Attachment B

RD/RA SOW

APPENDIX B

GENERIC STATEMENT OF WORK FOR CONDUCTING REMEDIAL DESIGNS AND REMEDIAL ACTIONS (RD/RA SOW)

OHIO ENVIRONMENTAL PROTECTION AGENCY DIVISION OF ENVIRONMENTAL RESPONSE AND REVITALIZATION REMEDIAL RESPONSE PROGRAM

1.0 PURPOSE

The purpose of this Remedial Design/Remedial Action Statement of Work (RD/RA SOW) is to define the procedures the Respondent(s) shall follow in designing and implementing the selected remedy for the Site as described in this SOW and the Director's Final Findings and Orders (Orders) to which it is attached. The Division of Environmental Response and Revitalization (DERR) documented the selection of a remedy for the Site in the Decision Document, which is attached to the Orders. The intent of the remedy is to protect the public health and/or the environment from the actual or potential adverse effects of the contaminants discovered at and related to the site. Further guidance for performing the RD/RA work tasks may be found in the U.S. EPA Superfund Remedial Design and Remedial Action Guidance document (OSWER Directive 9355.0-4A). All applicable regulatory requirements pertaining to the selected remedy and RD/RA activities shall be followed.

The Ohio EPA shall provide oversight of the Respondent's activities throughout the RD/RA. The Respondent's shall support the Ohio EPA's initiatives and conduct of activities related to the implementation of oversight activities.

2.0 DESCRIPTION OF THE REMEDIAL ACTION/ PERFORMANCE STANDARDS

Performance standards and specifications of the major components of the remedial action to be designed and implemented by the Respondent(s) are described below. Performance standards shall include cleanup standards, standards of control, quality criteria, and other requirements, criteria or limitations as established in the Decision Document, this SOW and the Orders to which it is attached.

See Appendix A, Decision Document, for description of the Remedial Action

components and associated performance standards.

3.0 SCOPE OF THE REMEDIAL DESIGN AND REMEDIAL ACTION

The Remedial Design/Remedial Action (RD/RA) shall consist of seven principal tasks described below. Each task shall be completed and required documentation shall be submitted in accordance with the schedules established in the Orders and in the RD/RA Work Plan approved by Ohio EPA. All work related to this SOW shall be performed by the Respondent(s) in a manner consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended, 42 USC 9601, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300 (1990), and other applicable federal and state rules and regulations.

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3.1 TASK I: RD/RA WORK PLAN

The Respondent(s) shall submit a work plan for the Remedial Design and Remedial Action (RD/RA) to the Ohio EPA for review and approval, which presents the overall strategy for performing the design, construction, operation, maintenance and monitoring of the Remedial Action (RA). The work plan shall provide a detailed discussion of the specific tasks necessary to implement the selected remedy, including a description of the technical approach, personnel requirements, plans, specifications, permit requirements and other reports described in this SOW.

The work plan shall document the responsibilities and authority of all organizations and key personnel involved with the development and implementation of the RD/RA. The qualifications of key personnel directing the RD/RA tasks, including contractor personnel, shall be described.

The work plan shall include schedules fixed in real time for the development of the (RD) and implementation of the RA, including milestones for the submittal of the document packages for Ohio EPA review and meetings for discussion of the submittals. The RD/RA Work Plan must be reviewed and approved by the Ohio EPA prior to initiation of field activities or proceeding with the RD.

Specific requirements to be addressed by the RD/RA Work Plan are described in the following sections.

3.1.1 Site Access

All site access agreements necessary to implement the RD and RA shall be obtained by the Respondent(s) prior to the initiation of any activities to be conducted under the Work Plan. Site access agreements shall extend for the duration of all remedial activities and shall include allowances for all operation and maintenance considerations and State oversight activities. The work plan shall describe the activities necessary to satisfy these requirements.

3.1.2 Pre-Design Studies Plan

The Respondent(s) shall develop a plan to complete the following pre-design studies, which are required to design and fully implement the remedial action.

[Describe any pre-design studies required to support the RD/RA.]

The Pre-Design Studies Plan (PDSP), as a component of the RD/RA Work Plan, will identify and describe, in detail, activities necessary to conduct the pre-design studies identified above. The plan shall include sufficient sampling, testing, and analyses to develop quantitative performance, cost and design data for the selected remedy.

At the discretion of the Site Coordinator for the Ohio EPA, the PDSP may be submitted for review and comment under separate cover from the work plan in accordance with the schedule established in the Orders. The PDSP must be approved by the Ohio EPA prior to initiation of associated field activities or treatability studies.

The Pre-Design Studies Plan shall include, as necessary, a Field Sampling Plan (FSP), a Quality Assurance Project Plan (QAPP) and a Health and Safety Plan (HSP). Section 4.0 of this SOW describes the required content of supporting plans such as the Field Sampling Plans, Quality Assurance Project Plans and Health and Safety Plans.

Prior to development of the Pre-Design Studies Plan, there shall be a meeting of the Site Coordinator for the Ohio EPA and the Project Manager representing the Respondent(s) to discuss scope, objectives, quality assurance and quality control issues, resources, reporting, communication channels, schedule, and roles of personnel involved. Other personnel representing the Respondent(s) and Ohio EPA, who may be needed to fully discuss the issues involved, should also participate in this meeting. Guidance documents to be consulted in developing the Pre-Design Studies Plan include U.S. EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies (EPA/540/G-89/004, October 1988) and Guide for Conducting Treatability Studies Under CERCLA (EPA/540/2-89/058, December 1989), as well as others listed in Appendix A, attached to this SOW.

The pre-design studies will be conducted as described under Task II.

3.1.3 Regulatory Compliance Plan

It shall be the responsibility of the Respondent(s) to ensure compliance with all applicable regulatory state and federal requirements for the RD/RA activities to be conducted at the site. The Respondent(s) shall develop a plan to identify and to satisfy all applicable state and federal laws and regulations for the RD/RA. he plan will include the following information:

1) Permitting authorities
2) Permits required to conduct RD/RA activities

3) Time required by the permitting agency(s) to process permit applications
4) Identification of all necessary forms
5) Schedule for submittal of applications
6) All monitoring and/or compliance testing requirements

The Respondent(s) shall identify in the plan any inconsistencies between any regulatory requirements or permits that may affect any of the work required. The plan shall also include an analysis of the possible effects such inconsistencies may have on the remedial action, recommendations, and supporting rationale for the recommendations. The Regulatory Compliance Plan shall be submitted to the Ohio EPA as part of the RD/RA Work Plan.

3.1.4 Natural Resource Damage Assessment

If natural resources are or may be injured as a result of a release, the Respondent(s) shall ensure that the trustees of the effected natural resources are notified. The trustees will initiate appropriate actions and provide input into the RD/RA in order to minimize or mitigate natural resource damages in accordance with the NCP and 43 CFR part 11. Trustees define "injury" as "a measurable adverse change, either long- or short-term, in the chemical or physical quality of a natural resource resulting either directly or indirectly from exposure to a discharge of oil or release of a hazardous substance. The Respondent(s) shall make available to the trustees all necessary information and documentation needed to assess actual or potential natural resource injuries.

3.2 TASK II: PRE-DESIGN STUDIES

The Respondent(s) shall schedule and detail the work necessary to accomplish the pre-design studies described in the Pre-Design Studies Plan submitted with the RD/RA Work Plan. The requirements of this section shall apply to studies undertaken to refine the understanding of the nature and extent of contamination at the site, as well as to bench and pilot scale treatability studies.

For any such studies required, the Respondent(s) shall furnish all services, including necessary field work, materials, supplies, labor, equipment, supervision, and data interpretation. Sufficient sampling, testing, and analyses shall be performed to provide the technical data necessary to support the remedial design effort with the goal of optimizing the required treatment and/or disposal operations and systems.
The Respondent(s) shall submit a draft Pre-Design Studies report for Ohio EPA's review and comment when the investigation and/or testing required by the Pre-Design Studies Plan is complete. The draft report shall present investigation/testing data and results along with an analysis of the implications those results have on the RD/RA, including a cost analysis, when appropriate. The draft report shall be submitted prior to the preliminary design submittal in accordance with the schedule specified in the Orders

and approved RD/RA Work Plan. After making any required corrections or modifications based on Ohio EPA comments, the Respondent(s) shall submit the final report with the Preliminary Design Report, unless otherwise specified in the approved RD/RA Work Plan.

3.2.1. Reporting Requirements for Groundwater data.

The Respondent(s) shall submit all groundwater data and monitoring well construction data. The Respondent(s) shall implement a groundwater monitoring program as identified in the RD workplan or as required by Ohio EPA. Respondent(s) shall submit all groundwater data and monitoring well construction data on a 3.5 inch diskette using the most current version of the U.S. EPA developed Ground Water Information Tracking System (GRITS) database software. GRITS is free software, and can be obtained by calling EPA office of Research and Development (ORD), at 513-569-7562, ask for Document # EPA/625/11-91/002. Respondent(s) shall submit one copy of each round of sampling data on printed paper in addition to the diskette format. The printed copy will be the official copy of the data.

