

UNITED STATES  
ENVIRONMENTAL PROTECTION  
AGENCY-REGION 7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 29 AM 11:19  
REGION 7  
901 NORTH 5<sup>TH</sup> STREET  
KANSAS CITY, KANSAS 66101

IN THE MATTER OF: )  
)  
HARCROS CHEMICALS FACILITY )  
Davenport, Iowa )  
)  
)  
ELEMENTIS CHEMICALS INC. )  
HARCROS CHEMICALS, INC. )  
)  
T H AGRICULTURE & NUTRITION, L.L.C. )  
)  
RESPONDENTS )  
)  
)  
Proceeding under Section 7003 of )  
the Resource Conservation and )  
Recovery Act, 42 U.S.C. § 6973, et seq., as amended. )  
)

EPA DOCKET NO.  
RCRA-07-2012-0013

ADMINISTRATIVE ORDER ON CONSENT

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**ATTACHMENTS**

- A Facility Map
- B Corrective Measures Implementation Scope of Work
- C Final Decision Document
- D Environmental Covenant
- E [Reserved]

## I. INTRODUCTION

1. This Administrative Order on Consent (Consent Order) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and Elementis Chemicals Inc. (Elementis), Harsco Chemicals, Inc. (Harsco-Kansas) and T H Agriculture & Nutrition, L.L.C. ("THAN") (hereafter collectively referred to as "Respondents"). This Consent Order provides for the performance of corrective measures by Respondents, including any Additional Work that may be required by Section XXVII (Additional Work) of this Consent Order, in connection with the Harsco-Kansas facility located at 2040 West River Drive, Davenport, Iowa (Facility). In entering into this Consent Order, the mutual objectives of EPA and Respondents are to construct, operate, monitor and maintain the corrective measures selected by EPA to remedy the potential endangerment to human health and the environment resulting from Respondents' activities at the Facility involving hazardous wastes or constituents of such wastes, and to insure that the Work ordered by EPA is designed and implemented to protect human health and/or the environment. These mutual objectives and the corrective measures to be implemented are described in the Corrective Measures Implementation Scope of Work (SOW) (Attachment B), which is hereby incorporated into this Consent Order by reference. Respondents shall finance and perform the Work in accordance with this Consent Order, plans, standards, specifications and schedules set forth in this Consent Order or developed by Respondents and approved by EPA pursuant to this Consent Order.
2. EPA alleges that Respondents have contributed to the past handling, storage, treatment, transportation or disposal of hazardous waste or constituents of such wastes at the Facility which has resulted in conditions that may present an imminent and substantial endangerment to health or the environment.
3. EPA has notified the State of Iowa of this action pursuant to Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).
4. Respondents' participation in this Consent Order shall not constitute or be construed as an admission of liability. Respondents neither admit nor deny the factual allegations and legal conclusions set forth in this Consent Order (Sections V and VI, EPA's Findings of Fact and EPA's Conclusions of Law).
5. EPA and Respondents acknowledge that this Consent Order has been negotiated by the parties in good faith and that this Consent Order is fair, reasonable, and in the public interest. The actions undertaken by Respondents in accordance with this Consent Order do not constitute an admission of liability and the Respondents neither admit nor deny EPA's Findings of Fact.

## II. JURISDICTION

6. This Consent Order is issued under the authority vested in the Administrator of EPA by Section 7003 of RCRA, 42 U.S.C. §6973, which authority has been delegated to the

Director of the Air and Waste Management Division of EPA Region 7 by Delegations R7-8-022-A and R7-8-022C.

7. Respondents agree to undertake and complete all actions required by the terms and conditions of this Consent Order. In any action by EPA or the United States to enforce the terms of this Consent Order, Respondents consent to and agree not to contest the authority or jurisdiction of the Director of the Air and Waste Management Division, EPA Region 7, to issue or enforce this Consent Order, and agree not to contest the validity of this Consent Order or its terms or conditions.

### **III. PARTIES BOUND**

8. This Consent Order shall apply to and be binding upon EPA, and on Respondents and Respondents' officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondents, as well as upon subsequent purchasers of the Facility. Any change in the ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter the Respondents' responsibilities under this Consent Order. Respondents shall be responsible for and liable for completing all of the activities required pursuant to this Consent Order, regardless of whether there has been a transfer of ownership or control of the Facility or whether said activities are to be performed by employees, agents, contractors, subcontractors, laboratories, or consultants of Respondents.
9. Respondents shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants that are retained to conduct a substantial portion of the Work performed pursuant to this Consent Order within seven (7) days of the Effective Date of this Consent Order, or the date that such services are retained. Respondents shall condition all such contracts or agreements with contractors, subcontractors, laboratories and/or consultants in connection with this Consent Order, on compliance with the terms of this Consent Order. Respondents shall ensure that their contractors, subcontractors, laboratories, and consultants comply with this Consent Order.
10. Not later than sixty (60) days prior to any voluntary transfer by Respondent Harcros-Kansas of any interest in the Facility or the operation of the Facility, Respondent Harcros-Kansas shall give written notice: (a) to the transferee regarding the Consent Order and any Institutional Controls regarding the real property; and (b) to EPA regarding the proposed transfer, including the name and address of the transferee and the date on which the transferee was notified of this Consent Order and Institutional Controls. Respondent Harcros-Kansas shall also provide a description of the property and/or the operations being transferred. In the case of a voluntary transfer through a bankruptcy, Respondent Harcros-Kansas shall notify EPA within 24 hours of the decision to transfer property. Respondent Harcros-Kansas shall notify EPA of any involuntary transfers immediately upon Respondent Harcros-Kansas' initial receipt of notice of any involuntary transfer. Not later than three (3) days after any transfer, Respondent Harcros-

Kansas shall submit copies of the transfer documents to EPA. Respondent Harcross-Kansas shall provide a copy of this Consent Order to any subsequent owners or successors before a controlling interest in ownership rights, stock, assets or the Facility is transferred.

#### IV. DEFINITIONS

11. Unless otherwise expressly provided herein, terms used in this Consent Order that are defined in the RCRA statute shall have the meaning assigned to them in that statute. Whenever the terms listed below are used in this Consent Order the following definitions apply:

“Additional Work” shall mean any activity or requirement that is not expressly covered by this Consent Order or its attachments but is determined by EPA to be necessary to fulfill the objectives of this Consent Order.

“Administrative Record” shall mean the record compiled and maintained by EPA related to the Facility.

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

“Consent Order” shall mean this Administrative Order on Consent, any amendments thereto, and any documents incorporated by reference into this Consent Order.

“Contractor” shall include any subcontractor, consultant, or laboratory retained to conduct or monitor any portion of the Work performed pursuant to this Consent Order.

“Corrective Measures” shall mean those measures or actions necessary to control, prevent, or mitigate the release or potential release of hazardous waste or hazardous constituents into the environment.

“Data Quality Objectives” shall mean those qualitative and quantitative statements derived from the outputs of scientific and legally defensible data collection planning process.

The term “day” shall mean a calendar day unless expressly stated otherwise.

“Effective Date” shall be the date on which EPA signs this Consent Order following the public comment period which is held pursuant to Section XXIX (Public Comment on this Consent Order).

“EPA” or “U.S. EPA” shall mean the United States Environmental Protection Agency, and any successor departments or agencies of the United States.

“Facility” shall mean the Harsco Chemicals facility at 2040 West River Drive, encompassing approximately two (2) acres, located in an industrial area in the southeast ¼ of the southwest ¼ of Section 34, Township 78 North, Range 3 East in Davenport, Scott County, Iowa. The Facility is generally depicted on the map attached to this Consent Order as Attachment A.

“Hazardous Constituents” shall mean those constituents listed in Appendix VIII to 40 C.F.R. Part 261 or any constituent identified in Appendix IX to 40 C.F.R. Part 264.

“Hazardous Waste” shall mean hazardous waste as defined in Section 1004(5) of RCRA, 42 U.S.C. § 6903(5), or 40 C.F.R. § 260.10.

“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.*

“Site” shall mean the “Facility” and areas where contamination from the Facility has migrated.

“SOW” shall mean Corrective Measures Implementation Scope of Work attached to this Consent Order as Attachment B.

“Work” shall mean all the activities and requirements specified in this Consent Order including, but not limited to the SOW to this Consent Order and in Section IX (Work To Be Performed) of this Consent Order.

## V. EPA’S FINDINGS OF FACT

12. Respondent Harsco-Kansas is the current owner of a chemical storage and distribution facility at 2040 West River Drive, Davenport, Iowa (“Facility”).
13. Respondents Elementis and THAN are prior owners and operators of the Facility.
14. The Facility has been operated as a storage and distribution center for various types of agricultural and industrial chemicals since approximately 1952. Raw materials for these products were delivered to the Facility by rail, tanker truck, or tractor trailer and stored in tanks, drums, and other containers at the Facility.
15. The Facility structures include a main warehouse and office building, and two smaller buildings (buildings A and B) situated south of the main warehouse. The main warehouse is used for chemical storage. Building A, constructed in 1956, is used for storage of drummed chemicals. Building B, constructed in 1995, houses five vertical

storage tanks filled with various surfactants and one tank filled with bleach. The Facility is surrounded by a gated fence that is locked after business hours.

16. During the construction of Building B, soil was excavated from earthen berms and a former tank storage area and placed in piles at the northern portion of the Facility. Tetrachloroethylene (PCE) and other hazardous constituents were detected in samples of the stockpiled soil collected in 1999.
17. The results of site assessment activities by Respondents in May and August of 1999 identified the presence of the following hazardous constituents in the soil and groundwater at the Facility: PCE, toluene, xylene, ethyl benzene, trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), styrene, methylene chloride, trans-1,2-dichloroethene (trans-1,2-DCE), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), 1,1,1-TCA, vinyl chloride (VC), acetone, and 4-methyl-2-pentanone.
18. In March 2001, Elementis and THAN entered into an Administrative Order on Consent, pursuant to Section 3013 of RCRA, 42 U.S.C. §6934, to investigate and define the nature and extent of releases of hazardous wastes and hazardous constituents at and from the Facility, and to identify and evaluate remedial alternatives necessary to abate the conditions which may present a substantial hazard to human health or the environment.
19. Analysis of on-site surface and subsurface soil collected during the investigation detected the following hazardous constituents: PCE, TCE, polycyclic hydrocarbons (PAHs), dieldrin, toluene, ethylbenzene, xylene, and MEK. Surface and subsurface samples collected south of West River Drive showed the presence of acetone, benzene, toluene, MEK, PCE and 1,1-DCA. Acetone, benzene, cis-1,2-DCE, ethylbenzene, MEK, methylene chloride, PCE, toluene, trans-1,2-dichloroethene, TCE and VC were detected on the properties east and west of the Facility and in the drainage ditch immediately south of the Facility boundary.
20. In March 2003, EPA approved the Respondents' proposal to conduct a thermal soil treatability test of surface and subsurface contaminated soils at the Facility. In July 2005, EPA approved the Soil Treatment Demonstration Test Workplan dated July 1, 2005. In February 2006, EPA approved expansion of the soil treatment demonstration test. Approximately 8,000 tons of contaminated soils were excavated and treated on-site via thermal desorption from 2005 to 2006. In July 2005, Respondents provided EPA with a Soil Contingency Plan as part of the Remedial Alternatives Study (RAS) Report Addendum, which was subsequently approved by EPA. The Soil Contingency Plan outlines additional soil treatment activities which may be implemented in the future. A Completion Memorandum For Soil Treatment Activities was submitted to EPA in October 2006. The June 2009 Documentation of Environmental Indicators Determination issued by EPA indicates that, based on available information, contamination in the surface and subsurface soil is not present at the site at concentrations above appropriately protective risk based levels as contaminated soil has been excavated and treated. In August 2003, approximately 1,800 cubic yards of stockpiled soil from the

northern portion of the Facility were removed and disposed of in the Scott County Landfill.

21. Groundwater samples were collected by Respondents from on-site and off-site monitoring wells from 1999 to 2009. Chlorinated volatile organic compounds and other constituents, including benzene, toluene, ethylbenzene and xylene, were detected in onsite and off-site groundwater. Respondents initiated a pilot study of in-situ chemical oxidation (ISCO) in 2004 to assess whether ISCO was an effective remedy for groundwater contamination. In 2007, based on the results of the pilot study, Respondents began ISCO treatment of groundwater pursuant to approval by EPA.
22. The following constituents were detected in samples taken from monitoring wells from June through December 2009:

**Maximum Concentrations Exceeding Screening Criteria in Harcros Groundwater  
from June through December 2009 (Reported in micrograms per liter [µg/l])**

Compound	MCL/ RSL*	Maximum Well Concentration	Well ID	Groundwater Zone
1,1,1-Trichloroethane (1,1,1-TCA)	200	66,500	BW-03	Shallow bedrock zone
1,1-Dichloroethane (1,1-DCA)	2.4*	11,000	BW-14	Shallow bedrock zone
1,1-Dichloroethene (1,1-DCE)	7	2,730J	BW-03	Shallow bedrock zone
Benzene	5	40.7	BW-12	Intermediate bedrock zone
cis-1,2-Dichloroethene (cis-1,2-DCE)	70	244,000	BW-05	Shallow bedrock zone
Ethylbenzene	700	6,010	BW-03	Shallow bedrock zone
Methylene Chloride	5	13,700	BW-03	Shallow bedrock zone
Tetrachloroethene (PCE)	5	88,200	MW-04	Unconsolidated Zone
Toluene	1,000	82,400	BW-14	Shallow Bedrock Zone
Trichloroethene (TCE)	5	41,500	BW-27	Shallow bedrock zone
Vinyl Chloride (VC)	2	21,600	BW-06	Shallow bedrock zone
Xylenes (total)	10,000	23,400	BW-03	Shallow bedrock zone

J = estimated concentration

Maximum Contaminant Levels (MCLs) from EPA's Safe Drinking Water Act Regulations and Health Advisories.

