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Attachments:

- A Facility Map
- B Corrective Measures Implementation Scope of Work (SOW)
- C Final Decision/Response to Comments (FD/RTC)
- D Environmental Covenant (Nebraska)

I. INTRODUCTION

1. This Administrative Order on Consent (Order) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and BNSF Railway Company (Respondent). This AOC provides for the implementation of the corrective measures described in the Final Decision/Response to Comments (FD/RTC) (Attachment C), including any Additional Work that may be required by Section XXVII (Additional Work) of this AOC, by Respondent in connection with the property located at the Hobson Yard, Lincoln, Nebraska (Facility). In entering into this AOC, the mutual objectives of EPA and Respondent are to prevent, mitigate, and remediate the potential endangerment to human health and/or the environment from activities involving solid waste, hazardous waste, and constituents of such wastes, and to insure that the Work ordered by EPA be designed and implemented to protect human health and/or the environment. These mutual objectives are described in Section IX (Work to be Performed) and the Scope of Work (SOW) (Attachment B), which is hereby incorporated into this AOC by reference. Respondent shall finance and perform the Work in accordance with this AOC, plans, standards, specifications and the schedules set forth in this AOC or those developed by Respondent and approved by EPA pursuant to this AOC.
2. EPA has determined that Respondent has contributed or is contributing to the past or present handling, storage, treatment, transportation or disposal of "solid waste and hazardous waste" or constituents of such wastes that may present an imminent and substantial endangerment to health or the environment.
3. EPA has notified the State of Nebraska of this action on January 28, 2014, pursuant to Section 7003(a) of RCRA 42 U.S.C. § 6973(a).
4. EPA and Respondent acknowledge that this AOC has been negotiated by the parties in good faith and that this AOC is fair, reasonable, and in the public interest and recognize that the actions undertaken by Respondent in accordance with this AOC do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings, other than proceedings to implement or enforce this AOC, the validity of the findings of fact, conclusions of law, and determinations in Sections VI and VII of this AOC.

II. JURISDICTION

5. This AOC is issued under the authority vested in the Administrator of EPA by Section 7003 of RCRA, which authority has been delegated to the Regional Administrators of EPA by Delegations 8-22-A and 8-22-C (April 20, 1994), and re-delegated to Director of the Air and Waste Management Division of EPA Region 7 by Delegation R7-8-022-A and R7-8-022-C (September 16, 2007).
6. Respondent agrees to undertake and complete all actions required by the terms and conditions of this AOC. In any action by EPA or the United States to enforce the terms of this AOC, Respondent consents to and agrees not to contest the authority or jurisdiction of the Director of the Air and Waste Management Division to issue or enforce this AOC, and agrees not to contest the validity of this AOC or its terms or conditions.

III. PARTIES BOUND

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

IV. STATEMENT OF PURPOSE

10. The mutual performance objectives of the Parties, in entering into this AOC, are: (1) to prevent receptors from coming into contact with subsurface soils and groundwater contaminated above site-specific or risk-based levels, (2) to contain the source areas to reduce their contribution to existing groundwater contamination, (3) to prevent migration of groundwater contamination off the site at levels above drinking water standards, and (4) to prevent discharge of contaminated groundwater to Salt Creek and Middle Creek at levels above Nebraska Surface Water Quality Standards.

V. DEFINITIONS

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

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

“Administrative Record” shall mean the record compiled and maintained by the EPA supporting this AOC. For information on the contents of the Administrative Record see “Guidance on Administrative Records for RCRA 3008(h) Actions,” OSWER Directive 9940.4, July 6, 1989.

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

“Annually” shall mean one (1) time per calendar year such that at least eleven (11) months and no more than thirteen (13) months have elapsed since the last annual event.

“AWMD” shall mean the Air and Waste Management Division of Region 7 of the EPA, or subsequently renamed division of EPA Region 7 that includes the personnel that conduct oversight of RCRA.

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

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

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

“Corrective Measures Implementation” or “CMI” shall mean those activities necessary to initiate, complete, monitor, and maintain the remedies the EPA has selected or may select to protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from the Facility. The CMI requirements are described in the SOW included as Attachment B.

“Corrective Measures Study” or “CMS” shall mean the investigation and evaluation of potential remedies which will protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from the Facility.

“Daily” shall mean once (1) each calendar day, unless expressly stated to be a working day.

“Data Quality Objectives (DQOs)” shall mean performance and acceptance criteria that clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions. The DQOs shall be prepared consistent with EPA Guidance documents: “Guidance on Systematic Planning Using the Data Quality Objectives Process” EPA QA/G-4, EPA/240/B-06/001, February 2006; “Guidance for Developing Quality Systems for Environmental Programs” EPA QA/G-1, EPA/240/R-008, November 2002; and any subsequent revisions or editions.

“Day” shall mean a calendar day unless otherwise specified. “Working day” or “business day” shall mean a day other than a Saturday, Sunday, or a federal holiday. In computing any period of time under this AOC, where the last day would fall on a Saturday, Sunday, or a federal holiday, the period shall run until the close of business of the next working day.

“Director” shall mean the Division Director of AWMD, his or her designee, or an authorized representative.

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

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

“Facility” shall mean the northeast portion of the entire BNSF Hobson Yard property located on the west side of Lincoln, Nebraska in Lancaster County, encompassing approximately 100 acres. The Facility is located within Section 27 of Township 10 North, Range 6 East. The north boundary runs east-west parallel to North Ditch to the confluence of North Ditch and Salt Creek. The east boundary runs along the west bank of Salt Creek from the confluence with North Ditch south to the north side of the railroad bridge across Salt Creek. The south boundary runs from the railroad bridge on Salt Creek to about the southwest corner of the Diesel Shop. Finally, the west boundary runs north from near the southwest corner of the Diesel Shop along the west side of the Diesel Shop to intersect the north boundary near the intersection of North Ditch and NW Roundhouse Drive. The Facility is generally depicted on the map attached to this AOC as Attachment A.

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

“Hazardous Waste” shall mean any solid waste as defined at 42 U.S.C. §6903 (27) and 40 C.F.R. §261.2 which also meets any of the criteria of a hazardous waste as listed in 42 U.S.C. §6903 (5) and 40 C.F.R. §261.3. This term also includes hazardous constituents as defined above.

“Interim Measures” or “IM” shall mean those actions taken to immediately control, abate, or eliminate threats or potential threats to human health or the environment from releases or potential releases of hazardous waste or hazardous constituents, which can be initiated before implementation of the final corrective measures for a facility.

“Institutional Controls” or “ICs” shall mean administrative and/or legal mechanisms that prevent or help limit exposure of humans to or from contamination and/or protect the integrity of the remedy.

“EPA Maximum Contaminant Levels” or “MCLs” (also known as National Primary Drinking Water Regulations (primary standards)) shall mean legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water.

“Monthly” means twelve (12) times per year (once per calendar month) such that at least fifteen (15) days and no more than forty-five (45) days have elapsed since the last monthly event.

“Quarterly” means four (4) times per calendar year such that at least two (2) months and no more than four (4) months have elapsed since the last quarterly event.

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

“RCRA Corrective Action Plan” means the document of the same name, dated May 1994, and given the OSWER Directive Number 9902.3-2A and EPA Document Number 520-R-94-004 and any subsequent revisions or editions.

“RCRA Facility Investigation” or “RFI” shall mean the investigation and characterization of the source(s) of contamination and the nature, extent, direction, rate, movement, and concentration of the source(s) of contamination and releases of hazardous waste, including hazardous constituents that have been or are likely to be released into the environment from the Facility.

“Regional Administrator” means the Regional Administrator of EPA, Region 7, or his or her designee.

“Release” shall mean any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes and/or hazardous constituents.

“Respondent” means BNSF Railway Company, a Delaware Corporation, authorized to do business in the State of Nebraska.

“Scope of Work” or “SOW” shall mean the outline of work Respondent must use to develop all work plans and reports required by this AOC as set forth in this AOC and Attachment B. All SOW Attachments and EPA-approved modifications or amendments thereto, are incorporated into this AOC and are an enforceable part of this AOC.

“Semi-Annually” means two (2) times per calendar year such that at least five (5) months and no more than seven (7) months have elapsed since the last semi-annual event.

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

“Solid Waste Management Unit” or “SWMU” means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

“Stabilization” means actions to control or abate threats to human health and/or the environment from releases at RCRA facilities, and/or to prevent or minimize the further spread of contamination while long-term remedies are pursued.

“Submittal” shall include any work plan, report, progress report, or any other written document Respondent is required by this AOC to send to EPA.

“Violations” of this Order or AOC shall mean those actions or omissions, failures or refusals to act by Respondent that result in a failure to meet the terms and conditions of this AOC or its Attachments.

“Weekly” shall mean fifty-two (52) times per calendar year such that no fewer than five (5) days and no more than ten (10) days have elapsed since the last weekly event.

“Work” or “Obligation” shall mean any activity Respondent must perform to comply with the requirements of this AOC and its Attachments.

“Work Plan” shall mean the detailed plans prepared by Respondent to satisfy the requirements of the corresponding SOW. The requirements for each work plan are presented in Section IX (Work to Be Performed) and/or the SOW (Attachment B).

VI. FINDINGS OF FACT

12. Respondent is a Delaware corporation, authorized to do business in the State of Nebraska.
13. Respondent owns and operates the rail yard, known as Hobson Yard, located on the west side of Lincoln, Nebraska in Lancaster County. Hobson Yard is situated in Sections 27, 28, and 29 of Township 10 North, Range 6 East, Lancaster County Nebraska.
14. The Facility contains a diesel shop, fueling racks, a 2.8 million gallon above-ground diesel fuel storage tank (this tank has been removed from the Facility), an above-ground storage tank formerly used to store tetrachloroethylene (PCE) (this tank has been removed from the Facility), two oil/water separators, a locomotive wash rack, a waste water treatment plant, a lagoon system, drainage ditches and an undeveloped area.
15. Portions of the undeveloped area, the East Ditch, and an open lagoon were inventoried as wetland and deep water habitat areas by the Nebraska Game and Park Commission in 1989. An EPA wetlands inspection performed in July 1992 verified several of these wetlands areas.
16. Hobson Yard was originally developed as a freight yard and steam engine terminal in 1906. A

large roundhouse, turntable, coal chutes, and a hump yard were in operation by 1909. Freight trains were assembled and steam engines were serviced and fueled in the yard. The old steam locomotives were replaced by diesel switch engines beginning in the 1940s and buildings were constructed in Hobson Yard to service and repair the diesel locomotives. A three-track diesel building was constructed south of the roundhouse in 1956, when about 95 percent of Respondent's operations were converted to diesel. The original diesel facility was expanded in 1964 and several stalls of the roundhouse were removed. The Hobson Yard continues to be used for car switching, storage, repair, diesel engine maintenance, and diesel engine fueling.

17. Prior to the 1960s, stormwater and wastewater from roundhouse operations were collected in the Closed Oil Collecting Basin and the Closed Oil Sump. An oil/water separator was installed around 1960 and was used to treat wastewater from the Diesel Shop.
18. Beginning around 1963, Hobson Yard's waste water and stormwater was discharged into two unlined waste water lagoons which were operated in succession. Waste water running through these lagoons was discharged into a drainage canal (North Ditch) which lies along the northern border of the BNSF property and empties into Salt Creek. Use of this lagoon system ceased in 1976, when the primary (upstream) lagoon (Filled Lagoon) was filled with soil in order to construct a new rail line (B-1). The Filled Lagoon area is further divided into the North Filled Lagoon Area and the South Filled Lagoon Area. The secondary (downstream) lagoon (Open Lagoon) was not filled. After the upstream lagoon was filled, storm water and waste water were treated in an oil-water separator and then discharged directly into the undeveloped area in the northeast corner of Hobson Yard, which contains a saline wetland. In 1978, a wastewater treatment plant (WWTP) became operational and industrial wastewater and some storm water was treated in the WWTP prior to discharge. Some stormwater runoff continued to discharge into the undeveloped area through storm sewers until 1993, when a system was installed to remove oil from the stormwater prior to discharge.
19. On or about April 1976, September 1986, March 1987, January 1990, November 1990, and February 1992, Respondent reported to the NDEQ and the National Response Center that oil spills had occurred at the Facility.
20. Sometime prior to 1983, it was discovered that a 6-inch underground fuel pipeline leading to the 2.8-million gallon diesel storage tank at the diesel shop building had leaked. Subsequent to the discovery, Respondent or its agents undertook an investigation of the Facility and submitted a Report on the Investigation of Subsurface Hydrocarbon Losses to the Nebraska Department of Environmental Control (now the Nebraska Department of Environmental Quality) in May 1983. The report documented two areas where oil was present in the subsurface underlying the Facility.
21. Respondent conducted an investigation at the Facility in December 1989. The investigation determined that surface water in the East and West Ditches were heavily impacted by diesel fuel and volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Three sources of hydrocarbon contamination in the shallow aquifer were identified (near the 2.8-million gallon diesel fuel storage tank, near the oil/water separator by the diesel shop, and behind the oil/water separator located near the wastewater treatment plant that lies near the West Ditch). Surficial fill material in two areas east and south of the diesel shop contained significant

quantities of diesel fuel and other petroleum products. It was also determined that contaminated surface areas were potentially adding to the groundwater contamination at the Facility.

22. Following discovery of the pipeline leak, the Respondent constructed two hydrocarbon recovery systems consisting of large-diameter poly-vinyl chloride (PVC) wells designed to recover oil from the subsurface. According to a January 1991 Remedial Action Plan, prepared on behalf of the Respondent, up until January 1991 these large-diameter PVC wells were "used only sparingly." Two additional wells were added to one of the existing recovery systems in 1991. Respondent continued to operate both hydrocarbon recovery systems at the Facility. Oil and other pollutants, contaminants, hazardous substances and/or hazardous wastes including but not limited to chlorinated solvents, extracted by these recovery systems were piped along with water to the Facility's WWTP. Following treatment, the effluent water was discharged to the City of Lincoln's sewer system.
23. One of the hydrocarbon recovery systems was located within a contaminated groundwater plume. Solvent-contaminated groundwater was removed along with oil in the hydrocarbon recovery systems. Samples of groundwater taken from the monitoring wells within this plume contained chlorinated solvents.
24. In 1992, EPA conducted a compliance inspection that included sampling of sludges within the Filled Lagoon. Several chlorinated solvents were detected with PCE and trichloroethylene (TCE) levels exceeding EPA's Toxicity Characteristic Levels (58.4 milligrams per liter (mg/l) and 13.3 mg/l, respectively). On-going groundwater monitoring at the Facility revealed widespread groundwater contamination that appeared to be sourced from both the contaminated soils and sludges within the Filled Lagoon and the contaminated soils in the area of the Former PCE Aboveground Storage Tank Area.
25. In 1993, EPA issued an administrative Removal Order to Respondent to contain the discharge of oil and contaminated media resulting from storm sewer discharge to the undeveloped area, to inspect and repair the Facility's existing underground storm sewer system, to evaluate the performance of the hydrocarbon recovery system, and to evaluate the WWTP's capability to remove oil and hazardous wastes/constituents present in groundwater produced from the facility's hydrocarbon recovery system.
26. In 1994, the EPA negotiated an AOC pursuant to Section 7003 of RCRA. The 1994 AOC required BNSF to perform interim measures, a RCRA Facility Investigation (RFI) to fully characterize the nature and extent of hazardous wastes or hazardous constituents released at the Facility (the RFI Report was submitted in February 2007 and approved by EPA), and a Corrective Measures Study (CMS) to identify alternatives for addressing Facility contamination (the CMS Report was submitted in March, 2011 and approved by EPA).
27. As directed by the 1994 AOC, BNSF implemented source control interim measures in the Former PCE Tank Area and in the Filled Lagoon Area to attempt to reduce contamination in these source areas. In the Filled Lagoon Area, excavation and removal of the northern portion of the Filled Lagoon were performed to reduce the source of chlorinated solvents in the soil. Permanganate injections were performed in the South Filled Lagoon Area to reduce the

chlorinated solvent source. In the Former PCE Tank Area, twelve multiphase extraction wells were installed and operated over a two year period to remove contaminants in both water and vapor phase. In the Filled Lagoon Area, six injection wells were installed to inject potassium permanganate to chemically react with the contaminants and convert them to a nonhazardous by-product; however, this treatment has had limited success. The RFI was initiated in 1996 and completed in 2007 and approved by EPA in March 2007.

