UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 7

IN THE MATTER OF: WEST LAKE LANDFILL SUPERFUND SITE, BRIDGETON, ST. LOUIS CO., MISSOURI (MOD079900932) BRIDGETON LANDFILL, LLC, Respondent Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622	CERCLA Docket No. 07-2016-0005 **ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTIONS**

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTIONS

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement") is entered into by the United States Environmental Protection Agency ("EPA") and Bridgeton Landfill, LLC ("Respondent"). This Settlement provides for the performance of a removal action by Respondent and the payment of certain response costs incurred by the United States at or in connection with the "West Lake Landfill Site" (the "Site") generally located at 13570 St. Charles Rock Road in Bridgeton, St. Louis County, Missouri. This Settlement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622 (CERCLA). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2923 (Jan. 29, 1987), and further delegated to Regional Administrators by EPA Delegation Nos. 14-14-A (Determinations of Imminent and Substantial Endangerment, Nov. 1, 2001), 14-14-C (Administrative Actions Through Consent Orders, Apr. 15, 1994) and 14-14-D (Cost Recovery Non-Judicial Agreements and Administrative Consent Orders, May 11, 1994). This authority was further redelegated by the Regional Administrator of EPA Region 7 to the Director of EPA Region 7's Superfund Division by Regional Delegation Nos. R7-14-014-A, R7-14-014-C and R7-14-014-D.

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

3. EPA and Respondent recognize that this Settlement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement, the validity of the EPA's findings of facts, conclusions of law, and determinations in Sections IV (Findings of Fact) and V (Conclusions of Law and Determinations) of this Settlement. Respondent agrees to comply with and be bound by the terms of this Settlement and further agrees that it will not contest EPA's authority or jurisdiction to issue or enforce this Settlement or its terms.

II. PARTIES BOUND

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

5. Respondent is jointly and severally liable for carrying out all activities required by this Settlement.

6. Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement and to execute and legally bind Respondent to this Settlement.

7. Respondent shall (1) provide a copy of this Settlement to each contractor retained to conduct or monitor any portion of the Work performed pursuant to this Settlement Agreement within seven (7) days of the Effective Date of this Settlement Agreement or on their date of retention, whichever is later; (2) require that contractors provide a copy of this Settlement Agreement to their subcontractors, laboratories, consultants, and supervisory personnel; and (3) condition all such contracts on compliance with the terms of this Settlement Agreement. Notwithstanding the terms of any contract, Respondent is responsible for complying with this Settlement Agreement and for ensuring that its contractors, subcontractors, and representatives comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

III. DEFINITIONS

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

"Action Memorandum" shall mean the EPA Action Memorandum relating to the Site signed by the Regional Administrator, EPA Region 7, or his/her delegate, and all attachments thereto. The "Action Memorandum" is attached as Appendix A.

"Affected Property" shall mean all real property at the Site and any other real property where EPA determines, at any time, that access or land, water, or other resource use restrictions are needed to implement the removal action.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675.

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

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

"EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

"EPA Hazardous Substance Superfund" shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

"MDNR" shall mean the Missouri Department of Natural Resources and any successor departments or agencies of the State.

"Future Response Costs" shall mean all costs not inconsistent with the NCP, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing deliverables submitted pursuant to this Settlement, in overseeing implementation of the Work under this Settlement, or otherwise implementing, overseeing, or enforcing this Settlement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Section IX (Property Requirements) (including, but not limited to, cost of attorney time and any monies paid to secure or enforce access or land, water, or other resource use restrictions, including, but not limited to, the amount of just compensation), Section XIII (Emergency Response and Notification of Releases), Paragraph 88 (Work Takeover), Paragraph 109 (Access to Financial Assurance), community involvement including, but not limited to, the costs of any technical assistance grant under Section 117(e) of CERCLA, 42 U.S.C. § 9617(e), Section XV (Dispute Resolution), and all litigation costs.

"Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at http://www2.epa.gov/superfund/superfund-interest-rates.

"Isolation Barrier System" shall mean a system of engineering controls developed to prevent a SSR from impacting the RIM in Operable Unit 1 Area 1.

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

"Non-Settling Owner" shall mean any person, other than a Respondent, that owns or controls any Affected Property.. The clause "Non-Settling Owner's Affected Property" means Affected Property owned or controlled by Non-Settling Owner.

"Owner Respondent" shall mean any Respondent that owns or controls any Affected Property. The clause "Owner Respondent's Affected Property" means Affected Property owned or controlled by Owner Respondent.

"Paragraph" shall mean a portion of this Settlement identified by an Arabic numeral or an upper or lower case letter.

"Parties" shall mean EPA and Respondent.

"Post-Removal Site Control" shall mean actions necessary to ensure the effectiveness and integrity of the removal action to be performed pursuant to this Settlement

consistent with Sections 300.415(*l*) and 300.5 of the NCP and "Policy on Management of Post-Removal Site Control" (OSWER Directive No. 9360.2-02, Dec. 3, 1990).

"RCRA" shall mean the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992 (also known as the Resource Conservation and Recovery Act).

"Respondent" shall mean Bridgeton Landfill, LLC.

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

"Settlement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXIX (Integration/Appendices)). In the event of conflict between this Settlement and any appendix, this Settlement shall control.

"Site" shall mean the West Lake Landfill Superfund Site, encompassing approximately 200 acres, located at 13570 St. Charles Rock Road, St. Louis County, Missouri and depicted generally on the map attached as Appendix B. The Site includes both Operable Unit-1 (OU-1) and Operable Unit-2 (OU-2).

"SSR" shall mean a subsurface, exothermic, self-sustaining chemical reaction. An example is the SSR that has been occurring in the South Quarry of the Bridgeton Landfill since December 2010.

"West Lake Superfund Site Special Account" shall mean the special account within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3).

"State" shall mean the State of Missouri.

"Transfer" shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

"United States" shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

"Waste Material" shall mean (a) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (c) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

"Work" shall mean all activities and obligations Respondent is required to perform under this Settlement except those required by Section XI (Record Retention).

IV. EPA's FINDINGS OF FACT

9. Respondent Bridgeton Landfill, LLC, a Delaware limited liability corporation authorized to transact business in Missouri, is the current operator of the Site and the current owner of Operable Unit 2 (OU-2).

10. West Lake Landfill is an approximately 200 acre property that includes several closed and inactive solid waste landfill units which accepted wastes for on-site landfilling from the 1940s or 1950s through 2004, plus a solid waste transfer station, and an asphalt batch plant. The Site is located at 13570 St. Charles Rock Road in Bridgeton, St. Louis County, Missouri, approximately one mile north of the intersection from Interstate 70 and Interstate 270.

11. The Site was used for limestone quarrying and crushing operations from 1939 through 1988. Beginning in the late 1940s or early 1950s, portions of the quarried areas and adjacent areas were used for landfilling municipal refuse, industrial solid wastes, and construction/demolition debris. In 1973, approximately 8,700 tons of leached barium sulfate residues (a remnant from the Manhattan Engineer District/Atomic Energy Commission project) were reportedly mixed with approximately 39,000 tons of soil from the 9200 Latty Avenue site in Hazelwood, Missouri, and transported to the West Lake Landfill. Investigations have determined that these radiologically-impacted materials (RIM) were disposed in portions of two separate disposal areas at the Site that have subsequently been identified as Radiological Area 1 and Radiological Area 2, or simply Area 1 and Area 2.

12. Based on investigations conducted to date, the RIM is in Area 1 and Area 2. In some portions of Areas 1 and 2, RIM is present at the surface.

13. OU-1 of the Site is comprised of the two disposal areas (Area 1 and Area 2), plus an adjacent area (the Buffer Zone/Crossroad Property) where erosion from Area 2 deposited RIM. OU-2 consists of the remainder of the Site and includes several inactive landfilled areas containing sanitary waste or demolition debris which ceased operation prior to state regulation, a permitted sanitary landfill (the Bridgeton Sanitary Landfill) a solid waste transfer station, and an asphalt batch plant.

14. Landfill activities conducted after 1979 within the quarry areas (part of what is now included in OU-2) were subject to permits obtained from the Missouri Department of Natural Resources (MDNR). In 1979 landfilling began in the portion of the Site described as the North Quarry Pit. Landfilling continued in this area until 1985, when the landfill underwent expansion to the southwest into the area described as the South Quarry Pit. Together, the North and South Quarry pit landfills make up the MDNR-permitted Bridgeton Sanitary Landfill.

15. Characterization of the nature, rate, and extent of contamination at the Site began in 1976. On August 30, 1990, EPA placed the Site on the National Priorities List (NPL). The NPL is EPA's list, compiled pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, of uncontrolled hazardous substances releases in the United States that are priorities for long-term remedial evaluation and response.

16. On March 3, 1993, EPA and Cotter Corporation (N.S.L.), Laidlaw Waste Systems (Bridgeton), Inc., Rock Road Industries, Inc., and the United States Department of Energy entered into an Administrative Order on Consent (EPA Docket No. VII-93-F-0005) for the performance of a remedial investigation/feasibility study for OU-1, Areas 1 and 2 at the Site.

17. On December 19, 1994, EPA and Laidlaw Waste Systems (Bridgeton), Inc., entered into an Administrative Order on Consent (EPA Docket No. VII-94-F-0025) for the performance of a remedial investigation/feasibility study for OU-2 at the Site.

18. In December 2004, the Bridgeton Sanitary Landfill stopped receiving waste pursuant to an agreement with the City of St. Louis to reduce the potential for birds to interfere with Lambert Field International Airport operations. The Bridgeton Sanitary Landfill is currently inactive and its South Quarry is impacted by an ongoing SSR. Future closure activities are planned to proceed under MDNR supervision. The majority of the West Lake Superfund Site remains subject to a restrictive covenant held by the City of St. Louis.

19. On May 29, 2008, EPA issued a Record of Decision (ROD) for OU-1 selecting a remedial action for the radiologically contaminated landfill areas and the area formerly described as the Ford Property, now called the Buffer Zone/Crossroad property.

20. On July 29, 2008, EPA issued a ROD for OU-2 selecting a remedial action for the inactive sanitary landfill portion of the Site. Through this ROD, EPA deferred action to MDNR on the remaining parts of OU-2, the Bridgeton Sanitary Landfill and the closed demolition landfill, which had operated under State permits.

21. In December 2010, Bridgeton Landfill detected changes in the landfill gas extraction system in use at the South Quarry of the Bridgeton Sanitary Landfill portion of the Site; specifically, elevated temperatures and elevated carbon monoxide levels. Further investigation indicated that the South Quarry Pit landfill was experiencing an exothermic subsurface reaction (SSR).