3.3 TASK III: REMEDIAL DESIGN

The Respondent(s) shall prepare and submit to the Ohio EPA, in accordance with the schedule set forth in the compliance schedule of the Orders, construction plans, specifications and supporting plans to implement the remedial action at the Site as defined in the Purpose and Description of the Remedial Action sections of this SOW, the Decision Document, and/or the Orders.

3.3.1 General Requirements for Plans and Specifications

The construction plans and specifications shall comply with the standards and requirements outlined below. All design documents shall be clear, comprehensive and organized. Supporting data and documentation sufficient to define the functional aspects of the remedial action shall be provided. Taken as a whole, the design documents shall demonstrate that the remedial action will be capable of meeting all objectives of the Decision Document, including any performance standards.

The plans and specifications shall include the following:

1) Discussion of the design strategy and design basis including:
   a. Compliance with requirements of the Decision Document and the Orders and all applicable regulatory requirements;
   b. Minimization of environmental and public health impacts;

2) Discussion of the technical factors of importance including:
   a. Use of currently accepted environmental control measures and technologies;
   b. The constructability of the design;
   c. Use of currently accepted construction practices and techniques;

3) Description of the assumptions made and detailed justification for those assumptions;

4) Discussion of possible sources of error and possible operation and maintenance problems;

5) Detailed drawings of the proposed design including, as appropriate:
   a. Qualitative flow sheets;
   b. Quantitative flow sheets;

6) Tables listing equipment and specifications;

7) Tables giving material and energy balances;

8) Appendices including:
   a. Sample calculations (one example presented and clearly explained for significant or unique calculations);
   b. Derivation of equations essential to understanding the report;
   c. Results of laboratory tests, field tests and any additional studies.

3.3.2 Design Phases

The Respondent(s) shall meet when necessary with Ohio EPA representatives to discuss design issues. The design shall be developed and submitted in the phases outlined below to facilitate progression toward an acceptable and functional design.

Submittals shall be made in accordance with the compliance schedule in the Orders, and the schedule in the approved RD/RA Work Plan.

3.3.2.1 Preliminary Design

A Preliminary Design, which reflects the design effort at approximately 30% completion, shall be submitted to the Ohio EPA for review and comment. At this stage of the design process, the Respondent(s) shall have verified existing conditions at the site that may influence the design and implementation of the selected RA. The Preliminary Design shall demonstrate that the basic technical requirements of the remedial action

and any permits required have been addressed. The Preliminary Design shall be reviewed to determine if the final design will provide an operable and usable RA that will be in compliance with all permitting requirements and response objectives. The Preliminary Design submittal shall include the following elements, at a minimum:

- Preliminary plans, drawings and sketches, including design calculations;
- Results of treatability studies and additional field sampling;
- Design assumptions and parameters, including design restrictions, process performance criteria, appropriate unit processes for treatment systems, and expected removal or treatment efficiencies for both the process and waste (concentration and volume);
- Proposed cleanup verification methods, including compliance with applicable laws and regulations;
- Outline of design specifications;
- Proposed sitting/locations of processes/construction activity;
- Expected long-term operation and monitoring requirements;
- Real estate and easement requirements;
- Preliminary construction schedule, including contracting strategy.

The supporting data and documentation necessary to define the functional aspects of the RA shall be submitted with the Preliminary Design. The technical specifications shall be outlined in a manner that anticipates the scope of the final specifications. The Respondent(s) shall include design calculations with the Preliminary Design completed to the same degree as the design they support.

If the Pre-Design Studies Report required under Task II have not been submitted prior to submission of the Preliminary Design, it shall be submitted with the Preliminary Design. Any revisions or amendments to the Preliminary Design required by the Ohio EPA shall be incorporated into the subsequent design phase.

3.3.2.2 Intermediate Design

Complex project designs necessitate preparation and Ohio EPA review of design documents between the preliminary and pre-final design phases. The Respondent(s) shall submit intermediate design plans and specifications to the Ohio EPA for review and comment when the design is approximately 60% complete in accordance with the schedule in the approved RD/RA Work Plan. All plans, specifications, design analyses

and design calculations submitted to the Ohio EPA shall reflect the same degree of completion. The Respondent(s) shall ensure that any required revisions or amendments resulting from the Ohio EPA's review of the Preliminary Design are incorporated into the Intermediate Design.

The Intermediate Design submittal shall include the following components:

- Design Plans and Specifications;
- Draft Construction Quality Assurance Plan;
- Draft Performance Standard Verification Plan;
- Draft Operation and Maintenance Plan;
- Health and Safety Plan.

The design shall include a Construction Quality Assurance Plan, a Performance Standard Verification Plan, an Operation and Maintenance Plan, and a Health and Safety Plan. The Performance Verification Plan shall include a Field Sampling Plan and a Quality Assurance Project Plan, as necessary. Section 4.0 of this SOW describes the required content of the supporting plans. The final Pre-Design Studies Report shall also be included, if it has not already been submitted. Revisions or amendments to the Intermediate Design required by Ohio EPA shall be incorporated into the Pre-final Design.

3.3.2.3 Pre-final Design

The Respondent(s) shall submit a Pre-final Design for Ohio EPA review in accordance with the schedule in the approved RD/RA Work Plan when the design effort is at least 90% complete. The Respondent(s) shall ensure that any modifications required by the Ohio EPA's prior review of related Pre-design Studies Reports, technical memoranda, the Preliminary and Intermediate Designs, and the QAPP and HSP are incorporated into the Pre-final Design submittal. The Pre-final Design submittal shall consist of the following components, at a minimum:

- Design Plans and Specifications;
- Construction Quality Assurance Plan;
- Performance Standard Verification Plan;
- Operation and Maintenance Plan;
- Remedial Action Implementation Plan;
- Cost Estimate;
- Health and Safety Plan.

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the remedial design specifications with the Pre-final Design, the Respondent(s) shall: (1) Coordinate and cross-check the specifications and drawings; (2) Complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

The Respondent(s) shall prepare and include in the technical specifications governing any treatment systems; contractor requirements for providing appropriate service visits by qualified personnel to supervise the installation, adjustment, startup and operation of the treatment systems; and appropriate training on operational procedures once startup has been successfully accomplished.

The Ohio EPA will provide written comments to the Respondent(s) indicating any required revisions to the Pre-final Design. Comments may be provided as a narrative report and/or markings on design plan sheets. Revisions to the plans and specifications required by Ohio EPA shall be incorporated into the Final Design. At the discretion of the Site Coordinator, the Respondent(s) shall also return to Ohio EPA all marked-up prints as evidence that the plans have been completely checked. The Pre-final Design submittal may serve as the Final Design, if Ohio EPA has no further comments and notifies the Respondent(s) that the Pre-final Design has been approved as the Final Design.

3.3.2.4 Final Design

Following incorporation of any required modifications resulting from the Ohio EPA's review of the Pre-final Design submittal, the Respondent(s) shall submit to the Ohio EPA the Final Design which is 100% complete in accordance with the approved schedule described in the RD/RA Workplan.

The Final Design submittal shall include all the components of the Pre-final Design and each of those components shall be complete. At the discretion of the Site Coordinator, any marked-up prints or drawings, which the Ohio EPA may have provided by way of comments on previous design submittals shall be returned to the Ohio EPA, if they have not already been returned.

The Respondent(s) shall make corrections or changes based on Ohio EPA comments on the Final Design submittals. The revised Final Design shall then be submitted in their entirety to the Ohio EPA for approval as

the completed Final Design. Upon approval of the Site Coordinator, final corrections may be made by submitting corrected pages to the Final Design documents. The quality of the Final Design submittal should be such that the Respondent(s) would be able to include them in a bid package and invite contractors to submit bids for the construction project.

3.3.3 Estimated Cost of the Remedial Action

The Respondent(s) shall refine the cost estimate developed in the Feasibility Study to reflect the detailed plans and specifications being developed for the RA. The cost estimate shall include both capital and operation and maintenance costs for the entire project. To the degree possible, cost estimates for operation and maintenance of any treatment system shall be based on the entire anticipated duration of the system's operation. The final estimate shall be based on the final approved plans and specifications. It shall include any changes required by the Ohio EPA during Final Design review, and reflect current prices for labor, material and equipment.

The refined cost estimate shall be submitted by the Respondent(s) with the Pre-final Design and the final cost estimate shall be included with the Final Design submittal.

3.3.4 Remedial Action Implementation Plan

The Respondent(s) shall develop a Remedial Action Implementation Plan (RAIP) to help coordinate implementation of the various components of the RA. It shall include a schedule for the RA that identifies timing for initiation and completion of all critical path tasks. The Respondent(s) shall specifically identify dates for completion of the project and major interim milestones in conformance with the approved RD/RA Workplan schedule. The Remedial Action Implementation Plan is a management tool which should address the following topics:

1) Activities necessary to fully implement each of the components of the RA;
2) How these activities will be coordinated to facilitate construction/ implementation in accordance with the approved schedule;
3) Potential major scheduling problems or delays, which may impact overall schedule;
4) Lines of communication for discussing and resolving problems, should they arise;
5) Common and/or anticipated remedies to overcome potential problems and delays.

The Remedial Action Implementation Plan shall be submitted with the Pre-final Design for review and comment by the Ohio EPA. The final plan and RA project

schedule shall be submitted with the Final Design for review and approval.

