

RESPONSIVENESS SUMMARY

Administrative Settlement Agreement and Order on Consent For Remedial Investigation, Feasibility Study and/or Engineering Evaluation and Cost Analysis, and Response Design For the Tittabawassee River/Saginaw River & Bay Site

This Responsiveness Summary provides both a summary of the public comments that the United States Environmental Protection Agency (“EPA”) and the Michigan Department of Environmental Quality (“MDEQ”)(jointly, “Agencies”) received regarding the Administrative Settlement Agreement and Order on Consent For Remedial Investigation, Feasibility Study and/or Engineering Evaluation and Cost Analysis, and Response Design (“Settlement Agreement”) for the Tittabawassee River/Saginaw River & Bay Site (“Site”), and EPA’s and MDEQ’s responses to those comments.

Outcome of EPA and MDEQ Review of Public Comments

After carefully reviewing and considering all public comments which were timely submitted during the public comment period, EPA and MDEQ have signed the Settlement Agreement. The Settlement Agreement was signed by The Dow Chemical Company (“Dow”) on October 15, 2009, prior to the start of the public comment period. The Settlement Agreement was signed by MDEQ and the Michigan Department of Attorney General on January 13, 2010, and by EPA on January 14, 2010, and will be effective on January 21, 2010. A copy of the final Settlement Agreement can be found at <http://www.epa.gov/region5/sites/dowchemical/index.htm>.

The Settlement Agreement requires the State of Michigan to propose a major modification to the Resource Conservation and Recovery Act of 1976 (“RCRA”) License within 21 days of the signature of the Settlement Agreement. In accordance with State law and the provisions of the Settlement Agreement, the public will also have an opportunity to provide comment on the proposed RCRA License modification.

After reviewing all comments which were timely submitted during the public comment period, EPA and MDEQ have determined that many of the recommendations are related to implementation of work under the Settlement Agreement, rather than to the Agreement itself. Therefore, as a result of certain comments, the Agencies intend the following:

- Community involvement activities at the Site will be robust and will go beyond the community involvement required by law.
 - EPA will maintain its Saginaw field office – opened to provide additional service to the community.
 - A Community Involvement Plan will be developed with stakeholder input.
 - This plan will evolve over time to reflect changing community needs.

- EPA and MDEQ will work closely with the Community Advisory Group (“CAG”), which was formed to represent diverse points of view within the community.
- EPA and MDEQ will also work with the broader community.
- Information on the progress of the Work will be made available on a routine basis, and will be made in plain, understandable language.
 - Routine updates will be posted to the Site Web site.
 - The CAG will be informed of the progress of the Work routinely.
 - Routine, periodic public meetings will be scheduled.
- Technical information and support will be available to the community.
 - Technical assistance will be provided to the community through a Technical Assistance Plan (“TAP”)
 - Technical information meetings will be scheduled as appropriate, and based on public interest.

Background and Community Involvement during Negotiations

EPA issued a Special Notice Letter on December 15, 2008, initiating negotiations for a Superfund settlement agreement that would establish a process to be used to develop a comprehensive cleanup for the Tittabawassee and Saginaw Rivers, as well as Saginaw Bay. EPA, MDEQ, and Dow began their negotiations after EPA’s issuance of the Special Notice Letter. On January 15, 2009, EPA and MDEQ held a public meeting to discuss the partnership between EPA and MDEQ, the strategy to use both the authorities of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA” or “Superfund”) and RCRA to streamline cleanup and the enforcement process. On March 2, 2009, EPA Administrator Lisa P. Jackson temporarily suspended the negotiations and dispatched a team of high-level EPA managers to meet with stakeholders and hear concerns about the negotiation process and the Site. The EPA team met with MDEQ, Dow, and various officials and organizations representing a range of environmental, governmental and business interests on March 18 and 19, 2009.