\* USEPA Regional Screening Levels were used to evaluate compounds with no established MCL.

Respondents believe that Benzene originates from off-site sources other than Respondents' operations.

23. The uppermost water-bearing unit beneath the Facility is the Unconsolidated Zone, which consists of a relatively thin layer of sediment, soil, and fill. This unconsolidated zone is generally described as clay and silt with occasional sand lenses. The unconsolidated zone ranges in thickness from 3 to 11 feet at and near the Facility, increasing to between 25 and 50 feet near the Mississippi River. The water table aquifer typically occurs in this layer. A groundwater high has been consistently observed in the north-northwest portions of the Harcros property. Thus, groundwater in the unconsolidated zone flows radially away from the groundwater high to the east, south, and west from the Facility towards the Mississippi River, which is approximately 500 feet south of the Facility and is a regional discharge zone for groundwater. The Shallow Bedrock Zone includes the uppermost portions of the limestone, with a thickness of approximately 35 feet. This zone has been identified as the more fractured portion of the bedrock, with significant

lateral and vertical heterogeneity. Groundwater flow in this zone generally follows the top of the bedrock surface, and is primarily to the east, south, and west away from northern portions of the Facility. The Intermediate Bedrock Zone includes the limestone bedrock between the base of the Shallow Bedrock Zone at approximately 50 feet below ground surface (bgs) to the top of the Deep Bedrock Zone at a depth of approximately 250 feet bgs. The Deep Bedrock Zone includes bedrock from the base of the Intermediate Bedrock Zone to the top of the underlying Maquoketa shale at a depth of approximately 400 feet bgs. The Intermediate and Deeper Bedrock Zones are less fractured, less weathered, and contain fewer solution cavities than the Shallow Bedrock Zone. Lateral groundwater flow direction in these bedrock zones also appears to be to the east, south, and west away from the northern portions of the Harcros property.

24. On September 21, 2010, the EPA issued a Final Decision Document and Response to Comments (FDD) documenting the selection of the following groundwater corrective action remedies to be implemented at the Facility: (a) ISCO treatment for on-site groundwater; (b) monitored natural attenuation with a contingency for enhanced bioremediation (EISB) for off-site groundwater; and (c) institutional controls. The FDD is attached to this Consent Order as Attachment C. Hazardous constituents, including those listed in the table above, are present in on-site and off-site groundwater at concentrations exceeding health-based limits (Maximum Contaminant Levels and EPA Regional Screening Levels). Contamination is predominantly found in the Unconsolidated Zone and Shallow Bedrock Zone; however, potential future exposure to groundwater in the Intermediate Bedrock Zone and Deep Bedrock Zone could present unacceptable risks. Potentially complete exposure pathways to contaminated groundwater include on-site and off-site construction/utility workers and outdoor workers.

The constituents identified in paragraphs 25 through 36 have been found in soil and groundwater at the Site and, under certain conditions of dose, duration, or extent of exposure, may constitute a threat to human health by ingestion and/or adsorption. As described in the 2006 Completion Memorandum for Soil Treatment Activities in Paragraph 20 above, surface and subsurface soils have been remediated to RAOs.

25. 1,1,1-Trichloroethane (1,1,1-TCA): The Federal drinking water standard for 1,1,1-TCA is 200 micrograms per liter ( $\mu\text{g/l}$ ). Health effects from exposure to unsafe levels of 1,1,1-TCA may result in dizziness, lightheadedness, loss of coordination, unconsciousness, decreased blood pressure, heart stoppage, liver and nervous system damage, and possibly death.
26. 1,1-Dichloroethane (1,1-DCA): The EPA Regional Screening Level for 1,1-DCA is 2.4  $\mu\text{g/l}$ . Exposure to 1,1-DCA may cause delayed fetal growth, kidney disease, arrhythmias, and possibly death.
27. 1,1-Dichloroethene (1,1-DCE): The Federal drinking water standard for 1,1-DCE is 7 $\mu\text{g/l}$ . Health effects from exposure to unsafe levels of 1,1-DCE may include loss of

breath, faintness, abnormal liver function, adverse neurological effects, kidney and liver damage, increased chance of birth defects, cancer, and possibly death.

28. Benzene: The Federal drinking water standard for benzene is 5 µg/l. Health effects from exposure to unsafe levels of benzene may include headache, dizziness, nausea, convulsions, coma and death. EPA's Integrated Risk Information System (IRIS) lists benzene as a Class A (known) human carcinogen.
29. 1,2-Dichloroethene (1,2-DCE): The Federal drinking water standard for cis-1,2-DCE is 70 µg/l. The Federal drinking water standard for trans-1,2-DCE is 100 µg/l. Health effects from exposure to excess levels of cis-1,2-DCE may include decrease in the number of red blood cells, liver damage, and decreased fetal development.
30. Ethylbenzene: The Federal drinking water standard for ethylbenzene is 700 µg/l. Health effects from exposure to unsafe levels of ethylbenzene may cause kidney, liver skin and chronic respiratory disease.
31. Methylene Chloride: The Federal drinking water standard for methylene chloride is 5 µg/l. Health effects from exposure to unsafe levels of methylene chloride may include irritation of the eyes, mucous membranes and skin and adversely affect the central and peripheral nervous systems and the heart. EPA's IRIS lists methylene chloride as a Class B2 (probable) human carcinogen.
32. Tetrachloroethene (PCE): The Federal drinking water standard for PCE is 5 µg/l. Health effects from exposure to unsafe levels of PCE may include liver problems, malaise, dizziness, headaches, slowed mental ability, central nervous system depression, hepatic injury and increased risk of cancer.
33. Toluene: The Federal drinking water standard for toluene in drinking water is 1,000 µg/l. Health effects from exposure to unsafe levels of toluene may include irritation of the eyes, respiratory tract, and skin, headache, dizziness, fatigue, muscular weakness, drowsiness, decreased coordination and staggering gait, skin paresthesia, collapse and coma.
34. Trichloroethene (TCE): The Federal drinking water standard for TCE is 5 µg/l. Health effects from exposure to unsafe levels of TCE may include neurological effects, kidney and liver problems, impaired immune system function and increased risk of cancer. TCE is a suspected carcinogen based on studies conducted on rats, mice, and observations of workers exposed to TCE.
35. Vinyl chloride: The Federal drinking water standard for vinyl chloride is 2 µg/l. Vinyl chloride is a known human carcinogen. Health effects from exposure to unsafe levels of vinyl chloride may include loss of consciousness, heart, liver, and kidney damage, circulation problems, increased risk of cancer and possibly death.

36. Xylene: The Federal drinking water standard for total xylenes is 10,000 µg/l. Health effects from exposure to unsafe levels of xylene may include irritation of the eyes, nose and throat, central nervous system depression, nausea, pulmonary edema and liver and kidney problems.

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

37. Based on the EPA's Findings of Fact set forth above, and the administrative record supporting this Consent Order, EPA has determined that:
- a. Respondents are each a "person" as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15). Respondent Harcros-Kansas is the present owner and/or operator of the Facility. Respondents Elementis and THAN are past owners and/or operators of the Facility.
  - b. The hazardous constituents identified in Paragraphs 25 through 36 that were spilled or leaked into the soil and groundwater at the Facility are "solid wastes" as defined in Section 1004(27) of RCRA, 42 U.S.C. § 6903(27), and are listed or characteristic hazardous waste or hazardous constituents under 40 C.F.R. Part 261. Such solid wastes are also a "hazardous wastes" as defined in Section 1004(5) of RCRA, 42 U.S.C. § 6903(5), because such waste may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or may pose a substantial present or potential threat to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.
  - c. The presence of solid wastes, hazardous wastes, hazardous constituents and/or hazardous substances in soils and ground water at the Facility is the result of the past handling, storage, treatment, transportation and/or disposal of agricultural, commercial and industrial chemicals at the Facility.
  - d. Respondents have contributed to the handling, storage, treatment, and/or disposal of solid waste and/or hazardous constituents, and/or wastes at the Facility through its handling of agricultural, commercial and industrial chemicals at the Facility.
  - e. Conditions at the Site, as described in Paragraph 24 of this Consent Order, may present an imminent and substantial endangerment to human health and/or the environment within the meaning of Section 7003 of RCRA, 42 U.S.C. § 6973, as 1,1,1-TCA, 1,1-DCA, 1,1-DCE, Benzene, cis-1,2-DCE, trans-1,2 DCE, Ethylbenzene, Methylene Chloride, PCE, Toluene, TCE, Vinyl Chloride and Xylene are present in the groundwater at the Site in concentrations exceeding health-based limits. Based on available information, surface and subsurface soil are no longer considered to pose an unacceptable hazard to site workers or construction workers.
  - f. The actions required by this Consent Order may be necessary to protect human health

and/or the environment.

## VII. ORDER ON CONSENT

38. Based upon the administrative record for the Facility, EPA's Findings of Fact (Section V) and EPA's Conclusions of Law and Determinations (Section VI) set forth above, and in consideration of the promises set forth herein, the following is hereby agreed to and ordered. Respondents shall comply with all provisions of this Consent Order, including, but not limited to, all attachments to this Consent Order and all documents incorporated by reference into this Consent Order.
39. Respondents shall finance and perform the Work in accordance with this Consent Order, plans, standards, specifications and schedules set forth in this Consent Order or developed by Respondents and approved by EPA pursuant to this Consent Order.

## VIII. CONTRACTORS AND PROJECT COORDINATORS

40. Project Coordinators. The Respondents' Project Coordinator is John P. Cleary, Senior Project Manager, Project Realty LLC, 15313 West 95<sup>th</sup> Street, Lenexa, Kansas 66219. The EPA Project Coordinator will be Ruby Crysler, U.S. EPA, 901 North 5<sup>th</sup> Street, Kansas City, Kansas, (913) 551-7409, [crysler.ruby@epa.gov](mailto:crysler.ruby@epa.gov). EPA may also designate an Alternate Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. EPA and Respondents have the right to change their respective Project Coordinators. EPA retains the right to approve/disapprove of Respondents' new Project Coordinator based upon the person's qualifications and ability to effectively perform this role. If EPA disapproves of Respondents' new Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, phone number, electronic mail address and qualifications within two (2) days following EPA's disapproval. The qualifications of the persons undertaking the Work for Respondents shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements of the EPA. All persons under the direction and supervision of Respondents' Project Coordinator must possess all necessary professional licenses required by federal and state law.
41. The EPA Project Coordinator shall be EPA's designated representative for the Facility. Unless otherwise provided in this Consent Order, all reports, correspondence, notices, or other submittals relating to or required under this Consent Order shall be in writing and shall be sent to the EPA Project Coordinator at the address specified in Paragraph 40, unless notice is given in writing to Respondents of a change in address. Reports, correspondence, notices or other submittals shall be delivered by U.S. Postal Service, private courier service or electronic mail. All correspondence shall include a reference to the case caption EPA Docket No. RCRA -07-2012-0013.
42. Respondents shall undertake and complete all of the Work to the satisfaction of EPA,

pursuant to RCRA § 7003, 42 U.S.C. § 6973. All of the Work performed under this Consent Order shall be under the direction and supervision of Respondents' Project Coordinator and shall be in accordance with the terms of this Consent Order. Respondents' Project Coordinator shall have expertise in hazardous waste cleanup.

43. Selection of Contractors, Personnel. All Work performed by, or on behalf of Respondents under this Consent Order shall be under the direction and supervision of qualified personnel. Within thirty (30) days of the Effective Date of this Consent Order, Respondents 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. EPA reserves the right to disapprove Respondents' contractor(s), subcontractor(s), consultant(s) and laboratories and the basis for disapproval shall be provided to Respondents except where prohibited. If EPA disapproves a contractor, subcontractor, consultant or laboratory, then Respondents must, within forty-five (45) days of receipt from EPA of written notice of disapproval, notify EPA, in writing, of the name, title, and qualifications of any replacement. EPA's disapproval shall not be subject to review under Section XVIII (Dispute Resolution) of this Consent Order.