22. On May 13, 2013, the Circuit Court of St. Louis County, State of Missouri entered a First Agreed Order of Preliminary Injunction between Bridgeton Landfill, LLC, and the State of Missouri (Agreed Order). The Agreed Order requires Bridgeton Landfill to, among other things, take actions to control the emissions and odors emanating from the Bridgeton Sanitary Landfill as a result of the SSR. On June 17, 2014, the First Amendment to the First Agreed Order of Preliminary Injunction was entered. On June 19, 2014, the Second Amendment to the First Agreed Order of Preliminary Injunction was entered.

23. Investigations performed by Respondent in 2013 and 2015 have identified additional areas of RIM in the south and western portion of OU-1, Area 1 outside of the previously identified Area 1 boundary.

24. On April 16, 2014, EPA, Bridgeton Landfill, LLC, and Rock Road Industries, Inc. entered into an Administrative Settlement Agreement and Order on Consent for Removal Action

(EPA Docket No. CERCLA-07-2014-002) to conduct certain activities necessary or deemed appropriate by EPA to advance, support, and prepare for the design, construction, and maintenance of an isolation barrier system intended to prevent the SSR from impacting the RIM.

25. EPA has reviewed the temperature, gas and subsidence data collected by Bridgeton Landfill in OU-2. In January 2014, at EPA's request, the West Lake OU-1 Respondents submitted an evaluation of the possible impacts of a SSR coming into contact with RIM. EPA's Office of Research and Development Engineering and Technical Support Center (ETSC) prepared a March 2014 Memorandum summarizing Observations of this submittal. While not a comprehensive review, ETSC's Observations included the finding that while an SSR would not cause the RIM materials to become explosive or cause non-RIM materials to ignite, there was a concern that the heat associated with a SSR could potentially induce surface cracks and fissures in the landfill cover that could allow fine particulates to escape and/or allow for increased emission of radon gas from the landfill.

26. Pursuant to an August 26, 2014 directive by EPA, on October 10, 2014, Bridgeto Landfill, LLC, prepared an Isolation Barrier Alternatives Analysis (IBAA) that evaluated the advantages and disadvantages of various barrier alignments identified by the Army Corps of Engineers in its August 25, 2014 Isolation Barrier Alternatives Assessment Report. The IBAA evaluated the initially identified alternatives with respect to the amount of waste to be excavated, design and construction schedule, bird and odor control issues, other potential risks, as well as the potential advantages of each alternative.

27. Pursuant to the Agreed Order with the State of Missouri, Bridgeton Landfill, LLC, has agreed to perform several actions designed to monitor and address the SSR.

28. This time-critical removal action is necessary to mitigate any potential future threat to public health or welfare or the environment posed by the potential migration of the SSR from the Bridgeton Landfill to OU-1 which could potentially cause hazardous substances to be mobilized. It is EPA's conclusion that if this removal action is not performed, at some point in the future the SSR in the South Quarry area of the Bridgeton Landfill could migrate through the South Quarry area and into the North Quarry area of the Landfill and thence into OU-1, Area 1, or an independent SSR could develop in the North Quarry area of the landfill and migrate into OU-1, Area 1. EPA has concluded that subjecting certain RIM-containing wastes in Area 1 to the conditions of a SSR has a potential to cause particulates to migrate and to increase the landfill's exhalation of radon gas. This presents a threat of release of hazardous substances into the environment that could present exposures to nearby human populations, primarily on-Site workers.

V. EPA's CONCLUSIONS OF LAW AND DETERMINATIONS

29. Based on the Findings of Fact set forth above, and the administrative record supporting this removal action, EPA has determined that:

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

b. The contamination found at the Site, as identified in EPA's Findings of Fact above, includes "hazardous substance(s)" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

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

d. Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). Respondent is the "owner(s)" and/or "operator(s)" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

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

f. The conditions described in the EPA's Findings of Fact above may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

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

VI. SETTLEMENT AGREEMENT AND ORDER

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

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

31. Respondent shall retain one or more contractors or subcontractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) or subcontractor(s) within 21 days after the Effective Date. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 7 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent, and shall provide the reason(s) for any such disapproval. If EPA disapproves of a selected contractor or subcontractor, Respondent shall retain a different contractor or subcontractor and shall notify EPA of that contractor's or subcontractor's name and qualifications within 14 days after EPA's disapproval. If Respondent disagrees with EPA's reason(s) for any such disapproval, Respondent may initiate Dispute Resolution pursuant to Section XVI. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor demonstrates compliance

with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondent shall be subject to EPA's review for verification that such persons meet minimum technical background and experience requirements.

32. Within 7 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, email address, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, email address, and qualifications within 14 days following EPA's disapproval. Notice or communication relating to this Settlement from EPA to Respondent's Project Coordinator shall constitute notice or communication to all Respondent. Respondent has designated, and EPA has not disapproved, the following individual as Project Coordinator, who shall be responsible for administration of all response actions by Respondent required by this Settlement Agreement:

Paul Rosasco
Engineering Management Support Inc.
7220 West Jefferson Avenue, Suite 406
Lakewood, CO 80235
303-940-3426
paulrosasco@emsidenver.com

33. EPA has designated Tom Mahler of the EPA Region 7 Superfund Division, as its On-Scene Coordinator (OSC). EPA and Respondent shall have the right, subject to Paragraph 32, to change their respective designated OSC or Project Coordinator. Respondent shall notify EPA 7 days before such a change is made or, if such change is not at the request of Respondent (i.e. is a personnel change initiated by the OSC or Project Coordinator), within 5 days of Respondent's learning of the need for a change in Project Coordinators. The initial notification by Respondent may be made orally, but shall be promptly followed by a written notice.

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

VIII. WORK TO BE PERFORMED

35. Respondent shall perform all actions necessary to implement the following items. The requirements of this Settlement do not resolve any past or future CAA violations or any other violations of state law.

a. Within 30 days of the Effective Date, Respondent shall submit to EPA and MDNR for review and approval a Work Plan with schedule for use of **Inert Gas Injection** as a "hot-spot" treatment option to isolate, contain, suppress, inhibit and/or extinguish any independent surface/subsurface smoldering event/fire that may occur in the "Neck" area or in the North Quarry of the Bridgeton Landfill. The Work Plan shall include the steps and associated timeframes necessary to implement the inert gas injection work, including triggers of greater than 185°F or 1500 ppm of carbon monoxide in a gas extraction well or greater than 200° F in a temperature monitoring probe. The Work Plan shall also specify that Respondent shall have the necessary materials available on-Site or under agreement such that once the Work Plan has been approved by EPA, it can be implemented within seven days.

b. Within 60 days of the Effective Date, Respondent shall submit to EPA and MDNR for review and approval a Work Plan for the placement of an **EVOH Cover** over the North Quarry. The Work Plan shall include the steps and associated timeframes necessary to install the EVOH Cover. Consistent with an EPA approved Work Plan, installation of the EVOH Cover shall proceed to be placed over the North Quarry, starting from the location of the existing EVOH Cover moving north such that the EVOH is continuous up to and covering the line of existing TMPs including TMP-16, 17, 18, 21, 22, 23, 25, 27, 28 and 29. The Work Plan shall also describe measures for operation and maintenance of the EVOH Cover.

c. Within 30 days of the Effective Date, Respondent shall initiate installation of a **Neck Heat Extraction System** in the neck area of the Bridgeton Landfill as described in the Technical Evaluation of a Heat Extraction Barrier prepared by Feezor Engineering and dated November 2015 and in accordance with the conditions specified in the Missouri Department of Natural Resources' December 4, 2015 approval letter, provided, however, that Respondent will not be required to perform the additional modeling directed by Condition 1, but rather move forward with installation. Installation of the system shall be completed within four months of the start date. The November 2015 Technical Evaluation of a Heat Extraction Barrier prepared by Feezor Engineering and the Missouri Department of Natural Resources' December 4, 2015 approval letter constitute a Work Plan for purposes of this Settlement.

d. Within 30 days of the Effective Date, Respondent will submit a work plan to EPA and MDNR for approval for the installation and operation of two **SO2 Ambient Air Monitors** for 1-hour SO2 measurements for a monitoring period of one year. The monitors shall be operational within 30 days of EPA's approval of the work plan. The location and type of monitor will be determined in consultation with and approval from EPA.

e. Within 30 days of the Effective Date, Respondent shall submit to EPA for review and approval a Work Plan with schedule for the design, installation and operation of additional **North Quarry Subsurface Temperature Monitoring Probes (TMPs)**, as follows:

(1) A system of TMPs capable of monitoring landfill temperatures that could be a precursor to or indicative of a SSR in the North Quarry that could come into contact with RIM in OU-1.

(2) Description of TMP operation, maintenance, performance metrics, and replacement procedures, including frequency.

(3) Triggers to be used to indicate a need for installation of additional TMPs elsewhere in OU-1 Area 1 and/or the Bridgeton Landfill North Quarry to monitor for a SSR; including greater than 185° F or 1500 ppm of carbon monoxide in a gas extraction well or greater than 200° F in a temperature monitoring probe.

(4) Provisions for ongoing regular reporting of temperature data, along with providing raw data, to EPA and MDNR.

36. For any regulation or guidance referenced in the Settlement, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondent receive notification from EPA of the modification, amendment, or replacement.

37. Work Plan and Implementation.

a. Within the timeframes specified in Paragraph 35, in accordance with Paragraph 38 (Submission of Deliverables), Respondent shall submit to EPA for approval the draft work plans and other deliverables for performing the removal actions (the "Removal Work Plans") generally described in Paragraph 35 above. The draft Removal Work Plans shall provide a description of, and an expeditious schedule for, the actions required by this Settlement.

b. EPA may approve, disapprove, require revisions to, or modify the draft Removal Work Plans in whole or in part. If EPA requires revisions, it shall describe the required revisions in writing. Respondent shall submit revised draft Removal Work Plans within 14 days after receipt of EPA's notification of the required revisions. Respondent shall implement the Removal Work Plans as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Removal Work Plans, the

schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement.

c. Upon approval or approval with modifications of the Removal Work Plans Respondent shall commence implementation of the Work in accordance with the schedule included therein. Respondent shall not commence or perform any Work except in conformance with the terms of this Settlement.

d. Unless otherwise provided in this Settlement, any additional deliverables that require EPA approval under the Removal Work Plans shall be reviewed and approved by EPA in accordance with this Paragraph.