3.3.5 Community Relations Support

A community relations program will be implemented by the Ohio EPA. The Respondent(s) shall cooperate with the Ohio EPA in community relations efforts. Cooperation may include participation in preparation of all appropriate information disseminated to the public, and in public meetings that may be held or sponsored by the Ohio EPA concerning the Site.

3.4 TASK IV: REMEDIAL ACTION CONSTRUCTION

Following approval of the Final Design submittal by the Ohio EPA, the Respondent(s) shall implement the designed remedial action(s) at the Site in accordance with the plans, specifications, Construction Quality Assurance Plan, Performance Standard Verification Plan, Health and Safety Plan, Remedial Action Implementation Plan, Quality Assurance Project Plan, and Field Sampling Plan approved with the final design. Implementation shall include the activities described in the following sections.

3.4.1 Preconstruction Inspection and Conference

The Respondent(s) shall participate in a preconstruction inspection and conference with the Ohio EPA to accomplish the following:

- Review methods for documenting and reporting inspection data;
- Review methods for distributing and storing documents and reports;
- Review work area security and safety protocol;
- Discuss any appropriate modifications to the Construction Quality Assurance Plan to ensure that site specific considerations are addressed. The final CQAP shall be submitted to the Ohio EPA at this time, if it has not already been submitted;
- Introduce key construction contractor, engineering and project management personnel and review roles during construction activities;
- Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The Respondent(s) shall schedule the preconstruction inspection and conference to be held within 10 days of the award of the construction contract. The preconstruction inspection and conference shall be documented by a designated person and minutes shall be transmitted to all parties by the Respondent(s) to all parties in attendance.

3.4.2 Design Changes During Construction

During construction, unforeseen site conditions, changes in estimated quantities of required construction materials and other problems associated with the project are likely to develop. Such changing conditions may require either major or minor changes to the approved final design. Certain design changes will require approval of the Ohio EPA prior to implementation to ensure that the intent and scope of the remedial action is maintained. Changes, which could alter the intent or scope of the RA, may require a revision to the Decision Document and a public comment period. Changes to the remedial design which require Ohio EPA written approval prior to implementation include:

- Those that involve the deletion or addition of a major component of the approved remedy (e.g. changing one treatment system for another; deleting any designed layer of a multi-layer cap);
- Those that result in a less effective treatment for wastes associated with the site;
- Any changes that may result in an increase of the exposure to chemicals of concern and/or risk to human health or the environment as compared to the goals for the completed remedial action as stated in the Orders and this SOW;
- Those that result in a significant delay in the completion of the RA;
- Other changes that alter or are outside the scope/intent of the approved remedial design.

Ohio EPA shall be notified of other changes made during construction through daily inspection reports and monthly progress reports.

3.4.3 Remedial Action Construction Completion and Acceptance

As the construction of the remedial action nears completion, the following activities and reporting shall be completed by the Respondent(s) to ensure proper project completion, approval, closeout and transition to the operation and maintenance/ monitoring phase.

3.4.3.1 Pre-final Construction Conference

Within seven days of making a preliminary determination that construction is complete, the Respondent(s) shall provide written notification to the Ohio EPA and a pre-final construction conference shall be held with the

construction contractor(s) to discuss procedures and requirements for project completion and close-out. The Respondent(s) shall have responsibility for making arrangements for the conference. Participants should include the Project Manager for the Respondent(s), the Site Coordinator for the Ohio EPA, all contractors involved with construction of the remedial action(s) and the remedial design agent (person(s) designed the remedy), if requested.

A list of suggested items to be covered at the conference includes, but is not limited to the following:

- Final Operation and Maintenance (O&M) Plan submission, if it has not been submitted already;
- Cleanup responsibilities;
- Demobilization activities;
- Security requirements for project transfer;
- Pre-final inspection schedule;
- Operator training.

The pre-final conference shall be documented by a designated person and conference minutes shall be transmitted to all parties in attendance by the Respondent(s).

3.4.3.2 Pre-final Inspection

Following the pre-final construction conference, a pre-final inspection of the project will be conducted. The pre-final inspection will be led by the Ohio EPA with assistance from the party with primary responsibility for construction inspection, if requested.

The pre-final inspection will consist of a walk-through inspection of the entire site. The completed site work will be inspected to determine whether the project is complete and consistent with the contract documents and the approved RD/RA Work Plan. Any outstanding deficient or incomplete construction items should be identified and noted during the inspection.

When the RA includes construction of a treatment system, the facility start-up and "shakedown" shall have been completed as part of the RA. "Shakedown" is considered to be the initial operational period following start-up during which adjustments are made to ensure that the performance standards for the system are reliably being achieved. The contractor shall have certified that the equipment has performed to meet

the purpose and intent of the contract specifications. Retesting shall have been successfully completed where deficiencies were revealed. Such shakedown may take several months. Determination of remedy effectiveness for other types of remedial actions will be based on the Performance Standard Verification Plan (PSVP).

If construction of major components of a remedial action is performed in distinct phases or under separate contracts due to the complex scope of the site remedy, it may be appropriate to conduct the pre-final inspections of those components separately. The approved RAIP should identify those projects and components, which should be handled in that manner.

Upon completion of the pre-final inspection, an inspection report shall be prepared by the Respondent(s) and submitted to Ohio EPA with the minutes from the pre-final conference. A copy of the report will be provided to all parties in attendance at the inspection. The report will outline the outstanding construction items, actions required to resolve those items, completion date for those items and a date for the final inspection. Ohio EPA will review the inspection report and notify the Respondent(s) of any disagreements with it.

3.4.3.3 Final Inspection

Within seven days following completion of any outstanding construction items, the Respondent(s) shall provide written notification to the Ohio EPA and schedule a final inspection. A final inspection will be conducted by the Ohio EPA with assistance from the party having primary responsibility for construction inspection, if requested.

The final inspection will consist of a walk-through inspection of the project site focusing on the outstanding construction items identified during the pre-final inspection. The Pre-final Inspection Report shall be used as a checklist. The contractor's demobilization activities shall have been completed, except for equipment and materials required to complete the outstanding construction items. If any items remain deficient or incomplete, the inspection shall be considered a pre-final inspection requiring another pre-final inspection report and final inspection.

As with the pre-final inspection, it may be appropriate to conduct final inspections of major components of a remedial action separately. Such projects and components should be identified in the approved Remedial Action Implementation Plan.

3.4.3.4 Construction Completion Report and Certification

Upon satisfactory completion of the final inspection, a Construction Completion Report shall be prepared by the Respondent(s) and submitted to the Ohio EPA within 30 days after the final inspection. The report shall include the following elements:

1) A brief description of the outstanding construction items from the pre-final inspection and an indication that the items were satisfactorily resolved;

2) A synopsis of the work defined in the approved RD/RA Work Plan and the Final Design and certification that this work was performed;

3) An explanation of any changes to the work defined in the approved RD/RA Work Plan and Final Design, including as-built drawings of the constructed RA facilities, and why the changes were necessary or beneficial for the project;

4) Certification that the constructed RA or component of the RA is operational and functional.

The construction completion report will be reviewed by the Ohio EPA. If the review indicates that corrections or amendments are necessary, then comments will be provided to the Respondent(s). The Respondent(s) shall submit a revised construction completion report based on Ohio EPA comments to the Ohio EPA within 30 days of receipt of those comments. Upon determination by the Ohio EPA that the report is acceptable, written notice of Ohio EPA's approval of the construction completion report will be provided to the Respondent(s).

3.4.4 Community Relations Support

The Respondent(s) shall provide support for Ohio EPA's community relations program during remedial action implementation as described in Section 3.3.5.

3.5 TASK V: FIVE-YEAR REVIEWS

At sites where contaminants will remain at levels that will not permit unrestricted use of the site, a review will be conducted no less frequently than once every five years to ensure that the remedy continues to be protective of human health and the environment. This is known as the "five-year review". The Respondent(s) shall complete Five-Year Review Reports no less often than every five years after the initiation of the remedial action or until contaminant levels allow for unrestricted use of the site. Further guidance for performing five-year review work tasks may be found in

the U.S. EPA OSWER Directive 9355.7-02, Structure and Components of Five-Year Reviews.

The more specific purpose of the reviews is two-fold: (1) to confirm that the remedial action as specified in the Decision Document and as implemented continues to be effective in protecting human health and the environment (e.g., the remedy is operating and functioning as designed, institutional controls are in place and are protective); and (2) to evaluate whether original cleanup levels remain protective of human health and the environment. A further objective is to evaluate the scope of operation and maintenance, the frequency of repairs, changes in monitoring indicators, costs at the site, and how each of these relates to protectiveness.