28. PCE and its daughter products were detected in soil in the PCE Tank Area and Filled Lagoon Area. In addition, dense non-aqueous phase liquid (DNAPL) was observed in Monitoring Well (MW)-137 and MW-192, indicating the presence of PCE in the Upper Sand as well as the Upper Clay. In the Former Fertilizer Plant, as depicted in Attachment A, fertilizer parameters were detected at low levels just above detection limits. Metals were also detected in the Former Fertilizer Plant and were generally comparable to background metals results.
29. Groundwater investigations were performed to provide information on the nature and extent of groundwater impacts at the Facility, as well as to evaluate groundwater quality. There are four water bearing zones at the Facility, including three unconsolidated units (Upper Clay, Upper Sand, and Lower Sand) and the sandstone bedrock of the Dakota Group. The Upper Clay unit is a silty clay unit that exists at thicknesses ranging from 12 to 18 feet throughout Hobson Yard. The Upper Sand unit consists of loose, fine- to coarse grained sand encountered at thicknesses ranging from 10 to 30 feet, and typically at depth of about 5 to 20 feet. The Lower Sand is situated in a bedrock low occupying the central portion of the Facility. Where present, the Lower Sand is in direct contact with the bedrock of the Dakota Group. The Dakota Group consists of interbedded sandstones and shales and is approximately 100 feet thick in the vicinity of Hobson Yard. On-site, both the Upper Clay and Upper Sand units discharge into Salt Creek.
30. The groundwater at the Facility has a high mineral content from salt deposits in the area and portions of the Facility are not suitable as a drinking water source; however, groundwater in the areas to the north, west, and east of the Facility are less saline and potentially potable.
31. PCE and its daughter products were detected in groundwater.
 - a. PCE and TCE were detected near the PCE Tank Area and Filled Lagoon Area, and in off-site wells (MW-180 and MW-181) at concentrations above EPA Maximum Contaminant Levels (MCLs).
 - b. TCE and cis-1,2-dichloroethene (cis-1,2-DCE) have been detected in MW-180 in the Upper Clay at concentrations above the MCLs. Cis-1,2-DCE and vinyl chloride have been detected in MW-181 in the Upper Sand unit at concentrations above the MCLs.
 - c. Cis-1,2-DCE and vinyl chloride were also detected above MCLs in the PCE Tank Area and Filled Lagoon Area, and in downgradient groundwater extending to North Ditch and Salt Creek. Concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) were also detected in groundwater.
32. In 2006, passive diffusion bag (PDB) samples were collected from pore space water in the

sediment of Salt Creek and Middle Creek. Concentrations of cis-1,2-DCE and vinyl chloride were detected in Salt Creek pore space water concentrations above the MCL. Concentrations of cis-1,2-DCE and Vinyl chloride were also detected in Middle Creek pore space water at concentrations above the MCLs.

33. Contamination and associated health and environmental risks at the Facility are associated with subsurface soils in the two main source areas (South Filled Lagoon Area and PCE Tank Area) and with groundwater located beneath and downgradient of these source areas. The primary contaminants of concern identified in groundwater at the Facility are the chlorinated volatile organic contaminants PCE, TCE, 1,2-dichloroethylene (1,2 DCE), and vinyl chloride.
34. In the South Filled Lagoon Area, there is an unacceptable risk to construction workers from exposure to subsurface soil and groundwater. Calculated risk estimates exceed the EPA acceptable risk range (i.e., is greater than the 1×10^{-4} risk level) for both subsurface soil and groundwater exposure. Non-carcinogenic risk from this exposure area also exceeds the acceptable target risk level (HI is greater than 1) for both subsurface soil and groundwater.
35. In the PCE Tank Area, there is an unacceptable risk to construction workers from exposure to subsurface soil and groundwater. Calculated risk estimates exceed the EPA acceptable risk range (i.e., is greater than the 1×10^{-4} risk level) for both subsurface soil and groundwater exposure. Non-carcinogenic risk from this exposure area also exceeds the acceptable target risk level (HI is greater than 1) for both subsurface soil and groundwater.
36. Indoor air sampling conducted in the Diesel Shop did not show unacceptable risk to current receptors from vapor intrusion during previous sampling. However, there are no controls in place that prevent unacceptable vapor intrusion risk to current or future on-site receptors or off-site receptors. Conditions such as fractured geologic media and gravel lenses or channels, such as those at the Site, may allow an atypical preferential soil gas flow through high-permeability pathways (in some cases opposite to the groundwater flow). If such a migration route connects a source directly to a building or allows higher levels of groundwater contamination to migrate under a building, there may be an unacceptable risk due to vapor intrusion.
37. The constituents identified below have been found in soil and groundwater at the Facility and, under certain conditions of dose, duration, or extent of exposure, may constitute a threat to human health by ingestion and/or adsorption.
 - a. Benzene: The Federal drinking water standard for benzene is 5 $\mu\text{g}/\text{l}$. Health effects from exposure to unsafe levels of benzene may include headache, dizziness, nausea, convulsions, coma and death. The EPA's Integrated Risk Information System (IRIS) lists benzene as a Class A (known) human carcinogen.
 - b. 1,2-DCE: The Federal drinking water standard for cis-1,2-DCE is 70 $\mu\text{g}/\text{l}$. The Federal drinking water standard for trans-1,2-DCE is 100 $\mu\text{g}/\text{l}$. Health effects from exposure to unsafe levels of cis-1,2-DCE may include decrease in the number of red blood cells, liver damage, and decreased fetal development.

- c. Methylene Chloride: The Federal drinking water standard for methylene chloride is 5 µg/l. Health effects from exposure to unsafe levels of methylene chloride may include irritation of the eyes, mucous membranes and skin and adverse effects to the central and peripheral nervous systems and the heart. EPA's IRIS lists methylene chloride as a Class B2 (probable) human carcinogen.
 - d. Petroleum: Petroleum describes a broad family of several hundred chemical compounds, called hydrocarbons, that originally come from crude oil. Petroleum contains aliphatic hydrocarbons, paraffins, tars, and aromatic hydrocarbon compounds. The aliphatic hydrocarbons are less toxic than the aromatic hydrocarbons, such as the benzene-related compounds (benzene, ethylbenzene, toluene, and xylenes).
 - e. PCE: The Federal drinking water standard for PCE is 5 µg/l. Health effects from exposure to unsafe levels of PCE may include liver problems, malaise, dizziness, headaches, slowed mental ability, central nervous system depression, hepatic injury and increased risk of cancer.
 - f. TCE: The Federal drinking water standard for TCE is 5 µg/l. Health effects from exposure to unsafe levels of TCE may include neurological effects, kidney and liver problems, impaired immune system function and increased risk of cancer. TCE is a suspected carcinogen based on studies conducted on rats, mice, and observations of workers exposed to TCE.
 - g. Vinyl chloride: The Federal drinking water standard for vinyl chloride is 2 µg/l. Vinyl chloride is a known human carcinogen. Health effects from exposure to unsafe levels of vinyl chloride may include loss of consciousness, heart, liver, and kidney damage, circulation problems, increased risk of cancer and possibly death.
38. This AOC may be necessary to protect public health and the environment. If proper corrective measures are not implemented, the chlorinated solvents will persist in the groundwater beneath the Facility, may continue to migrate off the Facility and may threaten human health and the environment.
39. The Work required by this AOC are expected to be of significant cost and thus financial assurance is necessary to protect human health and the environment.

VII. CONCLUSIONS OF LAW AND DETERMINATIONS

40. Based on the Findings of Fact set forth above, and an administrative record supporting this AOC, EPA has determined that:
- a. Respondent is a "person" as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).
 - b. PCE and diesel oil are discarded materials, and thus a "solid waste" as defined in Section 1004(27) of RCRA, 42 U.S.C. § 6903(27). BTEX, PCE and its daughter products, TCE, cis-1,2-DCE and vinyl chloride are "hazardous wastes" as defined in Section 1004(5) of RCRA,

42 § 6903(5) because they may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

- c. Imminent and Substantial Endangerment. The past disposal of PCE and diesel oil may present an imminent and substantial endangerment to human health and/or the environment within the meaning of Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).
- d. Hazardous wastes and/or hazardous constituents have been or are presently being handled, stored or disposed of at the Facility.
- e. The past or present handling, storage and/or disposal of hazardous wastes, and/or hazardous constituents at the Facility may present an imminent and substantial endangerment to human health or the environment within the meaning of Section 7003 of RCRA, 42 U.S.C. § 6973.
- f. Respondent has contributed or is contributing to the handling, storage and/or disposal of hazardous waste and/or hazardous constituents which may present an imminent and substantial endangerment to human health or the environment.
- g. The actions required by this AOC may be necessary to protect human health and/or the environment, to prevent further migration of the contaminant plume and to limit human contact with the contamination.

VIII. ORDER ON CONSENT

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

IX. WORK TO BE PERFORMED

- 42. Respondent shall implement the corrective measures identified in the FD/RTC (Attachment C) issued by the EPA, in accordance with the SOW attached to this AOC (Attachment B) to prevent, mitigate and/or remediate the release or migration of hazardous wastes and/or hazardous constituents at and from the Facility.
 - a. **SOW Task I - Corrective Measures Implementation (CMI) Work Plan:** Within ninety (90) days of the Effective Date of this AOC, Respondent shall prepare and submit to the EPA a CMI Work Plan, prepared in accordance with Paragraph 2.0, Task I of the SOW, to facilitate the design, construction, operation, maintenance, and monitoring of corrective measures at the Facility. The CMI Work Plan shall also include an Institutional Controls (ICs) Plan to describe any necessary ICs, including, but not limited to, an environmental covenant on real property and a Soil Management Plan, to limit or control land use to prevent

unacceptable exposure. The CMI Work Plan is subject to review and approval, disapproval, or modification by EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC. Upon approval by EPA of the CMI Work Plan, Respondent shall implement the corrective measures in the CMI Work Plan in accordance with the schedule therein.

- b. **SOW Task II - Updated Quality Assurance Project Plan (QAPP), Sampling and Analysis Plan (SAP), and Health and Safety Plans (HSP):** Within ninety (90) days of the Effective Date of this AOC, Respondent shall submit to the EPA updates of the above referenced plans, either as amendments, or stand alone documents to the CMI Work Plan. The updated QAPP, SAP, and HSP shall be revised as appropriate to address the requirements of implementing the final corrective measures for the Facility. These documents are subject to review and approval, disapproval, or modification by the EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC. The HSP shall be submitted to the EPA for documentation; however, the EPA will not comment on or approve this submittal.
- c. **SOW Task III - Operation and Maintenance (O&M) Plan:** Within ninety (90) days after the completion of construction activities required by the approved CMI Workplan, Respondent shall submit to the EPA an O&M Plan, prepared in accordance with Paragraph 4.0, Task III of the SOW, that outlines procedures for performing operations, long-term maintenance and monitoring of the final corrective measures required by this SOW. The O&M Plan is subject to review and approval, disapproval, or modification by the EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC.
- d. **SOW Task IV - Corrective Measures Construction Completion Report (CMCCR):** Within thirty (90) days after the completion of the construction activities required by the approved CMI Work Plan, Respondent shall submit to the EPA the CMCCR. The CMCCR shall be developed in a manner consistent with Paragraph 5, Task IV of the SOW and shall be consistent with the "RCRA Corrective Action Plan" EPA 520-R-94-004, OSWER Directive 9902.3-2A, May 1994, incorporated herein. The CMCCR is subject to review and approval, disapproval, or modification by EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC.
- e. **SOW Task V- Quarterly Progress Reports:** On a quarterly basis, Respondent shall submit a brief Quarterly Report to the EPA describing all CMI activities performed during the reporting period, including ICs. The reports shall be submitted until the EPA notifies Respondent that the reports are no longer necessary. The Quarterly Reports shall be developed in a manner consistent with Paragraph 6.0, Task V of the SOW.
- f. **SOW Task VI- Corrective Measures Implementation Annual Report:** No later than March 31 of the year following EPA's approval of the CMCCR, and annually by March 31 thereafter, Respondent shall submit a Corrective Measures Implementation Annual Report to the EPA detailing the prior year's performance of the corrective measures, including ICs. The CMI Annual Report shall be developed in a manner consistent with Paragraph 7.0, Task

VI of the SOW. The CMI Annual Report is subject to review and approval, disapproval, or modification by EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC.

- g. **SOW Task VII- Corrective Measures Implementation Five-year Review:** Within sixty (60) days of the 5-year anniversary of EPA’s approval of the CMCCR, Respondent shall submit a report to the EPA evaluating the corrective measures effectiveness and performance. The CMI Five-Year Review Report shall be developed in a manner consistent with Paragraph 8.0, Task VII of the SOW and shall be consistent with the “CERCLA Comprehensive Five-Year Review Guidance,” OSWER9355.7-03B-P, and any subsequent revisions or additions. The CMI Five-Year Review Report is subject to review and approval, disapproval, or modification by EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC.
- h. **SOW Task VIII- Corrective Measures Completion Report (CMCR):** Within ninety (90) days of the completion of all remedial activities required by this AOC, Respondent shall submit to EPA a CMCR. The CMCR shall be developed in a manner consistent with Paragraph 9.0, Task VIII of the SOW and generally conform to the “RCRA Corrective Action Plan” EPA 520-R-94-004, OSWER Directive 9902.3-2A, May 1994. The purpose of the CMCR is to fully document how the corrective measures completion criteria have been satisfied and to justify why the corrective measures and/or monitoring may cease. The CMCR is subject to review and approval, disapproval, or modification by EPA in accordance with Sections X and XXVII (EPA Approval of Deliverables and Additional Work) of this AOC.

43. The Remedial Action Objectives (RAOs) calculated for this Facility represent site-specific soil and groundwater risk-based remediation goals for construction workers and EPA MCLs. Drinking water standards are applicable for portions of the Facility. Applicable RAOs for surface water are found in Nebraska Administrative Code Title 117 Surface Water Quality (SWQ) Standards (Nebraska Administrative Code 2012). The RAOs are provided in the tables below.