#### **IX. WORK TO BE PERFORMED**

44. Respondents shall perform the following corrective measures identified in the FDD (Attachment C) issued by EPA, in accordance with the SOW attached to this Consent Order (Attachment B) to prevent, mitigate and/or remediate the release or migration of hazardous wastes and/or hazardous constituents at and from the Facility.
- a. SOW Task 1 - Operation, Monitoring and Maintenance Plan (OMMP): Within sixty (60) days of the Effective Date of this Consent Order, Respondents shall prepare and submit to EPA for review and approval an OMMP in accordance with Task 1 of the SOW. EPA shall review and provide comments on the OMMP, and shall review, approve or modify the OMMP according to Section X (EPA Approval of Deliverables) of this Consent Order. The OMMP shall include the following components:
- Long-Term Groundwater Monitoring Plan;
  - Enhanced In-Situ Bioremediation (EISB) Groundwater Remediation Contingency Implementation Plan;
  - In-Situ Chemical Oxidation Plan;
  - Health and Safety Plan;
  - Quality Assurance Project Plan/Sampling and Analysis Plan (QAPP/SAP); and
  - Institutional Controls (IC) Plan. This plan shall also be submitted as a stand-alone document for review and approval.
- b. SOW Task 2 - Annual Remedy Performance Report (ANPR): Respondents shall submit to EPA an Annual Remedy Performance Report for the prior calendar year by March 1st of each year until Respondents receive written notice from EPA according to

Section XXVIII (Termination and Satisfaction) of this Consent Order.

c. SOW Task 3 - Five-Year Corrective Measures Performance Evaluation (CMPE) Report : On or before the anniversary date of this Consent Order and every five years thereafter, Respondents shall conduct an evaluation of the performance of corrective measures performed under this Consent Order and shall submit to EPA, for review and approval, a Five-Year Corrective Measures Performance Evaluation Report in accordance with Task 3 of the SOW. This evaluation shall be consistent with the CERCLA Comprehensive Five Year Guidance, OSWER 9355.7 03B-P, and any subsequent revisions or additions thereto.

d. SOW Task 4 - Corrective Measures Completion (CMCR) Report: After obtaining information that the completion criteria for all corrective measures have been achieved, Respondents shall submit to EPA, for review and approval, a Completion Memorandum documenting that all work under the AOC has been completed. Once EPA approves the Completion Memorandum, Respondents shall submit within ninety (90) days, for review and approval, a Corrective Measures Completion Report in accordance with Task 4 of the SOW.

45. The Remedial Action Objectives (RAOs) specific to this Site are EPA MCLs and EPA Regional Screening Levels (RSLs) for constituents that do not have an MCL as set forth below:

Compound	RAOs (micrograms per liter[ $\mu\text{g/l}$ ])	Source of RAO
1,1,1-Trichloroethane (1,1,1-TCA)	200	MCL
1,1-Dichloroethane (1,1-DCA)	2.4	RSL
1,1-Dichloroethene (1,1-DCE)	7	MCL
1,2-Dichloroethane (1,2-DCA)	5	MCL
2-Butanone (Methyl ethyl ketone, MEK)	7,100	RSL
Acetone	22,000	RSL
Benzene	5	MCL
Chloroethane (ethyl chloride)	21,000	RSL
cis-1,2-Dichloroethene (cis-1,2-DCE)	70	MCL
Ethylbenzene	700	MCL
Methylene Chloride	5	MCL
Styrene	100	MCL
Tetrachloroethene (PCE)	5	MCL
Toluene	1,000	MCL
Trans-1,2-Dichloroethene (trans-1,2-DCE)	100	MCL
Trichloroethene (TCE)	5	MCL
Vinyl Chloride (VC)	2	MCL
Xylenes (total)	10,000	MCL

MCL Maximum Contaminant Levels (MCLs) from EPA's Safe Drinking Water Act Regulations and Health Advisories (EPA, 2009).

RSL USEPA Regional Screening Levels (EPA, 2010)

Respondents believe that Benzene originates from off-site sources other than Respondents' operations.

If new information becomes available demonstrating that the clean-up levels listed above are no longer protective of human health and the environment, the updated MCLs and/or RSL values will be evaluated for incorporation into the remedy. Likewise, if the MCLs and/or RSL values are made less stringent, Respondents will be responsible for requesting modification to the RAOs.

46. Performance Objectives: Performance monitoring for on-site groundwater shall consist of: groundwater sampling and analysis in accordance with the EPA approved OMMMP described in Task 1 of the SOW (Attachment B). Analytical data shall be evaluated in accordance with EPA guidance to review constituent trends over time with respect to overall decrease in contaminant mass and individual constituent concentrations, and the effectiveness of oxidant treatment. Data evaluation tools may include statistical analysis, parent/daughter product ratio trends, and oxidant distribution. Additional evaluation tools will be added as necessary. If necessary, and upon EPA approval, design parameters for oxidant treatment may be adjusted to optimize groundwater treatment. In addition, Respondents shall on an annual basis conduct visual inspections of the Facility and review of pertinent records regarding the Facility to verify that the institutional controls are being properly maintained. Evaluation of institutional controls shall be documented in the IC Plan, developed in accordance with Task 1 of the SOW. For off-site groundwater, analytical and geochemical data from off-site monitoring wells shall be evaluated in accordance with EPA guidance to review contaminant trends over time with respect to overall decrease in contaminant mass and individual constituent concentrations. Data evaluation tools may include statistical analysis, parent/daughter product ratio trends, and graphical trend analysis. Additional evaluation tools will be added as necessary. In addition, the nature and extent of constituents in groundwater will be evaluated to ensure that the plume is not migrating into previously unaffected areas and properties, including the Mississippi River, and to verify that geochemical and geologic conditions are still favorable for natural attenuation of all constituents. The data evaluation results will be compared to the EISB contingency triggers. The Respondents shall make a recommendation as to whether or not implementation of the contingency should be considered. EPA may require the implementation of the EISB contingency in accordance with the procedures set forth in Section X of this Consent Order.
47. All Work undertaken pursuant to this Consent Order shall be developed and performed in compliance with all applicable EPA guidance, policies and procedures, this Consent Order, and is subject to EPA approval.
48. All plans submitted to EPA for approval shall include a schedule of the Work to be performed. Following EPA's approval or modification of any plan pursuant to Paragraph 53, Respondents shall implement the plan in accordance with the schedule and provisions approved by EPA.
49. Respondents shall immediately post a sign at the facility which provides notice of the hazardous constituents present at the Site in accordance with the requirements of Section 7003(c) of RCRA, 42 U.S.C. § 6973(c). The sign to be posted shall be at least twenty-four (24) by thirty-six (36) inches, and shall be made of weatherproof material in white or a brightly-colored background with large, clearly contrasting lettering. The sign shall be

posted in a prominent place at or near the public entrance(s) to the facility, and shall state: "ATTENTION: Soil excavation and extraction or contact of groundwater may present a significant risk and is prohibited without prior approval from the Landowner. For Information Call 563-322-3511." Within thirty (30) days of the Effective Date of this Consent Order, Respondents shall provide documentation (i.e., photographs) to the EPA project manager that the sign has been posted. Failure to post the sign as directed in this paragraph will constitute a violation of this Consent Order.

50. Commencing on the Effective Date of this Consent Order, Respondents shall not use the Facility in any manner that EPA determines will: (a) pose an unacceptable risk to human health or the environment due to exposure to hazardous wastes and/or hazardous constituents; or, (b) interfere with or adversely affect the implementation, integrity or protectiveness of the corrective measures performed pursuant to this Consent Order. Respondents shall subject the Facility property to the use and activity limitations identified as part of the EPA-approved final remedy and included in the Environmental Covenant (Attachment D), as provided under the Iowa Uniform Environmental Covenants Act summarized below:
- Respondents shall not use the property for residential purposes unless the EPA determines that the Site no longer poses risk to human health or the environment.
  - Respondents shall prevent use of, and exposure to, site groundwater and shall not install any wells unless necessary for investigation or remedy implementation and approved by EPA.
51. Respondents shall execute and record in the appropriate land records office proprietary controls that: (a) grant a right of access to conduct any activity regarding this Consent Order, including, but not limited to, those activities listed in Paragraph 72, and (b) grant the right to enforce the land/water use restrictions listed in Paragraph 50 and any land/water use restrictions listed in the IC Plan. The proprietary controls shall be granted to one or more of the following persons, as determined by EPA: (a) the United States, on behalf of EPA, and its representatives, (b) the State and its representatives, and/or (c) other appropriate grantees. The proprietary controls shall meet the requirements of the Iowa Code 455I entitled Uniform Environmental Covenants Act. In accordance with the schedule set forth in the IC Plan identified in Task 1 of the SOW, Respondents shall submit to EPA for review and approval a draft proprietary control, in substantially the form attached to this Consent Order as Attachment D, and a current title insurance commitment or other evidence of title acceptable to EPA, which shows title to the land affected by the proprietary control to be free and clear of all prior liens and encumbrances (except when EPA waives the release or subordination of such prior liens or encumbrances or when, despite its best efforts, Respondents are unable to obtain release or subordination of such prior liens or encumbrances. Within forty-five (45) days of EPA's approval and acceptance of the proprietary control and the title evidence, update the title search and, if it is determined that nothing has occurred since the effective date of the commitment, or other evidence, to affect the title adversely, record the proprietary control with the appropriate land records office. Within thirty (30) days of recording the

proprietary control, Respondents shall provide EPA with a certified copy of the original recorded proprietary control showing the clerk's recording stamps.

#### X. EPA APPROVAL OF DELIVERABLES

52. Deliverables required by this Consent Order shall be submitted to EPA for approval or modification. All deliverables must be received at EPA by the due date specified in this Consent Order, SOW (Attachment B), or by schedules developed and approved by EPA pursuant to this Consent Order.
53. After review of any deliverable that is required pursuant to this Consent Order, EPA will: (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 Respondents modify the submission; or (e) any combination of the above. However, EPA will not modify a submission without first providing Respondents at least one (1) notice of deficiency and an opportunity to cure within ten (10) days, or an alternate timeframe approved by EPA, except where EPA determines that to do so would cause serious disruption to the Work or where EPA has disapproved previous submission(s) due to material defects and EPA determines that the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.
54. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 53 (a), (b), or (c), Respondents shall proceed to take any action required by the deliverable, as approved or modified by EPA subject only to Respondents' right to invoke the Dispute Resolution procedures set forth in Section XVIII (Dispute Resolution) with respect to the modifications or conditions made by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 53 (c) and EPA determines the submission has a material defect, EPA retains its right to seek stipulated penalties, as provided in Section XIX (Penalties).
55. Resubmission of Deliverable. Upon receipt of a notice of disapproval, in whole or in part, pursuant to Paragraph 53 (d), Respondents shall, within thirty (30) days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XIX (Penalties), shall accrue during the 30-day opportunity to cure period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect.
56. Notwithstanding the receipt of a notice of disapproval pursuant to Paragraph 53(d), Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Respondents of any liability for stipulated penalties for the deficient portion of the deliverable under Section XIX (Penalties).

57. In the event that a resubmitted deliverable, or portion thereof, is disapproved by EPA, EPA may again require Respondents to correct the deficiencies, in accordance with the preceding Paragraphs. EPA also retains the right to modify or develop the plan, report or other deliverable. Respondents shall implement any action as required in a deliverable which has been modified or developed by EPA, subject only to Respondents' right to invoke the procedures set forth in Section XVIII (Dispute Resolution).
58. If upon resubmission, a deliverable is disapproved or modified by EPA due to a material defect, Respondents shall be deemed to have failed to submit such deliverable timely and adequately unless Respondents invoke the dispute resolution procedures set forth in Section XVIII (Dispute Resolution) and EPA's action to disapprove or modify a deliverable is overturned pursuant to that Section. The provisions of Section XVIII (Dispute Resolution) and Section XIX (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 upheld, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XIX (Penalties).
59. All deliverables required to be submitted to EPA under this Consent Order, shall, upon approval or modification by EPA, be incorporated into and be enforceable under this Consent Order. In the event EPA approves or modifies a portion of a deliverable required to be submitted to EPA under this Consent Order, the approved or modified portion shall be enforceable under this Consent Order.

## **XI. MODIFICATION OF WORK PLANS**

60. If at any time during the implementation of the Work, Respondents identify a need for a compliance date modification or revision of a Work plan, Respondents shall submit a written request documenting the need for the modification or revision to the EPA Project Coordinator. EPA, in its discretion, will determine if the modification or revision is warranted and may provide written approval or disapproval. Any approved modified compliance date or plan modification is incorporated by reference into this Consent Order.
61. Emergency Response. In the event of any action or occurrence during the performance of the Work that constitutes an emergency situation or may present an immediate threat to human health and the environment, Respondents shall immediately take all appropriate action to minimize such emergency or threat, and shall immediately notify the EPA's Project Coordinator. Respondents shall take such immediate and appropriate actions in consultation with EPA's Project Coordinator. Respondents shall then submit to EPA written notification of such emergency or threat at the Site within three (3) calendar days of such discovery. Respondents shall thereafter submit to EPA for approval, within twenty (20) days, a plan to mitigate this threat. EPA will approve or modify this plan, and Respondents shall implement this plan as approved or modified by EPA. In the case of an extreme emergency, Respondents may act as it deems appropriate, at its own risk,

to protect human health or the environment.

