

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION VII**

09 FEB -3 AM 11:20
ENVIRONMENTAL PROTECTION
AGENCY-REGION VII
REGIONAL HEARING CLERK

IN THE MATTER OF:

Des Moines Ex Ordnance Site
Landfill and Lagoon Complex
Operable Unit 1
Ankeny, Polk County, Iowa

City of Ankeny, Iowa, and
John Deere Des Moines Works of Deere &
Company, Respondents

and
The U.S. Army Corps of Engineers, Settling
Federal Agency

**ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON
CONSENT FOR REMOVAL ACTION**

U.S. EPA Region VII
CERCLA Docket No. 07-2006-0127

Proceeding Under Sections 104, 106(a), 107
and 122 of the Comprehensive
Environmental Response, Compensation,
and Liability Act, as amended, 42 U.S.C. §§
9604, 9606(a), 9607 and 9622

TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS	1
II.	PARTIES BOUND	1
III.	DEFINITIONS	2
IV.	EPA'S FINDINGS OF FACT	5
V.	CONCLUSIONS OF LAW AND DETERMINATIONS	8
VI.	SETTLEMENT AGREEMENT AND ORDER	9
VII.	DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON- SCENE COORDINATOR	9
VIII.	WORK TO BE PERFORMED	10
IX.	SITE ACCESS	13
X.	ACCESS TO INFORMATION	14
XI.	RECORD RETENTION	15
XII.	COMPLIANCE WITH OTHER LAWS	16
XIII.	EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES	16
XIV.	AUTHORITY OF REMEDIAL PROJECT MANAGER	17
XV.	PAYMENT OF RESPONSE COSTS	17
XVI.	DISPUTE RESOLUTION	21
XVII.	FORCE MAJEURE	22
XVIII.	STIPULATED PENALTIES	23
XIX.	COVENANT NOT TO SUE BY EPA	25
XX.	RESERVATIONS OF RIGHTS BY EPA	26
XXI.	COVENANT NOT TO SUE BY RESPONDENTS AND SETTLING FEDERAL AGENCY	27
XXII.	OTHER CLAIMS	29
XXIII.	CONTRIBUTION	29
XXIV.	INDEMNIFICATION	30
XXV.	INSURANCE	31
XXVI.	FINANCIAL ASSURANCE	31
XXVII.	MODIFICATIONS	33
XXVIII.	NOTICE OF COMPLETION OF WORK	33
XXIX.	SEVERABILITY/INTEGRATION/APPENDICES	33

XXX.	NOTICES AND SUBMISSIONS.....	34
XXXI.	EFFECTIVE DATE.....	36

JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and the City of Ankeny, Iowa ("Respondent Ankeny"), John Deere Des Moines Works of Deere & Company ("Respondent Deere") (collectively, "Respondents"), and the U.S. Army Corps of Engineers ("Settling Federal Agency"). This Settlement Agreement provides for the performance of a removal action at Operable Unit 1, Landfill and Lagoon Complex ("OU1" or "Landfill/Lagoon Complex") of the Des Moines Ex Ordnance Site ("Site") located in Ankeny, Polk County, Iowa, and the reimbursement of certain response costs incurred by the United States at or in connection with the Site.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA").

3. This Settlement Agreement also provides for the resolution of claims of Respondents that could have been asserted against the Settling Federal Agency with regard to the Work and Past and Future Costs as provided in this Settlement Agreement.

4. EPA has notified the State of Iowa (the "State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

5. EPA, Respondents and Settling Federal Agency recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondents in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondents and Settling Federal Agency do not admit and retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of facts, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Respondents and Settling Federal Agency agree to comply with and be bound by the terms of this Settlement Agreement and further agree that they will not contest the basis or validity of this Settlement Agreement or its terms.

6. The Parties intend that Respondent Deere will conduct the Site cleanup required hereunder except for the operation and maintenance activities, which Respondent Ankeny has agreed to perform.

II. PARTIES BOUND

7. This Settlement Agreement applies to and is binding upon EPA, the Settling Federal Agency, Respondents and their successors and assigns. Any change in ownership or corporate

status of a Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Settlement Agreement.

8. Respondents are jointly and severally liable for carrying out all activities required by this Settlement Agreement. In the event of the insolvency or other failure of any one or more Respondents to implement the requirements of this Settlement Agreement, the remaining Respondent shall complete all such requirements.

9. Respondents shall ensure that their contractors, subcontractors, and representatives undertaking Work under this Settlement Agreement receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondents shall be responsible for any noncompliance with this Settlement Agreement, other than non-compliance by the Settling Federal Party.

10. Respondents have agreed to perform the Work and make the payments required hereunder to expedite the redevelopment and reuse of the Site for the benefit of the community.

III. DEFINITIONS

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

a. "Action Memorandum/Enforcement" shall mean the EPA Action Memorandum relating to the Landfill/Lagoon Complex signed by the Regional Administrator, EPA Region VII, or his delegate, and all attachments thereto. The "Action Memorandum/Enforcement" is attached as Appendix A.

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

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

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

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

f. "IDNR" shall mean the Iowa Department of Natural Resources and any successor departments or agencies of the State.

g. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States (except for Settling Federal Agency) incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Paragraph 44 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), and Paragraph 56 (emergency response), and Paragraph 83 (work takeover). Future Response Costs shall also include all Interim Response Costs and all Interest on those Past Response Costs Respondents have agreed to reimburse under this Settlement Agreement that has accrued pursuant to 42 U.S.C. 9607(a) during the period from September 1, 2008, to the Effective Date.

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

i. "Interim Response Costs" shall mean all costs, including direct and indirect costs; (a) paid by the United States (except for Settling Federal Agency) in connection with the Site between September 1, 2008, and the Effective Date, or (b) incurred prior to the Effective Date, but paid after that date.

j. "Municipal sewage sludge" shall mean any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage, and may include residue removed, all or in part, during the treatment of wastewater from manufacturing or processing operations, provided that such residue has essentially the same characteristics as residue removed during the treatment of domestic sewage.

k. "Municipal solid waste" shall mean waste material: (i) generated by a household (including a single or multifamily residence); or (ii) generated by a commercial, industrial or institutional entity, to the extent that the waste material – (I) is essentially the same as waste normally generated by a household; (II) is collected and disposed of with other municipal solid waste as part of normal municipal solid waste collection services; and (III) contains a relative quantity of hazardous substances no greater than the relative quantity of hazardous substances contained in waste material generated by a typical single-family household.

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

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

m. "Operable Unit 1" shall mean the Landfill/Lagoon Treatment Complex portion of the Site and depicted generally on the map attached as Appendix B.

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

o. "Parties" shall mean EPA, Respondents and the Settling Federal Agency.

p. "Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States (except for Settling Federal Agency) incurred for Operable Unit 1 through August 31, 2008.

q. "Post-Removal Site Control" shall include all activities conducted after the completion of the construction phase of the removal action including site operation and maintenance activities and any activity required to assure the effectiveness and integrity of the Work hereunder.

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

s. "Respondents" shall mean the City of Ankeny, Iowa, and Deere & Company.

t. "Scope of Work" shall mean the scope of work for implementation of the requirements of the Action Memorandum/Enforcement. The Scope of Work is set forth in Appendix D to this Settlement Agreement and has been approved by EPA.

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

v. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto. In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

w. "Settling Federal Agency" shall mean the United States Army Corps of Engineers, which is resolving any claims that have been or could have been asserted against it with regard to Work and Response Costs as provided in this Settlement Agreement.

x. "Site" shall mean the Des Moines Ex Ordnance Superfund Site, encompassing approximately 2,445 acres, located in Ankeny, Polk County, Iowa and depicted generally on the map attached as Appendix C.

y. "United States" shall mean the United States of America, including all of its departments, agencies, and instrumentalities, which includes without limitation EPA, the Settling Federal Agency, and any federal natural resources trustee.

z. "Work Plan" or "Work Plans" shall mean any and all work plans for implementation of the removal action at the Landfill/Lagoon Complex including Post-Removal Site Control, as set forth in the Scope of Work attached as Appendix D to this Settlement Agreement or otherwise submitted pursuant to the terms of this Settlement Agreement, and any modifications made thereto in accordance with this Settlement Agreement.

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

bb. "Work" shall mean all activities (including Post-Removal Site Control) that Respondents are required to perform under this Settlement Agreement related to the Landfill/Lagoon Complex, Operable Unit 1. Work shall not include any other response action at any other part of the Site.

IV. EPA's FINDINGS OF FACT

12. The Site consists of approximately 2,445 acres and is the location of the former Manufacturing Facility portion of the Des Moines Ordnance Plant ("DMOP"). Operable Unit 1 of the Site, or "the Landfill/Lagoon Complex," consists of approximately 38 acres.

13. The DMOP was constructed for the production and testing of small arms munitions for use during World War II. Basic manufacturing operations at the DMOP involved the fabrication of cartridge casings from raw brass and steel, and the preparation of ammunition component mixtures. Auxiliary processes included chemical testing, ammunition testing, and utilities operations.

14. Between 1942 and 1945, United States Rubber Company ("USRC") manufactured primarily ammunition and brass bullet casings at the DMOP pursuant to a contract between USRC and the United States. The sanitary sewage and industrial wastewater treatment lagoon area received wastes generated from and inherent in such manufacturing operations.

15. The Landfill/Lagoon Complex was utilized by various entities between 1942 and 1991 to process and dispose of waste streams. The Landfill/Lagoon Complex includes two distinct areas: (1) a sanitary sewage and industrial wastewater treatment lagoon area and (2) a landfill area.

16. The DMOP operations involved the use of various chemicals associated with annealing or heat treating, Cronak finishing, acidic quenching, and chromium plating. The explosives mixing area handled and stored smokeless powder and mixed raw chemicals to produce the following component mixtures: primer mixture, tracer, igniter, and incendiary. Materials used for the production of ammunition and for ancillary processes such as washing and plating included the following: Primer Mix (potassium chlorate, lead sulfacyanate, antimony sulfide, pentaerythritol tetranitrate, trinitrotoluene); Igniter and Tracer Mixes (strontium nitrate, strontium peroxide, strontium oxalate, barium peroxide, barium nitrate, calcium resinate, magnesium); Smokeless Powder (nitrocellulose); Plating Solutions (chromic acid and sulfuric acid); Annealing Solutions (sodium dichromate); and Oils (engine, lubricating, mineral, greases, and draw pressing).

17. Waste materials associated with small caliber ammunition production from the DMOP were deposited at the Landfill/Lagoon Complex. Process wastewater from the manufacturing buildings flowed to the process waste treatment plant. Possible waste streams sent to the industrial wastewater treatment plant were chrome plating solutions and rinse water, annealing solutions, waste oils from draw pressing operations, and wastewater from explosives mixing areas. The process wastewater and sludge flowed into various lagoons. The industrial process wastewater treatment plant lagoons were occasionally cleaned of sludge, and on occasion oil was burned off.

18. By quitclaim deed, in 1947 the United States conveyed 586 acres of the Site, including the Landfill and Lagoon Complex, to Deere & Company ("Deere"). Since 1947, Deere has conducted farm implement manufacturing operations at a portion of the Site. From 1947 until 1965 Deere owned and operated the Landfill/Lagoon Complex. During this time, the Landfill and Lagoon Complex received wastes generated by Deere's manufacturing operations.

19. Deere continued to use the existing sewer systems and treatment plants, and disposed of wastes in the landfill area. Open burning also occurred at the landfill. The types of wastes sent to the sewer included caustic paint stripper and rinse waters, coolants and oils, alkaline and acid wash solutions, process cooling waters, and plating wastewaters.

20. Deere disposed of the following wastes in the landfill: grinding sludges used in metal finishing; heat treating sludges which were a by-product of metal finishing; paint waste sludges; plating sludges from zinc, cyanide and chrome plating processes; and air pollution dust collected from the plant.

21. In 1965, Deere deeded the Landfill/Lagoon Complex to the City of Ankeny. Under the operation of the City of Ankeny, the Landfill and Lagoon Complex continued to receive some

wastes from Deere's farm implement manufacturing operations until 1976. The City of Ankeny also used the landfill within the Complex for disposal of municipal waste. Open burning of wastes continued at the landfill until 1971, and in the mid-1970's the City dredged the sedimentation lagoon and deposited the material in the landfill. The landfill was generally closed in 1971 but was used on an emergency basis thereafter for waste disposal activity. The sanitary sewage treatment plant within the Landfill/Lagoon Complex remained in operation until 1991.

22. In 1985, EPA conducted a Phase I Site Investigation of the Ankeny Landfill/Lagoon Complex to investigate the contamination at this portion of the Site and determine whether migration of contamination was occurring via surface water routes. Metals were detected above background levels in sediment and surface water samples.

23. In 1987, a Phase II Site Investigation of the Landfill/Lagoon Complex was performed to assess whether contamination had migrated into the shallow aquifer. Metals were detected above background levels in groundwater, sediment and surface water samples.

24. EPA conducted a groundwater investigation in 1998 and 1999. This investigation involved the collection of quarterly samples from four monitoring wells installed during the 1987 Phase II Site Investigation.

25. In March 2004, EPA prepared an Expanded Site Inspection ("ESI") Report to further define the nature of contaminants present at the Site, determine attribution of contaminants released at the Site, and provide information for the preparation of a Hazard Ranking System scoring package for the Site. Analytical results of the ESI indicate that groundwater, surface soils, and sediment at the DMOP have localized areas of contamination. Analysis of groundwater samples from the Landfill/Lagoon Complex indicated releases of metals, explosives, and volatile organic compounds.

26. In 2005, EPA performed a removal site evaluation for the Landfill/Lagoon Complex. Samples collected revealed a release of primarily lead, chromium, and copper to surface soils and lagoon sediments at levels exceeding EPA's preliminary remediation goals and the Iowa Statewide Standards for soil. Specifically, certain lagoon sediment samples contained high concentrations of lead and chromium. Certain samples collected from the landfill contained high levels of chromium, copper and lead. Groundwater samples also contained elevated concentrations of metals. In addition, surface water samples collected from the lagoons contained lead and zinc at concentrations that could impair aquatic life.

