

U.S. EPA Draft of December 15, 2008  
Subject to F.R.E. 408

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:

The Dow Chemical Company  
Midland, Michigan, 48667,

Respondent.

ADMINISTRATIVE SETTLEMENT  
AGREEMENT AND ORDER ON CONSENT  
FOR REMEDIAL INVESTIGATION,  
FEASIBILITY STUDY AND/OR  
ENGINEERING EVALUATION AND COST  
ANALYSIS, AND RESPONSE DESIGN

U.S. EPA Region 5  
CERCLA Docket No.

The Tittabawassee River Dioxin Spill Site

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

**ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR  
REMEDIAL INVESTIGATION, FEASIBILITY STUDY AND/OR ENGINEERING  
EVALUATION AND COST ANALYSIS, AND RESPONSE DESIGN**

## TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS
II.	PARTIES BOUND
III.	STATEMENT OF PURPOSE
IV.	DEFINITIONS
V.	FINDINGS OF FACT
VI.	CONCLUSIONS OF LAW AND DETERMINATIONS
VII.	SETTLEMENT AGREEMENT AND ORDER
VIII.	DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS
IX.	WORK TO BE PERFORMED
X.	U.S. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS
XI.	QUALITY ASSURANCE, SAMPLING, AND DATA AVAILABILITY
XII.	SITE ACCESS
XIII.	COMPLIANCE WITH OTHER LAWS
XIV.	RETENTION OF RECORDS
XV.	DISPUTE RESOLUTION
XVI.	STIPULATED PENALTIES
XVII.	FORCE MAJEURE
XVIII.	PAYMENT OF RESPONSE COSTS
XIX.	COVENANT NOT TO SUE BY U.S. EPA
XX.	RESERVATIONS OF RIGHTS BY U.S. EPA
XXI.	COVENANT NOT TO SUE BY RESPONDENT
XXII.	OTHER CLAIMS
XXIII.	CONTRIBUTION
XXIV.	INDEMNIFICATION
XXV.	INSURANCE
XXVI.	FINANCIAL ASSURANCE
XXVII.	SEVERABILITY/INTEGRATION/APPENDICES
XXVIII.	PUBLIC COMMENT
XXIX.	ADMINISTRATIVE RECORD
XXX.	EFFECTIVE DATE AND SUBSEQUENT MODIFICATION
XXXI.	NOTICE OF COMPLETION OF WORK

**ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT  
FOR REMEDIAL INVESTIGATION, FEASIBILITY STUDY AND/OR ENGINEERING  
EVALUATION AND COST ANALYSIS, AND RESPONSE DESIGN**

**I. JURISDICTION AND GENERAL PROVISIONS**

1. This Administrative Settlement Agreement and Order on Consent (“Settlement Agreement”) is entered into voluntarily by the United States Environmental Protection Agency (“U.S. EPA”) and The Dow Chemical Company (“Dow” or the “Respondent”). The Settlement Agreement concerns conducting evaluations of current Site conditions and assessments of response options, the preparation and performance of any remedial investigation (“RI”), any feasibility study (“FS”) and/or any engineering evaluation and cost analysis (“EE/CA”), and performing any response design (“Response Design” or “RD”) to respond to releases or threats of releases of hazardous substances, pollutants, or contaminants from The Dow Chemical Company Midland Plant property, with an address of 1000 East Main Street, 1790 Building, Midland Michigan, 48667 (the “Midland Plant”), or from any other Dow facility within the scope of this Settlement Agreement, that have or may have come to be located at the Site which encompasses the area located in and along approximately the upper six miles of the Tittabawassee River and its floodplains, beginning at Reach A, located upstream of the Midland Plant, and extending downstream to approximately Reach O, and any other areas where hazardous substances, pollutants, or contaminants from this area have or may have come to be located, including the Saginaw River and its floodplains and Saginaw Bay in Lake Huron. The Settlement Agreement also provides for reimbursement of U.S. EPA for Past Response Costs and Future Response Costs.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607, and 9622 (“CERCLA”). This authority was delegated to the Administrator of U.S. EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by U.S. EPA Delegation Nos. 14-14-A, 14-14-C and 14-14-D. This authority was further redelegated by the Regional Administrator, U.S. EPA, Region 5 to the Director, Superfund Division, U.S. EPA, Region 5 by U.S. EPA Delegation Nos. 14-14-A, 14-14-C and 14-14-D on May 2, 1996.

3. In accordance with Section 104(b)(2) and Section 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), on \_\_\_\_\_, 2008, U.S. EPA notified the following Federal and State natural resource trustees of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal or State trusteeship: Michigan Department of Environmental Quality; Michigan Department of Natural Resources; the Attorney General of the State of Michigan; U.S. Department of the Interior; U.S. Department of Energy; U.S. Department of Agriculture; U.S. Bureau of Indian Affairs; National Oceanic and Atmospheric Administration; and the Saginaw

Chippewa Indian Tribe of Michigan. In accordance with Sections 106(a) and 121(f)(1)(F), U.S. EPA notified the State of Michigan (the "State") on \_\_\_\_\_, 2008, of negotiations with potentially responsible parties regarding the evaluation of current Site conditions and assessments of response options, and implementation of any RI, any FS and/or EE/CA, and any RD for the Site.

4. U.S. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any issue of fact, or law, or liability. Nothing in this Settlement Agreement is intended by the Parties to be, nor shall it be construed as, an admission of fact or law, or a waiver of defenses or claims by Respondent for any purpose, except as expressly provided herein. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact, conclusions of law and determinations in Sections V and VI of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the jurisdictional basis or the validity of this Settlement Agreement or its terms.

## **II. PARTIES BOUND**

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

6. Respondent is required to carry out all activities specified in this Settlement Agreement.

7. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

8. The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind the Respondent to this Settlement Agreement.

## **III. STATEMENT OF PURPOSE**

9. a. In entering into this Settlement Agreement, the objectives of U.S. EPA and Respondent are: (a) to determine the nature and extent of contamination and any current or potential threat to the public health, welfare, or the environment posed by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site (to the extent such hazardous substances, pollutants or contaminants have or may have been released

from the Midland Plant or otherwise from a Dow facility within the scope of this Settlement Agreement) using appropriate, previously collected data and collecting sufficient additional data for developing and evaluating effective response alternatives, and by conducting, as necessary, any RI as more specifically set forth in the Statement of Work (“SOW”) attached as Appendix A to this Settlement Agreement; (b) to identify and evaluate response alternatives that protect human health and the environment by conducting any FS and/or EE/CA as more specifically set forth in the SOW in Appendix A to this Settlement Agreement; (c) to complete any RD as more specifically set forth in Paragraph 29 and the SOW found in Appendix A to this Settlement Agreement; and (d) to recover Past Response Costs, and Future Response Costs incurred by U.S. EPA with respect to this Settlement Agreement. (All references in this Settlement Agreement to hazardous substances, pollutants or contaminants refer only to hazardous substances, pollutants or contaminants that have been released from the Midland Plant or otherwise from a Dow facility within the scope of this Agreement and that have or may have come to be located at the Site.)

b. U.S. EPA shall ensure substantial and meaningful MDEQ involvement in the hazardous substance response activities required under this Settlement Agreement consistent with 42 U.S.C. § 9621(f), and 40 C.F.R. Part 300, Subpart F. U.S. EPA and MDEQ agree to work collaboratively to achieve the objectives expressed in Paragraph 9.a of this Settlement Agreement. The roles and responsibilities of U.S. EPA and MDEQ are more specifically described in the Tittabawasee River Dioxin Spill Site Superfund Memorandum of Agreement between U.S. EPA and MDEQ (“SMOA”) Addendum III, attached as Appendix B to this Settlement Agreement.

10. The Work conducted under this Settlement Agreement is subject to approval by U.S. EPA and, as provided more specifically in the SOW, shall provide all appropriate and necessary information to assess site conditions and evaluate alternatives to the extent necessary to select a response action that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 (“NCP”). Respondent shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP and all applicable U.S. EPA guidances, policies, and procedures that are written and available.

#### **IV. DEFINITIONS**

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

a. “ARARs” shall mean those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or more stringent state environmental or facility siting laws that are “applicable requirements” or “relevant and appropriate requirements” as defined at 40 C.F.R. § 300.5 and 42 U.S.C. §

9621(d).

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

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

d. “Dioxin” or “dioxins” or “furan” or “furans” shall mean the seventeen chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans identified by the World Health Organization in *The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds*, and as set forth below:

Congener (Full-Name)	Congener (Abreviation)	CAS No
<b>Dioxins</b>		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	2,3,7,8-TCDD	1746-01-6
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1,2,3,7,8-PCDD	40321-76-4
1,2,3,4,7,8- Hexachlorodibenzo-p-dioxin	1,4-HxCDD	39227-28-6
1,2,3,6,7,8- Hexachlorodibenzo-p-dioxin	1,6-HxCDD	57653-85-7
1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin	1,9-HxCDD	19408-74-3
1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin	1,4,8-HpCDD	35822-39-4
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	OCDD	3268-87-9
<b>Furans</b>		
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PCDF	57117-41-6
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PCDF	57117-31-4
1,2,3,4,7,8-Hexachlorodibenzofuran	1,4-HxCDF	70648-26-9
1,2,3,6,7,8- Hexachlorodibenzofuran	1,6-HxCDF	57117-44-9
1,2,3,7,8,9- Hexachlorodibenzofuran	1,9-HxCDF	72918-21-9
2,3,4,6,7,8- Hexachlorodibenzofuran	4,6-HxCDF	60851-34-5
1,2,3,4,6,7,8- Heptachlorodibenzofuran	1,4,6-HpCDF	67562-39-4
1,2,3,4,7,8,9- Heptachlorodibenzofuran	1,4,9-HpCDF	55673-89-7
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	OCDF	39001-02-0

Individual dioxins and furans are assessed using a toxic equivalency factor (“TEF”), which is an estimate of the relative toxicity of the compounds to 2,3,7,8-tetrachlorodibenzo-p-dioxin (“TCDD”). These converted concentrations are then added together to determine the “toxic equivalence concentration” (“TEQ”) of the dioxin and furan compounds as a whole.

e. "Early Final Remedial Action" shall mean Remedial Actions which are limited in scope and address areas/media through a final record of decision ("ROD") for an area/media or operable unit. Early Final Remedial Actions are taken before the RI, FS, and baseline risk assessment for the site or operable unit has been completed. Early Final Remedial Actions may be implemented for separate operable units or may be a component of a final ROD for other portions of the site. These types of actions are taken to eliminate, reduce or control the hazards posed by the site or to expedite the completion of the total site cleanup. Where an Early Final Remedial Action is selected in a ROD, U.S. EPA anticipates that the Early Final Remedial Action will not require additional response actions.

f. "Early Interim Remedial Action" shall mean shall mean Remedial Actions which are limited in scope and only address areas/media that will also be addressed by a final site/operable unit ROD. Early Interim Remedial Actions are taken before the RI, FS, and baseline risk assessment for the site or operable unit has been completed. Early Interim Remedial Actions may be implemented for separate operable units or may be a component of a final ROD for other portions of the site. These types of actions are taken to eliminate, reduce or control the hazards posed by the site or to expedite the completion of the total site cleanup. Where an Early Interim Remedial Action is selected in a ROD, U.S. EPA anticipates that the Early Interim Remedial Action may be followed with additional response actions, and that additional decision documents, including a final ROD, will be issued.

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

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

i. "Engineering Controls" shall mean constructed containment barriers or systems to prevent or reduce the mobility and/or bioavailability of contaminants located in the river sediments, banks, or floodplain soils. Examples include caps, covers, engineered bottom barriers, bank stabilization and other immobilization processes, and vertical barriers.

j. "Future Response 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, technical memoranda and other items pursuant to this Settlement Agreement, conducting community relations, reviewing and overseeing the implementation of any Technical Assistance Plan, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs (including fees), travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry ("ATSDR") costs, the costs incurred pursuant to Paragraph 51 and 53 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 35 (emergency response), and Paragraph 29 (Response Design). Future Response Costs shall also include all Interim Response Costs incurred during the period of \_\_\_\_\_, 2008, to the Effective Date of

this Settlement Agreement, and all Interest on those Past Response Costs that Respondent has agreed to reimburse under this Settlement Agreement that has accrued pursuant to 42 U.S.C. § 9607(a) during the period from \_\_\_\_\_, 2008, to the Effective Date of this Settlement Agreement.

