



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590



REPLY TO THE ATTENTION OF

NOV 28 2011

**MEMORANDUM**

SUBJECT: Final Approval of Administrative Settlement  
Marina Cliffs/Northwestern Barrel Site  
South Milwaukee, Wisconsin

FROM: Thomas Krueger   
Associate Regional Counsel

TO: Reviewers

This Memorandum requests your approval, and the Superfund Division Director's signature, of the attached Administrative Settlement.

In September and October, 2011, the relevant case team members and managers approved a proposed Administrative Settlement to be transmitted to the potentially responsible parties (PRPs) for this non-time critical removal action. Under the Settlement, the PRPs agree to take the removal actions selected by EPA and agree to reimburse EPA's oversight costs. The Settlement also includes provisions to reimburse the PRPs from a disbursement special account for certain response costs they incur at the Site. Given the time it took to negotiate the Settlement, the "Work to Be Performed" items in the Settlement have already been largely completed.

EPA sent the proposed Settlement to the PRPs on November 2, 2011, and the eligible PRPs have all signed the document by the deadline date.

Please feel free to contact me at 6-0562 or [Krueger.Thomas@epa.gov](mailto:Krueger.Thomas@epa.gov) if you have any questions concerning this matter. Thank you for your consideration.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF: ) Docket No. **V-W-11-C-985**  
)  
NORTHWESTERN BARREL SITE, ) ADMINISTRATIVE SETTLEMENT  
) AGREEMENT AND ORDER ON  
SOUTH MILWAUKEE, WISCONSIN ) CONSENT FOR REMOVAL ACTION  
) PURSUANT TO SECTIONS 104,  
) 106(a), 107 and 122 OF THE  
) COMPREHENSIVE  
) ENVIRONMENTAL RESPONSE,  
Respondents: ) COMPENSATION, AND LIABILITY ACT  
) OF 1980, as amended, 42 U.S.C. §§ 9604,  
) 9606(a), 9607 and 9622  
Listed in Attachment A )  
)

**I. JURISDICTION AND GENERAL PROVISIONS**

This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered voluntarily by the United States Environmental Protection Agency ("U.S. EPA") and the Respondents. The Settlement Agreement is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622. This authority has been delegated to the Administrator of the U.S. EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the Regional Administrators by U.S. EPA Delegation Numbers 14-14-A, 14-14-C and 14-14-D, and to the Director, Superfund Division, Region 5, by Regional Delegation Numbers 14-14-A, 14-14-C and 14-14-D.

This Settlement Agreement provides for performance of certain removal actions described in Section VI of this Settlement Agreement (the "Work") and for reimbursement of certain response costs incurred by the United States in connection with certain property located in South Milwaukee, Wisconsin (the "Northwestern Barrel Facility"). The Settlement Agreement requires Respondents to conduct the Work to abate the potential of an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Northwestern Barrel Facility.

A copy of this Settlement Agreement will be provided to the State of Wisconsin, which has been notified of the issuance of this Settlement Agreement pursuant to Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

Respondents' participation in this Settlement Agreement shall not constitute an admission of liability or of U.S. EPA's findings or determinations contained in this Settlement Agreement except in a proceeding to enforce the terms of this Settlement Agreement. Respondents agree to comply with and be bound by the terms of this Settlement Agreement. Respondents further agree that they will not contest the basis or validity of this Settlement Agreement or its terms.

## **II. PARTIES BOUND**

This Settlement Agreement applies to and is binding upon U.S. EPA, and upon each Respondent and each Respondent's heirs, receivers, trustees, successors or assigns. Any change in ownership or corporate status of any Respondent including, but not limited to, any transfer of assets or real or personal property, shall not alter such Respondents' responsibilities under this Settlement Agreement. Respondents are jointly and severally liable for carrying out all activities required by this Settlement Agreement. Compliance or noncompliance by one or more Respondents with any provision of this Settlement Agreement shall not excuse or justify noncompliance by any other Respondent.

Respondents shall each ensure that their contractors, subcontractors, and representatives comply with this Settlement Agreement. Respondents shall each be responsible for any noncompliance with this Settlement Agreement.

## **III. DEFINITIONS**

Terms used in this Settlement Agreement that are defined in Section 101 of CERCLA, 42 U.S.C. §9601, shall have the meanings provided therein. For purposes of this Settlement Agreement:

"Northwestern Barrel Site" or "Site" shall mean that portion of the Northwestern Barrel Facility, encompassing approximately 13 acres of vacant land along Lake Michigan and being a portion of Parcel 4 of CSM No. 1954, located in South Milwaukee, Wisconsin, and more particularly described in Attachment B (Legal Description).

"Northwestern Barrel Facility" shall mean the Site and any other adjacent or adjoining properties or locations at which hazardous substances related to the Site, or to the operations conducted at the Site, have come to be located.

"Oversight Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement. "Oversight Costs" shall also include all costs that the United States incurs in implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to payroll costs, contractor costs, travel costs, laboratory costs, costs of attorney time, costs of obtaining access to the Site including any just compensation, any payments to the State through a cooperative agreement, and Interest on all such costs.

“Parties” shall mean the signatories to this Settlement Agreement.

“Respondents” shall mean those persons or entities listed in Attachment A.

“Work” shall mean all activities Respondents are required to perform under this Settlement Agreement.

#### **IV. FINDINGS OF FACT**

Based upon available information, including the Administrative Record in this matter, U.S. EPA finds, and for purposes of establishing jurisdiction and enforceability of this Settlement Agreement only, Respondents stipulate that the factual statutory prerequisites necessary for issuance of this Settlement Agreement under CERCLA have been met. The Findings of Fact of the 1995 and 1998 Unilateral Administrative Orders (Nos. V-W-95-C-313 and V-W-98-C-486) and the 2001, 2002 and 2004 Settlement Agreements and Administrative Orders on Consent (Nos. V-W-01-C-630, V-W-02-C-703 and V-W-04-C-787) are hereby incorporated and made a part of this Settlement Agreement, and U.S. EPA further finds as follows:

1. The Northwestern Barrel Company operated a barrel reconditioning business on approximately 18 acres of property on the shoreline bluffs of Lake Michigan in the City of South Milwaukee, Milwaukee County, Wisconsin. The property is bordered on the west by 5th Avenue and on the east by Lake Michigan. The southern boundary is a roadway that ends in a lakeside dock. The northern boundary is the City of South Milwaukee Waste Water Treatment Plant property. The area around the Site includes residential and industrial properties.
2. Prior to 1941, the Site had been operated as a leather treatment/tanning facility by the Pfister & Vogel Leather Company. In 1941, the Northwestern Barrel Company acquired title to the Site, and commenced barrel recycling and reconditioning activities at that time. The Northwestern Barrel Company operated on the Site from approximately 1941 to the mid 1960s. Its operations included the on-site handling, washing, and refurbishing of steel drums and wooden barrels.
3. In 1988, the U.S. EPA conducted a Site Inspection (“SI”), giving the Site a high priority designation. Elevated concentrations of polychlorinated biphenyls (“PCBs”), chromium, volatile organic compounds, and lead were present in soil samples taken at certain locations. Low levels of chlorinated hydrocarbons and heavy metals were quantified in certain surface water samples.
4. U.S. EPA initially defined the Northwestern Barrel Facility to include only the 13-acre Site – the eastern portion of the original 18 acres occupied by the Northwestern Barrel Company. The original Facility definition excluded the private residential properties at the western end of the property (the “Marina Cliffs Condominium Property”) and the roadway and the City of South Milwaukee’s easement at the southern end of the former Northwestern Barrel property. The 13 acre Site portion of the former Northwestern Barrel property includes a deep ravine, lake

bluff and upland areas and was the focus of time-critical and non-time-critical removal actions conducted pursuant to the 1995 and 1998 Unilateral Administrative Orders (Nos. V-W-95-C-313 and V-W-98-C-486) and the 2001 Settlement Agreement and Administrative Order on Consent (Order No. V-W-01-C-630).

5. Data collected and information developed as part of these removal actions showed that some level of contamination may exist in portions of the neighboring residential areas and city easement which are outside the initial Site boundaries. Elevated contaminant levels, including lead and PCBs, were found on the Site immediately adjacent to the residential properties and city easement. In addition, during the time-critical removal action, a visibly stained soil layer was evident at the fence boundary in the vicinity of Marina Cliffs Condominium building number 3. Excavation of contaminated soils in this area stopped at the fence line separating the Site from the residential areas.

6. During 1998, Conestoga-Rovers & Associates ("CRA"), environmental consultant for the Potentially Responsible Parties ("PRPs") performing work at the Site, conducted two rounds of soil sampling to identify whether contamination might be present to the west of the Site boundary. CRA drilled eleven boreholes during the March 1998 sampling round, and another eleven boreholes during the June/July 1998 sampling round. Subsurface soil samples at the Marina Cliffs Condominium Property were collected from the soil borings, with sample depths ranging from 2 to 20 feet below ground surface. During the collection of the March 1998 samples, twelve surface soil samples were also collected from the Marina Cliffs Condominium Property and outside the fenced 13-acre area of the Site.

7. All subsurface soil samples from the March 1998 sampling event were analyzed for lead and PCBs. Selected samples were also analyzed for volatile organic compounds ("VOCs"), semivolatile organic compounds ("SVOCs"), PAHs, pesticides, PCBs, and inorganic substances. All June/July 1998 subsurface soil samples were analyzed for VOCs. Soil samples from selected soil boring depths were analyzed for additional parameters, including SVOCs, PCBs, pesticides, and inorganic substances. The results of this soil sampling identified several locations on the Marina Cliffs Condominium Property where sub-surface soils have elevated concentrations of certain VOCs including trichloroethene and tetrachloroethene at 28 and 190 mg/kg, respectively. The highest lead concentration detected in subsurface soils was 1,150 mg/kg, at a location at the Site immediately adjacent to the Marina Cliffs Condominium Property.

8. Surface soils were analyzed for VOCs, SVOCs, polycyclic aromatic hydrocarbons ("PAHs"), PCBs, pesticides and inorganic substances. Some surface soils collected during the March sampling round had slightly elevated levels of certain chemicals. The maximum concentration detected was 233 mg/kg for lead, 21.8 mg/kg for arsenic, 1.3 mg/kg for benzo(a)pyrene, and 0.1 mg/kg for dibenzo(a,h)anthracene.

9. On August 15, 2000, U.S. EPA signed an EE/CA Approval Memorandum which documented the need to collect additional information necessary to conduct an EE/CA investigation for any areas of the Northwestern Barrel Facility which extended outside the current Site boundary.

10. On July 5, 2002, U.S. EPA and Respondents entered a Settlement Agreement and Administrative Order on Consent (No. V-W-02-C-703) in which the Respondents agreed to conduct an EE/CA investigation for any areas of the Northwestern Barrel Facility which extended outside the current Site boundary.
11. Sampling data developed by Respondents as part of the EE/CA investigation indicated that subsurface soils on the eastern end of the Marina Cliffs Condominium Property in the vicinity of the fence were contaminated with elevated levels of lead and PCBs, as high as 3,400 ppm of PCBs and 1,150 ppm of lead.
12. Sampling data developed by Respondents as part of the EE/CA investigation indicated that surface soils on and around the Marina Cliffs Condominium Property in the vicinity of Building 1 were contaminated with elevated levels of PCBs, as high as 22 ppm, and that surface soils on a portion of the City of South Milwaukee's right of way just south of the Site were contaminated with elevated levels of lead, as high as 803 ppm.
13. Upon reviewing sampling data developed by the Respondents as part of the EE/CA under the 2002 Settlement Agreement and Administrative Order on Consent (No. V-W-02-C-703), U.S. EPA determined that regardless of which final non-time critical removal actions would be required for portions of the Marina Cliffs Condominium Property and the City of South Milwaukee's right of way, those actions would include excavation, appropriate treatment, and disposal of soil contaminated with PCBs at levels greater than 1 ppm and soil contaminated with lead at levels greater than 400 ppm.
14. On May 4, 2004, U.S. EPA and Respondents entered a Settlement Agreement and Administrative Order on Consent (No. V-W-04-C-787) in which the Respondents agreed to excavate, provide appropriate treatment for, and dispose of soil contaminated with PCBs at levels greater than 1 ppm and soil contaminated with lead at levels greater than 400 ppm in portions of the Marina Cliffs Condominium Property and the City of South Milwaukee's right of way. Respondents conducted this work from May through July, 2004.
15. In 2004, the Respondents submitted a draft EE/CA Report pursuant to the 2002 Settlement Agreement and Order on Consent. The draft EE/CA Report identified chemical oxidation injection as a potential technology for addressing the remaining contamination at the residential portion of the Site. In order to complete the EE/CA required by the Settlement Agreement and Order on Consent, the Respondents proposed to perform a pilot test of the chemical oxidation injection technology and submitted a work plan for the pilot test. In response to comments on the proposal from the residents, the Respondents agreed to extend the pilot test over the entire area where contamination was present.
16. Respondents conducted the pilot testing in November and December, 2004. After evaluating the results of the pilot test, Respondents submitted a revised EE/CA report on August 4, 2006.
17. U.S. EPA approved the EE/CA Report with minor modifications on September 15, 2006.

Based on that EE/CA Report and on the rest of the Administrative Record, on October 18, 2006, U.S. EPA proposed a final response action for the Marina Cliffs Condominium Property and solicited public comment on the proposal.

18. U.S. EPA did not receive any comments opposing the proposed final response action, and on January 4, 2007, it issued an Action Memorandum selecting the response action. That response action consists of: operating a chemical oxidation injection system with a minimum of 3-foot grid spacing in all areas where VOCs exceed cleanup objectives, operating a drain tile depressurization system during operation of the chemical oxidation injection system, implementing a health and safety plan, developing and implementing any necessary use restrictions, and restoring the property to its previous condition to the extent practicable.

19. As described above, hazardous substances have been or are threatened to be released at or from the Site.

20. As described above, as a result of the release or threatened release of hazardous substances, U.S. EPA and Respondents have undertaken response actions at or in connection with the Site under Section 104 of CERCLA, 42 U.S.C. § 9604, and will undertake response actions in the future.

## **V. CONCLUSIONS OF LAW AND DETERMINATIONS**

Based on the Findings of Fact set forth above, and the Administrative Record supporting these removal actions, U.S. EPA has determined that:

1. **Facility.** The Northwestern Barrel Facility is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. §9601(9).
2. **Hazardous Substances.** The substances noted above are "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. §9601(14).
3. **Persons.** Each Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. §9601(21).
4. **Release.** The conditions described in the Findings of Fact set forth above do for purposes of this Settlement Agreement constitute an actual or threatened "release" of a hazardous substance from the facility into the "environment" as defined by Sections 101(8) and (22) of CERCLA, 42 U.S.C. §§9601 (8) and (22).
5. **Threat.** The conditions described in the Findings of Fact set forth above do for purposes of this Settlement Agreement define a threat to public health, welfare, or the environment based upon the factors set forth in Section 300.415(b)(2).

6. **Endangerment.** The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

7. **Work.** Based upon the foregoing Findings of Fact, the U.S. EPA, as lead agency, and considering, among other factors, the factors set forth in 40 C.F.R. Section 300.415(b)(2), has determined that the work conducted or to be conducted pursuant to this Settlement Agreement (“the Work”) is necessary and appropriate to prevent, minimize and mitigate the release or threatened release of hazardous substances from the Northwestern Barrel Facility. The U.S. EPA has determined pursuant to 40 C.F.R. Section 300.415(a)(2) that Respondents can perform the Work promptly and properly.

8. **Consistent with NCP.** The Work required by this Settlement Agreement, if properly performed, is consistent with the CERCLA National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”). The removal actions required by this Settlement Agreement are necessary to protect the public health, welfare, or the environment.

## **VI. SETTLEMENT AGREEMENT AND ORDER**

Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, it is hereby ordered and agreed that Respondents shall comply with the provisions of this Settlement Agreement, including but not limited to all documents attached to or incorporated into this Settlement Agreement, and perform the following actions:

### **1. Designation of Contractor, Project Coordinator, and On-Scene Coordinator.**

Respondents have retained Conestoga-Rovers & Associates to implement the Work. Respondents shall also notify the U.S. EPA of the name and qualifications of any other contractors or subcontractors retained to perform Work under this Settlement Agreement at least 5 business days prior to commencement of Work by any such contractor or subcontractor. U.S. EPA retains the right to disapprove of the contractors and/or subcontractors retained by the Respondents. If U.S. EPA disapproves a selected contractor, Respondents shall retain a different contractor and shall notify U.S. EPA of that contractor's name and qualifications within five (5) business days prior to the performance of any Work by said contractor.

Ed Roberts of Conestoga-Rovers & Associates, shall serve as Project Coordinator, and shall be responsible for the administration of Respondents' actions required by this Settlement Agreement. To the greatest extent possible, the Project Coordinator shall be present on-Site or readily available during Site work. U.S. EPA retains the right to disapprove of any Project Coordinator named by the Respondents. If U.S. EPA disapproves of a selected Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify U.S. EPA of that person's name and qualifications within five (5) business days of U.S. EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from U.S. EPA relating to this Settlement Agreement shall constitute receipt by all Respondents.

The U.S. EPA has designated Shari Kolak of the Superfund Division, Region 5, as its On-Scene Coordinator ("OSC"). Respondents shall direct two copies of all notices and submissions required by this Settlement Agreement to the OSC at 77 West Jackson Boulevard, SR-6J, Chicago, Illinois, 60604-3590, by certified or express mail. Respondents shall also send a copy of all submissions to Thomas Krueger, Associate Regional Counsel, 77 West Jackson Boulevard, C-14J, Chicago, Illinois, 60604-3590. All Respondents are encouraged to make their submissions to U.S. EPA on recycled paper (which includes significant post-consumer waste paper content where possible) and using two-sided copies. Upon request by U.S. EPA, Respondents shall submit such documents in electronic form.

U.S. EPA and Respondents shall have the right, subject to the immediately preceding paragraphs, to change their designated OSC or Project Coordinator. U.S. EPA shall notify the Respondents, and Respondents shall notify U.S. EPA, as early as possible before such a change is made, but in no case less than 24 hours before such a change. The initial notification may be made orally but it shall be promptly followed by a written notice.

## 2. Work to Be Performed

Respondents shall perform, at a minimum, the following response actions consistent with the attached Work Plan:

a. Conduct in-situ chemical oxidation ("ISCO") treatment of soils with a minimum of 3-foot grid spacing in all areas where VOC contamination exceed Preliminary Remediation Goals ("PRGs") for an Industrial Worker, as shown approximately in Attachment C;

b. operate the existing drain tile depressurization system during implementation of the ISCO treatment;

c. implement the Site Health and Safety Plan developed pursuant to the 1995 UAO and submitted to U.S. EPA, and all additional necessary revisions thereto;

d. perform confirmation sampling after operation of the ISCO is completed, based on that information evaluate whether any restrictions on future excavation in the treatment area are necessary to prevent unacceptable exposures to workers, prepare a recommendation concerning the need for use restrictions to U.S. EPA, and if it is determined necessary by U.S. EPA develop and implement restrictive covenants on future excavation;

e. restore the Marina Cliffs Condominium Property to the condition it was in prior to initiation of response actions, to the extent practicable.