27. The land use in the immediate area surrounding the Landfill/Lagoon Complex is currently a mix of residential, commercial and industrial. The City of Ankeny's planned Prairie Trail development in this area will result in an increase in residential, commercial and recreational land uses. The City intends to use the Landfill/Lagoon Complex portion of the Site as a greenspace.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

28. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA alleges that:

a. The Landfill/Lagoon Complex is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Landfill/Lagoon Complex, as identified in the Findings of Fact above, includes "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Each Respondent and the Settling Federal Agency is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Each Respondent and the Settling Federal Agency is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site.

i. Respondent City of Ankeny, Iowa is the "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

ii. Respondent City of Ankeny, Iowa, Deere & Company, and the Settling Federal Agency were the "owners" and/or "operators" of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

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

f. The Work required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be considered consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. SETTLEMENT AGREEMENT AND ORDER

29. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for the Landfill/Lagoon Complex, it is hereby Ordered and Agreed that Respondents shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement, and that Settling Federal Agency shall reimburse the EPA Hazardous Substance Superfund for Past Response Costs and the Respondents for their response costs as provided in this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

30. Respondents shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within 15 days of the Effective Date. Respondents shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 15 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondents. If EPA disapproves of a selected contractor, Respondents shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 30 days of EPA's disapproval. The proposed contractor must demonstrate compliance with ANSI/ASQC E-4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B0-1/002), or equivalent documentation as required by EPA.

31. Within 15 days after the Effective Date, Respondents shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondents required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 30 days following EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by all Respondents.

32. EPA has designated Dan Garvey of the Superfund Division, EPA Region VII, as its Remedial Project Manager ("RPM"). Except as otherwise provided in this Settlement Agreement,

Respondents shall direct all submissions required by this Settlement Agreement to the RPM at 901 North 5th Street, Kansas City, Kansas, 66101.

33. EPA and Respondents shall have the right, subject to Paragraph 31, to change their respective designated RPM or Project Coordinator. Respondents shall notify EPA 15 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice.

VIII. WORK TO BE PERFORMED

34. Respondents shall perform all actions necessary to implement the Scope of Work attached hereto as Appendix D and Work Plans. Respondents shall submit the Work Plans referenced in the Scope of Work attached as Appendix D in accordance with the schedule therein, and shall implement such Work Plans upon approval by EPA. The actions to be implemented as generally described in the Scope of Work attached as Appendix D include, but are not limited to, the following: (a) Site investigation activities; (b) Activities to construct a cap over the Landfill area; (c) Excavate and provide for the proper off-site disposal of contaminated soils from the Industrial and Domestic Wastewater Treatment areas; and (d) Post-Removal Site Control activities.

35. EPA Approval of Work Plans or Other Submittals:

a. For each Work Plan or other deliverable submitted by Respondents to EPA for review and approval pursuant to this Settlement Agreement, EPA may approve, disapprove, require revisions to, or modify the draft work plan or other deliverable in whole or in part. If EPA requires revisions, Respondents shall submit a revised draft work plan or other deliverable within 30 days of receipt of EPA's notification of the required revisions. Respondents shall implement the Work Plan (or other deliverable as appropriate) as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan (or other deliverable as appropriate), the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

b. Respondents shall not commence any Work except in conformance with the terms of this Settlement Agreement. Respondents shall not commence implementation of any Work Plan developed hereunder until receiving written EPA approval pursuant to Paragraph 35(a).

36. Health and Safety Plan. As set forth in the Scope of Work, Respondents shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Settlement Agreement. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondents

shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the removal action.

37. Quality Assurance and Sampling.

a. All sampling and analyses performed by Respondents pursuant to this Settlement Agreement shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondents shall follow, as appropriate, "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. Respondents shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements.

b. Upon request by EPA, Respondents shall have such a laboratory analyze samples submitted by EPA for QA monitoring. Respondents shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA, Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondents shall notify EPA not less than 15 days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondents to take split or duplicate samples of any samples it takes as part of its oversight of Respondents' implementation of the Work.

38. Post-Removal Site Control. In accordance with the Work Plan schedule, or as otherwise directed by EPA, Respondents shall submit a proposal for post-removal site control consistent with Section 300.415(l) of the NCP and OSWER Directive No. 9360.2-02. Upon EPA approval, Respondents shall implement such controls and shall provide EPA with documentation of all post-removal site control arrangements.

39. Reporting.

a. Respondents shall submit a written progress report to EPA concerning actions undertaken pursuant to this Settlement Agreement every 5th day of the month after the

Effective Date until termination of this Settlement Agreement, unless otherwise directed in writing by the RPM. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

b. Respondents shall submit 3 copies of all plans, reports or other submissions required by this Settlement Agreement. Upon request by EPA, Respondents shall submit such documents in electronic form.

40. The City of Ankeny, the current owner of the Operable Unit 1 Landfill/Lagoon Complex portion of the Site shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice to the transferee that the property is subject to this Settlement Agreement and written notice to EPA and the State of the proposed conveyance, including the name and address of the transferee. The City of Ankeny shall also require that its successors comply with the immediately preceding requirement and Sections IX (Site Access) and X (Access to Information).

41. Construction Completion Report. Within 30 days after completion of all Work required by this Settlement Agreement, except for Post-Removal Site Control, Respondents shall submit for EPA review and approval a Construction Completion Report summarizing the actions taken to comply with this Settlement Agreement. The Construction Completion Report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports" and "Superfund Removal Procedures: Removal Response Reporting - POLREPS and OSC Reports" (OSWER Directive No. 9360.3-03, June 1, 1994). The Construction Completion Report shall include a good faith estimate of total costs or a statement of actual costs incurred in implementing the Work, a listing of quantities and types of materials removed off-Site or handled on-Site, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits), and a description of Post Removal Site Control activities to be performed to ensure the effectiveness and integrity of the Work. The Construction Completion Report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is 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."

42. Off-Site Shipments.

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

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

c. The identity of the receiving facility and state will be determined by Respondents following the award of the contract for the removal action. Respondents shall provide the information required by Paragraph 42(a) and 42(b) as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

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

IX. SITE ACCESS

43. If the Landfill/Lagoon Complex portion of the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by any of the Respondents, such Respondents shall, commencing on the Effective Date, provide EPA, the State, and their representatives, including contractors, with access at all reasonable times to the Landfill/Lagoon Complex portion of the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

44. Where any action under this Settlement Agreement 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 30 days after the Effective Date, or as otherwise specified in writing by the OSC. Respondents shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. For purposes of this Paragraph,

“best efforts” includes the payment of reasonable sums of money in consideration of access. Respondents shall describe in writing their efforts to obtain access. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondents shall reimburse EPA for all costs and attorney’s fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

45: Institutional Controls: After the Effective Date of this Order, the City of Ankeny agrees to refrain from using the Landfill/Lagoon Complex portion of the Site in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the response activities to be performed at the Landfill/Lagoon Complex portion of the Site unless otherwise approved by EPA in writing. The City of Ankeny shall execute and record in the Recorder’s Office of Polk County, State of Iowa, an Environmental Covenant (“Covenant”) as per Iowa Code Chapter 455I, running with the land, that grants to the Agency(s) signing the Covenant the right to enforce the activity and use limitations described in the Covenant. The City of Ankeny shall record such Covenant within thirty (30) days of receipt of the Covenant signed by the Agency(s). The Covenant shall be in substantially the same form and substance as Appendix E. The City of Ankeny has submitted to EPA evidence of title, which shows title to the land described in the Covenant to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by EPA or when, despite reasonable efforts, the City of Ankeny is unable to obtain release or subordination of such prior liens or encumbrances). Within thirty (30) days of receipt by the City of Ankeny of the original recorded Covenant showing the recorder’s stamp, the City of Ankeny shall provide EPA with a copy of same.

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

X. ACCESS TO INFORMATION

47. Respondents shall provide to EPA and the State, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

48. Respondents may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7),

and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA and the State, or if EPA has notified Respondents that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondents.

49. 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 the Respondents assert such a privilege in lieu of providing documents, they shall provide EPA and the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondents. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

50. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XI. RECORD RETENTION

51. Until 10 years after Respondents' receipt of EPA's notification pursuant to Section XXVIII (Notice of Completion of Work), each Respondent shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after Respondents' receipt of EPA's notification pursuant to Section XXVIII (Notice of Completion of Work), Respondents shall also instruct their contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work.

52. At the conclusion of this document retention period, Respondents shall notify EPA and the State at least 90 days prior to the destruction of any such records or documents, and, upon request by EPA or the State, Respondents shall deliver any such records or documents to EPA or the State. Any records or documents provided by the City of Ankeny shall be provided in accordance with this Settlement Agreement and applicable "open records" policies or laws. 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, they shall provide EPA or the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondents. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

53. Each Respondent hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

54. Settling Federal Agency acknowledges that it (1) is subject to all applicable Federal record retention laws, regulations, and policies; and (2) has fully complied with any and all EPA requests for information pursuant to Section 104(e) and 122(e) of CERCLA, 42 U.S.C. 9604(e) and 9622(e).

XII. COMPLIANCE WITH OTHER LAWS

55. Respondents shall perform all actions required pursuant to this Settlement Agreement in accordance with all applicable local, state, and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

56. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the RPM or, in the event of his/her unavailability, the Regional Duty Officer at (913) 281-0991 of the incident or Site conditions. In the event that Respondents fail to take appropriate response action as required by

this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

57. In addition, in the event of any release of a reportable quantity of a hazardous substance from the Site, Respondents shall immediately notify the RPM at (913) 281-0991 and the National Response Center at (800) 424-8802. Respondents shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

XIV. AUTHORITY OF REMEDIAL PROJECT MANAGER

58. The RPM shall be responsible for overseeing Respondents' implementation of this Settlement Agreement. The RPM shall have the authority vested in an On Scene Coordinator by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the Site. Absence of the RPM from the Site shall not be cause for stoppage of work unless specifically directed by the RPM.

XV. PAYMENT OF RESPONSE COSTS

59. Payment of Past Response Costs.

a. Within 90 days after the Effective Date, Respondents shall pay to EPA \$145,081.32 in payment of Past Response Costs incurred for Operable Unit 1. Payment shall be made to EPA by Electronic Funds Transfer ("EFT") in accordance with current EFT procedures to be provided to Respondents by EPA Region VII, and shall be accompanied by a statement identifying the name and address of the party(ies) making payment, the Site name, the EPA Region and Site/Spill ID Number 078G, and the EPA docket number for this action No. 07-2006-0127

b. At the time of payment, Respondents shall send notice that such payment has been made by email to acctsreceivable.cinwd@epa.gov, and to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St. Louis, Missouri 63197-9000

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

Kathy Robinson
Regional Hearing Clerk
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

Daniel Garvey
Remedial Project Manager
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

c. The total amount to be paid by Respondents pursuant to Paragraph 59(a) shall be deposited in the Des Moines Ex Ordnance Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

60. Payments of Future Response Costs.

a. Respondents shall pay EPA all Future Response Costs not inconsistent with the NCP. On an annual basis, EPA will send Respondents a bill requiring payment that includes a standard Regionally-prepared cost summary, which includes direct and indirect costs incurred by EPA and its contractors. Respondents shall make all payments within 60 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 62 of this Settlement Agreement.

b. Respondents shall make all payments required by this Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the party(ies) making payment, the EPA Site/Spill ID number 078G, and the CERCLA Docket No. 07-2006-0127. Respondents shall send the check(s) to:

U.S Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St. Louis, Missouri 63197-9000

c. At the time of payment, Respondents shall send notice that such payment has been made by email to acctsreceivable.cinwd@epa.gov, and to:

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

Kathy Robinson
Regional Hearing Clerk
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

Daniel Garvey
Remedial Project Manager
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

d. The total amount to be paid by Respondents pursuant to Paragraph 60(a) shall be deposited in the Des Moines Ex Ordnance Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

61. In the event that the payment for Past Response Costs is not made within 90 days of the Effective Date, or the payments for Future Response Costs are not made within 60 days of Respondents' receipt of a bill, Respondents shall pay interest on the unpaid balance. The interest on Past Response Costs shall begin to accrue on the Effective Date and shall continue to accrue until the date of payment. The interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

62. Respondents may dispute all or part of a bill for Future Response Costs submitted under this Settlement Agreement, if Respondents allege that EPA has made an accounting error, or if Respondents allege that a cost item is inconsistent with the NCP. If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs to EPA as specified in Paragraph 60 on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the persons listed in Paragraph 60(c) above. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within 14 days after the dispute is resolved.

63. Payments by Settling Federal Agency. As soon as reasonably practicable after the Effective Date of this Settlement Agreement, and consistent with subparagraph 63(b), the United States, on behalf of Settling Federal Agency, shall:

a. Pay to the EPA Hazardous Substances Superfund \$72,540.66 in payment of Past Response Costs. The total amount to be paid by Settling Federal Agency pursuant to this paragraph shall be deposited in the Des Moines Ex Ordnance Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

b. If the payment to the EPA Hazardous Substances Superfund required by Paragraph 62(a) is not made as soon as reasonably practicable, the appropriate EPA Regional Branch Chief may raise any issues relating to payment to the appropriate DOJ Assistant Section Chief for the Environmental Defense Section. In any event, if payment is not made within 120 days after the Effective Date of this Settlement Agreement, EPA and DOJ have agreed to resolve the issue within 30 days in accordance with a letter agreement dated December 28, 1998.

c. Pay to Respondents \$2,600,000 for costs incurred and to be incurred to implement the Work required pursuant to this Settlement Agreement by Electronic Funds Transfer in accordance with instructions provided by Respondents.

d. In the event that payments required by Paragraph 63(a) or 63(c) are not made within 90 days of this Settlement Agreement, interest on the unpaid balance shall be paid at the rate established pursuant to Section 107(a) of CERCLA, 42 U.S.C. 9607(a), commencing on the Effective Date of this Settlement Agreement and accruing through the date of payment.

64. At the time of payments made pursuant to Paragraph 63, Settling Federal Agency shall send notice that such payment has been made to:

Kathy Robinson
Regional Hearing Clerk
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

Daniel Garvey
Remedial Project Manager
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

Kathleen R. Gibson, Esq.
Deere & Company, Inc.
One John Deere Place
Moline, Illinois 61265-8098

Baerbel E. Schiller, Esq.
Spencer Fane Britt & Browne LLP
1000 Walnut Street, Suite 1400
Kansas City, Missouri 64106

65. The parties to this Settlement Agreement recognize and acknowledge that the payment obligations of the Settling Federal Agency under this Settlement Agreement can only be paid from appropriated funds legally available for such purpose. Nothing in this Settlement Agreement shall be interpreted or construed as a commitment or requirement that the Settling Federal Agency obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. 1341, or any other applicable provision of law.