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

l. "Interim Response Costs" shall mean all costs, including direct and indirect costs, (a) paid by the United States in connection with the Site between \_\_\_\_\_, 2008, and the Effective Date, or (b) incurred prior to the Effective Date, but paid after that date.

m. "License" shall mean the Hazardous Waste Management Facility Operating License issued by the State of Michigan Department of Environmental Quality to The Dow Chemical Company on June 12, 2003.

n. "MDEQ" shall mean the Michigan Department of Environmental Quality and any successor departments or agencies of the State.

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

p. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral. References to paragraphs in the SOW will be so identified (for example, "SOW paragraph 15").

q. "Parties" shall mean U.S. EPA and Respondent.

r. "Past Response Costs" shall mean all response costs, including, but not limited to, direct and indirect costs, that the United States paid at or in connection with the Site through \_\_\_\_\_, 2008, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

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

t. "Remedial Action" shall mean those actions consistent with permanent remedy taken instead of or in addition to Removal Actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous



substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment.

u. "Response Design" or "RD" shall mean the technical analysis and procedures which follow the selection of remedial action in a ROD or a non-time critical removal action selected in an action memorandum for a site and result in a detailed set of plans and specifications for implementation of the remedial action.

v. "Respondent" or "Dow" shall mean The Dow Chemical Company, a Delaware corporation.

w. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral. References to sections in the SOW will be so identified; for example as "SOW Section V."

x. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (as listed and provided in Section XXVII) and all documents incorporated by reference into this document including without limitation U.S. EPA-approved submissions. U.S. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by U.S. EPA. In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

y. "Site" shall mean the area located in and along approximately the upper six miles of the Tittabawassee River and its floodplains, beginning at Reach A, located upstream of the Midland Plant, and extending downstream to approximately Reach O, all depicted generally on the map attached as Appendix C, and any other areas where hazardous substances, pollutants, or contaminants from this area have or may have come to be located, including the Saginaw River and its floodplains and Saginaw Bay in Lake Huron. As more specifically set forth in the Tittabawassee River Dioxin Spill Site Superfund Memorandum of Agreement between U.S. EPA and MDEQ Addendum III, attached as Appendix B to this Settlement Agreement, certain areas of the Site are being addressed by Respondent pursuant to its License, including the City of Midland, Michigan, and the Midland Plant.

z. "State" shall mean the State of Michigan.

aa. "Statement of Work" or "SOW" shall mean the Statement of Work for conducting evaluations of current Site conditions and assessments of response options, the development of any RI, any FS and/or EE/CA, and for conducting any RD for the Site, as set forth in Appendix A to this Settlement Agreement. To the extent that work previously completed by Respondent meets the functional requirements of an RI, FS, EE/CA, or RD, that work, upon approval by U.S. EPA after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, may be deemed the equivalent of the relevant document. The Statement

of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement as are any modifications made thereto in accordance with this Settlement Agreement.

bb. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); (4) any "hazardous material" under Michigan Administrative Code R 299.9203; and (5) any hazardous substance as defined by MCL 324.20101(1)(f).

cc. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement, excluding those activities Respondent is required to perform by Section XIV (Retention of Records). "Work" shall not include work performed pursuant to the Administrative Settlement Agreements and Orders on Consent entered in U.S. EPA Docket Nos. V-W-07-C-874, V-W-07-C-875, V-W-07-C-876, V-W-08-C-886, and V-W-08-C-906 and referenced in Paragraph 12.aa, below. "Work" also shall not include any remedial response actions selected for the Site in any record of decision and taken pursuant to any Consent Decree. "Work" also shall not include any removal actions selected for the Site in any action memorandum and taken pursuant to any separate administrative settlement agreement and order on consent.

## V. FINDINGS OF FACT

12. Based on available information, including the Administrative Record in this matter, U.S. EPA hereby finds that:

a. The Site encompasses the area located in and along approximately the upper six miles of the Tittabawassee River and its floodplains, beginning at the upstream portion of Reach B, located upstream of the Midland Plant, and extending downstream to approximately Reach O, and any other areas where hazardous substances, pollutants, or contaminants from this area have or may have come to be located, including the Saginaw River and its floodplains and Saginaw Bay in Lake Huron. The Site is the location where Respondent has disposed of hazardous substances, pollutants, or contaminants, or where such materials have or may have come to be located.

b. The Dow Chemical Company is a Delaware corporation and its registered agent is The Corporation Trust Company with an address of Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware.

c. The Midland Plant began operations in 1897. The Midland Plant covers approximately 1,900 acres. The majority of the Midland Plant is located on the east side of the Tittabawassee River and South of the City of Midland.

d. The Tittabawassee River is a tributary to the Saginaw River, draining 2,600 square miles of land in the Saginaw River watershed. The Tittabawassee River flows south and east for a distance of approximately 80 miles to its confluence with the Shiawassee River approximately 22 miles southeast of Midland. Upstream of the Midland Plant, the Tittabawassee River flow is regulated by the Secord, Smallwood, Edenville, and Sanford dams. The current operation of the hydroelectric station at Sanford results in water releases from Sanford Dam during peak electricity usage periods to provide peaking power to Consumer's Energy. Sanford Lake has limited flood storage capacity due to a narrow range of permitted lake levels. The Dow Dam is located adjacent to the Midland Plant. Below the Dow Dam, the river flow is free flowing to its confluence with the Shiawassee and Saginaw Rivers. Tittabawassee River flow and water level fluctuate daily in response to releases from the Sanford Dam. The average and 100-year flood discharge for the Tittabawassee River based on data from 1937 to 1984 are approximately 1,700 cubic feet per second ("cfs") and 45,000 cfs, respectively. The relatively large ratio between the 100-year flood discharge and the long-term average discharge (26.5) indicates that the river is "flashy," or has a flow regime that is characterized by highly variable flows with a rapid rate of change.

e. The average monthly discharge from 1937 to 2003 for the Tittabawassee River 2,000 feet downstream of the Dow Dam ranged from approximately 600 cfs (in August) to 3,900 cfs (in March), with an average of 1,700 cfs. Discharge is typically highest in March and April during spring snowmelt and runoff. The maximum recorded historical crest of the Tittabawassee River occurred in 1986. A large storm in September 1986 produced up to 14 inches of rain in 12 hours. The discharge of the river near the Dow Dam reached nearly 40,000 cfs, and the river stage was 10 feet above flood stage at its crest (Deedler, Undated). Flows greater than 20,000 cfs have occurred in 22 of the 95 years between 1910 and 2004, with flows greater than 30,000 cfs occurring in 1912, 1916, 1946, 1948, and 1986. In March 2004, the river discharge reached approximately 24,000 cfs.

f. Portions of the Tittabawassee River floodplain are periodically inundated by floodwaters.

g. The Saginaw River is located within the Saginaw Bay and River watershed and drains over 6,300 square miles of land. It is formed by the confluence of the Tittabawassee River and the Shiawassee River just south of Saginaw, Michigan. The river itself is about 22.3 miles in length. Most of the Saginaw River flow originates in its major tributaries with 39 percent of flow contributed by the Tittabawassee River, 11 percent of flow contributed by the Shiawassee River, 20 percent of flow contributed by the Flint River, 14 percent of flow contributed by the Cass River and 16 percent of flow contributed by other sources. Most of the rivers in the watershed, including the Cass and Flint Rivers, indirectly discharge into the Saginaw River. The Flint River discharges into the Shiawassee River approximately six miles upstream of the confluence of the Tittabawassee and Shiawassee Rivers. The Cass River also discharges into the Shiawassee River, approximately five miles downstream of the Flint River and about one mile upstream of the Tittabawassee/Shiawassee/Saginaw confluence.

h. The Saginaw River flows through Saginaw, Michigan and from there to Bay City, where the river discharges into Saginaw Bay in Lake Huron. Saginaw Bay water surface elevations and seiche effects (oscillations in water surface elevations caused by meteorological events) can affect Saginaw River water levels and flow rates for its entire length.

i. Sheet piling has been used to stabilize the banks of the Tittabawassee River along numerous stretches within the Midland Plant area and in several downstream locations. This type of bank stabilization increases channel velocity in the immediate area during flood stage by restricting the cross-sectional area of the river and, depending on the local cross-section, may increase downstream flood elevations and erosive forces by increasing the flows and velocities of water that can no longer be stored on the overbank above the stabilized banks.

j. Initially, the Midland Plant operations involved extracting brine from groundwater pumped from production wells ranging in depth from 1,300 to 5,000 feet below groundwater surface. Over the time of its operation, the Midland Plant has produced over 1,000 different organic and inorganic chemicals. These chemicals include the manufacture of 24 chlorophenolic compounds since the 1930s.

k. Earlier in the history of the Midland Plant, wastes were discharged directly into the Tittabawassee River and, sometime later, wastes were stored and partially treated in ponds prior to discharge to the River. Other wastes were disposed of at the Midland Plant either on land or by burning. Over time, changes in waste management practices included installation and operation of a modern wastewater treatment plant as well as use of incinerators instead of open burning. Changes in the wastewater treatment plant and subsequent incorporation of pollution controls into both the operations of and emissions from the incinerators have reduced or eliminated non-permitted releases and emissions from the Midland Plant.

l. Air deposition appears to be among the sources of elevated furans and dioxins, and other hazardous substances, found in surface soils in the Midland Plant area. Elevated dioxin and furan levels in and along the Tittabawassee River appear to be primarily attributable to discharges related to brine electrolysis for chlorine manufacturing, and associated waste management practices for the period at the Midland Plant. Prior to the construction of wastewater storage ponds in the 1920s, waste from manufacturing processes was discharged directly to the Tittabawassee River. Flooding of the Midland Plant property may have resulted in discharges to the Tittabawassee River of stored brines and untreated or partially treated process wastewaters. The primary source of furans and dioxins from the Midland Plant to the Tittabawassee River is believed to be historic releases of particulates in wastewaters to the River. The chlorine manufacturing process was the likely source of comparatively high furan toxicity equivalent ("TEQ") readings in and along the Tittabawassee River. Dioxins and furans would have been discharged directly to the Tittabawassee River. Dioxins and furans found in more recent sediments may be related to chlorophenol production that began in the mid-1930s.

m. Pursuant to Section 3006 of RCRA, 42 U.S.C. § 6926, the Administrator of

U.S. EPA may authorize a State to administer the RCRA hazardous waste program in lieu of the federal program when the Administrator finds that the State program meets certain conditions. Any violation of regulations promulgated pursuant to Subtitle C (Sections 3001-3023 of RCRA, 42 U.S.C. §§ 6921-6939e) or of any state provision authorized pursuant to Section 3006 of RCRA, constitutes a violation of RCRA, subject to the assessment of civil penalties and issuance of compliance orders as provided in Section 3008 of RCRA, 42 U.S.C. § 6928. Pursuant to Section 3006(b) of RCRA, 42 U.S.C. § 6926(b), the Administrator of U.S. EPA granted the State of Michigan final authorization to administer a state hazardous waste program in lieu of the federal government's base RCRA program effective October 30, 1986. 51 Fed. Reg. 36804 (October 16, 1986). The U.S. EPA granted Michigan final authorization to administer certain Hazardous and Solid Waste Amendments of 1984 and additional RCRA requirements effective January 23, 1990, 54 Fed. Reg. 48608 (November 24, 1989); June 24, 1991, 56 Fed. Reg. 18517 (April 23, 1991); November 30, 1993, 58 Fed. Reg. 51244 (October 1, 1993); April 8, 1996, 61 Fed. Reg. 4742 (February 8, 1996); December 28, 1998, 63 FR 57912 (October 29, 1998) (stayed and corrected effective June 1, 1999, 64 Fed. Reg. 10111 (March 2, 1999)); and, July 31, 2002, 67 FR 49617 (July 31, 2002) . The U.S. EPA authorized Michigan regulations are codified at Michigan Part 111 Administrative Rules 299.9101 *et seq.* See also 40 C.F.R. § 272.1151 *et seq.*

n. The Michigan Department of Environmental Quality ("MDEQ") issued to Dow its current RCRA Hazardous Waste Management Facility Operating license for the Midland Plant, with an effective date of June 12, 2003, and an expiration date of June 12, 2013 (the "License"). Under its License, Dow has been conducting corrective action work. As part of the RCRA corrective action work, Dow prepared and submitted on December 29, 2005, a Remedial Investigation ("RI") Work Plan ("RIWP") for the area consisting of river channels and floodplains of the Tittabawassee River. On March 2, 2006, the MDEQ notified Dow that the RCRA RIWP was substantively deficient and Dow was required to submit a completely revised RIWP. On July 7, 2006, Dow submitted a GeoMorph Sampling and Analysis Plan for the Upper Tittabawassee River ("UTR SAP"). On July 12, 2006, the MDEQ approved on a pilot basis, the UTR SAP for the upper 6.5 miles of the Tittabawassee River. On December 1, 2006, Dow submitted a revised RIWP to the MDEQ for review. On February 1, 2007, Dow submitted the UTR Pilot Site Characterization Report. On May 3, 2007, the MDEQ approved the UTR Pilot Site Characterization Report with conditions and removed pilot site status from the GeoMorph process. On July 9, 2007, Dow submitted a Sampling and Analysis Plan for the Upper Tittabawassee River and Middle Tittabawassee River. On July 12, 2007, MDEQ approved the Sampling and Analysis Plan for the Upper Tittabawassee River and Middle Tittabawassee River. On July 13, 2007, Dow submitted the Remedial Investigation Scope of Work for the Saginaw River and Floodplain and Saginaw Bay. On July 24, 2007, MDEQ approved with modifications Compliance Schedules for the Tittabawassee River and Floodplain Soils and Midland Area Soils Remedial Investigation Work Plans. On August 29, 2007, MDEQ issued a Notice of Deficiency for the Remedial Investigation Scope of Work for the Saginaw River and Floodplain and Saginaw Bay. On September 17, 2007, Dow submitted a revised RIWP to MDEQ for the Tittabawassee River and on October 15, 2007, Dow submitted a revised RIWP for the City of Midland, and a revised Remedial Investigation Scope of Work for the Saginaw River and