Table 1: Remedial Action Objectives for Soil

Compound	RAO	Source of RAO
1,2,4-Trimethylbenzene	250 mg/kg	Risk-based remediation goal
1,2-Dichloroethene (total)	210 mg/kg	Risk-based remediation goal
2-Chlorotoluene	770 mg/kg	Risk-based remediation goal
Arsenic	130 mg/kg	Risk-based remediation goal
Cis-1,2-dichloroethene	220 mg/kg	Risk-based remediation goal
Methylene Chloride	10,000 mg/kg	Risk-based remediation goal
Tetrachloroethene	440 mg/kg	Risk-based remediation goal
Trichloroethene	60 mg/kg	Risk-based remediation goal

Vinyl Chloride	190 mg/kg	Risk-based remediation goal
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RAO Remedial Action Objective
 Mg/kg milligrams per kilogram

Table 2: Remedial Action Objectives for Groundwater at the North Property Boundary

Compound	RAO	Source of RAO
1,2-Dichloroethane	5 µg/l	MCL
Benzene	5 µg/l	MCL
Chloroform	70 µg/l	MCL
Cis-1,2-dichloroethene	70 µg/l	MCL
Iron	300 µg/l	MCL
Manganese	50 µg/l	MCL
Sulfate	250,000 µg/l	MCL
Tetrachloroethene	5 µg/l	MCL
Trans-1,2-dichloroethene	100 µg/l	MCL
Trichloroethene	5 µg/l	MCL
Vinyl Chloride	2 µg/l	MCL
Xylenes (total)	10,000 µg/l	MCL

RAO Remedial Action Objective

µg/l micrograms per liter

MCL EPA Maximum Contaminant Level EPA's Safe Drinking Water Act Regulations and Health Advisories (EPA, 2009)

Table 3: Remedial Action Objectives for On-Facility Groundwater

Compound	RAO	Source of RAO
1,2-Dichloroethane	3,400 µg/l	Risk-based remediation goal
Benzene	3,100 µg/l	Risk-based remediation goal
Chloroform	13,000 µg/l	Risk-based remediation goal
Cis-1,2-dichloroethene	20,000 µg/l	Risk-based remediation goal
Iron	6,800,000 µg/l	Risk-based remediation goal
Manganese	460,000 µg/l	Risk-based remediation goal
Sulfate	NA	
Tetrachloroethene	830 µg/l	Risk-based remediation goal
Trans-1,2-dichloroethene	210,000 µg/l	Risk-based remediation goal
Trichloroethene	350 µg/l	Risk-based remediation goal
Vinyl Chloride	3,400 µg/l	Risk-based remediation goal
Xylenes (total)	31,000 µg/l	Risk-based remediation goal

RAO Remedial Action Objective

µg/l micrograms per liter

Table 4: Remedial Action Objectives for Surface Water

Compound	RAO RAO	Source of RAO
1,1-Dichloroethene	32 µg/l	Nebraska Water Quality Standard*
1,2- Dichloroethene	11,600 µg/l	Nebraska Water Quality Standard*
Benzene	510 µg/l	Nebraska Water Quality Standard*
Cis-1,2-dichloroethene	11,600 µg/l	Nebraska Water Quality Standard*
Ethylbenzene	2,100 µg/l	Nebraska Water Quality Standard*
Tetrachloroethene	33 µg/l	Nebraska Water Quality Standard*
Toluene	15,000 µg/l	Nebraska Water Quality Standard*
Trans-1,2-dichloroethene	11,600 µg/l	Nebraska Water Quality Standard*
Trichloroethene	300 µg/l	Nebraska Water Quality Standard*
Vinyl Chloride	24 µg/l	Nebraska Water Quality Standard*
Xylenes (total)	NA	

RAO Remedial Action Objective

µg/l micrograms per liter

* Nebraska Administrative Code Title 117 Surface Water Quality Standards (Nebraska Administrative Code, 2012)

44. **Performance Objectives:** As stated in Paragraph 10, performance objectives for the Site shall consist of: 1) preventing receptors from coming into contact with subsurface soils and groundwater contaminated above site-specific or risk-based levels; 2) containing the source areas to reduce their contribution to existing groundwater contamination; 3) preventing migration of groundwater contamination off the Facility at levels above drinking water standards; and 4) preventing discharge of contaminated groundwater to Salt Creek and Middle Creek at levels above Nebraska Surface Water Quality Standards. In addition to interim corrective measures and other activities performed to date, Respondent shall implement corrective measures, including all appropriate source control activities consistent with the FD/RTC to implement the performance objectives and achieve the RAOs identified in this AOC and the FD/RTC as follows:

PCE Tank Area

- Implement in situ chemical reduction (ISCR) in the PCE Tank source area by injecting a combination of controlled-release carbon and zero-valent iron particles, and/or through bioaugmentation using Dehalococcoides species to reduce contaminant concentrations;
- Establish institutional controls (ICs) in the form of a deed restriction and a Soil Management Plan on the property to limit or control land use to prevent unacceptable exposure;
- Implement monitored natural attenuation (MNA) to verify that natural processes are reducing contaminant mass and preventing further contaminant migration; and

- Operate and maintain a system of groundwater monitoring wells that are collectively capable of verifying that the ISCR and MNA are preventing contaminant migration and reducing contaminant concentrations.

South Filled Lagoon Area

- Install a funnel-and-gate system immediately downgradient of the South Filled Lagoon Area to intercept contaminated groundwater and divert the groundwater flow into a permeable reactive barrier gate;
- Establish ICs in the form of a deed restriction and a Soil Management Plan to limit or control land use to prevent unacceptable exposure;
- Implement MNA to verify that natural degradation processes are reducing contaminant mass and preventing further migration; and
- Operate and maintain a system of groundwater monitoring wells that are collectively capable of verifying that the funnel-and-gate system and MNA are controlling contaminant migration and reducing contaminant concentrations.

Diesel Storage Tank Area

- Installation of LNAPL recovery equipment within the mobile plume such as belt and/or canister-type skimmers;
- Removal of LNAPL on a regular basis (e.g., vacuum truck, manually, etc.) to be determined by recovery rates, and
- Establish ICs in the form of a deed restriction and a Soil Management Plan to limit or control land use to prevent unacceptable exposure.

In addition, Respondent shall, on an annual basis, conduct visual inspections of the Facility and review pertinent records regarding the Facility to verify that the ICs are being properly maintained. Evaluation of ICs shall be documented in the IC Plan, developed in accordance with Task I of the SOW.

45. **Institutional Controls:** If contamination will remain onsite at levels that do not allow for unrestricted use and unlimited exposure at the Facility, Respondent must implement institutional controls to prevent unacceptable exposures to human health and the environment
- a. Commencing on the Effective Date of this AOC, Respondent shall not use the Facility in any manner that EPA has determined will: (a) pose an unacceptable risk to human health or the environment due to exposure to hazardous wastes and/or hazardous constituents; or, (b) interfere with or adversely affect the implementation, integrity or protectiveness of the corrective measures performed pursuant to this AOC. Specifically, Respondent shall subject the Facility property to the use and activity limitations identified as part of the EPA-approved final remedy as summarized below:

- i. Respondent shall not use the property for residential purposes unless the EPA determines that the Facility no longer poses risk to human health or the environment.
 - ii. Respondent shall prevent use of, and exposure to, subsurface soils and groundwater and shall not install any wells unless necessary for investigation or remedy implementation and approved by EPA.
 - b. The draft instrument submitted with the IC Plan identified in Task I of the SOW (Attachment B) must comply with Nebraska Uniform Environmental Covenants Act, Neb. Rev. Stat. §§76-2601 to 76-2613 and substantially follow the most current model environmental covenant document created by the State of Nebraska (Attachment D). The Environmental Covenant shall include controls that must (a) grant a right of access to conduct any activity regarding this AOC, including, but not limited to, those activities listed in Paragraph 76, and (b) grant the right to enforce the land/water use restrictions listed in Paragraph 46a (i) and (ii) and any land/water use restrictions listed in the IC Plan. The proprietary controls shall be granted to one or more of the following persons, as determined by EPA: (a) the United States, on behalf of EPA, and its representatives, (b) the State and its representatives, and/or (c) other appropriate grantees.
 - c. Within forty-five (45) days of EPA's approval and acceptance of the draft environmental covenant and the title evidence, Respondent shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment, or other evidence, to affect the title adversely, record the approved environmental covenant with the appropriate land records office in the county where the Facility is located. Within thirty (30) days of recording the environmental covenant, Respondent shall provide EPA with a certified copy of the original recorded proprietary control showing the clerk's recording stamps.
46. Project Coordinator: Respondent's Project Coordinator will be Daniel I. Gregory, Senior Project Manager, AECOM, 1601 Prospect Parkway, Fort Collins, CO 80525, 970.530.3519 Dan.Gregory@aecom.com. The EPA Project Coordinator will be Ruby Crysler, 11201 Renner Boulevard, Lenexa KS 66219, 913-551-7409, crysler.ruby@epa.gov. EPA may also designate an Alternate Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this AOC. EPA and Respondent have the right to change their respective Project Coordinators. The other party must be notified in writing at least ten (10) days prior to the change.

Within thirty (30) days of the Effective Date of this AOC or any change of personnel, Respondent shall notify EPA in writing of the names, titles and qualifications of the personnel, including agents, contractors, subcontractors, consultants and laboratories, to be used in carrying out the Work. EPA will approve/disapprove of Respondent's Project Coordinator, subcontractor(s), consultant(s) and laboratories (original or replacement) based upon the person's qualifications and ability to effectively perform this role. The qualifications of the persons undertaking the Work for Respondent shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements of the EPA. All

persons under the direction and supervision of Respondent's Project Coordinator must possess all necessary professional licenses required by federal and state law.

47. The EPA Project Coordinator shall be EPA's designated representative for the Facility. Unless otherwise provided in this AOC, all reports, correspondence, notices, or other submittals relating to or required under this AOC shall be in writing and shall be sent to the EPA Project Coordinator at the address specified in Paragraph 46, unless notice is given in writing to Respondent of a change in address. Reports, correspondence, notices or other submittals shall be delivered by U.S. Postal Service, private courier service or electronic mail. All correspondence shall include a reference to the case caption EPA Docket No. RCRA-07-2014-0015.
48. Respondent shall undertake and complete all of the Work to the satisfaction of EPA, pursuant to RCRA § 7003, 42 U.S.C. § 6973. All of the Work performed under this AOC shall be under the direction and supervision of Respondent's Project Coordinator and shall be in accordance with the terms of this AOC.
49. Respondent's obligation to perform the Work will begin on the Effective Date of this AOC.
50. The Work undertaken pursuant to this AOC shall be conducted in compliance with all applicable EPA guidance, policies and procedures, and with this AOC, and is subject to EPA approval.

X. EPA APPROVAL OF DELIVERABLES

51. Deliverables required by this AOC shall be submitted to EPA for approval or modification pursuant to Paragraph 53. All deliverables must be received at EPA by the due date specified in this AOC or by schedules developed pursuant to this AOC.
52. After review of any deliverable that is required pursuant to this AOC, EPA will: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, EPA will not modify a submission without first providing Respondent at least one (1) notice of deficiency and an opportunity to cure within ten (10) days, or an alternate timeframe approved by the EPA, except where EPA determines that to do so would cause serious disruption to the Work or where EPA has disapproved previous submission(s) due to material defects and EPA determines that the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.
53. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 53 (a), (b), or (c), Respondent shall proceed to take any action required by the deliverable, as approved or modified by EPA subject only to Respondent's right to invoke the Dispute Resolution procedures set forth in Section XVIII (Dispute Resolution) with respect to the modifications or conditions made by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 53(c) and EPA determines the submission has a material defect, EPA retains its right to seek stipulated penalties, as provided in Section XIX (Penalties).

54. Resubmission of Deliverable. Upon receipt of a notice of disapproval, in whole or in part, pursuant to Paragraph 53(d), Respondent shall, within thirty (30) days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XIX (Penalties), shall accrue during the 30-day opportunity to cure period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect.
55. Notwithstanding the receipt of a notice of disapproval pursuant to Paragraph 53(d), Respondent shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for stipulated penalties for the deficient portion of the deliverable under Section XIX (Penalties).
56. In the event that a resubmitted deliverable, or portion thereof, is disapproved by EPA, EPA may again require Respondent to correct the deficiencies, in accordance with the preceding Paragraphs. EPA also retains the right to modify or develop the plan, report or other item. Respondent shall implement any action as required in a deliverable which has been modified or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XVIII (Dispute Resolution).
57. If upon resubmission, a deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such deliverable timely and adequately unless Respondent invokes the dispute resolution procedures set forth in Section XVIII (Dispute Resolution) and EPA's action to disapprove or modify a deliverable is overturned pursuant to that Section. The provisions of Section XVIII (Dispute Resolution) and Section XIX (Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is upheld, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XIX (Penalties).
58. All deliverables required to be submitted to EPA under this AOC, shall, upon approval or modification by EPA, be incorporated into and be enforceable under this AOC. In the event EPA approves or modifies a portion of a deliverable required to be submitted to EPA under this AOC, the approved or modified portion shall be enforceable under this AOC.

XI. MODIFICATION OF THE WORK PLAN

59. If at any time during the implementation of the Work, Respondent identifies a need for a compliance date modification or revision of the Work Plan, Respondent shall submit a memorandum documenting the need for the modification or revision to the EPA Project Coordinator. EPA, in its discretion, will determine if the modification or revision is warranted and may provide written approval or disapproval. Any approved modified compliance date or Work Plan modification is incorporated by reference into this AOC.

60. Emergency Response. In the event of any action or occurrence during the performance of the Work that constitutes an emergency situation or may present an immediate threat to human health and the environment, Respondent shall immediately take all appropriate action to minimize such emergency or threat, and shall immediately notify the EPA's Project Coordinator. Respondent shall take such immediate and appropriate actions in consultation with EPA's Project Coordinator. Respondent shall then submit to EPA written notification of such emergency or threat at the Facility within three (3) calendar days of such discovery. Respondent shall thereafter submit to EPA for approval, within twenty (20) days, a plan to mitigate this threat. EPA will approve or modify this plan, and Respondent shall implement this plan as approved or modified by EPA. In the case of an extreme emergency, Respondent may act as it deems appropriate, at its own risk, to protect human health or the environment.
61. Respondents shall post and maintain a sign at the Facility which provides notice of the hazardous constituents present at the Facility in accordance with the requirements of Section 7003(c) of RCRA, 42 U.S.C. § 6973(c). The sign to be posted shall be at least twenty-four (24) by thirty-six (36) inches, and shall be made of weatherproof material in white or a brightly-colored background with large, clearly contrasting lettering. The sign shall be posted in a prominent place at or near the public entrance(s) to the Facility, and shall state: "ATTENTION: Soil excavation and extraction of or contact with groundwater may present a significant risk and is prohibited without prior approval from the Landowner. For Information Call [*Insert Appropriate Contact*]" Within thirty (30) days of the Effective Date of this AOC, Respondent shall provide documentation (i.e., photographs) to the EPA Project Coordinator that the signs have been posted. Failure to post the signs as directed in this paragraph will constitute a violation of this AOC.

XII. QUALITY ASSURANCE

62. As part of the Work to be Performed, Respondent shall develop/update a QAPP, for EPA review and approval. The QAPP shall address quality assurance, quality control, and chain of custody procedures for all sampling, monitoring and analytical activities. Respondent shall follow "EPA Requirements for Quality Assurance Project Plans" (QA/R5)" (EPA/240/B-01/003, March 2001), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) and any subsequent revisions of these documents, as well as other applicable documents identified by EPA. The QAPP shall be incorporated into this AOC by reference.
63. As part of the Work to be Performed, Respondent shall develop Data Quality Objectives for any data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use as required by this AOC.
64. Respondent shall ensure that laboratories used by Respondent for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste (SW-846)" or other methods approved by EPA. If methods other than EPA methods are to be used, Respondent shall specify all such protocols in the applicable Work Plan. EPA may reject any

data that does not meet the requirements of the approved Work Plan and EPA analytical methods and may require resampling and additional analysis.

65. Respondent shall ensure that all laboratories it uses for analyses participate in a quality assurance/quality control (QA/QC) program equivalent to the program that EPA follows. Respondent shall, upon EPA's request, make arrangements for EPA to conduct a performance and QA/QC audit of the laboratories chosen by Respondent, whether before, during, or after sample analyses. Upon EPA's request, Respondent shall have its laboratories perform analyses of samples provided by EPA to demonstrate laboratory QA/QC and performance. If the audit reveals deficiencies in a laboratory's performance or QA/QC, Respondent shall submit a plan to address the deficiencies and EPA may require resampling and additional analysis.
66. The EPA reserves the right to require a change in laboratories for reasons which may include, but shall not be limited to, QA/QC, performance, conflict of interest, or confidential agency audit information. In the event EPA requires a laboratory change, Respondent shall propose two (2) alternative laboratories within thirty (30) calendar days. Once EPA approves of the laboratory change, Respondent shall ensure that laboratory service shall be made available within fifteen (15) calendar days.