XVI. DISPUTE RESOLUTION

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

67. If Respondents object to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, they shall notify EPA in writing of their objection(s) within 30 days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondents shall have 30 days from EPA's receipt of Respondents' written objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

68. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature by both parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, the EPA Region VII Superfund Division Director will issue a written decision on the dispute to Respondents. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondents' obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement that

was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

XVII. FORCE MAJEURE

69. Respondents agree to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondents, or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondents' best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work, or increased cost of performance, or a failure to attain the performance standards or action levels set forth in the Action Memorandum/Enforcement.

70. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondents shall notify EPA orally within 48 hours of when Respondents first knew that the event might cause a delay. Within 5 days thereafter, Respondents shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondents from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

71. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondents in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

72. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraph 72 for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Respondents shall include completion of the activities under this Settlement Agreement or any work plan or other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, the Scope of Work and associated Work Plans, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

73. Stipulated Penalty Amounts.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance with this Settlement Agreement, except as set forth in Paragraph 73(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$200.00	1st through 14th day
\$400.00	15th through 30th day
\$800.00	31st day and beyond

b. Stipulated Penalty Amounts - Reports. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$100.00	1st through 14th day
\$200.00	15th through 30th day
\$400.00	31st day and beyond

74. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and 2) with respect to a decision by the EPA Region VII Superfund Division Director, under Paragraph 68 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

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

76. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondents' receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substance Superfund" and mailed to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
PO Box 979077
St. Louis, MO 63197-9000

The payment shall also indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 078G, the EPA Docket Number CERCLA-7-2006-0127, and the name and address of the party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to:

Kathy Robinson
Regional Hearing Clerk
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

Daniel Garvey
On Scene Coordinator
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

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

78. Penalties shall continue to accrue during any dispute resolution period, but need not be paid until 30 days after the dispute is resolved by agreement or by receipt of EPA's decision.

79. If Respondents fail to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondents shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 75. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondents' violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(l) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX, Paragraph 83. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

80. a. In consideration of the actions that will be performed and the payments that will be made by Respondents under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work, Past Response Costs, and Future Response Costs. This covenant not to sue shall take effect upon receipt by EPA of the Past Response Costs due under Section XV of this Settlement Agreement and any Interest or Stipulated Penalties due for failure to pay Past Response Costs as required by Sections XV and XVIII of this Settlement Agreement. This covenant not to sue is conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondents and does not extend to any other person.

b. In consideration of the payments that will be made by the Settling Federal Agency under the terms of this Settlement Agreement, and except as specifically provided in Section XX, EPA covenants not to take administrative action against the Settling Federal Agency pursuant to Sections 106 and 107(a) of CERCLA for the Work, Past Response Costs and Future Response Costs. EPA's covenant shall take effect upon the receipt of the payments required by Paragraph 63 of Section XV of this Settlement Agreement. EPA's covenant is conditioned upon the satisfactory performance by Settling Federal Agency of its obligations under this Settlement Agreement. EPA's covenant extends only to the Settling Federal Agency and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

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

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

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

83. Work Takeover. In the event EPA determines that Respondents have ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondents may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by the United States in performing the

Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XV (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

**XXI. COVENANT NOT TO SUE BY RESPONDENTS
AND SETTLING FEDERAL AGENCY**

84. Covenant Not to Sue By Respondents. Respondents covenant not to sue and agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Past Response Costs, Future Response Costs, or this Settlement Agreement, including, but not limited to:

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

b. any claim arising out of response actions at or in connection with Operable Unit 1 of the Site, including any claim under the United States Constitution, the Iowa Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

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

85. Covenant Not to Sue By Settling Federal Agency: Settling Federal Agency hereby agrees not to assert any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. 9507, based on Sections 106(b)(2), 107, 111, 112, and 113 of CERCLA, 42 U.S.C. 9606(b)(2), 9607, 9611, 9612, and 9613, or any other provision of law with respect to the Work, Past Response Costs and Future Response Costs. This covenant does not preclude demand for reimbursement from the Superfund of costs incurred by the Settling Federal Agency in the performance of its duties (other than pursuant to this Settlement Agreement) as lead or support agency under the National Contingency Plan (40 C.F.R. Part 300).

86. Except as expressly provided in Section XXI, Paragraphs 88 and 89 (Non-Exempt De Micromis Waiver), and Paragraphs 90 and 91 (MSW Waiver), these covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 84 (b), (c), and (e) - (g), but only to the extent that

Respondents' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

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

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

89. The waiver in Paragraph 88 shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:

a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or "RCRA"), 42 U.S.C. § 6972, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

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

90. Respondents agree not to assert any claims and to waive all claims or causes of action that they may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Respondents with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of Municipal Solid Waste (MSW) at the Site, if the volume of MSW disposed, treated or transported by such person to the Site did not exceed 0.2 percent of the total volume of waste at the Site.

91. The waiver in Paragraph 90 above shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines that: (a) the MSW contributed significantly or could contribute significantly, either individually or in the aggregate, to the cost of the response action or natural resource restoration at the Site; (b) the person has failed to comply with any information request or administrative subpoena issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. § 9604(e) or § 9622(e), or Section 3007 of RCRA, 42 U.S.C. § 6927; or (c) the person impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site.

XXII. OTHER CLAIMS

92. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

93. Except as expressly provided in Section XXI, Paragraphs 88 and 89 (Non-Exempt De Micromis Waiver), Paragraphs 90 and 91 (MSW Waiver) and Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

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

XXIII. CONTRIBUTION

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

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

c. Except as provided in Section XXI of this Settlement Agreement (Non-exempt De Micromis and MSW Waivers), nothing in this Settlement Agreement precludes the United States or Respondents from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not parties to this Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

XXIV. INDEMNIFICATION

96. Respondents shall indemnify, save and hold harmless the United States (with the exception of the Settling Federal Agency), its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. Any indemnification provided by the City of Ankeny pursuant to this Paragraph shall be to the extent allowed by applicable law. In addition, Respondents agree to pay the United States (with the exception of the Settling Federal Agency) all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this Settlement Agreement. Neither Respondents nor any such contractor shall be considered an agent of the United States.

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

98. Respondents waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of

construction delays. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXV. INSURANCE

99. At least 7 days prior to commencing any on-Site work under this Settlement Agreement, Respondents shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of two million dollars, combined single limit. Within the same time period, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. In addition, for the duration of the Settlement Agreement, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondents in furtherance of this Settlement Agreement. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

100. Within 30 days of the Effective Date, Respondents shall establish and maintain financial security in the amount of \$9,100,000 in one or more of the following forms:

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

f. A demonstration of sufficient financial resources to pay for the Work made by one or more of Respondents, which shall consist of a demonstration that any such Respondents satisfies the requirements of 40 C.F.R. Part 264.143(f).

101. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at an time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondents shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 100, above. In addition, if at any time EPA notifies Respondents that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondents shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondents' inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

102. If Respondents seek to ensure completion of the Work through a guarantee pursuant to Subparagraph 100(e) or 100(f) of this Settlement Agreement, Respondents shall (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be in the current cost estimate of \$9,100,000 for the Work at the Landfill/Lagoon Complex portion of the Site plus any other RCRA, CERCLA, TSCA, or other federal environmental obligations financially assured by the relevant Respondent or guarantor to EPA by means of passing a financial test.

103. If, after the Effective Date, Respondents can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 100 of this Section, Respondents may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondents shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security upon approval by EPA. In the event of a dispute, Respondents may seek dispute resolution pursuant to Section XV (Dispute Resolution). Respondents may reduce the amount of the security in accordance with the written decision resolving the dispute.

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

XXVII. MODIFICATIONS

105. The RPM may make modifications to any plan or schedule or Work Plan in writing or by oral direction. Any oral modification will be promptly memorialized in writing by EPA, but shall have as its effective date the date of the RPM's oral direction. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.

106. If Respondents seek permission to deviate from any approved work plan or schedule, Respondents' Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondents may not proceed with the requested deviation until receiving oral or written approval from the RPM pursuant to Paragraph 104.

107. No informal advice, guidance, suggestion, or comment by the RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXVIII. NOTICE OF COMPLETION OF WORK

108. When EPA determines, after EPA's review of the Construction Completion Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of Post-Removal Site Control and any continuing obligations required by this Settlement Agreement, including payment of Future Response Costs and record retention, EPA will provide written notice to Respondents of completion of Work. If EPA determines that any such Work except for Post-Removal Site Control has not been completed in accordance with this Settlement Agreement, EPA will notify Respondents, provide a list of the deficiencies, and require that Respondents modify the Work Plan if appropriate to correct such deficiencies. Respondents shall implement the modified and approved Work Plan and shall submit a modified Construction Completion Report in accordance with the EPA notice. Failure by Respondents to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXIX. SEVERABILITY/INTEGRATION/APPENDICES

109. If a court issues an order that invalidates any provision of this Settlement Agreement or finds that Respondents have sufficient cause not to comply with one or more

provisions of this Settlement Agreement, Respondents shall remain bound to comply with all provisions of this Settlement Agreement not invalidated or determined to be subject to a sufficient cause defense by the court's order.

110. This Settlement Agreement and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement.

XXX. NOTICES AND SUBMISSIONS

111. Whenever, under the terms of this Settlement Agreement, notice is required to be given or a document is required to be sent by one party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing:

As to EPA:

Daniel Garvey
Remedial Project Manager
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

Alyse Stoy
Office of Regional Counsel
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, Kansas 66101

As to Respondents:

As to Respondent Ankeny:

City Manager
City of Ankeny
400 West 1st Street
Ankeny, Iowa 50023

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

with a copy to:

Jane B. McAllister, Esq.
Ahlers & Cooney, P.C.
100 Court Avenue, Suite 600
Des Moines, Iowa 50309-2231

As to Respondent Deere:

Thomas H. Noble
John Deere Des Moines Works
825 SW Irvinedale Drive
Ankeny, Iowa 50023

Kathleen R. Gibson, Esq.
Deere & Company, Inc.
One John Deere Place
Moline, Illinois 61265-8098

with a copy to:

Baerbel E. Schiller, Esq.
Spencer Fane Britt & Browne LLP
1000 Walnut Street, Suite 1400
Kansas City, Missouri 64106

As to Settling Federal Agency:

Chief, Environmental Defense Section
United States Department of Justice
Environment and Natural Resources Division
P.O. Box 23986
Washington, D.C. 20026-3986
Re: DJ #

Randal K. Petersen
Chief, Environmental Remediation Branch
Planning, Programs, and Project Management Division
US Army Corps of Engineers, Omaha District
1616 Capital Ave, Suite 9000
Omaha, Nebraska 68102-4901

XXXI. EFFECTIVE DATE

112. This Settlement Agreement shall be effective ten days after the Settlement Agreement is signed by the EPA Region VII Superfund Division Director.

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

The undersigned representative of the City of Ankeny, Iowa certifies that it is fully authorized to enter into the terms and conditions of this Order and to bind the party it represents to this document.

Agreed this 15 day of September, 2008.

For Respondent City of Ankeny, Iowa

By 

Title _____
Mayor

Date Sept 15, 2008

By 

Title _____
City Clerk

Date 9-15-08

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

The undersigned representative of the U.S. Army Corps of Engineers certifies that it is fully authorized to enter into the terms and conditions of this Order and to bind the party it represents to this document.

For Respondent U.S. Army Corps of Engineers

By 

Title _____
District Commander

Date 1/26/89

*Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action*

The undersigned representative of John Deere Des Moines Works of Deere & Company certifies that it is fully authorized to enter into the terms and conditions of this Order and to bind the party it represents to this document.

Agreed this 18 day of September, 2008.

For Respondent John Deere Des Moines Works of Deere & Company

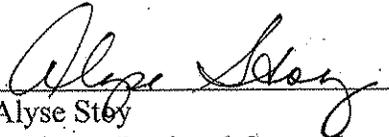
By William F. Norton

Title General Manager

Date 18 September 2008

Des Moines Ex Ordnance Plant - Operable Unit 1
Administrative Settlement and Order on Consent for Removal Action

FOR REGION VII OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY


Alyse Stoy
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
Region VII

1/29/09
Date

IT IS SO ORDERED AND AGREED.


Cecilia Tapia, Director
Superfund Division
U.S. Environmental Protection Agency
Region VII

2-3-09
Date

EFFECTIVE DATE: 2/13/09

Appendix A

Action Memorandum/Enforcement
Des Moines Ex Ordnance Plant Site
Operable Unit 1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

SEP 11 2008

ENFORCEMENT ACTION MEMORANDUM

SUBJECT: Request for Removal Action at the Des Moines (ex) Ordnance Plant Site,
Lagoon/Landfill Complex (Operable Unit 1)
Ankeny, Iowa

FROM: Dan Garvey, Remedial Project Manager
Special Emphasis and Remedial Branch

THRU: Gene Gunn, Chief
Special Emphasis and Remedial Branch

TO: Cecilia Tapia, Director
Superfund Division

Site ID - 078G
Category of Removal - Time-Critical Removal Action
CERCLIS ID # - 1A8210890028
Nationally Significant/Precedent Setting - No

I. PURPOSE

The purpose of this Action Memorandum is to request approval of a proposed removal action at the Des Moines (ex) Ordnance Plant Site (DMOP), Lagoon/Landfill Complex Operable Unit 1 (Ankeny Lagoon/Landfill Complex). The Department of Defense (DOD), the city of Ankeny and the John Deere Corporation are the responsible parties for the cleanup. The primary contaminants of concern include lead, chromium, arsenic, and copper, although numerous other contaminants have been detected in soils and groundwater.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

The DMOP was composed of two noncontiguous properties that served distinctly different functions. One property, the Accuracy Range, covered an area of 2,029 acres and was used primarily for testing the ballistics and accuracy of ammunition produced at the plant. The other portion of the property consisted of approximately 2,420 acres and was used for the manufacturing facility and its support structures. The former DMOP manufacturing facility was located in parts of Sections 22, 23, 26, 27, 34, and 35, Township 80 North, Range 24 West in

north-central Polk County, Iowa. DMOP is located approximately five miles north of Des Moines, Iowa, and adjoins the southwestern city limits of Ankeny, Iowa. The manufacturing facility portion of the DMOP is currently bounded by Southwest Third Street and Ordnance Road to the north, Highway 69 to the east, and Highway 415 to the south and west. The former Accuracy Range area is located approximately one mile west of the manufacturing facility. The 38-acre Ankeny Lagoon/Landfill Complex portion of the DMOP addressed by this activity is located on the former DMOP manufacturing facility property.