38. Submission of Deliverables.

a. General Requirements for Deliverables.

(1) Except as otherwise provided in this Settlement, Respondent shall direct all submissions required by this Settlement to Tom Mahler at U.S. EPA Region 7, Superfund Division, 11201 Renner Boulevard, Lenexa, Kansas, 66219, mahler.tom@epa.gov 913-551-7416. Respondent shall submit all deliverables required by this Settlement or any approved work plan to EPA in accordance with the schedule set forth in such plan.

(2) Respondent shall submit all deliverables in electronic form, unless EPA requests copies of a specific plan, report or other submission in hard copy format. Technical specifications for sampling and monitoring data and spatial data are addressed in Paragraph 38.b. All other deliverables shall be submitted to EPA in the form specified by the OSC.

b. Technical Specifications for Deliverables.

(1) Sampling and monitoring data should be submitted in standard Regional Electronic Data Deliverable (EDD) format. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.

(2) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (a) in the ESRI File Geodatabase format; and (b) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at https://edg.epa.gov/EME/.

(3) Each file must include an attribute name for each site unit or sub-unit submitted. Consult http://www.epa.gov/geospatial/policies.html for any further available guidance on attribute identification and naming.

(4) Spatial data submitted by Respondent does not, and is not intended to, define the boundaries of the Site.

39. Health and Safety Plan. Within 21 days after the Effective Date, Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-site work under this Settlement. This plan shall be prepared in accordance with "OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities," Pub. 9285.0-OlC (Nov. 2002), available on the NSCEP database at http://www.epa.gov/nscep/index.html, and "EPA's Emergency Responder Health and Safety Manual," OSWER Directive 9285.3-12 (July 2005 and updates), available at http://www.epaosc.org/_HealthSafetyManual/manual-index.htm. In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended in writing by EPA and shall implement the plan during the pendency of the removal action.

40. Quality Assurance, Sampling, and Data Analysis.

a. Respondent shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all samples consistent with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" EPA/240/B-01/003 (March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)" EPA/240/R-02/009 (December 2002), and "Uniform Federal Policy for Quality Assurance Project Plans," Parts 1-3, EPA/505/B-04/900A-900C (March 2005).

b. Sampling and Analysis Plan. For any sampling activity required by the Removal Work Plans, Respondent shall submit a Sampling and Analysis Plan to EPA for review and approval. This plan shall consist of a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) that is consistent with the Removal Work Plans, the NCP and applicable guidance documents, including, but not limited to, "Guidance for Quality Assurance Project Plans (QA/G-5)" EPA/240/R-02/009 (December 2002), "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" EPA 240/B-01/003 (March 2001, reissued May 2006), and "Uniform Federal Policy for Quality Assurance Project Plans," Parts 1-3, EPA/505/B-04/900A-900C (March 2005). Upon its approval by EPA, the Sampling and Analysis Plan shall be incorporated into and become enforceable under this Settlement.

c. Respondent shall ensure that EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent in implementing this Settlement. In addition, Respondent shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP and that sampling and field activities are conducted in accordance with EPA's "Field Operations Group Operational Guidelines for Field Activities" (http://www.epa.gov/region8/qa/FieldOperationsGroupOperationalGuidelinesForFieldActivities.pdf) and "EPA QA Field Activities Procedure" (http://www.epa.gov/irmpoli8/policies/2105-p-

02.pdf). Respondent shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Settlement meet the competency requirements set forth in EPA's "Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions" (http://www.epa.gov/fem/pdfs/fem-lab-competency-policy.pdf) and that the laboratories perform all analyses according to accepted EPA methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA's Contract Laboratory Program (http://www.epa.gov/superfund/programs/clp/), SW 846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm), "Standard Methods for the Examination of Water and Wastewater" (http://www.standardmethods.org/), 40 C.F.R. Part 136, "Air Toxics - Monitoring Methods" (http://www.epa.gov/ttnamti1/airtox.html)."

d. However, upon approval by EPA, Respondent may use other appropriate analytical method(s), as long as (i) quality assurance/quality control (QA/QC) criteria are contained in the method(s) and the method(s) are included in the QAPP, (ii) the analytical method(s) are at least as stringent as the methods listed above, and (iii) the method(s) have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods, e.g., EPA, ASTM, NIOSH, OSHA, etc. Respondent shall ensure that all laboratories they use for analysis of samples taken pursuant to this Settlement have a documented Quality System that complies with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs - Requirements with guidance for use" (American Society for Quality, February 2014), and "EPA Requirements for Quality Management Plans (QA/R-2)" EPA/240/B-01/002 (March 2001, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network (ERLN) laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs (http://www.epa.gov/fem/accredit.htm) as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Settlement are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

e. Upon request, Respondent shall provide split or duplicate samples to EPA or its authorized representatives. Respondent shall notify EPA not less than 7 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall provide to Respondent split or duplicate samples of any samples it takes as part of EPA's oversight of Respondent's implementation of the Work.

f. Respondent shall submit to EPA the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the Site and/or the implementation of this Settlement.

g. Respondent waives any objections to any data gathered, generated, or evaluated by EPA or Respondent in the performance or oversight of the Work that has been

verified according to the QA/QC procedures required by the Settlement or any EPA-approved Work Plans or Sampling and Analysis Plans. If Respondent objects to any other data relating to the Work, Respondent shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within 15 days after the monthly progress report containing the data.

41. Post-Removal Site Control. In accordance with the Removal Work Plans schedule, or as otherwise directed by EPA, Respondent shall submit a proposal for Post-Removal Site Control consistent with Section 300.415(l) and 300.5 of the NCP and EPA's *Policy on Management of Post-Removal Site Control*, OSWER Directive No. 9360.2-02. Upon EPA approval, Respondent shall implement such controls as are consistent with the heat extraction barrier installation and other North Quarry enhancements required by this Settlement. Respondent shall provide EPA with documentation of all Post-Removal Site Control commitments.

42. Progress Reports. Beginning 60 days after the Effective Date and every month thereafter by the 10th of the month, Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Settlement until issuance of Notice of Completion of Work pursuant to Section XXVIII, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

43. Final Report. Within 30 days after completion of all Work required by this Settlement, other than continuing obligations listed in Paragraph 119 (notice of completion), Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Settlement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests and permits). The final report shall also include the following certification signed by a responsible corporate official of Respondent or Respondent's Project Coordinator: "Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I have no personal knowledge that the information submitted is other than 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."

44. Off-Site Shipments.

a. Respondent may ship hazardous substances, pollutants and contaminants from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent will be deemed to be in compliance with CERCLA Section 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondent obtains a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, Respondent provides written notice to the appropriate state environmental official in the receiving facility's state and to the OSC. This written notice requirement shall not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondent also shall notify the state environmental official referenced above and the OSC of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the written notice after the award of the contract for the removal action and before the Waste Material is shipped.

c. Respondent may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only in compliance with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, EPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992), and any IDW-specific requirements contained in the Action Memorandum. Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the requirements for an exemption from RCRA under 40 C.F.R. § 261.4(e) shipped off-Site for treatability studies, are not subject to 40 C.F.R. § 300.440.

IX. PROPERTY REQUIREMENTS

45. Agreements Regarding Access and Non-Interference. Respondent shall, with respect to any Non-Settling Owner's Affected Property, use best efforts to secure from such Non-Settling Owner an agreement, enforceable by Respondent and the EPA, providing that such Non-Settling Owner, and Owner Respondent shall, with respect to Owner Settling Respondent's Affected Property: (i) provide the EPA, Respondent, and their representatives, contractors, and subcontractors with access at all reasonable times to such Affected Property to conduct any activity regarding the Settlement, including those activities listed in Paragraph 45.a (Access Requirements); and (ii) refrain from using such Affected Property in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material, or interfere with or adversely affect the implementation, integrity, or protectiveness of the removal action, including the restrictions listed in Paragraph 45.b (Land, Water, or Other Resource Use Restrictions).

a. Access Requirements. The following is a list of activities for which access is required regarding the Affected Property:

(1) Monitoring the Work;

(2) Verifying any data or information submitted to the United States;

(3) Conducting investigations regarding contamination at or near the Site;

(4) Obtaining samples;

(5) Assessing the need for, planning, implementing, or monitoring response actions;

(6) Assessing implementation of quality assurance and quality control practices as defined in the approved quality assurance quality control plan as defined in the approved QAPP;

(7) Implementing the Work pursuant to the conditions set forth in Paragraph 88 (Work Takeover);

(8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or its agents, consistent with Section X (Access to Information);

(9) Assessing Respondent's compliance with the Settlement;

(10) Determining whether the Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Settlement; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions applicable to the Affected Property.

b. Land, Water, or Other Resource Use Restrictions. The following is a list of land, water, or other resource use restrictions applicable to the Affected Property:

(1) Prohibiting activities which could interfere with the removal action.

46. Best Efforts. As used in this Section, "best efforts" means the efforts that a reasonable person in the position of Respondent would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements, as required by this Section. If Respondent is unable to accomplish what is required through "best efforts" in a timely manner, Respodent shall notify EPA, and include a description of the steps taken to comply with the requirements. If EPA deems it appropriate, it may assist Respondent, or take independent action, in obtaining such access and/or use restrictions. All costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the

amount of monetary consideration or just compensation paid, constitute Future Response Costs to be reimbursed under Section XIV (Payment of Response Costs).

47. Respondent shall not Transfer its Affected Property unless it has first secured EPA's approval of, and transferee's consent to, an agreement that: (i) is enforceable by Respondent and EPA; and (ii) requires the transferee to provide access to and refrain from using the Affected Property to the same extent as is provided under Paragraphs 45.a (Access Requirements) and 45.b (Land, Water, or Other Resource Use Restrictions).

48. If EPA determines in a decision document prepared in accordance with the NCP that institutional controls in the form of state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices are needed, in addition to the institutional controls already recorded on the Site, Respondent shall cooperate with EPA's efforts to secure and ensure compliance with such institutional controls.

49. In the event of any Transfer of the Affected Property, unless EPA otherwise consents in writing, Respondent shall continue to comply with their obligations under the Settlement, including its obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Affected Property.