On May 26, 2009, Administrator Jackson committed to a federal leadership role in expediting the ongoing cleanup of the Site and an acceleration of the EPA’s overall scientific review of dioxins. In a letter to community members, Administrator Jackson announced that EPA, working closely with the MDEQ, would take lead responsibility for cleanup efforts in significant portions of the Saginaw Bay watershed under the federal Superfund program. The Administrator said that EPA would commit the resources and expertise necessary to accelerate site investigation and cleanup and protect human health and the environment. In addition, Administrator Jackson directed Region 5 to resume negotiations with Dow.

On June 17, 2009, EPA held a public meeting to discuss its commitments to the community. In particular, EPA committed to a very high level of: transparency during the negotiations; enhanced community involvement opportunities, including opening a field office, formation of a CAG, and technical assistance, among other activities; and an accelerated schedule. EPA's dioxin science initiatives and timeframes were also discussed at the meeting.

In late June 2009, EPA and MDEQ resumed negotiations with Dow. On June 26, 2009, EPA notified Dow that the offer the Company submitted to EPA on February 13, 2009, (in response to EPA's Special Notice Letter) was sufficient to continue the negotiation process. During negotiations, EPA issued six updates to the community with respect to the negotiations. These updates were posted to EPA's Web site and sent through e-mail to individuals that signed up for EPA's listserv. Negotiations concluded on September 25, 2009, when the negotiation teams reached agreement on a proposed Settlement Agreement. The proposed Settlement Agreement was signed by Dow on October 15, 2009. EPA and MDEQ, however, committed to the community that they would consider public comment on the proposed Settlement Agreement before deciding whether to sign the Settlement Agreement.

The proposed Settlement Agreement was released to the public on October 16, 2009, and the public comment period was initially proposed to run from October 19 through November 17, 2009. Upon the request of a community member, the comment period was extended to December 17, 2009. EPA and MDEQ held a public meeting regarding the proposed Settlement Agreement on November 5, 2009, at Saginaw Valley State University in Saginaw, Michigan. Approximately 125 individuals attended the public meeting.

In addition, EPA agreed to provide technical assistance for the community through the Lone Tree Council during the comment period on the proposed Settlement Agreement. This assistance was provided by EPA's Technical Assistance Services for Communities program. Technical assistance services were provided by an independent advisor – Dr. Peter deFur – hired by EPA's contractor, Ecology & Economics, Inc. The goal was to ensure that the advisor's expertise benefited the entire community. All of the advisor's work products were posted to his Web site at http://estewards.com/services/lone_tree and he participated in a community meeting on December 15, 2009.

EPA and MDEQ received written comments (hand written, via regular and electronic mail, and by facsimile) and verbal comments (at the public meeting) during the public comment period. In total, comments were received from about 64 different people or organizations. Copies of all the comments received (including the verbal comments reflected in the transcript of the public meeting) are included in the Administrative Record for the Site.

Comments and Responses

This Responsiveness Summary does not repeat verbatim each individual comment. Rather, the comments are summarized and grouped by category with respect to the type of issue raised. The comments fell within several different categories: whether to proceed with the Settlement Agreement; community involvement issues; general comments on the Agreement; general comments on the scope of the work; specific Settlement Agreement provisions; Dow's role; economic impacts; concerns about specific properties; comments on dioxin; remedy options and cleanup goals; Site status; and miscellaneous comments.

The remainder of this Responsiveness Summary contains a summary of the comments received and EPA and MDEQ's responses to those comments, grouped by category.

I. WHETHER TO PROCEED WITH THE SETTLEMENT AGREEMENT

- 1. Several commenters supported the Settlement Agreement. Supporters of the Agreement include local residents, business representatives from the community, the city manager on behalf of the city of Midland, the Midland County Department of Public Health, the Bay City Commission, the Director of Environmental Affairs and Community Development for Bay County, as well as State Senators and Representatives of the region. Many of these commenters were pleased that the Site is being addressed and indicated that they felt that the Agreement is the right path forward and a good resolution. Some commenters favored the comprehensive and systematic approach put forth in the Agreement. Several commenters also expressed appreciation to EPA, MDEQ, and Dow for coming to a fair and workable resolution that is agreed to by all Parties.*

EPA and MDEQ acknowledge these comments.