2.1 Work Plan and Implementation. Respondents shall implement the Work Plan appended as Attachment C to this Settlement Agreement in accordance with the schedule provided therein. The Work Plan shall be fully enforceable under this Settlement Agreement. Respondents shall notify U.S. EPA at least 48 hours prior to performing any on-site Work

pursuant to this Settlement Agreement. Respondents shall not commence or undertake any removal actions at the Northwestern Barrel Facility without prior U.S. EPA approval.

2.2 Submittals. U.S. EPA may approve, disapprove, require revisions to, or modify the reports or other documents submitted pursuant to this Settlement Agreement. If U.S. EPA requires revisions, Respondents shall submit a revised draft submittal within fifteen business days of receipt of U.S. EPA's notification of required revisions. Subject to the conditions set forth in the notice of approval, the Respondents shall implement the approved submittal, according to the schedule contained therein. If a new or modified guidance document adversely affects the schedule, Respondents may propose such extension as U.S. EPA determines may be necessary to conform the Work to such guidance.

2.3 Health and Safety Plan. The Work Plan incorporates a plan prepared by the Respondents that ensures the protection of the public health and safety during performance of on-Site Work under this Settlement Agreement. This plan complies with applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. Respondents shall incorporate all changes to the plan recommended by U.S. EPA, unless they invoke the dispute resolution provisions of Section X herein to challenge any such recommended changes, and shall implement the plan during the pendency of the Work.

2.4 Quality Assurance and Sampling. All sampling and analysis performed pursuant to this Settlement Agreement shall conform to U.S. EPA direction, approval and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. These procedures shall be consistent with "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operation," (EPA QA/R5; "Preparing Perfect Project Plans," (EPA /600/9-88/087), and subsequent amendments to such guidelines upon notification by U.S. EPA to Respondents of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. Respondents shall ensure that the laboratory used to perform the analysis participates in a QA/QC program that complies with U.S. EPA guidance. Respondents shall follow, as appropriate, "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. Respondents shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by U.S. EPA. U.S. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements.

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

Upon request by U.S. EPA, Respondents shall allow U.S. EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents or their contractors or agents while performing Work under this Settlement Agreement. Respondents shall notify U.S. EPA not less than three business days in advance of any sample collection activity.

U.S. EPA shall have the right to take any additional samples that it deems necessary. Respondents shall ensure that U.S. EPA personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondents in implementing this Settlement Agreement. Respondents shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Settlement Agreement perform all analyses consistent with accepted U.S. EPA methods.

**2.5 Post-Removal Site Control.** In accordance with the Work Plan, the Respondents, to the extent practicable, shall make any necessary provisions for post-removal Site control, consistent with Section 300.415(1) of the NCP, 40 C.F.R. § 300.415(1), and OSWER Directive 9360.2-02. Respondents shall implement such controls and shall provide U.S. EPA with documentation of all post-removal Site control arrangements.

**2.6 Reporting.** Respondents shall submit a monthly written progress report to U.S. EPA concerning actions undertaken pursuant to this Settlement Agreement, beginning 30 calendar days after the effective date of this Settlement Agreement and until termination of this Settlement Agreement, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the Work performed and any problems encountered, analytical data received during the reporting period, and developments anticipated during the next reporting period, including a schedule of Work to be performed, anticipated problems and planned resolutions of past or anticipated problems.

Any Respondent that owns any portion of the Facility shall, at least 30 days prior to the conveyance of any interest in real property at the Facility, give written notice of this Settlement Agreement to the transferee and written notice of the proposed conveyance to U.S. EPA and the State. The notice to U.S. EPA and the State shall include the name and address of the transferee. The party conveying such an interest shall require that the transferee will provide access as described in Section VI.3 (Access to Property and Information).

**2.7 Final Report.** Within 120 calendar days after completion of all Work required under this Settlement Agreement, the Respondents shall submit for U.S. EPA review a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform to the requirements set forth in Section 300.165 of the NCP, 40 C.F.R. § 300.165, and the "Superfund Removal Procedures -- Removal Response Reporting: POLREPs and OSC Reports" (EPA-540/R-94/023). The final report shall also include a good faith estimate of total costs incurred in complying with the Settlement Agreement, a listing of quantities and types of materials removed off-site or handled on-site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destinations of those materials, a presentation of the analytical results of all sampling and analysis performed, and accompanying

appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts and permits).

The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

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

3. Access to Property and Information.

Respondents shall exercise their best efforts to provide or obtain access to the Facility and adjacent areas to which access is necessary to implement the Work required by this Settlement Agreement. To the extent obtained, such access shall be provided to U.S. EPA employees, contractors, agents, consultants, designees, representatives, and State representatives, who shall be permitted to move freely at the Facility and appropriate adjacent areas in order to conduct actions which U.S. EPA determines to be necessary. Respondents shall submit to U.S. EPA, upon request, the results of all sampling or tests and all other data generated by Respondents or their contractors, or on the Respondents' behalf during implementation of this Settlement Agreement and shall provide to U.S. EPA, upon request, access to all non-privileged records and documentation related to the conditions at the Facility and the actions conducted pursuant to this Settlement Agreement. This access to information may be limited by and subject to the joint defense privilege, attorney-client privilege and attorney work product doctrine. Regardless of any such claim of privilege, Respondents shall provide to U.S. EPA all sampling data developed pursuant to the requirements of this Settlement Agreement.

Where Work under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within 21 calendar days after the effective date of this Settlement Agreement, or as otherwise specified in writing by the OSC. Respondents shall immediately notify U.S. EPA if, after using their best efforts, they are unable to obtain such agreements. Respondents shall describe in writing their efforts to obtain access. U.S. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the Work described herein, using such means as U.S. EPA deems appropriate. Respondents shall reimburse U.S. EPA for all costs and attorneys fees incurred by the United States in obtaining such access. All persons granted access to the Site pursuant to this Settlement Agreement shall, as appropriate, be subject to the requirements of the Health and Safety Plan.

4. Record Retention, Documentation, Availability of Information

Respondents shall preserve all documents and information, in their possession or the possession of their contractors, subcontractors or representatives, relating to Work performed under this Settlement Agreement, or relating to the hazardous substances found on or released from the Facility, for six years following receipt of the Certificate of Completion pursuant to Section XXI

below. At the end of this six-year period and at least 60 days before any document or information is destroyed, Respondents shall notify U.S. EPA that such documents and information are available to U.S. EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to U.S. EPA. In addition, Respondents shall provide documents and information retained under this Section at any time before expiration of the six-year period at the written request of U.S. EPA. This access to information may be limited by and subject to the joint defense privilege, attorney-client privilege and attorney work product doctrine. Regardless of any such claim of privilege, Respondents shall provide to U.S. EPA all sampling data developed pursuant to the requirements of this Settlement Agreement.

5. Off-Site Shipments.

All hazardous substances removed off-site pursuant to this Settlement Agreement for treatment, storage or disposal shall be treated, stored, or disposed of at a facility or facilities in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 C.F.R. § 300.440, 58 Federal Register 49215 (Sept. 22, 1993).

6. Compliance with Other Laws.

Respondents shall perform all Work required pursuant to this Settlement Agreement in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA Section 121(e), 42 U.S.C. §9621(e), and 40 C.F.R. §300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-site Work required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by U.S. EPA, considering the exigencies of the situation, be performed in accordance with applicable or relevant and appropriate requirements under federal environmental or facility siting laws and regulations.

7. Emergency Response and Notification of Releases.

If any incident, or change in Facility conditions, during the activities conducted pursuant to this Settlement Agreement causes or threatens to cause an additional release of hazardous substances from the Facility or an endangerment to the public health, welfare, or the environment, the Respondents shall immediately take all appropriate action to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the OSC or, in the event of his or her unavailability, shall notify the Regional Duty Officer, Emergency Response Branch, Region 5 at (312) 353-2318, of the incident or Facility conditions. If Respondents fail to respond, U.S. EPA may respond to the release or endangerment and reserve the right to recover costs associated with any such response.

Respondents shall submit a written report to U.S. EPA within seven business days after each release under the preceding paragraph, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the recurrence of such a release. Respondents shall also comply with any other

notification requirements, including those in CERCLA Section 103, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act, 42 U.S.C. § 11004.

Nothing in the preceding Paragraphs or in this Settlement Agreement shall be deemed to limit any authority of the U.S. EPA: (a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of hazardous substances on, at, or from the Facility, or (b) to direct or order or pursue such action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of hazardous substances on, at, or from the Site, subject to Section XV (Covenants Not to Sue by the United States).

#### **VII. AUTHORITY OF THE U.S. EPA ON-SCENE COORDINATOR**

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

#### **VIII. REIMBURSEMENT OF COSTS**

Respondents shall pay Oversight Costs to be incurred and paid by the United States related to the Facility that are not inconsistent with the NCP, in the manner described below.

U.S. EPA will send Respondents a bill for "Oversight Costs" on an annual basis. Any failure by U.S. EPA to provide these bills on an annual basis shall not provide a defense to Respondents' Oversight Cost payment obligations.

Respondents shall, within 30 calendar days of receipt of a bill, remit a cashier's or certified check for the amount of the bill, made payable to the "Hazardous Substance Superfund," to the following address:

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

Respondents shall simultaneously transmit a copy of the check to the Director, Superfund Division, U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604-3590. Such payments shall be designated as "Response Costs - Marina Cliffs/Northwestern Barrel Site" and

shall reference the names of the Respondents, the U.S. EPA site identification number (#05PO), and the docket number of this Settlement Agreement.

In the event that any payment is not made within the deadlines described above, Respondents shall pay interest on the unpaid balance ("Interest"). Interest is established at the rate specified in Section 107(a) of CERCLA, 42 U.S.C. §9607(a). The Interest shall begin to accrue on the date of the Respondents' receipt of the bill. Interest shall accrue at the rate specified through the date of the payment. Payments of Interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section.

Respondents may dispute all or part of a bill for Oversight Costs submitted under this Settlement Agreement, if Respondents allege that U.S. EPA has made an accounting error, or if Respondents allege that a cost item is inconsistent with the NCP.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the OSC. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within 20 calendar days after the dispute is resolved.

## **IX. DISBURSEMENT OF SPECIAL ACCOUNT FUNDS**

1. **Creation of Northwestern Barrel Disbursement Special Account and Agreement to Disburse Funds to Respondents.** U.S. EPA shall transfer \$140,145.59 from the Marina Cliffs/Northwestern Barrel Special Account to the Northwestern Barrel Disbursement Special Account, within the EPA Hazardous Substance Superfund. Subject to the terms and conditions set forth in this Section, U.S. EPA agrees to make the funds in the Northwestern Barrel Disbursement Special Account, available for disbursement to Respondents as partial reimbursement for Work performed under this Settlement Agreement and Work Plan. The funds available from the Northwestern Barrel Disbursement Special Account shall also include interest earned on amounts in the Northwestern Barrel Disbursement Special Account, which shall be computed monthly at a rate based on the annual return on investments of the Hazardous Substance Superfund. The applicable rate of interest shall be the rate in effect at the time the interest accrues. U.S. EPA shall disburse funds from the Northwestern Barrel Disbursement Special Account to Respondents in accordance with the procedures and milestones for phased disbursement set forth in this Section.

2. **Requests for Disbursement of Special Account Funds.** Respondents may submit to U.S. EPA a Cost Summary and Certification, covering response actions performed pursuant to this Settlement Agreement and Work Plan, including but not limited to performance of chemical

oxidation injections. The Cost Summary and Certification shall include a complete and accurate written cost summary and certification of the necessary costs incurred and paid by Respondents for the response actions covered by the particular submission, excluding costs not eligible for disbursement under subparagraph 3, below. Each Cost Summary and Certification shall contain the following statement signed by the Respondents' Project Coordinator:

To the best of my knowledge, after thorough investigation and review of Respondents' documentation of costs incurred and paid for response actions performed pursuant to this Settlement Agreement and Work Plan I certify that the information contained in or accompanying this submittal is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

The Respondents' Project Coordinator shall also provide U.S. EPA a list of the documents that he or she reviewed in support of the Cost Summary and Certification. Upon request by U.S. EPA, Respondents shall submit to U.S. EPA any additional information that U.S. EPA deems necessary for its review and approval of a Cost Summary and Certification.

If U.S. EPA finds that a Cost Summary and Certification includes a mathematical accounting error, costs excluded under subparagraph 3. below, or costs that are inadequately documented, it will notify Respondents and provide an opportunity to cure the deficiency by submitting a revised Cost Summary and Certification. If Respondents fail to cure the deficiency within 30 days after being notified of, and given the opportunity to cure, the deficiency, U.S. EPA will recalculate Respondents' costs eligible for disbursement for that submission and disburse the corrected amount to Respondents in accordance with the procedures in subparagraph 4. of this Section. Respondents may dispute U.S. EPA's recalculation under this subparagraph pursuant to Section IX (Dispute Resolution). In no event shall Respondents be disbursed funds from the Northwestern Barrel Disbursement Special Account in excess of amounts properly documented in a Cost Summary and Certification accepted or modified by U.S. EPA.

**3. Costs Excluded from Disbursement.** Except as specifically provided in this Settlement Agreement the following costs are excluded from, and shall not be sought by Respondents for, disbursement from, the Northwestern Barrel Disbursement Special Account: (a) response costs paid pursuant to any prior order or settlement agreement for the Site; (b) any payments made by Respondents to the United States pursuant to this Settlement Agreement, including, but not limited to, any oversight costs pursuant to Section VIII of this Settlement Agreement or any interest or stipulated penalties paid pursuant to Section XII of this Settlement Agreement; (c) attorneys' fees and costs; (d) costs of any response activities Respondents perform that are not required under, or approved by EPA pursuant to, this Settlement Agreement and Work Plan; (e) costs related to Respondents' litigation, settlement, development of potential contribution claims or identification of defendants; (f) internal costs of Respondents, including but not limited to, salaries, travel, or in-kind services, except for those costs that represent the work of employees of Respondents directly performing the Work; or (g) any costs incurred by Respondents pursuant to Section X (Dispute Resolution).

4. Timing, Amount and Method of Disbursing Funds From the Northwestern Barrel Disbursement Special Account. After U.S. EPA's receipt of a Cost Summary and Certification, as defined by subparagraph 2. above, or if U.S. EPA has requested additional information or a revised Cost Summary and Certification under subparagraph 2. above, subject to the conditions set forth in this Section, U.S. EPA shall disburse the funds from the Northwestern Barrel Disbursement Special Account as follows: (a) up to \$125,000.00 in costs that U.S. EPA determines are eligible for disbursement may be disbursed from the Northwestern Barrel Disbursement Special Account upon the completion of U.S. EPA's initial review of the submittals; (b) the remaining funds in the Northwestern Barrel Disbursement Special Account may be disbursed for costs that U.S. EPA determines are eligible for disbursement upon U.S. EPA's approval of the Notice of Completion Report to be submitted under Section XXI of the Settlement Agreement. U.S. EPA shall disburse the funds from the Northwestern Barrel Disbursement Special Account to Respondents in the following manner:

5. Termination of Disbursements from the Special Account. U.S. EPA's obligation to disburse funds from the Northwestern Barrel Disbursement Special Account under this Settlement Agreement shall terminate upon U.S. EPA's determination that Respondents: (a) have knowingly submitted a materially false or misleading Cost Summary and Certification; (b) have submitted a materially inaccurate or incomplete Cost Summary and Certification, and have failed to correct the materially inaccurate or incomplete Cost Summary and Certification within 30 days after being notified of, and given the opportunity to cure, the deficiency; or (c) failed to submit a Cost Summary and Certification as required by subparagraph 2. above within 30 days (or such longer period as U.S. EPA agrees) after being notified that U.S. EPA intends to terminate its obligation to make disbursements pursuant to this Section because of Respondents' failure to submit the Cost Summary and Certification as required by subparagraph 2. U.S. EPA's obligation to disburse funds from the Northwestern Barrel Disbursement Special Account shall also terminate upon U.S. EPA's determination that Respondents have failed to complete the response actions required by the Settlement Agreement. Respondents may dispute U.S. EPA's termination of special account disbursements under Section X (Dispute Resolution).

6. Recapture of Special Account Disbursements. Upon termination of disbursements from the Northwestern Barrel Disbursement Special Account under subparagraph 5. above, if U.S. EPA has previously disbursed funds from the Northwestern Barrel Disbursement Special Account for activities specifically related to the reason for termination (e.g., discovery of a materially false or misleading submission after disbursement of funds based on that submission), U.S. EPA shall submit a bill to Respondents for those amounts already disbursed from the Northwestern Barrel Disbursement Special Account specifically related to the reason for termination, plus interest on that amount covering the period from the date of disbursement of the funds by U.S. EPA to the date of repayment of the funds by Respondents. Within 21 days of receipt of U.S. EPA's bill, Respondents shall reimburse the Hazardous Substance Superfund for the total amount billed by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the party making payment, and the EPA Site/Spill Identification Number PO. Respondents shall send the check(s) to:

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

At the time of payment, Respondents shall send notice that payment has been made to the Director, Superfund Division, U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604-3590. Upon receipt of payment, U.S. EPA may deposit all or any portion thereof in the Marina Cliffs/Northwestern Barrel Special Account, the Northwestern Barrel Disbursement Special Account, or the Hazardous Substance Superfund. The determination of where to deposit or how to use the funds shall not be subject to challenge by Respondents pursuant to the dispute resolution provisions of this Settlement Agreement or in any other forum. Respondents may dispute EPA's determination as to recapture of funds pursuant to Section X (Dispute Resolution).

7. **Balance of Special Account Funds.** After U.S. EPA issues its written Notice of Completion pursuant to Section XXI of this Settlement Agreement, and after U.S. EPA completes all disbursements to Respondents in accordance with this Section, if any funds remain in the Northwestern Barrel Disbursement Special Account, Respondents may request that the remaining funds be disbursed to them to reimburse oversight cost payments made pursuant to Section VIII of this Settlement Agreement, following the procedures described in this Section. To the extent funds still remain in the Northwestern Barrel Disbursement Special Account after reimbursement of Respondents' oversight cost payments, U.S. EPA may elect to transfer such funds to the Northwestern Barrel Special Account or to the Hazardous Substance Superfund. Any transfer of funds to the Northwestern Barrel Special Account or the Hazardous Substance Superfund shall not be subject to challenge by Respondents pursuant to the dispute resolution provisions of this Settlement Agreement or in any other forum.