1. Removal site evaluation

The DMOP manufactured ammunition from 1941 to 1945, when 586 acres of the 4,400-acre property was purchased by the John Deere Corporation which operates the John Deere Des Moines Works Plant on the property. This purchase included the 38-acre treatment lagoons/landfill complex, which was used by the John Deere Corporation until 1965 when the property was deeded to the city of Ankeny. Under the operation of the city of Ankeny, the Ankeny Lagoon/Landfill Complex continued to receive wastes from the John Deere plant as well as wastes from the city of Ankeny. The landfill was closed in 1971. However, the sewage treatment lagoon complex remained in operation until 1991.

From 1941 to 1991, the lagoons received many types of liquid wastes from the DMOP and/or the John Deere plant including storm water, sanitary sewage, and industrial wastewater. Typical wastes from the DMOP consisted of explosives, smokeless powders, priming components, and wastes from the production of bullet casings. Wastes from the John Deere plant included coolants and oils, alkaline and acid wash solutions, and plating wastewaters. The lagoon complex also received municipal waste from the city of Ankeny from 1965 to 1991.

Wastes were deposited at the landfill area adjacent to the lagoon complex by DMOP, the John Deere plant, and the city of Ankeny until 1971 when the landfill was closed. The DMOP deposited wastes associated with the manufacture of small caliber ammunition, which may have included brass bullet casings, smokeless powders, and priming compositions. Most wastes originating from the John Deere plant included paper and wood-type trash, paint wastes, sludges (such as grinding, heat-treating, and plating.) From 1965 to 1971, the landfill also received municipal wastes from the city of Ankeny. Open burning was routinely practiced at the landfill until it closed in 1971.

Previous environmental investigations conducted at the DMOP have included the following:

- A Phase I Site Investigation (SI) was performed by the Environmental Protection Agency (EPA) in January 1985.
- A Phase II SI of the Ankeny Landfill/Lagoon Complex was conducted by EPA to assess whether contamination had migrated to the shallow drinking water aquifer in July 1987.

- EPA conducted a groundwater monitoring investigation in 1998 and 1999. This investigation involved collecting quarterly samples from four monitoring wells installed during the 1987 Phase II SI.
- EPA completed sampling for an Expanded Site Inspection (ESI) report, which was submitted as a final version in March 2004. The objectives of this ESI were to further determine the nature and extent of contaminants present at DMOP and to establish attribution to DMOP for those contaminants.

A variety of contaminants were detected in environmental media samples collected at the Ankeny Lagoon/Landfill Complex during these previous sampling efforts. Surface water and stream sediment samples have been found with elevated concentrations of metals and lower levels of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). Samples of groundwater from monitoring wells installed around the DMOP were found to contain elevated concentrations of contaminants including metals (chromium, copper, lead, iron, manganese, arsenic, and selenium) and VOCs and SVOCs that exceeded Region 6 Preliminary Remediation Goals (PRGs). Explosive residue compounds including nitrobenzene, nitrocellulose, and 2,6-dinitrotoluene had also been previously detected in groundwater samples collected at the Ankeny Lagoon/Landfill Complex.

2. Physical location

Geographic coordinates recorded with a handheld Global Positioning System near the center of the DMOP between the gate to the landfill area and the east end of the sedimentation lagoons were 41°42'31.2" N latitude and 93°37'29.4" W longitude. Geographic coordinates of other specific sampling locations on the DMOP have also been recorded during this effort as documented.

The 38-acre Ankeny Lagoon/Landfill Complex property is owned by the city of Ankeny. Surrounding land is slated for residential, recreational, commercial, civic, and educational uses in the near future. The Ankeny Lagoon/Landfill property itself is planned for development as a green space or city park.

3. Site characteristics

Structures or features remaining at DMOP include a dilapidated barn building, six former sewage treatment plant lagoons/ponds, and some of the associated interconnected piping structures and the closed landfill complex. Saylor Creek runs along the southern perimeter of the DMOP flowing in a southeasterly direction.

Soils of the Webster Series cover much of the area around the Ankeny Lagoon/Landfill Complex. These dark-colored, poorly drained soils developed from glacial till and composed of calcareous, loamy till about 50 to 175 feet thick.

Surface runoff from the Ankeny Lagoon/Landfill Complex is generally to the south to Saylor Creek. Most residences in the DMOP vicinity use water provided by municipal systems for their drinking water and other domestic needs.

There are six open sewage treatment lagoons/ponds remaining at DMOP containing water including the following:

- Two ponds located at the northwest corner of the DMOP near the entrance gate which are identified as the North Intake Area Pond and the South Entrance Gate Area Pond (aka Sewage Disposal Pond.)
- The concrete lined former Trickling Filter Unit.
- The Equalization Lagoon (aka Oil Skimming Pond.)
- Two larger lagoons which are identified as the North and South Sedimentation Ponds.

Green-stained soils/lagoon sediments were observed inside the south perimeter of the Equalization Lagoon near a concrete standpipe located there. Field screening analysis of this soil (with an X-Ray Fluorescence Spectrometer [XRF]) indicated contamination with Resource Conservation and Recovery Act (RCRA) regulated metals in the 10,000- to 60,000-parts-per-million (ppm) range. This was later confirmed by laboratory analysis of the lagoon sediment samples with concentrations of lead up to 50,200 ppm and chromium up to 45,500 ppm. A black, oily looking substance with a strong petroleum odor was also observed in the Equalization Lagoon sediments and was sampled to a depth of two feet below the sediment surface of the lagoon bottom.

Other structures located on the sewage treatment lagoon portion of the DMOP complex include a dilapidated building/barn structure which was presumably the control facility for the former treatment plant. There was a number of interconnecting piping and concrete conduit or brick-lined flume structures between the lagoons, a sump pit-type structure located in soil sampling cell 30, and an effluent ditch located in cell 57 draining to Saylor Creek. A large area of soil waste piles is also present, located to the northwest of the Equalization Lagoon. The origin of these soil waste piles is uncertain, but the piles have also been referred to as chromium waste piles by other DMOP representatives.

Observations noted for the landfill area portion of the DMOP included scrap metal pieces, pipes, concrete demolition materials, and other general debris scattered over much of the top of the area. A grayish-green powdery material (which appeared to be some type of sludge) was observed sloughing out of the east hillside of the landfill area (toe area of landfill near soil sampling cells 157 to 163) with high XRF screening concentrations of metals. This material was observed in a number of other locations along the length of the east toe area. Confirmation laboratory analysis of this material later confirmed high levels of chromium, copper, and lead in the 10,000 to 35,000 ppm range.

Other items located inside the landfill area perimeter fence included approximately twenty, 55-gallon drums of roofing tar (or mastic) in deteriorating metal drums which have ruptured and leaked onto the soil surface. This material was hardened and solidified so much that EPA could not obtain a representative sample for field screening or laboratory analysis to likely characterize the material as potential hazardous material.

Also, a single one-gallon container partially full of pentachlorophenol and containing wood preservative liquid was found abandoned on the DMOP. It was overpacked into a five-gallon plastic bucket with a lid and then placed inside the barn building at the Ankeny Lagoon/Landfill Complex for temporary storage until proper disposal arrangements are made.

4. Release or threatened release into the environment of a hazardous substance or pollutant or contaminant

Lead, chromium, arsenic, and copper have been detected in soils and sediments at the DMOP. Lead, chromium, arsenic, and copper are listed as hazardous substances pursuant to 40 C.F.R. § 302.4. As such, they are hazardous substances as defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14).

5. NPL Status

The DMOP is not proposed for listing on the NPL.

B. Other Actions to Date

1. Previous actions

In 2005, EPA completed additional targeted sampling activities. These activities included sampling of environmental media for field screening and/or confirmation laboratory analysis of hazardous waste constituents (metals, VOCs, SVOCs, selected explosive residues including 2,6-dinitrotoluene [2,6-DNT], nitrobenzene, pentaerythritoltetranitrate [PETN], 2,4,6-trinitrotoluene [2,4,6-TNT]); and surface/subsurface soil sampling for contaminants of concern (COCs) to further determine if removal action considerations are warranted at the Ankeny Lagoon/Landfill Complex.

A removal assessment was conducted by EPA Region 7 personnel at the Ankeny Lagoon/Landfill Complex. Initial site reconnaissance inspection of the DMOP was conducted on April 1, 2005, and removal site evaluation activities including environmental media sampling, XRF field screening of soil and sediment samples, and laboratory confirmation sampling of selected samples was conducted in two phases in May and November 2005. Based on the results of this activity, the Ankeny Lagoon/Landfill Complex qualifies for a removal action per 40 C.F.R. 300.415(b)(2).

Specifically these conditions are:

- (i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.
- (ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems.
- (iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

- (v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- (vii) The availability of other appropriate federal or state response to the release.

These conditions were determined based on reconnaissance observations, sampling and XRF field screening of surface soil and lagoon sediments at the DMOP, and laboratory confirmation analysis of soil and sediment samples for DMOP COCs.

The soil sample analytical results indicate that DMOP COCs (primarily arsenic, lead, chromium, and copper) have been released to surface soils and lagoon sediments at the Ankeny Lagoon/Landfill Complex. These vastly exceed the screening action levels (including EPA Region 6 PRGs and Iowa Statewide Standards for Soil) as determined by soil/sediment concentrations near the Equalization Lagoon (with maximum lead and chromium concentrations as high as 50,200 and 45,500 ppm, respectively), the former landfill area near sample point BH-06 (with lead and chromium in the 1,000 ppm range), and along the toe of the landfill area on the east perimeter of the DMOP (with lead, chromium, and copper concentrations in the 10,000 to 35,000 ppm range). However, none of the six samples that were also submitted for Toxic Characteristic Leaching Properties (TCLP) analysis of RCRA metals concentrations failed the TCLP criteria. Contaminants of concern were not detected above the site screening action levels in the background samples collected off-site.

Three areas with elevated metals concentrations in surface soil/sediment were identified at the Ankeny Lagoon/Landfill Complex during the April 2005 sampling activity by XRF field screening and/or laboratory confirmation analysis. These included: (1) perimeter sediments collected from the Equalization Lagoon impoundment where chromium and lead were detected by laboratory analysis at concentrations of 27,500 milligrams per kilogram (mg/kg) and 26,900 mg/kg, respectively; (2) influent ditch sediments near the north intake area pond and piles of soil west of the Equalization Lagoon where field screening with an XRF analyzer indicated concentrations of chromium and lead as high as 1,782 mg/kg and 2,088 mg/kg, respectively; and (3) surface soils near sampling point BH-06 in the landfill area where slightly elevated levels of chromium and lead were indicated by laboratory analysis.

To further assess the magnitude and areal extent of metals contamination across the three areas identified above, sampling grids were established with 50-foot node spacing across the northwest corner of the Ankeny Lagoon/Landfill Complex between the north intake pond and the Equalization Lagoon near sampling point BH-06. Also, a grid system with 25-foot spacing was established inside and around the perimeter of the Equalization Lagoon to assess the contamination in the pond sediments. The three sampling grid areas encompassed the following areas:

- (1) 50 by 50-foot sampling cells over the northwest portion of the Ankeny Lagoon/Landfill Complex, between the Equalization Lagoon and the north intake pond, roughly bounded by the gravel driveway (approximately 1,000 feet by 300 feet consisting of 71 grid cells),
- (2) 50 by 50-foot cells within 100 feet in each cardinal direction of sampling point BH-06 (approximately 200 feet by 200 feet, consisting of 16 grid cells),
- (3) 25-foot cells inside and around the Equalization Lagoon (approximately 200 feet by 200 feet consisting of 64 grid cells).

While in the field performing this sampling effort, 16 additional 50-foot cells were added for sampling at the southeast corner of the Ankeny Lagoon/Landfill Complex due to the discovery of a grayish-green powdery material. The soil sampling cells 151 to 166 were added to cover this discovery. This material had high XRF screening concentrations of metals.

Nine aliquot composite samples were also collected from most of the 25-foot sampling cells near the Equalization Lagoon except for the cells that were located inside the actual lagoon perimeter. The area inside the lagoon perimeter was divided into four quadrants and one multi-aliquot surface sediment sample was collected in each of the four quadrants (NE, NW, SE, and SW) with each quadrant area encompassing roughly three or four sampling cells.

Additional followup sampling included the collection of sediment core samples from the former wastewater treatment plant lagoons to a depth of two feet below the sediment surface. The previous sampling of the lagoon sediments had been limited to a depth of six inches. EPA resampled each of the lagoon sediment locations to a depth of two feet. This was accomplished using either a soil auger or manual slambar type soil core sampler apparatus.

In total, an additional 158 surface soil and sediment samples were collected from the DMOP for XRF screening of metals concentrations during this follow up sampling effort. Thirty-seven of these samples were then selected for confirmation laboratory analysis of total metals (37 samples), TCLP metals (6 samples), and/or Polycyclic Aromatic Hydrocarbons (PAHs) (12 samples).

Only three of the initial surface soil (0- to 2-feet deep) core sample locations had laboratory confirmation sample concentrations of metals exceeding PRGs of 210 ppm for total chromium or lead at 400 ppm. These included Location BH-06 (Sample 2617-11) with a total chromium concentration of 621 ppm and lead at 516 ppm, Location BH-13 (Sample 2617-23) with an estimated (J coded) total chromium concentration of 267 J ppm and lead at 469 ppm, and Location BH-03 (Sample 2617-19) with a total chromium concentration of 234 ppm.

Other lab sampling results indicated three areas (BH-01, BH-04, and BH-07) with metal concentrations also exceeding PRGs (primarily lead in the over 1,000- to 2,000-ppm range), however, it should be noted that these samples were all at depths of four feet below the ground surface (bgs) or deeper. The remaining initial borehole sampling locations reported had elevated XRF screening concentrations of metals above the PRGs that were not verified by the corresponding laboratory confirmation samples.

In situ XRF screening of soil/sediments from the wastewater influent ditch at the northwest corner of the Ankeny Lagoon/Landfill Complex (near the north intake pond) and from soil waste piles located west of the Equalization Lagoon indicated chrome and lead concentrations in the 1,000- to 2,000-ppm range. However, these areas were not sampled for laboratory confirmation analysis during the initial EPA activities conducted in May 2005. They were later targeted for additional sampling during the follow-up sampling activities that were conducted in the fall 2005.