XIII. ADMINISTRATIVE DOCUMENTATION

67. The EPA retains the responsibility for the issuance of any decision documents related to the Facility.
68. The EPA will provide Respondent with copies of all decision documents for the Facility.
69. Submission of Documentation. The EPA will determine the contents of the administrative record file for selection and/or modification of the corrective action. Respondent shall submit to EPA documents developed during the course of performing the work upon which selection and/or modification of the corrective action may be based. EPA will maintain an administrative record file. The administrative record supporting this AOC and the Work to be Performed shall be available for public review at 11201 Renner Boulevard, Lenexa KS 66219 and at the Facility or at another location mutually agreed upon by EPA and Respondent.

XIV. DOCUMENT CERTIFICATION

70. Any report or other document submitted by Respondent pursuant to this AOC which makes recommendations as to whether or not further actions are necessary, or makes any representation concerning Respondent's compliance or noncompliance with any requirement of this AOC shall be certified by a designated representative of Respondent.
71. The certification required by Paragraph 71 above, shall be in the following form:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry

of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____
Name: _____
Title: _____
Date: _____

XV. SAMPLING, ACCESS, AND DATA AVAILABILITY

72. All results of sampling, testing, modeling or other data generated (including raw data if requested) by Respondent, or on Respondent's behalf, during implementation of this AOC shall be validated by Respondent and submitted to EPA according to the schedules described in Section IX (Work to be Performed), the SOW (Attachment B) and in the EPA-approved work plans. Data validation will be performed as described in the QAPP prepared pursuant to Section IX (Work to be Performed) and the SOW (Attachment B). Respondent shall tabulate data chronologically by media. EPA will make available to Respondent data generated by EPA for the purposes of oversight of the Work unless it is exempt from disclosure by any federal or state law or regulation.
73. Respondent shall notify EPA at least thirty (30) days prior to conducting field sampling. EPA may, at its sole discretion, waive the notification requirement on a case-by-case basis. At EPA's request, Respondent shall allow split or duplicate samples to be taken by EPA or EPA's representative.
74. Access. Pursuant to RCRA § 3007(a), 42 U.S.C. § 6927(a), Respondent shall provide access to the Facility at reasonable times to EPA, EPA's contractors and oversight officials to conduct any activity regarding this AOC including, but not limited to, the following:
- a. Monitoring the Work;
 - b. Verifying any data or information submitted to EPA or the State;
 - c. Conducting investigations regarding contamination at or near the Facility;
 - d. Obtaining samples;
 - e. Assessing the need for, planning or implementing additional response action at the Facility;
 - f. Assessing implementation of quality assurance and quality control practices as defined in the approved QAPP;

- g. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or their agents consistent with this Section;
- h. Determining whether the Facility or other real property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under this AOC; and,
- i. Implementing, monitoring, maintaining, reporting on, and enforcing any ICs and the requirements of the IC Plan.

All parties with access to the Facility under this paragraph shall comply with all approved health and safety plans and regulations, as well as with Respondent's established written procedures for assuring safety within a railroad yard.

- 75. Respondent shall also provide access at reasonable times to EPA, EPA's contractors and oversight officials to all records and documentation in its possession or control, including those records and documents in the possession or control of Respondent's contractors and employees, related to the conditions at the Facility and the actions conducted pursuant to this AOC.
- 76. Respondent shall use its best efforts to gain access to areas owned by or in the possession of someone other than Respondent, as necessary to implement this AOC, as described in Paragraph 75. Such access shall be provided to EPA, its contractors and oversight officials. These individuals shall be permitted to move freely about the Facility in order to conduct actions that EPA determines to be necessary. EPA, its contractors and oversight officials shall notify Respondent of their presence at the Facility by presenting their credentials. All parties with access under this paragraph shall comply with all approved health and safety plans and regulations.
- 77. Pursuant to this Section, any denial of access at reasonable times to any portion of the Facility property where a request for access was made for the purposes of enforcing the requirements of RCRA or this AOC shall be construed as a violation of the terms of this AOC subject to the penalty provisions outlined in Section XIX (Penalties) of this AOC.
- 78. Access Agreements. Where action under this AOC is to be performed in areas owned by, or in possession of, someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within forty-five (45) days of approval of any Work Plan for which access is necessary or as otherwise specified, in writing, by the EPA Project Coordinator. Any such access agreement shall provide for access by EPA and its representatives to move freely in order to conduct actions that EPA determines to be necessary. All access agreements shall specify that Respondent is not EPA's representative with respect to any liabilities associated with activities to be performed. Respondent shall provide EPA's Project Coordinator with copies of any access agreements. Respondent shall immediately notify EPA if after using Respondent's best efforts it is unable to obtain such agreements within the time required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondent to the present owner of such property requesting access agreements to permit Respondent, EPA, and EPA's authorized representatives to enter such property, and the offer of payment of reasonable sums of money in consideration of granting access. Respondent shall, within ten (10) days of its receipt

of a denial of access, submit in writing, a description of its efforts to obtain access. EPA may, at its discretion, assist Respondent in obtaining access. In the event EPA obtains access, Respondent shall undertake the Work on such property and Respondent shall reimburse EPA for all costs and attorney fees incurred by the United States in obtaining such access.

79. Confidential Business Information. Respondent may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this AOC under 40 C.F.R. § 2.203 in the manner described at 40 C.F.R. § 2.203(b) and substantiated with the information described at 40 C.F.R. § 2.204(e)(4). Information EPA determines is confidential will be given the protection specified in 40 C.F.R. Part 2. If no such claim or substantiation accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the State without further notice to Respondent. Respondent agrees not to assert confidentiality claims with respect to any data related to Facility conditions, sampling, monitoring or the Work performed pursuant to this AOC.
80. Privileged Documents. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege in lieu of providing documents, Respondent shall provide EPA with the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the author's name and title; (d) the name and title of each addressee and recipient; (e) a description of the contents; and (f) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this AOC shall be withheld on the grounds that they are privileged.
81. All data, information, and records created or maintained relating to any Solid or Hazardous Waste found at the Facility shall be made available to EPA upon request unless Respondent asserts a claim that such documents are legally privileged from disclosure. Respondent shall have the burden of demonstrating to EPA by clear and convincing evidence that such privilege exists.
82. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information developed pursuant to this AOC evidencing conditions at or around the Facility.
83. Nothing in this AOC shall be construed to limit the EPA's right of access, entry, inspection, and information gathering pursuant to applicable law, including but not limited to RCRA and CERCLA.

XVI. COMPLIANCE WITH OTHER LAWS

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

XVII. RECORD RETENTION

85. Respondent shall preserve all documents and information, including raw data, relating to the Work performed under this AOC, or relating to any solid or hazardous waste found at the Facility, for ten (10) years following completion of the Work required by this AOC.
86. Respondent shall acquire and retain copies of all documents that relate to submissions to EPA required under this AOC that are in the possession of its employees, agents, accountants, contractors or attorneys.
87. Respondent shall make available to EPA all employees and persons, including contractors, who engage in activities under this AOC and make best efforts to facilitate their cooperation with EPA with respect to this AOC.
88. After the ten (10) year retention period and ninety (90) days before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies (at no extra cost) of such documents and information to EPA. Notification shall be in writing and shall reference the Effective Date, caption, and docket number of this AOC and shall be addressed to the Director of the Air and Waste Management Division, EPA Region 7. In addition, Respondent shall provide documents and information retained under this Section at any time before expiration of the ten (10) year retention period at the written request of EPA. At the end of the document retention period, Respondent may convert the project files into an electronic format and destroy the paper copy of such documents.
89. All documents pertaining to this AOC shall be stored and managed by Respondent's Project Coordinator in a centralized location at the Facility, or an alternative location mutually approved by Respondent and EPA, to promote easy access by EPA or its representatives.

XVIII. DISPUTE RESOLUTION

90. Respondent shall raise any disputes concerning the Work required under this AOC to EPA (excluding any decision document(s) issued by EPA), in writing, within fifteen (15) days after receiving written notice from EPA regarding any aspect of the Work required under this AOC that Respondent disputes. EPA and Respondent shall expeditiously and informally attempt to resolve any disagreements. EPA and Respondent's Project Coordinator shall first confer in an effort to resolve the dispute. If the Project Coordinators are unable to informally resolve the dispute within ten (10) days of the first conference, Respondent shall notify EPA, within five (5) days, in writing of its objections. Written objections shall identify Respondent's objections, state the basis for those objections, and provide all data, analyses and information relied upon by Respondent. EPA and Respondent then have an additional fourteen (14) days from EPA's receipt of the objections to reach agreement. If an agreement is not reached within the fourteen (14) days, Respondent may request in writing, within five (5) days, a determination resolving the dispute by EPA's Director of the Air and Waste Management Division. The request should provide all information that Respondent believes is relevant to the dispute. If such request is submitted within five (5) days, the Division Director shall issue a determination in writing.

EPA's final decision shall be incorporated into and become an enforceable part of this AOC and shall no longer be subject to dispute pursuant to this AOC. Respondent shall proceed in accordance with the Division Director's decision regarding the matter in dispute, regardless of whether Respondent agrees with the decision. If Respondent does not agree to perform or does not actually perform the Work in accordance with EPA's decision, EPA reserves the right in its sole discretion to conduct the Work itself, seek reimbursement from Respondent, seek enforcement of this AOC, seek stipulated penalties, and/or any other appropriate relief. Any disputes arising under this AOC are not subject to judicial review until such time as EPA seeks to enforce this AOC.

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

XIX. PENALTIES

93. Stipulated Penalties. Any time Respondent fails to comply with any requirement of this AOC, Respondent shall be liable for stipulated penalties in the amounts set forth in this section unless a Force Majeure event has occurred as defined in Section XX (Force Majeure) and EPA has approved the extension of a deadline as required by Section XX (Force Majeure). Compliance with this AOC by Respondent shall include completion of an activity or any matter under this AOC in accordance with this AOC, and within the specified time schedules approved under this AOC.
94. The stipulated penalties for violations relating to this AOC shall accrue for failure to commence, properly perform or complete work as prescribed by this AOC or pursuant to a plan approved under this AOC; for failure to comply with the provisions of this AOC after receipt of notice of noncompliance by the EPA; and for failure to submit deliverables as required by this AOC, or for any failure to comply with this AOC not described elsewhere. Penalties are as follows:
 - a. \$500 per day for the first (1) through seventh (7) days of non-compliance;
 - b. \$750 per day for the eighth (8) through (13) thirtieth days of non-compliance; and
 - c. \$1,000 per day for the thirty-first (31) and each succeeding day of non-compliance thereafter.
95. Penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of correction of the violation or completion of the activity. Payment shall be due within thirty (30) days of receipt of a demand letter from EPA. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this AOC, even where those violations concern the same event (e.g., submission of a Work Plan that is late and is of unacceptable quality).

96. If payment is not made within thirty (30) days of the date of Respondent's receipt from EPA of a written demand for payment of the penalties or of the date of agreement or decision resolving the dispute, interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the first day after Respondent's receipt of EPA's demand letter, or the date of the agreement or decision resolving the dispute, and will accrue until such penalties and interest have been paid in full. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. An additional penalty of six percent (6 %) per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for ninety (90) days or more. The applicable rate of interest shall be the rate in effect at the time the interest accrues pursuant to 31 U.S.C. § 3717.
97. Respondent shall make payments by money order, certified check, company check, electronic funds transfer, or cashier's check payable to the "Treasurer of the United States" within thirty (30) days of Respondent's receipt of EPA's request, and shall be submitted to the following address:
- Regional Hearing Clerk (Region 7)
U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, Missouri 63197-9000.
98. Docket No. RCRA-07-2014-0015 should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, certified check, company check, electronic funds transfer, or cashier's check to the following:
- Branch Chief
Waste Remediation and Permitting Branch
Air Waste and Management Division
U.S. EPA, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219.
99. Respondent may dispute an EPA determination that it failed to comply with this AOC by invoking the dispute resolution procedures under Section XVIII (Dispute Resolution) unless the matter has already been in or is the subject of dispute resolution. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondent does not prevail upon resolution, all penalties shall be due to EPA within thirty (30) days of resolution of the dispute. If Respondent prevails upon resolution, no penalties shall be paid. In the event that Respondent prevails in part, penalties shall be due on those matters in which Respondent did not prevail.
100. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way Respondent's obligation to comply with the terms and conditions of this AOC. The stipulated penalties set forth in this Section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the terms and conditions of this AOC.

101. No payments under this Section shall be deducted for federal tax purposes.
102. 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 AOC.
103. Civil Penalties. Violation of this AOC may subject Respondent to civil penalties as provided for in Section 7003(b) of RCRA, 42 U.S.C. § 6973(b), as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, 28 U.S.C. § 2461 note. Should Respondent violate this AOC or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to any applicable authorities, and/or may seek judicial enforcement of this AOC.

XX. FORCE MAJEURE

104. Respondent agrees to perform all requirements under this AOC within the time limits established under this AOC, unless the performance is delayed by a force majeure. For purposes of this AOC, a force majeure is defined as any event arising from causes beyond the control of Respondent, or any entity controlled by Respondent or Respondent's contractors, which delays or prevents performance of any obligation under this AOC despite Respondent's best efforts to fulfill the obligation. The requirement that the Respondent exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event: (a) as it is occurring, and (b) following the potential force majeure event, such that the delay is minimized to the greatest extent possible. Force majeure does not include financial inability to complete the Work, increased cost of performance, changes in Respondent's business or economic circumstances, or inability to attain media cleanup standards.
105. If any event occurs or has occurred that may delay the performance of any obligation under this AOC, whether or not caused by a force majeure event, Respondent shall notify EPA within seventy-two (72) hours of when Respondent knew or should have known that the event might cause a delay. Such notice shall: (a) identify the event causing the delay, or anticipated to cause delay, and the anticipated duration of the delay; (b) provide Respondent's rationale for attributing such delay to a force majeure event; (c) state the measures taken or to be taken to prevent or minimize the delay; (d) estimate the timetable for implementation of those measures; and (e) state whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health or the environment. Respondent shall undertake best efforts to avoid and minimize the delay. Failure to comply with the notice provision of this paragraph and to undertake best efforts to avoid and minimize the delay shall waive any claim of force majeure by Respondent. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.
106. If the EPA determines that a delay in performance or anticipated delay in fulfilling a requirement of this AOC is or was attributable to a force majeure, then the time period for performance of that requirement will be extended as deemed necessary by EPA. If EPA determines that the delay or anticipated delay has been or will be caused by a force majeure, then EPA will notify Respondent, in writing, of the length of the extension, if any, for performance of such obligations

affected by the force majeure. Any such extensions shall not alter Respondent's obligation to perform or complete other tasks required by this AOC which are not directly affected by the force majeure.

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

XXI. RESERVATION OF RIGHTS

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

XXII. OTHER CLAIMS

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

XXIII. INSURANCE

117. Prior to commencing the Work under this AOC, Respondent shall secure, and shall maintain in force for the duration of this AOC and for two (2) years after the completion of all activities required by this AOC, comprehensive general liability insurance and automobile insurance with limits of \$1 million dollars, combined single limit, naming EPA as an additional insured. Prior to commencement of the Work under this AOC, and annually thereafter on the anniversary of the Effective Date of this AOC, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. If Respondent demonstrates by evidence satisfactory to EPA that its contractors and subcontractors maintain insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by the contractors and subcontractors.
118. For the duration of this AOC, Respondent shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of employer's liability insurance and worker's compensation insurance for all persons performing the Work on behalf of Respondent, in furtherance of this AOC.
119. At least seven (7) days prior to commencing the Work under this AOC, Respondent shall certify to EPA that their contractors and subcontractors have obtained the required insurance.