- 2. Some commenters felt that the Settlement Agreement should be amended to reflect their comments, as described in the following sections of this summary, before being signed by EPA and MDEQ.*

In paragraph 126 of the proposed Settlement Agreement, it is noted that final acceptance of the Settlement Agreement by EPA and/or the State is subject to EPA publishing notice of the proposed settlement, providing the public with an opportunity to comment, and consideration of those comments by EPA and the State. EPA did not agree to incorporate all comments and is not required to do so by CERCLA, RCRA, or their implementing regulations. After carefully reviewing and considering all timely public comments, EPA and MDEQ determined that the Settlement Agreement does not require amendment, and have signed the Agreement. In arriving at this conclusion, the Agencies considered whether the comments actually pertained to terms and conditions of the Settlement Agreement, and evaluated the substance of the comments pertaining to terms and conditions of the Settlement Agreement. None of the comments caused

EPA or MDEQ to call into question the legal basis for the Settlement Agreement. Similarly, none of the comments caused EPA or MDEQ to call into question the overall technical approach for the Site. Where appropriate, the substance of certain of the comments will be addressed during implementation of the Work under the Agreement.

After reviewing all of the comments, EPA and MDEQ have determined that many of the comments are related to implementation of Work under the Settlement Agreement, rather than to the Agreement itself, and have made the commitments discussed above. Additionally, the Agencies considered the time that would be spent re-opening negotiations versus the likely impact on the cleanup schedule. EPA and MDEQ concluded that it is neither necessary, nor in the interest of the public, to reopen the terms of the Settlement Agreement and to conduct further negotiations, and that reopening negotiations would likely delay the cleanup schedule.

3. *Several commenters felt that it was time to get going and get done and supported cleanup of the Site. Some expressed frustration with the regulatory Agencies, the approaches taken by the Parties in the past, and the amount of time required. Some expressed concerns that the work under the Settlement Agreement would get bogged down or delayed. One commenter stated that it is important that the community realize that the process will take a long time, but that the process in the Settlement Agreement should be followed.*

EPA and MDEQ agree with the goal of completing the cleanup at the Site in an effective and expeditious fashion. The Statement of Work (“SOW”), attached as Appendix A to the Settlement Agreement, states “[t]he objectives of this SOW are to streamline studies, quickly identify and assess cleanup options, and accelerate RD [Response Design] in order to initiate any needed response actions rapidly, and thereby reduce exposures and risks at the Site.”

EPA and MDEQ believe that using the combined legal authorities of Superfund and RCRA on the rivers and bay, and RCRA on the plant site and the Midland area soils will provide the best approach to advance cleanup. The approach allows the Agencies to leverage their expertise and resources.

EPA and MDEQ agree that it is important that the community understand that cleanup will take time. The Agencies believe that the approach developed in the Settlement Agreement – an approach that will provide the basis for any necessary remediation in an upstream to downstream fashion, and that considers each river segment independently and in the context of the entire Site – will ultimately provide the best way to address the problems at the Site. However, because this systematic approach will take time, the Settlement Agreement also contains provisions to assess and address acute and near-term exposure and contaminant transport risks throughout the Site early in the process.

II. COMMUNITY INVOLVEMENT ISSUES

4. *A few commenters were concerned about the negotiation process and AOC negotiations being kept confidential by EPA, MDEQ, and Dow.*

From a legal standpoint, the federal courts and Congress have long recognized the importance of keeping settlement discussions confidential. See, for example, the Federal Rule of Evidence 408. Generally, speaking, the federal courts and Congress have recognized that keeping settlement discussions confidential is in the public interest and in the interest of individual litigants. Confidential settlement discussions encourage the consensual resolution of disputes. If the parties know that offers, demands, conduct, or statements made during settlement discussions will not be kept confidential, then the parties will be less likely to negotiate in good faith.