Fifteen months prior to the due date for completion of a five-year review, the Respondent(s) shall meet with Ohio EPA to discuss the requirements of the five-year review. The review must be completed within five years following the initiation of the remedial action. The scope and level of review will depend on conditions at the site. The scoping effort should include a determination by the Site Coordinator and Respondent(s) as to whether available monitoring data and other documentation will be sufficient to perform the five-year review or whether a field sampling effort will be a necessary component of the review. Within three months of the meeting, the Respondent(s) shall develop and submit a workplan to Ohio EPA that shall describe, at a minimum, the following activities and documentation:

1. Document Review
    a. Background Information
        1. Decision Document
        2. Decision Document Summary
        3. Administrative or Judicial Order for RD/RA
        4. Completion of Remedial Action Report
    b. Design Review
    c. Maintenance and Monitoring
        1. O&M Manual
        2. O&M Reports
        3. Groundwater Monitoring Plan
        4. Monitoring Data and Information
2. Standards Review
    a. Specific performance standards required by Decision Document
    b. Changing Standards
        1. Laws and Regulations applicable to conditions and activities at the site
    c. Risk Assessment
        1. As summarized in the Decision Document
        2. Review for changes in exposure pathways not previously

evaluated

3. Interviews
   a. Background Information
      1. Previous Staff Management
      2. Nearest Neighbors, Respondent(s)
   b. Local Considerations
      1. State Contacts
      2. Local Government Contacts
   c. Operational Problems
      1. Plant Superintendent
      2. O&M Contractors

4. Site Inspection/Technology Review
   a. Performance and Compliance
      1. Visual Inspection
   b. Offsite Considerations
   c. Recommendations

5. Report
   a. Background
      1. Introduction
      2. Remedial Objectives
      3. Review of Applicable Laws and Regulations
   b. Site Conditions
      1. Summary of Site Visit
      2. Areas of Noncompliance
   c. Risk Assessment
   d. Recommendations
      1. Technology Recommendations
      2. Statement on Protectiveness
      3. Timing and Scope of Next Review
      4. Implementation Requirements

If sampling and analysis of environmental samples is required under the five-year review, the Respondent(s) are required to prepare and submit with the workplan other supporting plans. Supporting plans may include a Quality Assurance Project Plan, Field Sampling Plan and Health and Safety Plan. The purpose and content of these supporting plans are discussed in Section 4 of this SOW. The Five-Year Review Workplan must be reviewed and approved by the Ohio EPA prior to initiation of field activities or proceeding with the five-year review.

The Five-Year Review Report will be reviewed by the Ohio EPA. If the Ohio EPA review indicates that corrections or amendments are necessary, then comments will be provided to the Respondent(s). The Respondent(s) shall submit a revised Five-Year

Review Report based on Ohio EPA comments to the Ohio EPA within 30 days of receipt of those comments.

3.6 TASK VI: OPERATION AND MAINTENANCE/PERFORMANCE MONITORING

The Respondent(s) shall implement performance monitoring and operation and maintenance procedures as required by the approved Performance Standard Verification Plan and approved Operation and Monitoring (O&M) Plan for the RA once it is demonstrated that the RA components are operational and functional.

3.6.1 Reporting During Operation and Maintenance

3.6.1.1 Operation and Maintenance Sampling and Analysis Data

Unless otherwise specified in the approved O&M Plan, sampling, analysis, and system performance data for any treatment system or other engineering systems required to be monitored during the O&M Phase shall be submitted by the Respondent(s) to the Ohio EPA on a monthly basis. These monthly submittals will form the basis for the annual progress report described below in Section 3.6.1.2

3.6.1.2 Progress Reports During Operation and Maintenance

The Respondent(s) shall prepare and submit annual progress reports during the operation and maintenance/performance monitoring phase of the RA. When appropriate, the RD/RA Work Plan shall specify progress reports during O&M to be submitted more frequently.

The O&M progress reports shall contain the same information as required for the monthly progress reports for the RD and RA construction phases, as specified in Section 3.6.1 of this SOW. It shall also include an evaluation of the effectiveness of any treatment and engineering systems in meeting the cleanup standards, performance standards and other goals of the RA as defined in the Orders, this SOW, the RD/RA Work Plan and the approved Final Design.

3.6.2 Completion of Remedial Action Report

At the completion of the remedial action, the Respondent(s) shall submit a Completion of Remedial Action Report to the Ohio EPA. The RA shall be considered complete when the all of the goals, performance standards and cleanup standards for the RA as stated in the Decision Document, this SOW, and the approved Final Design (including changes approved during construction) have been met. The report shall document that the project is consistent with the

design specifications, and that the RA was performed to meet or exceed all required goals, cleanup standards and performance standards. The report shall include, but not be limited to the following elements:

1) Synopsis of the remedial action and certification of the design and construction;
2) Listing of the cleanup and performance standards as established in the Decision Document and the Orders, any amendments to those standards with an explanation for adopting the amendments;
3) Summary and explanation of any changes to the approved plans and specifications. An explanation of why the changes were necessary should be included and, where necessary, Ohio EPA approval of the changes should be documented;
4) Summary of operation of treatment systems including monitoring data, indicating that the remedial action met or exceeded the performance standards or cleanup criteria;
5) Explanation of any monitoring and maintenance activities to be undertaken at the site in the future as outlined in Section 3.0 of this RD/RA SOW.

3.7 TASK VII: REPORTING REQUIREMENTS

The Respondent(s) shall prepare and submit work plans, design plans, specifications, and reports as set forth in Tasks I through V of this SOW to document the design, construction, operation, maintenance, and performance monitoring of the remedial action. Monthly progress reports shall be prepared, as described below, to enable the Ohio EPA to track project progress.

3.7.1 Monthly Progress Reports during RD and RA Construction

The Respondent(s) shall at a minimum provide the Ohio EPA with monthly progress reports during the design and construction phases of the remedial action containing the information listed below. When appropriate, the RD/RA Work Plan shall specify progress reports to be submitted more frequently.

1) A description of the work performed during the reporting period and estimate of the percentage of the RD/RA completed
2) Summaries of all findings and sampling during the reporting period
3) Summaries of all changes made in the RD/RA during the reporting period, indicating consultation with Ohio EPA and approval by the Ohio EPA of those changes, when necessary
4) Summaries of all contacts with representatives of the local community, public interest groups or government agencies during the reporting period
5) Summaries of all problems or potential problems encountered during the reporting period, including those which delay or threaten to delay

completion of project milestones with respect to the approved work plan schedule or RAIP schedule

6) Summaries of actions taken and being taken to rectify problems
7) Summaries of actions taken to achieve and maintain cleanup standards and performance standards
8) Changes in personnel during the reporting period
9) Projected work for the next reporting period
10) Copies of daily reports, inspection reports, sampling data, laboratory/ monitoring data, etc.

3.7.2 Summary of Reports and Submittals

A summary of the information reporting requirements contained in this RD/RA SOW is presented below:

- **Draft RD/RA Work Plan**
  - Health and Safety Plan (HSP)
  - Regulatory Compliance Plan
- **Final RD/RA Work Plan**
  - HSP
  - Regulatory Compliance Plan
- **Draft Pre-Design Studies Plan**
  - Quality Assurance Project Plan (QAPP)
  - Field Sampling Plan (FSP)
- **Final Pre-Design Studies Plan**
  - QAPP
  - FSP
- **Pre-Design Studies Reports** - Draft
- **Preliminary Design Documents**
- **Pre-Design Studies Reports** - Final
- **Intermediate Design Documents**
  - Draft Construction Quality Assurance Plan (CQAP)
  - Draft Performance Standard Verification Plan (PSVP)
  - Draft O & M Plan
  - Health and Safety Plan
- **Pre-final Design Documents**
  - CQAP
  - PSVP
  - O & M Plan
  - Draft Remedial Action Implementation Plan (RAIP)
  - Health and Safety Plan
- **Final Design Documents**

CQAP
PSVP
O & M Plan
Draft RAIP
Health and Safety Plan

- **Preconstruction Inspection and Conference Report**
- **Monthly Progress Reports During RD/RA**
- **Notification of Preliminary Completion of Construction**
- **Final O & M Plan**
- **Pre-final Inspection Report**
- **Notification for Final Inspection**
- **Construction Completion Report**
- **O & M Sampling Data**
- **Progress Reports during O&M/Performance Monitoring period**
- **Completion of Remedial Action Report**
- **Five-Year Review Workplan**
- **Five-Year Review Report**

4.0 CONTENT OF SUPPORTING PLANS

The documents listed in this section shall be prepared and submitted as outlined in Section 3.0 of this SOW to support the activities necessary to design and fully implement the RA. These supporting documents include a Quality Assurance Project Plan (QAPP), a Field Sampling Plan (FSP), a Health and Safety Plan (HSP), a Construction Quality Assurance Plan (CQAP) and a Performance Standard Verification Plan (PSVP). The following sections describe the required contents of each of these supporting documents.

4.1 QUALITY ASSURANCE PROJECT PLAN

The Respondent(s) shall prepare a site-specific Quality Assurance Project Plan (QAPP) to cover sample analysis and data handling based on guidance provided by the Ohio EPA. Refer to the list of Ohio EPA and U.S. EPA guidance documents in Appendix B attached to the Orders.

A QAPP shall be developed for any sampling and analysis activities to be conducted as predesign studies and submitted with the Pre-Design Studies Plan for Ohio EPA review and approval.

During the remedial design phase the Respondent(s) shall review all remedial design information and modify or amend the QAPP developed for the Pre-Design Studies Plan, as necessary, to address the sampling and analysis activities to be conducted during

implementation of the Remedial Action, including activities covered by the PSVP and O&M Plan. An amended QAPP shall be submitted with the Intermediate Design documents for review and comment by Ohio EPA. A final Quality Assurance Project Plan, which incorporates comments made by the Ohio EPA, shall be submitted for approval with the Final Design documents. Upon agreement of the Site Coordinator, the Respondent(s) may submit only the amended portions of the QAPP developed for the PDSP with the Intermediate, Pre-Final and Final Design documents.