XXIV. COST ESTIMATES AND FINANCIAL ASSURANCE

120. Cost Estimates. Within ninety (90) days after the Effective Date of this AOC, Respondent shall review the detailed cost estimate contained in the CMS Report for the selected corrective

measures, modify the estimate to include any additional work and all costs related to the preparation of documents required under this AOC as necessary, and submit to EPA the detailed written initial estimate, in current dollars, of the cost of hiring a third party to perform the Work described in Section IX (Work to Be Performed) of this AOC and the attached SOW (Attachment B). A third party is a party who: (a) is neither a parent nor a subsidiary of Respondents, and (b) does not share a common parent or subsidiary with Respondents. The initial cost estimate must account for the total costs of the Work described in Section IX (Work to Be Performed) and the SOW (Attachment B) for the entire period of this AOC, including any necessary long term costs, such as operation and maintenance costs, monitoring costs, and institutional controls. The cost estimate must not incorporate any salvage value that may be realized from the sale of wastes, Facility structures or equipment, land or other assets associated with the Facility.

121. Concurrent with the submission of any Work Plan(s) for additional work required under Section XXVII (Additional Work), Respondent shall submit revised detailed written estimate(s), in current dollars, of the cost of hiring a third party to perform the Work.
122. Respondent must annually review, and adjust the cost estimate(s) by December 31 of each year until the Work required by this AOC is completed. The cost estimate will consider future tasks required by the SOW (Attachment B) and significant changes in projected future expenditure as compared to the initial estimate. In addition, Respondent must adjust the cost estimate if EPA determines that any additional work is required, pursuant to Section XXVII (Additional Work), or if any other conditions increase the cost of the Work to be performed under this AOC.
123. Respondent shall submit each annual cost estimate to EPA for review pursuant to Section X (EPA Approval of Deliverables).
124. Assurances of Financial Responsibility for Completing the Work. In order to secure the full and final completion of the Work in accordance with the AOC, Respondent shall establish and maintain financial assurance using one of the mechanisms provided by 40 C.F.R. Part 264.
125. Respondent has historically used the financial test to comply with its previous RCRA financial assurance obligations. Historically, it has issued the assurance letter by March 31 of each year and intends, if the financial test is used, to continue to issue its assurance letter by that date.
126. If the annually adjusted cost estimate for the cost of completing the remaining Work exceeds the amount of financial assurance already provided pursuant to this Section, Respondent shall, within ninety (90) days thereafter, increase the amount of the financial assurance to cover such cost increase. In addition, in the event that EPA determines at any time that the financial assurances provided pursuant to this AOC are inadequate, Respondent shall, within ninety (90) days after receipt of notice of EPA's determination, correct the inadequacy. Furthermore, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased above the established level of financial assurance and provides the basis for such determination, then, within ninety (90) days of receipt of such notification, Respondent shall increase the amount of financial assurance to cover such cost increase.

127. Respondent's inability to post financial assurance for completion of the Work shall in no way excuse performance of any other requirements of this AOC, including, without limitation, Respondent's obligation to complete the Work in strict accordance with the terms of this AOC.
128. Reduction of Amount of Financial Assurance. If Respondent believes that the estimated cost to complete the remaining Work has diminished below the amount covered by the existing financial assurance provided under this AOC, Respondent may, at a time agreed to by EPA and Respondent, submit a written proposal to EPA to reduce the amount of the financial assurance provided under this Section to the estimated cost of the remaining Work to be Performed. The written proposal shall specify, at a minimum, the cost of the remaining Work to be Performed and the basis upon which such cost was calculated. The decision whether to approve a proposal to reduce the amount of financial assurance shall be within EPA's sole discretion and EPA shall notify Respondent of its decision regarding such proposal in writing. Respondent may reduce the amount of the financial assurance only after receiving EPA's written decision and only in accordance with and to the extent permitted by such written decision. In the event of a dispute, Respondent may reduce the amount of the financial assurance required by this Section only in accordance with a final administrative decision resolving such dispute under Section XVIII (Dispute Resolution) of this AOC.
129. Release of Financial Assurance. Respondent may submit a written request to the Director of Air and Waste Management Division of EPA Region 7 requesting that EPA release Respondent from the requirement to maintain financial assurance under this Section at such time as EPA has provided written notice, pursuant to Section XXVIII (Termination and Satisfaction) that Respondent has demonstrated that all the terms of this AOC have been addressed to the satisfaction of EPA. The Division Director shall notify Respondent and the Trustee, if there is a financial assurance Trust, in writing the Respondent is released from all financial assurance obligations under this AOC.

XXV. INDEMNIFICATION

130. Respondent agrees to indemnify, save and hold harmless the United States, its officials, agents, contractors, employees, and representatives from any and all claims or causes of action: (a) arising from, or on account of, acts or omissions of Respondent, Respondent's directors, officers, employees, agents, successors, assigns, heirs, trustees, receivers, contractors, or consultants in carrying out actions pursuant to this AOC; and (b) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any persons for performance of the Work on or relating to the Facility, including claims on account of construction delays. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including litigation costs arising from or on account of claims made against the United States based on any of the acts or omissions referred to in the preceding sentence.

XXVI. MODIFICATION OF THIS AOC

131. Except for Modification of work plans as provided in Section XI (Modification of the Work Plan), this AOC may only be modified by the mutual agreement of EPA and Respondent. Any

agreed modifications shall: be in writing; be signed by both parties; have as their effective date the date on which they are signed by EPA; and be incorporated into this AOC.

132. No informal advice, guidance, suggestion, or comment by the EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain such formal approval as may be required by this AOC, and to comply with all requirements of this AOC unless it is formally modified. Any deliverables, plans, technical memoranda, reports, specifications, schedules and attachments required by this AOC are, upon approval by EPA, incorporated into and enforceable under this AOC.

XXVII. ADDITIONAL WORK

133. EPA may determine or Respondent may propose that certain tasks are necessary in addition to or in lieu of the tasks included in any EPA-approved Work Plan when such Additional Work is necessary to meet the objectives set forth in Section I (Introduction). EPA may determine that Respondent shall perform any Additional Work and EPA will specify, in writing, the basis for its determination that any Additional Work is necessary. Within fifteen (15) days after the receipt of such determination, Respondent shall have the opportunity to meet or confer with EPA to discuss any Additional Work. Respondent shall submit for EPA approval a Work Plan for any Additional Work. Such Work Plan shall be submitted within forty-five (45) days of Respondent's receipt of EPA's determination that any Additional Work is necessary, or according to an alternative schedule established by EPA. Upon approval of a Work Plan for any Additional Work, Respondent shall implement the Work Plan for any of the work in accordance with the schedule and provisions contained therein. These work plans shall be incorporated by reference into this AOC.

XXVIII. TERMINATION AND SATISFACTION

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

XXIX. PUBLIC COMMENT ON THIS AOC

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

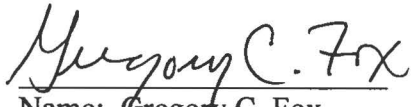
XXX. SEVERABILITY

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

XXXI. EFFECTIVE DATE

137. This AOC shall be effective when EPA signs this AOC after the public comment period as specified in Section XXIX (Public Comment on This AOC) above. Within two (2) business days of signing this AOC, EPA will provide Respondent with a copy of the signature page of this AOC signed by the Director of the Air and Waste Management Division. The undersigned representative of Respondent certifies that it is fully authorized to enter into the terms and conditions of this AOC and to bind the party it represents to this document. Respondent agrees not to contest the validity or terms of this AOC, or the procedures underlying or relating to it in any action brought by the United States, including EPA, to enforce its terms or seek penalties for its violation. Respondent retains its right to assert claims against any third parties with respect to this Facility.

FOR RESPONDENT:
BNSF Railway Company

A handwritten signature in black ink that reads "Gregory C. Fox". The signature is written in a cursive style with a horizontal line underneath the name.


Name: Gregory C. Fox

Title: Executive Vice President Operations

September 4, 2015
Date

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7

Signatures



Demetra O. Salisbury
Attorney
Office of Regional Counsel
EPA Region 7

Nov. 9, 2015
Date

IT IS SO ORDERED:



Rebecca Weber

Director

Air and Waste Management Division

11-12-15
Date

CERTIFICATE OF SERVICE

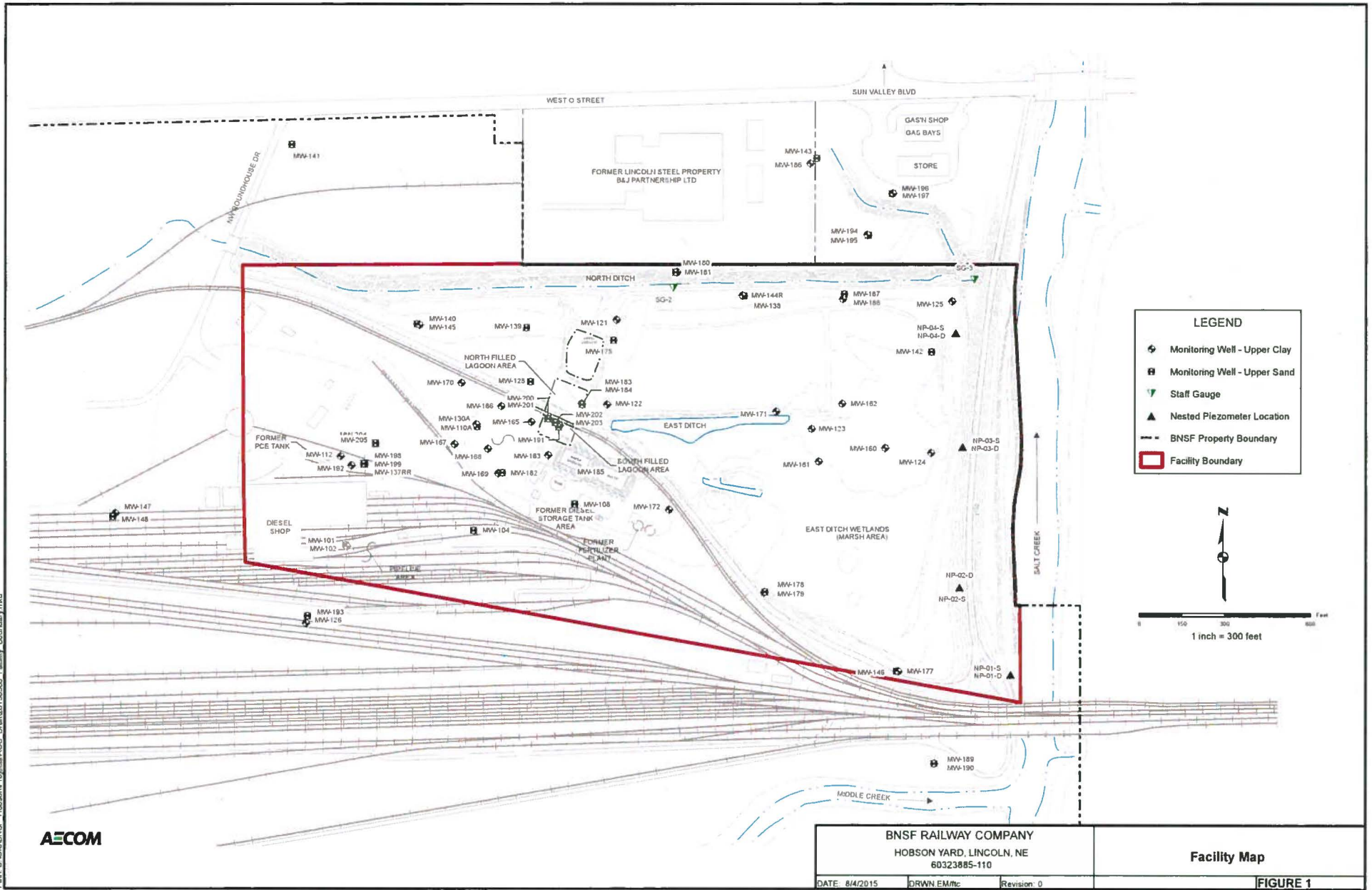
I certify that I have caused a copy of the foregoing AOC to be served upon the person designated below on the date below, by causing said copy to be deposited in the U.S. Mail, First Class (~~Certified Mail~~, *CR*, ~~Return Receipt Requested~~, postage prepaid), at Lenexa, Kansas, in an envelope addressed to the below:



Kathy Robinson
Regional Hearing Clerk

Dated this day of 16 November, 2015.

Attachment A



Path: B:\GIS\BNSF_Hobson\Project\Map\ACC_Draft\20150508_Facility_Boundary.mxd

AECOM

ATTACHMENT B

SCOPE OF WORK FOR THE FACILITY AT THE BNSF HOBSON YARD EPA ID: NED000822767 LINCOLN, NEBRASKA

1.0 INTRODUCTION

The purpose of this Scope of Work (SOW) for the Facility situated in the northeast portion of the railway yard located at 801 W. O Street on the west side of Lincoln, Nebraska (hereinafter "Facility") and owned by BNSF Railway Company (hereinafter "Respondent") is to define the requirements, standards and guidelines that shall be followed by the Respondent to perform Corrective Measures Implementation (CMI).

The Respondent shall perform CMI to implement the EPA-selected remedy to prevent, mitigate, and/or remediate any migration or release of solid and/or hazardous wastes and/or hazardous constituents at, and/or from, the Facility. The CMI shall also include remediation of any off-site contamination originating from the Facility. Respondent shall accomplish the following Tasks:

- Task I: Corrective Measures Implementation Work Plan**
- Task II: Updated Quality Assurance Project Plan (QAPP), Sampling and Analysis Plan (SAP), and Health and Safety Plans (HSP)**
- Task III: Operation and Maintenance (O&M) Plan**
- Task IV: Corrective Measures Construction Completion Report (CMCCR)**
- Task V: Quarterly Progress Reports**
- Task VI: Corrective Measures Implementation Annual Report**
- Task VII: Corrective Measures Implementation Five-year Review**
- Task VIII: Corrective Measures Completion Report (CMCR)**

In accomplishing the above Tasks, the Respondent shall comply with the provisions of the corresponding Administrative Order on Consent (AOC), Docket No. RCRA 07-2014-0015 between the United States Environmental Protection Agency (EPA) and Respondent; this SOW; the *RCRA Corrective Action Plan*, EPA/520-R-94-004, OSWER Directive 9902.3-2A, May 1994; and all applicable EPA guidance, (including, but not limited to, the guidance documents referenced in the AOC and this SOW). The SOW for currently identified work to be performed pursuant to the AOC is set forth below.

2.0 TASK I: CORRECTIVE MEASURES IMPLEMENTATION (CMI) WORK PLAN

Within the timeframe specified in the AOC, Respondent shall submit a CMI Work Plan to the

EPA. The required CMI Work Plan shall specify the work required for the design, construction, implementation, and continued performance monitoring of the EPA's selected final corrective measures at the Facility. The EPA will review and approve or modify this submittal in accordance with Section X (EPA Approval of Deliverables) of the AOC. The CMI Work Plan shall include, at a minimum, the following elements:

A. Introduction/Purpose:

1. Description of the purpose of the document and a summary description of the project;
2. Summary of remedial action objectives;
3. Description of the final corrective measures selected by the EPA and the rationale for the remedy selection, including institutional controls, if any;

B. Description of Corrective Measures:

1. Performance expectations;
2. Preliminary design criteria and rationale;
3. Engineering plans and designs for each source area (PCE Tank Area, South Filled Lagoon Area, and Diesel Tank Area), including a discussion of the methods for designing all major components, the justifications and assumptions for the particular designs, and the probability of variance in performance characteristics.
4. General operation and maintenance (O&M) requirements;
5. Startup procedures, including all applicable system startup procedures, including operational testing;
6. Performance and long-term monitoring requirements;
7. Design and implementation considerations to implement the selected remedy, to include, but not be limited to:
 - a. Anticipated technical problems;
 - b. Additional engineering data that may be required;
 - c. A description of any permits and regulatory requirements; and
 - d. Access, easements and right-of-way.