## **X. DISPUTE RESOLUTION**

A. **Informal Resolution.** The parties to this Settlement Agreement shall attempt to resolve, expeditiously and informally, any disagreements concerning this Settlement Agreement and shall reduce any and all such resolutions to a writing executed by the Respondents and the OSC as soon as is practical after any such resolution.

B. **Objections.** If the Respondents object to any action taken by U.S. EPA pursuant to the terms of this Settlement Agreement, the Respondents shall notify U.S. EPA in writing of their objection within 10 calendar days of such action, unless the objections have been informally resolved. This written notice shall include a statement of the issues in dispute, the relevant facts upon which the dispute is based, all factual data, analysis or opinion supporting Respondents' position, and all supporting documentation on which such party relies ("Statement of Position"). U.S. EPA shall submit its Statement of Position, including supporting documentation, no later than 10 calendar days after receipt of the written notice of dispute. In the event that these 10-day time periods for exchange of written documents may cause a delay in the work, they shall be

shortened upon, and in accordance with, notice by U.S. EPA. The time periods for exchange of written documents relating to disputes over billings for response costs may be extended at the sole discretion of U.S. EPA.

C. Record. An administrative record of any dispute under this Section shall be maintained by U.S. EPA. The record shall include the written notification of such dispute, and the Statements of Position served pursuant to this Section. Any agreement reached by the Parties to the dispute pursuant to this Section shall be in writing, signed by all Parties to the dispute, and shall upon the signature of such Parties be incorporated into and become an enforceable element of this Settlement Agreement.

D. Resolution by Director. If the Parties to the dispute are unable to reach an agreement within the negotiation period, upon review of the administrative record, the Director of the Superfund Division, U.S. EPA Region 5, shall resolve the dispute consistent with the NCP and the terms of this Settlement Agreement.

E. No Tolling. Respondents' obligations under this Settlement Agreement, except as expressly provided in Section XII (Stipulated Penalties), shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirements that were the subject of the dispute in accordance with the agreement reached or with the Director's decision, whichever applies.

## **XI. FORCE MAJEURE**

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

Respondents shall notify U.S. EPA orally within 24 hours after Respondents become aware of any event that Respondents contend constitutes a force majeure, and in writing within seven calendar days after any such event. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay, including necessary demobilization and remobilization; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. Respondents shall take all reasonable measures to avoid and minimize the delay. Failure to comply with the notice provision of this Section shall be grounds for U.S. EPA to deny Respondents an extension of time for performance. Respondents shall have the burden of demonstrating by a preponderance of the evidence that the event is a force majeure, that the delay is warranted under the circumstances, and that best efforts were exercised to avoid and mitigate the effects of the delay.

If U.S. EPA determines a delay in performance of a requirement under this Settlement Agreement is or was attributable to a force majeure, the time period for performance of that requirement shall be extended as deemed necessary by U.S. EPA. Such an extension shall not alter Respondents' obligation to perform or complete other tasks required by the Settlement Agreement which are not directly affected by the force majeure.

**XII. STIPULATED AND STATUTORY PENALTIES**

For each day, or portion thereof, that Respondents fail to fully perform their obligations related to the following enumerated items in accordance with the schedule established pursuant to this Settlement Agreement, and subject to the Dispute Resolution provisions of this Settlement Agreement, Respondents shall be liable as follows:

<u>Violation</u>	<u>Penalty Per Violation Per Day</u>		
	<u>Up to 30 Days</u>	<u>Up to 60 Days</u>	<u>Over 60 Days</u>
Failure to submit timely or adequate progress reports:	\$500	\$1,000	\$1,500
Failure to submit timely or adequate Work Plans or Supplemental Work Plans:	\$1,000	\$2,000	\$5,000
Failure to submit timely or adequate revisions to Work Plans or Supplemental Work Plans:	\$1,000	\$2,000	\$5,000
Failure to provide timely notice of appointment of or change in Project Coordinator:	\$500	\$1,000	\$1,500
Failure to provide timely notice of sampling event:	\$1,000	\$2,000	\$5,000
Failure to provide timely notice of Work-related release	\$1,000	\$5,000	\$10,000

Failure to complete Work by the deadline established in the approved Work Plan:

\$1,000

\$5,000

\$10,000

Upon receipt of written demand by U.S. EPA, Respondents shall make payment to U.S. EPA within 20 days and Interest shall accrue on late payments in accordance with Section VIII of this Settlement Agreement (Reimbursement of Costs).

Even if violations are simultaneous, separate penalties may accrue for separate violations of this Settlement Agreement. Penalties accrue and are assessed per violation per day. Penalties shall accrue regardless of whether U.S. EPA has notified Respondents of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondents' obligations to complete the performance of the Work required under this Settlement Agreement. Stipulated penalties shall accrue, but need not be paid, during any dispute resolution period concerning the particular penalties at issue. If Respondents prevail in such a dispute, Respondents shall pay only such penalties as the resolution requires. In its unreviewable discretion, U.S. EPA may waive its rights to demand all or a portion of the stipulated penalties due under this Section. Such a waiver must be made in writing.

If Respondents fail to pay stipulated penalties when due, U.S. EPA may institute proceedings to collect the penalties, as well as interest. Interest is established at the rate specified in Section 107(a) of CERCLA, 42 U.S.C. §9607(a). The interest shall begin to accrue on the date of the Respondents' receipt of the demand. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section.

Should Respondents violate this Settlement Agreement or any portion hereof, U.S. EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Settlement Agreement pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

### **XIII. ASSURANCE OF ABILITY TO COMPLETE WORK**

Within 30 days after the effective date of this Settlement Agreement, Respondents shall establish and maintain financial security necessary to ensure completion of the Work, estimated to be in the amount of \$100,000 in one or more of the following forms:

- a. A surety bond guaranteeing performance of the Work;
- b. One or more irrevocable letters of credit equaling the total estimated cost of the Work;
- c. A trust fund;

d. A guarantee to perform the Work by one or more parent corporations or subsidiaries, or by one or more unrelated corporations that have a substantial business relationship with at least one of the Respondents; or

e. A demonstration that one or more of the Respondents satisfy the requirements of 40 C.F.R. Part 264.143(f).

If the Respondents seek to demonstrate the ability to complete the Work through a guarantee by a third party, Respondents shall demonstrate that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f). If Respondents seek to demonstrate their ability to complete the Work by means of financial test or corporate guarantee, they shall resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the effective date of this Settlement Agreement. In the event that U.S. EPA determines at any time that the financial assurances provided pursuant to this Section are inadequate, Respondents shall, within 30 days of receipt of notice of U.S. EPA's determination, obtain and present to U.S. EPA for approval one of the other forms of financial assurance listed above. Respondents' inability to demonstrate financial ability to complete the Work shall not excuse performance of any activities required under this Settlement Agreement.

If Respondents can show that the estimated cost to complete the remaining Work has diminished below \$100,000 after the effective date of this Settlement Agreement, Respondents may, on any anniversary date of this Settlement Agreement, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondents shall submit a proposal for such reduction to U.S. EPA, in accordance with the requirements of this Section, and may reduce the amount of the security upon approval by U.S. EPA.

Respondents may change the form of financial assurance provided under this Section at any time, upon notice to and approval by U.S. EPA, provided that the new form of assurance meets the requirements of this Section.

#### **XIV. OTHER CLAIMS**

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

Except as expressly provided in Section XV (Covenant Not to Sue by the United States) and Section XVIII (Contribution Protection), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States

for costs, damages and interest under Sections 106(a) or 107(a) of CERCLA, 42 U.S.C. §§ 9606(a), 9607(a).

This Settlement Agreement does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The Respondents waive any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Settlement Agreement.

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

#### **XV. COVENANTS NOT TO SUE BY THE UNITED STATES**

Except as otherwise specifically provided in this Settlement Agreement, upon issuance of the U.S. EPA notice referred to in Section XXI (Notice of Completion), U.S. EPA covenants not to sue Respondents for judicial imposition of damages or civil penalties or to take administrative action against Respondents for any failure to perform actions agreed to in this Settlement Agreement.

Except as otherwise specifically provided in this Settlement Agreement, in consideration of and upon Respondents' payment of the Oversight Costs specified in Section VIII (Reimbursement of Costs) of this Settlement Agreement, U.S. EPA covenants not to sue or to take administrative action against Respondents under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for recovery of Oversight Costs incurred by the United States in connection with this removal action and this Settlement Agreement. This covenant not to sue shall take effect upon the receipt by U.S. EPA of the Oversight Cost payments required by Section VIII (Reimbursement of Costs).

These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Settlement Agreement. These covenants not to sue extend only to the Respondents and do not extend to any other person.

#### **XVI. COVENANT NOT TO SUE BY RESPONDENTS**

Respondents covenant not to sue and agree not to assert any claims or causes of action against the United States or its contractors or employees with respect to the Site or this Settlement Agreement including, but not limited to:

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

b. any claims arising out of response activities at the Site; and

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Site.

## **XVII. RESERVATION OF RIGHTS**

Except as specifically otherwise provided in this Settlement Agreement, nothing herein shall limit the power and authority of U.S. EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Northwestern Barrel Facility. Further, nothing herein shall prevent U.S. EPA or Respondents from seeking legal or equitable relief to enforce the terms of this Settlement Agreement. Except as otherwise provided herein, U.S. EPA also reserves the right to take any other legal or equitable action as it deems appropriate and necessary, or to require the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. Except as otherwise provided in this Settlement Agreement, Respondents reserve all rights, defenses and legal arguments to contest any and all alleged liability or responsibility for hazardous substances, materials, or contamination at or emanating from the Northwestern Barrel Facility.

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

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

## **XVIII. CONTRIBUTION PROTECTION**

The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondents are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for “matters addressed” in this Settlement Agreement. The “matters addressed” in this Settlement Agreement are the Work and Oversight Costs.

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

With regard to claims for contribution against Respondents for matters addressed in this Settlement Agreement, the Parties hereto agree that the Respondents are entitled to protection from contribution actions or claims to the extent provided by Section 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4). Nothing in this Settlement Agreement precludes Parties from asserting any claims, causes of action or demands against any persons not parties to this Settlement Agreement for indemnification, contribution, or cost recovery.

## **XIX. INDEMNIFICATION**

Respondents agree to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action: (A) arising from, or on account of, acts or omissions of Respondents and Respondents' officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Settlement Agreement; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents, and any persons for performance of Work on or relating to the Facility, including claims on account of construction delays. Nothing in this Settlement Agreement, however, requires indemnification by Respondents for any claim or cause of action against the United States based on action (negligent or otherwise) taken solely and directly by U.S. EPA (not including oversight or approval of plans or activities of the Respondents).

## **XX. MODIFICATIONS**

Modifications to any plan or schedule may be made in writing by the OSC or at the OSC's oral direction. If the OSC makes an oral modification, it will be memorialized in writing within seven business days; however, the effective date of the modification shall be the date of the OSC's oral direction. Any other requirements of this Settlement Agreement may only be modified in writing by mutual agreement of all parties.

If Respondents seek permission to deviate from any approved plan or schedule, Respondents' Project Coordinator shall submit a written request to U.S. EPA for approval outlining the proposed modification and its basis.

No informal advice, guidance, suggestion, or comment by U.S. EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondents shall relieve Respondents of their obligations to obtain such formal approval as may be required by this Settlement Agreement, and to comply with all requirements of this Settlement Agreement unless it is formally modified.

## **XXI. NOTICE OF COMPLETION**

Within 90 days after Respondents conclude that the Work has been fully performed in accordance with this Settlement Agreement, except for certain continuing obligations required by this Settlement Agreement (*e.g.*, record retention, reimbursement of costs), Respondents shall schedule and conduct a pre-certification inspection to be attended by Respondents, U.S. EPA and the State. If, after the pre-certification inspection, Respondents still believe that the Work has been fully performed, they shall submit the final report described in Paragraph VI.2.8 herein requesting certification to U.S. EPA for approval, with a copy to the State, within 30 days of the inspection. In the report, a registered professional engineer and Respondents' Project Coordinator shall state that the Work has been completed in full satisfaction of the requirements of this Settlement Agreement. The written report shall include as-built drawings as appropriate, signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible official of Respondents or Respondent's Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If, after completion of the pre-certification inspection and receipt and review of the written final report, U.S. EPA, after reasonable opportunity to review and comment by the State, determines that the Work or any portion thereof has not been completed in accordance with this Settlement Agreement, U.S. EPA will notify Respondents in writing of the activities that must be undertaken by Respondents pursuant to this Settlement Agreement to complete the Work, provide a list of the deficiencies, and require that Respondents modify the Work Plan if appropriate to correct such deficiencies.

U.S. EPA will set forth in the notice a schedule for performance of such activities consistent with the Settlement Agreement or require Respondents to submit a schedule to U.S. EPA for approval in the manner provided in Section VI.2.2 above. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established pursuant

to this Paragraph, subject to their right to invoke the dispute resolution procedures set forth in Section X (Dispute Resolution). The Respondents shall implement the required activities and shall submit a modified final report in accordance with the U.S. EPA notice. Failure to timely implement the required activities and revisions shall be deemed a violation of this Settlement Agreement.

## **XXII. COMMUNITY RELATIONS**

Respondents shall propose to U.S. EPA their participation in the community relations activities to be conducted with respect to this Settlement Agreement. U.S. EPA will determine the appropriate role for the Respondents in community relations activities. Respondents shall also cooperate with U.S. EPA in providing information regarding the Work to the public. As requested by U. S. EPA, Respondents shall participate in the preparation of such information for dissemination to the public in public meetings which may be held or sponsored by U.S. EPA to explain activities at or relating to the Facility.

## **XXIII. SEVERABILITY**

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

## **XXIV. EFFECTIVE DATE**

This Settlement Agreement shall be effective upon receipt by Respondents of a copy of this Settlement Agreement signed by the Director, Superfund Division, U.S. EPA Region 5.

IN THE MATTER OF:

MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

**SIGNATORIES**

Each undersigned representative of a signatory to this Settlement Agreement and Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

Agreed this \_\_\_\_\_ day of \_\_\_\_\_, 2011.

By:

Name:

Representing: \_\_\_\_\_

Address for Notice:

IN THE MATTER OF:

MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

IT IS SO ORDERED AND AGREED

By: Richard C. Karl  
Richard C. Karl, Director  
Superfund Division  
United States Environmental Protection Agency  
Region 5

Date: 12-6-11

IN THE MATTER OF:

MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

**SIGNATORIES**

Each undersigned representative of a signatory to this Settlement Agreement and Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

Agreed this 14 day of November, 2011.

By: Nan Bernardo  
Nan Bernardo  
Senior Environmental Counsel

Representing: **BASF Corporation**

Address for Notice:

Nan Bernardo, Senior Environmental Counsel  
BASF Corporation  
100 Campus Drive  
Florham Park, NJ 07932

(973) 245-6050  
Nan.bernardo@basf.com

IN THE MATTER OF:

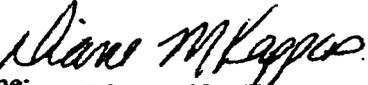
MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

**SIGNATORIES**

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Agreed this 22 day of November, 2011.

By:

  
Name: Diane M. Kapas, V.P. EHS  
Representing: PPG Industries, Inc.

Address for Notice:

C/O Steven F. Faeth, Esq.  
Corporate Counsel EHS  
PPG Industries, Inc.  
One PPG Place  
Pittsburgh, PA 15272

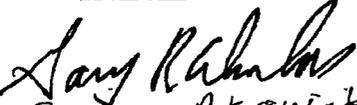
IN THE MATTER OF:

MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

SIGNATORIES

Each undersigned representative of a signatory to this Settlement Agreement and Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

Agreed this 21st day of November, 2011.

By:   
Name: GARY AKAVICKAS, General Counsel  
Representing: S.C. JOHNSON & SON, INC.

Address for Notice:

GARY R. AKAVICKAS  
Sr. Vice President & General Counsel  
S.C. JOHNSON & SON, INC.  
1525 Howe St. MS 062  
Racine, WI 53403

IN THE MATTER OF:

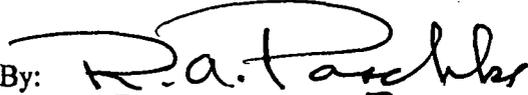
MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

**SIGNATORIES**

Each undersigned representative of a signatory to this Settlement Agreement and Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

Agreed this 15<sup>th</sup> day of NOVEMBER, 2011.

By:

  
Name: ROBERT A. PASCHKE, MANAGER, CORP. ENVIRONMENTAL PROGRAMS  
Representing: 3M

Address for Notice:

3M Center, Building 223-02-S-31  
St. Paul, MN 55144

## **ATTACHMENT A**

BASF Corporation

PPG Industries, Inc.

S.C. Johnson & Son, Inc.

3M

## **ATTACHMENT B**

MARINA CLIFFS SITE

THAT PART OF PARCEL 4 OF CERTIFIED SURVEY MAP NO. 1954, BEING A PART OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 5 NORTH, RANGE 22 EAST, IN THE CITY OF SOUTH MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 13; THENCE NORTH  $89^{\circ}05'00''$  EAST 220.00 FEET TO A POINT, SAID POINT BEING THE NORTHEAST CORNER OF PARCEL 1 OF CERTIFIED SURVEY MAP NO. 4167 AND THE POINT OF BEGINNING OF THE LANDS HEREIN DESCRIBED; CONTINUING THENCE NORTH  $89^{\circ}05'00''$  EAST ALONG THE NORTH LINE OF SAID 1/4 SECTION 913.00 FEET TO A POINT; THENCE DUE SOUTH ALONG A MEANDER LINE 400.00 FEET TO AN ANGLE POINT; THENCE SOUTH  $18^{\circ}31'52''$  WEST ALONG SAID MEANDER LINE 410.75 FEET TO A POINT; THENCE NORTH  $89^{\circ}30'40''$  WEST 315.00 FEET TO A POINT; THENCE NORTH 21.00 FEET TO A POINT; THENCE NORTH  $89^{\circ}21'00''$  WEST 526.38 FEET TO A POINT; THENCE NORTH  $51^{\circ}07'32''$  EAST 259.42 FEET TO A POINT; THENCE NORTH  $25^{\circ}00'00''$  WEST 259.88 FEET TO A POINT; THENCE SOUTH  $65^{\circ}00'00''$  WEST 178.81 FEET TO A POINT, SAID POINT BEING THE SOUTHEAST CORNER OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 4167; THENCE DUE NORTH 219.41 FEET TO A POINT; THENCE DUE WEST 18.02 FEET TO A POINT; THENCE DUE NORTH 204.67 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH ALL LANDS LYING BETWEEN THE MEANDER LINE AND THE SHORELINE OF LAKE MICHIGAN.