## XII. QUALITY ASSURANCE

62. As part of the Work to be Performed, Respondents shall submit a Quality Assurance Project Plan (QAPP)/Sampling and Analysis Plan (SAP). The combined QAPP/SAP shall address quality assurance, quality control, and chain of custody procedures for all sampling, monitoring and analytical activities including ISCO, EISB and MNA performance monitoring. The QAPP/SAP will also provide information regarding field sampling procedures and equipment, decontamination procedures, analytical methods, and laboratory reporting limits. Respondents shall follow "EPA Requirements for Quality Assurance Project Plans" (QA/R5)" (EPA/240/B-01/003, March 2001), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) and subsequent revisions of these documents, as well as other applicable documents identified by EPA.
63. As part of the Work to be Performed, Respondents shall include Data Quality Objectives for any data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use as required by this Consent Order.
64. Respondents shall ensure that laboratories used by Respondents for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste (SW-846)" or other methods approved by EPA. If methods other than EPA methods are to be used, Respondents shall specify all such protocols in the applicable plan. EPA may reject any data that does not meet the requirements of the approved plan and EPA analytical methods and may require resampling and additional analysis.
65. Respondents shall ensure that all laboratories used for analyses participate in a quality assurance/quality control (QA/QC) program equivalent to the program that EPA follows. Respondents shall, upon EPA's request, make arrangements for EPA to conduct a performance and QA/QC audit of the laboratories chosen by Respondents, whether before, during, or after sample analyses. Upon EPA's request, Respondents shall have their laboratories perform analyses of samples provided by EPA to demonstrate laboratory QA/QC and performance. If the audit reveals deficiencies in a laboratory's performance or QA/QC, Respondents shall submit a plan to address the deficiencies and EPA may require resampling and additional analysis.
66. EPA reserves the right to require a change in laboratories for reasons which may include, but shall not be limited to, QA/QC, performance, conflict of interest, or confidential agency audit information. In the event EPA requires a laboratory change, Respondents shall propose two alternative laboratories within thirty (30) days. Once EPA approves of the laboratory change, Respondents shall ensure that laboratory service shall be made available within fifteen (15) calendar days.

**XIII. ADMINISTRATIVE DOCUMENTATION**

- 67. Submission of Documentation. EPA will determine the contents of the Administrative Record file for selection and/or modification of the corrective action. Respondents shall submit to EPA documents developed during the course of performing the Work upon which selection and/or modification of the corrective action may be based. EPA will maintain an Administrative Record file. The Administrative Record supporting this Consent Order and the Work to be performed shall be available for public review at the EPA Region 7 office located at 901 North 5<sup>th</sup> Street, Kansas City, Kansas 66101.

**XIV. DOCUMENT CERTIFICATION**

- 68. Any report or other document submitted by Respondents pursuant to this Consent Order for purposes of documenting compliance with the terms of this Consent Order and approved work plans, and, which makes recommendations as to whether or not further actions are necessary, or makes any representation concerning Respondents' compliance or noncompliance with any requirement of this Consent Order shall be certified by a responsible corporate officer of Respondents. A responsible corporate officer means: a president, secretary, treasurer, or vice-president in charge of a principal business function, their designee in accordance with corporate procedures, or any other person who performs similar policy or decision-making functions.
- 69. The certification required by Paragraph 68 above, shall be in the following form:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **XV. SAMPLING, DATA AVAILABILITY, ACCESS AND INSTITUTIONAL CONTROLS**

70. All results of sampling, testing, modeling or other data generated (including raw data if requested) by Respondents, or on Respondents' behalf, during implementation of this Consent Order shall be submitted to EPA in the deliverables described in Section IX (Work to be Performed) and the SOW. Data validation will be performed as described in the QAPP/SAP prepared pursuant to Section IX (Work to be Performed) and the SOW. Respondents shall tabulate data chronologically by media. EPA will make available to Respondents data generated by EPA for the purposes of oversight of the Work unless it is exempt from disclosure by any federal or state law or regulation.
71. Respondents shall orally notify EPA at least thirty (30) days prior to conducting field sampling. EPA may, at its sole discretion, waive the notification requirement on a case-by-case basis. At EPA's request, Respondents shall allow split or duplicate samples to be taken by EPA or EPA's representative.
72. Access. Respondents shall provide access to the Facility at reasonable times to EPA, EPA's contractors and oversight officials and State representatives to conduct any activity regarding this Consent Order including, but not limited to, the following:
- a. Monitoring the Work;
  - b. Verifying any data or information submitted to EPA or the State;
  - c. Conducting investigations regarding contamination at or near the Facility;
  - d. Obtaining samples;
  - e. Assessing the need for, planning or implementing additional response action at the Facility;
  - f. Assessing implementation of quality assurance and quality control practices as defined in the approved QAPP;
  - g. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondents or their agents consistent with this Section;
  - h. Determining whether the Facility or other real property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under this Consent Order; and,
  - i. Implementing, monitoring, maintaining, reporting on, and enforcing any Institutional Controls and the requirements of the IC Plan.

73. Pursuant to this Section, any denial of access at reasonable times to any portion of the Facility property where a request for access was made for the purposes of enforcing the requirements of RCRA or this Consent Order shall be construed as a violation of the terms of this Consent Order subject to the penalty provisions outlined in Section XIX (Penalties) of this Consent Order.
74. Access Agreements. Where action under this Consent Order is to be performed in areas owned by, or in possession of, someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within forty-five (45) days of approval of any plan, in writing, by the EPA Project Coordinator for properties where access has not been previously secured. Any such access agreement shall provide for access by EPA and its representatives to move freely in order to conduct actions that EPA determines to be necessary. All access agreements shall specify that Respondents are not EPA's representative with respect to any liabilities associated with activities to be performed. Respondents shall provide EPA's Project Coordinator with copies of any access agreements. Respondents shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements within the time required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondents to the present owner of such property requesting access agreements to permit Respondents, EPA, and EPA's authorized representatives to enter such property, and the offer of payment of reasonable sums of money in consideration of granting access. Respondents shall, within ten (10) days of its receipt of a denial of access, submit in writing, a description of their efforts to obtain access. EPA may, at its discretion, assist Respondents in obtaining access. In the event EPA obtains access, Respondents shall undertake the Work on such property and Respondents shall reimburse EPA for all costs and attorney fees incurred by the United States in obtaining such access.
75. Confidential Business Information. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Consent Order under 40 C.F.R. § 2.203 in the manner described at 40 C.F.R. § 2.203(b) and substantiated with the information described at 40 C.F.R. §2.204(e)(4). Information EPA determines is confidential will be given the protection specified in 40 C.F.R. Part 2. If no such claim or substantiation accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the state without further notice to Respondents. Respondents agree not to assert confidentiality claims with respect to any data related to Site conditions, sampling, monitoring or the Work performed pursuant to this Consent Order.
76. Privileged Documents. Respondents 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 Respondents assert such a privilege in lieu of providing documents, Respondents shall provide EPA with the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the author's name and title; (d) the name and title of each addressee and recipient; (e)

a description of the contents; and (f) the privilege asserted by Respondents. However, no documents, reports or other information created or generated pursuant to the requirements of this Consent Order shall be withheld on the grounds that they are privileged.

77. All data, information, and records created or maintained relating to any Solid or Hazardous Waste found at the Site shall be made available to EPA upon request unless Respondents assert a claim that such documents are legally privileged from disclosure. Respondents shall have the burden of demonstrating to EPA by clear and convincing evidence that such privilege exists.
78. 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 developed pursuant to this Consent Order evidencing conditions at or around the Site.
79. Nothing in this Consent Order shall be construed to limit EPA's right of access, entry, inspection, and information gathering pursuant to applicable law, including but not limited to RCRA and CERCLA.
80. Respondents shall provide written notification of this Consent Order to the owners/operators of neighboring properties that have been affected by the presence of chemical constituents above RAOs within thirty (30) days of the effective date of this Consent Order, or an alternate timeframe approved by EPA.

## **XVI. COMPLIANCE WITH OTHER LAWS**

81. Respondents shall perform all actions required pursuant to this Consent Order in accordance with all applicable local, state, and federal laws and regulations. Respondents shall obtain or cause their representatives to obtain all permits and approvals necessary under such laws and regulations in a timely manner so as not to delay the Work required by this Consent Order.

## **XVII. RECORD RETENTION**

82. Respondents shall preserve all documents and information, including raw data, relating to the Work performed under this Consent Order, or relating to any Solid Waste or Hazardous Waste found at the Site, for six (6) years following completion of the Work required by this Consent Order.
83. Respondents shall acquire and retain copies of all documents that relate to submissions to EPA required under this Consent Order that are in the possession of its employees, agents, accountants, contractors or attorneys.
84. Respondents shall make available to EPA all employees and persons, including contractors, who engage in activities under this Consent Order and make best efforts to

facilitate their cooperation with EPA with respect to this Consent Order.

85. After the six (6) year retention period and ninety (90) days before any document or information is destroyed, Respondents shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies (at no extra cost) of such documents and information to EPA. Notification shall be in writing and shall reference the Effective Date, caption, and docket number of this Consent Order and shall be addressed to the Director of the Air and Waste Management Division, EPA Region 7. In addition, Respondents shall provide documents and information retained under this Section at any time before expiration of the six (6) year retention period at the written request of EPA. At the end of the document retention period, Respondents may convert the project files into an electronic format and destroy the paper copy of such documents.
86. All documents pertaining to this Consent Order shall be stored by Respondents at a centralized location managed by the Respondent's Project Coordinator, mutually approved by Respondents and EPA, where access by EPA or its representatives may be obtained with reasonable notice.

#### **XVIII. DISPUTE RESOLUTION**

87. Respondents shall raise any disputes concerning the Work required under this Consent Order to EPA (excluding any decision document(s) issued by EPA), in writing, within fifteen (15) days after receiving written notice from EPA regarding any aspect of the Work required under this Consent Order that Respondents dispute. EPA and Respondents shall expeditiously and informally attempt to resolve any disagreements. EPA and Respondents' Project Coordinators shall first confer in an effort to resolve the dispute. If the Project Coordinators are unable to informally resolve the dispute within ten (10) days of the first conference, Respondents shall notify EPA, within five (5) days, in writing of their objections. Written objections shall identify Respondents' objections, state the basis for those objections, and provide all data, analyses and information relied upon by Respondents. EPA and Respondents then have an additional fourteen (14) days from EPA's receipt of the objections to reach agreement. If an agreement is not reached within the fourteen (14) days, Respondents may request in writing, within five (5) days, a determination resolving the dispute by EPA Region 7's Waste Remediation and Permitting Branch Chief, Air and Waste Management Division (Branch Chief). The request should provide all information that Respondents believe is relevant to the dispute. If such request is submitted, the Branch Chief shall issue a determination in writing. EPA's final decision shall be incorporated into and become an enforceable part of this Consent Order and shall no longer be subject to dispute pursuant to this Consent Order. Respondents shall proceed in accordance with the Branch Chief's decision regarding the matter in dispute, regardless of whether Respondents agree with the decision. If Respondents do not agree to perform or do not actually perform the Work in accordance with EPA's decision, EPA reserves the right in its sole discretion to conduct the Work itself, seek reimbursement from Respondents, seek enforcement of this Consent Order,

seek stipulated penalties, and/or any other appropriate relief. Any disputes arising under this Consent Order are not subject to judicial review until such time as EPA seeks to enforce this Consent Order.

88. If EPA and Respondents reach agreement on the dispute at any stage, the agreement shall be set forth in writing and shall, upon signature of both parties, be incorporated into and become an enforceable part of this Consent Order.
89. The existence of a dispute and EPA's consideration of matters placed in dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Consent Order during the pendency of the dispute resolution process except as agreed by EPA in writing. The invocation of dispute resolution does not stay the accrual of stipulated penalties under this Consent Order.

### **XIX. PENALTIES**

90. Stipulated Penalties. Any time Respondents fail to comply with any requirement of this Consent Order, Respondents shall be liable for stipulated penalties in the amounts set forth in this Section unless a Force Majeure event has occurred as defined in Section XX (Force Majeure) and EPA has approved the extension of a deadline as required by Section XX (Force Majeure). Compliance with this Consent Order by Respondents shall include completion of an activity or any matter under this Consent Order in accordance with this Consent Order to the satisfaction of EPA, and within the specified time schedules approved under this Consent Order.
  - a) \$250 per day for the first through seventh days of non-compliance
  - b) \$500 per day for the eighth through thirtieth days of non-compliance;  
and
  - c) \$1000 per day for the thirty-first and each succeeding day of non-compliance thereafter.
91. 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 correction of the violation or completion of the activity. Payment shall be due within ninety (90) days of receipt of a demand letter from EPA. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Consent Order, even where those violations concern the same event (e.g., submission of a plan that is late and is of unacceptable quality).
92. If payment is not made within ninety (90) days of the date of Respondents' receipt from EPA of a written demand for payment of the penalties or of the date of agreement or decision resolving the dispute, interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the first day after Respondents' receipt of EPA's demand letter, or the date of the agreement or decision resolving the dispute, and will accrue until such penalties and interest have been paid in full. Interest shall accrue at the Current

Value of Funds Rate established by the Secretary of the Treasury. An additional penalty of six percent (6 %) per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for ninety (90) days or more. The applicable rate of interest shall be the rate in effect at the time the interest accrues pursuant to 31 U.S.C. § 3717.