50. Notice to Successors-in-Title

a. Owner Respondent shall, within 15 days after the Effective Date, submit for EPA approval a notice to be filed regarding Owner Respondent's Affected Property in the appropriate land records. The notice must: (1) include a proper legal description of the Affected Property; (2) provide notice to all successors-in-title that: (i) the Affected Property is part of, or related to, the Site; (ii) EPA has selected a removal action for the Site; and (iii) potentially responsible parties have entered into an Administrative Settlement Agreement and Order on Consent requiring implementation of that removal action; and (3) identify the name, docket number, and effective date of this Settlement. Owner Respondent shall record the notice within 10 days after EPA's approval of the notice and submit to EPA, within 10 days thereafter, a certified copy of the recorded notice.

b. Owner Respondent shall, prior to entering into a contract to Transfer its Affected Property, or 60 days prior to Transferring its Affected Property, whichever is earlier:

(1) Notify the proposed transferee that EPA has selected a removal action regarding the Site, that potentially responsible parties have entered into an Administrative Settlement Agreement and Order on Consent requiring implementation of such removal action, (identifying the name, docket number, and the effective date of this Settlement); and

(2) Notify EPA of the name and address of the proposed transferee and provide EPA with a copy of the above notice that it provided to the proposed transferee.

51. Notwithstanding any provision of the Settlement, EPA retains all of its access authorities and rights, as well as all of its rights to require land, water, or other resource use

restrictions, including enforcement authorities related thereto under CERCLA, RCRA, and any other applicable statute or regulations.

X. ACCESS TO INFORMATION

52. Respondent shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within Respondent's possession or control or that of its contractors or agents relating to activities at the Site concerning implementation of this Settlement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

53. Privileged and Protected Claims.

a. Respondent may withhold those documents covered by any privilege or protection recognized under federal law or applied by federal courts in actions commenced by the United States provided Respondent complies with Paragraph 53.b, and except as provided in Paragraph 53.c.

b. If Respondent asserts such a privilege or protection, it shall provide EPA with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, Respondent shall provide the Record to EPA in redacted form to mask the privileged or protected portion only. Respondent shall retain all Records that they claim to be privileged or protected until EPA has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in Respondent's favor.

c. Respondent may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondent are required to create or generate pursuant to this Settlement.

54. Business Confidential Claims. Respondent may assert that all or part of a Record provided to EPA under this Section or Section XI (Record Retention) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondent shall segregate and clearly identify all Records or parts thereof submitted under this Settlement for which Respondent assert business confidentiality claims. Records submitted to EPA determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality

accompanies Records when they are submitted to EPA, or if EPA has notified Respondent that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondent.

55. Notwithstanding any provision of this Settlement, EPA retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XI. RECORD RETENTION

56. Until seven (7) years after EPA provides Respondent with notice, pursuant to Section XXVIII (Notice of Completion of Work), that all Work has been fully performed in accordance with this Settlement, Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control, or that come into its possession or control, that relate in any manner to its liability under CERCLA with regard to the Site, and must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that Respondent (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

57. At the conclusion of the document retention period, Respondent shall notify EPA at least 90 days prior to the destruction of any such Records, and, upon request by EPA, and except as provided in Paragraph 53 (Privileged and Protected Claims), Respondent shall deliver any such Records to EPA. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: its title; its date; the name, title, affiliation (e.g. company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. However, no final document, reports or other information created or generated pursuant to the requirements of this Settlement shall be withheld on the grounds that they are privileged or confidential.

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

XII. COMPLIANCE WITH OTHER LAWS

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

60. No local, state, or federal permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work), including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work that is not on-site requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. Respondent may seek relief under the provisions of Section XVI (Force Majeure) for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit or approval required for the Work, provided that they have submitted timely and complete applications and taken all other actions necessary to obtain all such permits or approvals. This Settlement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

61. Emergency Response. If any event occurs during performance of the Work that causes or threatens to cause a release of Waste Material on, at, or from the Site that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release. Respondent shall take these actions in accordance with all applicable provisions of this Settlement, including, but not limited to, the Health and Safety Plan. Respondent shall also immediately notify the OSC or, in the event of his/her unavailability, the EPA Region 7 Spill Line at 913-281-0991 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA for all costs of such response action not inconsistent with the NCP pursuant to Section XIV (Payment of Response Costs).

62. Release Reporting. Upon the occurrence of any event during performance of the Work that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, Respondent shall immediately orally notify the OSC or, in the event of his/her unavailability, the EPA Region 7 Spill Line at 913-551-0991, and the National Response Center at (800) 424-8802. This reporting requirement is in addition to, and not in lieu

of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

63. For any event covered under this Section, Respondent shall submit a written report to EPA within 7 days after the onset of such event, setting forth the action or event that occurred and the measures taken, and to be taken, to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release.

XIV. PAYMENT OF RESPONSE COSTS

64. Payments for Future Response Costs. Respondent shall pay to EPA all Future Response Costs as defined in Section III pursuant to this Settlement which are not inconsistent with the NCP.

a. Periodic Bills. On a periodic basis, EPA will send Respondent a bill requiring payment that includes a standard Regionally-prepared cost summary, which includes direct and indirect costs incurred by EPA, its contractors, subcontractors, and the United States Department of Justice. Respondent shall make all payments within 45 days after Respondent's receipt of each bill requiring payment, except as otherwise provided in Paragraph 66 (Contesting Future Response Costs).

b. Respondent shall make payment to EPA by Fedwire Electronic Funds Transfer (EFT) to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference Site/Spill ID Number 0714 and the EPA docket number for this action.

c. At the time of payment, Respondent shall send notice that payment has been made to OSC Tom Mahler, and to the EPA Cincinnati Finance Office by email at cinwd_acctsreceivable@epa.gov, or by mail to

EPA Cincinnati Finance Office
26 W. Martin Luther King Drive
Cincinnati, Ohio 45268

Such notice shall reference Site/Spill ID Number 0714 and the EPA docket number for this action.

d. Deposit of Future Response Costs Payments. The total amount to be paid by Respondent pursuant to Paragraph 64.a (Periodic Bills) shall be deposited by EPA in the West Lake Landfill Superfund Site Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund, provided, however, that EPA may deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund if, at the time the payment is received, EPA estimates that the West Lake Landfill Superfund Site Special Account balance is sufficient to address currently anticipated future response actions to be conducted or financed by EPA at or in connection with the Site. Any decision by EPA to deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund for this reason shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Settlement or in any other forum.

65. Interest. If Respondent does not pay Future Response Costs within 45 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill. The Interest shall accrue through the date of Respondent's payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Paragraph 77 (Stipulated Penalties).

66. Contesting Future Response Costs. Respondent may initiate the procedures of Section XV (Dispute Resolution) regarding payment of any Future Response Costs billed under Paragraph 64 (Payments for Future Response Costs) if it determines that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. To initiate such dispute, Respondent shall submit a Notice of Dispute in writing to the OSC within 45 days after receipt of the bill. Any such Notice of Dispute shall specifically identify the contested Future Response Costs and the basis for objection. If Respondent submits a Notice of Dispute, Respondent shall within the 45-day period, also as a requirement for initiating the dispute, (a) pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 64, and (b) establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation (FDIC) and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the OSC a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. If EPA prevails in the dispute, within 5 days after the resolution of the dispute, Respondent shall pay the sums due (with accrued Interest) to EPA in the manner described in Paragraph 64. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued Interest) for which it did not prevail to EPA in the manner described in Paragraph 64. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms

for resolving disputes regarding Respondent' obligation to reimburse EPA for its Future Response Costs.

XV. DISPUTE RESOLUTION

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

68. Informal Dispute Resolution. If Respondent objects to any EPA action taken pursuant to this Settlement, including billings for Future Response Costs, it shall send EPA a written Notice of Dispute describing the objection(s) within 15 days after such action unless the objection(s) has/have been resolved informally. EPA shall respond in writing within 21 days from EPA's receipt of Respondent's Notice of Dispute. EPA and Respondent shall have 10 days from Respondent's receipt of EPA's written response to resolve the dispute through informal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally but must be confirmed in writing to be effective. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement.

69. Formal Dispute Resolution. If the Parties are unable to reach an agreement within the Negotiation Period, Respondent shall, within 15 days after the end of the Negotiation Period, submit a statement of position to the OSC. EPA may, within 15 days thereafter, submit a statement of position. Thereafter, the EPA Region 7 Superfund Division Director will issue a written decision on the dispute to Respondent resolving the dispute consistent with the NCP and this Settlement, based on his or her review of the Respondent's written objection(s). EPA's written response(s), and any other written submissions or related data concerning the issue in dispute. EPA's decision shall be incorporated into and become an enforceable part of this Settlement. Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

70. Except as provided in Paragraph 66 (Contesting Future Response Costs) or as agreed by EPA, the invocation of formal dispute resolution procedures under this Section does not extend, postpone, or affect in any way any obligation of Respondent under this Settlement. Except as provided in Paragraph 78, stipulated penalties with respect to the disputed matter shall continue to accrue, but payment shall be stayed pending resolution of the dispute. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Settlement. In the event that Respondent does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XVII (Stipulated Penalties). Respondent shall not be subject to stipulated penalties regarding an objection as to which dispute resolution was invoked and Respondent's position for that objection prevailed.

XVI. FORCE MAJEURE

71. "Force Majeure," for purposes of this Settlement, is defined as any event arising from causes beyond the control of Respondent, of any entity controlled by Respondent, or of Respondent's contractors that delays or prevents the performance of any obligation under this Settlement despite Respondent's best efforts to fulfill the obligation. The requirement that Respondent exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (a) as it is occurring and (b) following the potential force majeure such that the delay and any adverse effects of the delay are minimized to the greatest extent possible. "Force Majeure" does not include financial inability to complete the Work, increased cost of performance, or a failure to attain performance standards set forth in the Action Memorandum.

72. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement for which Respondent intend or may intend to assert a claim of force majeure, Respondent shall notify EPA's OSC orally or, in his or her absence, the alternate EPA OSC, or, in the event both of EPA's designated representatives are unavailable, the EPA Region 7 Superfund Division Director, within 3 days of when Respondent first knew that the event might cause a delay. Within 5 days thereafter, Respondent shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a force majeure; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health or welfare, or the environment. Respondent shall include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure. Respondent shall be deemed to know of any circumstance of which Respondent, any entity controlled by Respondent, or Respondent's contractors knew or should have known. Failure to comply with the above requirements regarding an event shall preclude Respondent from asserting any claim of force majeure regarding that event, provided, however, that if EPA, despite the late or incomplete notice, is able to assess to its satisfaction whether the event is a force majeure under Paragraph 71 and whether Respondent has exercised its best efforts under Paragraph 71, EPA may, in its unreviewable discretion, excuse in writing Respondent's failure to submit timely or complete notices under this Paragraph.

73. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, the time for performance of the obligations under this Settlement that are affected by the force majeure will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure, EPA will notify Respondent in writing of its decision and Respondent may invoke Dispute Resolution pursuant to Section XV. If EPA agrees that the delay is attributable to a force majeure, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

74. If Respondent elects to invoke the dispute resolution procedures set forth in Section XV (Dispute Resolution), it shall do so no later than 15 days after receipt of EPA's notice. 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 best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of Paragraphs 71 and 72. If Respondent carries this burden, the delay at issue shall be deemed not to be a violation by Respondent of the affected obligation of this Settlement identified to EPA.

75. The failure by EPA to timely complete any obligation under the Settlement is not a violation of the Settlement, provided, however, that if such failure prevents Respondent from meeting one or more deadlines under the Settlement, Respondent may seek relief under this Section.

XVII. STIPULATED PENALTIES

76. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraph 77 for failure to comply with the requirements of this Settlement specified below, unless excused under Section XVI (Force Majeure). "Compliance" by Respondent shall include completion of all activities and obligations, including payments, required under this Settlement, or any deliverable approved under this Settlement, in accordance with all applicable requirements of law, this Settlement, and any deliverables approved under this Settlement and within the specified time schedules established by and approved under this Settlement.

77. Stipulated Penalty Amounts.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance with this Compliance Milestones set forth in b:

Penalty Per Violation Per Day	Period of Noncompliance
$500.00	1st through 7th day
$1000.00	8th through 30th day
$2500.00	31st through 60th day
$5000.00	61st day and beyond

b. Compliance Milestones.

i. Submission of Work Plans (draft and revised);

ii. Commencement of Work according to the schedule in an approved Work Plan;

iii. Completion of Work according to the schedule in an approved Work Plan;

iv. Installation of North Quarry Subsurface Temperature Monitoring System as set forth in Paragraph 35.e.

v. Installation of Neck Heat Extraction System as set forth in Paragraph 35.c.

vi. Installation and operation of SO2 Ambient Air Monitors as set forth in Paragraph 35.d.

vii. Installation of EVOH Cover as set forth in Paragraph 35.b.

viii. Submission of Health and Safety Plans;

ix. Establishment and maintenance of financial assurance in compliance with the timelines and other substantive and procedural requirements of Section XXV (Financial Assurance); and

x. Failure to submit timely or adequate deliverables pursuant to this Settlement.

78. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. Penalties shall continue to accrue during any dispute resolution period, and shall be paid within 15 days after the agreement or the receipt of EPA's decision or order. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Paragraph 37 (Work Plan and Implementation), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (b) with respect to a decision by the EPA Region 7 Superfund Division Director under Paragraph 69 (Formal Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing in this Settlement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement.

79. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement, EPA may give Respondent written notification of the failure and describe the noncompliance. EPA may send Respondent a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation, but Respondent's failure to pay penalties shall not be considered a new violation of this Settlement absent a demand or invoice from EPA notifying Respondent that such penalties are due and owing

80. All penalties accruing under this Section shall be due and payable to EPA within 30 days after Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the Dispute Resolution procedures under Section XV (Dispute Resolution) within the 30-day period. All payments to EPA under this Section shall indicate that the payment

is for stipulated penalties and shall be made in accordance with Paragraph 64 (Payments for Future Response Costs).

81. If Respondent fails to pay stipulated penalties when due, Respondent shall pay Interest on the unpaid stipulated penalties as follows: (a) if Respondent has timely invoked dispute resolution such that the obligation to pay stipulated penalties has been stayed pending the outcome of dispute resolution, Interest shall accrue from the date stipulated penalties are due pursuant to Paragraph 78 until the date of payment; and (b) if Respondent fails to timely invoke dispute resolution, Interest shall accrue from the date of demand under Paragraph 80 until the date of payment. If Respondent fails to pay stipulated penalties and Interest when due, the United States may institute proceedings to collect the penalties and Interest.

82. The payment of penalties and Interest, if any, shall not alter in any way Respondent's obligation to complete the performance of the Work required under this Settlement.

83. Nothing in this Settlement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(*l*) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(*l*), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), provided however, that EPA shall not seek civil penalties pursuant to Section 106(b) or Section 122(*l*) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Settlement, except in the case of a willful violation of this Settlement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 88 (Work Takeover).

84. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement.

XVIII. COVENANTS BY EPA

85. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement, and except as otherwise specifically provided in this Settlement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs, both as defined by this Settlement. These covenants shall take effect upon the Effective Date. These covenants are conditioned upon the complete and satisfactory performance by Respondent of its obligations under this Settlement. These covenants extend only to Respondent and do not extend to any other person.

XIX. RESERVATIONS OF RIGHTS BY EPA

86. Except as specifically provided in this Settlement, nothing in this Settlement shall limit the power and authority of EPA or the United States to take, direct, or order all actions

necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

87. The covenants set forth in Section XVIII (Covenants by EPA) do not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

a. liability for failure by Respondent to meet a requirement of this Settlement;

b. liability for costs not included within the definition of Future Response Costs;

c. liability for performance of response action other than the Work;

d. criminal liability;

e. liability for violations of federal or state law that occur during or after implementation of the Work;

f. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

g. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

h. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

88. Work Takeover.

a. In the event EPA determines that Respondent: (1) has ceased implementation of any portion of the Work; (2) is seriously or repeatedly deficient or late in its performance of the Work; or (3) is implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice ("Work Takeover Notice") to Respondent. Any Work Takeover Notice issued by EPA (which writing may be electronic) will specify the grounds upon which such notice was issued and will provide Respondent a period of 7 days within which to remedy the circumstances giving rise to EPA's issuance of such notice.

b. If, after expiration of the 7-day notice period specified in Paragraph 88.a, Respondent has not remedied to EPA's satisfaction the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portion(s) of the Work as EPA deems necessary ("Work Takeover"). EPA will notify Respondent in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this Paragraph 88.b. Funding of Work Takeover costs is addressed under Paragraph 109 (Access to Financial Assurance).

c. Respondent may invoke the procedures set forth in Paragraph 69 (Formal Dispute Resolution) to dispute EPA's implementation of a Work Takeover under Paragraph 88.b. However, notwithstanding Respondent's invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under Paragraph 88.b until the earlier of (1) the date that Respondent remedies, to EPA's satisfaction, the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice, or (2) the date that a written decision terminating such Work Takeover is rendered in accordance with Paragraph 69 (Formal Dispute Resolution).

d. Notwithstanding any other provision of this Settlement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XX. COVENANTS BY RESPONDENT

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

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

b. any claims under Sections 107 and 113 of CERCLA, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or state law regarding the Work, Future Response Costs, and this Settlement;

c. any claim arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the Missouri Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law.

90. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to any of the reservations set forth in Section XIX (Reservations of Rights by EPA), other than in Paragraph 87.a (liability for failure to meet a requirement of the Settlement), 87.d (criminal liability), or 87.e (violations of federal/state law during or after implementation of the Work), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

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

92. Respondent reserves, and this Settlement is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, and brought pursuant to any statute other than CERCLA or RCRA and for which the waiver of sovereign immunity is found in a statute other than CERCLA or RCRA, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States, as that term is defined in 28 U.S.C. § 2671, while acting within the scope of his or her office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, the foregoing shall not include any claim based on EPA's selection of response actions, or the oversight or approval of Respondent's deliverables or activities.

XXI. OTHER CLAIMS

93. By issuance of this Settlement, 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 shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement.

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

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

XXII. EFFECT OF SETTLEMENT/CONTRIBUTION

96. Nothing in this Settlement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement. Except as provided in Section XX (Covenants by Respondent), each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this Settlement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

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

98. The Parties further agree that this Settlement constitutes an administrative settlement pursuant to which Respondent has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

99. Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement, notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. Respondent also shall, with respect to any suit or claim brought against it for matters related to this Settlement, notify EPA in writing within 10 days after service of the complaint or claim upon it. In addition, Respondent shall notify EPA within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial, for matters related to this Settlement.

100. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other relief relating to the Site, 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 in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant by EPA set forth in Section XVIII (Covenants by EPA).

XXIII. INDEMNIFICATION

101. The United States does not assume any liability by entering into this Settlement or by virtue of any designation of Respondent as EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), and 40 C.F.R. 300.400(d)(3). Respondent shall indemnify, save, and hold harmless the United States, its officials, agents, employees, contractors, subcontractors, and representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, and any persons acting on Respondent's behalf or under their control, in carrying out the Work pursuant to this Settlement. Further, Respondent agrees to pay the United States all costs it incurs, including but not limited to attorneys' fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States resulting from the negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out the Work pursuant to this Settlement. The United States shall not be held out as a party to any contract entered into

by or on behalf of Respondent in carrying out the Work pursuant to this Settlement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

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

103. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work pursuant to this Settlement on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work pursuant to this Settlement on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXIV. INSURANCE

104. No later than 5 days before commencing any on-Site Work, Respondent shall secure, and shall maintain until the first anniversary after issuance of Notice of Completion of Work pursuant to Section XXVIII (Notice of Completion of Work), commercial general liability insurance with limits of $3 million, for any one occurrence, and automobile insurance with limits of $3 million, combined single limit, naming EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondent pursuant to this Settlement. In addition, for the duration of the Settlement, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in a lesser amount, Respondent need provide only that portion of the insurance described above that is not maintained by the contractor or subcontractor.

XXV. FINANCIAL ASSURANCE

105. In order to ensure completion of the Work, Respondent shall secure financial assurance, initially in the amount of $4,159,955 ("Estimated Cost of the Work"), for the benefit of EPA. The financial assurance must be one or more of the mechanisms listed below, in a form substantially identical to the relevant sample documents available from the "Financial Assurance" category on the Cleanup Enforcement Model Language and Sample Documents Database at http://cfpub.epa.gov/compliance/models/, and satisfactory to EPA. Respondent may

use multiple mechanisms if they are limited to surety bonds guaranteeing payment, letters of credit, trust funds, and/or insurance policies.

a. A surety bond guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;

b. An irrevocable letter of credit, payable to or at the direction of EPA, that is issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency;

d. A policy of insurance that provides EPA with acceptable rights as a beneficiary thereof and that is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction(s) and whose insurance operations are regulated and examined by a federal or state agency;

e. A demonstration by Respondent that it meets the relevant financial test criteria of 40 C.F.R. § 264.143(f) and reporting requirements of this Section for the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; or

f. A guarantee to fund or perform the Work executed in favor of EPA by one of the following: (1) a direct or indirect parent company of Respondent; or (2) a company that has a "substantial business relationship" (as defined in 40 C.F.R. § 264.141(h)) with Respondent; provided, however, that any company providing such a guarantee must demonstrate to EPA's satisfaction that it meets the relevant financial test criteria of 40 C.F.R. § 264.143(f) and reporting requirements of this Section for the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee.