C. Cost estimates: includes the capital and O&M costs for implementing the corrective measures.

D. Project Schedule: specify a schedule for key elements of the planning, design, bidding and construction process, and for the initiation of all major corrective measures construction tasks.

E. **Institutional Controls (ICs) and Institutional Control (IC) Plan:** The corrective measures include the implementation of ICs, commencing at the time of the EPA's approval of the corrective measures. Respondent shall refrain from using the Facility, or such other property, in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the corrective measures to be implemented pursuant to AOC. The IC Plan shall be consistent with the EPA's "Institutional Controls: A Guide for Preparing Institutional Control Implementation and Assurance Plans at Contaminated Sites," EPA-540-R-09-002, OSWER 9200.0-77, December 2012.

Respondent shall include, as part of the CMI Work Plan, an IC Plan that includes:

1. A draft instrument enforceable under the laws of the State of Nebraska that shall be binding on Respondent and Respondent's successors, assigns, and all transferees acquiring or owning any right, title, lien or interest in the affected areas of the Facility and their heirs, successors, assigns, grantees, executors, administrators, and devisees.
2. A current title insurance commitment or some other evidence of title acceptable to the EPA, which shows title to the land described in the instrument to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by the EPA or when, despite best efforts, Respondent is unable to obtain release or subordination of such prior liens or encumbrances).
3. A program of annual visual inspections of the Facility and review of pertinent records regarding the Facility to verify that the ICs are being properly maintained.

F. **Soil Management Plan:** describe procedures, such as construction methods, engineering controls, and required personal protective equipment that will prevent unacceptable exposure to subsurface soil and groundwater during CMI activities and potential future construction activities.

G. **Corrective Measures Completion Criteria:** The CMI Work Plan shall propose the process and criteria for determining when the implemented corrective measures have achieved the remedial action objectives. The CMI Work Plan shall also describe the process and criteria for determining when corrective measures implementation may cease.

3.0 **Task II: Updated Quality Assurance Project Plan (QAPP), Sampling and Analysis Plan (SAP), and Health and Safety Plans (HSP)**

Respondent shall update the referenced plans, either as amendments, or stand alone documents to the CMI Work Plan. The updated QAPP, SAP, and HSP shall be revised as appropriate to address the requirements of implementing the final corrective measures for the Facility. The EPA will review and approve or modify these submittals in accordance with Section X (EPA Approval of Deliverables) of the AOC. The HSP shall be submitted to EPA for documentation; however, the EPA will not comment on or approve this submittal.

4.0 **Task III: Operation and Maintenance (O&M) Plan**

Respondent shall also submit to the EPA an O&M Plan that outlines procedures for performing operations, long-term maintenance and monitoring of the final corrective measures required by this SOW. The O&M Plan shall address all elements set forth below, including but not limited to,

project management, data collection, waste management procedures and contingency procedures.

The EPA will review and approve or modify this submittal in accordance with Section X (EPA Approval of Deliverables) of the AOC. The O&M Plan shall, at a minimum, include the following elements:

- A. **Project management:** Describe the management approach including levels of personnel authority and responsibility (including an organizational chart), lines of communication and the qualifications of key personnel who will operate and maintain the corrective measures (including contractor personnel);
- B. **System description:** Describe the corrective measures components and identify significant equipment, as applicable to each selected corrective action alternative. Provide schematics or process diagrams to illustrate system design and operation;
- C. **Personnel training:** Describe the training process for O&M personnel, as applicable. Respondent shall prepare, and include the technical specifications governing the operation and on-going maintenance of contaminant mitigation systems, and the support requirements for the following:
 1. Appropriate service visits by experienced personnel to supervise the installation, adjustment, start-up and operation of contaminant mitigation systems; and
 2. Training covering appropriate operational procedures once the start-up has been successfully accomplished.
- D. **Start-up procedures:** all applicable system start-up procedures including any operational testing;
- E. **O&M procedures:** all normal operation and maintenance procedures including:
 1. A description of tasks for O&M;
 2. A description of prescribed treatment or operation conditions; and
 3. A schedule showing the frequency of each O&M task.
- F. **Data management and documentation requirements:** specifies that Respondent shall collect and maintain the following information:
 1. Progress report information;
 2. Monitoring and laboratory data;
 3. Records of operating costs; and
 4. Personnel, maintenance and inspection records.
- G. **Application of QAPP:** reference the approved QAPP and describe actions necessary to apply

the QAPP to ensure that all information, data and resulting decisions are technically sound, statistically valid and properly documented.

- H. **Replacement Schedule:** specify a replacement schedule for equipment and installed components;
- I. **Waste management practices:** describe any solid wastes/hazardous wastes which may be generated by the operation of the corrective measures components and describe how they will be managed;
- J. **Contingency procedures:** describe, as applicable, the following types of contingency procedures necessary to ensure system operation in a manner protective of human health and the environment:
 - 1. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures;
 - 2. Alternative procedures to be implemented if the corrective measure systems suffer complete failure. The alternative procedures must be able to achieve the performance standards for the corrective measures until system operations are restored;
 - 3. Specify that, in the event of a major breakdown and/or the failure of the corrective measures, Respondent shall notify the EPA within 24 hours of the event; and
 - 4. Specify the procedures to be implemented in the event that the corrective measures are experiencing major operational problems, are not performing to design specifications, and/or will not achieve the remedial action objectives.

5.0 Task IV: Corrective Measures Construction Completion Report (CMCCR)

Within the timeframes specified in the AOC, Respondent shall submit a CMCCR. The EPA will review and approve or modify the submittal in accordance with Section X (EPA Approval of Deliverables) of the AOC. The CMCCR shall include at a minimum, the following elements:

- A. A statement of the purpose of the report;
- B. A synopsis of the corrective measures, design criteria, and a certification that the corrective measure was constructed and implemented in accordance with the approved CMI Work Plan;
- C. An explanation and description of any modifications to the approved CMI Work Plan and design specifications, and why such modifications were necessary and appropriate;
- D. Copies of any sampling/test results for operational testing and/or monitoring that documents how initial operation of the corrective measure compares to design criteria;
- E. A summary of significant activities that occurred during the implementation/construction, including a discussion of any problems encountered and how such problems were addressed;
- F. A summary of all inspection findings (including copies of inspection reports, documents and

appendices); and

G. Copies of as-built drawings and photographs.

6.0 Task V: Quarterly Progress Reports

Quarterly Progress Reports must be submitted as required by the AOC. The Respondent shall include the following information in the Quarterly Progress Reports:

- A. A description of all of the CMI activities completed during the reporting period;
- B. A description of all changes made to the CMI documents during the reporting period;
- C. Summaries of all contacts, during the reporting period, with representatives of the local community, public interest groups or State government concerning activities at the site;
- D. Summaries of all problems or potential problems encountered during the reporting period;
- E. Actions being taken to rectify problems;
- F. Changes in project coordinator, principal contractor, laboratory, and/or consultant during the reporting period;
- G. Projected work for the next reporting period;
- H. Other relevant documentation, including, but not limited to copies of laboratory/monitoring data received and/or generated during the reporting period;
- I. Other activities conducted by the Facility (e.g., project specific reporting requirements); and
- J. Conclusions and recommendations.

7.0 Task VI: Corrective Measures Implementation Annual Report

The Respondent shall submit a CMI Annual Report to the Director within the timeframes specified in the AOC detailing the prior year's performance of the corrective measures above, including IC's. The CMI Annual Report shall include documentation of all samples and data collected and their analysis, and an evaluation of both the short-term and long-term effectiveness of the corrective measures. The CMI Annual Report shall include any deficiencies or violations of ECs or ICs determined from the inspection, maintenance, and monitoring required. The EPA will review and approve or modify the submittal in accordance with Section X (EPA Approval of Deliverables) of the AOC. Based upon the EPA's review of the report, the Director may require the Respondent to conduct additional investigation, study, and/or work in order to modify an existing corrective measure or to select a new corrective measure or measures. If action is needed to protect human health or the environment from releases or to prevent or minimize the further spread of contamination while long-term remedies are pursued, the Director may require the Respondent to implement Interim Measures.

8.0 Task VII: Corrective Measures Implementation Five-year Review

The Respondent shall submit a report to evaluate the corrective measures effectiveness and performance every five (5) years to the Director. Within the timeframes specified in the AOC, the Respondent shall submit to the EPA for review and approval a 5-Year Corrective Measures Performance Evaluation Report. The EPA will review and approve or modify the submittal in accordance with Section X (EPA Approval of Deliverables) of the AOC. The evaluation shall be consistent with the CERCLA Comprehensive Five-Year Review Guidance, OSWER9355.7-03B-P, and any subsequent revisions or additions, and include the following:

- Effectiveness of corrective measures in protecting human health and the environment as planned in the Statement of Basis;
- Effectiveness of ECs and ICs in protecting human health and the environment as planned in the Statement of Basis;
- Results of sampling and analysis to determine the effectiveness and performance of the corrective measures;
- Any changed circumstances that render the corrective measure, including ECs and ICs, ineffective;
- Possible modifications to the corrective measures to provide necessary protection; and
- Any other reporting requirements included in the EPA-approved CMI Work Plan.

Based upon the EPA's review of the report, the Director may require the Respondent to conduct additional investigation, study, and/or work in order to modify an existing corrective measure or to select a new corrective measure or measures. If action is needed to protect human health or the environment from releases or to prevent or minimize the further spread of contamination while long-term remedies are pursued, the Director may require the Respondent to implement Interim Measures pursuant to this AOC.

9.0 Task VIII: Corrective Measures Completion Report (CMCR)

Within the timeframes specified in the AOC and upon satisfaction of the EPA-approved completion criteria, Respondent shall submit to the EPA a CMCR. The EPA will review and approve or modify this submittal in accordance with Section X (EPA Approval of Deliverables) of the AOC. The CMCR shall fully document how the remedial action objectives and corrective measures completion criteria have been satisfied, and shall justify why the corrective measure and/or monitoring may cease. The CMCR shall, at a minimum, include the following elements:

- A. A synopsis of the corrective measures;
- B. Corrective measures completion criteria - the process and criteria used to determine, and recommend, that the corrective measures maintenance and monitoring may cease;
- C. A demonstration that the remedial action objectives and corrective measure completion criteria have been met. The CMCR shall include results of tests and/or monitoring that documents how operation of the corrective measures compares to, and satisfies, the remedial action objectives and completion criteria;
- D. A summary of work accomplishments (e.g. performance levels achieved, total hours of operation, total volume treated and/or excavated volumes of media, nature and volume of

wastes generated, etc.);

- E. A summary of significant activities that occurred during operation of the corrective measures, including a discussion of any problems encountered and how such problems were addressed;
- F. A summary of inspection findings (including copies of key inspection documents in appendices); and
- G. A summary of total O&M costs.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
FINAL DECISION AND RESPONSE TO COMMENTS
BURLINGTON NORTHERN SANTA FE RAILROAD – HOBSON YARD
EPA ID # NED000822767
LINCOLN, NEBRASKA**

INTRODUCTION

This Final Decision and Response to Comments (FD/RTC) is being presented by the U.S. Environmental Protection Agency (EPA). The purpose of the FD/RTC is to present issues and concerns raised during the public comment period on the remedy proposed for the Burlington Northern Santa Fe (BNSF) Railroad site (EPA ID# NED000822767) in Lincoln, Nebraska, to provide responses to those issues and concerns, and to identify the remedy that the EPA has selected for the site. All comments received by the EPA during the public comment period were carefully reviewed during the final selection of the remedy and have been addressed in the FD/RTC. Minor modifications to the originally proposed remedy have been made as a result of public comments. These modifications are described in the "PUBLIC COMMENTS AND EPA RESPONSE" section of this FD/RTC.

LOCATION

BNSF-Hobson Yard is located on the west side of Lincoln, Nebraska in Lancaster County. In 1994, the EPA negotiated an Administrative Order on Consent (AOC) pursuant to Section 7003 of the Resource Conservation and Recovery Act (RCRA). The 1994 AOC required BNSF to perform interim measures, a RCRA Facility Investigation to fully characterize the nature and extent of hazardous wastes or hazardous constituents released at the site, and a Corrective Measure Study (CMS) to identify alternatives for addressing site contamination. The site, as defined in the AOC, is the northeast portion of the entire BNSF property in Lincoln, Nebraska. This portion of the BNSF property, which is currently subject to corrective action under the 1994 AOC, occupies approximately 100 acres and is located within Section 27 of Township 10 North, Range 6 East and is bounded to the north by various commercial and industrial properties, along the west by "O" Street, to the east by Salt Creek, and to the south by Middle Creek.

FACILITY HISTORY

The site was originally developed as a freight yard and steam engine terminal by the Chicago, Burlington, and Quincy Railroad in 1906. A large roundhouse, turntable, coal chutes, and a hump yard were in operation by 1909. Freight trains were assembled and steam engines were serviced and fueled in the yard. The old steam locomotives were replaced by diesel switch engines beginning in the 1940s and buildings were constructed on the site to service and repair the diesel locomotives. A three-track diesel building was constructed south of the roundhouse in 1956, when about 95 percent of Burlington's operations were converted to diesel. The original diesel facility was expanded in 1964 and several stalls of the roundhouse were removed. A new diesel facility was subsequently installed on the southern side of the Diesel Shop area. Burlington Northern Railroad came into existence when the Chicago, Burlington, and Quincy merged with the Great Northern and Northern Pacific in 1970. The yard continued to be used for car switching, storage, repair, diesel engine maintenance, and diesel engine fueling.

SELECTED REMEDY

The corrective action remedy to address contaminated groundwater at and downgradient of the two main chlorinated solvent source areas and the light non-aqueous phase liquid (LNAPL) source area at Hobson Yard is:

Tetrachloroethylene (PCE) Tank Area

- Implement in situ chemical reduction (ISCR) in the PCE Tank source area by injecting a patented combination of controlled-release carbon and zero valent iron particles, and/or through bioaugmentation using Dehalococcoides species to reduce contaminant concentrations;
- Establish institutional controls (ICs) in the form of a deed restriction and a Soil Management Plan on the property to limit or control land use to prevent unacceptable exposure;
- Implement monitored natural attenuation (MNA) to verify that natural processes are reducing contaminant mass and preventing further contaminant migration; and
- Operate and maintain a system of groundwater monitoring wells that are collectively capable of verifying that ISCR and MNA are preventing contaminant migration and reducing contaminant concentrations.

South Filled Lagoon Area

- Install a funnel and gate system immediately downgradient of the South Filled Lagoon Area to intercept contaminated groundwater and divert the groundwater flow into a permeable reactive barrier gate;
- Establish ICs in the form of a deed restriction and a Soil Management Plan to limit or control land use to prevent unacceptable exposure;
- Implement MNA to verify that natural degradation processes are reducing contaminant mass and preventing further migration; and
- Operate and maintain a system of groundwater monitoring wells that are collectively capable of verifying that the funnel and gate system and MNA are controlling contaminant migration and reducing contaminant concentrations.

Diesel Storage Tank Area

- Installation of LNAPL recovery equipment within the mobile plume such as belt and/or canister-type skimmers,
- Removal of LNAPL on a regular basis (e.g., vacuum truck, manually, etc.) to be determined by recovery rates, and
- Establish ICs in the form of a deed restriction and a Soil Management Plan to limit or control land use to prevent unacceptable exposure.