An EPA guidance document, entitled “Restrictions on Communicating with Outside Parties Regarding Enforcement Actions” (3/8/06), follows this line of reasoning, and states that “communication with outside parties about enforcement-sensitive information should not occur.” The guidance document goes on to describe “outside parties” to include members of the general public and “enforcement-sensitive information” to include information on the status of negotiations or settlement discussions, including strategy and tactics, noting that “[i]t is common practice that once settlement discussions begin in any given enforcement matter, that the parties agree, in writing, that such communications will be held confidential between the parties to the fullest extent of the law.”

EPA is sensitive to the notion that confidential settlement discussions can lead to the impression that an improper agreement has been reached, especially when the public trust and environmental hazards are at issue. In this instance, that concern is addressed by the enhanced public participation process and the ongoing steps that have been taken to inform the public of the Settlement Agreement and obtain their input on the Settlement Agreement.

President Barack Obama and Administrator Lisa P. Jackson have emphasized the importance keeping government actions transparent. See Memorandum for the Heads of Executive Departments and Agencies from President Barack Obama (1/21/09); Memorandum to all EPA employees from EPA Administrator Lisa P. Jackson (1/23/09); letter to various Midland/Saginaw/Bay City community members from EPA Administrator Lisa P. Jackson (5/26/09).

Toward that end, although settlement discussions were subject to a Confidentiality Agreement among the Parties, EPA Administrator Jackson stated in her May 26, 2009, letter:

The place to start is with the negotiations over the draft agreement between EPA and Dow. We will provide information to all stakeholders about the topics that will be the subject of negotiations with Dow. We will further explain these topics at the upcoming

community meeting prior to beginning further negotiations. There are already many useful documents available on EPA's Web site, including the actual December 2008 proposed agreement and the model agreements that are the basis of the December 2008 proposed agreement. We will also provide progress updates on the Web site during the negotiations. In addition, before the parties sign any agreement, EPA will provide the draft for public review and consider public comments before making a final decision.

EPA and MDEQ went on to obtain certain waivers from the existing Confidentiality Agreement, enabling the agencies to hold a public meeting to explain the topics of the AOC negotiations on June 17, 2009, in Saginaw. EPA also updated its Web site with negotiation progress updates on June 29, July 21, August 20, August 25, September 18, and September 28, 2009.

5. *A few commenters expressed concerns that the public comment period on the Settlement Agreement was extended from 30 to 60 days.*

EPA and MDEQ concluded that it was reasonable and in the interest of the public to allow additional time to review and comment on the terms of the proposed Settlement Agreement, and that there would be minimal impact on the cleanup schedule by giving the additional 30 days time to comment. EPA frequently grants extensions to public comment periods when the materials are lengthy and complex. This extension was not unusual.

6. *One commenter suggested that EPA and MDEQ consider extending the comment period for an additional 30 days. The commenter's basis for the request was because the community meeting hosted by the Lone Tree Council and featuring Dr. deFur was only two days prior to the end of the comment period.*

After careful consideration, EPA and MDEQ decided that an additional extension of the comment period was not warranted. EPA and MDEQ had no control over the timing of Dr. deFur's meeting sponsored by the Lone Tree Council. However, at EPA's public meeting on November 5, 2009, it was made clear that Dr. deFur's expertise was available to the entire community at any time during the comment period. No one else requested an additional extension, and no one indicated that the 60 days already granted by EPA and MDEQ was inadequate to review the proposed Settlement Agreement.

7. *A few commenters expressed appreciation for the opportunity to comment and for the meeting that was held.*

EPA and MDEQ acknowledge these comments.