Six groundwater samples collected from various locations on and around the DMOP perimeter had elevated concentrations of metals as compared to EPA Maximum Contaminant Levels (MCLs) and Secondary Drinking Water Regulations (SDWRs) for benchmark screening concentrations. These elevated levels included lead at 1.18 milligrams per liter (mg/L) and chromium at 1.1 mg/L. As stated during the ESI investigation, it was determined that the closest drinking water well to the Ankeny Lagoon/Landfill Complex is 0.9 miles northwest of the area. At least 201 people within a four-mile radius of the Lagoon/Landfill Complex drink the local groundwater.

Six of the soil samples that contained the most elevated metals concentrations as indicated by the XRF screening were also analyzed for TCLP metals by the laboratory. No TCLP criteria were exceeded in any of these samples.

Only one surface water sample (Location SW-05; Sample 2617-117) from the north intake area pond contained any contaminant above benchmark levels, which was lead at 0.0776 ppm with an MCL of 0.015 ppm.

High levels of chrome (27,500 ppm) and lead (26,900 ppm) were detected in the laboratory sample of sediment from the south perimeter of the Equalization Lagoon. This correlated strongly with a number of XRF screening locations there. Sediment observed at this sampling location was stained green, inside the south perimeter of the Equalization Lagoon near a concrete standpipe located there. None of the other lagoon or creek sediment samples contained concentrations of metals exceeding their respective PRGs.

Metals concentrations in the follow up soil/sediment samples were compared to Iowa Statewide Standards for Soil and EPA Region 6 PRGs for residential soil since the subject property is intended for development as a public park and green space. The primary concern was levels of lead, chromium, copper, and arsenic in cells near the Equalization Lagoon.

PAH compounds in the 12 samples submitted for analysis were intended to be compared to Iowa Statewide Standards for Soil and EPA Region 6 PRGs for residential soil. However, the detection limits achievable by the laboratory on the samples were higher than the concentration of interest for a number of the PAH compounds listed below. Therefore, from the new follow-up data, it was uncertain whether a number of these compounds may be present at concentrations above levels of concern. Some of these samples, such as the sediment from the Equalization Lagoon, were visibly contaminated with black, oily material and had a prominent petroleum odor. The sample extracts obtained by the lab for a number of the samples were viscous and therefore analyzed by the medium level protocol and/or had to be diluted, which contributed to the elevated detection limits.

Due to the elevated detection limits reported in the data, it is uncertain whether any of the 12 follow-up soil samples contain a number of PAH compounds above these site screening action levels.

Previous PAH in soil results from the May 2005 sampling effort included the following: Benzo-a-pyrene was detected in one surface soil sample (location BH-09) at 0.42 ppm. Another location (location BH-07) indicated concentrations of Benzo-a-anthracene and Benzo-b-fluoranthene above their respective PRG concentrations, however, this was at a depth of four to six feet bgs. Several other of the soil samples collected for SVOC analysis during that sampling effort also had elevated detection limits due to required dilutions.

2. Current Actions

The city has created a development master plan for the Prairie Trail area which encompasses the Ankeny Lagoon/Landfill Complex. The Prairie Trail development will include a mixture of residential, recreational, commercial, civic, and educational land uses. In October 2005, EPA conducted additional investigations to determine the threats to human health and the environment posed by the Ankeny Landfill/Lagoon Complex. Based on the results of this targeted sampling effort, EPA has determined that high levels of contaminants (including lead, copper, arsenic, and chromium) warrant a removal action. EPA, in coordination with IDNR, has prepared an administrative order on consent (AOC) with the city, John Deere, and the Army Corps of Engineers to perform these cleanup activities.

On May 29, 2008, EPA hosted a public availability meeting in Ankeny, Iowa, to present all of the sampling results and studies that had been previously completed. Another objective of the meeting was to present the proposed removal action for the Ankeny Landfill/Lagoon Complex. A 30-day public comment period then commenced and ended on June 29, 2008. All of the comments received by EPA were reviewed and studied to determine if any changes were warranted due to citizen's concerns or new information surfaced concerning the DMOP. After careful consideration of all significant comments, the decision was made by EPA to proceed with the proposed removal action for the Ankeny Landfill/Lagoon Complex as documented in this Action Memorandum. A written response to all significant public comments is attached.

C. State and Local Authorities' Roles

1. State and local actions to date

EPA determined not to pursue listing of the DMOP on the NPL. In 2004, EPA and IDNR subsequently reached an agreement regarding future DMOP management to allow maximum flexibility for safe and timely redevelopment of those areas of the DMOP that are appropriate for redevelopment. IDNR has the lead role at the majority of the DMOP, while EPA maintains the lead for the Ankeny Landfill/Lagoon complex. The John Deere manufacturing facility is being addressed pursuant to a RCRA § 3008(h) corrective action order.

2. Potential for state/local response

The IDNR is expected to provide document (e.g., work plan) review support and occasional field oversight during the response action.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

EPA prepared a Streamlined Risk Assessment and PRGs for the Ankeny Lagoon/Landfill Complex in November 2007. The objectives of the risk assessment were to (1) evaluate current and future human health risks from exposures to contaminants at the Ankeny Lagoon/Landfill Complex under the assumption that no controls or activities are taken to mitigate exposures, and (2) develop preliminary remediation goals for contaminants that may pose unacceptable human health risks. Results of the risk assessment show that levels of several metals may pose unacceptable human health hazards to individuals exposed to site soils, sediments, surface water, and groundwater. Listed below are some of the constituents of potential concern and the possible health effects.

At certain levels, lead can affect almost every organ and system in the body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure for adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people, and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High lead level exposures in men can cause damage to the organs responsible for sperm production.

Chromium enters the air, water, and soil mostly in the chromium (III) and (VI) forms. Breathing high levels of chromium (VI) can cause irritation to the nose, nosebleeds, ulcers, and holes in the nasal septum. Ingesting large amounts of chromium (VI) can cause stomach upsets, ulcers, convulsions, kidney and/or liver damage, and even death.

Breathing high levels of inorganic arsenic can result in a sore throat or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" to hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small corns or warts on the palms, soles and torso. Skin contact with organic arsenic may cause redness and swelling.

Copper is a metal that occurs naturally in the environment, and also in plants and animals. Low levels of copper are essential for maintaining good health. High levels can cause harmful effects such as vomiting, diarrhea, stomach cramps, nausea, irritation of the nose, mouth, and eyes and even death. Copper has been found in at least 906 of the 1,647 National Priority Sites identified by the EPA.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)]

Metals concentrations in the follow-up soil/sediment samples were compared to Iowa Statewide Standards for Soil and EPA Region 6 PRGs for residential soil since the subject site property is intended for development as a green space. The primary concern was high levels of lead, chromium, copper, and arsenic in cells near the Equalization Lagoon.

Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)]

Six groundwater samples collected from various locations on and around the Ankeny Lagoon/Landfill Complex perimeter had concentrations of metals exceeding EPA MCLs or SDWRs. Other samples obtained during prior sampling efforts have also identified MCL exceedences in groundwater. These exceedences have been identified at the Equalization Lagoon, Piezometer 7, temporary Geoprobe Well 14 at the Former Grease Lagoon, temporary Geoprobe well at the southeast edge of the landfill, and monitoring wells 1 and 5.

Based on the findings in the ESI, the groundwater may be a potential concern at the Ankeny Lagoon/Landfill Complex. There are at least 201 people within a four-mile radius of the Ankeny Lagoon/Landfill Complex who drink the local groundwater.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [300.415 (b)(2)(iv)]

Analytical results obtained from EPA sampling efforts have confirmed the presence of hazardous substances that health officials have determined to pose a carcinogenic risk in surface soils for both current and future DMOP workers. Lead, chromium, arsenic, copper, and other hazardous substances have been identified in surface and subsurface soils. If the identified threat is not mitigated, redevelopment activities could relocate the contaminated soil.

Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.415 (b)(2)(v)]

High levels of hazardous substances exist largely at or near the surface that may migrate due to upcoming seasonal weather conditions. Also, significant groundwater contamination has been documented and has migrated off DMOP that can be affected by seasonal rainy periods.

The availability of other appropriate federal or state response mechanisms to respond to the release [300.415 (b)(2)(vii)]

There does not appear to be any other federal, state, or local mechanism to respond to this environmental threat. EPA and IDNR have agreed that EPA will oversee the cleanup of the Ankeny Lagoon/Landfill Complex portion of DMOP. The Army Corps of Engineers will be a party to the AOC and provide funds for the performance of this removal action.

B. Threats to the Environment

The threats to the environment include both contaminated soil and groundwater. Saylor Creek is also threatened by the hazardous substances.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the Ankeny Lagoon/Landfill Complex portion of the DMOP if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

I. Proposed action description

The objectives of the Removal Action are to:

- Perform groundwater and soil investigations to define the nature and extent of contamination;
- Remove contaminated soils, sediments, and liquids from lagoons above health-based levels of concern;
- Prevent direct contact with and ingestion of contaminated soil/landfill contents;
- Control landfill surface water runoff and erosion;
- Minimize or prevent the migration of contamination to the groundwater and surface water; and
- Implement institutional controls to protect and maintain the landfill cover and restrict land and groundwater uses.

The removal action will consist of the following actions:

A site characterization involving a complete groundwater investigation will need to be completed that will determine the groundwater flow directions in the vicinity of the Ankeny Lagoon/Landfill Complex to assess the potential for constituent migration, developing geological

cross-sections of the Ankeny Lagoon/Landfill Complex, evaluate the impact to the groundwater resulting from the installation of the landfill cap, and to help determine the proper location of the permanent monitoring wells that will need to be installed and monitored. This characterization will need to be completed before other removal work can commence.

Also, this site characterization will require soil sampling to be performed. This effort will include soil sampling in the 18-20 acre area southwest of Saylor Creek which has never been previously sampled, the Industrial and Domestic Wastewater Treatment Areas. Exploratory trenching and geotechnical borings around the perimeter of the landfill to define the extent of the landfill requiring the engineered cap. Also, additional soil sampling will be required during the implementation of the action to ensure that all of the cleanup goals have been achieved, including any backfill soils that are brought in to regrade the area.

The landfill will be capped with a multilayer cover system to meet the removal action objectives such as (1) preventing direct contact with the landfill contents, (2) minimizing infiltration and resulting leaching to groundwater, and (3) minimizing migration of contaminants from the source area. The cover system will include a low-permeability clay composite liner with a passive methane venting system. Grading and cover layers will be placed below the composite liner to level the surface and to provide a stable base for the installation of a low-permeability clay liner. A geo-composite drainage layer will be placed over the composite liner to prevent ponding of water. A finish layer of topsoil will be placed and seeded to restore the Landfill Area. Adherence to Iowa Administrative Code (IAC), Section 115, Sanitary Landfills: Industrial Monofills will need to be followed including the cap thickness, permeability, proctor density, post-closure requirements, and other listed specifications. Future land use options in the Ankeny Landfill/Lagoon Complex will be limited to recreational use and will require an environmental covenant to protect and maintain the landfill cap and to restrict land and groundwater use.

Dewatering of the Domestic and Industrial Wastewater Treatment area lagoons and ponds will be required prior to the excavation of impacted areas and will likely continue through the duration of the excavation activities. The removed liquids shall be sampled to determine whether the material is a hazardous waste and, depending on the results of this sampling, the liquids will be properly disposed of at an appropriate disposal location.

Impacted sediments and surrounding soils that exceed EPA's stated cleanup goals from the Domestic and Industrial Wastewater Treatment Area lagoons will be excavated and disposed of at a RCRA-approved landfill. The lagoon areas will be rough graded to drain and then seeded. Also, all encountered inactive underground piping will be removed at the DMOP with any residual sludge(s) or other media sampled and properly disposed of with all encountered remaining piping identified and either removed or properly sealed.

During the course of the field work activities, air sampling will be required during critical work phases to ensure the protectiveness of the remedy concerning the nearby community. Also, security fencing will be installed around certain (contaminated) areas of the Ankeny Lagoon/Landfill Complex to ensure restricted entry during the cleanup of the identified hazardous substances.

The following table lists all of the required cleanup goals that will be followed/achieved during this action:

Contaminants of Concern CleanUp Goals

Lead (soil)	400 ppm
Arsenic (soil)	17 ppm
Copper (soil)	14,000 ppm
Chromium III (soil)	97,000 ppm
Chromium VI (soil)	210 ppm

2. Contribution to remedial performance

Although no remedial actions are currently anticipated for the Ankeny Lagoon/Landfill Complex, the proposed actions will be consistent with remedial actions which might subsequently prove to be necessary.

3. Description of alternative technologies

The EPA considered using alternate treatment technologies rather than excavation to achieve the soil cleanup levels specified in Section V.1. The EPA's policy regarding the use of alternative technologies for removal actions as described in the Office of Solid Waste and Emergency Response Directive 9380.2-1, *Administrative Guidance for Removal Program Use of Alternatives to Land Disposal*, is that the alternative technology must provide for a timely response and protection of human health and the environment. The policy also establishes three criteria in considering the use of alternative technologies: effectiveness, implementability, and cost. After consideration, it was determined that alternative treatment technologies will not be utilized during this time-critical removal action.

4. Applicable or relevant and appropriate requirements (ARARs)

The National Contingency Plan (NCP), 40 C.F.R. section 300.415(j), provides that removal actions pursuant to CERCLA, Section 106 shall, to the extent practicable considering the exigencies of the situation, attain ARARs under federal environmental, state environmental, or facility siting laws. By letter, EPA requested IDNR to identify requirements to be considered as potential state ARARs for this removal action. To qualify as state ARARs, these requirements must be (1) promulgated, (2) identified by the state within the time period specified in the letter, and (3) more stringent than federal requirements.

On March 3, 2006, IDNR identified potential ARARs for the Ankeny Lagoon/Landfill Complex, and provided statewide groundwater standards and soil standards for metals, VOCs, SVOCs, PAHs, and other organic and inorganic compounds to be considered during this time-critical removal action. The federal and state ARARs identified for this removal action include the following:

Solid Waste Requirements: Solid waste (such as nonhazardous contaminated waste soil and debris generated at the site through industrial activities) rules are found in IAC-567-100 through IAC-567-121. These regulations require that persons generating, collecting, transporting, storing, processing, and disposing of solid waste comply with notification and permitting requirements for facilities and landfills under the Iowa solid waste regulations.