Institutional Controls:

Since groundwater underlying the site is not considered usable as a drinking water source, the selected remedy will achieve the following objectives: 1) prevent construction workers from coming into contact with contaminated subsurface soils and groundwater, 2) contain the source areas to reduce their contribution to existing groundwater contamination, 3) prevent migration of groundwater contamination off the site at levels above drinking water standards, and 4) prevent discharge of contaminated groundwater to Salt and Middle Creeks at levels above Nebraska Surface Water Quality Standards.

ICs will be used to prevent unacceptable exposure of receptors to hazardous substances remaining at the site. The primary ICs for the remedy include:

- Limiting the site to industrial use only;
- Implementing a deed restriction to prevent using groundwater at the site for any activity, including drinking water, irrigation, process water, etc.;
- Implementing a Soil Management Plan that will provide procedures, such as construction methods, engineering controls, and personal protective equipment that prevent unacceptable exposure to subsurface soil and groundwater during potential future construction activities;
- Providing prior notification to the site's environmental manager and obtaining approval for activities that may expose site or construction/utility workers to contaminated soil or groundwater (i.e., excavation);
- Prohibiting the installation of potable, industrial, or irrigation water wells;
- Providing access to EPA or State of Nebraska representatives for sampling and inspection of the corrective measures systems and site groundwater monitoring wells; and
- Conducting annual inspections that will include visual inspection of the site and review of pertinent records relating to the site. Annual inspections will verify that these ICs are being properly maintained. Access will be provided to EPA or State of Nebraska representatives for verifying land use.

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

General Standards for Corrective Measures (required elements)

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

Selection Decision Factors (used to select among the alternatives)

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

Based upon a comparison to the foregoing general standards and selection decision factors, EPA determined that the proposed remedies for the site represented the best balance of environmental protectiveness, effectiveness, implementability, and cost. Therefore, the corrective measures listed above were selected as the final remedy.

REMEDIAL ACTION OBJECTIVES

The Remedial Action Objectives (RAOs) calculated for this site represent site-specific soil and groundwater risk-based remediation goals for construction workers and EPA Maximum Contaminant Levels (MCLs). Drinking water standards are applicable for portions of the site; however, it is not expected that on-site groundwater would be used for potable water supply. Applicable RAOs for surface water are found in Nebraska Administrative Code Title 117 Surface Water Quality Standards (Nebraska Administrative Code 2012). The RAOs for this site are provided in the tables below.

Table 1: Remedial Action Objectives for Soil

Compound	RAO	Source of RAO
1,2,4-Trimethylbenzene	250 mg/kg	Risk-based remediation goal
1,2-Dichloroethene (total)	210 mg/kg	Risk-based remediation goal
2-Chlorotoluene	770 mg/kg	Risk-based remediation goal
Arsenic	130 mg/kg	Risk-based remediation goal
Cis-1,2-dichloroethene	220 mg/kg	Risk-based remediation goal
Methylene Chloride	10,000 mg/kg	Risk-based remediation goal
Tetrachloroethene	440 mg/kg	Risk-based remediation goal
Trichloroethene	60 mg/kg	Risk-based remediation goal
Vinyl Chloride	190 mg/kg	Risk-based remediation goal

RAO Remedial Action Objective
Mg/kg milligrams per kilogram

Table 2: Remedial Action Objectives for Groundwater at the North Property Boundary

Compound	RAO	Source of RAO
1,2-Dichloroethane	5 µg/l	MCL
Benzene	5 µg/l	MCL
Chloroform	70 µg/l	MCL
Cis-1,2-dichloroethene	70 µg/l	MCL
Iron	300 µg/l	MCL
Manganese	50 µg/l	MCL
Sulfate	250,000 µg/l	MCL
Tetrachloroethene	5 µg/l	MCL
Trans-1,2-dichloroethene	100 µg/l	MCL
Trichloroethene	5 µg/l	MCL
Vinyl Chloride	2 µg/l	MCL
Xylenes (total)	10,000 µg/l	MCL

RAO Remedial Action Objective
µg/l micrograms per liter

MCL EPA Maximum Contaminant Level EPA's Safe Drinking Water Act Regulations and Health Advisories (EPA, 2009)

Table 3: Remedial Action Objectives for On-Site Groundwater

Compound	RAO	Source of RAO
1,2-Dichloroethane	3,400 µg/l	Risk-based remediation goal
Benzene	3,100 µg/l	Risk-based remediation goal
Chloroform	13,000 µg/l	Risk-based remediation goal
Cis-1,2-dichloroethene	20,000 µg/l	Risk-based remediation goal
Iron	6,800,000 µg/l	Risk-based remediation goal

Manganese	460,000 µg/l	Risk-based remediation goal
Sulfate	NA	
Tetrachloroethene	830 µg/l	Risk-based remediation goal
Trans-1,2-dichloroethene	210,000 µg/l	Risk-based remediation goal
Trichloroethene	350 µg/l	Risk-based remediation goal
Vinyl Chloride	3,400 µg/l	Risk-based remediation goal
Xylenes (total)	31,000 µg/l	Risk-based remediation goal

RAO Remedial Action Objective
µg/l micrograms per liter

Table 4: Remedial Action Objectives for Surface Water

Compound	RAO	Source of RAO
1,1-Dichloroethene	32 µg/l	Nebraska Water Quality Standard*
1,2-Dichloroethene	11,600 µg/l	Nebraska Water Quality Standard*
Benzene	510 µg/l	Nebraska Water Quality Standard*
Cis-1,2-dichloroethene	11,600 µg/l	Nebraska Water Quality Standard*
Ethylbenzene	2,100 µg/l	Nebraska Water Quality Standard*
Tetrachloroethene	33 µg/l	Nebraska Water Quality Standard*
Toluene	15,000 µg/l	Nebraska Water Quality Standard*
Trans-1,2-dichloroethene	11,600 µg/l	Nebraska Water Quality Standard*
Trichloroethene	300 µg/l	Nebraska Water Quality Standard*
Vinyl Chloride	24 µg/l	Nebraska Water Quality Standard*
Xylenes (total)	NA	

RAO Remedial Action Objective
µg/l micrograms per liter

* Nebraska Administrative Code Title 117 Surface Water Quality Standards (Nebraska Administrative Code, 2012)

PUBLIC PARTICIPATION ACTIVITIES

A public comment period was held from February 11, 2013 through March 13, 2013. Comments were received during the public comment period as identified below with EPA responses. Modifications or changes to the proposed remedy were made as a result of public comment as described below.

PUBLIC COMMENTS AND EPA RESPONSE

Fact Sheet Comments

1. Page 2 The Contamination: The presence of LNAPL (or petroleum hydrocarbon compounds) should be noted in this section.

EPA Response: The Fact Sheet was provided as supplemental information to the Statement of Basis. The Fact Sheet is intended to briefly describe the site background and proposed remedy, to identify the location of the Administrative Record, and to inform the public of the comment period. The Statement of Basis identifies the proposed remedy for a corrective action at a facility and explains the reasons for the proposal, describes other remedies that were considered in detail in the RFI and CMS reports, solicits public review and comment on all possible remedies considered in the RFI and CMS reports, and on any other plausible remedies, and provides information on how the public can be involved in the remedy selection process. It is a more in-depth document, and the presence of LNAPL contamination at the site has been identified throughout the Statement of Basis. The Fact Sheet is not revised at the conclusion of the public comment period.

2. Page 2 Proposed Corrective Measures – PCE Tank Area 3rd Bullet: The objective of MNA should be changed to "limiting plume migration and breaking down source contaminants" to match the description on Page 12 of the Statement of Basis.

EPA Response: The phrase provided in the comment was a general description of current MNA activities at the site. It was not intended to be identification of the objective of an MNA remedy. The EPA considers the objective in the section titled "PCE Tank Area" 3rd Bullet to be correct. Therefore, no changes will be made to that section. Also, the Fact Sheet was provided as supplemental information and is not revised at the conclusion of the public comment period.

3. Page 2 Proposed Corrective Measures South Filled Lagoon Area 3rd Bullet: The objective of MNA should be changed to "limiting plume migration and breaking down source contaminants" to match the description on Page 12 of the Statement of Basis.

EPA Response: The phrase provided in the comment was a general description of current MNA activities at the site. It was not intended to be identification of the objective of an MNA remedy at the site. The EPA considers the objective in the section titled "South Filled Lagoon Area" 3rd Bullet to be correct. Therefore, no changes will be made to that section. Also, the Fact Sheet was provided as supplemental information and is not revised at the conclusion of the public comment period.

4. Page 2 Proposed Corrective Measures South Filled Lagoon Area 4th Bullet: The objective of MNA should be changed to "limiting plume migration and breaking down source contaminants" to match the description on Page 12 of the Statement of Basis.

EPA Response: The phrase provided in the comment was a general description of current MNA activities at the site. It was not intended to be identification of the objective of an MNA remedy at the site. The EPA considers the objective in the section titled "South Filled Lagoon Area" 4th Bullet to be correct. Therefore, no changes will be made to that section. Also, the Fact Sheet was provided as supplemental information and is not revised at the conclusion of the public comment period.

5. Page 2 Proposed Corrective Measures Diesel Storage Tank Area 1st Bullet: The description of the LNAPL recovery system should be changed to "the installation of LNAPL recovery equipment, such as belt and/or canister-type skimmers" to match the remedy and allow optimization of selected equipment during the detailed design stage.

EPA Response: The Fact Sheet was provided as supplemental information and is not revised at the conclusion of the public comment period. However, the commenter's point regarding flexibility to allow optimization of selected equipment during the detailed design stage has been considered in this FD/RTC.

Statement of Basis Comments

1. In the summary of the PROPOSED REMEDY PCE Tank Area, p. 3, 4th bullet, the objective of MNA should be changed to "limiting plume migration and breaking down source contaminants" to match the description on Page 12 of the Statement of Basis.

EPA Response: The phrase provided in the comment was a general description of current MNA activities at the site. It was not intended to be identification of the objective of an MNA remedy. The EPA considers the objective in the section titled "PCE Tank Area" 4th Bullet to be correct. Furthermore, changes are not made to the Statement of Basis at the conclusion of the public comment period.

2. In the summary of the PROPOSED REMEDY, South Filled Lagoon Area p.3, 3rd bullet and 4th bullet, the objective of MNA should be changed to "limiting plume migration and breaking down source contaminants" to match the description on Page 12 of the Statement of Basis.

EPA Response: The phrase provided in the comment was a general description of current MNA activities at the site. It was not intended to be identification of the objective of an MNA remedy at the site. The EPA considers the objective in the section titled "South Filled Lagoon Area" 3rd Bullet and 4th Bullet to be correct. Furthermore, changes are not made to the Statement of Basis at the conclusion of the public comment period.

3. In the summary of the PROPOSED REMEDY, p.3, Diesel Storage Tank Area, the description of the LNAPL recovery system should be changed to "the installation of LNAPL recovery equipment, such as belt and/or canister-type skimmers" to match the remedy and allow optimization of selected equipment during the detailed design stage.

EPA Response: The EPA concurs that the site remedy should incorporate flexibility to allow optimization of selected equipment during the detailed design state (corrective measures implementation). Therefore, the description of the LNAPL recovery system in this FD/RTC has been changed as suggested by the commenter.

4. In the summary of the PROPOSED REMEDY, p. 4, 2nd paragraph, last sentence, the reference is made to "continuous groundwater monitoring and reporting." A more accurate description would be "periodic groundwater monitoring and reporting."

EPA Response: The EPA does not concur with the commenter's recommendation. The term "periodic" implies that monitoring will not occur on a routine basis and may be performed sporadically. However, the EPA acknowledges the commenter's concern with the word "continuous" and believes "regular" would have been more accurate. However, changes are not made to the Statement of Basis at the conclusion of the public comment period.

5. In the summary of the PROPOSED REMEDY, p. 4, last paragraph, beginning with the first sentence, the proposed remedy for the LNAPL is described as including quarterly evacuation of LNAPL and groundwater from wells using a vacuum truck. This is not correct. This paragraph, including each of the three bullet points, should be changed to remove all reference to periodic evacuation of LNAPL and groundwater from wells using a vacuum truck. The remedy will involve the deployment and use of passive skimmers only. On Page 5 the Phase 3 bullet again references the canister type skimmers and requires modification as noted in Comment 3 above. The last two sentences of Phase 3 bullet (regarding system upgrade and operation) are out of order and need to be deleted and moved up to the Phase 1 bullet.

EPA Response: Use of passive skimmers only is unacceptable. All LNAPL captured from the recovery system must be removed on a regular basis; it cannot linger in the recovery wells or units. Section 5.2 of the Corrective Measures Study Report states, "The LNAPL plume associated with the

Former Diesel Storage Tank contains large concentrations of PCE." The report also states, "If a portion of the DNAPL is not removed or contained, it could contribute to dissolved phase concentrations for a long period of time." Source control is necessary to minimize further releases to the environment, is one of the EPA's General Measures for Corrective Measures, and is consistent with the Agency's longstanding pollution prevention goals. Therefore, the remedy has been modified to state that LNAPL will be removed on a regular basis (e.g., vacuum truck, manually, etc.) to be determined by recovery rates. This gives BNSF flexibility to determine the required frequency and method of removal. It is noted that the existing passive recovery system adjacent to the Diesel Shop (Pipeline Area) will be upgraded with new wells and passive canister-type skimmers during Phase I. This will be reflected in the forthcoming design documents.

6. In the summary of the REMEDIAL ACTION OBJECTIVES, p. 9, Table 4, the RAO for chloroform is listed as 80 (no units given), with the source listed as MCL. Presumably this is in reference to the MCL for disinfection byproducts of 80 micrograms per liter ($\mu\text{g/L}$). This term is defined as the sum of the concentrations of the following four trihalomethanes (chloroform, bromodichloromethane, bromoform, and dibromochloromethane). The MCLG for chloroform is specifically listed as 70 $\mu\text{g/L}$. Leaving chloroform in the table is acceptable, but the appropriate MCL table contaminant name (Total Trihalomethanes) and units ($\mu\text{g/L}$) should be listed.

EPA Response: The omission of units was a typographical error in the Statement of Basis. The commenter is correct that the 80 $\mu\text{g/L}$ RAO was in reference to the MCL for disinfection byproducts, defined as the sum of the concentrations of the following four trihalomethanes (chloroform, bromodichloromethane, bromoform, and dibromochloromethane). The MCLG for chloroform is listed as 70 $\mu\text{g/L}$. Therefore, the RAO for this compound has been changed to 70 $\mu\text{g/L}$ in Table 2 above.

7. In the summary of the REMEDIAL ACTION OBJECTIVES, p. 9, Table 6, some of the RAOs do not match the values listed in the April 2012 NAC Title 117 SWQS. Specifically:
 - a. Benzene – Table 6 = 713 $\mu\text{g/L}$, 2012 WQS = 5300 $\mu\text{g/L}$ acute, 510 $\mu\text{g/L}$ chronic
 - b. Ethylbenzene – Table 6 = 29,000 $\mu\text{g/L}$, 2012 WQS = 32,000 $\mu\text{g/L}$ acute, 2,100 $\mu\text{g/L}$ chronic
 - c. Tetrachloroethene – Table 6 = 89 $\mu\text{g/L}$, 2012 WQS = 5,280 $\mu\text{g/L}$ acute, 33 $\mu\text{g/L}$ chronic
 - d. Toluene – Table 6 = 17,500 $\mu\text{g/L}$, 2012 WQS = 17,500 $\mu\text{g/L}$ acute, 15,000 $\mu\text{g/L}$ $\mu\text{g/L}$ chronic
 - e. Trichloroethene – Table 6 = 810 $\mu\text{g/L}$, 2012 WQS = 45,000 $\mu\text{g/L}$ acute, 300 $\mu\text{g/L}$ chronic
 - f. Vinyl chloride – Table 6 = 5,250 $\mu\text{g/L}$, 2012 WQS = 24 $\mu\text{g/L}$ chronic

The Table 6 values are generally higher than the most stringent of the 2012 acute and chronic standards.