Less and except the:

Northwest 1/4 of Section 13, Town 5 North, Range 22 East, in the City of South Milwaukee, Milwaukee County, Wisconsin, bounded and described as follows: Commencing at the Northwest corner of said 1/4 section; thence South along the West line of said 1/4 section, 765.25 feet; thence North  $89^{\circ}05'00''$  East along the center line of Marina Road, 161.00 feet; thence South  $89^{\circ}21'00''$  East 326.38 feet to the place of beginning of lands to be described; thence North 21.0 feet; thence North  $89^{\circ}21'00''$  West along the South line of Parcel 4 of Certified Survey Map No. 1954, 54.00 feet; thence North 45.0 feet; thence South  $89^{\circ}21'$  East, 54.00 feet; thence South  $89^{\circ}30'40''$  East parallel with the South line of said Parcel 4, 337.06 feet to a point on the meander line of Parcel 4; thence South  $18^{\circ}31'52''$  West on said meander line 69.41 feet; thence North  $89^{\circ}30'40''$  West along the South line of said Parcel 4, 315.00 feet to the place of beginning; said Parcel to include lands lying between the Northerly and Southerly lines of the above described lands extending from the meander line of said Parcel to the shore line of Lake Michigan.

## **ATTACHMENT C**



EPA Region 5 Records Ctr.



295750

## NON-TIME-CRITICAL REMOVAL ACTION WORK PLAN

PROPERTIES ADJACENT TO  
MARINA CLIFFS/NORTHWESTERN BARREL SITE  
SOUTH MILWAUKEE, WISCONSIN

JUNE 2007

REF. NO. 008326 (39)

This report is printed on recycled paper.

**Prepared by:**  
**Conestoga-Rovers**  
**& Associates**

65 Colby Drive  
Waterloo, Ontario  
Canada N2V 1C2

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5. Prepare a Supplemental Streamlined Risk Assessment (SSRA) subsequent to completing the ISCO treatment and confirmatory soil sampling to assess if the subsurface soils have been reduced to acceptable risk-based VOC concentrations for future construction/utility workers. The SSRA will assess residual risks based on both default and Site-specific excavation rates for purposes of assessing whether further removal action at the Properties would be required; and
6. Employ best efforts to implement permanent and effective use restrictions (i.e., appropriate deed restrictions, access easements and institutional controls) on the treated areas, if necessary, based upon the conclusions of the SSRA.

### 1.3 ORGANIZATION OF REPORT

This Work Plan is organized into the following major sections:

- Section 1.0 presents a summary of the purpose, scope of activities, and organization of the Work Plan;
- Section 2.0 presents background information including a Site description and a summary of previous removal actions;
- Section 3.0 discusses the additional Non-Time-Critical Removal Action activities be completed at the Properties;
- Section 4.0 discusses implementation of appropriate use restrictions/institutional controls at the Properties;
- Section 5.0 discusses Post-Removal Site Control requirements under the AOC;
- Section 6.0 discusses the reporting requirements associated with Work Plan activities;
- Section 7.0 discusses the schedule for the Work Plan activities; and
- Section 8.0 presents a summary of reports referenced in this Work Plan.

## 2.0 BACKGROUND

### 2.1 SITE DESCRIPTION AND BACKGROUND

#### 2.1.1 LOCATION

The Site and the Properties are located on the shoreline of Lake Michigan in the city of South Milwaukee, Wisconsin (NW ¼, NW ¼, Section 13, Township 5N, Range 22E) near the intersection of Marina Road and Fifth Avenue. The locations of the Site (latitude 42°53'59" N, longitude 87°50'55" W) and the Properties are shown on Figure 2.1.

Generally, the Site and the Properties are bounded to the east by Lake Michigan; to the west by Fifth Avenue; to the north by the South Milwaukee Wastewater Treatment Plant; and to the south by Marina Road and apartments located along Marina Road. A plan of the existing conditions of the Site and the Properties is presented on Figure 2.2.

Northwestern Barrel Company's barrel reconditioning operations were conducted on an approximately 18-acre parcel of property. USEPA initially defined the Site to include only the eastern portion of the property, which consists of roughly 13 acres of the original 18 acres occupied by the Northwestern Barrel Company. The original Site definition excluded the residential properties located immediately west of the Site as well as the right-of-way owned by the City of South Milwaukee located immediately south of the Site. The 13-acre portion of the property (i.e., Site) included the ravine, lake bluff, and upland areas and was the focus of Time-Critical and Non-Time-Critical Removal Actions conducted pursuant to the 1995 and 1998 Unilateral Administrative Orders (Nos. V-W-95-C-313 and V-W-98-C-486) and the 2001 AOC (No. V-W-01-C-630).

The remaining 5 acres including the residential properties located immediately west of the Site as well as the right-of-way owned by the City of South Milwaukee located immediately south of the Site (the "Properties") were the focus of Time-Critical Removal Actions completed at the Properties in 2004 pursuant to AOC No. V-W-04-C-787 and Non-Time-Critical Removal Actions, including the EE/CA Report, which were completed pursuant to the 2002 Administrative Order on Consent (No. V-W-02-C-703).

#### 2.1.2 SETTING

The Site is municipally zoned for residential occupancy. Land use of the properties located immediately west of the Site is residential and land use of the property located immediately south of the Site is a right-of-way owned by the City of South Milwaukee.

Land use in the surrounding area is residential consisting of mostly homes, apartment and condominium buildings. The South Milwaukee Wastewater Treatment Plant is located immediately north of the Site and the Properties. Residences are serviced with a municipal water supply that utilizes Lake Michigan as a source of drinking water.

General stratigraphy in the vicinity of the Site and the Properties is characterized as approximately 150 feet of silty clay glacial drift overlying Silurian dolcstone bedrock. The drift was deposited during the Woodfordian substage of the Wisconsinan glaciation. The principal stratigraphic unit in the vicinity of the Site and the Properties is silty clay till of the Oak Creek formation. The silty clay till has a very low permeability, which acts as an aquitard limiting the potential for downward groundwater migration.

The climate in southeastern Wisconsin is temperate with seasonal changes in temperature and precipitation. The average annual rainfall is approximately 32 inches per year with over half of the precipitation falling between May and September. The ground is generally snow covered and frozen from December through February and the mean annual temperature of the area is 50°F.

## 2.2 PREVIOUS REMOVAL ACTIONS

Initial EE/CA sampling activities were completed by the Performing Parties at the Properties between October 2002 and March 2003. Based on the analytical results for soils samples collected during the EE/CA sampling activities, it was determined that Time-Critical Removal Action activities were necessary at the Properties to address polychlorinated biphenyl (PCBs) and lead concentrations detected in the shallow soils along the eastern boundaries of the Marina Cliffs Condominium property and the Bay Heights Condominium property as well on the City of South Milwaukee Right-of-Way.

Time-Critical Removal Action activities commenced on the Properties in May 2004 and were completed in July 2004. The Time-Critical Removal Action included the excavation and off-Site disposal of all impacted soils with lead concentrations above 400 mg/kg and/or PCBs concentrations above USEPA's self-implementing PCB residential cleanup level of 1 mg/kg. The removal of all lead- and PCB-impacted soil was verified prior to backfilling by the performance of verification sampling conducted during excavation activities. A total of 1,359 cubic yards of impacted soils was excavated and disposed of off Site. The Time-Critical Removal Action activities conducted at the Properties was summarized in the Time-Critical Removal Action Report submitted to USEPA under cover dated August 22, 2005.

During a meeting among the Performing Parties and USEPA representatives on January 8, 2004, there was a discussion pertaining to the volatile organic compound (VOC)-impacted subsurface soils at the Properties that exceeded VOC risk-based USEPA Region IX Preliminary Remediation Goals (PRGs) (screening values) under a future construction/utility worker exposure scenario as well as potential Removal Action technologies to be evaluated in the EE/CA Report. The Performing Parties proposed that In Situ Chemical Oxidation (ISCO) be considered as a viable Removal Action technology in the EE/CA Report to treat the VOC-impacted subsurface soils. USEPA indicated they would require additional information on the effectiveness of ISCO to treat the VOC-impacted soils. Thus, the Performing Parties proposed to conduct additional EE/CA investigation activities to provide USEPA with the additional information requested.

A final draft EE/CA Work Plan Addendum was prepared and submitted to USEPA and WDNR on September 30, 2004. Subsequent to attending two meetings with the Marina Cliffs Condominium Association on October 4 and 14, 2004, to review and discuss the EE/CA Work Plan Addendum, USEPA approved the September 30, 2004 Work Plan Addendum, with revisions, based on comments received from the residents. The additional EE/CA investigation activities were completed at the Properties between October 2004 and October 2005. These additional investigation activities included the completion of a full-scale ISCO pilot study at the Properties in November/December 2004.

A Streamlined Risk Evaluation (SRE) of the analytical data collected during the initial EE/CA sampling activities conducted at the Properties between October 2002 and March 2003 as well as the EE/CA Work Plan Addendum activities conducted at the Properties between October 2004 and October 2005 was subsequently completed. The SRE was a focused assessment of potential current and future risks to human health associated with chemical concentrations in surface soil, subsurface soil, groundwater, and indoor air at the Properties.

An EE/CA Report including the SRE was submitted to USEPA for review in August 2006. USEPA reviewed and approved the final EE/CA Report on September 15, 2006. Subsequently, USEPA released the EE/CA Report and a Proposed Plan describing the proposed additional Non-Time-Critical Removal Action activities for a 30-day public comment, which ended on November 17, 2006. A public meeting to discuss the EE/CA Report and the Proposed Plan for the Properties was held by USEPA on November 2, 2006. USEPA subsequently issued an Enforcement Action Memorandum dated January 4, 2007 specifying the additional Non-Time-Critical Removal Action activities to be completed at the Properties by the Performing Parties.

### 3.0 ADDITIONAL NON-TIME-CRITICAL REMOVAL ACTION ACTIVITIES

The additional Non-Time-Critical Removal Action activities to be completed at the Properties by the Performing Parties are discussed in the following subsections.

#### 3.1 ISCO TREATMENT

Three discrete areas with VOC concentrations exceeding PRGs for an Industrial Worker (USEPA, 2004) were identified on the Properties in the August 2006 EE/CA Report at the locations shown on Figure 3.1. USEPA has determined that these three areas require to be treated by ISCO. As shown on Figure 3.1, the three discrete areas of VOC-impacted soils to be treated by ISCO are described as follows:

- Treatment Area 1 is between Building Nos. 1 and 2 in the vicinity of boreholes BH-5, BH-13, BH-15, and BH-17. This area is approximately 3,960 square feet with a treatment depth ranging from 6 to 10 feet below ground surface (bgs);
- Treatment Area 2 is north of Building No. 4 in the vicinity of boreholes BH-22, BH-56, and BH-57. This area is approximately 2,899 square feet with a treatment depth ranging from 4 to 10 feet bgs; and
- Treatment Area 3 is north of Building No. 4 in the vicinity of boreholes BH-50, BH-58, and BH-59. This area is approximately 3,890 square feet with a treatment depth ranging from 6 to 10 feet bgs.

The ISCO treatment will be completed by BMS Services Inc. (BMS) of Crown Point, Indiana using the patented BIOX<sup>®</sup> technology. BIOX<sup>®</sup> is a remedial technology that combines chemical oxidation with enhanced biodegradation. It is noted that BMS completed the previous full-scale ISCO pilot study at the Properties using the BIOX<sup>®</sup> technology in November/December 2004. The following provides a summary of the procedures to be implemented during the ISCO treatment in Treatment Areas 1 through 3 at the Properties:

- One ISCO injection event will be performed;
- ISCO injection will be performed on 2-foot centers in the immediate vicinity of boreholes BH-13, BH-22, BH-50, and BH-59 up to a maximum of 3-foot centers in other areas being treated. The final spacing and location of the injection points will be determined in the field based on an evaluation of conditions encountered;
- ISCO injection will be performed utilizing BMS' Direct Injection Delivery (DID) system, which is a soft-advance hydraulic drilling technique that creates a high

pressure fluid jet [approximately 100 to 125 pounds per square inch (psi)] that liquefies soil at the probe tip and allows the probe to be easily advanced by hand. Since liquid accomplishes the drilling, safety and protection of subsurface utilities is assured. Lateral pressure from the soil on the probe wall above the injection nozzle effectively seals the hole and minimizes leakage to the surface. Utilizing a limited degree of hydraulic fracturing, BIOX solution is introduced into migration pathways characteristic of the clays at the Properties;

- All ISCO injection activities will be performed in accordance with a WDNR injection permit, issued pursuant to Wisconsin Administrative Code, Section NR 812.05, which pertains to the underground placement of any substance necessary for the remediation of contaminated soil, groundwater, or an aquifer;
- ISCO Injection will consist of advancing the DID probe to the target depth, with BIOX<sup>®</sup> solution injection performed throughout the depth of concern;
- Once the specified volume of BIOX<sup>®</sup> solution has been injected, the DID probe will be removed and the borehole sealed;
- Sealing will be performed using a combination of fine sand and/or bentonite chips;
- Once the borehole is sealed, the DID probe will proceed to the next ISCO injection location. Subsequent to completion of all injection activities all surfaces will be restored; and
- During ISCO injection activities, real-time monitoring of ambient air in the worker breathing zone, immediately above drain gates in the vicinity of the treatment area, and at the lowest point inside the residential buildings will be monitored for both VOCs using a photoionization detector (PID) and for lower explosive limits (LEL) using a LEL meter.

It is noted that these are the same procedures that were previously implemented during the full-scale ISCO pilot study conducted at the Properties in November/December 2004.

### **3.2 DRAIN-TILE DEPRESSURIZATION SYSTEMS/ INDOOR AIR MONITORING**

The drain-tile depressurization systems currently in operation in Building Nos. 1 through 4 of the Marina Cliffs Condominium buildings will continue to be operated as a precautionary measure during the ISCO treatment to ensure that concentrations of VOCs in indoor air remain at or below acceptable levels. These systems will continue to be operated continuously, at no cost to the residents, during the ISCO treatment.

Consistent with the previously approved full-scale ISCO pilot study, an indoor air sampling event will be performed in Building No. 1 during ISCO treatment in the vicinity of BH-15 and in Building No. 4 during ISCO treatment in the vicinity of BH-56. These two individual sampling events will be performed as a precautionary measure during the ISCO treatment to ensure that concentrations of VOCs in indoor air in residential units immediately adjacent to the areas being treated remain at or below acceptable levels.

The indoor air samples will be collected over an 8-hour interval using Summa canister sampling techniques in accordance with the USEPA-approved Site-specific QAPP. The indoor air samples will be submitted for laboratory analysis of TCL VOCs in accordance with the USEPA-approved Site-specific QAPP. The indoor air data will be assessed to ensure that concentrations of VOCs in indoor air remain at or below acceptable levels during ISCO treatment activities.

### 3.3 SITE-SPECIFIC HEALTH AND SAFETY PLAN

All additional Non-Time-Critical Removal Action activities will be completed in accordance with the Site-specific Health and Safety Plan (HASP) dated November 2004 that was previously submitted to USEPA as part of previous full-scale ISCO pilot study conducted at the Properties in November/December 2004, updated as appropriate in May 2007. The Site-specific HASP was developed in accordance with the Occupational Safety and Health Administration (OSHA) regulations found at Title 29, Code of Federal Regulations, Part 1910 and 1926 (29 CFR Part 1910 and 1926) to ensure the protection of the public health and safety during performance of the ISCO treatment activities.

All Non-Time-Critical Removal Action activities including the ISCO injection activities will be continuously monitored by CRA's project representative. The health and safety procedures, Site control measures and emergency response guidelines specified in the above-referenced Site-specific HASP will be implemented and maintained during the Non-Time-Critical Removal Action activities. Any unanticipated events will be immediately addressed as they arise by CRA's project representative in consultation with USEPA's representative. Appropriate notification to the Marina Cliff Condominium Corporation will be determined by USEPA's representative.

In the event of an accident or disturbance of underground services, work activities will immediately cease and the appropriate emergency response personnel (e.g., Fire Department, Police Department, State of Wisconsin Emergency Response Commission,

Utility Company) will be immediately notified in accordance with the Emergency Contingencies specified in the above-referenced Site-specific HASP. USEPA's representative will also be immediately notified and immediate notification to the Marina Cliff Condominium residents and/or City of South Milwaukee, as appropriate, will be initiated.

In the unlikely event that the Marina Cliff Condominium residents must be evacuated from a building due to an accident or disturbance of underground services during Non-Time-Critical Removal Action activities, alternative accommodations acceptable to the residents will be arranged and provided throughout the duration that the residents are displaced from their homes.

#### **3.4 QUALITY ASSURANCE PROJECT PLAN**

All additional Non-Time-Critical Removal Action activities sampling and analyses activities will be completed in accordance with the October 2002 USEPA-approved Site-specific Quality Assurance Project Plan (QAPP) Amendment that was implemented during the previous full-scale ISCO pilot study conducted at the Properties in November/December 2004.

#### **3.5 PROPERTY ACCESS**

All additional Non-Time-Critical Removal Action activities will be conducted on the Marina Cliffs Condominium Corporation property. This property is not owned by or under control of the Performing Parties. The Performing Parties will exercise their best efforts to obtain access with the Marina Cliffs Condominium Corporation. The Performing Parties will, in writing, immediately request the assistance of USEPA within 14 calendar days of receipt of notification of USEPA's approval of the Supplement Work Plan, should the Performing Parties be unsuccessful in obtaining access to the property.

To the extent obtained, such access will be provided to USEPA employees, contractors, agents, consultants, designees, representatives, and WDNR representatives, who shall be permitted to move freely at these areas in order to conduct actions that USEPA determines to be necessary. All persons granted access to the property shall, as appropriate, be subject to the requirements of the Site-specific HASP described in Section 3.3.

### 3.6 SITE PREPARATION AND RESTORATION ACTIVITIES

Prior to initiation of the additional Non-Time-Critical Removal Action activities, the ISCO Treatment Areas will be visually inspected and a photographic documentation of the ground surface and surface features will be completed by CRA's project representative. Copies of the photographic documentation will be provided to the Marina Cliff Condominium Corporation for its records. The photographic documentation will provide the basis for the restoration activities to be completed following the completion of the additional Non-Time-Critical Removal Action activities at the Properties.

All surface features that will be potentially affected by the Non-Time-Critical Removal Action activities will be identified and the owner will be notified. Features that can be readily moved (e.g., bird baths, picnic tables, etc.), will be temporarily moved and then placed back in their original location/condition immediately after performing Non-Time-Critical Removal Action activities. All parking areas that will be potentially affected by the Non-Time-Critical Removal Action activities will be identified and alternative parking arrangements will be arranged for the affected individuals.

All Non-Time-Critical Removal Action activities will be completed in a manner that is cognizant of the proximity of the residences to the ISCO Treatment Areas. Non-Time-Critical Removal Action activities will be conducted in a manner to minimize, to the extent practicable, disturbance to the residents and to minimize the potential for any adverse impacts to the general public or the environment.