Hazardous Waste Requirements: The RCRA allows any state to administer and enforce a hazardous waste program under federal authorization. The Hazardous and Solid Waste Amendments of 1984 expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions (LDR) and technical requirements. Because Iowa does not have a hazardous waste program, there are no state-specific regulations to be met for management of hazardous wastes generated at the Site. Hazardous substances are defined in and hazardous conditions identified through IAC -567-131. Generators of hazardous waste in Iowa must comply with the rules set forth in 40 C.F.R Parts 261 and 262. These regulations establish requirements for hazardous waste determination, EPA generator ID, waste manifests and shipments, pretransport activities and generator recordkeeping and reporting activities. Certain wastes that are generated at the DMOP may be subject to the LDRs that are described in 40 C.F.R Part 268.

RCRA Subtitle D-Solid Waste Disposal Regulations: The Subtitle D regulations at 40 C.F.R. Part 257 (Criteria for Classification of Solid Waste Disposal Facilities and Practices) establish requirements for maintenance and closure of a facility at which solid wastes are disposed.

IAC Chapter 115 - Sanitary Landfills; Industrial Monofills: This chapter details closure requirements for sanitary landfills accepting only a specific type of industrial waste and hydrologic monitoring system standards for these solid waste disposal facilities.

Air Requirements: Generation of airborne particulate matter from excavation of contaminated soil, earth moving and regrading that will occur during remediation must be evaluated under IAC 567-23. These regulations call for the control of fugitive emissions by taking measures to prevent particulate matter and suspended particulate matter from becoming airborne.

Water Quality Requirements: The Clean Water Act (CWA) (33 U.S. C. 1251 to 1376), as amended by the Water Quality Act of 1987 (Public Law 100-4-103), provides authority for each state to adopt water quality standards designed to protect beneficial uses of each water body and requires states to designate uses for each water body. For removal actions at the DMOP involving construction and excavation of contaminated soil, engineering controls designed to prevent discharges that may affect the water quality of nearby surface waters must be implemented. Discharges are required to meet storm water and wastewater discharge monitoring requirements established by the CWA.

U. S. Department of Transportation (DOT) Requirements: DOT regulations found at 49 C.F.R. parts 171-173 and 179 may be relevant and appropriate for the transportation of the treated contaminated soils to the disposal facility. As required by DOT (49 CFR Part 171), hazardous materials (such as hazardous wastes and environmentally hazardous substances that may be transported from the DMOP) cannot be transported during interstate and intrastate commerce, except in accordance with the requirements of Subchapter C, Hazardous Material Regulations of 49 C.F.R. Part 171. Hazardous wastes or environmentally hazardous substances transported within the state must comply with applicable packaging, labeling, marking, and placarding requirements of 49 C.F.R. Part 171 subpart C, Hazardous Waste Transporters. Truck operators also must be in compliance with applicable DOT operational requirements, specifically driver duty hours and time log requirements, as described in DOT Federal Motor Carrier Safety Administration, 49 C.F.R. Part 35.

The CERCLA Off-Site Rule: promulgated pursuant to CERCLA section 121(d)(3), 42 U.S.C. § 9621(d)(3), and formally entitled "Amendment to the National Oil and Hazardous Substance Pollution Contingency Plan; Procedures for Planning and Implementing Off-Site Response Action: Final Rule," 58 Fed. Reg. 49200 (Sept. 22, 1993), codified at 40 C.F.R. § 300.440. The Off-Site Rule is applicable since off-site disposal of soils will be utilized as the disposal method. Any off-site shipments of hazardous waste will need to meet the manifesting requirements found under 40 C.F.R. 262.20 to 262.23, the pretransport and packaging requirements found under 40 C.F.R. 262.30, the labeling requirements found under 40 C.F.R. 262.31, the marking requirements found under 40 C.F.R. 262.32, the Standards Applicable to Transporters found under 40 C.F.R. 263 and 264, subpart F, Releases from Solid Waste Management Units.

IAC Chapter 133 – Land Recycling Program: Rules for Determining Cleanup Actions and Responsible Parties: These rules establish criteria IDNR will use to determine the parties responsible and cleanup actions necessary to meet the goals of the state pertaining to the protection of the groundwater. These rules pertain to the cleanup of groundwater itself and soils and surface water where groundwater may be impacted. They may also be used as guidelines in other environmental protection activities authorized by Iowa Code chapter 455B. Maximum concentration levels are defined in IAC-567-133 and IAC-567-137.

In addition to the above ARARs, the following EPA guidance documents are to be considered for this removal action: (1) Presumptive Remedy for CERCLA Municipal Landfill Sites, EPA 540-F-93-035 (Sept. 1993); and (2) Application of the CERCLA Municipal Landfill Presumptive Remedy to Military Landfills, EPA 540-F-96-020 (Dec. 1996).

5. Project schedule

It is anticipated that construction activities (such as on-site excavation, grubbing, dewatering, grading, backfilling, and the construction of the landfill cap) will take approximately four months to complete after the relevant work plans are submitted by the Potentially Responsible Parties (PRPs) pursuant to the AOC. The project schedule is defined in the AOC.

B. Estimated Costs

The estimated cost to complete the proposed work is approximately \$9,000,000. EPA's extramural costs for oversight (including split sampling) is estimated at \$240,000.

Extramural Costs

Oversight Costs	200,000
20% Contingency	<u>40,000</u>
Removal Ceiling	\$240,000

EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Refer to the enforcement section for a breakout of these costs.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The proposed actions for the Ankeny Lagoon/Landfill Complex should be taken immediately. Should these actions be delayed, the potential threats to human health and the environment will increase.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

The total EPA costs for oversight of this PRP-lead removal action based on full cost-accounting practices are estimated to be \$381,350.

Direct Extramural Costs	240,000
Direct Intramural Costs	50,000
EPA Indirect (31.5% of all Costs)	<u>91,350</u>
Total Project Costs	\$381,350

Direct costs include direct extramural and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct cost, consistent with the full cost-accounting methodology effective October 2, 2000. These estimates do not include prejudgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Ankeny Lagoon/Landfill Complex and was developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record.

Conditions at the Ankeny Lagoon/Landfill Complex meet the NCP section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed, responsible-party-funded removal action. The removal project ceiling, if approved, will be \$240,000.

Approved:



Cecilia Tapia, Director
Superfund Division

9-11-08
Date

Attachment

Responsiveness Summary

On May 29, 2008, the Environmental Protection Agency (EPA) hosted a public availability meeting at the Lakeside Recreation Center, Hawkeye Park, 400 N.W. Lakeshore Drive, Ankeny, Iowa. The public meeting was held between the hours of 7 and 9 p.m. with 40 to 50 citizens in attendance. Other attendees included local leaders, state, and county officials. The purpose of the meeting was for EPA to discuss the environmental threats that are present at the 38-acre Landfill/Lagoon Complex Operable Unit 1 (Ankeny Lagoon/Landfill Complex) and to explain the proposed removal action for this portion of the Des Moines (ex) Ordnance Plant Site (DMOP).

Prior to finalizing the Action Memorandum (which documents EPA's decision regarding the removal action to be performed for the Ankeny Landfill/Lagoon Complex) the public was given an opportunity to provide comment on the proposed removal action for the Ankeny Landfill/Lagoon Complex. The public comment period opened on May 29, 2008, and closed on June 29, 2008. EPA established an Administration Record at the Kirkendall Public Library, 1210 N.W. Prairie Ridge Drive, Ankeny, Iowa. The Administrative Record contains all documents that form the basis for the selection of a response action at the Ankeny Landfill/Lagoon Complex portion of the DMOP.

All of the comments submitted during the public comment period were reviewed by EPA and considered in formulating this Time-Critical Removal Action for the Ankeny Landfill/Lagoon Complex. The public comments received did not disclose facts or considerations which would indicate the proposed removal action is inappropriate, improper or inadequate. Copies of the public comments and Action Memorandum are included in the Administrative Record.

The following comments were received during the public comment period. In some cases, similar comments have been grouped together whenever they can be addressed by a single response.

COMMENTS RELATING TO THE DEVELOPMENT AND CLEANUP ACTIONS

Comment/Question:

Several commenters expressed their concerns about the development project due to contamination found at the DMOP and uncertainty regarding the long-term effects that could result by allowing children to play at the proposed park or school. One commenter has concerns regarding the potential for inhalation and ingestion of contaminated dust and dirt over long periods of time, as well as concerns about the amount of chromium and other harmful chemicals that may be in the soil and water. Further, a question was asked whether all hazards have been discovered and what can EPA do to ensure that prolonged exposures will be safe.

EPA Response: EPA and the state of Iowa have performed and overseen several investigations at the DMOP. EPA has completed Phase I and Phase II Investigations and an Expanded Site Investigation over a several year period at the DMOP and has identified numerous hazardous substances (mainly metals such as lead, chromium, copper, and arsenic) in soil, sediment, and groundwater. EPA is confident that the nature and extent of contamination and risks associated with the Ankeny Landfill/Lagoon Complex, which is the subject of EPA's cleanup plan, have

been defined. All future work at the Ankeny Landfill/Lagoon Complex will be closely monitored by EPA and appropriate actions will be taken during all phases of the EPA Removal Action. EPA's risk assessment and cleanup plan have taken into consideration the planned future use of the Ankeny Landfill/Lagoon Complex as a green space and the surrounding area as a residential development. EPA then developed soil cleanup levels for the contaminants of concern that are protective of the future use of the Ankeny Landfill/Lagoon Complex as a park, with the surrounding area as a residential development. EPA's recommendations are based on sound scientific principles and human health studies and evaluations performed by engineers, scientists, trained risk assessors and health experts.

EPA's selected removal action is documented and described in the Action Memorandum. The Ankeny Landfill/Lagoon Complex cleanup will include complete excavation of soils/wastes from the former lagoon area to satisfy the health-based standards developed by EPA, with off-site disposal of the excavated material at an approved location. The excavated area will then be backfilled with clean soil. Further, an engineered, composite cap will cover the entire landfill area to ensure that no soils exceeding cleanup criteria are exposed. Additional investigations of the Ankeny Landfill/Lagoon Complex areas during and following the cleanup work will be performed to verify that cleanup criteria have been met. When the cleanup is complete, no contaminants exceeding EPA's protective standards will remain accessible within the Ankeny Landfill/Lagoon Complex area. The cleanup plan also includes institutional controls in the form of a restrictive covenant that will be implemented by the city (and any future owner of the Ankeny Landfill/Lagoon Complex) and enforced by EPA and the state of Iowa to ensure that future uses of the property will not impair the landfill cap and that individuals are not exposed to unacceptable levels of contamination.

Comment/Question:

One commenter expressed concerns about a family member who was a guard at the plant during World War II who died of cancer of the pancreas. The commenter asked if there is any way to check records of employment of those that were guards at the time and investigate any incidents of cancer in that area. If the workers families could give data on the guards, and if any cancer was involved, it may give a good indication of how much danger might be involved with the toxic material.

EPA Response: The Iowa Department of Public Health (IDPH) discussed the procedures for conducting a health study or cancer registry at the May 29, 2008, Public Availability Meeting. On August 6, 2008, the IDPH concluded that overall, the results of this data analyses suggest that the cancer experience of the target area in Ankeny is similar to the remainder of Ankeny. Also, that it is the opinion of the IDPH that if site remediation activities are completed as planned, the use of DMOP will be safe for both adults and children living and working within the development area. This IDPH study will be included in the Administrative Record for public review.

In addition, EPA has used historic employee interviews as a means to improve our understanding of the past operations at a site. In the case of the Ankeny Landfill/Lagoon Complex we are addressing here, EPA has a good understanding of the contamination remaining onsite through the investigations that have taken place.

Comment/Question:

One commenter demands action by EPA officials and the Iowa Governor, Legislators, and Congressmen: (1) to expand federal investigations by EPA pertaining to toxic Superfund Sites in Ankeny and environs; (2) to include research into Health & Death data and also consumer fraud; and (3) to place a moratorium on 'Prairie Trail' development and the sale of homes by Ankeny City Officials and developer Albaugh. Information points to the probabilities of still-dangerous carcinogenic toxins and long-buried uranium wastes in the Ankeny area. Public testimonies in hearings by Iowa's Department of Natural Resources and the National Environmental Protection Agency in Iowa supported the need for further studies. Certain recorded testimonies and anecdotal evidence suggest the necessity of further investigations, in addition to the continuation and expansion of Environmental Protection Agency Superfund studies, to include other federal agencies such as Public Health, Consumer Protection & Federal Emergency Management. Coordinated national level analysis is essential to determine whether anecdotal reports of abnormal levels of cancer in Ankeny are valid or relevant. A request was made that EPA make available in advance of fact-finding hearings an officer, in a central DM location during both day-time & evening hours, to explain maps & other EPA data and that EPA must announce the existence of such an office as soon as it is opened.

EPA Response: As stated above, EPA and the state of Iowa have performed and overseen several investigations at the Site. For example, Phase I and Phase II Investigations and an Expanded Site Investigation have been completed over a several year period at the Site. EPA has identified numerous hazardous substances (mainly metals) in soil, sediment and groundwater. All of the information relied upon by EPA in selecting the removal action for the Ankeny Landfill/Lagoon Complex, as well as a significant amount of information regarding the DMOP as a whole, has been made publicly available in Ankeny and was discussed in detail at the May 29, 2008 availability session by representatives from EPA and IDNR. EPA is confident that the Ankeny Landfill/Lagoon Complex, which is the subject of the EPA removal action, has been adequately characterized. The cleanup actions taken as part of EPA's plan will result in the complete excavation of the former lagoon areas to health based standards and backfill with clean soil as well as capping the landfill area. No surface exposures to contaminants in the Ankeny Landfill/Lagoon Complex will remain. Additional investigations of the areas during design and post construction will verify the final site conditions. All future work at the Ankeny Landfill/Lagoon Complex parcel will be closely monitored by EPA and appropriate actions will be taken during all phases of the EPA removal action. The EPA's risk assessment and cleanup plan have taken into consideration the planned future use of the Ankeny Landfill/Lagoon Complex area as a green space/park area and the surrounding area as a residential development. EPA's recommendations are based on sound scientific principles and human health studies and evaluations that were performed by engineers, scientists, and trained risk assessors and health experts. The cleanup plan also includes institutional controls that will be implemented by the city and monitored by EPA and the state of Iowa to ensure that future uses of the property are protective.