93. Respondents shall make payments by money order, certified check, company check, electronic funds transfer, or cashier's check payable to the Treasurer of the United States within ninety (90) days of Respondent's receipt of EPA's request, and shall be submitted to the following address:

U.S. Environmental Protection Agency  
Region 7  
Fines and Penalties  
P.O. Box 979077  
St. Louis, Missouri 63197-9000.

94. Any payment made pursuant to this Section shall reference EPA Docket No. RCRA-07-2012-0013. Respondents shall send simultaneous notices of such payments, including copies of the money order certified check, company check, electronic funds transfer, or cashier's check to EPA's Project Coordinator.
95. Respondents may dispute an EPA determination that it failed to comply with this Consent Order by invoking the dispute resolution procedures under Section XVIII (Dispute Resolution) unless the matter has already been in or is the subject of dispute resolution. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondents do not prevail upon resolution, all penalties shall be due to EPA within thirty (30) days of resolution of the dispute. If Respondents prevail upon resolution, no penalties shall be paid. In the event that Respondents prevail in part, penalties shall be due on those matters in which Respondents did not prevail.
96. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way Respondents' obligation to comply with the terms and conditions of this Consent Order. The stipulated penalties set forth in this Section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondents' failure to comply with any of the terms and conditions of this Consent Order.
97. No payments under this Section shall be deducted for federal tax purposes.
98. 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 Consent Order.

99. Civil Penalties. Violation of this Consent Order may subject Respondents to civil penalties as provided for in Section 7003(b) of RCRA, 42 U.S.C. § 6973(b), as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, 28 U.S.C. § 2461. Should Respondents violate this Consent Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to any applicable authorities, and/or may seek judicial enforcement of this Consent Order.

## XX. FORCE MAJEURE

100. Respondents agree to perform all requirements under this Consent Order within the time limits established under this Consent Order, unless the performance is delayed by a *force majeure*. For purposes of this Consent Order, a *force majeure* is defined as any event arising from causes beyond the control of Respondents, or any entity controlled by Respondents or Respondents' contractors, which delays or prevents performance of any obligation under this Consent Order despite Respondents' best efforts to fulfill the obligation. The requirement that the Respondents exercise "best efforts" to fulfill the obligation includes using best efforts to anticipate any potential *force majeure* event and best efforts to address the effects of any potential *force majeure* event: (1) as it is occurring, and (2) following the potential *force majeure* event, such that the delay is minimized to the greatest extent possible. *Force majeure* does not include financial inability to complete the Work, increased cost of performance, changes in Respondents' business or economic circumstances, or inability to attain media cleanup standards.
101. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Order, whether or not caused by a *force majeure* event, Respondents shall orally notify EPA within five (5) of when Respondents knew or should have known that the event might cause a delay. Such notice shall: (a) identify the event causing the delay, or anticipated to cause delay, and the anticipated duration of the delay; (b) provide Respondents' rationale for attributing such delay to a *force majeure* event; (c) state the measures taken or to be taken to prevent or minimize the delay; (d) estimate the timetable for implementation of those measures; and (e) state whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health or the environment. Respondents shall undertake best efforts to avoid and minimize the delay. Failure to comply with the notice provision of this paragraph and to undertake best efforts to avoid and minimize the delay shall waive any claim of *force majeure* by Respondents. Respondents shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.
102. If EPA determines that a delay in performance or anticipated delay in fulfilling a requirement of this Consent Order is or was attributable to a *force majeure*, then the time period for performance of that requirement will be extended as deemed necessary by EPA. If EPA determines that the delay or anticipated delay has been or will be caused by a *force majeure*, then EPA will notify Respondents, in writing, of the length of the extension, if any, for performance of such obligations affected by the *force majeure*. Any

such extensions shall not alter Respondents' obligation to perform or complete other tasks required by this Consent Order which are not directly affected by the *force majeure*.

103. If EPA disagrees with Respondents' assertion of a *force majeure*, then Respondents may elect to invoke the dispute resolution provision, and shall follow the procedures set forth in Section XVIII (Dispute Resolution). In any such proceeding, Respondents shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a *force majeure*, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that Respondents' best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondents complied with the requirements of this Section. If Respondents satisfy this burden, then EPA will extend the time for performance as EPA determines is necessary.

## XXI. RESERVATION OF RIGHTS

104. Notwithstanding any other provisions of this Consent Order, the United States retains all of its authority to take, direct, or order any and all actions necessary to protect public health or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or constituents, or hazardous or solid waste or constituents of such wastes, on, at, or from the Site, including but not limited to the right to bring enforcement actions under RCRA, CERCLA, and any other applicable statutes or regulations.
105. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to Respondents' failure to comply with any of the requirements of this Consent Order, including without limitation the assessment of penalties under Section 7003 of RCRA, 42 U.S.C. § 6973.
106. This Consent Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, claims, and/or authorities, civil or criminal, which EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
107. This Consent Order is not intended to be nor shall it be construed to be a permit. Respondents acknowledge and agree that EPA's approval of the Work and/or work plans does not constitute a warranty or representation that the Work and/or work plans will achieve the required cleanup or performance standards. Compliance by Respondents with the terms of this Consent Order shall not relieve Respondents of their obligations to comply with RCRA or any other applicable local, state, or federal laws and regulations.
108. Notwithstanding any other provision of this Consent Order, no action or decision by EPA pursuant to this Consent Order, including without limitation, decisions of the Regional Administrator, the Director of the Air and Waste Management Division, or any authorized representative of EPA, shall constitute final agency action giving rise to any

right of judicial review prior to EPA's initiation of a judicial action to enforce this Consent Order, including an action for penalties or an action to compel Respondents' compliance with the terms and conditions of this Consent Order.

## XXII. OTHER CLAIMS

109. By issuance of this Consent Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA will not be deemed a party to any contract, agreement or other arrangement entered into by Respondents or their officers, directors, employees, agents, successors, assigns, trustees, receivers, contractors, or consultants in carrying out actions pursuant to this Consent Order.
110. Respondents waive all claims against the United States relating to or arising out of conduct of this Consent Order, including, but not limited to, contribution and counterclaims.
111. Respondents shall bear their own litigation costs and attorney fees.
112. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Site, Respondents shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter.

## XXIII. INSURANCE

113. Respondents shall secure, and shall maintain in force for the duration of this Consent Order and for two (2) years after the completion of all activities required by this Consent Order, comprehensive general liability insurance and automobile insurance with limits of \$1 million dollars, combined single limit, naming EPA as an additional insured. Annually, on the anniversary of the Effective Date of this Consent Order, Respondents shall provide EPA with certificates of such insurance or other acceptable assurance of coverage. If Respondents demonstrate by evidence satisfactory to EPA that their contractors and subcontractors maintain insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by the contractors and subcontractors, or other acceptable assurance of coverage.
114. For the duration of this Consent Order, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of employer's liability insurance and worker's compensation insurance for all persons performing the Work on behalf of Respondents, in furtherance of this Consent

Order.

115. At least seven (7) days prior to commencing the Work under this Consent Order, Respondents shall certify to EPA that their contractors and subcontractors have obtained the required insurance.

#### **XXIV. COST ESTIMATES AND FINANCIAL ASSURANCE**

116. Cost Estimates. Within sixty (60) days after the Effective Date of this Consent Order Respondents shall review the detailed cost estimate contained in the Remedial Alternatives Study Report (2004) for the selected remedy, modify the estimate to include all costs related to the preparation of documents required under this Consent Order as necessary, and submit to EPA the detailed written initial estimate, in current dollars, of the cost of hiring a third party to perform the Work described in Section IX (Work to Be Performed) of this Consent Order and the attached SOW. A third party is a party who: (i) is neither a parent nor a subsidiary of Respondents, and (ii) does not share a common parent or subsidiary with Respondents. The initial cost estimate must account for the total costs of the Work described in Section IX (Work to Be Performed) and the SOW for the entire period of this Consent Order, including any necessary long term costs, such as operation and maintenance costs, monitoring costs, and institutional controls. The cost estimate must not incorporate any salvage value that may be realized from the sale of wastes, site structures or equipment, land or other assets associated with the Site.
117. Respondents must annually review, and adjust the cost estimate(s) by December 31<sup>st</sup> of each year until the Work required by this Consent Order is completed. The cost estimate will consider future tasks required by the SOW and significant changes in projected future expenditure as compared to the initial estimate. In addition, Respondents must adjust the cost estimate if EPA determines that any additional work is required, pursuant to Section XXVII (Additional Work), or if any other conditions increase the cost of the Work to be performed under this Consent Order.
118. Respondents shall submit each annual cost estimate to EPA for review pursuant to Section X (EPA Approval of Deliverables).
119. Assurances of Financial Responsibility for Completing the Work. In order to secure the full and final completion of the Work in accordance with the Consent Order, Respondents shall establish and maintain financial assurance using one of the mechanisms provided by 40 C.F.R. Part 264.
120. Within sixty (60) days of the Effective Date of this Consent Order, Respondents shall submit a draft summary of the financial assurance mechanism they select to EPA for review pursuant to Section X (EPA Approval of Deliverables). The financial assurance shall be in the form and substance satisfactory to EPA, determined in EPA's sole discretion.

121. Within sixty (60) days after EPA's approval of both the initial cost estimate and the draft financial assurance mechanism, whichever is later, Respondents shall finalize the financial assurance mechanism approved by EPA and send a copy to EPA.
122. If the annually adjusted cost estimate for the cost of completing the remaining Work exceeds the amount of financial assurance already provided pursuant to this Section, Respondents shall, within ninety (90) days thereafter, increase the amount of the financial assurance to cover such cost increase. In addition, in the event that EPA determines at any time that the financial assurances provided pursuant to this Consent Order are inadequate, Respondents shall, within ninety (90) days after receipt of notice of EPA's determination, correct the inadequacy. Furthermore, if at any time EPA notifies Respondents that the anticipated cost of completing the Work has increased above the established level of financial assurance and provides the basis for such determination, then, within ninety (90) days of receipt of such notification, Respondents shall increase the amount of financial assurance to cover such cost increase.
123. Respondents' inability to post financial assurance for completion of the Work shall in no way excuse performance of any other requirements of this Consent Order, including, without limitation, Respondents' obligation to complete the Work in strict accordance with the terms of this Consent Order.
124. Reduction of Amount of Financial Assurance. If Respondents believe that the estimated cost to complete the remaining Work has diminished below the amount covered by the existing financial assurance provided under this Consent Order, Respondents may, at a time agreed to by EPA and Respondents, submit a written proposal to EPA to reduce the amount of the financial assurance provided under this Section to the estimated cost of the remaining Work to be performed. The written proposal shall specify, at a minimum, the cost of the remaining Work to be performed and the basis upon which such cost was calculated. The decision whether to approve a proposal to reduce the amount of financial assurance shall be within EPA's sole discretion and EPA shall notify Respondents of its decision regarding such proposal in writing. Respondents may reduce the amount of the financial assurance only after receiving EPA's written decision and only in accordance with and to the extent permitted by such written decision. In the event of a dispute, Respondents may reduce the amount of the financial assurance required by this Section only in accordance with a final administrative decision resolving such dispute under Section XVIII (Dispute Resolution) of this Consent Order.
125. Release of Financial Assurance. Respondents may submit a written request to the Director of Air and Waste Management Division of EPA Region 7 requesting that EPA release Respondents from the requirement to maintain financial assurance under this Section at such time as EPA has provided written notice, pursuant to Section XXVIII (Termination and Satisfaction) that Respondents have demonstrated that all the terms of this Consent Order have been addressed to the satisfaction of EPA. The Division Director shall notify Respondents, and the Trustee if there is a financial assurance Trust,

in writing the Respondents are released from all financial assurance obligations under this Consent Order.

#### **XXV. INDEMNIFICATION**

126. Respondents agree to indemnify, save and hold harmless the United States, its officials, agents, contractors, employees, and representatives from any and all claims or causes of action: (a) arising from, or on account of, acts or omissions of Respondents, Respondents' directors, officers, employees, agents, successors, assigns, trustees, receivers, contractors, or consultants in carrying out actions pursuant to this Consent Order; and (b) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondents and any persons for performance of the Work on or relating to the Site, including claims on account of construction delays. In addition, Respondents agree to pay the United States all costs incurred by the United States, including litigation costs arising from or on account of claims made against the United States based on any of the acts or omissions referred to in the preceding sentence. Respondents shall not be responsible for indemnifying any party for claims or causes of action arising from or on account of acts or omissions of that party.

#### **XXVI. MODIFICATION OF THIS CONSENT ORDER**

127. Except for modification of work plans as provided in Section XI (Modification of the Work Plans), this Consent Order may only be modified by the mutual agreement of EPA and Respondents. Any agreed modifications shall: be in writing; be signed by both parties; have as their effective date the date on which they are signed by EPA; and be incorporated into this Consent Order.
128. No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain such formal approval as may be required by this Consent Order, and to comply with all requirements of this Consent Order unless it is formally modified. Any deliverables, plans, technical memoranda, reports, specifications, schedules and attachments required by this Consent Order are, upon approval by EPA, incorporated into and enforceable under this Consent Order.