106. Within 30 days after the Effective Date, or 30 days after EPA's approval of the form and substance of Respondent's financial assurance, whichever is later, Respondent shall secure all executed and/or otherwise finalized mechanisms or other documents consistent with the EPA-approved form of financial assurance and shall submit such mechanisms and documents to Alyse Stoy at U.S. EPA Region 7, Office of Regional Counsel, 11201 Renner Boulevard, Lenexa, KS, 66219, stoy.alyse@epa.gov, 913-551-7826.

107. If Respondent provides financial assurance by means of a demonstration or guarantee under Paragraph 105.e or 105.f, Respondent shall also comply and shall ensure that its guarantors comply with the other relevant criteria and requirements of 40 C.F.R. § 264.143(f) and this Section, including, but not limited to: (a) the initial submission to EPA of required documents from the affected entity's chief financial officer and independent certified public accountant no later than 30 days after the Effective Date; (b) the annual resubmission of such

documents within 90 days after the close of each such entity's fiscal year; and (c) the notification of EPA no later than 30 days, in accordance with Paragraph 108, after any such entity determines that it no longer satisfies the relevant financial test criteria and requirements set forth at 40 C.F.R. § 264.143(f)(1). Respondent agrees that EPA may also, based on a belief that an affected entity may no longer meet the financial test requirements of Paragraph 105.e or 105.f, require reports of financial condition at any time from such entity in addition to those specified in this Paragraph. For purposes of this Section, references in 40 C.F.R. Part 264, Subpart H, to: (1) the terms "current closure cost estimate," "current post-closure cost estimate," and "current plugging and abandonment cost estimate" include the Estimated Cost of the Work; (2) the phrase "the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates" includes the sum of all environmental obligations (including obligations under CERCLA, RCRA, and any other federal, state, or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the Estimated Cost of the Work under this Settlement; (3) the terms "owner" and "operator" means Respondent making a demonstration or obtaining a guarantee under Paragraph 105.e or 105.f; and (4) the terms "facility" and "hazardous waste management facility" include the Site.

108. Respondent shall diligently monitor the adequacy of the financial assurance. If Respondent becomes aware of any information indicating that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, Respondent shall notify EPA of such information within 7 days. If EPA determines that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, EPA will notify Respondent of such determination. Respondent shall, within 30 days after notifying EPA or receiving notice from EPA under this Paragraph, secure and submit to EPA for approval a proposal for a revised or alternative financial assurance mechanism that satisfies the requirements of this Section. EPA may extend this deadline for such time as is reasonably necessary for Respondent, in the exercise of due diligence, to secure and submit to EPA a proposal for a revised or alternative financial assurance mechanism, not to exceed 60 days. Respondent shall follow the procedures of Paragraph 110 (Modification of Amount, Form, or Terms of Financial Assurance) in seeking approval of, and submitting documentation for, the revised or alternative financial assurance mechanism. Respondent's inability to secure and submit to EPA financial assurance in accordance with this Section shall in no way excuse performance of any other requirements of this Settlement, including, without limitation, the obligation of Respondent to complete the Work in accordance with the terms of this Settlement.

109. Access to Financial Assurance.

a. If EPA issues a notice of implementation of a Work Takeover under Paragraph 88.b, then, in accordance with any applicable financial assurance mechanism, EPA is entitled to: (1) the performance of the Work; and/or (2) require that any funds guaranteed be paid in accordance with Paragraph 109.d.

b. If EPA is notified by the issuer of a financial assurance mechanism that it intends to cancel such mechanism, and Respondent fails to provide an alternative financial

assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, the funds guaranteed under such mechanism must be paid prior to cancellation in accordance with Paragraph 109.d.

c. If, upon issuance of a notice of implementation of a Work Takeover under Paragraph 88, either: (1) EPA is unable for any reason to promptly secure the resources guaranteed under any applicable financial assurance mechanism, whether in cash or in kind, to continue and complete the Work; or (2) the financial assurance is provided under Paragraph 105.e or 105.f, then EPA may demand an amount, as determined by EPA, sufficient to cover the cost of the remaining Work to be performed. Respondent shall, within 15 days of such demand, pay the amount demanded as directed by EPA.

d. Any amounts required to be paid under this Paragraph 109 shall be, as directed by EPA: (i) paid to EPA in order to facilitate the completion of the Work by EPA or by another person; or (ii) deposited into an interest-bearing account, established at a duly chartered bank or trust company that is insured by the FDIC, in order to facilitate the completion of the Work by another person. If payment is made to EPA, EPA may deposit the payment into the EPA Hazardous Substance Superfund or into the West Lake Landfill Superfund Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

e. All EPA Work Takeover costs not paid under this Paragraph 109 must be reimbursed as Future Response Costs under Section XIV (Payments for Response Costs).

110. Modification of Amount, Form, or Terms of Financial Assurance. Respondent may submit, on any anniversary of the Effective Date or at any other time agreed to by the Parties, a request to reduce the amount, or change the form or terms, of the financial assurance mechanism. Any such request must be submitted to EPA in accordance with Paragraph 106, and must include an estimate of the cost of the remaining Work, an explanation of the bases for the cost calculation, and a description of the proposed changes, if any, to the form or terms of the financial assurance. EPA will notify Respondent of its decision to approve or disapprove a requested reduction or change pursuant to this Paragraph. Respondent may reduce the amount of the financial assurance mechanism only in accordance with: (a) EPA's approval; or (b) if there is a dispute, the agreement or written decision resolving such dispute under Section XV (Dispute Resolution). Any decision made by EPA on a request submitted under this Paragraph to change the form or terms of a financial assurance mechanism shall be made in EPA's sole and unreviewable discretion, and such decision shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Settlement or in any other forum. Within 30 days after receipt of EPA's approval of, or the agreement or decision resolving a dispute relating to, the requested modifications pursuant to this Paragraph, Respondent shall submit to EPA documentation of the reduced, revised, or alternative financial assurance mechanism in accordance with Paragraph 106.

111. Release, Cancellation, or Discontinuation of Financial Assurance. Respondent may release, cancel, or discontinue any financial assurance provided under this Section only: (a)

if EPA issues a Notice of Completion of Work under Section XXVIII (Notice of Completion of Work); (b) in accordance with EPA's approval of such release, cancellation, or discontinuation; or (c) if there is a dispute regarding the release, cancellation, or discontinuance of any financial assurance, in accordance with the agreement or final decision resolving such dispute under Section XV (Dispute Resolution).

XXVI. MODIFICATION

112. The OSC may modify any plan or schedule in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction. Any other requirements of this Settlement may be modified in writing by mutual agreement of the parties.

113. If Respondent seeks permission to deviate from any approved work plan or schedule, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving oral or written approval from the OSC pursuant to Paragraph 112.

114. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding any deliverable submitted by Respondent shall relieve Respondent of their obligation to obtain any formal approval required by this Settlement, or to comply with all requirements of this Settlement, unless it is formally modified.

115. Should a Congressional action result in oversight authority for the West Lake Landfill being transferred from EPA, or another agency becoming the lead agency responding to radioactive contamination at the Site, the Parties will meet within 10 days to discuss how this action may affect future implementation of the Work pursuant to this Settlement, including the potential for modification or suspension of the Work. Upon Agreement by the Parties, following appropriate consultation with the other agency, EPA and Respondent may modify the Settlement pursuant to this Section as needed to reflect these changes.

XXVII. ADDITIONAL REMOVAL ACTION

116. If EPA determines that additional removal actions must be performed in order to accomplish the Work required by this Settlement, EPA will notify Respondent of that determination. Unless otherwise stated by EPA, within 30 days after receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA a work plan for the additional removal actions. The plan shall conform to the applicable requirements of Section VIII (Work to Be Performed) of this Settlement.

117. Respondent shall confirm its willingness to perform any additional removal actions requested by EPA pursuant to Paragraph 116, above, in writing to EPA within 15 days of receipt of the EPA request. If Respondent disagrees with EPA's determination that the additional removal actions must be performed in order to accomplish the Work required by this

Settlement, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution).

118. Upon EPA's approval of any additional removal action Work Plan requested by EPA pursuant to Section VIII, Respondent shall implement the Work Plan for additional removal actions in accordance with the provisions and schedule contained therein. This Section does not alter or diminish the OSC's authority to make oral modifications to any plan or schedule pursuant to Section XXVI (Modification).

XXVIII. NOTICE OF COMPLETION OF WORK

119. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement, with the exception of any continuing obligations required by this Settlement, including, EPA will provide written notice to Respondent. If EPA determines that such Work has not been completed in accordance with this Settlement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Removal Work Plans if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Removal Work Plans and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Removal Work Plans shall be a violation of this Settlement.

XXIX. INTEGRATION/APPENDICES

120. This Settlement and its appendix constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement. The parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement. "Appendix A" is the Action Memorandum.

XXX. EFFECTIVE DATE

121. This Settlement shall be effective upon the date Respondent receives a fully executed copy of this Settlement Agreement.

IT IS SO AGREED AND ORDERED:

U.S. ENVIRONMENTAL PROTECTION AGENCY:

4/28/2016
Dated

Mary P. Peterson
Mary P. Peterson, Director
Superfund Division
EPA Region 7

4/27/16
Dated

Alyse Stoy
Alyse Stoy
Attorney, Office of Regional Counsel
EPA Region 7

The undersigned representative of Bridgeton Landfill, LLC certifies that it is fully authorized to enter into this Settlement Agreement and to bind Bridgeton Landfill, LLC to this document.