8. *One commenter felt there were not enough public comment meetings and that there should be more than one local meeting. This commenter also felt that information about the meetings should be distributed more broadly.*

Only one meeting was held to take oral public comments on the record during the comment period on the proposed Settlement Agreement. However, there were many other ways that public comments could be submitted. Additionally, the information about the public comment period on the Settlement Agreement and the public meeting was disseminated broadly – by email to the Site listserve, on EPA’s Web site, by direct mailing, through a news release, and ads were placed in three newspapers – the Saginaw News, Bay City Times, and Midland Daily News, and ran on Sunday, October 18, 2009. Therefore, the Agencies believe that adequate information about the public comment period and meeting was available, and that there were sufficient opportunities to provide public comment on the Settlement Agreement. EPA and MDEQ will hold other public meetings in the future on other matters. The Agencies will evaluate the locations and numbers of meetings, as well as how to best disseminate information about meetings to stakeholders.

9. *Some commenters expressed concerns with the technical advisor provided by EPA to local community groups to help understand the terms of the Settlement Agreement. There were concerns with the objectivity of the advisor and with the groups that received primary access to the advisor. A few commenters felt that technical support resources had been denied or not provided to all stakeholders. One commenter felt that the technical advisor was focused on topics unrelated to the Settlement Agreement. The same commenter felt that a different “unbiased, third party review” should be conducted by a different consultant with an engineering background.*

In September 2009, EPA Region 5 received a request from the Lone Tree Council and Tittabawassee River Watch for technical assistance at the Site. This request was made to EPA as the negotiation process with Dow was nearing completion. In considering this request, EPA weighed the following: 1) that any proposed settlement would be a complex legal and technical document; 2) that the groups requesting the assistance on behalf of the community are established local community groups that have been active at the Site for a number of years; 3) that no other established group had requested assistance even though EPA had openly shared with the community the status of the negotiation process; and 4) that the CAG, which is intended to represent the broad interests within a community, was still being convened. It was based on these facts and the belief that the community would benefit from having access to a technical advisor during the public comment period on any proposed settlement that EPA agreed to provide technical assistance for the community through the Lone Tree Council.

The assistance was provided as part of EPA’s Technical Assistance Services for Communities program. The Lone Tree Council did not receive a grant or any direct funding from EPA. Instead, technical assistance services were provided by an independent advisor hired by EPA’s contractor, Ecology & Economics, Inc. Dr. Peter deFur was hired as the advisor by Ecology & Economics, Inc. The goal was that the advisor’s expertise should benefit the entire community. All of the advisor’s work products are posted to his Web site and he made it known at the November 5, 2009, public meeting that he was available to help anyone in the community. Dr.

deFur participated in a meeting on December 15, 2009, to discuss the Settlement Agreement that was open to the community.

It is important to note that this assistance was provided only for the duration of the comment period on the proposed settlement and focused on the technical aspects of the Settlement Agreement. Other technical assistance to the community will be available in the future and is expected to be provided to the CAG which has been selected to represent a wide range of backgrounds and interests in the community (see response to comment 11). The technical advisor for future work has not yet been selected.

10. Some commenters felt that the availability of the technical advisor was very helpful and that technical assistance should continue to be available.

EPA and MDEQ acknowledge these comments. It is the Agencies' goal to ensure that the public has support to understand the complex technical issues associated with the Site.

11. Some commenters stated that they felt that any future resources and technical consultants to the community should provide feedback through the CAG, and not through smaller groups. They felt that the CAG was more representative of the community. They stated that the community has many diverse points of view and expressed concerns that stakeholder organizations that they characterized as "extremists" or "fringe groups" representing a minority opinion were having undue influence.

The Settlement Agreement contains a provision – the TAP, Task 3.2 of the SOW – that would make available funds (initially \$50,000) for the community to obtain technical assistance to evaluate work done under the Settlement Agreement. EPA and MDEQ anticipate that future technical assistance may be requested by, and provided through, the CAG.