Floodplain and Saginaw Bay. On October 15, 2007, Dow submitted a Direct Contact Criteria Report for the City of Midland Soils. On November 9, 2007, MDEQ issued a Disapproval and Letter of Warning to Dow for the Direct Contact Criteria Report for the City of Midland Soils. On February 1, 2008, MDEQ issued an Approval with Modifications for the Remedial Investigation Scope of Work for the Saginaw River and Floodplain and Saginaw Bay. On March 3, 2008, Dow submitted to MDEQ the report of the data collected in 2007 from the Middle Tittabawasee River. On April 16, 2008, MDEQ notified Dow that RCRA interim response actions would be required in 2008. On May 19, 2008, Dow submitted a partial working draft 2008 Sampling and Analysis Plan. On June 30, 2008, Dow posted electronic copies of the final 2008 SAP and 2008 QAPP and submitted hard copies on July 3, 2008. MDEQ provided conceptual approval of the SAP via e-mail on June 30, 2008 and written approval with a modification and clarifications on July 10, 2008. MDEQ provided approval removing the modification on August 15, 2008.

o. The pilot GeoMorph sampling plan included sampling conducted in 2006 in and along the Tittabawasee River. Sampling within Reach D establishes dioxin sediment contamination levels of up to 69,000 parts per trillion (“ppt”) dioxin, and other contaminants, including chlorobenzene at levels of up to 950 parts per million (“ppm”). Sampling within Reach J-K establishes dioxin sediment contamination levels of up to 84,000 ppt dioxin. Sampling within Reach O establishes dioxin sediment contamination levels of up to 87,000 ppt dioxin. Sampling conducted in 2007 within Reach L establishes dioxin sediment contamination levels of up to 110,000 ppt dioxin.

p. Sampling has been conducted by Dow under the pilot GeoMorph UTR SAP as part of the RCRA Remedial Investigation process under the License. The sampling is being conducted to identify areas contaminated with dioxins and furans, and other potential contaminants of interest. Other potential contaminants of interest that have been detected in Tittabawasee River sediments or floodplain soils, as reported in the October 31, 2008, GeoMorph Interim Data submittal, include: Diethyl phthalate, Di-n-butyl phthalate, Pyrene, Fluoranthene, Dieldrin, Thallium, Hexachlorobenzene, Chrysene, Ethyl parathion, Phenanthrene, Benzo(a)pyrene, 1,2,3,4-Tetrachlorobenzene, 1,4-Dichlorobenzene, Octachlorostyrene, Pentachlorobenzene, 1,2,3-Trichlorobenzene, Benzo(k)fluoroanthene, Benzo(b)fluoranthene, Chlorobenzene, Lindane, Endrin, 4,4-DDE, (E)-alpha,beta-2,3,4,5,6-Heptachlorostyrene, Pentachlorophenol, Acenaphthene, Fluorene, beta-BHC, Aldrin, 1,2,4-Trichlorobenzene, Anthracene, Naphthalene, Indeno\_1,2,3-cd\_pyrene, Dibenzofuran, 1,2-Dichlorobenzene, Benzo(a)anthracene, Benzo(g,h,i)perylene, Bis(2-ethylhexyl) phthalate, 4,4-DDT, 1,3-Dichlorobenzene, 2-Methylnaphthalene, delta-BHC, Benzo(a)anthracene, Hexachloro-1,3-butadiene, o,p'-DDD, chromium (total), Acenaphthylene, 4,4-DDD, Heptachlor, 2,3,4,6-Tetrachlorophenol, Disulfoton, N-Nitrosodiphenylamine, Benzo\_b\_fluoranthene, Methylene chloride, o-Phenylphenol, Dichloromethane, 1,2,4,5-Tetrachlorobenzene, 4-Chloro-3-methylphenol, Methyl chlorpyrifos, Endosulfan I, Butyl benzyl phthalate, Carbazole, toluene, alpha-BHC, Dibenzo(a,h)anthracene, Phenol, Tetrachloroethene, Thionazin, 2,4,5-Trichlorophenol, 4-tert-Butylphenol, 2,4,6-Trichlorophenol, 2-Chloronaphthalene, benzyl butyl phthalate, DDD, (1,1-

bis(chlorophenyl)-2,2-dichloroethane), hexachlorobutadiene, Isophorone, Methyl parathion, 2,4-Dichlorophenol, 2,4-Dinitrophenol, Dimethyl phthalate, Famphur, Hexachloroethane, N-Nitroso-N-propyl-1-propanamine, actone, DDE, (1,1-bis(chlorophenyl)-2,2-dichloroethene), DDT, trichloroethylene, 2,6-Dinitrotoluene, Aniline, Benzene Chloroform, Di-n-octyl phthalate, Endosulfan II, Trichloroethene, cyanide, 2,4-Dinitrotoluene, 2-Chlorophenol, 4-Nitrophenol, acetophenone, beta,beta-2,3,4,5,6-Heptachlorostyrene, Di-n-octylphthalate, Hexachloro-1,3-cyclopentadiene, Nitrobenzene, Oxychlorane, PCB-1248 (AROCHLOR 1248), Pentachloronitrobenzene, 2,6-Dichlorophenol, 2-Methyl-4,6-dinitrophenol, 2-Nitrophenol, 3,3'-Dichlorobenzidine, 3-Methylphenol, 3-Nitroaniline, 4-Bromophenyl phenyl ether, 7,12-dimethylbenz(a)anthracene, alpha-2,3,4,5,6-Hexachlorostyrene, analine, Azobenzene, Benzidine, Bis(2-chloroethyl) ether, dibenz(a,h)anthracene, ethylbenzene, Polybrominated biphenyls, tetrachloroethylene, xylenes (total), Barium, Copper, Lead, Nickel, Chromium, Iron, Lithium, Arsenic, Cobalt, Vanadium, Zinc, Aluminum, Calcium, Magnesium, Manganese, Potassium, Sodium, Strontium, Titanium, Boron, Antimony, Beryllium, Mercury, Cadmium, Silver, Selenium, Tin, and sulfide.

q. Contaminants found in July 1994 in the Midland Plant revetment groundwater interception system sumps were: chlorobenzene; tetrachlorobenzene; trichloroethene; xylene; 1,2-dichlorobenzene; 1,3-dichlorobenzene; 1,4-dichlorobenzene; 2,4-dichlorophenol; 2,6-dichlorophenol; hexachlorobutadiene; 2,3,4,6-tetrachlorophenol; 1,2,4-trichlorobenzene; 2,4,5-trichlorophenol; 2,4,6-trichlorophenol; 2-chlorophenol; 3-methylphenol (meta cresol); 4-methylphenol (para cresol); 2,4-dichlorophenoxyacetic acid; phenol; pentachlorophenol; TCDF; PCDF isomers; and HCDF isomers. These contaminants may be found within the Site. Based on the Midland Plant's historic operations, other contaminants that may be present at the Site include volatile organic compounds, semi-volatile organic compounds, polychlorinated biphenyls, metals, and pesticides. The groundwater system continues to be monitored for contaminants including those listed herein.

r. Sampling conducted as part of the RCRA RIWP under the License indicates that the dioxin/furan contamination in the Tittabawassee River adjacent to and downstream of Dow is associated with the Midland Plant. Soil samples collected upstream of the City of Midland did not contain elevated levels of dioxins or furans. Dioxin and furan concentrations from these sample locations are consistent with statewide background concentrations. Sampling within tributaries to the Tittabawassee River has not identified any significant sources of dioxins or furans. No significant sources of dioxins or furans are known within the City of Midland other than Dow. Dioxin/furan congener profile charts for Tittabawassee River sediments and floodplain soils downstream of the Midland Plant are similar amongst themselves and very different from sample locations upstream of the Midland Plant. Dioxin and furan contamination within the estimated 100-year flood plain downstream of the Midland Plant has been documented.

s. U.S. EPA's general understanding of potential hazardous substances in soils at the Site is based, in part, on studies conducted by Dow in 1984 (Agin et al., 1984) and 1998

(Dow, 2000), U.S. EPA in 1983-1984 (U.S. EPA, 1985), and MDEQ in 1996 (MDEQ, 1997). Although these studies focused primarily on dioxins and furans, the 1985 U.S. EPA study also analyzed samples for volatile organic compounds (“VOCs”), semivolatile organic compounds (“SVOCs”), and polychlorinated biphenyls (“PCBs”). More recent but limited sampling results have been provided by Dow, the University of Michigan Dioxin Exposure Study (“UMDES”), and onsite soil sampling conducted by MDEQ at the Midland Plant in 2005 and 2006. A study conducted by U.S. EPA in 1987 provided limited data on concentrations of dioxins and furans in garden vegetables grown in the City of Midland. Dow’s GeoMorph® Site Characterization Report, March 2008 Update, dated March, 3, 2008, and Dow’s 2008 Working Data Monthly Update, dated October 31, 2008, also contain information regarding potential hazardous substances in soils at the Site.

t. The studies conducted prior to 1996 by Dow, U.S. EPA, and MDEQ focused on sampling and analysis for 2,3,7,8-tetrachlorodibenzo-p-dioxin (“TCDD”) as the main dioxin congener. More recent studies report dioxin and furan data TEQ concentrations. Dioxin and furan sample results from the laboratory are currently typically reported on an individual congener basis. TEQ concentrations are calculated according to a toxicity weighting scale. TEQ concentrations are typically reported in concentrations of parts per trillion.

u. The following sampling events and studies are among those conducted at, and around, the Site:

i. 1978 Dow Chemical Study - Dow reported results of a chlorinated dioxin and dibenzofuran monitoring program to the Michigan Department of Natural Resources and U.S. EPA Office of Toxic Substances. (Blumb, R.R. et al, “Trace Chemistries of Fire: A Source of Chlorinated Dioxins,” *Science*, 210, 385, 1980). Based on this study and Dow data, U.S. EPA formed a preliminary conclusion of substantial risk of injury to human health or the environment existed under section 8(e) of the Toxic Substances Control Act and concluded that Dow Chemical was likely the sole source of the dioxin contamination. (August 8, 1978, communication to J. Merenda, Director, Assessment Division, OTE/OTS, “Interim Status Report 8EHQ-0778-0209,” from F. Kover, OTE/OTS; September 6, 1978, communication to Ectyl H. Blair, Dow Chemical, “EPA Document Control Number 8EHQ-0778-0209,” from Warren R. Muir, OTS, EPA; February 8, 1979, communication to J. Merenda, Director, Assessment Division, OTE/OTS, “Status Report Supplement 8EHQ-0778-0209”, from F. Kover, OTE/OTS; A Review of Polychlorinated dibenzo-p-dioxin and Polychlorinated dibenzofurans: Sources and Effects, U.S. EPA, 1981).

ii. 1984 Dow study - the primary objective of the 1984 Dow study was to identify point sources of dioxins and furans at the Midland Plant (Agin et al., 1984).

iii. 1985 U.S. EPA Study - The primary objective of the 1985 U.S. EPA Study was to determine whether concentrations of dioxins and other hazardous substances present on- and off-site of Dow’s Midland Plant might pose unacceptable public health risks