The Respondent(s) shall schedule and attend a pre-QAPP meeting with representatives of Ohio EPA to discuss the scope and format of the QAPP. For sites where the Site Coordinator and Project Manager agree that a pre-QAPP meeting is not needed, this meeting may be omitted. The QAPP shall, at a minimum, include:

1. Data Collection Strategy - The strategy section of the QAPP shall include but not be limited to the following:
   a. Description of the types and intended uses for the data, relevance to remediation or restoration goals, and the necessary level of precision, accuracy, and statistical validity for these intended uses;
   b. Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
   c. Description of the rationale used to assure that the data accurately and precisely represent a characteristic of a population, variation of physical or chemical parameters throughout the Site, a process condition or an environmental condition. Factors which shall be considered and discussed include, but are not limited to:
      i) Environmental conditions at the time of sampling;
      ii) Sampling design (including number, location and distribution);
      iii) Representativeness of selected media, exposure pathways, or receptors; and
      iv) Representativeness of selected analytical parameters.
      v) Representativeness of testing procedures and conditions; and
      vi) Independence of background or baseline from site influences.
   d. Description of the measures to be taken to assure that the following data sets can be compared quantitatively or qualitatively to each other:
      i) RD/RA data collected by the Respondent over some time period;
      ii) RD/RA data generated by an outside laboratory or consultant employed by the Respondent versus data collected by the Respondent, and;
      iii) Data generated by separate consultants or laboratories over

some time period not necessarily related to the RD/RA effort.

iv) Data generated by Ohio EPA or by an outside laboratory or consultant employed by Ohio EPA;

e. Details relating to the schedule and information to be provided in quality assurance reports. These reports should include but not be limited to:

i) Periodic assessment of measurement data accuracy, precision and completeness;
ii) Results of performance audits;
iii) Results of system audits;
iv) Significant quality assurance problems and recommended solutions; and
v) Resolutions of previously stated problems.

2. Sample Analysis - The Sample Analysis section of the Quality Assurance Project Plan shall specify the following:

a. Chain-of-custody procedures, including:

i) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment and verify the data entered onto the sample custody records;
ii) Provision for a laboratory sample custody log consisting of serially numbered lab-tracking report sheets; and
iii) Specification of laboratory sample custody procedures for sample handling, storage and disbursement for analysis.

b. Sample storage procedures and storage times;
c. Sample preparation methods;
d. Analytical procedures, including:

i) Scope and application of the procedure;
ii) Sample matrix;
iii) Potential interferences;
iv) Precision and accuracy of the methodology;
v) Method detection limits;
vi) Special analytical services required to ensure contract required detection limits do not exceed known toxicity criteria; and
vii) Verification and reporting of tentatively identified compounds.

e. Calibration procedures and frequency;
f. Data reduction, validation and reporting;
g. Internal quality control checks, laboratory performance and systems audits and frequency, including:

i) Method blank(s);
ii) Laboratory control sample(s);

iii) Calibration check sample(s);
iv) Replicate sample(s);
v) Matrix-spiked sample(s);
vi) "Blind" quality control sample(s);
vii) Control charts;
viii) Surrogate samples;
ix) Zero and span gases; and
x) Reagent quality control checks.

h. Preventative maintenance procedures and schedules;
i. Corrective action (for laboratory problems); and
j. Turnaround time.

3. Modeling - The Modeling section of the Quality Assurance Project Plan shall apply to all models used to predict or describe fate, transport or transformation of contaminants in the environment and shall discuss:
   a. Model assumptions and operating conditions;
   b. Input parameters; and
   c. Verification and calibration procedures.

4. In Situ or Laboratory Toxicity Tests - The Toxicity Test section of the Quality Assurance Project Plan shall apply to all tests or bioassays used to predict or describe impacts of contaminants on a population, community, or ecosystem level.

5. Data Record - The QAPP shall also provide the format to be used to present the raw data and the conclusions of the investigation, as described in a, b, and c below:
   a. The data record shall include the following:
      i) Unique sample or field measurement code;
      ii) Sampling or field measurement location and sample or measurement type;
      iii) Sampling or field measurement raw data;
      iv) Laboratory analysis ID number;
      v) Property or component measured; and
      vi) Result of analysis (e.g., concentration).
   b. Tabular Displays - The following data shall be presented in tabular displays:
      i) Unsorted (raw) data;
      ii) Results for each medium, organism, or for each constituent measured;
      iii) Data reduction for statistical analysis;
      iv) Sorting of data by potential stratification factors (e.g., location, soil layer, topography, vegetation form);
      v) Summary data (i.e., mean, standard deviation, min/max

values, and sample number); and

vi) Comparisons with background or reference data.

c. Graphical Displays - The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

i) Display sampling locations and sampling grid;

ii) Indicate boundaries of sampling area, and areas where more data are required;

iii) Display levels of contamination at each sampling location or location from which organism was taken;

iv) Display geographical extent of contamination;

v) Display contamination levels, averages and maxima;

vi) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters;

vii) Indicate features affecting intramedia transport and show potential receptors;

viii) Compare nature and extent of contamination with results of ecological or biological sampling or measurements; and

ix) Display comparisons with background or reference analyses or measurements.

4.2 FIELD SAMPLING PLAN

1. Sampling - The Sampling section of the Field Sampling Plan shall discuss:

a. Sufficient preliminary sampling to ensure the proper planning of items b. through o. below;

b. Selecting appropriate sampling locations, depths, vegetation strata, organism age, etc. and documenting relevance of sample for intended biological toxicity tests or analyses;

c. Providing a sufficient number of samples to meet statistical or other data useability objectives;

d. Measuring all necessary ancillary data such as ambient conditions, baseline monitoring, etc.;

e. Determining environmental conditions under which sampling should be conducted;

f. Determining which media, pathways, or receptors are to be sampled (e.g., ground water, air, soil, sediment, biota, etc.);

g. Determining which parameters are to be measured and where;

h. Selecting the frequency and length of sampling period;

i. Selecting the sample design (e.g., composites, grabs, random, repeated, etc.);

j. Selecting the number, location, media or organisms for determining background conditions or reference conditions (refer to Risk

Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A), Interim Final, EPA/540/1-89/002, December 1989);

k. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;

l. Documenting field sampling operations and procedures, including;
   i) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters and adsorbing reagents);
   ii) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
   iii) Documentation of specific sample preservation method;
   iv) Calibration of field devices;
   v) Collection of replicate and field duplicate samples;
   vi) Submission of field-biased and equipment blanks, where appropriate;
   vii) Potential interferences present at the site or facility;
   viii) Construction materials and techniques associated with monitoring wells and piezometers;
   ix) Field equipment listing and sample containers;
   x) Sampling order; and
   xi) Decontamination procedures.

m. Selecting appropriate sample containers;

n. Sample preservation; and

o. Chain-of-custody, including:
   i) Standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment;
   ii) Sample sealing, storing and shipping procedures to protect the integrity of the sample; and,
   iii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

2. Field Measurements - The Field Measurements section of the Field Sampling Plan shall discuss:

a. Selecting appropriate field measurement locations, depths, organism age etc.;

b. Providing a sufficient number of field measurements that meet statistical or data useability objectives;

c. Measuring all necessary ancillary data such as ambient or baseline environmental conditions;

d. Determining conditions under which field measurement should be conducted;

e. Determining which media, pathways, or receptors are to be addressed by appropriate field measurements (e.g., ground water,

air, soil, sediment, biota, etc.);

f. Determining which physical, chemical, or biological parameters are to be measured and where;

g. Selecting the frequency and duration of field measurement; and

h. Documenting field measurement operations and procedures, including:

   i) Procedures and forms for recording raw data and the exact location, time and Site specific considerations associated with the data acquisition;

   ii) Calibration of field devices;

   iii) Collection of replicate measurements;

   iv) Submission of field-biased blanks, where appropriate;

   v) Potential interferences present at the Site;

   vi) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;

   vii) Field equipment listing;

   viii) Order in which field measurements were made; and

   ix) Decontamination procedures; and

i) Selecting the number, location, media, and organisms for determining background or reference conditions.

4.3 SITE HEALTH AND SAFETY PLAN

The Respondent(s) shall submit a Health and Safety Plan (HSP) to the Ohio EPA with the RD/RA Work Plan for any on-site activities taking place during the design phase. The Respondent(s) shall review the remedial design information and modify the HSP developed for the RD/RA Work Plan, as necessary, to address the activities to be conducted on the site during implementation of the Remedial Action. It shall be designed to protect on-site personnel and area residents from physical, chemical and other hazards posed by the construction, operation and maintenance activities of the Remedial Action.