Concerning alleged disposal of radioactive wastes at the Site, EPA and the state of Iowa investigated claims that DMOP had been used as part of the uranium enrichment work that took place at Iowa State University. The investigation included an extensive historical records review and a site visit to evaluate the allegations. Part of this review included the April 2002 study

published by Iowa State University Environmental Health and Safety titled *Historical Review of the Iowa State University Ankeny Farm*. This report concludes there are no ISU records of any radioactive material being used at the site. The study also concludes that no records were found that indicated that DMOP was part of the uranium enrichment project and no records of any use of radioactive materials by Iowa State University at DMOP. In addition, a visit to DMOP, which included the individual making the allegations, was conducted to check the areas of most concern to the individual. This visit included taking measurements to detect radiation that would have been expected at these areas. These measurements included taking water samples in 2002 from the DMOP (Iowa State Farm) that indicates that the radioactive material levels were within background or normal levels.

Comment/Question:

A commenter wrote to express very serious concern about a development project in Ankeny Iowa, and believes the development should not be allowed to proceed where there are well known and documented contamination problems in various parts of the development site. The EPA representative at a public hearing acknowledged that DMOP has multiple problem areas including a "toxic pond"... toxins that "exceed health based levels"... lead levels that are around "38,000 per million" when normal or acceptable levels are reported to be around 300. It is also reported that "environmental workers are being medically monitored" due to the high risk of exposure to toxins in the area. There are suspicions based on circumstantial evidence that uranium that was once produced by Iowa State University may have been disposed of at this site. These suspicions warrant investigation by the EPA when so much is at stake. Families with children are being paid "\$10,000 in scholarship funds" for buying in the proposed development site. A park is expected to be developed in an area where contaminants have been identified as being highly problematic. These families and the children in them deserve to have clean and healthy land, water and air. The EPA needs to ensure that the former dumping ground is NOT used for a developer to make money off of what should potentially be inhabitable land. The commenter requests EPA to investigate this development site further and make safe recommendations for the use or non-use of the land.

EPA Response: EPA has identified levels of hazardous substances that pose a potential long term threat to human health if no action at the DMOP is taken. EPA agrees that the contamination must be addressed to prevent future, unacceptable exposures. However, it should be noted that once this removal action for the Ankeny Landfill/Lagoon Complex is completed, area will be acceptable for the current and proposed uses. EPA's involvement in the development of the property is to ensure that the planned development is consistent with the protectiveness goals of the cleanup actions and that all future uses of the property remain protective.

As stated previously, the IDPH has conducted a health study or cancer registry. On August 6, 2008, the IDPH concluded that overall, the results of this data analyses suggest that the cancer experience of the target area in Ankeny is similar to the remainder of Ankeny. Also, that it is the opinion of the IDPH that if site remediation activities are completed as planned, the use of the former DMOP will be safe for both adults and children living and working within the development area.

Addressing medical monitoring for the workers at the site, OSHA regulations require medical monitoring practices to be implemented at all Superfund Sites. Often workers rotate from site to site and/or city to city and are potentially exposed to all types of hazardous substances while working in very close proximity to the contamination during the course of the year. This regulation should not be interpreted as the citizens in the nearby community are going to be exposed to unsafe levels of contamination during the cleanup since they are not medically monitored. Many safety precautions will be implemented during the cleanup that will assure the community that all of the work activities are conducted without risk to the nearby community, including air monitoring, covered truck loads and dust suppression.

EPA is confident that the Ankeny Landfill/Lagoon Complex, which is the subject of the EPA cleanup plan, has been characterized and a detailed assessment has been performed. The cleanup actions taken as part of EPA's plan will result in a complete excavation of the former lagoons to health based standards, offsite disposal at an approved location, and backfilled with clean soil, as well as an engineered cap over the entire landfill area. No surface exposures to the contaminants of concern in the Ankeny Landfill/Lagoon Complex will remain. Additional investigations of the areas during design and post construction will verify final site conditions. All future work at the Ankeny Landfill/Lagoon Complex will be closely monitored by EPA and appropriate actions will be taken during all phases of the EPA removal action. The EPA's risk assessment and cleanup plan have taken into consideration the planned future use of the Ankeny Landfill/Lagoon Complex as a green space/park area and the surrounding area as a residential development. EPA's recommendations are based on sound scientific principles, human health studies, and evaluations that were performed by engineers, scientists, trained risk assessors, and health experts. The cleanup plan also includes institutional controls that will be implemented by the city and monitored by EPA and the state of Iowa to ensure that future uses of the property are protective. The institutional controls will be publicly available and continue with any future land transfers.

In addition to all of the studies relating to alleged radioactive materials on the site area that have already been addressed in this document, the IDPH stated in a May 2, 2002, correspondence to Iowa State University, that there is no further action necessary concerning any additional sampling or studies, as far as radioactive materials are concerned at the Ankeny Farm Site.

AMINISTRATIVE/GENERAL COMMENTS:

Comment/Question:

One commenter asked if the developers of this project are required to inform potential buyers of the history of hazardous material imbedded in the ground.

EPA Response: EPA defers the commenter to any local real estate laws that may require such disclosure to potential buyers. EPA has made available to the public a significant number of technical reports regarding the site that document the nature and extent of contamination. In addition, EPA has also made publicly available the historical information regarding the use of DMOP. EPA's Administrative Record is located at the Kirkendall Public Library, 1210 N.W. Prairie Ridge Drive, Ankeny, Iowa.

Comment/Question:

One commenter asked which developer, agency, and local government is behind the planning on this project?

EPA Response: There are numerous parties that are involved with the planning of this project and the subsequent development. EPA is not involved in land use decisions. EPA does take into account the future land use of the property to determine the appropriate cleanup goals to ensure the cleanup action will be protective of human health and the environment. The basis for EPA's decision-making are risks posed by the site contamination to human health and the environment for the anticipated future use of the property. The Iowa Department of Natural Resources briefly discussed the developer and the associated activities during EPA's Public Availability Meeting. The City of Ankeny, the Army Corps of Engineers, and John Deere are the responsible for the cleanup of the Ankeny Landfill/Lagoon Complex portion of the DMOP.

Comment/Question:

One commenter asked whether attendees of the Home Show were aware that the Prairie Trail Housing Complex is a former dump-site.

EPA Response: EPA distributed fact sheets, held a public availability meeting, and made the Administrative Record accessible to the public in advance of the Home Show. As part of the notice of the Public Availability meeting, local newspapers carried announcements of the meeting and direct mailing to local residents and public officials of the Site Fact Sheet and announcement of the Public Availability Meeting was done.

Comment/Question:

One commenter asked if the Des Moines Register did an investigative piece on DMOP several months ago.

EPA Response: An article about DMOP was published in the March 31, 2008, edition of the Des Moines Register. This article can also be found in the Administrative Record for DMOP located at the Kirkendall Public Library, 1210 N.W. Prairie Ridge Drive, Ankeny, Iowa.

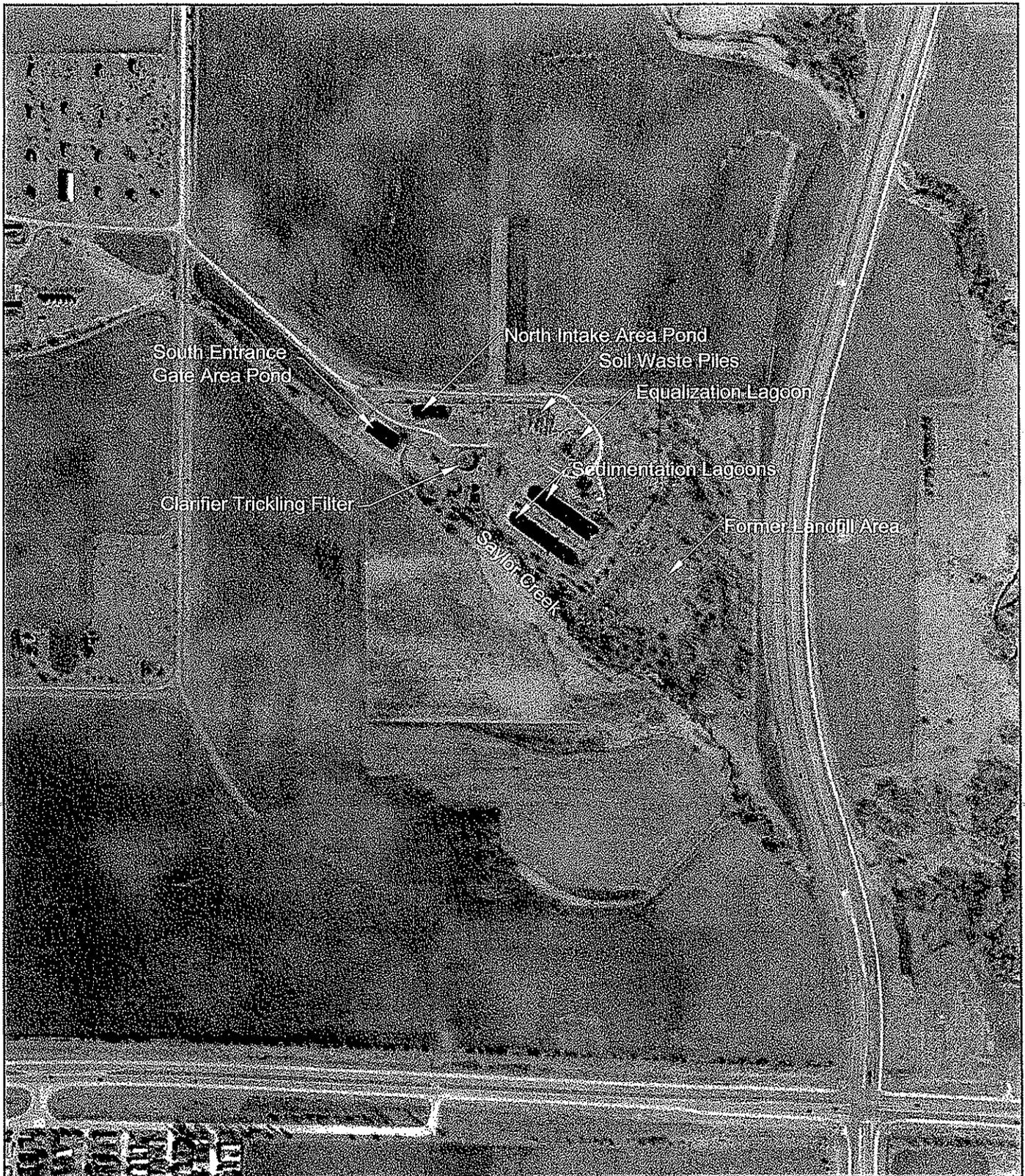
Comment/Question:

Now that the public comment period has ended for DMOP, can you share what next steps would be and a timeline of the steps?

EPA Response: The EPA has taken the public comments received into consideration in the cleanup decision documented in an Action Memorandum for this removal action. This Responsiveness Summary is an attachment to the Action Memorandum for the Ankeny Landfill/Lagoon Complex and is available for public review as part of that document. Negotiations with the potential responsible parties will then be finalized on an Administrative Order for the design and cleanup actions. The order will include a schedule and statement of work for the cleanup.

Appendix B

Landfill/Lagoon Treatment Complex Map



South Entrance
Gate Area Pond

North Intake Area Pond

Soil Waste Piles

Equalization Lagoon

Sedimentation Lagoons

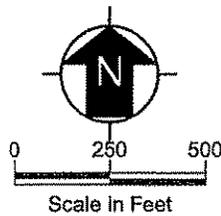
Clarifier-Trickling Filter

Former Landfill Area

Saylor Creek

Des Moines (ex) Ordnance Plant Site
Ankeny, Iowa

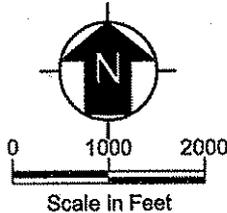
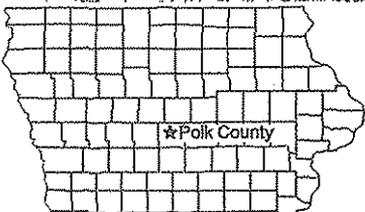
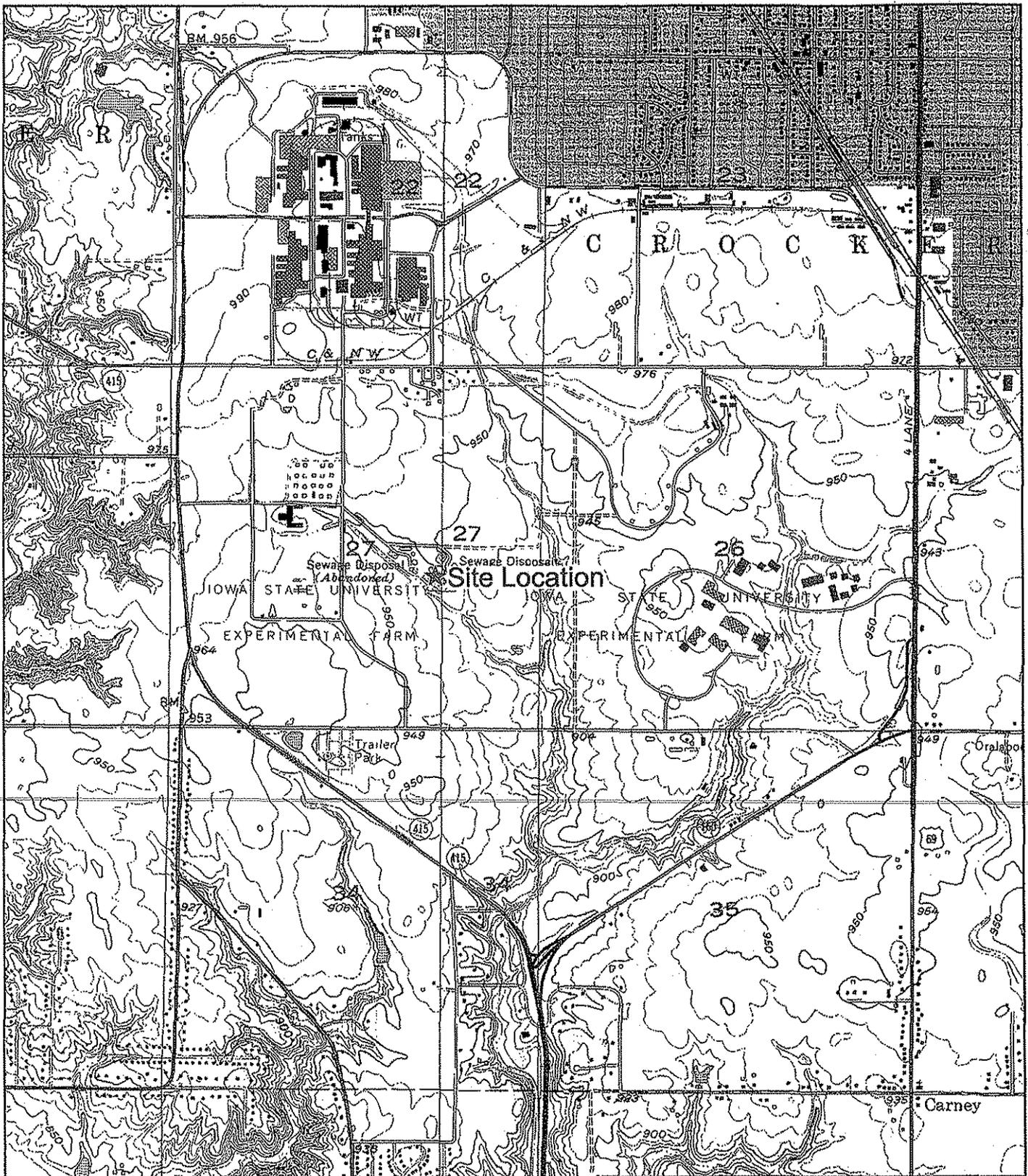
Figure 2
Site Layout Map



Tetra Tech EM Inc.