EPA Response: The RAOs provided in Table 6 of the Statement of Basis were identified in the approved CMS Report drafted by AECOM on behalf of BNSF. Table 2-3 in the CMS Report states the lowest of either the acute or chronic value is used. Since the Nebraska Surface Water Quality Standards have been updated since approval of the CMS Report, the RAOs in Table 4 above have been revised to identify updated SWQ standards to ensure continued protectiveness of surface water.

8. In the EVALUATION OF THE PROPOSED REMEDY, p. 13, last paragraph, first sentence, the reference is made to "Passive (canister-style skimming) recovery". This should be changed to not specify the specific type of passive recovery, or modified as described in Comment 3 above.

EPA Response: The EPA concurs that the site remedy should incorporate flexibility to allow optimization of selected equipment during the detailed design state (corrective measures implementation). Therefore, the description of the LNAPL recovery system in this FD/RTC has been changed as suggested by the commenter.

DECLARATIONS

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



Becky Weber
Director
Air and Waste Management Division

4/11/13

Date

Site Map

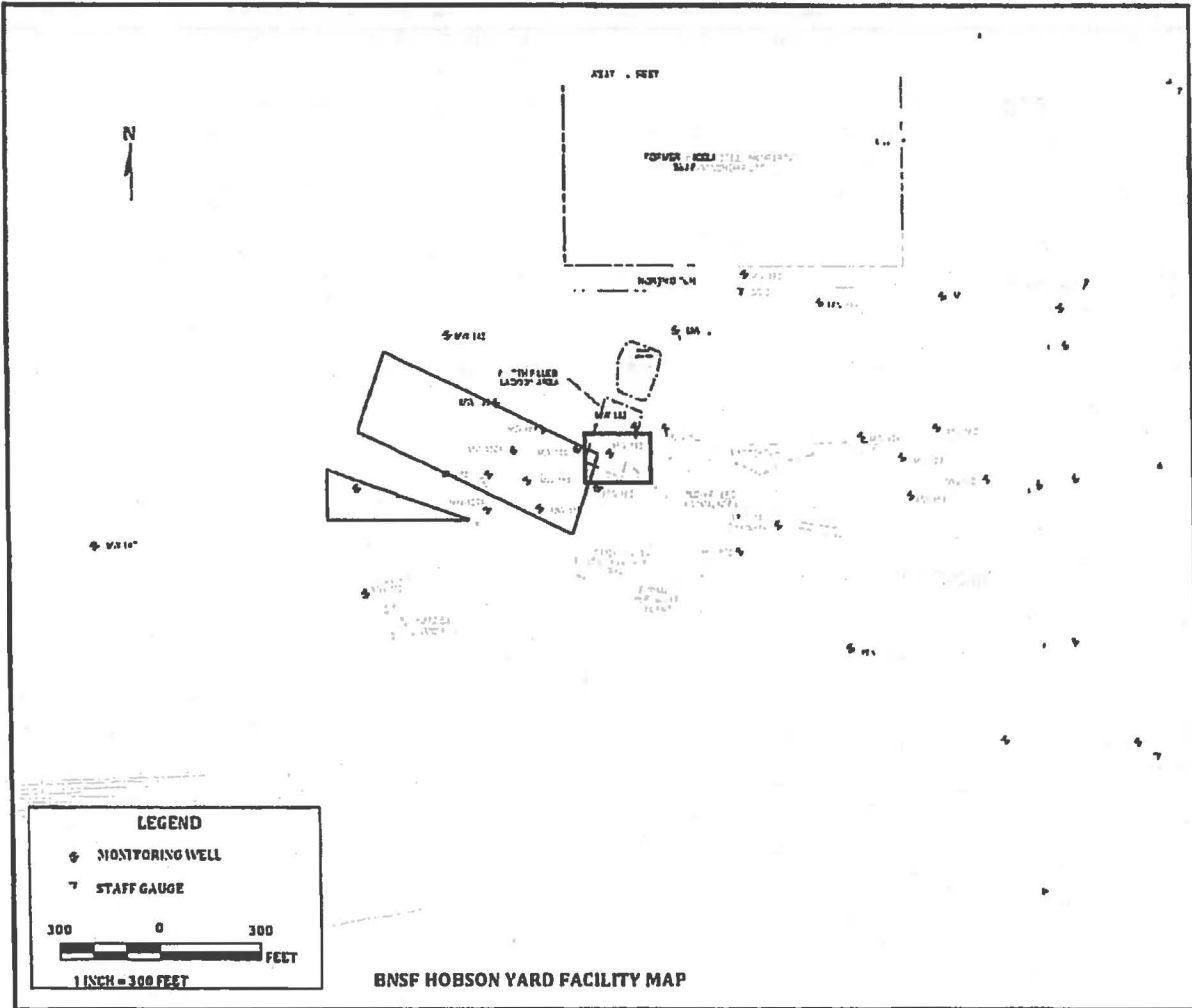


Figure courtesy of AECOM

**RECORDING REQUESTED BY AND
WHEN RECORDED RETURN TO:**

[Grantor]
[Address]

Space Above for Record's Use Only

ENVIRONMENTAL COVENANT

This Environmental Covenant is executed this ____ day of _____, ____, by _____, Grantor and _____, Holder/Grantee, pursuant to the Nebraska Uniform Environmental Covenants Act, Neb. Rev. Stat. §§76-2601 to 76-2613.

RECITALS:

A. Grantor is the owner of real property located at [street address] in _____, _____ County, Nebraska, legally described as follows:

Example: Lots One (1) and Two (2), Block ____, Third Addition to the City of _____, _____ County, Nebraska or Section _____, Township _____, Range, _____, _____ County, Nebraska. [A lengthy legal description may be attached and referenced as an exhibit.]

B. Holder/Grantee is [name each person signing the covenant as a holder/grantee and describe their capacity. See Neb. Rev. Stat. §76-2603 for description of persons and entities who may be holders and the nature of their rights.]

C. The Property has been used for _____ and was the site of release(s) of certain hazardous substances, pollutants or contaminants. [Describe the use of the property that resulted in contamination.]

D. The Property is the subject of an environmental response project or action pursuant to [Identify the federal and/or state program governing environmental remediation of real property as defined in Neb. Rev. Stat. §76-2602(5) including but not limited to the Nebraska Environmental Protection Act, the Nebraska voluntary cleanup program

authorized by the Remedial Action Plan Monitoring Act, the Petroleum Release Remedial Action Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, or other environmental remediation statute.]

E. The Agency, as defined in Neb. Rev. Stat. §76-2602, is [Identify all agencies who have determined or approved the environmental response project or action, including but not limited to the Nebraska Department of Environmental Quality (NDEQ) and the United State Environmental Protection Agency (USEPA).]

F. The selected environmental response project or action is documented in _____ . [For example, a Remedial Action Plan approved on _____, a Record of Decision signed on _____.] The administrative record for this project or action is available to the public and located at _____. [Identify the location of the information, such as the Nebraska Department of Environmental Quality, 1200 N St., Suite 400, Lincoln, NE.]

NOW, THEREFORE,

Grantor hereby declares that the Property will hereinafter be bound by, held, sold and conveyed subject to the following terms, conditions, obligations, and restrictions set forth herein, which will run with the land, in perpetuity, unless amended or terminated pursuant to Paragraph 11 below.

1. Representations and Warranties. The Grantor warrants to the other signatories to this Covenant that:

- a. The Grantor is the sole fee title owner of the Property;
- b. The Grantor holds sufficient fee 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. The Grantor has identified all other persons holding legal or equitable interests, including but not limited to contract buyers, mortgage holders, other consensual lien holders, and lessees and secured their consent. [The Agency may require appropriate documentation of such interests and consent.]

2. Purpose. The purpose of this Environmental Covenant is to ensure protection of human health and the environment by minimizing the potential for exposure to contamination that remains on the Property and to ensure that the Property is not developed, used, or operated in a manner incompatible with the approved remediation.

3. Running with the Land. The Environmental Covenant is perpetual and conveys to the Holder/Grantee real property rights that will run with the land, and gives to the Agency the right to enforce the activity and use limitations described in Paragraph 4. The terms, conditions, obligations, and limitations in this Environmental Covenant are binding on the Grantor, its successors, heirs, executors, assigns and transferees,

and all persons, corporations or other entities obtaining or succeeding to any right, title or interest in the Property after the effective date of this Environmental Covenant. All real estate, lots, or parcels located within the Property are subject to the terms, conditions, obligations and limitations in this Environmental Covenant. Acceptance of any conveyance, transfer, lease or sublease of the Property, or part thereof, will bind each transferee, its heirs, executors, successors, transferees and assigns to the terms, conditions, obligations, and limitations during their respective period of ownership or occupancy, as applicable. Notice of any transfer of any interest in the Property must be promptly provided to the Agency by the transferor. The Grantor is bound by the terms, conditions, obligations and limitations in this Environmental Covenant only during its period of ownership or occupancy after the effective date. This Environmental Covenant in no way amends, modifies, limits or releases the Grantor from its duties and obligations under the approved environmental response project or action.

4. Activity and Use Limitations. The Property is subject to the following activity and use limitations:

[Insert precise description of activity or use limitations and restricted areas with map and survey locations as may be appropriate. A map depicting the areas of residual contamination and engineering controls used to prevent human exposure to the contamination may be attached and referenced as an exhibit. Several limitations may be appropriate as part of a remedial action where cleanup to an unrestricted land use is not feasible. Each limitation must be considered on a site-by-site basis to determine which limitation or combination of limitations is suitable for the particular property, based on applicable standards or remedial action goals and objectives, the nature of the contamination, the affected media and the potential exposures to human health and the environment. The types of limitations may include the following:

- a. Land use limitations (e.g., to limit duration and frequency of human exposure to surficial soils, surface water, or sediments such as industrial or commercial use versus residential use)
- b. Ground water limitations (e.g., to prevent exposure to contaminated ground water by prohibiting extraction or use of ground water, except for investigation or remediation thereof)
- c. Disturbance limitations (e.g., to protect in-place remedial systems to prevent exposures caused by digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities, which may also include limitations as to depth of disturbance and include any repair, renovation or demolition of existing structures on the property without the prior written approval of the Agency)
- d. Construction limitations (e.g., to prevent exposure to volatile emissions to air from soil or ground water)
- e. Resource protection limitations (e.g., to protect certain ecological features associated with the property)
- f. Other appropriate institutional controls required by the approved remedial action.]

5. Reserved Rights of Grantor. The Grantor hereby reserves unto itself and its successors all rights and privileges in and to the use of the Property which are not incompatible with the limitations granted herein.

6. Compliance Reporting. One year from the effective date of this Environmental Covenant, and on an annual basis thereafter until such time as this Environmental Covenant is terminated, the then-current fee simple owner of the Property shall submit to the Agency written documentation verifying that the activity and use limitations remain in place and are being complied with. Any signatory to this Environmental Covenant shall notify the Agency as soon as possible of conditions that would constitute a breach of the activity and use limitations.

7. 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 Neb. Rev. Stat. §76-2611. Failure to exercise such rights of enforcement will in no event bar subsequent enforcement by any signatory and shall not be deemed a waiver of the signatory's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict or limit the Agency from exercising any authority under applicable law. The prevailing party in any action to enforce any provision of this Environmental Covenant is entitled to recover all costs of such action, including reasonable attorney fees. Any Holder/Grantee and the Agency shall be entitled to recover damages for violations of this Environmental Covenant or for any injury to the remedial action required by the Agency, to the public or to the environment protected by this Environmental Covenant.

8. Rights of Access. The Grantor and any then-current owner hereby grants to the Agency, its agents, contractors, and employees, the right of access to the Property to monitor compliance with the terms, conditions, obligations, and limitations of this Environmental Covenant. Nothing in this Environmental Covenant shall limit or otherwise affect the Agency's right of entry and access or the Agency's authority to take response actions under applicable law.

9. Notice Upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property, including but not limited to, deeds, leases and mortgages, shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be in substantially the form set forth below. Within thirty (30) days of the date any such instrument of conveyance is executed, the Grantor or then-owner must provide the Agency with a certified copy of said instrument and its recording reference in the _____ County Register of Deeds.

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT DATED _____, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS OF _____ COUNTY, NEBRASKA ON _____, IN [DOCUMENT _____, BOOK _____,

PAGE ____]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS: **[Insert the language that describes the activity and use limitations exactly as it appears in Paragraph 4 of the Environmental Covenant.]**

10. Waiver of Certain Defenses. The persons and entities bound by this Environmental Covenant hereby waive any defense to the enforcement of this Environmental Covenant based on laches, estoppel, statute of limitations, or prescription.
11. Amendment and Termination. Amendment or termination of this Environmental Covenant shall comply with Neb. Rev. Stat. §76-2610. The terms of this Environmental Covenant may be modified or terminated by written consent of the Director of the Agency, the then current fee simple title owner, and all original signatories unless exempted by Neb. Rev. Stat. §76-2610. The amendment or termination is not effective until the document evidencing consent of all necessary persons is properly recorded. If not by consent, any amendment or termination of this Environmental covenant shall be as provided by Neb. Rev. Stat. §76-2609 and such additional terms as specified in this Environmental Covenant. As provided in Neb. Rev. Stat. §76-2610(c), except for an assignment undertaken pursuant to a governmental reorganization, assignment of an environmental covenant to a new holder is an amendment.
12. 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.
13. Captions. The captions in this Environmental Covenant are for convenience and reference only and are not a part of this instrument and shall have no effect upon construction or interpretation.
14. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Nebraska.
15. Recordation. Within thirty (30) days after the date of the Agency's approval of this Environmental Covenant, the Grantor shall record the Environmental Covenant, in the same manner as a deed to the property, with the ____ County Register of Deeds.
16. Effective Date. The effective date of this Environmental Covenant is the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the ____ County Register of Deeds.
17. Distribution of Environmental Covenant. Within 60 days of the effective date, the Grantor shall distribute a file- and date-stamped copy of the recorded

Environmental Covenant to [each person identified in Neb. Rev. Stat. §76-2607(a) and §76-2608(c).]

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

Remediation Section
Waste Management Division
Nebraska Department of Environmental Quality
P.O. Box 98922
Lincoln, NE 68509-8922

[List any other parties requiring notice under this Environmental Covenant.]

ACKNOWLEDGEMENTS

GRANTOR:

IN WITNESS WHEREOF, Grantor, as the owner of the Property [and the Holder] of this Environmental Covenant, has caused this Environmental Covenant to be executed on this ____ day of _____, 20__.

By: _____
[Name of Grantor]

[Title]

STATE OF NEBRASKA)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ of _____, 20__ by _____ who acknowledged said Environmental Covenant on behalf of Grantor.

Notary Public

(SEAL)

HOLDER/GRANTEE: [If different from the Grantor]

IN WITNESS WHEREOF, Holder/Grantee of this Environmental Covenant, has caused this Environmental Covenant to be executed on this ____ day of _____, 20__.

By: _____
[Name of Holder/Grantee]

[Title]

STATE OF NEBRASKA)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ of _____, 20__ by _____ who acknowledged said Environmental Covenant on behalf of Holder/Grantee.

Notary Public

(SEAL)

AGENCY:

IN WITNESS WHEREOF, NDEQ, as an Agency defined in Neb. Rev. Stat. § 76-2602(2), is not a party to this Environmental Covenant and does not acquire or assume any liability, obligation, or responsibility under state or federal law by virtue of signing this Environmental Covenant, nor is NDEQ a Holder under Neb. Rev. Stat. §§ 76-2602(6) and 76-2603(a).

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

By: _____

Director

STATE OF NEBRASKA)