4/26/16
Date

W. J. Eggleston Jr
Signature

VP
Title

Appendix A

Action Memorandum

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

APR 2 8 2016

ENFORCEMENT ACTION MEMORANDUM

SUBJECT: Approval of a Time-Critical Removal Action at the West Lake Landfill Site, Bridgeton, Missouri

FROM: for Tom Mahler, On-Scene Coordinator
Missouri/Kansas Remedial Branch

THRU: Lynn M. Juett, Branch Chief
Missouri/Kansas Remedial Branch

TO: Mary P. Peterson, Director
Superfund Division

CERCLIS ID:	MOD079900932
Operable Unit:	01
SSID:	0714
Removal Category:	Enforcement Time-Critical
Nationally Significant/Precedent-Setting:	No

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval and funding for a time-critical removal action at the West Lake Landfill Site (site) in Bridgeton, St. Louis County, Missouri. The time-critical removal action will involve the implementation and installation of engineering controls within portions of the Bridgeton Landfill to mitigate potential impacts to OU-1 due to potential subsurface, exothermic, self-sustaining chemical reactions (SSR). This will include the installation of a Heat Extraction System (HES) within the "Neck" area between the North and South Quarry portions of Bridgeton Landfill; a plan for the use of inert gas injection; the installation of an EVOH cover over the North Quarry portion of Bridgeton Landfill; and environmental monitoring. These controls will be put in place to, at a minimum, retard an SSR from migrating through the Neck and into the North Quarry, and take steps to control or extinguish an SSR that may develop independently within the North Quarry. This removal action is expected to be conducted and/or funded by Bridgeton Landfill, LLC, the current owner of OU-2 and current operator of the site. The U. S. Environmental Protection Agency will perform oversight of Bridgeton Landfill's implementation of this removal action.

This time-critical removal action is necessary to mitigate any potential future threat to public health or welfare or the environment posed by the potential mobilization of radionuclides and migration of radon gas in the event an SSR in the North Quarry of the Bridgeton Sanitary Landfill were to come into contact with RIM in the West Lake Landfill OU-1, Area 1. The radiological wastes in OU-1, Area 1 are hazardous substances as defined by Section 101(14) of the Comprehensive Environmental Response,

Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14), and are designated hazardous substances per 40 C.F.R. § 302.4(b).

II. SITE CONDITIONS AND BACKGROUND

APR 2 8 2016

A. Site Description

1. Removal site evaluation

The Site was historically used for agricultural purposes until a limestone quarrying and crushing operation began in 1939. The quarrying operation continued until 1988 and resulted in two quarry pits. Beginning in the early 1950s, portions of the quarried areas and adjacent areas were used for landfilling municipal refuse, industrial solid wastes, and construction/demolition debris. These operations pre-dated state and federal permitting requirements for landfills. Two areas, designated today as "Area 1" and "Area 2" of the landfill were radiologically contaminated in 1973 when they received soil mixed with leached barium sulfate residues. These two landfill areas constitute OU-1.[1]

The barium sulfate residues, containing traces of uranium, thorium, and their daughter products are associated with uranium ore processing conducted by Mallinckrodt Chemical Company in support of the Manhattan Project. These barium sulfate residues were initially stored by the Atomic Energy Commission (AEC) on a 21.7-acre tract of land in a then undeveloped area of north St. Louis County, now known as the St. Louis Airport Site (SLAPS), which is part of the St. Louis Formerly Utilized Sites Remedial Action Program managed by the U.S. Army Corps of Engineers (USACE).

In 1966 and 1967, the barium sulfate residues located at SLAPS were purchased by a private company for mineral recovery and placed in storage at a nearby facility on Latty Avenue under an AEC license. Most of the residues were shipped from there to Canon City, Colorado for reprocessing with the exception of the leached barium sulfate residues, which were the least valuable in terms of mineral content. Most of the uranium and radium was removed in previous precipitation steps. Reportedly, 8,700 tons of leached barium sulfate residues were mixed with approximately 39,000 tons of soil and then transported to the site. According to the landfill operator, the soil was used as cover for municipal refuse in routine landfill operations. The data collected during the Remedial Investigation (RI) are consistent with this account.

Portions of the quarry pits were used for permitted solid waste landfill operations (Bridgeton Sanitary Landfill or Former Active Sanitary Landfill) beginning in 1979. In December 2004, the Bridgeton Sanitary Landfill stopped receiving municipal waste pursuant to an agreement with the city of St. Louis to reduce the potential for birds to interfere with the Lambert-St. Louis International Airport operations. The EPA placed the site on the Superfund National Priorities List (NPL) in 1990. The NPL is a list of priority sites promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended. The NPL is found in Appendix B of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

In 1993, the EPA entered into an Administrative Order on Consent with the Respondents: Cotter Corporation (N.S.L.), Laidlaw Waste Systems (Bridgeton), Inc., Rock Road Industries, Inc., and the U.S. Department of Energy for the performance of a Remedial Investigation and Feasibility Study. Pursuant to the Administrative Order on Consent, the Respondents submitted for the EPA's review and

[1] OU-2 of the site are those portions of the landfill where non-radiological hazardous substances are present. The EPA issued a Record of Decision for OU-2 in July 2008.

approval a Remedial Investigation which detailed the findings of extensive sampling and analysis in the area of OU-1 and the surrounding area. Following the Remedial Investigation process, the Respondents submitted for the EPA's review and approval a Feasibility Study which evaluated various remedial alternatives for OU-1, consistent with the requirements of the Administrative Order on Consent, CERCLA, and the NCP. In addition, the state of Missouri reviewed and commented on these documents. The Record of Decision documenting the remedy selection for OU-1, which was concurred with by the state, was issued by the EPA in May 2008. This remedy has not yet been implemented.

In December 2010, Bridgeton Landfill detected changes in the landfill gas extraction system in the South Quarry of the Bridgton Landfill, specifically elevated temperatures and elevated carbon monoxide levels. Further investigation indicated that the South Quarry portion of the Bridgeton landfill was experiencing an exothermic subsurface reaction event, which is referred to as a "subsurface reaction" or an "SSR." As a consequence of the SSR, the South Quarry has experienced an increase in odors, elevated waste temperatures, and accelerated decomposition of the landfilled solid waste.

In May 2013, the Missouri Attorney General and Bridgeton Landfill, LLC entered into a First Agreed Order of Preliminary Injunction[2] (state order) under which Bridgeton Landfill performed certain actions to address the SSR. One of the actions specified by the state order was the establishment of trigger criteria for the construction of an "isolation break" between the North Quarry portion of the Bridgeton Sanitary Landfill and the adjacent OU-1, Area 1 cell. With state consent, the EPA assumed lead responsibility for overseeing the evaluation, design, and construction of any subsurface barrier in OU-1, Area 1.

In 2013, Bridgeton Landfill, LLC and Rock Road Industries, Inc. began additional subsurface investigations in the southern portion of OU-1, Area 1 to further delineate the Radiologically Impacted Material in support of the design of the subsurface barrier. Those investigations proceeded in a phased manner, and extended into the summer of 2015. A final report submitted by the Respondents presenting the results of those investigations was approved by the EPA in April 2016.

In January 2014, at the EPA's request, Bridgeton Landfill, LLC and Rock Road Industries, Inc. submitted an evaluation of the possible impacts of an SSR coming into contact with Radiologically Impacted Material. The EPA's Office of Research and Development Engineering and Technical Support Center prepared a March 2014 Memorandum summarizing the observations of this submittal. While not a comprehensive review, the Engineering and Technical Support Center's observations of this submittal included the finding that while an SSR would not cause the Radiologically Impacted Materials to become explosive or cause non-RIM materials to ignite, there was a concern that the heat associated with an SSR could induce surface cracks and fissures in the landfill cover that could potentially allow fine particulates to escape and/or allow for the increased emission of radon gas from the landfill.
In April 2014, the EPA, Bridgeton Landfill, LLC, and Rock Road Industries, Inc. entered into an Administrative Settlement Agreement and Order on Consent for Removal Action – Preconstruction Work (EPA Docket No. CERCLA-07-2014-002). Pursuant to this order, the Respondents agreed to conduct certain activities necessary or deemed appropriate by the EPA to advance, support, and prepare for the design, construction, and maintenance of an isolation barrier intended to prevent the SSR from impacting the Radiologically Impacted Material.

In August 2014, at the EPA's request, the U.S. Army Corps of Engineers submitted an Isolation Barrier Alignment Alternatives Assessment Report. The 2014 assessment focused on the proposed barrier

[2] In the Circuit Court of St. Louis County, State of Missouri; Case No. 13SL-CC01088.

alignments, the feasibility of constructing the Isolation Barrier, the comparative advantages and disadvantages of the proposed alignments, and the associated risks. In October 2014, at the EPA's request, Bridgeton Landfill, LLC submitted a Barrier Alternatives Assessment. In that document, the stated objective of an isolation barrier would be to prevent the possible hypothesized impacts that may occur if radiologically-impacted material in Area 1 of OU-1 were to be heated to levels consistent with those observed in conjunction with the SSR in the South Quarry area of the Bridgeton Landfill. The document went on to state that this objective presumes that the SSR would migrate north-eastward from the South Quarry area of the Bridgeton Landfill into and through the North Quarry area of the Bridgeton Landfill and continue into OU-1, Area 1. Finally, in November 2015, the U.S. Army Corps of Engineers provided an Isolation Barrier Alignment Alternatives Assessment Report to the EPA, which was a supplement to their August 2014 assessment report.

2. Physical location

The site is located on a parcel of land that is approximately 200 acres in size and is located in the northwestern portion of the St. Louis metropolitan area. It is situated approximately one mile north of the intersection of Interstate 70 and Interstate 270, within the city limits of Bridgeton in northwestern St. Louis County. The Missouri River lies about two miles to the north and west of the site. The site is bounded on the north by St. Charles Rock Road and on the east by Taussig Road. Old Saint Charles Rock Road borders the southern and western portions of the site. The Earth City Industrial Park is adjacent to the site on the west. The Spanish Village residential subdivision is located less than a mile to the south.

3. Site characteristics

The site consists of the Bridgeton Sanitary Landfill (Former Active Sanitary Landfill), the West Lake Landfill, and other inactive areas with sanitary and demolition fill which are no longer operational. The address is 13570 St. Charles Rock Road. The site is divided into two operable units. OU-1 addresses two of the inactive landfill areas, Area 1 and Area 2, where radiological contamination is located, and the area formerly described as the Ford Property and is now the Buffer Zone / Crossroads Property. The other landfill areas where radiological contaminants are not present constitute OU-2.

There are other facilities and operations located and conducted on the 200-acre parcel which are not included in the site. These include an asphalt batch plant, a solid waste transfer station, and a leachate pre-treatment plant.

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

As described above, the Remedial Investigation and subsequent investigations have documented the presence of radiological contamination in the OU-1, Area 1 and 2 cells and the near-surface soils on these cells. The presence of radiological contamination in these areas constitutes a release or substantial threat of release into the environment of a hazardous substance.

5. National Priority List (NPL) status

The Site is listed on the National Priorities List (55 Fed. Reg. 35502, August 30, 1990).