#### **XXVII. ADDITIONAL WORK**

129. EPA may determine or Respondents may propose that certain tasks are necessary in addition to or in lieu of the tasks included in any EPA-approved work plan when such Additional Work is necessary to meet the objectives set forth in Section I (Introduction). EPA may determine that Respondents shall perform any additional work and EPA will specify, in writing, the basis for its determination that any Additional Work is necessary. Within fifteen (15) days after the receipt of such determination, Respondents shall have the opportunity to meet or confer with EPA to discuss any Additional Work. Respondents shall submit for EPA approval a work plan for any Additional Work. Such work plan shall be submitted within sixty (60) days of Respondents' receipt of EPA's

determination that any Additional Work is necessary, or according to an alternative schedule established by EPA. Upon approval of a work plan for any Additional Work, Respondents shall implement the work plan for any Additional Work in accordance with the schedule and provisions contained therein. The work plan for any Additional Work shall be incorporated by reference into this Consent Order.

#### **XXVIII. TERMINATION AND SATISFACTION**

130. The provisions of this Consent Order shall be deemed terminated and satisfied by Respondents upon written notice from EPA that Respondents have demonstrated that all of the terms of this Consent Order, including any Additional Work as may be performed pursuant to Section XXVII (Additional Work) and any stipulated penalties demanded by EPA under Section XIX (Penalties), have been addressed to the satisfaction of EPA. Termination of this Consent Order shall not terminate Respondents' obligation to comply with: Sections XV (Sampling, Data Availability, Access and Institutional Controls); XVII (Record Retention); XXI (Reservation of Rights); and XXV (Indemnification) of this Consent Order and to maintain institutional and engineering controls.

#### **XXIX. PUBLIC COMMENT ON THIS CONSENT ORDER**

131. EPA shall provide public notice, opportunity for a public meeting and a reasonable opportunity for public comment on the proposed settlement. After consideration of any comments submitted during a public comment period of not less than thirty (30) days (which EPA may extend), EPA may withhold consent or seek to amend all or part of this Consent Order if EPA determines that comments received disclose facts or considerations which indicate that this Consent Order is inappropriate, improper, or inadequate.

#### **XXX. SEVERABILITY**

132. If a court issues an order that invalidates any provision of this Consent Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Consent Order, Respondents shall remain bound to comply with all provisions of this Consent Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

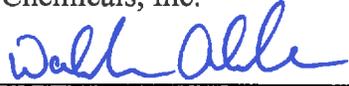
#### **XXXI. EFFECTIVE DATE**

133. This Consent Order shall be effective when EPA signs this Consent Order after the public comment period as specified in Section XXIX (Public Comment on This Consent Order) above. Within two (2) business days of signing this Consent Order, EPA will provide Respondents with a copy of the signature page of this Consent Order signed by the Director of the Air and Waste Management Division, EPA Region 7. The undersigned representative of Respondents certify that they are fully authorized to enter into the terms and conditions of this Consent Order and to bind the parties they represent to this document. Respondents agree not to contest the validity or terms of this Consent Order,

or the procedures underlying or relating to it in any action brought by the United States, including EPA, to enforce its terms or seek penalties for its violation. Respondents retain its right to assert claims against any third parties with respect to this Facility.

Agreed this 29<sup>TH</sup> day of FEBRUARY, 2012.

Elementis Chemicals, Inc.

By:   
Signature

WALKER ALLEN  
Print Name

PRESIDENT  
Title

Harcros Chemicals, Inc.

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title



or the procedures underlying or relating to it in any action brought by the United States, including EPA, to enforce its terms or seek penalties for its violation. Respondents retain its right to assert claims against any third parties with respect to this Facility.

Agreed this \_\_\_\_ day of \_\_\_\_\_, 2012.

Elementis Chemicals, Inc.

By: \_\_\_\_\_  
Signature  
\_\_\_\_\_  
Print Name  
\_\_\_\_\_  
Title

Harcros Chemicals, Inc.

By:  \_\_\_\_\_  
Signature  
JOHN F. O'NEILL  
\_\_\_\_\_  
Print Name  
SVP  
\_\_\_\_\_  
Title



T H Agriculture & Nutrition, LLC

By: Philips Electronics North America Corporation  
as attorney-in-fact for T H Agriculture & Nutrition, LLC

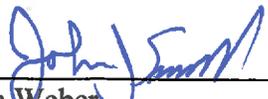
By:   
Signature

Joseph E. Innamorati  
Print Name

Senior Vice President  
Title



It is so ORDERED and Agreed this 29<sup>th</sup> day of May, 2012.

By:  Date: 5/29/12  
Rebecca Weber  
 Director, Air and Waste Management Division  
Region 7, U.S. Environmental Protection Agency

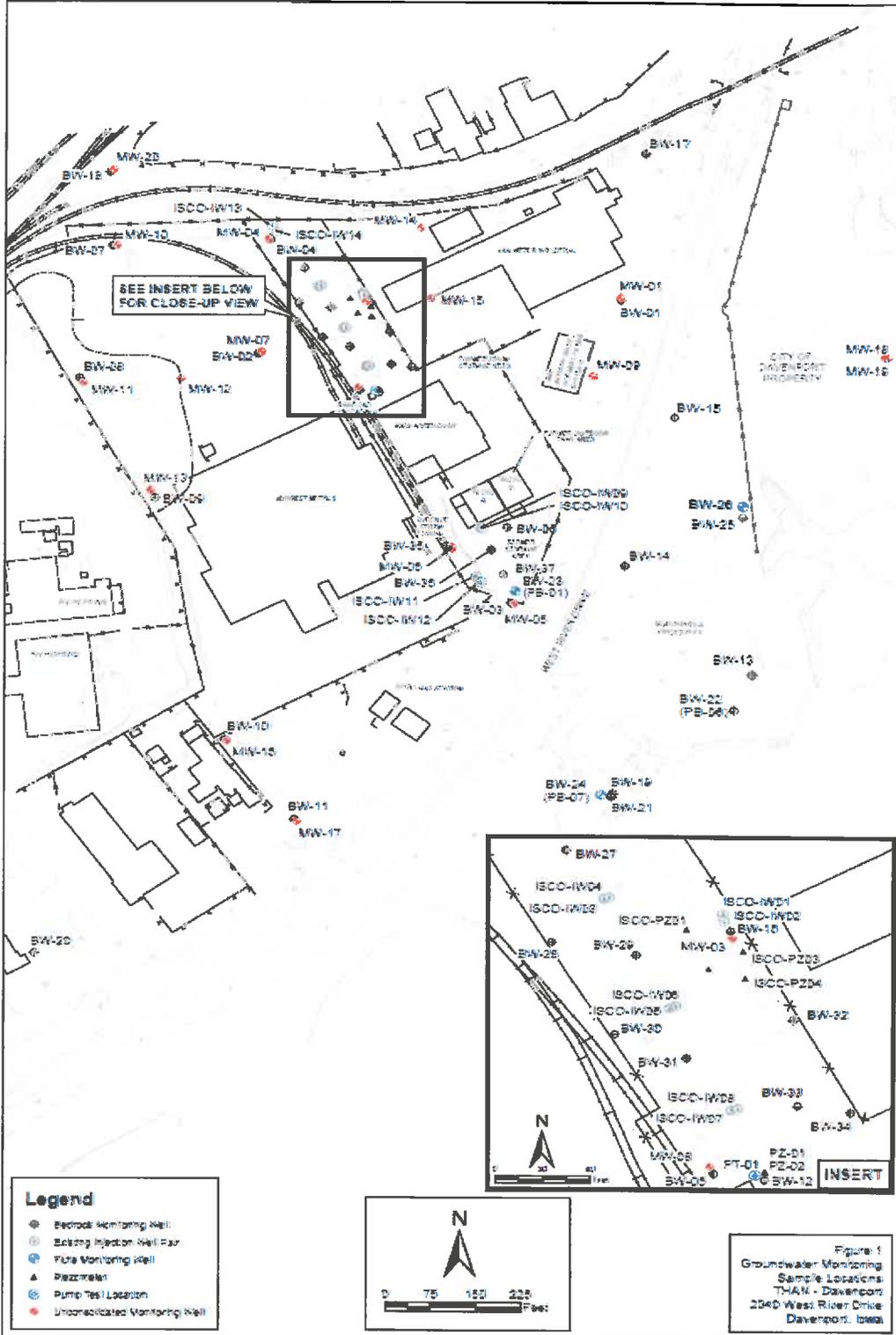
EFFECTIVE DATE: 5/29/12



# Attachment A

## Facility Map

(Provided courtesy of CH2MHILL)





## ATTACHMENT B

### CORRECTIVE MEASURES IMPLEMENTATION SCOPE OF WORK

#### HARCROS CHEMICALS, INC. DAVENPORT, SCOTT COUNTY, IOWA

**INTRODUCTION AND PURPOSE:** This Scope of Work (SOW) is incorporated into and made a part of the Administrative Order on Consent (“Consent Order”) entered into by Elementis Chemicals, Inc., Harcros Chemicals, Inc., T H Agriculture & Nutrition, L.L.C. (“Respondents”) and the United States Environmental Protection Agency (EPA), Region 7, for implementation of corrective measures at the Harcros Chemicals facility, 2040 West River Drive, Davenport, Scott County, Iowa (“Facility”). The Respondents shall perform a Corrective Measures Implementation (CMI) program that implements the remedy selected by EPA to prevent, mitigate, and/or remediate migration or release of solid and/or hazardous wastes and/or hazardous constituents at, and/or from, the Facility. The purpose of the CMI program is to design, construct, operate, maintain and monitor the performance of the corrective measures selected in the Final Decision and Response to Comments (FDD), dated September 21, 2010, or subsequent corrective measures deemed necessary by EPA. Details of these Corrective Measures were presented in the EPA approved Remedial Alternatives Study Report (RAS) dated August 2004 as amended by Addendum 1 to the RAS Report dated July 2005. Corrective measures are intended to protect human health and the environment from harm or potential harm from contamination. The work will be performed in general accordance with EPA’s *RCRA Corrective Action Plan*, EPA/520-R-94-004, OSWER Directive 9902.3-2A, May 1994, and all other applicable EPA guidance, including EPA’s *Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action* (EPA 530-R-04-030), April 2004, and subsequent revisions and additions. The selected corrective measures must be implemented and maintained until the Remedial Action Objectives (RAOs) and the conditions of the Consent Order have been met.

#### **Scope –**

Four deliverables, as outlined below, will be required as part of the CMI: (1) Operation, Monitoring and Maintenance Plan, (2) Annual Remedy Performance Report, (3) 5-Year Remedy Review, and (4) Corrective Measures Completion Report.

#### **TASK 1: Operation, Monitoring and Maintenance Plan (OMMP)**

Detailed implementation of the actions required for the CMI will be documented in the Operations, Monitoring, and Maintenance Plan (OMMP). The OMMP shall be developed within sixty (60) days of the effective date of this Consent Order and shall include the following components:

#### **Item 1: Background**

The background section of the OMMP will include:

- a. Project team roles, lines of communication, and responsibilities;
- b. Site description of current conditions and overview of the site conceptual model;
- c. Overview of EPA-selected remedy;
- d. Operation, Monitoring, Maintenance, and Reporting Schedule;
- e. RAOs;
- f. Data and document management procedures;
- g. Waste generation, management and disposal procedures; and
- h. Cost Estimate for implementation of the corrective measures.

**Item 2: Long-Term Groundwater Monitoring Plan**

The long-term groundwater monitoring section of the OMMP will identify data quality objectives for groundwater sampling as it relates to (1) monitoring the nature and extent of the groundwater plume, (2) evaluating the progress of the EPA-selected groundwater corrective measures that will be implemented at the site (In Situ Chemical Oxidation (ISCO), Monitored Natural Attenuation (MNA), and (3) establishing triggers for the implementation of the Enhanced In Situ Bioremediation (EISB) contingency.

This section will also include:

- a. Purpose of monitoring, monitoring wells, analytes and analytical methods, detection limits, sampling frequency, and schedule;
- b. Data quality control/quality assurance procedures;
- c. Well Inspection and maintenance procedures;
- d. Sampling methods summary (complete details in the QAPP/SAP);
- e. Criteria for modifying the monitoring program;
- f. Performance standards, criteria for documenting attainment of RAOs and evaluating achievement of cleanup standards and methodology for data evaluation; and
- g. Criteria for triggering groundwater treatment contingencies.

**Item 3: Enhanced In Situ Bioremediation (EISB) Groundwater Remediation Contingency Implementation Plan**

This EISB section will provide design considerations in the event long-term monitoring, as described in Item 2, identifies the need for EISB to achieve RAOs. This information will be refined as needed prior to full implementation of the EISB, if triggered.