The location of all underground services will be accurately determined and marked on the ground surface prior to commencing Non-Time-Critical Removal Action activities. ISCO treatment activities are anticipated to be completed in the vicinity of underground services, however, as discussed in Section 3.1, BMS' Direct Injection Delivery (DID) system utilizes a soft-advance hydraulic drilling technique that liquefies soil at the probe tip and allows the probe to be easily advanced by hand. Since liquid accomplishes the drilling, safety and protection of subsurface utilities is assured.

Efforts will be made to minimize disturbance to the surface features on the Marina Cliff Condominium Corporation property. In the event of disturbance to any surface features (i.e., trees, shrubs, lawns, sidewalks, pavement, etc.) on the properties, the disturbed area will be restored to its prior condition immediately upon completing ISCO injection activities and post-treatment soil sampling. As discussed above, the photographic documentation completed prior to the ISCO injection activities will provide the basis for the restoration activities.

A follow-up inspection will be performed (see Section 5.0) following completion of the ISCO injection activities. The follow-up inspection will be completed with USEPA's project manager, CRA's project representative, and a representative of the Marina Cliff Condominium Corporation to confirm that all restorations are satisfactory. Any unsatisfactory restoration will be identified and immediately restored to the satisfaction of USEPA and/or the Marina Cliff Condominium Corporation.

### **3.7 POST-TREATMENT SOIL MONITORING**

Soil monitoring will be performed between 30 and 45 days after the completion of the ISCO injection to evaluate the effectiveness of BIOX<sup>®</sup> in achieving acceptable VOC risk-based concentrations for the future industrial worker scenario. Soil monitoring will be performed at the ten proposed borehole locations shown on Figure 3.2. One subsurface soil sample will be collected from each of the borehole locations in Areas 1 and 3, at depths of 7 to 9 feet bgs. The treatment depth in Areas 1 and 3 is from 6 to 10 feet bgs. Two subsurface soil samples will be collected from each of the borehole locations in Area 2, at depths of 4 to 6 feet bgs and 8 to 10 feet bgs, respectively. The treatment depth in Area 2 is from 4 to 10 feet bgs. All soil samples collected will be submitted for laboratory analyses of Target Compound List (TCL) VOCs in accordance with the USEPA-approved Site-specific QAPP.

### **3.8 SUPPLEMENTAL STREAMLINED RISK ASSESSMENT (SSRM)**

Subsequent to completing the ISCO treatment and confirmatory soil sampling discussed in Sections 3.1 and 3.7, respectively, an SSRA will be prepared and submitted to USEPA. The purpose of the SSRA will be to assess if subsurface soils have been reduced to acceptable risk-based VOC concentration levels for future construction/utility workers. The SSRA will be prepared consistent with the assumptions utilized for the future construction/utility worker exposure scenario presented in the EE/CA Report (CRA, 2006), with the exception that residual risks will be calculated using default and Site-specific excavation rates for purposes of assessing whether further removal action at the Properties would be required. The SSRA will also include recommendations for any appropriate use restrictions, easements, and institutional controls at the Properties based on an evaluation of the post-treatment soil data.

4.0 USE RESTRICTIONS/INSTITUTIONAL CONTROLS

As discussed in Section 3.5, Marina Cliffs Condominium Corporation is the legal owner of the property where elevated concentrations of VOCs were identified and are the subject of the additional Non-Time-Critical Removal Action activities detailed in this Work Plan. This property is not owned by or under control of the Performing Parties.

As a result, and as specified in the AOC, the Performing Parties Group will use its reasonable best efforts to assist USEPA to ensure that appropriate deed restrictions, access easements and institutional controls are implemented by Marina Cliffs Condominium Corporation at the property. The necessity for and appropriateness of the use restrictions will be based upon the conclusions of the SSRA.

5.0 POST-REMOVAL SITE CONTROL

A follow-up inspection will be performed approximately 3 months following completion of the ISCO injection activities. The follow-up inspection will be completed with USEPA's Project Manager, CRA's project representative, and a representative of the Marina Cliff Condominium Corporation to confirm that all restorations are satisfactory. Any unsatisfactory restoration will be identified and immediately restored to the satisfaction of USEPA and/or the Marina Cliff Condominium Corporation.

## 6.0 REPORTING

The following reports will be submitted to the USEPA:

- Monthly Progress Reports;
- Supplemental Streamlined Risk Assessment; and
- Final Report.

### 6.1 MONTHLY PROGRESS REPORTS

Monthly Progress Reports will continue to be provided to USEPA until completion of the Final Report discussed in Section 6.2 as required by the AOC, and will include the following major items:

- A description of the Work Plan activities which were performed and a summary of all significant developments during the reporting period;
- A description of any problems encountered during the reporting period and actions taken to resolve those problems;
- A summary of analytical data, after QA/QC review, received during the reporting period; and
- A description of developments anticipated during the next reporting period, including a schedule of Work Plan activities to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

The Monthly Progress Reports will be submitted by the tenth day of every month until the Work Plan activities are complete and all of the requirements of the AOC have been satisfied. If the date for submission of any item or notification required by the AOC falls upon a weekend or federal holiday, the submission date will be extended until the next business day following the weekend or holiday.

### 6.2 SUPPLEMENTAL STREAMLINED RISK ASSESSMENT (SSRA)

As discussed in Section 3.8, an SSRA will be prepared and submitted to USEPA subsequent to completing ISCO treatment and confirmatory soil sampling to assess if the subsurface soils have been reduced to acceptable risk-based VOC concentration levels for future construction/utility workers.

The SSRA will also include recommendations for further removal actions to be implemented at the Site, if necessary, and any appropriate use restrictions, easements, and institutional controls at the Properties based on an evaluation of the post-treatment soil data.

### 6.3 FINAL REPORT

Following completion of the Work Plan activities and USEPA determining that no further removals actions are necessary at the Properties, a Final Report will be prepared and submitted to USEPA for review in accordance with the requirements of the AOC. The Final Report will include a summary of the Work Plan activities as well as all of the activities taken to comply with the AOC. The Final Report will include an estimate of total costs incurred in complying with the AOC, a listing of the quantities and types of materials handled or removed from the Site, a discussion of the disposal options, a listing of the ultimate destinations of all materials, a summary of all of the analytical results, and accompanying appendices containing all relevant documentation generated under the AOC.

7.0 SCHEDULE

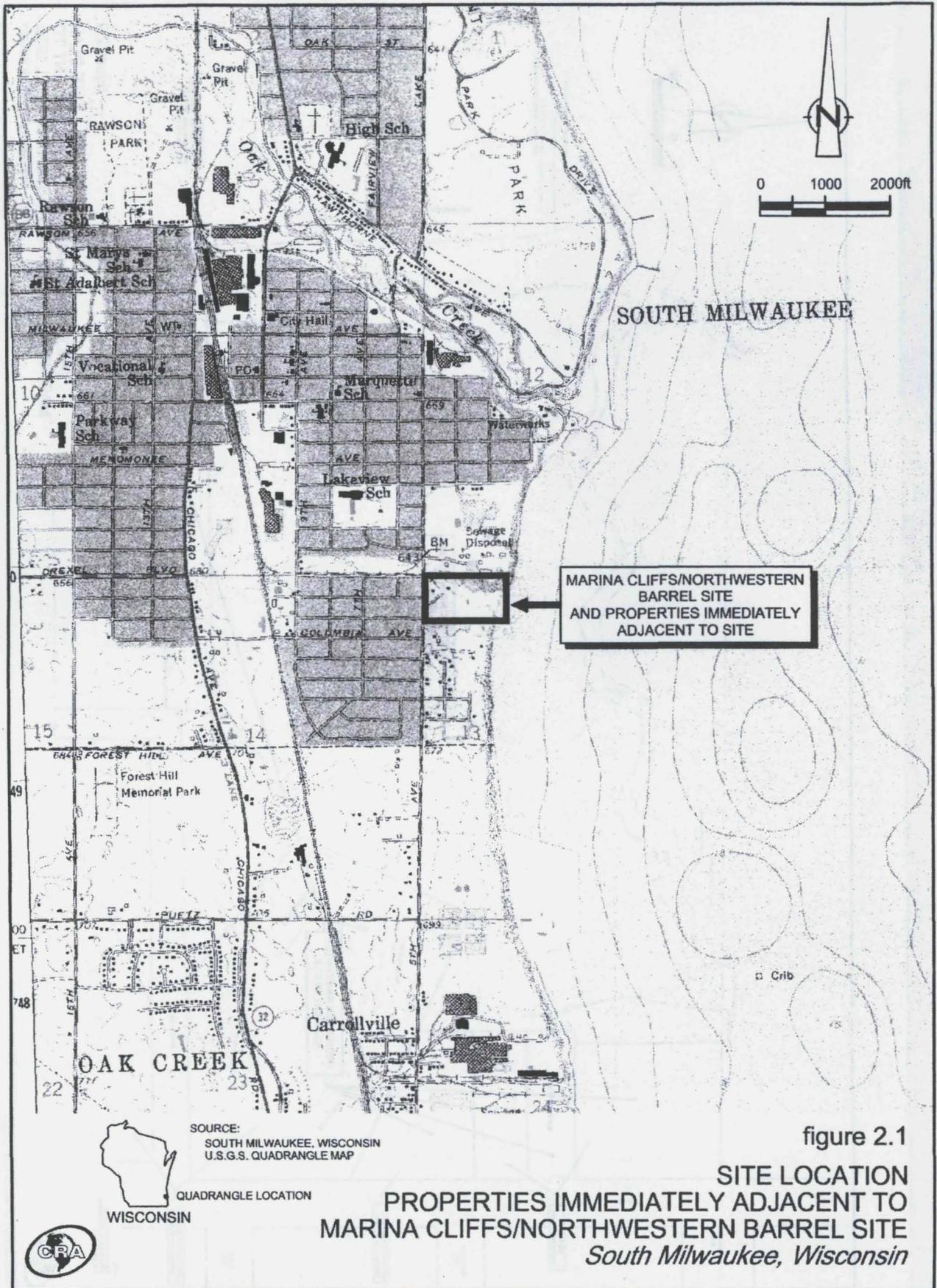
Implementation of the Work Plan activities will commence on June 4, 2007, subject to approval of the Work Plan and securing the necessary access agreements with the Marina Cliffs Condominium Association. If Work Plan approval and the necessary access rights are not secured by that date, the commencement of Work Plan activities will be postponed until September 2007.

It is estimated that the ISCO injection and confirmatory soil sampling Work Plan activities will be completed within approximately 90 days from commencement of field activities. The SSRA will be prepared and submitted to USEPA for review and approval within 60 days following completion of the ISCO injection and confirmatory soil sampling Work Plan activities. A Final Report will be prepared and submitted to USEPA for review and approval within 120 days of USEPA determining that no further removal actions are necessary at the Properties.

## 8.0 REFERENCES

- CRA, 2002. Engineering Evaluation/Cost Analysis Work Plan, Properties Adjacent to Marina Cliffs/Northwestern Barrel Site, South Milwaukee, Wisconsin, Conestoga-Rovers & Associates, July 2002.
- CRA, 2004. Engineering Evaluation/Cost Analysis Work Plan Addendum, Properties Adjacent to Marina Cliffs/Northwestern Barrel Site, South Milwaukee, Wisconsin, Conestoga-Rovers & Associates, September 30, 2004.
- CRA, 2005. Time-Critical Removal Action Report, Properties Adjacent to Marina Cliffs/Northwestern Barrel Site, South Milwaukee, Wisconsin, Conestoga-Rovers & Associates, August 22, 2005.
- CRA, 2006. Engineering Evaluation/Cost Analysis Report, Properties Adjacent to Marina Cliffs/Northwestern Barrel Site, South Milwaukee, Wisconsin, Conestoga-Rovers & Associates, August 4, 2006.
- USEPA, 2004. Region IX Preliminary Remediation Goals (PRGs), October 1, 2004.
- USEPA, 2007. Enforcement Action Memorandum, Marina Cliffs/Northwestern Barrel Facility, South Milwaukee, Wisconsin, United States Environmental Protection Agency, January 4, 2007.

## FIGURES



MARINA CLIFFS/NORTHWESTERN  
BARREL SITE  
AND PROPERTIES IMMEDIATELY  
ADJACENT TO SITE

SOURCE:  
SOUTH MILWAUKEE, WISCONSIN  
U.S.G.S. QUADRANGLE MAP

QUADRANGLE LOCATION  
WISCONSIN



figure 2.1  
SITE LOCATION  
PROPERTIES IMMEDIATELY ADJACENT TO  
MARINA CLIFFS/NORTHWESTERN BARREL SITE  
*South Milwaukee, Wisconsin*

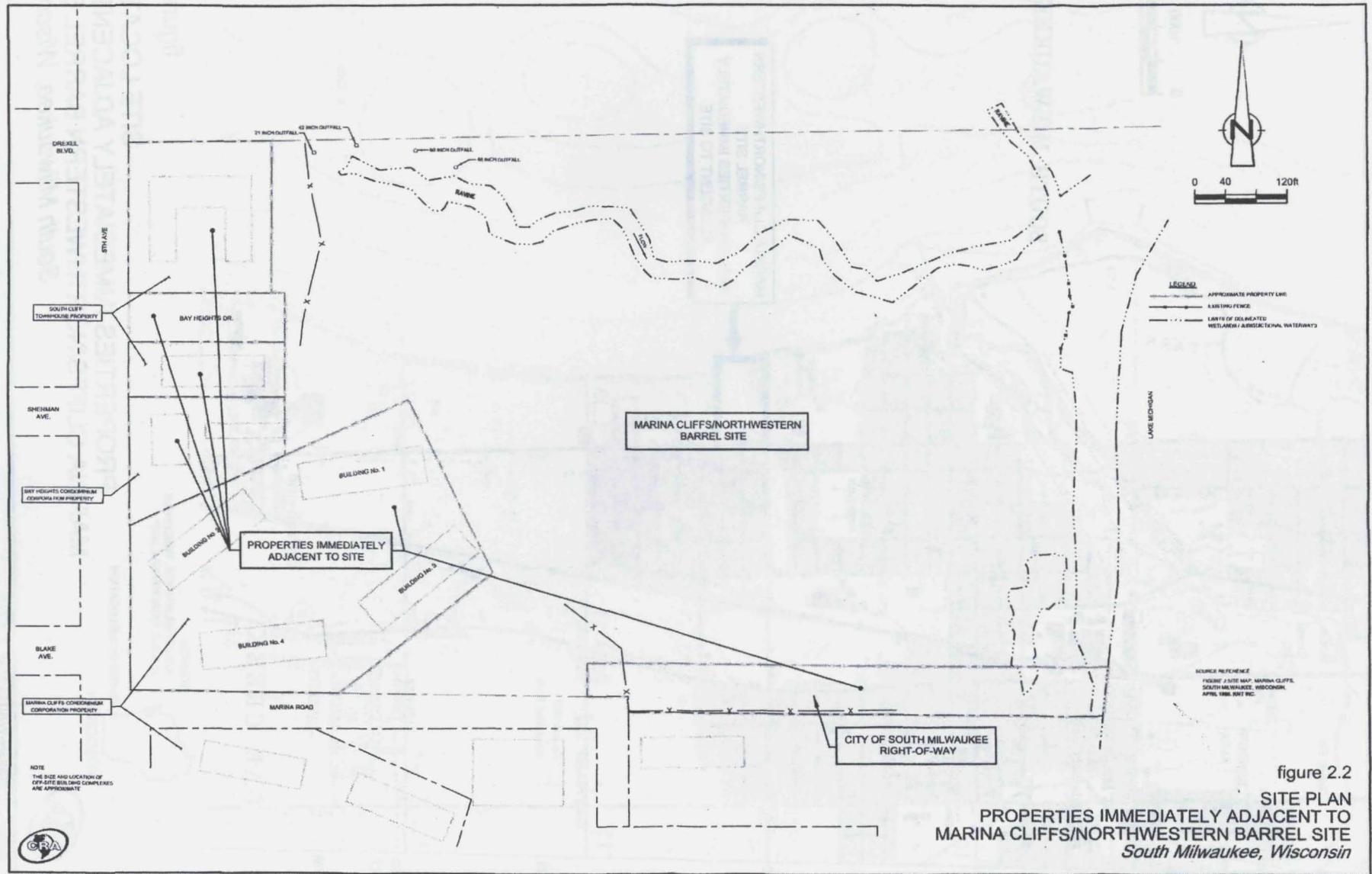
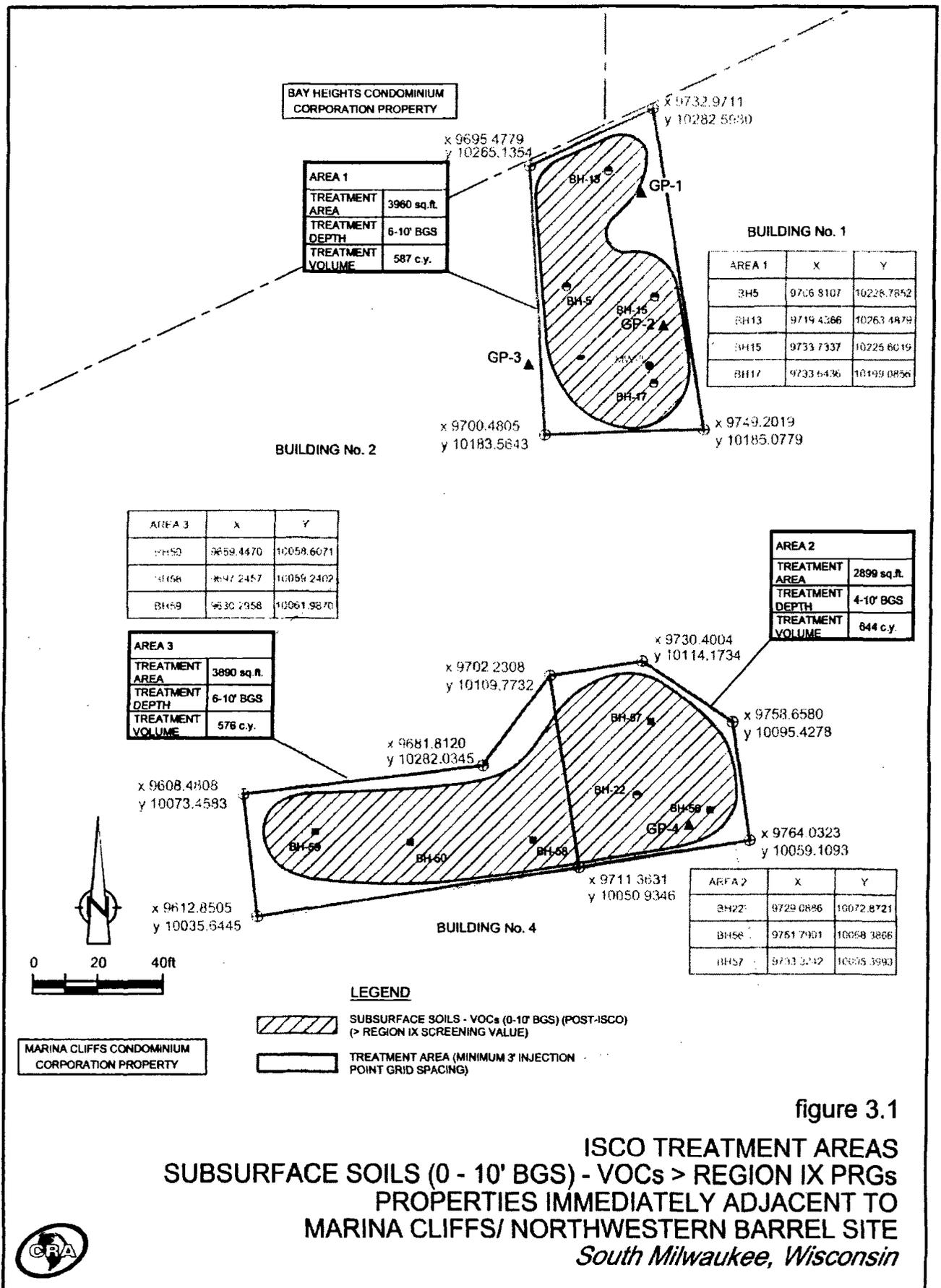
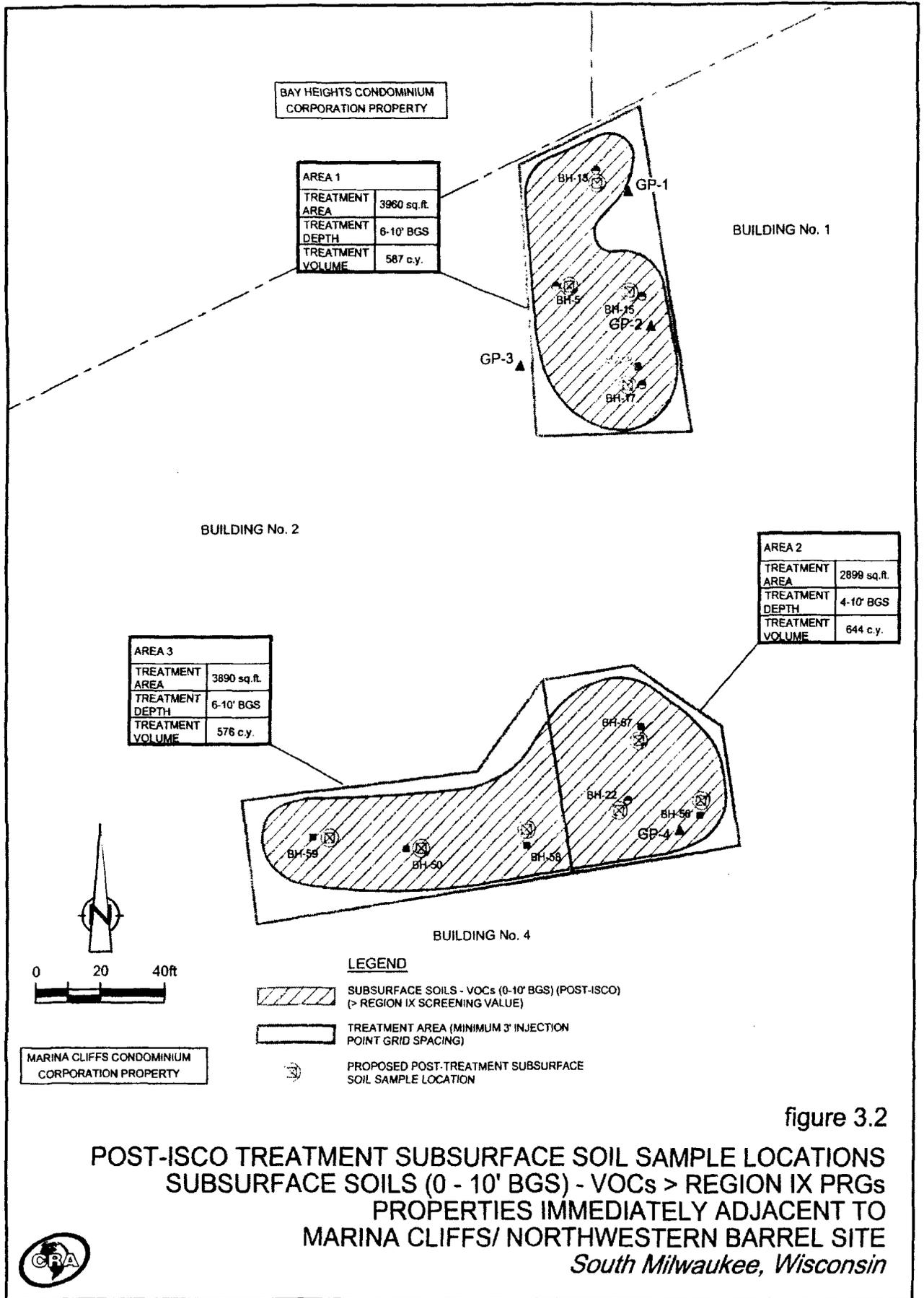