(U.S. EPA, 1985). (“Dioxin Risk Assessment for Dioxin Contamination Midland Michigan”, EPA-905/4-88-005, April, 1988).

iv. 1986 U.S. EPA Study - Wastewater characterization studies, fish and sediment of dioxin releases from the Midland Plant (July 6, 1986, Dow Chemical Wastewater Characterization Study; Tittabawassee River Sediments and Native Fish, EPA-9005/4-88-003).

v. 1987 U.S. EPA Study - U.S. EPA evaluated the incinerator data submitted by Dow as well as U.S. EPA’s independent investigations of incinerator exhaust and ambient air. (Michigan Dioxin Studies, “Dow Chemical Building 703 Incinerator Exhaust and Ambient Air Study;” EPA-905/4-88-04).

vi. 1987 U.S. EPA garden vegetable study - In 1987, U.S. EPA Region 5 conducted preliminary screening of home-grown vegetables from two gardens in the City of Midland, and a control garden in Eagle, Michigan (U.S. EPA, 1988). Fresh or frozen vegetables (carrots, beets, onions, and lettuce) and garden soil samples were collected and analyzed for dioxins and furans. Although dioxins and furans were present in the soils of both gardens, they were not detected in any vegetable tissue samples (U.S. EPA, 1988).

vii. 1988 U.S. EPA Study and Risk Management Conclusions - A comprehensive human health risk analysis was completed by U.S. EPA on sample results obtained from air, water, fish, and soils (“Dioxin Risk Assessment for Dioxin Contamination Midland, Michigan,” EPA-905/4-88-005, April, 1988; Risk Management Recommendations for Dioxin Contamination at Midland, Michigan: Final Report; EPA-905/4-88-008).

viii. 1988 U.S. EPA Risk Management Report - U.S. EPA concluded that Tittabawassee River sediments and the river flood plain, from upstream of the Midland Plant to downstream of the facility should be evaluated to determine the potential for dioxin and other chemical contamination. Based upon these findings it was recommended that a determination be made regarding whether sediment removal might be appropriate (Risk Management Recommendations for Dioxin Contamination at Midland, Michigan: Final Report; EPA-905/4-88-008).

ix. 1996 MDEQ study - The objective of the 1996 MDEQ study was to evaluate the distribution of dioxin and furan concentrations in the Midland community and the Midland Plant and to compare these results to those of the 1984 Dow and 1985 U.S. EPA studies (MDEQ, 1997).

x. 1998 Dow study - Approximately 45 soil samples were collected in the offsite Study Area during the 1998 Dow study (Dow, 2000). Most samples were collected from Dow property (Corporate Center area). The objective of this study was to determine descriptive statistics (mean, median, geometric mean, standard deviation, variance, and normality check) for sample groups from the Dow Corporate Center and Saginaw/Salzburg/Rockwell Roads site.

xi. 2002 Great Lakes Protection Fund Study conducted by MDEQ - Baseline Chemical Characterization of Saginaw Bay Watershed Sediments - The focus of the study was to characterize the sediments in the Tittabawassee River study area beginning upstream of Midland, Michigan on the Pine, Chippewa, and Tittabawassee Rivers, and continuing downstream on the Tittabawassee to its confluence with the Saginaw River.

xii. 2003 – Michigan Department of Environmental Quality – Final Report Phase II Tittabawassee /Saginaw River Dioxin Flood Plain Sampling Study June 2003 (revised August 2003) found total dioxin TEQ levels ranging from 45 – 1,400 ppt on residential property on Riverside Boulevard.

xiii. 2005 - Michigan Department of Community Health Study - A Pilot Exposure Investigation: Dioxin Exposure in Adults Living in the Tittabawassee River Flood Plain Saginaw County, Michigan (PEI). The Michigan Department of Community Health (“MDCH”) Division of Environmental and Occupational Epidemiology conducted this investigation under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (“ATSDR”). The Final MDCH PEI report is dated November 1, 2007. Additional, relevant, MDCH studies and reports include the following: Dioxin Contamination in Soil, The Dow Chemical Company, Michigan Division, Midland Location, Midland, Midland County, Michigan, August 12, 2004; Tittabawassee River Floodplain Dioxin Contamination, Tittabawassee River, Midland, Midland County, Michigan, August 12, 2004; Dioxins in Wild Game Taken from the Tittabawassee River Floodplain South of Midland, Midland and Saginaw Counties, Michigan, April 29, 2005; Tittabawassee River Fish Consumption Health Consultation, Midland, Midland County, Michigan, July 27, 2005; Fish Consumption Survey of People Fishing and Harvesting Fish from the Saginaw Bay Watershed, June 14, 2007; Interim Fish Consumption Advisory for the Saginaw River, November 14, 2007; Evaluation of Saginaw River Dioxin Exposures and Health Risks, Saginaw River, City of Saginaw, Saginaw County, Michigan, February 4, 2008; and Wild Game Advisories for the Tittabawassee and Saginaw River Flood Plains, May 15, 2008.

xiv. 2006 Great Lakes National Program Office Grant Project # GL965334010 conducted by MDEQ - Dioxin-Like Toxicity in the Saginaw Bay Watershed - Flood plain soils (115) and sediment samples (97) were collected from the Saginaw Bay Watershed. Samples were collected from a geographically extensive area that includes the Shiawassee River, the Saginaw River, and Saginaw Bay. These samples were analyzed for a number of constituents, including dioxins and furans, coplanar polychlorinated biphenyls (“PCBs”), and polybrominated diphenyl ethers (“PBDEs”).

xv. 2006 University of Michigan Dioxin Exposure Study (“UMDES”) - The objective of the UMDES was to evaluate human exposure to the dioxins, furans and dioxin-like PCBs.

xvi. 2005 MDEQ samples - MDEQ collected surface soil samples from

eight locations within the Midland Plant in 2005. Samples were analyzed for dioxins and furans, PCBs, pesticides, VOCs, SVOCs, and metals.

xvii. 2006 MDEQ samples - MDEQ collected additional surface soil samples from within the Midland Plant in 2006. These samples were also analyzed for dioxins and furans, PCBs, pesticides, VOCs, SVOCs, and metals.

The soil sample data from certain of these previous investigations were reviewed by Dow as part of its RCRA RIWP under the License to determine the degree to which the data could be used in remedial investigation data evaluation activities.

v. In October 2003, MDEQ completed its "Tittabawassee River Aquatic Ecological Risk Assessment," and Dow responded to that document on December 19, 2003. In April 2004, MDEQ completed its "Tittabawassee River Floodplain Screening-level Ecological Risk Assessment." On July 30, 2004, U.S. EPA issued its "(1) Health Risk Analysis of Tittabawassee Fish with Dioxin and (2) Recommendations for Risk Evaluation."

w. In the MDEQ 2003 "Tittabawassee River Aquatic Ecological Risk Assessment," risks to birds and mammals from consuming fish from the Tittabawassee River below the City of Midland were evaluated using a streamlined approach that included site-specific contaminant data and modeling related to TCDD (fish tissue and bird egg concentrations) and data from the scientific literature.

x. In the MDEQ 2004 "Tittabawassee River Floodplain Screening-level Ecological Risk Assessment" risks to six species of birds and mammals from consuming soils and invertebrate, mammalian, and avian prey from the floodplain of the Tittabawassee River downriver of the City of Midland were evaluated using a screening level ecological risk assessment. This analysis was based on empirical soil PCDD/PCDF concentrations and bioaccumulation, toxicological, and ecological data from the scientific literature. The question addressed by this ecological risk assessment was whether an unacceptable risk to ecological receptors in the Tittabawassee River floodplain could be reasonably discounted.

y. In the U.S. EPA 2004 "(1) Health Risk Analysis of Tittabawassee Fish with Dioxin and (2) Recommendations for Risk Evaluation," U.S. EPA conducted an initial evaluation of the risks to humans from consuming fish from the Tittabawassee River.

z. Human access to the Site is unrestricted to people approaching the Site from the Tittabawassee River. Wildlife in the area also has unrestricted access. The Site is also be subject to flooding and erosion. This is particularly true during high stream flow events. This may result in the spread of dioxin contamination to other locations within the flood plain, as well as to downstream locations. This may also result in further contamination of fish and invertebrates within the river and at downstream locations.

aa. On July 12, 2007, U.S. EPA and Dow entered into three separate Administrative Settlement Agreements and Orders on Consent under the authority of Sections 104, 106(a), 107, and 122 of CERCLA. On November 15, 2007, U.S. EPA and Dow entered into a fourth Administrative Settlement Agreement and Order on Consent. On July 15, 2008, U.S. EPA and Dow entered into a fifth Administrative Settlement Agreement and Order on Consent. The Administrative Settlement Agreements and Orders provide for CERCLA time critical removal actions to, among other things, remove certain dioxin-contaminated bottom deposits, sediments, and/or soils in, or along, the Tittabawassee River in Midland County, Michigan, as well as in the Saginaw River in the City of Saginaw, Michigan. The Administrative Settlement Agreements and Orders consist of the following elements:

i. The first Administrative Settlement Agreement and Order on Consent (“AOC”), entered in U.S. EPA Docket No. V-W-07-C-874, provides for the performance of removal actions by Dow to cleanup dioxin-contaminated bottom deposits and sediments at the area known as Reach D, which is located at and in the vicinity of an historic flume situated along the northeast bank of the Tittabawassee River, within the Midland Plant property in Midland County, Michigan. Under this AOC, Dow removed dioxin-contaminated sediments in designated locations. A Notice of Completion and Determination of Compliance with this AOC is pending.

ii. Under the second AOC, entered in U.S. EPA Docket No. V-W-07-C-875, Dow agreed to perform a removal action at an area known as Reach J-K, which is located in overbank areas on the northeast side of the Tittabawassee River, approximately 3.6 miles downstream of the confluence of the Chippewa and Tittabawassee Rivers. Under this AOC, Dow removed a dioxin-contaminated naturally occurring levee, capped one dioxin-contaminated upland area and fenced off another dioxin-contaminated wetland area. Reach J-K is located within Dow’s property bounded to the northeast by a wetland with Saginaw Road to the northeast beyond the wetland, the Caldwell boat launch to the South, and to the west by the east channel bank of the Tittabawassee River, in Midland County, Michigan. EPA issued its Notice of Completion and Determination of Compliance with this AOC on May 2, 2008.

iii. Under the third AOC, entered in U.S. EPA Docket No. V-W-07-C-876, Dow agreed to perform a removal action at an area known as Reach O of the Tittabawassee River, an approximately 1,300 foot-long point bar extending approximately 50 to 100 feet into the Tittabawassee River and situated parallel to the northeast bank of the Tittabawassee River, approximately 6.1 miles downstream of the confluence of the Chippewa and Tittabawassee Rivers and located within, or immediately adjacent to, Dow property located to the south of North Saginaw Road in Midland County, Michigan. Under this AOC, Dow removed dioxin-contaminated sediments in designated locations of the point bar. EPA issued its Notice of Completion and Determination of Compliance with this AOC on April 10, 2008.

iv. Under the fourth AOC, entered in U.S. EPA Docket No. V-W-08-C-886, Dow agreed to perform a removal action at an area known as the Saginaw

River Sediment Dioxin Contamination Site (adjacent to Wickes Park, City of Saginaw, Michigan). Under this AOC, Dow removed dioxin-contaminated sediments in designated locations. EPA issued its Notice of Completion and Determination of Compliance with this AOC on August 4, 2008.

v. Under the fifth AOC, entered in U.S. EPA Docket No. V-W-08-C-906, Dow agreed to perform a removal action at an area known as Exposure Unit 001 ("EU001"), an area in Saginaw, Michigan, approximately 1,000-foot long by 150-foot wide bounded by the bank of the Tittabawassee River to the south, Consumers Power lines to the east, a berm on state land to the north, and a forested area to the west. The EU001 includes an approximately 1000 feet portion of Riverside Boulevard and the following parcels in Saginaw, Michigan. Under this AOC, Dow removed dioxin-contaminated soils in designated locations, including residential properties, property zoned for industrial use, and State-owned land. Dow also cleaned the inside of occupied homes (including but not limited to garages and workshops) located within EU001 and after cleaning sampled the interiors for dioxin TEQ contaminant levels (if any). A Notice of Completion and Determination of Compliance with this AOC is pending.

bb. Dioxins and furans are listed as hazardous constituents in RCRA Appendix VIII to 40 CFR 261; and Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Michigan Compiled Laws ("MCL") 324.101 et seq. ("NREPA").

cc. Dioxins, furans, and chlorobenzenes are listed as hazardous constituents in RCRA Appendix VIII to 40 CFR 261; and Part 111, Hazardous Waste Management, of Michigan's NREPA, 1994 PA 451, as amended, MCL 324.101 et seq.

dd. U.S. EPA OSWER Directive 9200.4-26, April 13, 1998, has generally selected 1 ppb as a cleanup level for dioxin for direct contact threat in residential soils at Superfund and RCRA cleanup sites. MDEQ has established a more restrictive state ARAR of .09 ppb. The MDEQ ARAR is established in Part 201, Environmental Remediation, of the NREPA, 1994 PA 451, as amended and Part 213, Leaking Underground Storage Tanks, of the NREPA, which also allows for a different cleanup number to be developed and used based on site-specific and other information.