This section will describe the Contingency Plan design considerations including:

- a. Identify the most appropriate substrate based on site conditions including estimated substrate dose, and identification of any additional amendments required to establish the appropriate biochemical environment;
- b. A description of the configuration of the treatment zone (conceptual design) and delivery system for substrate and microorganisms;
- c. Identification of the hydrogeological constraints on amendment injection and distribution;
- d. A description of the modeling, bench-scale tests, or field tests needed to evaluate the fundamentals of the proposed EISB design;

- e. A description of any considerations for integrating the EISB with on-going In Situ Chemical Oxidation treatment of on-site groundwater;
- f. A description of the process and performance monitoring required for EISB performance evaluation and optimization;
- g. A description of the performance monitoring report, how data will be evaluated and conditions warranting consideration of other treatment technologies (e.g., plume expansion, gas-phase byproducts, metals solubilization, etc.); and
- h. Data reporting schedule.

**Item 4: ISCO Injection Plan**

This section of the OMMP will identify criteria for additional ISCO injections and details of the injections.

This section will include:

- a. Identification of ISCO substrate, concentration, and volume;
- b. Criteria for triggering additional ISCO injection;
- c. Criteria for modifying injection concentrations;
- d. Procedures for injection, including equipment, additional monitoring, etc.;
- e. Criteria for selecting injection location or modifying injection locations; and
- f. Identification of target treatment zones.

**Item 5: Health and Safety Plan (HASP)**

This section of the OMMP will present health and safety protocols for all field activities. The HASP will include site-specific personnel training requirements. The HASP must, at a minimum, comply with all applicable Occupational Safety and Health Act (“OSHA”) requirements.

**Item 6: Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP)**

Respondents shall submit a Quality Assurance Project Plan (QAPP)/Sampling and Analysis Plan (SAP). The combined QAPP/SAP shall address quality assurance, quality control, and chain of custody procedures for all sampling, monitoring and analytical activities including ISCO, EISB and MNA performance monitoring. The QAPP/SAP will also provide information regarding field sampling procedures and equipment, decontamination procedures, analytical methods, and laboratory reporting limits. Respondents shall follow “EPA Requirements for Quality Assurance Project Plans” (QA/R5)” (EPA/240/B-01/003, March 2001), “Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/240/R-02/009, December 2002), and “EPA Requirements for Quality Management Plans (QA/R-2)” (EPA/240/B-01/002, March 2001) and subsequent revisions of these documents, as well as other applicable documents identified by EPA.

**Item 7: Institutional Controls Plan**

This section of the OMMP will include:

- a. Detailed description of all institutional controls (ICs) required by the EPA-approved final remedy;
- b. Implementation procedures;
- c. Schedule for implementation;
- d. Procedures to verify ICs are in place and the party responsible for implementing,

- monitoring and verifying IC effectiveness; and
- e. Documentation of ICs once they have been put in place (recorded deed restriction, etc.).

This section will also be provided to EPA as a stand-alone document.

## **TASK 2: ANNUAL REMEDY PERFORMANCE REPORT (ARPR)**

An ARPR shall be submitted annually to EPA by March 1<sup>st</sup> of each year until EPA provides written notice that Respondents have demonstrated that the terms of the Consent Order have been satisfied. The ARPR shall include the following components:

- a. Identification of reporting time frame;
- b. Summary of work performed, including any deviations from the OMMP;
- c. Discussion of site conditions during sampling;
- d. Forecast of work to be performed during next reporting period;
- e. Presentation of data collected, an evaluation of data quality, including tables, figures and charts;
- f. Comparison of data collected to established cleanup goals, natural attenuation criteria, etc.;
- g. Evaluation of data trends including statistical analysis, if appropriate;
- h. Summary of impact of new data on site conceptual model;
- i. Summary of progress towards achieving RAOs;
- j. Evaluation and verification that ICs are in place and effective; and
- k. Recommendations and rationale for proposed monitoring changes, changes to injection schedule, implementation of contingencies, etc.

## **TASK 3: 5-YEAR CORRECTIVE MEASURES PERFORMANCE EVALUATION (CMPE) REPORT**

A 5-Year Corrective Measures Performance Evaluation Report will be submitted to EPA on or before the anniversary date of the effective date of the Consent Order. The CMPE Report will document the evaluation of the effectiveness and performance of the on-site ISCO corrective measures, off-site Monitored Natural Attenuation corrective measures (or EISB if implemented) and the institutional controls in preventing unacceptable human or environmental exposure. This evaluation shall be consistent with the CERCLA Comprehensive Five-Year Review Guidance, OSWER 9355.7-03B-P, and any subsequent revisions or additions, and shall include the following:

- a. A description of its purpose;
- b. A summary of the objectives of on-site and off-site contaminated groundwater treatment;
- c. A synopsis of the objectives of the institutional controls;
- d. A discussion on the effectiveness of the corrective measures and ICs in protecting human health and the environment using sampling and analysis results;
- e. A discussion on progress toward attaining site-specific media cleanup goals, an estimate of the time remaining to attain those goals, and identification of limiting factors in attaining those goals;

- f. Any changed circumstances that render the remedy, including engineered and institutional controls, ineffective; and
- g. Proposed modifications to the corrective measures to meet the goals of the approved remedy.

**TASK 4: CORRECTIVE MEASURES COMPLETION REPORT (CMCR)**

An CMCR will be developed when Respondents obtain information demonstrating that the completion criteria, which are described in the OMMP, for all of the corrective measures have been achieved. The purpose of the CMCR is to fully document how the RAOs and corrective measure completion criteria have been satisfied, and to justify why the corrective measure and/or monitoring may cease. The CMCR will be submitted within ninety (90) days of receipt of the notice of completion from EPA. The CMCR shall, at a minimum, include the following elements:

- a. A synopsis of the corrective measures implemented;
- b. The Corrective Measures Completion Criteria: Describe the process and criteria for determining when the corrective measures and maintenance and monitoring may cease. Corrective measure completion criteria were described in the EPA-approved OMMP;
- c. A demonstration that the completion criteria have been met. Include results of testing and/or monitoring, indicating how operation of the corrective measures compare to the completion criteria;
- d. A summary of work accomplishments (e.g., performance levels achieved, total treated and/or excavated volumes, nature and volume of wastes generated, etc.);
- e. A summary of significant activities that occurred during operations. Include a discussion of problems encountered and how they were addressed; and
- f. A discussion of the potential impacts that cessation of maintenance and monitoring could have on the future effectiveness of the corrective measure and/or potential receptors.

**Remedial Action Objectives:** RAOs specific to this Site are EPA Maximum Contaminant Levels (MCLs) and EPA Regional Screening Levels (RSLs) for constituents that do not have an established MCL.

Compound	RAOs (micrograms per liter[µg/l])	Source of RAO
1,1,1-Trichloroethane (1,1,1-TCA)	200	MCL
1,1-Dichloroethane (1,1-DCA)	2.4	RSL
1,1-Dichloroethene (1,1-DCE)	7	MCL
1,2-Dichloroethane (1,2-DCA)	5	MCL
2-Butanone (Methyl ethyl ketone, MEK)	7,100	RSL

Acetone	22,000	RSL
Benzene	5	MCL
Chloroethane (ethyl chloride)	21,000	RSL
cis-1,2-Dichloroethene (cis-1,2-DCE)	70	MCL
Ethylbenzene	700	MCL
Methylene Chloride	5	MCL
Styrene	100	MCL
Tetrachloroethene (PCE)	5	MCL
Toluene	1,000	MCL
Trans-1,2-Dichloroethene (trans-1,2-DCE)	100	MCL
Trichloroethene (TCE)	5	MCL
Vinyl Chloride (VC)	2	MCL
Xylenes (total)	10,000	MCL

Maximum Contaminant Levels (MCLs) from EPA's Safe Drinking Water Act Regulations and Health Advisories (EPA, 2009)  
RSL USEPA Regional Screening Levels (EPA, 2010)  
Respondents believe that benzene originates from off-site sources other than Respondents' operations.

If new information becomes available demonstrating that the clean-up levels listed above are no longer protective of human health and the environment, the updated MCLs and/or RSL values will be evaluated for incorporation into the remedy. Likewise, if the MCLs and/or RSL values are made less stringent, Respondents will be responsible for requesting modification to the RAOs.

**Performance Objectives:** Performance objectives under this Consent Order consist of attainment of all the RAOs for groundwater listed in the table above. This pertains to constituent concentrations in both on-site and off-site groundwater.

**On-site Groundwater:** Performance monitoring shall consist of groundwater sampling and analysis in accordance with the OMMP described in Task 1. Analytical data shall be evaluated in accordance with EPA guidance to review constituent trends over time with respect to overall decrease in contaminant mass and individual constituent concentrations, and the effectiveness of oxidant treatment. Data evaluation tools may include statistical analysis, parent/daughter product ratio trends, and oxidant distribution. Additional evaluation tools will be added as necessary. If necessary, and upon EPA approval, design parameters for oxidant treatment may be adjusted to optimize groundwater treatment. In addition, Respondents shall on an annual basis conduct visual inspections of the Facility and review of pertinent records regarding the Facility to verify that the institutional controls are being properly maintained. Evaluation of institutional controls shall be documented in the IC Plan, developed in accordance with Task 1 of the SOW.

**Off-site Groundwater:** Analytical and geochemical data from off-site monitoring wells shall be evaluated in accordance with EPA guidance to review contaminant trends over time with respect

to overall decrease in contaminant mass and individual constituent concentrations. Data evaluation tools may include statistical analysis, parent/daughter product ratio trends, and graphical trend analysis. Additional evaluation tools will be added as necessary. In addition, the nature and extent of constituents in groundwater will be evaluated to ensure that the plume is not migrating into previously unaffected areas and properties, including the Mississippi River, and to verify that geochemical and geologic conditions are still favorable for natural attenuation of all constituents. The data evaluation results will be compared to the EISB contingency triggers. The Respondents shall make a recommendation as to whether or not implementation of the contingency should be considered. EPA may require the implementation of the EISB contingency in accordance with the procedures set forth in Section X of the Consent Order.



## ATTACHMENT C

### FINAL DECISION AND RESPONSE TO COMMENTS HARCROS CHEMICALS DAVENPORT, IOWA

#### INTRODUCTION

This Final Decision and Response to Comments (FD/RTC) is being presented by the U.S. Environmental Protection Agency (EPA). The purpose of the FD/RTC is to present issues and concerns raised during the public comment period on the remedy proposed for the Harcross Chemicals site, to provide responses to those issues and concerns, and to identify the remedy EPA has selected for the site. EPA received one comment during the public comment period; however, the proposed remedy has not been altered from the one originally proposed.

#### SELECTED REMEDY

The corrective action remedy for on-site groundwater is In-Situ Chemical Oxidation (ISCO). Additional ISCO injection wells were installed in close proximity to the most contaminated wells at the site in the northern and southern portions of the site. Sodium permanganate is being injected into groundwater in these areas to increase the rate of contaminant degradation. Additional oxidant injections will be performed in the future to ensure continued degradation of contaminants. The corrective action remedy for off-site groundwater is monitored natural attenuation (MNA) with Enhanced In Situ Bioremediation (EISB) as a contingency. Implementation of EISB includes the addition of a substrate or amendment to select areas of the off-site shallow bedrock groundwater to enhance the biological components of natural attenuation processes. This will result in further reduction in the mass of constituents in the off-site groundwater plume, resulting in higher rates of attenuation in off-site groundwater.

Groundwater will continue to be sampled in on-site monitoring wells semi-annually in conjunction with continued permanganate injections and associated performance monitoring. EPA may adjust the frequency of monitoring in the future based on plume response. In addition, select off-site monitoring wells will be monitored regularly to collect data about contaminant concentrations in the off-site groundwater plume. The groundwater plume will be monitored closely in accordance with strict performance standards to confirm the contaminant plume is diminishing within a reasonable time frame and will not flow beyond its current extent. EISB will be utilized to further reduce contaminant concentrations in the off-site groundwater plume if performance standards are not being met by the MNA remedy. Institutional controls will be implemented to limit the site to industrial use only, and an environmental covenant on the property will be utilized to prevent groundwater use and exposure.

#### *Institutional Controls:*

Since groundwater at the facility still contains contaminants at concentrations exceeding clean-up levels, institutional controls will be used to prevent unacceptable exposure of site employees to hazardous substances remaining at the site and to prohibit installation of on-site drinking water or other wells. The primary institutional controls for the remedy include:

- Limiting the site to industrial use only;
- Implementing site-specific health and safety protocols for site workers to limit potential contact with contaminated media;
- Prior notification to the site's senior project manager and approval for activities that may expose site or construction/utility works to contaminated groundwater (i.e., excavation);
- Prohibiting the installation of potable, industrial, or irrigation water wells;
- Providing access to EPA or State of Iowa representatives for sampling and inspection of the injection and groundwater monitoring wells;
- Conducting annual inspections that will include visual inspection of the site and review of pertinent records relating to the site. Annual inspections will verify that these institutional controls are being properly maintained. Access will be provided to EPA or State of Iowa representatives for verifying land use.
- Providing notice to prospective purchasers and occupants that there are contaminants in the groundwater; and
- Off-site exposure to contaminated groundwater will be prevented by providing notification to owners/operators of affected neighboring properties of plume presence and toxicity.