figure 2.2  
 SITE PLAN  
 PROPERTIES IMMEDIATELY ADJACENT TO  
 MARINA CLIFFS/NORTHWESTERN BARREL SITE  
 South Milwaukee, Wisconsin









APPENDIX A

JANUARY 4, 2007 ENFORCEMENT ACTION MEMORANDUM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

SR-6J

MEMORANDUM

DATE: JAN 04 2007

SUBJECT: ENFORCEMENT ACTION MEMORANDUM - Determination of Threat to Public Health and the Environment and Selection of Non-Time Critical Removal Action at the Marina Cliffs/Northwestern Barrel Facility, South Milwaukee, Wisconsin (Site ID #05PO)

FROM: Michael Berkoff, Remedial Project Manager  
Remedial Response Section II

TO: Richard Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this memorandum is to document the determination of an imminent and substantial threat to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances, and the removal action to be performed, at the portion of the Northwestern Barrel/Marina Cliffs Facility located near the Marina Cliffs condominium complex (referred to as "the Properties"), in South Milwaukee, Wisconsin (Figures 1, 2).

The selected response action addresses the threats posed by the presence of volatile organic compounds (VOCs) in subsurface soils associated with a barrel reconditioning operation. A group of potentially responsible parties (the "Performing Parties") is expected to enter an Administrative Settlement Agreement and Order on Consent (Settlement) agreeing to perform the response actions selected by the United States Environmental Protection Agency (U.S. EPA) for the Properties under U.S. EPA oversight. If U.S. EPA cannot reach a Settlement, it expects to issue a Unilateral Administrative Order (UAO) requiring the Performing Parties to perform the selected response action.

The selected response action will mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the Properties. These response

actions have been selected based on an Engineering Evaluation/Cost Analysis (EE/CA) investigation for the Properties, focused on the residual contamination remaining after time critical removal actions to remove surface soil contamination at the Properties.

The selected removal actions include injection of chemical oxidizers to soils at the Properties, excavation and disposal of the contaminated soil at the Properties, and use restrictions requiring that workers working at depths below three feet in the areas where subsurface contamination is present wear appropriate protective equipment and follow an appropriate health and safety plan.

The information and the removal alternatives are based on site investigation activities performed under a July 5, 2002 Administrative Order by Consent (AOC), Docket No. V-W-02-C-703. This action is classified as a non-time critical removal action.

The Northwestern Barrel/Marina Cliffs Facility is not on the National Priorities List (NPL). The removals at the Site and the Properties have been and will be performed by potentially responsible parties (PRPs).

The EE/CA report was completed on August 4, 2006, and based on that report U.S. EPA identified its proposed response actions and solicited public comments. The comment period closed on November 17, 2006, and [U.S. EPA received comments from two individuals on the proposed actions.] The EE/CA report analyzes all the confirmation sampling data collected as part of previous removal activities and pilot studies at the Properties and incorporates this data into a formal Streamlined Risk Evaluation (SRE). Upon completion of the removal actions the excess lifetime cancer risk level at the Properties will be lower than one in a million for residential use, the Hazard Index will be just above one (this is discussed in the Removal Site Evaluation of this Action Memorandum) for residential use, and all Applicable or Relevant and Appropriate Requirements (ARARs) are expected to be met.

## **II. SITE CONDITIONS AND BACKGROUND**

The CERCLIS ID number for the Facility is WID981095995

### **A. Removal Site Evaluation**

An EE/CA Report for the Properties was prepared by Conestoga Rovers & Associates (CRA), on behalf of the Performing Parties pursuant to the July 5, 2002, AOC. U.S. EPA approved the EE/CA Report, with minor modifications, on September 15, 2006.

Based on the results of initial EE/CA investigations conducted in 2003, the Performing Parties performed a time critical removal action to excavate and remove contaminated surface soil under an AOC issued on May 4, 2004, as described in detail in Section II.E.

The EE/CA report presents the results of EE/CA sampling activities completed at the Properties, the time critical removal activities performed at the Properties in 2004, and the 2005 pilot test performed to evaluate the effectiveness of chemical oxidation (ChemOx) in treating subsurface VOCs. The EE/CA Report also presents an SRE of the analytical data collected; and recommendations for additional removal actions.

The SRE did not include in the analysis sampling data for soil that had been either excavated in the time critical removal or treated during the pilot study. The Performing Parties presented their conclusions in the SRE section of the non-time critical EE/CA for the Properties. The SRE conducted in the time critical EE/CA for the Properties focused on three primary potential exposure pathways:

1. Potential current recreational user exposure to surface soils and surface water; and
2. Potential future hypothetical residential exposure to soils and garden produce.
3. Potential future hypothetical exposure to construction or utility workers during soil excavation around the condo area.

The first two exposure pathways were addressed in the time critical removal actions of 2004. The non time-critical EE/CA addresses the potential exposure to construction and utility workers.

As part of the SRE, it was determined that many COPCs, which contributed to the estimated cancer risks and hazard indices, were present in soils at the Properties only at levels below background, and therefore, are not site-related. These non-Properties-related COPCs in surface and subsurface soils include arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The Properties-related COPCs in surface soil include only aroclor-1254, iron and manganese. In both the surface and subsurface soil, aroclor-1254 is at levels less than 1 ppm, the MCL, where still detected.

Iron and manganese are site-related COPCs that are considered unrelated to the historic barrel recycling contamination at the Facility. This determination was made because these contaminants do not follow the distribution pattern of the other site-related COPCs. At the Properties, iron and manganese are fairly localized along roadways which suggest that they come from automotive emissions. This issue is discussed in Section 2.6.6.1 of the EE/CA which addresses the exposure risks to current residents based upon surface soil contaminants. The Hazard Index for the surface soil is above one due to the presence of arsenic, iron and manganese. Iron and manganese are at high levels at background concentrations, so the slightly elevated levels for these elements found in a small number of samples has raised the Hazard Index above 1. Because, these elevated levels may be attributable to non-site related anthropogenic sources like automobile emissions as the two locations, with high levels of contaminant, in the 0"-6" horizon of soil, occur along roadways.

EPA can use its discretion as it makes risk management decisions in regards to non-site related contamination from anthropogenic sources or potentially hazardous elements that have high background concentrations. This is based upon EPA guidance on background data as it relates to risk evaluation and management. EPA has considered the current data on the iron, manganese, and arsenic levels at the Properties and does not feel that the performing parties need to address those elements at this time.

U.S. EPA has evaluated soil data set as it relates to the estimated cumulative lifetime cancer risks, and hazard indices (HI) for both the current and the hypothetical future residential scenarios. From this, U.S. EPA has concluded that additional activities, as a Non-Time Critical Removal Action, are required to be protective of human health and the environment. Specifically, the Non-Time Critical Removal Action activity is considered necessary to address the risk posed by soil COPCs to industrial workers. A summary of the estimated cumulative lifetime cancer risks and HI for both residential and industrial worker exposure scenarios is detailed in the non-time critical EE/CA for the Properties dated August 4, 2006. Figure 3 shows those areas of the Property where subsurface soils exceed VOC risk-based Region IX Preliminary Remediation Goals (PRGs) for industrial workers, and therefore further action is required.

Properties-Related COPCs in subsurface soil include benzene, PCE, TCE, vinyl chloride and aroclor-1254. As stated above, aroclor-1254 is at levels below 1ppm when it is detected. The VOCs are present in distinct pockets of subsurface soils at the Properties. The contamination is below the parking area and adjacent to two buildings and are the primary focus of this non-time critical removal action. The subsurface soil in this area contains a great deal of utilities, so U.S. EPA has encouraged the Performing Parties to explore alternative remediation technologies in the EE/CA process. The Performing Parties conducted, under U.S. EPA supervision, a pilot study testing the ability of ChemOx as a response action for these contaminated soils. Confirmation sampling verified that ChemOx can be a successful method for treating contaminated soils at the Properties.

The proposed Non-Time Critical Removal Action activities will consist of injections of ChemOx in the affected areas. ChemOx is a chemical that converts hazardous contaminants into less toxic and hazardous breakdown products through a chemical oxidation process. These breakdown products, typically vinyl chloride, continue to break down into less hazardous compounds over time. This decision to use ChemOx is supported by the results of a previous in-situ chemical oxidation pilot study. ChemOx injections were made in three discrete contaminated areas in the Marina Cliffs Condo property, the effects of which were observed over the following months by sampling the treated soil. The sampling results suggest that in-situ chemical injections can reduce the levels of COPCs at the Properties, when the spacing of the injections is three feet apart (Figure 4). U.S. EPA determined that the in-situ method was preferable to excavation of the contaminated soils, because excavation would be very difficult logistically, very disruptive to residents, and could have threatened the integrity of the buildings. Preliminary results from the pilot study show in-situ chemical injections to be an effective method for treating these COPCs.

Though the reductions varied, contaminant levels decreased in all areas.

Groundwater is not currently a source of drinking water in the vicinity of the Site or the Properties, which are served by a public drinking water system so no complete direct pathway currently exists for potential exposure to groundwater. Additionally, U.S. EPA does not expect groundwater to be a future source of drinking water at either the Site or the Properties. Sampling results indicate that Target Compound List (TCL) VOC, TCL semi-volatile organic compounds, TCL pesticides/PCB's, and Target Analyte List inorganic groundwater concentrations were detected infrequently and at low concentrations at monitoring wells MW-8, MW-9, and MW-10 at the Properties. Some of the VOC levels may be breakdown products of COPCs from the pilot study.

At the Properties, the contaminant levels that are found in the ground water are below the MCL's. Additionally, indoor air sampling data had not found the presence of COPCs in the basements of the units adjacent to the contaminated subsurface soil. Based upon those two observations, so there does not appear to be any risk of vapor intrusion due to any groundwater source from the Properties. The closest areas of elevated contaminant levels in the groundwater are found on the 13 acre property adjacent to the Properties. The soil in the area is densely packed clay, so there is little migration of groundwater in the area. Additionally, the Properties are up gradient of the potential sources on the 13 acre property. Given these geologic features of the area, migration of contaminants, via groundwater, from the 13 acre property to the condo area is unlikely.

#### **B. Physical Location and Site Characteristics**

The 13-acre parcel and the Properties are located on the shoreline of Lake Michigan in the city of South Milwaukee, Wisconsin (NW ¼, NW ¼, Section 13, Township 5N, Range 22E) near the intersection of Marina Road and Fifth Avenue. The locations of the Facility (latitude 42°53'59" N, longitude 87°50'55" W) and the Properties are shown on Figure 1. Generally, the Facility is bounded to the east by Lake Michigan, to the west by Fifth Avenue, to the north by the South Milwaukee Wastewater Treatment Plant, and to the south by Marina Drive (Figure 2). Northwestern Barrel Company's barrel reconditioning operations were conducted on an approximately 18-acre parcel of property.

U.S. EPA initially focused on the 13-acre eastern portion of the property, which is owned by Towne Realty, Inc. and which is where most of the barrel reconditioning operations took place. The 13-acre Site area included the ravine, lake bluff, and upland areas and was the focus of Time Critical and Non-Time Critical Removal Actions conducted pursuant to 1995 and 1998 Unilateral Administrative Orders (Docket Nos. V-W-95-C-313 and V-W-98-C-486) and a 2001 Administrative Order on Consent (Docket No. V-W-01-C-630). The remaining 5 acres, including the residential properties located immediately west of the Site as well as the right-of-way owned by the City of South Milwaukee located immediately south of the Site (the "Properties"), are the

focus of the EE/CA Report which is being prepared pursuant to the July 5, 2002 AOC.

The Facility is municipally zoned for residential occupancy and land use in the vicinity of the Facility is primarily residential. The Facility is bordered to the south and the west by residential areas consisting of mostly apartment and condominium buildings. Residences in the vicinity of the Facility are serviced with a municipal water supply that utilizes Lake Michigan as a source of drinking water.

General stratigraphy in the vicinity of the Facility is characterized as approximately 150 feet of silty clay glacial drift overlies Silurian dolostone bedrock. The drift was deposited during the Woodfordian substage of the Wisconsinan glaciation. The principal stratigraphic unit in the vicinity of the Facility is silty clay till of the Oak Creek formation. The silty clay till has a very low permeability, which acts as an aquitard limiting the potential for downward groundwater migration.

In Wisconsin, the low-income average is 28% and the minority average is 13%. To meet the Environmental Justice (EJ) concern criteria, the area within 1 mile of the Site must have a population that's twice the state low-income average percentage and/or twice the state minority average percentage. That is, the area must be at least 56% low income and/or 26% minority. At this site, the low-income is 26% and the minority is 8% as determined by ArcView EJ Analysis. Therefore, these demographic conditions indicate that an EJ priority does not exist for the community around the site (See Attachment II).

### **C. History**

The Northwestern Barrel Company operated a barrel reconditioning facility on the Facility from approximately 1941 until 1964. Northwestern Barrel Company reconditioned both steel and wood barrels. Used barrels were received from a wide variety of companies for cleaning and reconditioning. The operations included on-site handling, washing, and refurbishing of drums and barrels. The residuals from these operations were disposed of at the Facility. Northwestern Barrel Company then sold the reconditioned drums.

The entire Northwestern Barrel/Marina Cliffs Facility is defined as an 18 acre parcel of land bounded by the lakefront to the east, 5th Avenue to the west, Marina Road to the south and the South Milwaukee Wastewater Treatment Plant to the north. Towne Realty owns the 13-acre parcel that fronts Lake Michigan, which it purchased in 1982. The condominiums on the 5-acre portion of the Facility are privately owned and the common property is owned by the Marina Cliffs Condominium Association. The condominium buildings were constructed between 1965 and 1969. The right of way immediately south of the condos was conveyed by Towne Realty to the City of South Milwaukee in April 1994.