The Respondent(s) shall prepare a site HSP which is designed to protect on-site personnel and area residents from physical, chemical and all other hazards posed by RD/RA activities. The HSP shall address the following topics:

1. Major elements of the Health and Safety Plan shall include:

   a. Facility or site description including availability of resources such as roads, water supply, electricity and telephone service;

   b. Description of the known hazards and an evaluation of the risks associated with the incident and with each activity conducted;

   c. Listing of key personnel (including the site safety and health officer) and alternates responsible for site safety, response operations, and for protection of public health;

d. Delineation of work area, including a map;
e. Description of levels of protection to be worn by personnel in the work area;
f. Description of the medical monitoring program for on-site responders;
g. Description of standard operating procedures established to assure the proper use and maintenance of personal protective equipment;
h. The establishment of procedures to control site access;
i. Description of decontamination procedures for personnel and equipment;
j. Establishment of site emergency procedures;
k. Availability of emergency medical care for injuries and toxicological problems;
l. Description of requirements for an environmental monitoring program. (This should include a description of the frequency and type of air and personnel monitoring, environmental sampling techniques and a description of the calibration and maintenance of the instrumentation used.);
m. Specification of any routine and special training required for responders; and
n. Establishment of procedures for protecting workers from weather related problems.

2. The Health and Safety Plan shall be consistent with:
   a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
   b. CERCLA Sections 104(f) and 111(c)(6)
   c. EPA Order 1440.3 -- Respiratory Protection;
   d. EPA Order 1440.2 -- Health and Safety Requirements for Employees Engaged in Field Activities;
   e. EPA Occupational Health and Safety Manual;
   f. EPA Interim Standard Operating Safety Procedures and other EPA guidance as developed by EPA;
   g. OSHA regulations particularly in 29 CFR 1910 and 1926;
   h. State and local regulations; and
   i. Site or facility conditions.

4.4 CONSTRUCTION QUALITY ASSURANCE PLAN

The Respondent(s) shall develop a Construction Quality Assurance Plan (CQAP) based on the plans and specifications and performance standards for the RA. The CQAP is a site specific document that shall specify procedures to ensure that the completed remedial action work meets or exceeds all design criteria and specifications. A draft CQAP shall be submitted with the Intermediate Design submittal for review and

comment by the Ohio EPA. Subsequent drafts shall be submitted with the Pre-final and Final Design submittals that incorporate comments made by the Ohio EPA. Certain aspects of the CQAP, for example personnel names and qualifications, may not be known at the time of design approval. A complete and final CQAP shall be submitted to Ohio EPA for approval prior to the start of construction. At a minimum, the CQAP shall address the elements listed below.

4.4.1 Responsibility and Authority

The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the construction of the remedial action(s) shall be described fully in the CQAP. The Respondent(s) shall provide a copy of the approved CQAP to each organization with responsibility and authority for implementing the CQAP. The Respondent(s) shall also identify a CQA officer and the necessary supporting inspection staff.

4.4.2 Construction Quality Assurance Personnel Qualifications

The qualifications of the Construction Quality Assurance officer and supporting inspection personnel shall be presented in the CQAP to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

4.4.3 Inspection Activities

The observations and tests that will be used to monitor the construction and/or installation of the components of the remedial action shall be described in the CQAP. The plan shall include scope and frequency of each type of inspection. Inspections shall verify compliance with the design, applicable requirements of state and federal law and performance standards. Inspections shall also ensure compliance with all health and safety standards and procedures. The CQAP shall include provisions for conducting the preconstruction, pre-final and final inspections and associated meetings as described in Section 5.4 of this SOW.

4.4.4 Sampling Requirements

The sampling activities necessary to ensure that the design specifications and performance standards are achieved shall be presented in the CQAP. The description of these activities shall include sample sizes, sample locations, frequency of sampling, testing to be performed, acceptance and rejection criteria, and plans for correcting problems as addressed in the design specifications.

4.4.5 Documentation

Reporting requirements for CQA activities shall be described in detail in the CQAP. This shall include such items as daily summary reports, meeting reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports and final documentation. Provisions for the storage of all records shall be presented in the CQAP.

4.5 PERFORMANCE STANDARD VERIFICATION PLAN

A Performance Standard Verification Plan (PSVP) shall be prepared to consolidate information for required testing, sampling and analyses to ensure that both short-term and longterm performance standards for the RA are met. Performance standards may include clean-up standards for contaminated environmental media as well as the measurement of the effectiveness of engineering controls or other controls used to control migration of or exposure to contaminants. For example, the containment of a plume of contaminated ground water by pumping wells would be a performance standard requiring verification. The PSVP should describe the measurements to be taken, such as water levels in monitoring wells and piezometers, along with any analyses to be conducted on the data obtained, such as ground water modeling, to verify that the plume is contained. The PSVP shall include a FSP and a QAPP for any sampling and analyses to be conducted.

The Draft PSVP shall be submitted with the Intermediate Design for review and comment by the Ohio EPA. The final PSVP, which fully addresses comments made by the Ohio EPA must be submitted with and approved as part of the Final Design.

4.6 OPERATION AND MAINTENANCE PLAN

The Respondent(s) shall prepare an Operation and Maintenance Plan (O&M Plan) to cover long term operation and maintenance of the RA. Operation and maintenance for all components of the Remedial Action, shall begin after it is demonstrated that those components are operational and functional. The plan, at a minimum, shall be composed of the elements listed below.

1. Normal Operation and Maintenance
   a. Description of tasks for operation
   b. Description of tasks for maintenance
   c. Description of prescribed treatment or operating conditions
   d. Schedules showing the frequency of each O&M task

2. Potential Operating Problems
   a. Description and analysis of potential operating problems
   b. Sources of information regarding potential operating problems
   c. Description of means of detecting problems in the operating systems

d. Common remedies for operating problems

3. Routine Monitoring and Laboratory Testing
   a. Description of monitoring tasks
   b. Description of required laboratory tests and interpretation of test results
   c. Required QA/QC procedures to be followed
   d. Schedule of monitoring frequency and provisions to discontinue, if appropriate

   Note: Information on monitoring and testing that is presented in the PSVP should be referenced, as appropriate, but should not be duplicated in the O&M Plan.

4. Alternative O&M
   a. Description of alternate procedures to prevent undue hazard, should systems fail
   b. Analysis of the vulnerability and additional resources requirements should a failure occur

5. Safety Plan
   a. Description of safety procedures, necessary equipment, etc. for site personnel
   b. Description of safety tasks required in the event of systems failure (may be linked to the Site Safety Plan developed for the RD/RA)

6. Equipment
   a. Description of equipment necessary to the O&M Plan
   b. Description of installation of monitoring components
   c. Description of maintenance of site equipment
   d. Replacement schedule for equipment and installed components

7. Annual O&M Budget
   a. Costs for personnel
   b. Costs for preventative and corrective maintenance
   c. Costs of equipment and supplies, etc.
   d. Costs of any contractual obligations (e.g., lab expenses)
   e. Costs of operation (e.g., energy, other utilities, etc.)

8. Records and Reporting Mechanisms Required
   a. Daily operating logs
   b. Laboratory records
   c. Records for operating costs
   d. Mechanism for reporting emergencies

e. Personnel and maintenance records
f. Monthly/semi-annual reports to Ohio EPA

The Respondent(s) shall submit a draft O&M Plan to the Ohio EPA for review and comment with the Intermediate Design submittal. Subsequent drafts of the O&M Plan shall be submitted with the Pre-final and Final Design submittals, which reflect the refined plans and specifications of those submittals and any comments made by the Ohio EPA. The final O&M Plan shall be submitted by the Respondent(s) prior to or at the completion of construction of the remedial action and shall incorporate any modifications or corrections required by the Ohio EPA.

Attachment C

List of Relevant Guidance Documents

APPENDIX C

LIST OF GUIDANCE DOCUMENTS AND REFERENCES FOR USE WITH OHIO EPA DERR REMEDIAL RESPONSE PROGRAM REMEDIAL DESIGN/REMEDIAL ACTION STATEMENT OF WORK AND ORDERS

Statement of Purpose and Use of This Guidance Document List:
The purpose of this list of Ohio EPA and U.S. EPA policies, directives and guidance documents is to provide a reference of the primary documents which provide direction and guidance for designing and implementing selected remedial actions at Remedial Response sites. *The listed documents incorporate by reference any documents listed therein*. Certain sites may have contaminants or conditions which are not fully addressed by the documents in this list. There is an evolving body of policy directives, guidance and research documentation which should be used, as needed, to address circumstances not encompassed by the documents in this list. For sites where activities are conducted in response to an administrative or judicial order, this list will be an attachment to the order and will govern the work conducted. When entering into or issuing an order for any site, Ohio EPA reserves the right to modify this list to fully address the site conditions.

Analytical Methods

Compendium of Methods for Determination of Toxic Organic Compounds in Ambient Air second edition, Compendium Method TO-14A, EPA/625/R-96/010b, U.S. EPA, January 1999. See also: Air Toxics – Monitoring Methods.

SW 846, Test Methods for Evaluating Solid Waste, 3rd Edition and updates (online), originally dated November 1986.

Standard Methods for the Examination of Water and Waste Water, American Public Health Association, 18th Edition 1992, and recent editions (online).

U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, U.S. EPA, EPA-540-R-04-004, OSWER 9240.1-45, October 2004.

U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, U.S. EPA, EPA-540-R-08-01, June 2008.

ARARs

Applicable or Relevant and Appropriate Requirements (ARARS), U.S. EPA (online).