Each of the foregoing proposed remedies and several alternatives were initially evaluated against the following general standards for corrective measures and selection decision factors.

General Standards for Corrective Measures (required elements)

- Overall Protection of Human Health and the Environment- how the alternatives provide human health and environmental protection.
- Attain Media Clean-up Standards- the ability of alternatives to achieve the media clean-up standards.
- Control of the Sources of Releases- how alternatives reduce or eliminate to the maximum extent possible further releases.
- Compliance with Standards for Management of Waste- how the alternatives assure that management of wastes during corrective measures is conducted in a protective manner.

Selection Decision Factors (used to select among the alternatives)

- Long-Term Reliability and Effectiveness- magnitude of residual risk, adequacy and reliability of controls.
- Reduction of Toxicity, Mobility, and Volume of Waste- treatment processes and materials treated; amount of hazardous materials destroyed or treated; degree of expected reductions in toxicity, mobility, or volume.
- Short-Term Effectiveness- protection of community during remedial actions, protection of workers during remedial actions, environmental impacts, and time until Corrective Action Objectives are achieved.
- Implement ability- ability to construct and operate the technology, reliability of the technology, and ability to monitor effectiveness of the remedy.
- Cost- capital costs, operating and maintenance costs, and present worth costs.

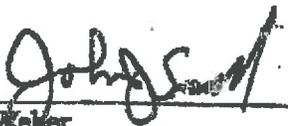
Based upon a comparison to the foregoing general standards and selection decision factors, EPA determined that the proposed remedies for the site represented the best balance of effectiveness, implement ability, cost and environmental protectiveness. Therefore, sodium permanganate injection, MNA with Institutional Controls, and enhanced bioremediation were selected as the final remedy.

**PUBLIC PARTICIPATION ACTIVITIES**

A public comment period was held from August 16, 2010 to September 15, 2010. Only one comment was received during the public comment period. The Iowa Department of Natural Resources supported EPA's selection of the groundwater corrective action remedy. Therefore, no modifications or changes to the proposed remedies were made as a result of public comment.

**DECLARATIONS**

Based on the administrative record compiled for these corrective actions, I have determined that the selected remedies to be ordered at this site are appropriate and will be protective of human health and the environment.



*for* Becky Weber  
Director  
Air and Waste Management Division

9/21/10

Date



## ATTACHMENT D

### ENVIRONMENTAL COVENANT

This environmental covenant is established pursuant to Iowa Code chapter 455I entitled Uniform Environmental Covenants Act (*see also* 2005 Iowa Acts, Senate File 375).

[*INSERT name(s) of fee title owners of affected property*], hereafter "grantor(s)" and [*names of all holder(s)*] enter into this environmental covenant for the purpose of subjecting the property described below to certain activity and use limitations in accordance with the terms and conditions as specified below and the provisions of Iowa Code section 455B.103(7), 455I.

1. **Affected Property.** The grantor(s) identified below is the fee title owner(s) of the property located at 2040 West River Drive, Davenport, Iowa. The property is legally described as:

Hereinafter, the affected property will be referred to as "the property."

2. **Risk Management and Institutional Controls.** [*Insert name of party*] has undertaken corrective action remedies for groundwater contamination at the property in accordance with the United States Environmental Protection Agency's Final Decision and Response to Comments dated September 21, 2010, and an Administrative Order on Consent, EPA Docket No. RCRA-07-2012-0013 (Consent Order). Because contamination will remain in the groundwater at levels above those appropriate for unlimited use and unrestricted exposure, this Environmental Covenant is being imposed on the property for the purposes of protecting public health and the environment, and to prevent interference with the performance, and the operation and maintenance, of any environmental response project required under the terms of the Consent Order and to manage the risk of future exposure by limiting specified activities at this property and establishing affirmative obligations.

3. **Reopening.** The signatories acknowledge that failure of the activity and use limitations to serve their intended purpose including the prevention of exposure to contamination could result in the requirement of additional work by the Respondents, in accordance with the Consent Order, to ensure the protectiveness of the corrective remedial action.

4. **Identity of Grantor(s) and Holder(s).**

**GRANTOR(S):** [*INSERT name of each fee title holder*]

**HOLDERS:** [*INSERT each person signing the covenant as a holder and describe their relationship to the property. A grantor can be a holder as well. Other persons may include contract buyers, lessees, mortgage holders, municipalities, owners of the source site, and other interested parties.*]

**AGENCY:** The Iowa Department of Natural Resources (IDNR) and the U.S. Environmental Protection Agency (EPA) are each an Agency under this Environmental Covenant.

**5. Representations and Warranties.** The grantor(s) warrants to the other signatories to this covenant the following:

- a. The grantor[s] is/are the sole fee title owner[s] of the property;
- b. the grantor[s] holds sufficient fee title to the property to grant the rights and interests described in this covenant free of any conflicting legal and equitable claims;
- c. the grantor[s] has/have identified all other persons holding legal or equitable interests, including, but not limited to, contract buyers, mortgage holders, other consensual lienholders and lessees, and secured their consent either by signatures on this covenant or by a separate subordination and consent agreement attached as Exhibit [*INSERT Exhibit*].

**6. Running with the Land.** This environmental covenant is perpetual and runs with the land as provided in Iowa Code section 455I.9 until modified or terminated. The terms of this environmental covenant are binding on the grantors and all successors in interest, assigns and all transferees acquiring or owning any right, title, lien or interest in the property and their heirs, successors, assigns, grantees, executors, administrators and devisees. The term "transferee," as used in this environmental covenant, shall mean any future owner of any interest in the property or any portion thereof, including, but not limited to, owners of an interest in fee simple, contract buyers, mortgagees, easement holders and/or lessees.

**7. Activity and Use Limitations and Terms.** The property is subject to the following activity and use limitations:

- A. The Property may not be used, developed or operated in any manner that violates any applicable state or federal laws, rules and regulations and zoning requirements;
- B. The Property shall not be used or developed in any manner that impairs, degrades or compromises the corrective measures performed pursuant to the Consent Order;
- C. The Property shall not be used for residential purposes or for any purpose that could reasonably be expected to attract children, including, but not limited to schools, playgrounds, and child care facilities unless the Property has been remediated to unrestricted use standards and approved by EPA in writing;
- D. Installation of drinking water wells on the Property is prohibited;
- E. Groundwater taken from beneath the Property shall not be used for domestic purposes such as drinking, cooking or bathing.

**8. Notice of Non-Compliance.** Any property owner or subsequent transferee of an interest in the property shall notify the Department as soon as possible of conditions which would constitute a breach of the activity and use limitations in paragraph seven (7) if they have actual knowledge of these conditions or would reasonably be deemed to have knowledge within the normal course of administration of their property interest.

**9. Notice to Lessees.** Grantor, any holder with a property interest sufficient to grant a lease of the property, and any subsequent transferee shall incorporate the activity and use limitations of this covenant either in full or by reference to this instrument in any lease, license, or other instrument granting a right to possession of the property.

**10. Access to Property.** Reasonable access to the property is granted to IDNR and EPA, and their authorized representatives. Access shall be granted to any private party or its contractors which may be required by law or authorized by IDNR or EPA to conduct environmental activities at the Property to ascertain or ensure the effectiveness of the corrective remedial action. These activities may include, but are not limited to, repair and maintenance of response equipment, groundwater monitoring wells and associated aboveground or subsurface structures, and monitoring and enforcement of the terms of this environmental covenant. To determine property conditions and compliance with the terms of this Environmental Covenant, access may include groundwater sampling and monitoring, additional drilling and construction of soil borings and/or groundwater monitoring wells and other activities authorized or otherwise directed by EPA.

**11. Groundwater Hazard Statement Notice.** Iowa Code section 558.69 requires submission of a groundwater hazard statement and disclosure if "hazardous waste" exists on the property as defined in Iowa Code subsections 455B.411(3), 455B.412(2) or section 455B.464 or if the Department determines that solid waste exists on the property that is potentially hazardous. If hazardous waste is present, the groundwater hazard statement must state that the condition is being managed in accordance with Department rules. The signatories and all subsequent transferees required to submit a groundwater hazard statement under Iowa Code section 558.69 shall make reference to this environmental covenant in substantially the following form:

THE INTEREST CONVEYED IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED [ *date month, day, year* ] RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE \_\_\_\_\_ COUNTY RECORDER ON [ *date month, day, year* ] IN [ *document, book and page, or parcel number* ].

THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS: (1) THE PROPERTY SHALL BE LIMITED TO ONLY INDUSTRIAL USES OR PURPOSES; (2) INSTALLATION OF DRINKING WATER WELLS ON OR IN THE PROPERTY IS PROHIBITED; AND (3) GROUNDWATER TAKNE FROM BEMEATH THE PROPERTY SHALL NOT BE USED FOR DOMESTIC PURPOSES SUCH AS DRINING, COOKING OR BATHING.

**12. Modification and Termination.** Modification or termination of the terms of this covenant shall comply with the standards in Iowa Code chapter 455I. The terms of this environmental covenant may be modified or terminated by written consent of the Director of the Department, the then current fee simple title owner and all original signatories (unless exempted under the provisions of Iowa Code section 455I.10(1)“c” in accordance with and subject to the provisions of Iowa Code section 455I.10). The termination or modification is not effective until the document evidencing consent of all necessary persons is properly recorded. If not by consent, any modification or termination of this environmental covenant shall be in accordance with Iowa Code section 455I.9 and such additional terms as specified in this covenant.

**13. Enforcement.** The terms of this environmental covenant may be enforced in a civil action for injunctive or other equitable relief by the signatories and those persons authorized by and in accordance with Iowa Code section 455I.11.

**14. Severability.** If any provision of this environmental covenant is found to be unenforceable in any respect, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired.

**15. Governing Law.** This environmental covenant shall be governed by and interpreted in accordance with the laws of the State of Iowa.

**16. Recordation.** Within thirty (30) days after execution of this Environmental Covenant by all parties hereto, , the grantor[s] shall properly record the Environmental Covenant in the same manner as a deed to the property with the Scott County Recorder’s Office.

**17. Effective Date.** The effective date of this Environmental Covenant shall be the date upon which the fully executed environmental covenant has been properly recorded with the Scott County Recorder’s Office.

**18. Notice.** Unless otherwise notified in writing by an Agency, any document or communication required by this environmental covenant shall be submitted to:

Iowa Department of Natural Resources  
Contaminated Sites Section Supervisor  
Wallace State Office Building  
502 E 9<sup>th</sup> Street  
Des Moines, IA 50319

U.S. Environmental Protection Agency  
Director, Air and Waste Management Division  
901 N. 5<sup>th</sup> Street  
Kansas City, Kansas 66101

**19. Subordination and Consent.** By signing this environmental covenant, the signatories knowingly and intelligently acknowledge their consent to the terms of this agreement and agree

to subordinate their interest in the property. The following persons have expressly consented and subordinated interests:

**20. Notice of Change in Ownership.** Grantor and holder with sufficient property interest to convey a possessory interest in the property and any subsequent transferee with sufficient interest shall reference and incorporate the terms of this agreement into any subsequent instrument which conveys a possessory interest in the property.

**ACKNOWLEDGMENTS**

*INSERT property acknowledgments in accordance with Iowa Code section 558.20 and Iowa Code chapter 9E, and specific to individuals, partnerships, corporate entities, municipalities, State agencies and political subdivisions, etc.*

**GRANTORS**

*[INSERT signature blocks and appropriate acknowledgements for all grantors]*

\_\_\_\_\_  
Notary Public, State of Iowa:

**HOLDERS:**

*[INSERT signature blocks and appropriate acknowledgements for all holders]*

\_\_\_\_\_  
Notary Public, State of Iowa:

**AGENCY:**

\_\_\_\_\_ Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.  
Richard A Leopold  
Director, Iowa Department of Natural Resources

State of \_\_\_\_\_ )  
County of \_\_\_\_\_ ) ss.

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally appeared \_\_\_\_\_, known to me to be the Director of the Iowa Department of Natural Resources or the lawful designee of the Director who executed the foregoing instrument, and acknowledge that this person executed the same as his/her/their voluntary act and deed.

\_\_\_\_\_  
Notary Public for State of Iowa

**SUBORDINATED INTERESTS:**

*[INSERT signature blocks and appropriate acknowledgements for all subordinated interests]*



IN THE MATTER OF Harcros Chemicals Facility; Elementis Chemicals Inc. Harcros Chemicals, Inc.; T  
H Agriculture & Nutrition, L.L.C., Respondents  
Docket No. RCRA-07-2012-0013

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing Order was sent this day in the following manner to the addressees:

Copy hand delivered to  
Attorney for Complainant:

Barbara Peterson  
Assistant Regional Counsel  
Region 7  
United States Environmental Protection Agency  
901 N. 5<sup>th</sup> Street  
Kansas City, Kansas 66101

Copy by Certified Mail Return Receipt to:

John P. Cleary, P.E.  
Senior Project Manager  
Project Realty LLC  
15313 West 95<sup>th</sup> Street  
Lenexa, Kansas 66219

Dated: 5/29/12



Kathy Robinson  
Kathy Robinson  
Hearing Clerk, Region 7