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

13. Based on the Findings of Fact set forth above, and the Administrative Record in this matter, U.S. EPA has determined that:

14. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

15. The contamination found at the Site, as identified in the Findings of Fact above,

includes a “hazardous substance” as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

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

17. Respondent is a “person” as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

18. Respondent is a responsible party under Sections 104, 107, and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622.

19. The actions required by this Settlement Agreement are necessary to protect the public health, welfare or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

20. U.S. EPA has determined that Respondent is qualified to conduct the evaluation of current Site conditions and assessments of response options, and implementation of any RI, any FS and/or EE/CA, and any RD within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondent complies with the terms of this Settlement Agreement.

## **VII. SETTLEMENT AGREEMENT AND ORDER**

21. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

## **VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS**

### **22. Selection of Contractors, Personnel.**

a. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Within 30 days of the Effective Date of this Settlement Agreement, and before the Work outlined below begins, Respondent shall notify U.S. EPA and MDEQ in writing of the names, titles, and qualifications of the key personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out such Work. With respect to any contractor proposed to be the supervising contractor or that will be collecting

or analyzing environmental samples, Respondent shall demonstrate that the proposed contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by U.S. EPA. The qualifications of the persons undertaking the Work for Respondent shall be subject to U.S. EPA's review, for verification that such persons meet minimum technical background and experience requirements. If Respondent fails to demonstrate to U.S. EPA's satisfaction that Respondent is qualified to perform properly and promptly the actions set forth in this Settlement Agreement, U.S. EPA may take over the work required by this Settlement Agreement.

b. If U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, disapproves in writing of the technical qualifications of any person, Respondent shall notify U.S. EPA of the identity and qualifications of the replacement(s) within 30 days of the written notice. If U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, subsequently disapproves in writing of the technical qualifications of the replacement(s), U.S. EPA reserves the right to terminate this Settlement Agreement and to evaluate the current Site conditions and assess response options and to conduct any RI, any FS and/or EE/CA, and/or any RD, and to seek reimbursement for costs and penalties from Respondent. During the course of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD, Respondent shall notify U.S. EPA and MDEQ in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. U.S. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

23. Within 30 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to U.S. EPA and MDEQ the designated Project Coordinator's name, address, telephone number, and qualifications. In no event shall legal counsel serve as a Project Coordinator for purposes of 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, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, retains the right to disapprove of the designated Project Coordinator. If U.S. EPA disapproves of the designated Project Coordinator in writing, Respondent shall retain a different Project Coordinator and shall notify U.S. EPA and MDEQ of that person's name, address, telephone number and qualifications within 21 days following U.S. EPA's disapproval. Respondent shall have the right to change its Project Coordinator subject to U.S. EPA's right to disapprove. Respondent shall notify U.S. EPA 14 days before such change is made. The initial notification may be made orally, but shall be promptly followed by a written notification.

24. U.S. EPA has designated Mary Logan of the Superfund Division, Region 5 as its Project Coordinator. U.S. EPA will notify Respondent of any change in its designation of the Project Coordinator. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to:

Mary Logan  
Remedial Project Manager  
U.S. EPA, Superfund Division  
Mail Code SR-6J  
77 West Jackson  
Chicago, Illinois 60604-3590

Respondent is encouraged to make its submissions to U.S. EPA on recycled paper (which includes significant post-consumer waste paper content where possible) and using two-sided copies. Respondent shall make submissions electronically according to U.S. EPA Region 5 specifications. Receipt by Respondent's Project Coordinator of any notice or communication from U.S. EPA relating to this Settlement Agreement shall constitute receipt by Respondent. Documents to be submitted to the Respondent shall be sent to:

**[Name]**  
**Organization**  
**Address**

25. U.S. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, U.S. EPA's Project Coordinator shall have the authority consistent with the NCP to halt, conduct, or direct any Work required by this Settlement Agreement, and to take any necessary response action when s/he determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the U.S. EPA Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

26. U.S. EPA shall have the right, subject to Paragraph 23, to change its RPM and/or OSC. Respondent shall have the right, subject to Paragraph 23, to change its Project Coordinator. Respondent shall notify U.S. EPA 14 days before such a change is made. The initial notification by either party may be made orally, but shall be promptly followed by a written notice.

27. U.S. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of any RI and any FS for the Site, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). U.S. EPA may also arrange for a qualified person to assist in its oversight and review of all other Work required under this Settlement Agreement. Such person shall have the



authority to observe Work and make inquiries in the absence of U.S. EPA, but not to modify the plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, or other work plans.

## **IX. WORK TO BE PERFORMED**

28. a. Respondent shall conduct all of the tasks required by the SOW, including the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD, in accordance with the provisions of this Settlement Agreement, the SOW, CERCLA, the NCP and all applicable U.S. EPA guidance. U.S. EPA guidance related to the Work includes, but is not limited to, the guidance listed in Exhibit B to the SOW.

b. In any RI and FS Reports, Respondent shall address the factors required to be taken into account in Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430 of the NCP, 40 C.F.R. § 300.430. To the extent not previously completed, the RI shall characterize the geology and hydrogeology of the Site, determine the nature and extent of hazardous substances, pollutants or contaminants at the Site, and characterize ecological zones including terrestrial, riparian, wetlands, aquatic, and transitional, as provided in the SOW. As provided in the SOW, Respondent shall evaluate current Site conditions and assess response options, and shall prepare a determination and report of the nature and extent of the current and potential threat to the public health or welfare or the environment posed by the release or threatened release of any hazardous substances, pollutants, or contaminants at or from the Site. In the FS Report and/or EE/CA, Respondent shall determine and evaluate (based on treatability testing, where appropriate) alternatives for response action that protect human health and the environment by recycling waste or by eliminating, reducing and/or controlling risks posed by the exposure pathways at the Site as provided in the SOW. In the FS Report, the Respondent shall evaluate a range of alternatives including but not limited to those alternatives described in 40 C.F.R. § 300.430(e) and remedial alternatives that utilize permanent solutions and alternative treatment technologies or resource recovery technologies as provided in the SOW. The FS Reports shall include a detailed analysis of individual alternatives against each of the nine evaluation criteria in 40 C.F.R. § 300.430(e)(9)(iii) and a comparative analysis that focuses upon the relative performance of each alternative against the nine criteria in 40 C.F.R. § 300.430(e)(9)(iii). Respondent shall submit to U.S. EPA and the State each 5 copies (or another amount, as requested) of all plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW in accordance with the approved schedule for review and approval pursuant to Section X (U.S. EPA Approval of Plans and Other Submissions). Upon request by U.S. EPA, Respondent shall submit in electronic form all portions of any documents, reports, or other deliverable Respondent is required to submit pursuant to provisions of this Settlement Agreement, including the SOW. Upon approval by U.S. EPA, all deliverables under this Settlement Agreement, including the SOW, shall be incorporated into and become enforceable under this Settlement Agreement.

29. Response Design. U.S. EPA anticipates that information may be developed while the

SOW tasks are being conducted, but before they are completed, that supports issuance of a ROD or RODs for taking Early Interim Remedial Action or Early Final Remedial Action. Where an Early Interim Remedial Action is selected in a ROD, U.S. EPA anticipates that the Early Interim Remedial Action may be followed with additional response actions, and that additional decision documents, including a final ROD, will be issued. Where an Early Final Remedial Action is selected in a ROD, U.S. EPA anticipates that the Early Final Remedial Action will not require additional response actions. When U.S. EPA in its sole discretion determines that an Early Interim Remedial Action, Early Final Remedial Action, or final Remedial Action ROD is necessary during the time that Respondent is conducting Work under this Settlement Agreement, U.S. EPA shall issue a ROD requiring such Remedial Action. When U.S. EPA in its sole discretion determines that a non-time critical removal action is necessary during the time that Respondent is conducting Work under this Settlement Agreement, U.S. EPA shall issue an action memorandum requiring such non-time critical removal action. Respondent shall commence the RD of any remedial action selected in a ROD and shall commence the RD of any non-time critical removal action selected in an action memorandum in accordance with the Schedule in Exhibit A to the SOW consistent with the terms of this Settlement Agreement and the SOW attached as Appendix A. Nothing in this Settlement Agreement impedes U.S. EPA's authorities to enter into Agreements on Consent and to issue Unilateral Administrative Orders to Respondent outside of this Settlement Agreement; U.S. EPA retains all of its authorities under Section 106 of CERCLA, 42 U.S.C. § 9606.

30. Community Involvement Plan and Technical Assistance Plan. U.S. EPA will prepare a Community Involvement Plan, in accordance with U.S. EPA guidance and the NCP. As requested by U.S. EPA, Respondent shall provide information supporting U.S. EPA's community relations programs. When requested by U.S. EPA, Respondent also shall provide U.S. EPA with the following deliverable:

Technical Assistance Plan: Within 45 days of a request by U.S. EPA, Respondent shall provide U.S. EPA with a Technical Assistance Plan ("TAP") for providing and administering up to \$50,000 of Respondent's funds to be used by a qualified community group to hire independent technical advisers during the Work conducted pursuant to this Settlement Agreement. The TAP shall state that Respondent will provide and administer any additional amounts needed if U.S. EPA determines that the selected community group has demonstrated such a need prior to U.S. EPA's issuance of the response action decision documents contemplated by this Settlement Agreement. Upon its approval or modification by U.S. EPA pursuant to Section X (U.S. EPA Approval of Plans and Other Submissions), the TAP shall be incorporated into and become enforceable under this Settlement Agreement.

31. Modification of any plans.

a. As information is developed during the Work, Respondent may propose appropriate modifications to the Work Plans, or other plans or schedules for U.S. EPA's review

in accordance with Section X (U.S. EPA Approval of Plans and Other Submissions). In addition, if at any time during the performance of the Work under this Settlement Agreement Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional data to the U.S. EPA Project Coordinator within 15 days of identification. U.S. EPA will determine whether the additional data will be collected by Respondent and incorporated into reports and deliverables under this Settlement Agreement.

b. In the event of an immediate threat or unanticipated or changed circumstances at the Site, Respondent shall notify the U.S. EPA Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In addition to the authorities in the NCP, in the event that U.S. EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in any of the plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, U.S. EPA shall direct that Respondent modify, amend or supplement the plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW in writing accordingly. Respondent shall perform the plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW as modified or amended.

c. U.S. EPA may determine that in addition to tasks defined in the initially approved plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, other additional Work may be necessary to accomplish the objectives of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD as set forth in the SOW for the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD (attached as Appendix A). U.S. EPA may require that Respondent perform these response actions in addition to those required by the initially approved plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, including any approved modifications, if it determines that such actions are necessary to accomplish the objectives set forth in the SOW.

d. Respondent shall confirm its willingness to perform the additional evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD Work in writing to U.S. EPA within 7 days of receipt of the U.S. EPA request. If Respondent objects to any modification determined by U.S. EPA to be necessary pursuant to this Paragraph, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution). The plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW shall be modified in accordance with the final resolution of the dispute.

e. Respondent shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by U.S. EPA in a written modification to the plans, reports, submittals and other deliverables required under this Settlement Agreement, the

SOW, and the documents approved under the SOW, or a written work plan supplement. If Respondent does not do so, U.S. EPA reserves the right to conduct the additional Work itself at any point, to seek reimbursement from Respondent, and/or to seek any other appropriate relief.

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

g. No informal advice, guidance, suggestion, or comment by the U.S. EPA Project Coordinator or other U.S. EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

h. Nothing in this Paragraph shall be construed to limit U.S. EPA's authority to require performance of further response actions as otherwise provided in this Settlement Agreement.