ARARs Table, Ohio EPA DERR, Remedial Response Program. [This is a list of generic ARARs that is periodically updated and subject to change.]

CERCLA Compliance with Other Laws Manual - Part I and Part 2, OSWER Directive 9234.1-01, EPA/540/G-89/006, August 1988, and OSWER Directive 9234.1-02, EPA/540/G-89/009, August 1989.

Ohio EPA Rules (online).

Use of Applicable or Relevant and Appropriate Requirements (ARARs) in the Ohio EPA Remedial Response Program, Ohio EPA DERR, September 2003.

Attainment of Cleanup Goals

Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media, U.S. EPA, EPA 230/02-89-042, February 1989.

Methods for Evaluating the Attainment of Cleanup Standards, Volume 2: Ground Water, U.S. EPA, EPA 230-R-92-014, July 1992.

Methods for Evaluating the Attainment of Cleanup Standards, Volume 3: Reference-Based Standards for Soils and Solid Media, U.S. EPA, EPA 230-R-94-004, December 1992.

Background Guidance

Use of Background for Remedial Response Sites, Technical Decision Compendium, Ohio EPA DERR, August 2009.

Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites, U.S. EPA, EPA 540-R-01-003 OSWER 9285.7-41, September 2002.

Role of Background in the CERCLA Cleanup Program, OSWER 9285.6-07P, April 2002.

Data Quality Objectives

Data Quality Evaluation Statistical Toolbox (Data QUEST) Users Guide, U.S. EPA ORD, EPA/600/R-96/085 (EPA QA/G-9D), December 1997. No longer available. For a link to other free software for performing data quality assessment, see Quality-Related Resources – Software.

Data Quality Objectives Decision Error Feasibility Trials Software (DEFT) – Users Guide, U.S. EPA, EPA QA/G-4D, EPA/240/B-01/007, September 2001.

Data Quality Objectives Process for Hazardous Waste Site Investigations, U.S. EPA, EPA/600/R-00/007 (EPA QA/G-4HW), January 2000.

Data Quality Objectives Process for Superfund, Interim Final Guidance, OSWER Directive 9355.9-01, EPA540-R-93-071, September 1993.

Data Quality Objectives Process Summary, DERR-00-DI-32 Ohio EPA DERR Remedial Response Program, January 2002.

Guidance for Data Quality Assessment: Practical Methods for Data Analysis, U.S. EPA, EPA/600/R-96/084 (EPA QA/G-9), QAOO Update, July 2000.

Guidance on Systematic Planning Using the Data Quality Objectives Process, U.S. EPA, EPA QA/G-4, EPA/240/B-06/001, February 2006.

Health and Safety Plan

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices, ISBN: 1-882417-46-1, 2002.

NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, DHHS (NIOSH) Publication No. 85-115, October 1985.

NIOSH Pocket Guide to Chemical Hazards, National Institute for Occupational Safety and Health (online, last updated November 2010).

OSHA Regulations particularly in 29 CFR 1910 and 1926

OSHA Regulation 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response; U.S. Department of Labor (OSHA).

OSHA Regulation 29 CFR 1910.134, Respiratory Protection Standard;

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Disclaimer: Please note that web links are not maintained.

March 28, 2012 updates

Attachment D

Environmental Covenant Template

Ohio EPA's Remedial Response Program
Environmental Covenant Template and Guidance

To be recorded with Deed Records - ORC § 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by *[name all Owners of the Property* ("Owner[s]") and *any Holders of the Property ("Holders")]* and the Ohio Environmental Protection Agency ("Ohio EPA") pursuant to Ohio Revised Code ("ORC") §§ 5301.80 to 5301.92 for the purpose of subjecting the Property described in section 2 herein ("the Property"), to the activity and use limitations set forth herein.

[DERR's Background Section: This Environmental Covenant concerns [*a portion of*] an area known as the _____Site. In a Decision Document dated *[Month, Day, Year]*, the Director of Ohio EPA selected a remedial action for the _____ Site requiring, among other things, *[add Site specific information here about components of remedy]*, and deed restrictions on a portion of the Site. *Add sentence referencing Parties' agreement in RD/RA ORDER, including date of journalization. Describe the "environmental response project," see ORC § 5301.80(E), and identify the name and location of the administrative record for the project. See ORC § 5301.82(A)(8). See also ORC § 5301.82(B)(2) re: description of contamination on or underlying the property and its remedy, including the contaminants of concern, the pathways of exposure, limits on exposure, and the location and extent of the contamination.]*

Now therefore, Owner[*s] [name all Owners of the Property and add other "Holders," if any]* and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns *[an approximately acre tract of real property]; [parcels currently numbered _____]* owned by [Owner, located at [*Address of Owner*], in _____ [*County*], Ohio, and more particularly described in [*Exhibit #*] attached hereto and hereby incorporated by reference herein ("Property").

3. Owner[*s*]. This Property is owned by [Owner Name] _____ ("Owner[*s*]"),who resides or is located] at _____ _____, _____, _____.

4. Holder[s]. Pursuant to ORC § 5301.81, the holder of this Environmental

Covenant ("Holder") is the Owner[*s*] listed above [and, if applicable, [Holder Name] who resides or is located at _____ _____, _____].

5. Activity and Use Limitations. As part of the remedial action described in the Decision Document Owner[*s*] hereby impose[*s*] and agree[*s*] to comply with the following activity and use limitations:

[Determine the use restrictions (a.k.a. activity and use limitations or AULs) appropriate for the Property. Several types of restrictions may be appropriate as part of a remedial action, interim action, or closure plan where cleanup to an unrestricted land use is infeasible. These include: land use restrictions; ground water restrictions; disturbance restrictions; and construction restrictions. Each type of restriction must be considered on a site-specific basis to determine which restriction or combination of restrictions is suitable for the particular circumstances of the site or facility. Evaluate the possible use restrictions based on the nature of contamination, the type of affected media and the potential exposures. The restriction categories include: land use, ground water, disturbance and construction. As a general rule, avoid imposing through AULs obligations or required actions without first considering if these are better implemented through an operation and maintenance plan or through direct terms in the RD/RA order. Note: in some instances it is desirable to impose an obligation an O&M Plan or RD/RA order, as well as in the environmental covenant if the obligation is one that you want to run with the land.

A. *Insert appropriate* ***Land Use Restrictions*** *(e.g., to limit duration and frequency of human exposure of surficial soils, surface water, sediments.)*

Examples:

i. Commercial or Industrial Land Use Only. The Property is hereby restricted to commercial or industrial land use only.

Commercial land use land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are customers, patrons or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of commercial land uses include, but are not limited to warehouses; building supply facilities; retail gasoline stations; automobile service stations; automobile dealerships; retail warehouses; repair and service establishments for appliances and other goods; professional offices; banks and credit unions; office buildings; retail businesses selling food or merchandise; golf courses; hospitals and clinics; religious institutions; hotels; motels; and parking facilities.

Industrial land use is land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of industrial land uses include, but are not limited to: lumberyards; power plants; manufacturing facilities such as metalworking shops, plating shops, blast furnaces, coke plants, oil refineries, brick factories, chemical plants and plastics plants; assembly plants; non-public airport area; limited access highways; railroad switching yards; and marine port facilities.

ii. *Commercial/Recreational Land Use Only. The Property shall be used only for commercial/recreational land use, including, but not limited to, managed green space, landscaped areas, golf course sports fields and recreation-related commercial structures and other commercial structures;*

Note: Depending on the result of the risk assessment, you may want to also specify what types of structures are not appropriate (e.g., residences, child care, etc.)

B. *Insert appropriate* ***Ground Water Restrictions*** *(e.g., to limit exposure to contaminated ground water through purposeful extraction or use of ground water.)*

Examples:

i. <u>Prohibition against Groundwater Extraction.</u> Groundwater located at or underlying the Property shall not be extracted or used for any purpose, potable or otherwise, except for investigation, monitoring or remediation of the groundwater in conjunction with construction or excavation activities or maintenance of subsurface utilities;

[It may be possible to delete "or otherwise" to allow for non-potable uses of groundwater, such as dewatering or industrial cooling. It is likely a risk assessment evaluation would be required to consider the potential exposure risks before this change could be allowed. Further, consider expressing the allowed non-potable uses in the restriction as an affirmative statement.]

ii. <u>Prohibition against Groundwater Well Construction</u>. No new ground-water wells for potable use may be constructed at the Property.

C. *Insert appropriate* ***Disturbance Restrictions*** *(e.g., to protect in-place remedial systems, to avoid exposures caused by any mixing of*

contaminated subsurface soils with "clean" surface soils, and to avoid contact with subsurface contamination during excavation.)