6. Maps, pictures, and other graphic representations

The Depiction of the Site is included as an Attachment to this Action Memorandum.

B. Other Actions to Date

1. Previous actions

As discussed above, there have been substantial CERCLA investigatory and response actions taken at the site. In addition, actions have been taken at the Bridgeton Sanitary Landfill to, among other things, control emissions and odors as a result of the SSR pursuant to the state of Missouri's solid waste landfill permit and state order.

2. Current actions

On April 20, 2015, the EPA determined that additional work was necessary to accomplish the objectives of the Remedial Investigation/Feasibility Study for OU-1. The OU-1 Respondents recently completed the collection of additional data from Areas 1 and 2, pursuant to a work plan approved by the EPA on September 4, 2015. The data from this effort will be used by the OU-1 Respondents in the development of partial and full excavation remedial alternatives to be evaluated and presented to the EPA in a Final Feasibility Study.

Bridgeton Landfill, LLC and Rock Road Industries, Inc. are also currently implementing an Administrative Settlement Agreement and Order on Consent for Removal Action – Preconstruction Work for the performance of actions that support the design, construction and maintenance of an Isolation Barrier. Air monitoring is currently being performed by these parties pursuant to this Order. On December 9, 2015, the EPA issued a Unilateral Administrative Order to Bridgeton Landfill, LLC, Rock Road Industries, Inc., and Cotter Corporation (N.S.L.) that requires actions at West Lake Landfill (Operable Unit 1) needed to address the risk of a potential surface fire event at the site. Specifically, these actions include the following: (1) placement of interim cover materials over areas of OU1 where RIM is located at or near the surface, (2) clearing of vegetation to mitigate the risk of future surface fires, and (3) the development and implementation of an Incident Management Plan to clearly define the site protocols, notifications, and response activities that will be taken in the event of any future incidents at the site.

C. State and Local Authorities' Roles

1. State and local actions to date

The West Lake Landfill NPL site encompasses several closed landfills. Operable Unit 2 consists of the inactive Bridgeton Landfill (or Former Active Sanitary Landfill) and the Inactive Demolition and Inactive Sanitary Landfills. The Bridgeton Landfill stopped accepting waste in December 2004 pursuant to an agreement with the city of St. Louis due to a runway expansion project at the nearby Lambert – St. Louis International Airport. The EPA issued a Record of Decision in 2008 that defers remediation of the Bridgeton and Demolition Landfills to the Missouri Department of Natural Resources (MDNR) in accordance with existing solid waste permits, closure, and post-closure requirements.

Since 2010, a SSR has been occurring in the South Quarry area of the Bridgeton Landfill in a portion of OU-2. As mentioned above, the Missouri Department of Natural Resources has managed solid waste

issues at portions of the site, particularly with administering and overseeing closure work on the Bridgeton Sanitary Landfill and responding to the SSR. The Missouri Department of Natural Resources has also conducted numerous site inspections, and the Missouri Attorney General has issued a state order, seeking certain response actions at the site.

In 2013, the Missouri Department of Natural Resources requested that Bridgeton Landfill perform certain activities, put in place certain plans to protect against the potential progression of the existing SSR from the South Quarry into the North Quarry, and to prevent the development of an independent SSR in the North Quarry of the Bridgeton Landfill. In August 2015, the Missouri Department of Natural Resources sent a letter requiring work plans and schedules for enhancements to the North Quarry cap and gas collection and control system, to include additional corrective action measures to protect against the potential progression of the SSR from the South Quarry into the North Quarry and measures to protect against the potential for an independent SSR in the North Quarry. Bridgeton Landfill has implemented some, but not all, of the actions requested by the state.

2. Potential for continued state/local response

State authorities will continue to manage the Bridgeton Landfill site pursuant to the 2008 ROD. EPA plans to include MDNR in the review of the design documents and work plans associated with this removal action.

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

A. Threats to Public Health or Welfare

Where the EPA makes a determination, based on the factors set forth in 40 C.F.R. § 300.415(b)(2), that a release or threat of release of a hazardous substance, pollutant, or contaminant poses a threat to public health or welfare or the environment, the EPA may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release. The factors in 40 C.F.R. § 300.415(b)(2) that apply to this site are:

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

The primary contaminants of concern at the site for this action include Radiologically Impacted Material contained within the OU-1, Area 1 Landfill cell. If the removal actions described in this Action Memorandum are not implemented, the SSR in the South Quarry Landfill cell could migrate into the North Quarry Landfill cell and thence into OU-1, Area 1, or an independent SSR could develop in the North Quarry allowing movement into OU-1, Area 1 at some point in the future. Subjecting certain Radiologically Impacted Material containing wastes in Area 1 to the conditions of a SSR has a potential to cause particulates to migrate and to increase the exhalation of radon gas. This presents a threat of release of hazardous substances into the environment that could present exposures to nearby human populations, primarily to on-site workers.

- **300.415(b)(2)(viii) – Other situations or factors that may pose threats to public health or welfare of the United States or the environment.**

A SSR impacting OU-1, Area 1 could impair the future implementation of the OU-1 remedial action. For example, significant subsidence and increased leachate and gas production has been observed in the South Quarry (OU-2) due to the SSR, as well as, changes to the landfill gases and leachate characteristics. The area surrounding the site includes residences, an airport, and a large number of businesses both commercial and industrial. The EPA is aware that the ongoing SSR and related potential impacts are of great concern to the local community and nearby businesses.

IV. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed action will include the design, construction, and implementation of a variety of engineering controls and contingency plans to retard the existing SSR in the South Quarry portion of the Bridgeton Landfill from migrating through the "Neck" area and into the North Quarry portion of the Bridgeton Landfill. Additionally, these controls and plans will better mitigate the effects of any independent SSRs that may occur within the North Quarry portion of the Bridgeton Landfill. Specifically, these removal actions will include:

1. The use of Inert Gas Injection as a "hot-spot" treatment option to address any SSRs that may occur in the "Neck" area or in the North Quarry of the Bridgeton Landfill;
2. Placement of an EVOH cap over the North Quarry;
3. The installation of a heat extraction system within the "Neck" area of the Bridgeton Landfill in accordance with the *Technical Evaluation of a Heat Extraction Barrier* prepared by Feezor Engineering and dated November 2015; and
4. Environmental monitoring.

Any off-site disposal of waste will comply with Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440. The EPA will oversee the Respondent's work to implement the proposed action, both by reviewing submittals and approving all construction work in advance, and by overseeing the associated fieldwork.

2. Contribution to remedial performance

This proposed removal action will, to the extent practicable, contribute to the efficient performance of the long term remedial action with respect to the release of hazardous substances at and from the site. The remedial action for OU-1 selected in the 2008 Record of Decision and currently being evaluated by the EPA is not contingent on the performance of this removal action. Performance of this removal action would not in any way adversely affect or prevent the implementation of any future remedial actions for the site.

3. Applicable or Relevant and Appropriate Requirements (ARARs)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) at 40 C.F.R. § 300.415(j) provides that removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs under federal environmental or state environmental or facility siting laws. The following ARARs have been identified for this removal action:

Federal

Action/Prerequisite	Requirement	Citation
NESHAPs	Standard for radon-222 emissions	40 C.F.R. Parts 61 Subpart T
National Pollutant Discharge Elimination System	Storm Water Discharge permitting requirements and conditions for landfills that have received industrial wastes	40 C.F.R Part 122.26 and Part 122.41
Federal Water Quality Standards	Establishes methods to develop ambient water quality criteria for the protection of aquatic organisms and protection of human health	40 C.F.R. 131
Standards applicable to generators of hazardous waste	Manifesting, pre-transport, record keeping	40 C.F.R. Part 262
Identification of hazardous waste	Definition and identification of hazardous waste	40 C.F.R. Part 261
Hazardous Materials Transportation Act	Transportation	49 U.S.C. §§ 801 – 1813, 49 C.F.R. Parts 171 - 180

State

A letter requesting that the state identify ARARs for these actions at the site will be sent. This removal action will attain the state-identified ARARs to the extent practicable and will be incorporated into the proposed action upon receipt of the state's response.

4. Project schedule

It is expected that the implementation of these controls will begin within one to two months. The actual implementation schedule will be set forth in the corresponding work plans and subject to the EPA's approval.

B. Estimated Costs

The estimated cost for the Respondent to conduct the activities set forth in this Action Memorandum is $4,159,955. The EPA's costs to oversee the Respondent's work will be reimbursed by the Respondent pursuant to the cost reimbursement provisions of the Order. The total EPA costs for oversight of the work, as set forth in the Order based on full cost-accounting practices, are estimated to be $728,000.00.

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

Delayed action could potentially result in the uninhibited migration of a SSR into certain Radiologically Impacted Material containing wastes in OU-1, Area 1, which would create a release, or threat of release of hazardous substances into the environment and would impair the future implementation of the OU-1 remedial action.

VI. OUTSTANDING POLICY ISSUES

None

VII. ENFORCEMENT

See attached Enforcement Addendum.

VIII. RECOMMENDATION

This decision document represents the selected removal action for addressing the potential future threat of the SSR to certain radiologically-contaminated wastes in the OU-1 Area 1 Landfill cell at the site. The removal action was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the site.

Conditions at the site meet the NCP § 300.415(b) criteria for a removal action, and I recommend your approval of this proposed removal action. The total EPA costs to oversee this response action are estimated to be $728,000.00.

Approved:

Mary P. Peterson

Mary P. Peterson, Director
Superfund Division

4/28/2016

Date

Attachments (2)

TMP-29
TMP-18
TMP-27
TMP-28
TMP-25
TMP-17
TMP-22
TMP-23
TMP-16
TMP-21
TMP-2
TMP-3R
TMP-1
TMP-4R
TMP-3
TMP-4

Legend

- Gas Extraction Well (GEW)
- Soil Core - With RIM
- Soil Core - Without RIM
- Temperature Monitoring Probe (TMP)
- Area1 Waste Disposal Boundary
- Extent of Detected RIM
- West Lake Landfill Site Boundary

RIM Radiologically Impacted Material

N

100 0 100

Feet

Note: The Environmental Protection Agency does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any injury or loss resulting from the reliance upon the information shown.

Source: ESRI, Digital Globe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Environmental Protection Agency Region 7 Responsible Parties

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West Lake Landfill
Bridgeton, Missouri

Attachment 1

TETRA TECH

Date: 4/26/2016 Drawn By: Gustavo Orozco Project No: X9025.L.16.0134.000