### 32. Off-Site Shipment of Waste Material.

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

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

c. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the remedial investigation and feasibility study. Respondent shall provide the information required by Subparagraph 32.b, 32.d, and 32.e as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

d. Respondent shall, prior to any off-site shipment of Waste Material from the

Site to an in-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official and to U.S. EPA's Designated Project Coordinator. However, this notification requirement shall not apply to any off-site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

Respondent shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation.

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

33. Meetings. Respondent shall make presentations at, and participate in, meetings (in person, or if approved by the U.S. EPA Project Coordinator, by telephone conference) at the request of U.S. EPA during the initiation, conduct, and completion of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD. In addition to discussion of the technical aspects of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD, topics will include anticipated problems or new issues. Meetings will be scheduled at U.S. EPA's discretion.

34. Progress Reports. In addition to the deliverables set forth in this Settlement Agreement, Respondent shall provide to U.S. EPA monthly progress reports by the 15th day of the following month. At a minimum, with respect to the preceding month or week, these progress reports shall (1) describe the actions which have been taken to comply with this Settlement Agreement during that month or week, (2) include electronic copies (according to U.S. EPA Region 5 specifications), and hard copies upon request by U.S. EPA, of all results of sampling and tests and all other data received by the Respondent under this Settlement Agreement during that month or week, (3) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD completion, and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

35. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work which

causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the U.S. EPA Project Coordinator or, in the event of his/her unavailability, the On Scene Coordinator (“OSC”) or the Regional Duty Officer, U.S. EPA Region 5 Emergency Planning and Response Branch at (Tel: (312) 353-2318) of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and U.S. EPA takes such action instead, Respondent shall reimburse U.S. EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Response Costs).

b. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall, upon knowledge of the release, immediately notify the U.S. EPA Project Coordinator, the OSC or Regional Duty Officer at (312) 353-2318 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to U.S. EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

## **X. U.S. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS**

36. After review of any plan, report or other item that is required to be submitted for approval pursuant to this Settlement Agreement, including the SOW, U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, shall, in writing: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, U.S. EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within 30 days (or such longer time as specified by U.S. EPA in writing), except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

37. In the event of approval, approval upon conditions, or modification by U.S. EPA, pursuant to Subparagraph 36(a), (b), (c) or (e), Respondent shall proceed to take any action required by the plan, report or other item, as approved or modified by U.S. EPA subject only to its right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by U.S. EPA. Following U.S. EPA approval or modification of a submittal or portion thereof, Respondent shall not thereafter

alter or amend such submittal or portion thereof unless directed by U.S. EPA. In the event that U.S. EPA modifies the submission to cure the deficiencies pursuant to Subparagraph 36(c) and the submission had a material defect, U.S. EPA retains the right to seek stipulated penalties, as provided in Section XVI (Stipulated Penalties). U.S. EPA also retains the right to perform its own studies, complete all or a portion of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD pursuant to Paragraph 84 (Work Takeover), and seek reimbursement from Respondent for its costs; and/or seek any other appropriate relief.

38. Resubmission of Plans.

a. Upon receipt of a notice of disapproval, Respondent shall, within 30 days or such longer time as specified by U.S. EPA in writing, correct the deficiencies and resubmit the plan, report, or other item for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the 30-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 39 and 40.

b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission that does not depend on the disapproved portion, unless otherwise directed by U.S. EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondent shall not proceed with any activities or tasks described in, or dependent upon U.S. EPA approval of any of the deliverables until receiving U.S. EPA approval for the pertinent deliverable consistent with Exhibit A of the SOW. While awaiting U.S. EPA approval on these deliverables, Respondent shall proceed with all other tasks and activities which may be conducted independently of the deliverables, in accordance with the schedule set forth in this Settlement Agreement, or as otherwise approved by U.S. EPA.

d. U.S. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD.

39. If U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, disapproves a resubmitted plan, report or other item, or portion thereof, U.S. EPA may direct Respondent to correct the deficiencies. U.S. EPA also retains the right to modify or develop the plan, report or other item. Respondent shall implement any such plan, report, or item as corrected, modified or developed by U.S. EPA, subject only to its right to invoke the procedures set forth in Section XV (Dispute Resolution).

40. If upon resubmission, a plan, report, or item is disapproved or modified by U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or item timely and adequately unless Respondent invokes the dispute resolution procedures in accordance with Section XV (Dispute Resolution) and U.S. EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by U.S. EPA or superceded by an agreement reached pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If U.S. EPA's disapproval or modification is not otherwise revoked, substantially modified or superceded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XV, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

41. In the event that U.S. EPA takes over some of the tasks, but not the preparation of the RI Report, or the FS Report and/or EE/CA, or any RD deliverables, Respondent shall incorporate and integrate information supplied by U.S. EPA into the final reports or deliverables.

42. All plans, reports, and other items submitted to U.S. EPA under this Settlement Agreement shall, upon approval or modification by U.S. EPA after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, be incorporated into and enforceable under this Settlement Agreement. In the event U.S. EPA approves or modifies a portion of a plan, report, or other item submitted to U.S. EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

43. Neither failure of U.S. EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, nor the absence of comments, shall be construed as approval by U.S. EPA. Whether or not U.S. EPA gives express approval for Respondent's deliverables, Respondent is responsible for preparing deliverables acceptable to U.S. EPA.

## **XI. QUALITY ASSURANCE, SAMPLING, AND DATA AVAILABILITY**

### **44. Quality Assurance.**

a. Respondent shall assure that all Work performed, samples taken and analyses conducted conform to the requirements of the SOW, the Quality Assurance Project Plan ("QAPP") and guidances identified therein. Respondent will assure that field personnel used by Respondent are properly trained in the use of field equipment and in chain of custody procedures. Respondent shall use quality assurance, quality control, and chain of custody procedures for all samples taken, and analyses in accordance with the Uniform Federal Policy for Implementing Environmental Quality Systems (UFP-QS), the Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP) Manual, the Uniform Federal Policy - QAPP Workbook, and the



Uniform Federal Policy - QAPP Compendium, and subsequent amendments to such guidelines upon notification by U.S. EPA to Respondent of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. All sampling and analyses 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. Respondent 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. The Respondents shall also ensure the provision of analytical tracking information consistent with OSWER Directive No. 9240.0-2B, Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites (July 6, 1992).

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

#### 45. Sampling.

a. All results of sampling, tests, modeling or other data (including raw data) generated by Respondent, or on Respondent's behalf, under this Settlement Agreement, shall be submitted to U.S. EPA and MDEQ (in electronic form according to U.S. EPA Region 5 specifications, and in hard copy upon request by U.S. EPA) in the next monthly progress report as described in Paragraph 34 of this Settlement Agreement. U.S. EPA will make available to Respondent validated data generated by U.S. EPA unless it is exempt from disclosure by any federal or state law or regulation.

b. Except for sampling intended to occur during storm events, Respondent shall verbally notify U.S. EPA and the State at least 14 days prior to conducting significant field events as described in the SOW and any Work Plan/Field Sampling Plan. At U.S. EPA's verbal or written request, or the request of U.S. EPA's oversight assistant, Respondent shall allow split or duplicate samples to be taken by U.S. EPA (and its authorized representatives) and the State of any samples collected by Respondent in implementing this Settlement Agreement. All split samples shall be analyzed by the methods identified in a U.S. EPA-approved QAPP governing split samples.

c. Except for sampling intended to occur during storm events, emergency response actions, or enforcement-related events requiring confidentiality, U.S. EPA shall verbally notify Respondent at least 14 days prior to conducting significant field events related to

overseeing this Settlement Agreement. At Respondent's written request, U.S. EPA shall allow split or duplicate samples to be taken by Respondent (and its authorized representatives) of any samples collected by U.S. EPA in overseeing this Settlement Agreement. All split samples shall be analyzed by the methods identified in a U.S. EPA-approved QAPP governing split samples.

46. Data Availability.

a. At all reasonable times, U.S. EPA and its authorized representatives shall have the authority to enter and freely move about all property at the Site and off-site areas where Work, if any, is being performed, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondent and its contractor pursuant to this Settlement Agreement; reviewing the progress of Respondent in carrying out the terms of this Settlement Agreement; conducting tests as U.S. EPA or its authorized representatives deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to U.S. EPA by Respondent. Respondent shall allow these persons to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to Work undertaken in carrying out this Settlement Agreement, subject to Paragraphs 46(c) and 48. Nothing herein shall be interpreted as limiting or affecting U.S. EPA's right of entry or inspection authority under federal law. All persons accessing the Site under this paragraph shall comply with all approved Health and Safety Plans.

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

c. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to U.S. EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA. 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by U.S. EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to U.S. EPA and the State, or if U.S. EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent agrees not to assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring. Respondent shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which

Respondent asserts business confidentiality claims.

47. In entering into this Settlement Agreement, Respondent waives any objections to any data gathered, generated, or evaluated by U.S. EPA, the State, or Respondent in the performance or oversight of the Work that has been verified according to the quality assurance/quality control (QA/QC) procedures required by the Settlement Agreement or any U.S. EPA-approved Work Plans or Sampling and Analysis Plans under this Settlement Agreement. If Respondent objects to any other data relating to any plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, Respondent shall submit to U.S. EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to U.S. EPA within 15 days of the monthly progress report containing the data.

48. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide U.S. EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged. Additionally, no claim of privilege or confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

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

## **XII. SITE ACCESS**

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

51. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within no fewer than 90 days before access to such

property is needed pursuant to the Work Plans or other approved plans specified in the SOW, or as otherwise specified in writing by the U.S. EPA Project Coordinator. Respondent shall immediately notify U.S. EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. U.S. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as U.S. EPA deems appropriate. Respondent shall reimburse U.S. EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Response Costs).

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

53. If Respondent cannot obtain access agreements, U.S. EPA may obtain access for Respondent, perform those tasks or activities with U.S. EPA contractors, or terminate the obligations under the Settlement Agreement that requires the access agreements in question. In the event that U.S. EPA performs those tasks or activities with U.S. EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other activities not requiring access to that property, and shall reimburse U.S. EPA for the costs incurred in performing such activities in accordance with Section XVIII (Payment of Response Costs). Respondent shall integrate the results of any such tasks undertaken by U.S. EPA into its reports and deliverables.

### **XIII. COMPLIANCE WITH OTHER LAWS**

54. Respondent shall comply with all applicable local, state and federal laws and regulations when performing the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

### **XIV. RETENTION OF RECORDS**

55. During the pendency of this Settlement Agreement and for a minimum of 10 years after commencement of construction of the last remedial action which is based on the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA,

and any RD developed under this Settlement Agreement, Respondent shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after commencement of construction of the last remedial action based on the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD developed under this Settlement Agreement, Respondent shall also instruct its contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work. All records required to be retained under this Paragraph may be retained in electronic rather than hard copy form.

56. At the conclusion of this document retention period, Respondent shall notify U.S. EPA and the State at least 90 days prior to the destruction of any such records or documents, and, upon request by U.S. EPA or the State, Respondent shall deliver any such records or documents to U.S. EPA and/or the State. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide U.S. EPA and the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

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

## **XV. DISPUTE RESOLUTION**

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

59. If Respondent objects to any U.S. EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs (which shall be addressed pursuant to Paragraph 80), it shall notify U.S. EPA in writing of its objection(s) within 14 days of such

action (unless a longer time period is provided in or pursuant to this Settlement Agreement), unless the objection(s) has/have been resolved informally. U.S. EPA and Respondent shall have 14 days from U.S. EPA's receipt of Respondent's written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of U.S. EPA. Such extension may be granted verbally but must be confirmed in writing to be effective.

60. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, U.S. EPA shall provide its Statement of Position, including supporting documentation, no later than 31 days after receipt of the written notice of dispute. Respondent may submit a response to the U.S. EPA Statement of Position within seven (7) days after receipt of the Statement. In the event that these 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 (with the time to be reduced equally for each Party). 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. 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, the Statement of Position and any response served pursuant to this paragraph, and all other materials exchanged during dispute resolution and designated as submitted as part of such dispute resolution. Based upon the administrative record, the Director of the Superfund Division, U.S. EPA Region 5, or his or her designee, shall resolve the dispute consistent with the NCP and the terms of this Settlement Agreement. The Superfund Division Director, or his or her designee, will issue a written decision resolving the dispute. The Director of the Superfund Division, or his or her designee, shall, upon request, meet with the Parties before resolving the dispute. U.S. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with U.S. EPA's decision, whichever occurs. Respondent shall proceed in accordance with U.S. EPA's final decision regarding the matter in dispute, regardless of whether Respondent agrees with the decision. If Respondent does not agree to perform or does not actually perform the Work in accordance with U.S. EPA's final decision, U.S. EPA reserves the right in its sole discretion to conduct the subject Work itself, to seek reimbursement from Respondent, to seek enforcement of the decision, to seek stipulated penalties, and/or to seek any other appropriate relief.