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

As described below the majority of contamination at the Property was removed under a previous time critical removal action. The EE/CA documents the presence of residual subsurface VOCs in a few small areas around the condominium buildings that still remain after prior excavation and disposal of contaminated surface soil. For the reasons described in Section II A, these areas continue to present releases and threats of releases of hazardous substances into the environment.

**E. Other Actions to Date**

Various historical sampling has been conducted at the Properties. This has included surface soil sampling conducted by the Wisconsin Department of Health and Family Services (WDHFS) on July 11, 1997 and background sampling in November 1996 and in December 2000, as part of the EE/CA investigation for the Site area. Non-Time Critical Site-Wide Evaluation investigation activities were initially conducted by the Performing Parties at the Site in March and June/July 1998. Additional subsurface soil samples were collected at one of the residential properties located immediately west of the Site by representatives of the property owners in December 1999.

In response to a request from the Marina Cliffs Condominium Association, a total of six boreholes (i.e., BH-36 to BH-41) were advanced and surface/subsurface soil samples were collected south of Marina Cliffs Condominium Building Nos. 3 and 4 on March 19, 2002. These activities were done in accordance with a U.S. EPA-approved Scope of Work. This allowed for the completion of surface water drainage modification activities in this area, by the Association, in the spring of 2002.

Soil sampling was performed from December 2002 to February 2003, as part of the EE/CA to determine the extent to which releases of contamination (and thus the boundary of the Facility) extended beyond the 13 acre parcel. After analyzing the findings, U.S. EPA included the 5 acre parcel, adjacent to 5th Avenue and Marina Road, as a part of the Facility and called this area the "Properties." The Properties are defined to include a City right-of-way just south of the 13 acre parcel and the adjacent Marina Cliffs condominium complex, which was constructed within the original property boundary owned by Northwestern Barrel.

A uniform 75 foot grid was established over the Properties (31 borehole locations). Additional borings were added in the Marina Cliffs condominiums area to further define the extent of contamination. Results at most of the surface sampling locations indicated that compounds of potential concern (COPC) were at low concentrations, similar to background. The only notable exceptions were at four locations primarily around the Marina Cliffs condominiums and a small area near the Bay Heights complex. The maximum PCB concentration was 22 parts per million (ppm). Lead was also detected in one surface sample at 803 ppm within the City of South

Milwaukee Right of Way. Similarly, sampling results at most of the subsurface locations, indicated that COPCs were at low concentrations, similar to background.

Polychlorinated biphenyls (PCBs) and lead, however, were detected at elevated levels around the Marina Cliffs condominiums at a depth of 2 to 4 feet. Based on those sample results, U.S. EPA determined in a May 4, 2004, Action Memorandum that regardless of the measures evaluated to address other contamination on the Properties, any cleanup approach would require excavation of surface and shallow soils containing lead in excess of 400 ppm and PCBs in excess of 1 ppm. U.S. EPA. Past and current contamination at the Properties is presented in Figure 5.

The focus of the EE/CA and this Action Memorandum for a non-time critical removal action is the VOC contamination in soil at depths of 4 to 14 feet at the Properties, because the lead and PCBs were addressed in the time critical removal action. The VOC contamination is in two spots under the parking lot, between buildings 1 and 2, and in a one spot north of building 1 (Figures 4, 5). The EE/CA details the risks and cleanup options associated with these subsurface soils, soil gas and groundwater. In addition to the recent and past soil investigations, the EE/CA includes data from a chemical injection pilot study conducted at the condo property during 2005.

Based on the results of initial EE/CA investigations in 2002 and 2003, the Performing Parties agreed to conduct a time critical removal actions to excavate contaminated surface soils at the Properties. The Performing Parties excavated the contaminated soils in May through July, 2004, and sampling confirmed that they removed all shallow soils containing lead in excess of 400 ppm and PCBs in excess of 1 ppm for disposal. The locations and depths of the soil removal are shown in Figure 5. The screening level of 400 ppm of lead has been derived by U.S. EPA to be protective of a residential child using the Integrated Exposure Uptake Biokinetic (IEUBK) Model for lead in children. Specifically, the time critical removal included:

1. Completion of a detailed topographical survey of the ground surface in the vicinity of the excavation areas at the Marina Cliff Condominium Association (MCCA) property and the Bay Heights Owners Association (BHOA) property by a qualified Wisconsin land surveyor.
2. Completion of a detailed inventory and photographic documentation vegetation in the vicinity of the excavation areas at the MCCA property and the BHOA property by an independent, qualified landscape professional.
3. Implementation of a building inspection program including the completion of a detailed exterior inspection including the completion of a detailed exterior inspection including photographic documentation and elevation surveying of the foundation walls of Buildings Nos. 1 and 3 of the MCCA property and the garage at BHOA property. In addition, and interior inspection of the foundations at select units of Building Nos. 1 and 3 of the MCCA was completed. The building inspection program was completed by an

independent, qualified structural engineering professional.

4. Completion of a detailed inspection program by the appropriate utility service providers to identify the location of all underground services in the vicinity of the excavation areas, all of which were marked on the ground surface prior to excavation activities.
5. Implementation of programs to monitor the air quality, noise and vibration impact during the excavation and backfilling at the condo area.
6. Excavation and removal of contaminated soils around condominium buildings, which were characterized before disposal. The excavated soils were primarily contaminated by Lead and PCB's. The impacted VOC areas, at the properties adjacent, were not addressed as a part of this excavation.
7. Implementation of surface water controls to prevent infiltration of water into the excavation areas in addition to the dewatering of accumulated precipitation to prevent the water-borne spread of contaminants.
8. Collection and analysis of remaining soil at the base and sidewalls of the excavation to document that the appropriate cleanup standards had been met.
9. Restoration of the previously vegetated areas in the vicinity of the excavation at the MCCA and the City of South Milwaukee's right-of-way. This activity included back-filling with clean soil, compaction of this soil, and the re-vegetation of these areas.
10. Implementation of a 1-year follow-up building inspection program including the completion of a detailed exterior inspection of the MCCA property and parts of the Bay Heights Owners Association property.

As part of the EE/CA's evaluation of cleanup alternatives, the Performing Parties proposed a ChemOx study which was performed on VOC impacted soils at the Properties to evaluate the effectiveness of that technology. Initially, a ChemOx bench-scale treatability study was performed on representative subsurface soil samples collected from the Properties. The details and results of the bench-scale treatability study were presented in the 2004 U.S. EPA-approved EE/CA Work Plan Addendum.

The in-situ chemical oxidation (ISCO) pilot study was implemented in November and December 2004 at three discrete areas at the Properties that had elevated concentrations of VOCs in the subsurface soils. Complete details of the study, including information on the chemical used, is available in the August 4, 2006 non-time critical EE/CA and in a summary report prepared by BMS, Inc. dated January 20, 2005. 1,079 injection points were completed to treat approximately 4,471 cubic yards of VOC-impacted soils with 22,676 gallons of BIOX© remedial fluids.

Certain areas were treated using 3-foot injection point grid spacing and other areas were treated using 4-foot injection point grid spacing.

Prior to implementation of full-scale ISCO pilot study, drain tile depressurization systems were installed in Buildings No. 1 through 4 at the Properties. The sumps in each building were sealed in accordance with the protocols provided in the U.S. EPA-approved EE/CA Work Plan Addendum. The drain tile depressurizations systems were installed as a precautionary measure to prevent or minimize potential migration of impacted soil gas to indoor air due to the pilot study.

Groundwater, soil gas, and indoor air sampling and analyses were performed immediately prior to and subsequent to the pilot study. As discussed in the EE/CA Work Plan Addendum, the groundwater data were collected to determine any impact the BIOX<sup>®</sup> injection may have on groundwater. As also discussed in the EE/CA Work Plan Addendum, the soil gas and indoor air data were collected to assess the effectiveness of the ISCO in reducing soil gas concentrations in subsurface soils, and to ensure that concentrations of VOCs in indoor air remained at or below acceptable levels.

#### **F. Current actions**

The Performing Parties submitted an EE/CA Report in August, 2006. U.S. EPA approved the EE/CA Report, with minor modifications, on September 15, 2006. The EE/CA Report has detailed the remaining contamination at the Properties and discusses cleanup alternatives. The EE/CA Report and a proposed plan describing the removal actions selected in this Action Memorandum were released for a thirty day public comment which ended on November 17, 2006. U.S. EPA also held a public meeting on November 2, 2006. U.S. EPA's responses to comments received at the public meeting and in writing are provided in the Responsiveness Summary (Attachment III) and have been incorporated into this Action Memorandum as appropriate.

The Performing Parties are also conducting work at the 13 acre parcel adjacent to the Properties. Beginning in 1997, the Responsible Parties dug up, stockpiled and disposed of nearly 9,000 tons of waste and soil from the disposal pits and surrounding area on the Towne Reality area. This work was followed in 1998 by additional excavation and off-site disposal of more than 170,000 tons of waste, debris and contaminated soil from the ravine, lake bluff and upland area. Cleanup continued in spring 2004 when two small areas of soil were excavated and erosion control measures were put in place on the slope to the lake. In 2005, the upland area was regraded and reseeded to improve drainage. Eroded areas on the east slope were filled with soil. In 2006, a small area of subsurface soil in the upland area was treated to neutralize remaining chemicals. Ground water will be monitored over the next few years to confirm that any leftover chemicals remain at safe levels. EPA expects that work on Towne's property will be complete in the spring of 2007, after the shoreline wetland is replanted and additional efforts are made to minimize erosion on the east slope.

#### **G. State and Local Authorities' Roles**

Both the Wisconsin Department of Natural Resources and the Wisconsin Department of Public Health have been active participants in the EE/CA process. All plans and reports have been reviewed by State personnel. To the extent practicable, all State ARARs identified in prior removal actions will be followed. WDPH and WDNR will continue to advise U.S. EPA.

The City of South Milwaukee has historically been involved primarily due to residents concerns during the time critical removal actions. The City is also involved in outlining a strategy to redevelop the Site once the removal actions in this Action Memorandum are completed.

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

A removal action is necessary in two small areas to abate the threat to public health, welfare or the environment posed by the release and potential release of hazardous substances. The NCP, 40 C.F.R. Section 300.415(b)(2), provides eight specific criteria for evaluation of a threat and the appropriateness of a removal action. Observations documented during the investigation of the Properties indicate that the Properties meet the following criteria for a non-time critical removal action:

- a. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants

This factor is present at the Properties due to the presence of elevated levels of VOCs in two areas at the Properties which could be encountered by utility workers or construction workers excavating in those areas.

- d. The unavailability of other appropriate federal or state response mechanisms to respond to the release

This factor supports the actions required by this Memorandum because State and local authorities lack the financial resources to address the threats to human health and the environment.

#### **IV. ENDANGERMENT DETERMINATION**

Given the current conditions at the Properties and the nature of the hazardous substances on-site, actual or threatened releases of hazardous substances from the Properties, if not addressed by implementing and completing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

The possibility of further releases of the hazardous substances presents a threat to the nearby population and the environment via the exposure pathways described in sections II and III, above.

## **V. PROPOSED ACTIONS**

Hazardous substances are located near a residential area and must be addressed. The selected removal actions at the Properties would eliminate any remaining imminent and substantial threats to human health, welfare, or the environment, as outlined in this Memorandum.

U.S. EPA has determined that the following response actions are appropriate to mitigate threats posed by the presence of hazardous substances at the Properties:

1. Develop and implement a site-specific workplan including a proposed time line;
2. Develop and implement a site-specific health and safety plan;
3. Provide site security measures during the response activities which may include, but not be limited to, security guard service and fencing;
4. Conduct In-situ Chemical Oxidation treatments to areas that still have contaminant levels above the remedial goals for this site with the injection points spaced at a maximum of 3 feet apart;
5. Operate the drain tile depressurization systems installed in Buildings No. 1 through 4 at all times the In-situ Chemical Oxidation is active;
6. Perform confirmatory sampling to determine the degree of success of the In-situ Chemical Oxidation treatment; and
7. Implement permanent and effective use restrictions on the impacted area as appropriate, based upon review of the post-injection sampling. If necessary, these restrictions may require that any excavation deeper than 3 feet below ground surface be performed under a health and safety plan addressing the risks identified in the EE/CA Report and that any workers working at depths of 10 feet or more below ground surface must wear the appropriate level of personal protection against the risks identified in the EE/CA Report. The deed restrictions should also provide that monitoring wells on the Properties cannot be removed or disturbed without approval from U.S. EPA.

It is estimated that the cost to the Performing Parties is \$322,000 and will take 5 months to complete.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 C.F.R Section 300.440, 58 Federal Register 49215 (Sept. 22, 1993).

The removal action will be taken in a manner not inconsistent with the NCP. Post-removal site

control, consistent with the provisions of section 300.415(l) of the NCP, will be provided through the institutional controls described above. U.S. EPA anticipates that after implementation of this removal action, there will be no need for post-removal site control beyond the institutional controls.

All ARARs of federal and state law will be complied with, to the extent practicable. A Federal ARAR determined to be applicable for the site is the Off-Site Rule. A state ARAR determined to be applicable for the Properties is the Subtitle G: Waste Disposal Regulations. Any additional federal and state ARARs will be addressed to the extent practicable.

The response actions described in this Memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the Properties which may pose an *imminent and substantial endangerment to public health, welfare, or the environment*. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

The selected response action represents the best combination of effectiveness, implementability and cost to address the residual contamination at the Properties. The EE/CA Report provides a more detailed comparison of the selected alternative and other alternatives considered that supports the selection of this response action.

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

A delay or inaction at the Properties may result in an increased likelihood of direct human contact with hazardous substances. Since the Properties are easily accessible, the various threats to human health and/or the environment pose a serious threat to the local population.

#### **VII. OUTSTANDING POLICY ISSUES**

No significant policy issues are associated with the Northwestern Barrel/Marina Cliffs Facility.

#### **VIII. ENFORCEMENT**

The *Performing Parties at this Site and Properties* are identified, and U.S. EPA expects that they can and will perform the selected response actions properly and promptly. Those Performing Parties will be subject to an enforceable agreement to complete the response actions selected for the Properties by U.S. EPA.

**IX. RECOMMENDATION**

This decision document represents the selected non-time critical removal action for the Properties at the Northwestern Barrel/Marina Cliffs Facility developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the site (see Attachment I). Conditions at the Properties meet the criteria of Section 300.415(b)(2) of the NCP for a removal action, and I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

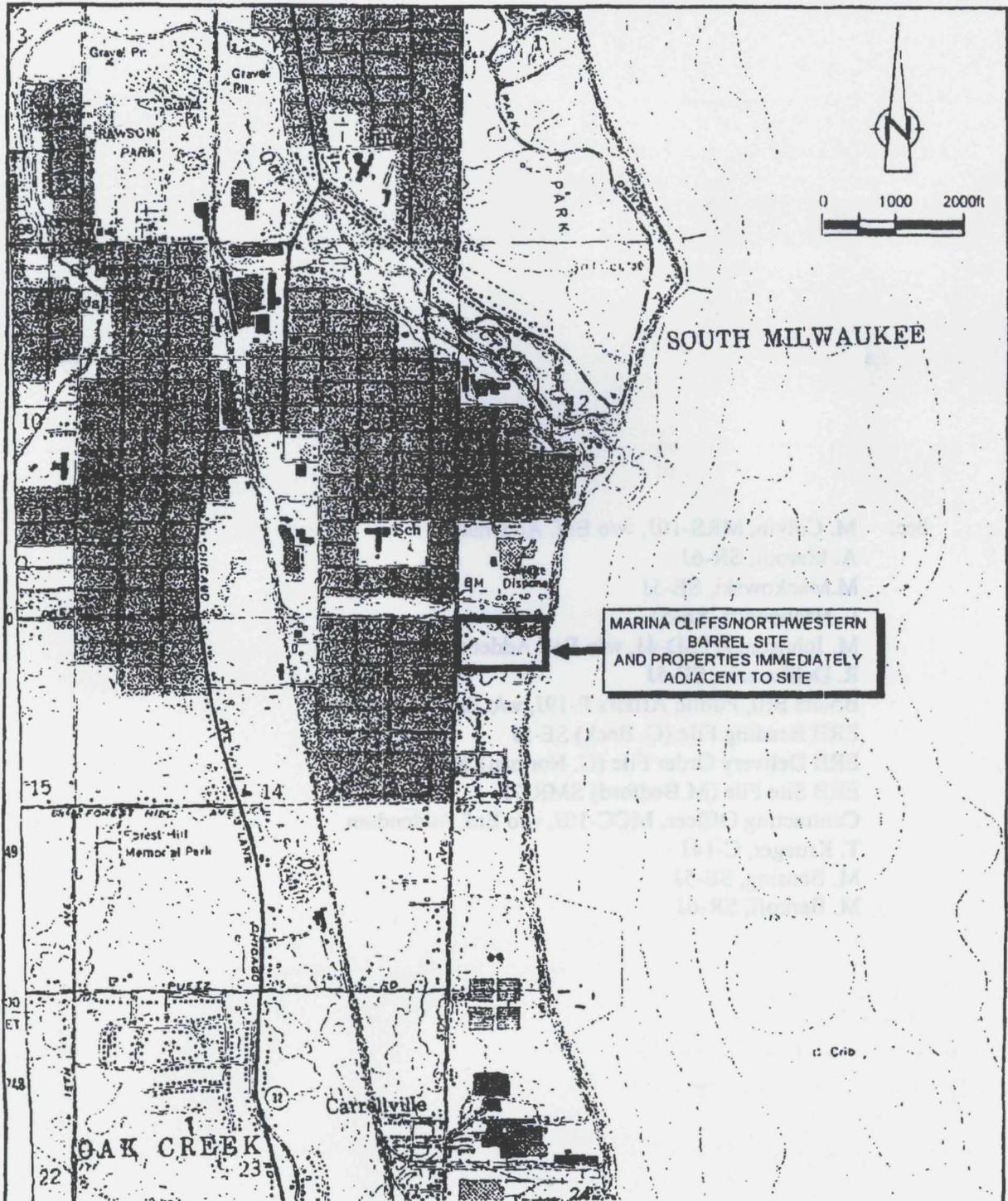
APPROVE:  DATE: 1/4/07  
for Richard C. Karl  
Director, Superfund Division

DISAPPROVE: \_\_\_\_\_ DATE: \_\_\_\_\_  
Richard C. Karl  
Director, Superfund Division

- Attachments: I. Administrative Record  
II. Region 5 Superfund EJ Analysis  
III. Responsiveness Summary