Examples:

i. *Restriction against Excavation*. *Excavation at the Property shall not be undertaken at depths greater than ___ feet from the ground surface.*

[When using this restriction, consideration must be given to potential future uses of the Property, construction requirements, location of the Contaminants on the Property and the practical implementation of the restriction. The depth used should create a reliable and enforceable restriction, e.g., 6 feet or greater may avoid restricting access to subsurface utilities.]

ii. *[Alternative – use in limited situations] Prohibition against Excavation*. *Excavation is prohibited at depths below five (5) feet at the Property/[if an area smaller than the Site Property: "in the [describe] Area delineated in attachment A to this Environmental Covenant"] without implementation of an Ohio EPA approved Soil Management Plan (SMP) for the Property/[describe] Area.*

[This can be used at Sites that have or will need an Ohio EPA approved Soil Management Plan or another document equivalent to a Risk Management Plan and can also be applied to the entire Site or to just portions, as applicable. This ensures that future owners are aware of the need for Ohio EPA approval and the need for a SMP or other risk management document.]

iii. *Containment and Monitoring Systems.* *The Property shall not be used in a manner that damages the integrity of any remedial containment or monitoring systems at the Property.*

[This restriction is intended to compliment an operation and maintenance obligation contained in an O&M plan to support the Respondent's work at the Site. For example, the restriction would give notice to successor land owners that they should avoid causing damage to an installed system. However, this restriction may not be relied upon for maintenance of a remedial system (maintenance would be provided for under the O&M Plan). When relying on this restriction, consideration must be given to possible future uses of the Property, location of the current systems and whether the restriction would in fact be a helpful compliment to the O&M plan requirements.]

iv. A two foot point of compliance shall be maintained at the Property in accordance with the approved Operation and Maintenance Plan required to be submitted pursuant to the [Site]DFFOs.

D. *Insert appropriate* ***Construction Restrictions*** *(e.g., blocking or addressing the potential exposure to volatile emissions to indoor air from soil or ground water.)]*

Examples:

i.a. *Prohibition against Basements. No basement or other permanent subsurface or underground structure designed for routine human occupancy shall be constructed at the Property.*

Or

i.b. *Prohibition against Habitable Subsurface Features. The construction of habitable subsurface features (i.e., basements and crawl-spaces) is prohibited at the Property. This limitation shall not preclude construction of "slab-on-grade" structures, building foundations, utility corridors and utilities.*

[These restrictions are intended to prevent volatile emissions from contaminants to indoor air. Before relying on this restriction, consider the potential future uses of the Property and the practical implementation of the restriction; consider options for active remediation to avoid the restriction.]

ii. Prohibition against Construction. No permanent or temporary buildings shall be constructed at the Property, except for buildings used for [environmental] investigation, monitoring or remedial activities only.

[Before relying on this restriction, consider the potential future uses of the Property and construction needs, the location of the contamination or contaminants, and whether buildings could be used for any aspects of the Site investigation, monitoring or remedy. This restriction is intended to prevent volatile emissions from contamination or contaminants to indoor air. Therefore, consider how the buildings will be used and the frequency of the use. The language presumes the persons accessing the buildings are aware of the potential for emissions, and are trained to mitigate the risks from emissions. Consider remedial alternatives which avoid the restriction.]

If any event or action by or on behalf of a person who owns an interest in or holds an encumbrance on the Property, identified in paragraph 11 below, constitutes a breach of the activity and use limitations, Owner or Transferee shall notify Ohio EPA within [thirty (30)] days of becoming aware of the event or action, and shall remedy the breach of the activity and use limitations within [sixty (60)] days of becoming aware of the event or action, or such other time frame as may be agreed to by the Owner or Transferee and Ohio EPA.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owner[s], during the time that the Owner[s] owns the Property or any portion thereof, and upon all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

7. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA from exercising any authority under applicable law.

8. Rights of Access. Owner[s] hereby grant[s] to Ohio EPA's authorized representatives *[and any "Holders;" the local government, etc.; see ORC §§ 5301.82(A)(6) and 5301.91(A)]* the right of access to the Property for implementation or enforcement of this Environmental Covenant and shall require such access as a condition of any transfer of the Property or any portion thereof.

9. Compliance Reporting. Owner[s] or any Transferee shall submit to Ohio EPA *[local government, "Holders" other than Owner]* on *[an annual]* basis written documentation verifying that the activity and use limitations remain in place and are being complied with.

10. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED_____, 20__, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE COUNTY RECORDER ON _____, 20__, IN [DOCUMENT ____, *or* BOOK___, PAGE ____,]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS:[1]

Owner[*s*] or Transferee, if applicable, shall notify Ohio EPA *[and any "Holders" other than the Owner]* within [*ten (10)*] days after each conveyance of an interest in the Property or any portion thereof. The notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

11. Representations and Warranties. Owner[*s*] hereby represent[*s*] and warrant[*s*] to the other signatories hereto:

A. that the Owner[*s*] is [*are*] the sole owner[*s*] of the Property;

B. that the Owner[*s*] hold[s] fee simple title to the Property and that the Owner conducted a current title search that shows that the Property [choose one: is subject to [or] is not subject to any] interests or encumbrances that conflict with the activity and use limitations set forth in this Environmental Covenant;[2]

C. that the Owner[*s*] has [*have*] the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;

D. that this Environmental Covenant will not materially violate or

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[1] List the activity and use limitations in Paragraph 5 of the property environmental covenant (e.g., limitations to commercial and industrial land uses; prohibitions on ground water extraction and use prohibition, etc.), or copy and paste the limitation paragraphs in full.

[2] If other interests and encumbrances on the Property conflict with the activity and use limitations set forth in this Environmental Covenant, add the following provision as a separate subparagraph:

To the extent that any other interests in or encumbrances on the Property conflict with the activity and use limitations set forth in this Environmental Covenant, the persons who own such interests or hold such encumbrances have agreed to subordinate such interests or encumbrances to the Environmental Covenant, pursuant to ORC § 5301.86, and the subordination agreement(s) (attached hereto as [*Exhibit #*]; [*or*] recorded at County Recorder's Office).

contravene or constitute a material default under any other agreement, document or instrument to which Owner[*s*] is [*are*] a party or by which Owner[*s*] may be bound or affected;

E. that the Owner[*s*] has [*have*] identified all other persons that own an interest in or hold an encumbrance on the Property [*and, if applicable, notified such persons of the Owner's[s'] intention to enter into this Environmental Covenant*].

12. Amendment or Termination. This Environmental Covenant may be amended or terminated by consent of all of the following: the Owner[*s*] or a Transferee, if applicable; [*other "Holders," if any;*] and the Director of the Ohio EPA, pursuant to ORC § 5308.82 and 5301.90 and other applicable law. The term, "Amendment," as used in this Environmental Covenant, shall mean any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations when there is at least one limitation remaining. The term, "Termination," as used in this Environmental Covenant, shall mean the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant.

This Environmental Covenant may be amended or terminated only by a written instrument duly executed by the Director of Ohio EPA and the Owner[*s*] or Transferee *[and other "Holder," or their assignees, if any]* of the Property or portion thereof, as applicable. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, the Owner[*s*] or Transferee shall file such instrument for recording with the County Recorder's Office, and shall provide a file- and date-stamped copy of the recorded instrument to Ohio EPA [and other "Holders" or their assignees, if any].

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

14. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

15. Recordation. Within [*thirty (30)*] days after the date of the final required signature upon this Environmental Covenant, Owner[*s*] shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the County Recorder's Office.

16. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as

a deed record for the Property with the County Recorder.

17. Distribution of Environmental Covenant. The Owner[s] shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: Ohio EPA, any other signatories to the Environmental Covenant; and the [*include appropriate governmental entity applicable to property: City/County/Township]*.

18. Notice. Unless otherwise notified in writing by or on behalf of the current owner or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

As to Ohio EPA:
Division of Environmental Response and Revitalization
Ohio EPA – Central Office
50 West Town Street
Columbus, Ohio 43216
Attn: DERR Records Management Officer

Or, send electronically to: records@epa.state.oh.us

And

Ohio EPA – [applicable district office]
[District office address]
Attn: DERR Site Coordinator for [site name]

As to Owner [include an entry for each Owner]:

[Name, title, or position]
[Address]

As to Holder [include an entry for each Holder that is not an Owner]:

[Name, title, or position]
[Address]

The undersigned represents and certifies that the undersigned is authorized to execute this Environmental Covenant.

IT IS SO AGREED:

[NAME OF OWNER]

_____

Signature of Owner[*s*]

_____

Printed Name and Title

_____

Date

State of _____)
County of _____) ss:
)

Before me, a notary public, in and for said county and state, personally appeared _____, a duly authorized representative of _____, who acknowledged to me that *[he/she]* did execute the foregoing instrument on behalf of _____.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____day of _____, 20__.

_____

Notary Public

[NAME OF HOLDER]

_____

Signature of Holder

_____

Printed Name and Title

_____

Date

State of _____)
County of _____) ss:
)

Before me, a notary public, in and for said county and state, personally appeared _____, a duly authorized representative of _____, who acknowledged

to me that *[he/she]* did execute the foregoing instrument on behalf of _____.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____day of _____, 20__.

_____
Notary Public

OHIO ENVIRONMENTAL PROTECTION AGENCY

Scott J. Nally, Director _____ Date _____

State of Ohio)
)
County of Franklin) ss:

Before me, a notary public, in and for said county and state, personally appeared Scott J. Nally, the Director of Ohio EPA, who acknowledged to me that he did execute the foregoing instrument on behalf of Ohio EPA.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____day of _____, 20__.

_____
Notary Public

This instrument prepared by:[3]

[name, address]

[3] As required by ORC § 317.111, list the name and address of the person who prepared this Environmental Covenant.