## **XVI. STIPULATED PENALTIES.**

61. Respondent shall be liable to U.S. EPA for stipulated penalties in the amounts set forth in Paragraphs 62, 63, 64, and 65, for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVII (Force Majeure) or as otherwise approved by U.S. EPA. "Compliance" by Respondent shall include completion of the

Work under this Settlement Agreement or any activities contemplated under any of the plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, identified below in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by U.S. EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

62. Stipulated Penalty Amounts - Payments and Progress Reports. The following stipulated penalties shall accrue per day for any noncompliance with the following milestones: failure to meet due dates for payments of Future Response Costs; failure to establish escrow accounts in the event of disputes; failure to timely submit Monthly and Annual Reports required under Section III/Task 5 of the SOW attached as Appendix A.

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500	1 <sup>st</sup> through 14 <sup>th</sup> day
\$ 1,000	15 <sup>th</sup> through 30 <sup>th</sup> day
\$ 2,000	31 <sup>st</sup> day and beyond

63. Stipulated Penalty Amounts - Planning Documents, Reports and Technical Memoranda. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate plans, reports, technical memoranda or other written documents required by Section III/Tasks1 through 4, Section IV/Tasks 6 through 10 Section V/Tasks11 and 13 through 16 of the SOW attached as Appendix A and in accordance with the Schedule in Exhibit A of the SOW.

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,500	1 <sup>st</sup> through 14 <sup>th</sup> day
\$ 3,000	15 <sup>th</sup> through 30 <sup>th</sup> day
\$ 5,000	31 <sup>st</sup> day and beyond

64. Stipulated Penalty Amounts – Work. The following stipulated penalties shall accrue per day for any noncompliance with required Work, including the following: failure to timely or adequately implement work as prescribed in Section III/Tasks1 through 4, Section IV/Task 9 (if pre-design work is required), and Section V/Tasks12 and 16 (if pre-design work is required) of the SOW attached as Appendix A and in accordance with the Schedule in Exhibit A SOW, and all approved Work Plans:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500	1 <sup>st</sup> through 14 <sup>th</sup> day
\$ 1,000	15 <sup>th</sup> through 30 <sup>th</sup> day
\$ 2,500	31 <sup>st</sup> day and beyond

65. Respondent shall be liable for stipulated penalties in the amount of \$500 per day for the first week or part thereof and \$2,500 per day for each week or part thereof thereafter for failure to meet any other obligation under this Settlement Agreement including the SOW.

66. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section X (U.S. EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31<sup>st</sup> day after U.S. EPA's receipt of such submission until the date that U.S. EPA notifies Respondent of any deficiency; and (2) with respect to a decision by the Superfund Division Director, or his or her designee, under Paragraph 60 of Section XV (Dispute Resolution), during the period, if any, beginning on the 21<sup>st</sup> day after the Negotiation Period begins until the date that the Superfund Division Director, or his or her designee, issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement. U.S. EPA shall consider Respondent's good faith and best efforts in seeking to meet the terms and conditions of this Settlement Agreement and associated Work Plans and schedules.

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

68. All penalties accruing under this Section shall be due and payable to U.S. EPA within 30 days of Respondent's receipt from U.S. EPA of a written demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures in accordance with Section XV (Dispute Resolution). All payments to U.S. EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to the U.S. Environmental Protection Agency, Fines and Penalties, Cincinnati Finance Center, P.O. Box 979077, St. Louis, Mo. 63197-9000, shall indicate that the payment is for stipulated penalties, and shall reference the U.S. EPA Region and Site/Spill ID Number B5KF, U.S. EPA's docket number for this Settlement Agreement, and the name and address of the party



making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s) shall be sent to:

Jeffrey A. Cahn  
Associate Regional Counsel  
Office of Regional Counsel  
Mail Code C-14J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

Catherine Garypie  
Associate Regional Counsel  
Office of Regional Counsel  
Mail Code C-14J  
77 West Jackson Blvd.  
Chicago, Illinois 60604-3590

Mary Logan  
Remedial Project Manager  
Superfund Division  
Mail Code SR-6J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

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

70. Penalties shall continue to accrue as provided in Paragraph 66 during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of U.S. EPA's decision.

71. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 84 of Section XX (Reservation of Rights by EPA), Respondents shall be liable for a stipulated penalty in the amount of \$750,000.

72. If Respondent fails to pay stipulated penalties when due, U.S. EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 68.

73. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of U.S. EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that U.S. EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of willful violation of this Settlement Agreement or in the event that U.S. EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by U.S. EPA), Paragraph 84. Notwithstanding any other provision of this Section, U.S. EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

## **XVII. FORCE MAJEURE**

74. Respondent agrees to perform all requirements of this Settlement Agreement within

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

75. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify U.S. EPA orally within three (3) working days of when Respondent first knew that the event was likely to cause a delay. Within ten (10) days thereafter, Respondent shall provide the following to U.S. EPA in writing: 1) an explanation and description of the reasons for the delay; 2) the anticipated duration of the delay; 3) all actions taken or to be taken to prevent or minimize the delay; 4) a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; 5) Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and 6) a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

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

## **XVIII. PAYMENT OF RESPONSE COSTS**

### **77. Payment of Past Response Costs.**

a. Within 30 days after the Effective Date, Respondents shall pay to U.S. EPA \$1,841,563.61 for Past Response Costs. Payment shall be made to U.S. EPA by Electronic Funds Transfer ("EFT") in accordance with Paragraph 77.a.(i), and shall be accompanied by a statement identifying the name and address of the party making payment, the site name- the Tittabawassee River Dioxin Spill Site, U.S. EPA Region 5, and the Site/Spill ID Number B5KF, and the U.S. EPA docket number for this action.

(i) If the Past Response Costs payment amount is for \$10,000 or greater, payment shall be made to U.S. EPA by Electronics Funds Transfer (“EFT”) in accordance with the EFT procedures described below, and with updated EFT procedures to be provided to Respondent by U.S. EPA Region 5. Payment shall be accompanied by a statement identifying the name and address of the party making payment, the Site name, U.S. EPA Region 5, the Site/Spill ID Number B5KF, and U.S. EPA’s docket number for this action. As of the date of this agreement, payment by EFT shall be made in accordance with the following:

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

(ii) If the Past Response Costs amount is less than \$10,000, the Respondent may in lieu of the EFT procedures in subparagraph 77.a.(i) make all payments required by this Paragraph by a certified or cashier’s check or checks made payable to “EPA Hazardous Substance Superfund,” referencing the name and address of the party making the payment, and the EPA Site/Spill ID Number B5KF. Respondent shall send the check(s) to:

US Environmental Protection Agency  
Superfund Payments  
Cincinnati Finance Center  
P.O. Box 979076  
St. Louis, Mo. 63197-9000

b. At the time of payment, Respondent shall send notice that payment has been made to:

Jeffrey A. Cahn  
Associate Regional Counsel  
Office of Regional Counsel  
Mail Code C-14J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

Catherine Garypie  
Associate Regional Counsel  
Office of Regional Counsel  
Mail Code C-14J  
77 West Jackson Blvd.  
Chicago, Illinois 60604-3590

Mary Logan  
Remedial Project Manager  
Superfund Division  
Mail Code SR-6J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

c. The total amount to be paid by Respondent pursuant to Subparagraph 77.a shall be deposited in the Tittabawassee River Dioxin Spill Site Special Account within the U.S. EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by U.S. EPA to the U.S. EPA Hazardous

Substance Superfund.

78. Payment of Future Response Costs.

a. Within 30 days of the Effective Date, Respondent shall pay to U.S. EPA \$500,000 in prepayment of Future Response Costs. The total amount paid shall be deposited by U.S. EPA in the Tittabawassee River Dioxin Spill Site Future Response Costs Special Account, within the EPA Hazardous Substance Superfund. These funds shall be retained and used by U.S. EPA to conduct or finance Future Response Actions. Payment shall be made to U.S. EPA by Electronic Funds Transfer (“EFT”) in accordance with Paragraph 78.c.(i), and shall be accompanied by a statement identifying the name and address of the party making payment, the site name- the Tittabawassee River Dioxin Spill Site, U.S. EPA Region 5, and the Site/Spill ID Number B5KF, and the U.S. EPA docket number for this action. Any amounts received under this Subparagraph will be credited to Respondent in the final accounting pursuant to Subparagraph 78.e.

b. Respondent shall pay to U.S. EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, U.S. EPA will send Respondent a bill requiring payment that includes Region 5's Itemized Cost Summary, which includes direct and indirect costs incurred by U.S. EPA and its contractors. Respondent shall make all payments within 30 days of Respondent's receipt of each bill requiring payment, except as otherwise provided in Paragraph 80. Respondent shall make all payments required by this Paragraph in the manner required by Subparagraph 78.c, with notice as required by Subparagraph 78.d. The total amount paid will be deposited by U.S. EPA in the Tittabawassee River Dioxin Spill Site Future Response Costs Special Account within the U.S. EPA Hazardous Substance Superfund. These funds will be retained and used by U.S. EPA to conduct or finance Future Response Costs. Any amounts remaining in the Tittabawassee River Dioxin Spill Site Future Response Costs Special Account, will be remitted and returned in accordance with Subparagraph 78.e.

c. Respondent shall make all payments within 30 days of receipt of each bill requiring payment, except as otherwise provided in Paragraphs 78.b and 80 of this Settlement Agreement, according to the following procedures:

(i) If the payment amount demanded in the bill is for \$10,000 or greater, payment shall be made to U.S. EPA by Electronics Funds Transfer (“EFT”) in accordance with the EFT procedures described below, and with updated EFT procedures to be provided to Respondent by U.S. EPA Region 5. Payment shall be accompanied by a statement identifying the name and address of the party making payment, the Site name, U.S. EPA Region 5, the Site/Spill ID Number B5KF, and U.S. EPA's docket number for this action. As of the date of this agreement, payment by EFT shall be made in accordance with the following:

Federal Reserve Bank of New York  
ABA = 021030004

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

(ii) If the amount demanded in the bill is less than \$10,000, the Respondent may in lieu of the EFT procedures in subparagraph 78.c.(i) make all payments required by this Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the party making the payment, and the EPA Site/Spill ID Number B5KF. Respondent shall send the check(s) to:

US Environmental Protection Agency  
Superfund Payments  
Cincinnati Finance Center  
P.O. Box 979076  
St. Louis, Mo. 63197-9000

d. At the time of payment, Respondent shall send notice that payment has been made to:

Jeffrey A. Cahn  
Associate Regional Counsel  
Office of Regional Counsel  
Mail Code C-14J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

Catherine Garypie  
Associate Regional Counsel  
Office of Regional Counsel  
Mail Code C-14J  
77 West Jackson Blvd.  
Chicago, Illinois 60604-3590

Mary Logan  
Remedial Project Manager  
Superfund Division  
Mail Code SR-6J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

e. After U.S. EPA issues its written Certification of Completion of Work and U.S. EPA has performed a final accounting of Future Response Costs, EPA shall remit and return to Respondent any unused amount of the funds paid by Respondent pursuant to Subparagraph 78.a.

79. If Respondent does not pay Past Response Costs within 30 days after the Effective Date, or does not pay Future Response Costs within 30 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance of Past Response Costs and Future Response Costs, respectively. The Interest on unpaid Past Response Costs shall begin to accrue on the Effective Date and shall continue to accrue until the date of payment. The Interest on unpaid Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If U.S. EPA receives a partial payment, Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to

make timely payments under this Section, including but not limited to, payments of stipulated penalties pursuant to Section XVI. Respondent shall make all payments required by this Paragraph in the manner described in Paragraph 77.

80. Respondent may contest payment of any Future Response Costs under Paragraph 78 if it determines that U.S. EPA has made an accounting error or if it believes that a cost item was incurred inconsistent with the NCP. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the U.S. EPA Project Coordinator. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondent shall within the 30 day period pay all uncontested Future Response Costs to U.S. EPA in the manner described in Paragraph 78. Simultaneously, Respondent shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of Michigan and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the U.S. EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If U.S. EPA prevails in the dispute, within 5 days of the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to U.S. EPA in the manner described in Paragraph 78. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to U.S. EPA in the manner described in Paragraph 78. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse U.S. EPA for its Future Response Costs.