Appendix C

**Des Moines Ex Ordnance Plant
Site Map**



**Des Moines (ex) Ordnance Plant Site
Ankeny, Iowa**

**Figure 1
Site Location Map**

Tetra Tech EM Inc.

Date: 06/06/05 Drawn By: Roger Stul Project No: C6011.L-05.0237.00

Source: 11/02/07/Reg/Planned/Map

SE 1/4, Sec. 27, T 80N, R 24W
 Source: USGS Des Moines NE, IA 7.5 Minute Topo Quad, 1956, PR 1967, 1971, and 1976
 USGS Des Moines NW, IA 7.5 Minute Topo Quad, 1956, PR 1967, 1971, and 1976

Appendix D

Scope of Work
Des Moines Ex Ordnance Plant Site

Appendix E

Environmental Covenant

ENVIRONMENTAL COVENANT

This Environmental Covenant is established and executed pursuant to Iowa Code Chapter 455I entitled Uniform Environmental Covenants Act.

The signatories hereto have entered 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 specified below and the provisions of Iowa's Uniform Environmental Covenants Act, Iowa Code Chapter 455I. The Environmental Protection Agency ("EPA") and the Iowa Department of Natural Resources ("IDNR") enter into this covenant in their capacity as "agencies" as provided in Iowa Code sections 455I.2(2) and 455I.3(2). The IDNR enters into this agreement pursuant to authority in Iowa Code section 455B.103(7).

1. **The Property.** The City of Ankeny, Iowa ("City") is the fee simple title owner of that real property described in Exhibit A hereto (the "Property"). The Property is comprised of three (3) areas (Area A, Area B, and Area C), each of which is individually described in Exhibit A.

2. **Background.** Pursuant to the authority of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. 9601 et seq., the United States Environmental Protection Agency ("EPA") has conducted investigations into the environmental conditions of the Property and has determined that a removal ~~action is warranted thereon.~~ As part of those investigations and removal action, EPA has concluded that the soils and groundwater underlying portions of the Property contain levels of contaminants that may pose a threat to human health and the environment if used without restriction. The Removal Action will be performed as set forth in an EPA Action Memorandum dated September 11th, 2008, and an Administrative Settlement Agreement and Order on Consent for Removal Action, EPA Docket No. 07-2006-0127.

EPA refers to the Property as Operable Unit 1 of the Des Moines Ex Ordnance Plant Superfund Site. The Administrative Record for that Site contains EPA decision documents and can be reviewed at the offices of EPA specified in Section 18 below.

3. **Purpose.** Because contamination will remain at some areas of the Property at levels above those appropriate for unrestricted use, this Environmental Covenant is being imposed on the Property for the purposes of protecting public health or welfare or the environment.

4. **Identity of Grantor, Grantee/Holder, and Agency, as each is defined in this Environmental Covenant:**

Grantor: The City of Ankeny, Iowa is the current owner of the Property and the Grantor of this Environmental Covenant.

Grantee/Holder: The City of Ankeny, Iowa is the Grantee/Holder of this Environmental Covenant.

Agency: EPA and IDNR are each an Agency under this Environmental Covenant.

5. **Representations and Warranties.** The City warrants to EPA the following:

- A. that it is the sole fee simple title owner of the Property;
- B. that it holds sufficient fee simple title to the Property to grant the rights and interests described in this Environmental Covenant free of any conflicting legal and equitable claims, and
- C. that it has searched for all other persons holding legal or equitable interests to the Property, including, but not limited to, contract buyers, mortgagees, other consensual lien holders, and lessees and there are none.

6. **Running with the Property.** This Environmental Covenant is perpetual and runs with the areas of the Property specified herein as provided in Iowa Code Chapter 455I until modified or terminated as provided below in Section 12. This Environmental Covenant is binding on the City and all of the City's successors, assigns, and all transferees acquiring or owning any right, title, lien or interest in the areas of the Property specified herein 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 areas of the Property so specified, 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 limitation:

- A. For Areas A, B, and C, no water wells may be installed and/or used except for the purpose of environmental investigation and/or monitoring; unless otherwise expressly authorized in writing by EPA and IDNR.
- B. Area B of the Property shall not be used for any permitted purpose other than as a park, recreational area, and/or green space, unless otherwise expressly authorized in writing by EPA and IDNR.
- C. No excavation shall be permitted in Area B of the Property except as is necessary and appropriate for environmental investigation, monitoring and/or response activities, and the maintenance and repair of such environmental investigative, monitoring and/or response mechanisms and technologies, and the installation, repair, and maintenance of trees, shrubs,

grasses, trails, and park or landscaping related items and structures, unless otherwise expressly authorized in writing by EPA and IDNR.

D. In addition to the restrictions set forth in Paragraph 7(C), the City and any subsequent transferee of the Property shall not conduct any activities in Area B that would potentially affect the integrity of the cap or penetrate deeper than the uncompacted soil layer without prior approval from EPA and IDNR. Further, the City and any subsequent transferee of the Property will take measures to maintain the integrity of the cap in Area B by maintaining appropriate vegetative cover, maintaining the specified grade of the cap as installed, repairing erosion of cap material, and preventing unplanned ponding, unless expressly authorized in writing by EPA and IDNR.

8. **Notice of Transfer of Interest.** The City and any subsequent transferee of the Property shall notify EPA and IDNR of any transfer of interest in the Property at least thirty (30) days prior to such transfer.

9. **Notice of Non-Compliance:** The City and any subsequent transferee of the Property shall notify EPA and IDNR as soon as possible of any conditions that would constitute a breach of the activity and use limitations specified above in Section 7.

10. **Notice to Lessees:** The City and any subsequent transferee shall incorporate the activity and use limitations of this Environmental Covenant either in full or by reference to this instrument in any lease, license, or other instrument granting a right of possession of the Property.

11. **Access to the Property.** Reasonable access to the Property is hereby granted to EPA and IDNR, and their authorized representatives, for the purpose of implementation, monitoring and enforcement of the terms of this environmental covenant, and to ascertain or ensure that the Removal Action taken at the Property remains effective and protective of human health or welfare or the environment. Nothing herein shall be deemed to limit or otherwise affect EPA's or IDNR's rights of access and entry under federal or state law. Right of access includes, but is not limited to, the following activities:

- a. implementing, overseeing or conducting any activity related to the Removal Action; and
- b. verifying any data or information submitted to EPA or IDNR during the Removal Action.

12. **Modification and Termination.** This Environmental Covenant may be modified or terminated in accordance with and subject to the provisions of Iowa Code Chapter 455I. The termination or modification of this Environmental Covenant is not effective until the document evidencing consent of all necessary persons is properly recorded.

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 Chapter 455I.

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 following execution of this Environmental Covenant by all parties hereto, Grantor shall submit for recordation this Environmental Covenant with the Polk County, Iowa, 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 Polk County, Iowa, Recorder's Office.

18. **Notice.** Unless otherwise notified in writing by an Agency, any document or notice required by this Environmental Covenant shall be submitted to:

Director, Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
~~Kansas City, Kansas 66101~~

Director
Iowa Department of Natural Resources
Wallace State Office Building
502 East 9th Street
Des Moines, Iowa 50319

City of Ankeny, Iowa
Attention: City Manager
Ankeny City Hall
410 West 1st Street
Ankeny, Iowa 50023

GRANTOR/GRANTEE/HOLDER:

City of Ankeny, Iowa

Sept 15, 2008

[Signature]

By: _____

Title: Mayor

[Signature]

By: _____

Title: City Clerk

STATE OF IOWA)

) ss:

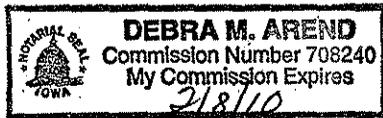
COUNTY OF POLK)

On this 15th day of September, 2008, before me, a Notary Public in and for the State of Iowa, personally appeared Steven D. Van Cort and Pamela DeMuth, to me personally known, and, who, being by me duly sworn, did say that they are the Mayor and City Clerk, respectively, of the City of Ankeny, Iowa; hat the seal affixed to the foregoing instrument is the corporate seal of the corporation, and that the instrument was signed and sealed on behalf of the corporation, by authority of its City Council, as contained in Ordinance No. Resolution

2008-324 passed (the Resolution adopted) by the City Council, under Roll Call No. N/A of the City Council on the 15th day of September, 2008, and that Steven D. Van Cort and Pamela DeMuth acknowledged the execution of the instrument to be their voluntary act and deed and the voluntary act and deed of the corporation, by it voluntarily executed.

[Signature]

Notary Public in and for said State and County



AGENCY:

IOWA DEPARTMENT OF NATURAL RESOURCES

By: Richard Leopold, Director
Iowa Department of Natural
Resources

State of Iowa)
) ss:
County of)

On this ____ day of _____, _____, before me personally appeared Richard Leopold, the Director of the Iowa Department of Natural Resources, who being duly sworn, did sign this Environmental Covenant.

Notary Public, State of Iowa

EXHIBIT A

AREA "A"

THAT PART OF LOT 14 OF JOHN DEERE PLACE, BEING AN OFFICIAL PLAT IN THE CITY OF ANKENY, POLK COUNTY, IOWA, LYING NORTHEAST OF AND ADJACENT TO THE CENTERLINE OF A CREEK THAT FLOWS DIAGONALLY ACROSS SAID LOT 14 FROM APPROXIMATELY THE NORTHWEST CORNER TO APPROXIMATELY THE SOUTHEAST CORNER THEREOF, AND BEING ADJACENT TO AND WEST OF THE FOLLOWING DESCRIBED LINE; COMMENCING AT THE NORTHEAST CORNER OF SAID LOT 14; THENCE NORTH 89°52'59" WEST ALONG THE NORTH LINE OF SAID LOT 14, A DISTANCE OF 328.20 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 1°31'25" WEST, 329.61 FEET; THENCE SOUTH 34°11'17" WEST, 563.00 FEET TO THE CENTERLINE OF SAID CREEK AND TO THE POINT OF TERMINUS.

AREA "B"

THAT PART OF LOT 14 OF JOHN DEERE PLACE, BEING AN OFFICIAL PLAT IN THE CITY OF ANKENY, POLK COUNTY, IOWA, LYING ADJACENT TO AND NORTHEAST OF THE CENTERLINE OF A CREEK THAT FLOWS DIAGONALLY ACROSS SAID LOT 14 FROM APPROXIMATELY THE NORTHWEST CORNER TO APPROXIMATELY THE SOUTHEAST CORNER THEREOF, AND LYING ADJACENT TO AND WEST OF THE CENTERLINE OF A NORTH-SOUTH CREEK NEAR THE ~~EAST LINE OF SAID LOT 14, AND LYING ADJACENT TO AND EAST OF THE~~ FOLLOWING DESCRIBED LINE; COMMENCING AT THE NORTHEAST CORNER OF SAID LOT 14; THENCE NORTH 89°52'59" WEST ALONG THE NORTH LINE OF SAID LOT 14, A DISTANCE OF 328.20 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 1°31'25" WEST, 329.61 FEET; THENCE SOUTH 34°11'17" WEST, 563.00 FEET TO THE CENTERLINE OF SAID DIAGONAL CREEK AND TO THE POINT OF TERMINUS.

AREA "C"

THAT PART OF LOT 14 OF JOHN DEERE PLACE, BEING AN OFFICIAL PLAT IN THE CITY OF ANKENY, POLK COUNTY, IOWA, LYING ADJACENT TO AND SOUTH OF THE CENTERLINE OF A CREEK THAT FLOWS DIAGONALLY ACROSS SAID LOT 14 FROM APPROXIMATELY THE NORTHWEST CORNER TO APPROXIMATELY THE SOUTHEAST CORNER THEREOF, AND LYING ADJACENT TO AND EAST OF THE CENTERLINE OF A NORTH-SOUTH CREEK NEAR THE EAST LINE OF SAID LOT 14.

IN THE MATTER OF Des Moines Ex Ordnance Site; City of Ankeny, Iowa and John Deere Des Moines Works of Deere Company; and The U.S. Army Corps of Engineers, Respondents
Docket No. CERCLA-07-2006-0127

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing Administrative Settlement Agreement and Order on Consent for Removal Action was sent this day in the following manner to the addressees:

Copy hand delivered to
Attorney for Complainant:

Alyse Stoy
Office of Regional Counsel
Region VII
United States Environmental Protection Agency
901 N. 5th Street
Kansas City, Kansas 66101

Copy by First Class Mail to:

Eric Hostettler
U.S. Department of Justice
Environment and Natural Resources Division
601 D. Street, Suite 8000
Washington, D.C. 20004

Cathy Grow
Assistant District Counsel
~~Department of the Army~~
Corps of Engineers, Omaha District
1616 Capitol Avenue
Omaha, Nebraska 68102-4901

Copy by Certified Mail Return Receipt to:

Amy S. Beattie, Esq.
Brick, Gentry, Bowers, Swartz, Stoltze, Schuling & Levi, P.C.
550 Thirty-Ninth Street, Suite 200
Des Moines, Iowa 50312

Baerbel E. Schiller, Esq.
Spencer Fane Britt & Browne LLP
1000 Walnut Street, Suite 1400
Kansas City, Missouri 64106

Jane B. McAllister
Ahlers & Cooney, P.C.
100 Court Avenue, Suite 600
Des Moines, Iowa 50309

Dated: 2/6/09



Kathy Robinson
Hearing Clerk, Region 7