- cc: D. Chung, U.S.EPA, 5202G  
M. Chezik, U.S. Department of the Interior, w/o Enf. Addendum  
A. Walden, WDNR, w/o Enf. Addendum

bcc: M. Colvin, MRS-10J, w/o Enf. Addendum  
A. Marouf, SR-6J  
M.Mankowski, SE-5J  
L. Nachowicz, SE-5J  
M. Johnson, ATSD-4J, w/o Enf. Addendum  
R. DelRosario, SE-5J  
Briana Bill, Public Affairs P-19J, w/o Enf. Addendum  
ERB Reading File (C. Beck) SE-5J  
ERB Delivery Order File (C. Norman), SE-5J  
ERB Site File (M.Bedford) SMR-7J  
Contracting Officer, MCC-10J, w/o Enf. Addendum  
T. Krueger, C-14J  
M. Bensing, SE-5J  
M. Berkoff, SR-6J

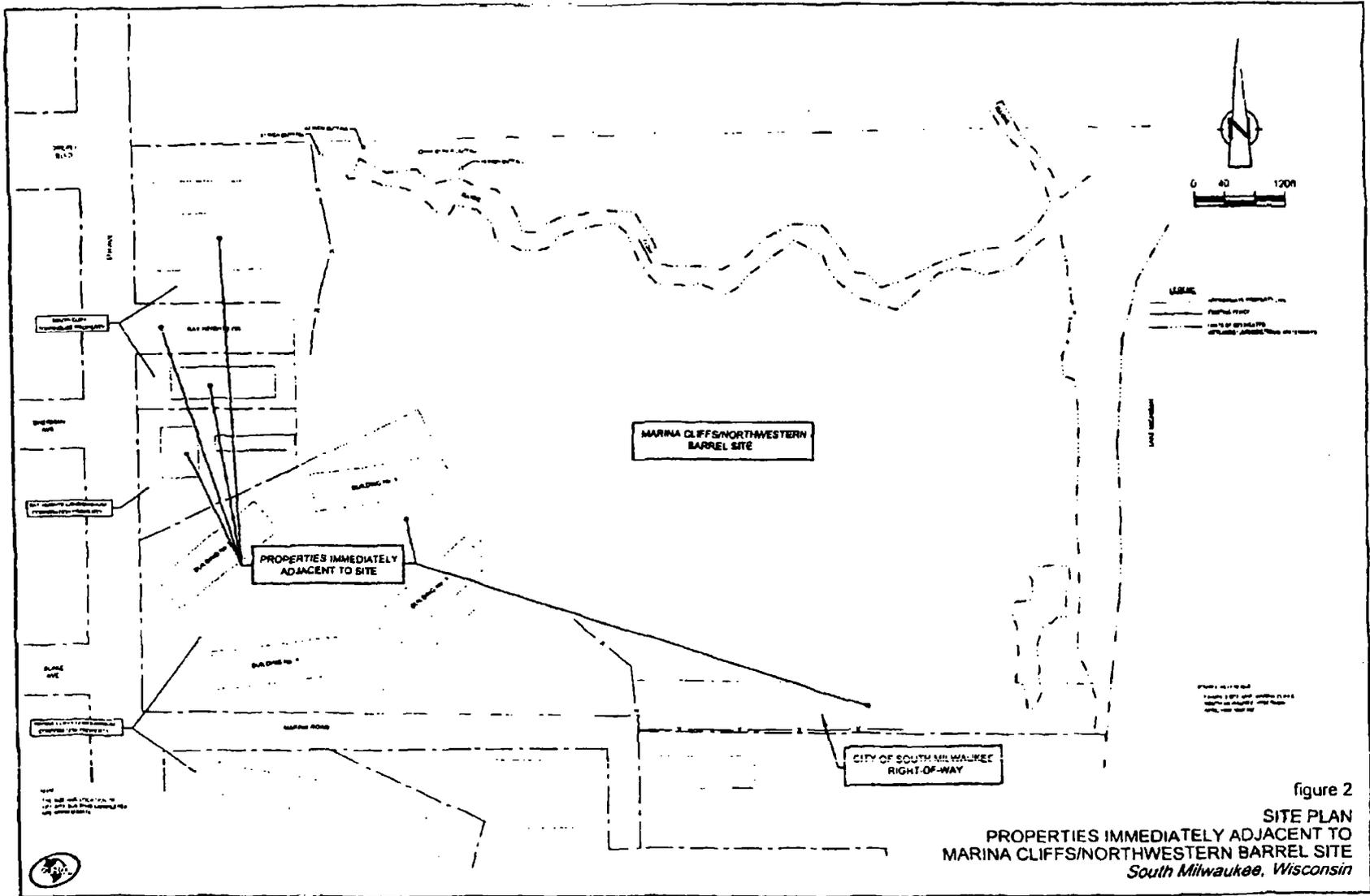


SOURCE:  
SOUTH MILWAUKEE, WISCONSIN  
U.S.G.S. QUADRANGLE MAP

QUADRANGLE LOCATION  
WISCONSIN



figure 1  
SITE LOCATION  
PROPERTIES IMMEDIATELY ADJACENT TO  
MARINA CLIFFS/NORTHWESTERN BARREL SITE  
*South Milwaukee, Wisconsin*





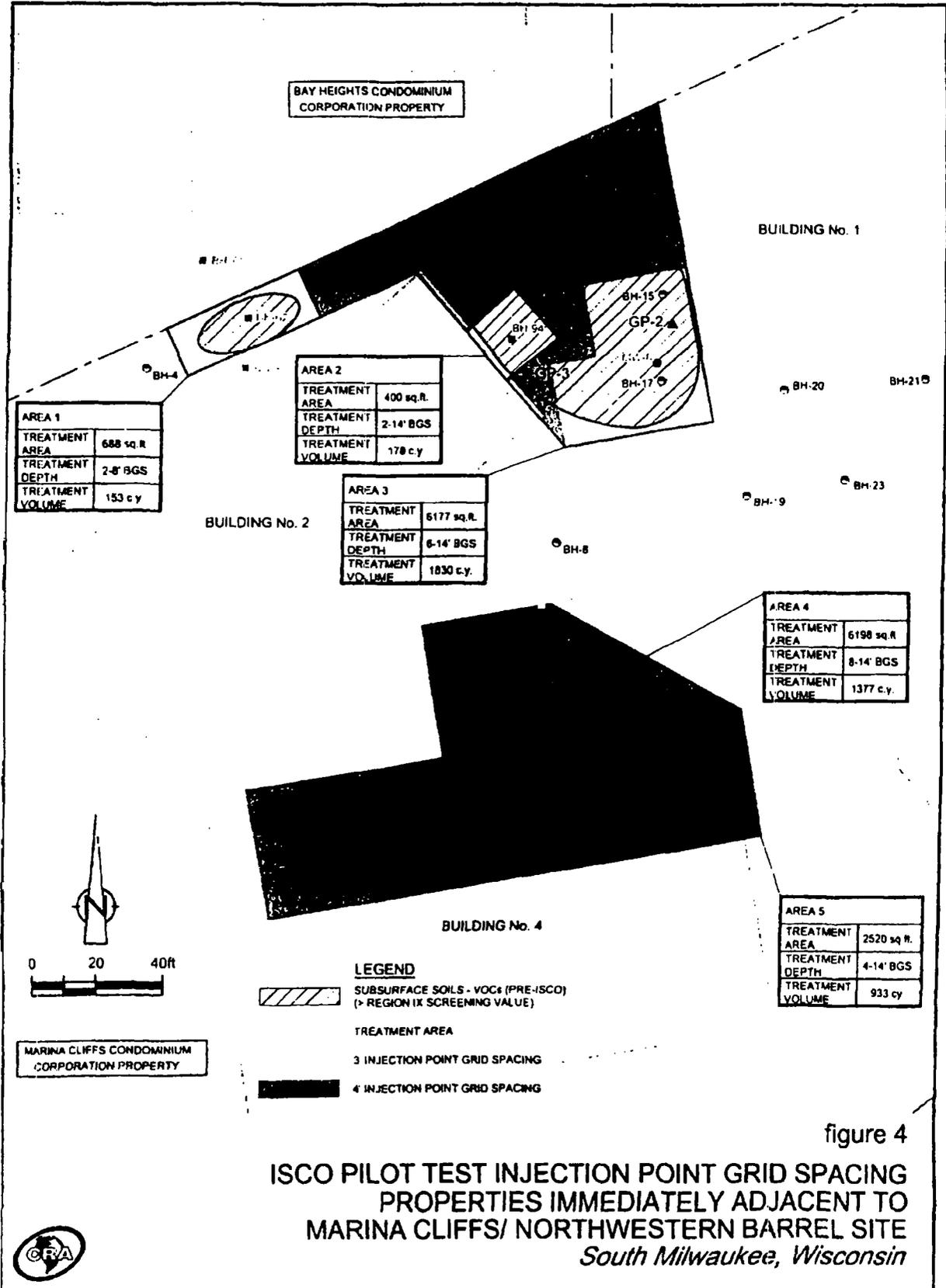


figure 4

**ISCO PILOT TEST INJECTION POINT GRID SPACING PROPERTIES IMMEDIATELY ADJACENT TO MARINA CLIFFS/ NORTHWESTERN BARREL SITE**  
*South Milwaukee, Wisconsin*



**ATTACHMENT I**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
REMOVAL ACTION**

**ADMINISTRATIVE RECORD  
FOR  
MARINA CLIFFS/NORTHWESTERN BARREL SITE  
ELKHART, ELKHART COUNTY, INDIANA**

**UPDATE  
DECEMBER 20, 2006**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	08/00/06	Conestoga-Rovers & Associates	U.S. EPA	Engineering Evaluation/ Cost Analysis (EE/CA) for Properties Immediately Adjacent to the Marina Cliffs/Northwestern Barrel Site	223
2	09/15/06	Berkoff, M., U.S. EPA	Roberts, E., Conestoga-Rovers & Associates	Letter re: U.S. EPA Approval, w/ Modifications, of the August 4, 2006 Engineering Evaluation/ Cost Analysis (EE/CA) Report for the Marina Cliffs/Northwestern Barrel Site	4
3	11/10/06	Roberts, E., Conestoga-Rovers & Associates	Berkoff, M., U.S. EPA	Letter re: Monthly Progress Report for October 2006 for the Marina Cliffs/Northwestern Barrel Site	3
4	00/00/00	U.S. EPA	U.S. EPA	Action Memorandum (PENDING)	

**ATTACHMENT II**

**REGION 5 ENVIRONMENTAL JUSTICE ANALYSIS**



## ATTACHMENT III

### RESPONSIVENESS SUMMARY For Northwestern Barrel/Marina Cliffs Superfund Site

This Responsiveness Summary provides both a summary of the public comments U.S. EPA received on the Proposed Plan for the residential properties (the Properties) at the Northwestern Barrel Superfund Site and U.S. EPA's responses to those comments. The Proposed Plan was released to the public on October 18, 2006 and the public comment period ran from October 18, 2006 through November 17, 2006. Wisconsin Department of Natural Resources (WDNR) provided support by commenting on the draft Proposed Plan and participating in the presentation at the public hearing. U.S. EPA held a public hearing regarding the Proposed Plan on November 2, 2006, at the City Hall Council Chambers in South Milwaukee, Wisconsin. WDNR and Wisconsin Department of Health and Family Services assisted with the presentations and responded to questions.

Two individuals made comments on a number of issues during the public hearing, and they submitted similar comments in writing during the hearing. Copies of the comments are included in the Administrative Record for the Site. U.S. EPA carefully considered these comments prior to selecting the final response action for the Site as documented in the Action Memorandum.

This Responsiveness Summary contains a summary of the comments, grouped by the type of issue raised, and U.S. EPA's responses.

#### I. QUESTIONS ABOUT ADJACENT PROPERTY

Commenters raised questions about the cleanup activities at the vacant 13-acre portion of the Site that is adjacent to the Marina Cliffs Condominium property. This adjacent property was formerly occupied by the Northwestern Barrel recycling facility. The commenters' concerns were about how future development at the adjacent property would impact the Marina Cliffs Condominium property. Even though concerns and comments regarding this 13-acre parcel do not directly pertain to the cleanup decision for the residential property, it may be useful for readers to know the status of the cleanup efforts, and U.S. EPA's jurisdiction in future matters of redevelopment.

Response: Beginning in 1997 under U.S. EPA and WDNR supervision, contractors for the group of potentially responsible parties dug up, stockpiled and disposed of nearly 9,000 tons of waste and soil from the disposal pits and surrounding area on the now-vacant property, currently owned by Towne Realty. This work was followed in 1998 by additional excavation and off-site disposal of more than 170,000 tons of waste, debris and contaminated soil from the ravine, lake bluff and upland area. Cleanup continued in spring 2004 when two small areas of soil were excavated and erosion control measures were put in place on the slope to the lake. In 2005, the upland area was regraded and reseeded to improve drainage. Eroded areas on the east slope were filled with soil. In 2006, a small area of subsurface soil in the upland area was treated to neutralize remaining chemicals. Groundwater will be monitored over the next few years to confirm that any leftover chemicals remain at safe levels. U.S. EPA expects that work on Towne's property will be

complete in 2007. U.S. EPA is waiting until spring 2007, at the earliest, to determine if further work is required to insure the stability of the recently re-graded upland and slope or in the replanted wetlands.

The extensive excavation on the 13-acre parcel was necessary because it contained much higher levels of contamination than the condominium property and was feasible because there were no buildings in place. The vacant 13-acre parcel has been cleaned to levels that would permit unrestricted use of the property (consistent with applicable zoning). In a settlement with U.S. EPA, the property owner has agreed to accept any use restrictions required by U.S. EPA in order to assure protection of human health and the environment. At the present time, U.S. EPA expects that the only requirements will be: (1) continued access to and protection of the monitoring wells; (2) no installation or use of groundwater wells, and that the wetlands at the eastern border of the property be maintained.

## II. QUESTIONS ABOUT POSSIBLE DAMAGE THAT COULD RESULT FROM THE CLEANUP ACTION

The commenters had concerns about the chemicals that would be used in the final response action and whether the chemicals would pose any potential threats to either people or the environment, in particular plantings north of buildings 1 and 2 and a tree located within a small green-space within the parking area. Additionally, they expressed the concern that chemical injections into the ground might pose a general environmental hazard.

Response: It is unlikely that BiOx, the chemical that will be used in the proposed cleanup, will cause any damage to vegetation at the property because it will be injected below the reach of the root systems of the plants. The chemical is a highly dilute solution of hydrogen peroxide and the injection boreholes are roughly the diameter of a quarter. During the BiOx pilot study in late 2004, there was no evidence of damage to vegetation. The same chemical and method of injection will be used one more time in this final response action. The final round of injections will cover a smaller surface area than the pilot test. The final response action will be performed by a group of potentially responsible parties (the Performing Parties), who will need to obtain access from the Marina Cliffs Condominium Association in order to do this work. In the access agreement covering the 2004 pilot studies, the Performing Parties agreed to address potential and actual damage at the property caused by the work. U.S. EPA anticipates that the Condominium Association's new access agreement would also include provisions to address property damage resulting from the work.

The injections will be done under a U.S. EPA-approved health and safety plan. Any health and safety plan that would meet U.S. EPA approval must include provisions to prevent exposure of harmful chemicals to both workers implementing the BiOx injections and people near the work area. Adherence to the plan would prevent exposure of chemicals to residents of the property and to the surrounding environment.

## III. ACCESS AGREEMENT

The aforementioned concerns about restoration of damaged vegetation also fall into the category of access agreement issues. The commenters made general statements about property access issues. Their comments pertained to both the access agreement that must be made between the Performing Parties and the Condo Association and to the existing agreement between the Association and Towne Realty. The latter agreement allows for a pedestrian access, usable by the association, to Lake Michigan through the Towne Realty property.

Response: U.S. EPA understands that the residents of the property have a settlement agreement with Towne Realty that assures them of an easement for beach access. The cleanup of that property, as discussed in Section I, will not interfere with or limit that easement. As discussed in Section II, the Performing Parties will be required to obtain the necessary access agreements to perform the final response actions at the condominium property. U.S. EPA would expect the Performing Parties to take reasonable steps to address the residents' concerns in order to obtain access.

#### IV. QUESTION ABOUT PUBLIC HEARING

One of the commenters asked why U.S. EPA was holding a public hearing when the proposed cleanup would be taking place on private land.

Response: U.S. EPA held a public hearing in order that the views of private residents could be *formally* solicited and considered in the response selection process and so that these opinions and questions could be made a part of the administrative record for this site. Because the final cleanup decision has a significant impact on the owners of the property, U.S. EPA wanted to provide an open forum for them to ask questions and make comments.

#### V. CONCERNS ABOUT POSSIBLE DEED RESTRICTIONS ON THE PROPERTY

Both commenters expressed concern about potential deed restrictions on the Marina Cliffs Condominium Association property and how they would affect property values of individual residential units.

Response: Safety to residents and utility workers is a high priority for U.S. EPA. As such, it may be necessary for the Agency to require deed restrictions to protect individuals who dig deep into soil containing contaminants. U.S. EPA will not be able to determine if deed restrictions will be required for the association property until completion of the soil testing associated with the BiOx injections. If the chemical injections result in a sufficient drop in contamination levels, deed restrictions may not be required for the property.

If necessary, the deed restrictions would require that construction or utility workers have and follow a health and safety plan for any deep excavation work. Such a plan would likely include the requirement that workers wear the appropriate personal protective equipment to prevent exposure to volatile organic compounds. U.S. EPA anticipates that the BiOx injections may achieve a sufficient level of reduction in VOCs so that the contamination would no longer

present an unacceptable risk to utility workers. In that case, deed restrictions would not be necessary.

WDNR will be placing the site on the Wisconsin Geographic Information System (GIS) registry -- a computerized mapping system -- of contaminated sites. This will make information about contaminant levels available to the public, including any potential construction or utility workers that may conduct work at the site. Additionally, U.S. EPA will require the performing parties to provide direct notice to the utility companies about the contamination levels at the condominium property.

Finally, it is important to note that there is not a threat posed to the residences in the condo buildings and no remaining surface contamination at the Site. This should help alleviate any potential property value concerns.

#### VI. CONCERN ABOUT NOTIFICATION TO CONTRACTORS

One commenter wanted to know who would be responsible for notifying potential contractors of any special health and safety requirements. The commenter explained that the condo association has had contractors conduct work on the drain tiles in the basements of at least one unit. The commenter wanted to know if, in the future, it would be the responsibility of the condo association to notify the contractors about the health risk posed by the soil.

Response: As it would be the association hiring the contractors to address the drain tiles, it would be the responsibility of the association to notify the contractor about the risks, if any, posed by the soil. The utility companies would have been provided with notice directly, and through the Wisconsin GIS database, as described in Section V.

**ATTACHMENT IV**

**ENFORCEMENT ADDENDUM**

*The enforcement strategies for this site are discussed in section VIII of this Action Memorandum. BASF, S.C. Johnson & Sons, PPG, 3M, Daimler Chrysler, Mautz Paint, and General Motors are the Performing Parties for this site.*