#### **XIX. COVENANT NOT TO SUE BY U.S. EPA**

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

covenant not to sue extends only to Respondent and does not extend to any other person.

## **XX. RESERVATIONS OF RIGHTS BY U.S. EPA**

82. Except as specifically 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 Site. Further, nothing in this Settlement Agreement shall prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

83. The covenant not to sue set forth in Section XIX 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 Respondent with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definitions of Past Response Costs or Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site;
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site; and
- h. liability for costs incurred if U.S. EPA assumes the performance of the Work pursuant to paragraph 84.

84. Work Takeover. In the event U.S. EPA determines that Respondent has ceased implementation of any portion of the Work, is deficient or late in its performance of the Work, or

is implementing the Work in a manner which may cause an endangerment to human health or the environment, U.S. EPA may assume the performance of all or any portion of the Work as U.S. EPA determines necessary. Respondent may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute U.S. EPA's determination that takeover of the Work is warranted under this Paragraph. After commencement and for the duration of any Work Takeover, EPA shall have immediate access to and benefit of any financial assurance mechanism provided pursuant to Section XXVI of this Settlement Agreement, in accordance with the provisions of Paragraph 106 of that Section. If and to the extent that EPA is unable to secure the resources guaranteed under any such financial assurance mechanism(s) in accordance with the provisions of Paragraph 106, any unreimbursed costs incurred by EPA in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XVIII (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, U.S. EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

## **XXI. COVENANT NOT TO SUE BY RESPONDENT**

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

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

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

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work or Future Response Costs, provided, however, that this Paragraph 85(c) does not include claims under sections 113(f)(1) or 113(f)(3)(B) of CERCLA, 42 U.S.C. 9613(f)(1), (f)(3)(B), against the Department of Defense, the Department of Commerce, and the General Services Administration, and their components, in connection with the Work or Future Response Costs.

86. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 83(b), (c), and (e) - (g), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation. Further, nothing in this Settlement Agreement shall prevent Respondent from seeking legal or equitable relief to enforce the terms of this Settlement Agreement.



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

88. Respondent agrees not to seek judicial review of a decision to list the Site on the NPL at any time after the Effective Date of this Settlement Agreement based on a claim that changed site conditions that resulted from the performance of the Work in any way affected the basis for listing the Site.

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

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

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

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

91. For the purposes of Section 113(g)(1) of CERCLA, the parties agree that, upon issuance of this Settlement Agreement, remedial action under CERCLA shall be deemed to be scheduled and an action for damages (as defined in 42 U.S.C. 9601(6)) must be commenced within 3 years after the completion of the remedial action.

92. Respondent has separately entered into a Tolling Agreement with the asserted

Federal, State, and Tribal natural resource trustees dated February 19, 2007, regarding the statute of limitations under Section 113(g)(1) of CERCLA for an action for damages (as defined in 42 U.S.C. § 9601(6)).

## **XXII. OTHER CLAIMS**

93. 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 Respondent. The United States or U.S. EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

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

95. 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).

## **XXIII. CONTRIBUTION**

96. a.. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 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, Past Response Costs, and Future Response Costs.

b. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42. U.S.C. § 9113(f)(3)(B), or as may otherwise be provided by law, pursuant to which the Respondent has, as of the Effective Date, resolved its liability to the United States for the Work, Past Response Costs, and Future Response Costs.

c. Except as provided in Section XXI , Paragraph 89 of this Settlement Agreement (Non-Exempt De Micromis Waivers), nothing in this Settlement Agreement precludes the United States or Respondent from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any person not a party to this

Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Section 113(f)(2) and (3), 42 U.S.C. § 9613(f)(2) and (3), to pursue any such persons to obtain additional response costs or response action, and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2).

#### **XXIV. INDEMNIFICATION**

97. Respondent shall 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 arising from, or on account of negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States. The Federal Tort Claims Act (28 U.S.C. §§ 2671, 2680) provides coverage for injury or loss of property, or injury or death caused by the negligent or wrongful act or omission of an employee of U.S. EPA while acting within the scope of his or her employment, under circumstances where U.S. EPA, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.

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

99. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement by Respondent and any person for performance of Work on or relating to the Site. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement by Respondent and any person for performance of Work on or relating to the Site.

#### **XXV. INSURANCE**

100. At least thirty (30) days prior to commencing any On-Site Work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with

limits of \$2,000,000, combined single limit, naming the U.S. EPA as an additional insured. Within the same period, Respondent shall provide U.S. EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to U.S. EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

## **XXVI. FINANCIAL ASSURANCE**

101. Within 30 days after the Effective Date, Respondent shall establish and maintain financial security for the benefit of U.S. EPA in the amount of \$15,000,000 (hereinafter "Estimated Cost of Work"), in order to secure the full and final completion of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD Work by Respondent. Respondent shall establish and maintain all financial security required by this Settlement Agreement in one or more of the following forms:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;
- b. one or more irrevocable letters of credit, payable to or at the direction of U.S. EPA, issued by financial institution(s) acceptable in all respects to U.S. EPA equaling the total Estimated Cost of the Work;
- c. a trust fund administered by a trustee acceptable in all respects to U.S. EPA;
- d. a policy of insurance issued by an insurance carrier acceptable in all respects to U.S. EPA, which ensures the payment and/or performance of the Work;
- e. a written corporate guarantee to pay for or perform the Work provided by one or more parent companies of Respondent, or by one or more unrelated companies that have a substantial business relationship with Respondent; including a demonstration that any such guarantor company satisfied the financial test requirements of 40 C.F.R. § 264.143(f); and/or
- f. documentation of sufficient financial resources to pay for the Work made by the Respondent, which shall consist of a demonstration that Respondent satisfies the requirements of 40 C.F.R. § 264.143(f).

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

103. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Subparagraph 101.e or 101.f. of this Settlement Agreement, Respondent shall (i) demonstrate to U.S. EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. § 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. § 264.143(f) annually, on the anniversary of the Effective Date, or such other date as agreed to by U.S. EPA, to U.S. EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. § 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculation shall be the current cost estimate of \$15,000,000 for the Work at the Site shall be used in relevant financial test calculations plus any other RCRA, CERCLA, TSCA or other federal environmental obligations financially assured by the Respondent or guarantor to U.S. EPA by means of passing a financial test.

104. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work had diminished below the amount set forth in Paragraph 101 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent 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 after receiving written approval from U.S. EPA. In the event of a dispute, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution) and may reduce the amount of security in accordance with U.S. EPA's written decision resolving the dispute.

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

106. The commencement of any Work Takeover pursuant to Paragraph 84 of this Settlement Agreement shall trigger U.S. EPA's right to receive the benefit of any financial assurance mechanism provided pursuant to this Section, and at such time U.S. EPA shall have immediate access to resources guaranteed under any such financial assurance mechanism(s), whether in cash or in kind, as needed to continue and complete the Work assumed by U.S. EPA under the Work Takeover. If for any reason U.S. EPA is unable to promptly secure the resources guaranteed under any such financial assurance mechanism(s), whether in cash or in kind, necessary to continue and complete the Work assumed by U.S. EPA under the Work Takeover, or in the event that the financial assurance mechanism involves a demonstration of satisfaction of the financial test criteria pursuant to Paragraph 101.f, Respondent shall immediately upon written demand from U.S. EPA deposit into an account specified by U.S. EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed as of such date, as determined by U.S. EPA. In addition, if at any time U.S. EPA is notified by the issuer of a financial assurance mechanism that such issuer intends to cancel the financial assurance mechanism it has issued, then, unless Respondent provides a substitute Performance Guarantee mechanism in accordance with this Section XXVI no later than 30 days prior to the impending cancellation date, U.S. EPA shall be entitled (as of and after the date that is 30 days prior to the impending cancellation) to draw fully on the funds guaranteed under the then-existing financial assurance mechanism.

## **XXVII. SEVERABILITY/INTEGRATION/APPENDICES**

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

108. This Settlement Agreement, including its appendices (with the exception of Appendix B), and all deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc. that will be developed pursuant to this Settlement Agreement and become incorporated into and enforceable under this Settlement Agreement constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. Appendix B is an attachment to this Settlement Agreement and is included to describe the respective roles and responsibilities of U.S. EPA and MDEQ. Appendix B is not legally binding. Nothing in Appendix B is intended to either create any right in or grant any cause of action to any person not a Party to Appendix B, including Respondent, or to release or waive any claim, cause of action, demand, or defense in law or equity that any Party to Appendix B may have against any person(s) or entity that is or is not a party to Appendix B. Appendix B may be modified from time to time by U.S. EPA and

MDEQ in accordance with Section 7 of the SMOA. Appendices A and C are attached to and incorporated into this Settlement Agreement. Appendix B is attached to this Settlement Agreement. The following are the appendices to this Settlement Agreement:

“Appendix A” is the Remedial Investigation, Feasibility Study and/or Engineering Evaluation and Cost Analysis, and Response Design SOW.

“Appendix B” is the Tittabawasee River Dioxin Spill Site Superfund Memorandum of Agreement between U.S. EPA and MDEQ Addendum III.

“Appendix C” is the map of the Site.

### **XXVIII. PUBLIC COMMENT**

109. Final acceptance by U.S. EPA of this Settlement Agreement shall be subject to U.S. EPA publishing notice of the proposed settlement and providing persons who are not parties to the proposed settlement an opportunity to comment on the terms of settlement, and after consideration by U.S. EPA of submitted comments in determining whether to consent to the proposed settlement. U.S. EPA may withhold consent from, or seek to modify, all or part of this Settlement Agreement if comments received disclose facts or considerations that indicate that this Settlement Agreement is inappropriate, improper or inadequate. Otherwise, this Settlement Agreement shall become effective as provided in Paragraph 111.

### **XXIX. ADMINISTRATIVE RECORD**

110. Consistent with CERCLA and the NCP, U.S. EPA will determine the contents of the administrative record file for selection of the response actions. Respondent shall submit to U.S. EPA documents developed during the course of the evaluation of current Site conditions and the assessments of response options, any RI, any FS and/or EE/CA, and any RD upon which selection of the response action may be based. Upon request of U.S. EPA, Respondent shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Upon request of U.S. EPA, Respondent shall additionally submit any previous studies it conducted under state, local or other federal authorities relating to selection of the response action, and all communications between Respondent and state, local or other federal authorities concerning selection of the response action. At U.S. EPA’s discretion, Respondent shall establish a community information repository at or near the Site, to house one copy of the administrative record.

### **XXX. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION**

111. This Settlement Agreement shall be effective 7 days after the Settlement Agreement is signed by the Director of the Superfund Division or his/her delegatee. U.S. EPA shall promptly transmit the signed Settlement Agreement to Respondent.

112. This Settlement Agreement may be amended in writing by mutual agreement of U.S. EPA and Respondent. Amendments shall be effective when signed by U.S. EPA. U.S. EPA Project Coordinators or OSCs do not have the authority to sign amendments to the Settlement Agreement.

### **XXXI. NOTICE OF COMPLETION OF WORK**

113. When U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, determines, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to payment of Future Response Costs and record retention, U.S. EPA will provide written notice to Respondent. If U.S. EPA, after opportunity for review and comment by MDEQ under the procedures provided in the SMOA, determines that any such Work has not been completed in accordance with this Settlement Agreement, U.S. EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, and shall submit the required deliverable(s) in accordance with the U.S. EPA notice. Subject to its right to seek dispute resolution under Section XV, failure by Respondent to implement the approved modified plans, reports, submittals and other deliverables required under this Settlement Agreement, the SOW, and the documents approved under the SOW, or other work plan shall be a violation of this Settlement Agreement.



IN THE MATTER OF:

The Dow Chemical Company  
Midland, Michigan, 48667

The Undersigned Party enters into this Administrative Settlement Agreement and Order on Consent in the matter of the Tittabawassee River Dioxin Spill Site.

Agreed this \_\_\_ day of \_\_\_\_\_, 200\_.

For Respondent: The Dow Chemical Company

By \_\_\_\_\_  
David W. Graham  
Vice President  
Environment, Health, & Safety and Sustainability

IN THE MATTER OF:

The Dow Chemical Company  
Midland, Michigan, 48667

It is so ORDERED AND AGREED this \_\_\_\_\_ day of \_\_\_\_\_, 200\_.

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Richard C. Karl, Director  
Superfund Division  
U.S. Environmental Protection Agency  
Region 5

EFFECTIVE DATE: \_\_\_\_\_