EPA and MDEQ recognize that the community has many diverse points of view. The Superfund law provides public involvement opportunities to any individual or group that cares to participate, and EPA and MDEQ agree that no single faction should dominate. EPA and MDEQ believe that the CAG, comprised of individuals with a variety of interests and diverse points of view, will be an effective group to represent the broader community. Additionally, other community involvement activities will ensure that anyone in the community can participate in the process.

12. A few commenters expressed concern that the TAP resources would no longer be available after the Record of Decision ("ROD"), and stated that they believe that the community will still require technical assistance during implementation of the selected remedy. They asked that other technical assistance be made available if the TAP resources have expired.

The TAP required of Dow pursuant to Task 3.2 of the SOW follows most of the requirements of the Technical Assistance Grant (“TAG”) program administered by EPA (see <http://www.epa.gov/superfund/community/tag/>). TAGS are federal grants awarded by EPA to a group of people who may be affected by a release or a threatened release at any facility listed on the National Priorities List (“NPL”). The purpose of TAGs is to allow communities to procure independent technical advisors to help interpret and comment on site-related information. TAPs are provisions in settlement agreements obligating potentially responsible parties (“PRPs”) to provide a community with financial assistance to procure an independent technical advisor and to share information with others in the community. EPA, by statute and regulation, cannot provide TAGs at sites that are not on the NPL. Therefore, the TAP process was developed, and required of PRPs, to provide technical assistance at non-NPL sites that is at least equivalent to a TAG.

The Settlement Agreement covers Remedial Investigations (“RI”), Feasibility Studies (“FS”) and Remedial Design (“RD”). EPA and MDEQ do not intend there will not be technical assistance beyond the final ROD. EPA and MDEQ linked the ending of technical assistance in the Settlement Agreement to the final ROD since the Agencies envision a series of sequential remedy decisions which would not be considered final until after they are designed and implemented. As such, the final ROD would likely be many years in the future. Since the Settlement Agreement does not cover construction of any remedy (since none have yet been selected), technical assistance for construction activities is also not covered by the Settlement Agreement. EPA, in consultation with MDEQ, will need to obtain separate settlement agreements to cover these activities. EPA and MDEQ anticipate that the Agencies would, as a part of those future agreements, seek to negotiate any necessary additional technical assistance for the community for construction activities at the time we enter into any settlement for construction.

13. Some commenters (including the technical advisor provided to the community by EPA at the public meeting) commented that public involvement beyond the minimum required by the Superfund law should be required in the Agreement. They suggested that monthly or quarterly meetings be a requirement of the Agreement. They felt that a robust community involvement program going forward is essential, including opportunities for the public to comment on proposed decisions, regular technical briefings on the progress of the Site, centralized electronic postings on a web site, and other activities.

EPA and MDEQ have already provided public involvement beyond the requirements of the Superfund law, and intend to continue to do so. One example is the formation of the CAG before the Settlement Agreement was effective. Another example is EPA’s opening of a field office in Saginaw. It is the Agencies’ intent that the work under the Settlement Agreement, and decisions that stem from the work, be conducted in a transparent manner with significant stakeholder input. Opportunities for enhanced public involvement will be memorialized in the Community Involvement Plan, which is being developed by EPA, in consultation with MDEQ (see Task 3.1 of the SOW). EPA and MDEQ believe that it is more appropriate that input from

the CAG and other input developed under the Community Involvement Plan be used to establish the frequency and types of meetings, rather than making it a requirement of the Settlement Agreement. The Settlement Agreement is primarily a legal document specifying Work that Dow will be required to perform, not a plan for public involvement.

14. A few commenters felt that the CAG should not be the only mechanism for community involvement.

The CAG will not replace other forms of public input. EPA, in consultation with MDEQ, will fully develop and implement community involvement activities for the Site. These activities will be memorialized in a Community Involvement Plan, which is currently under development. The Community Involvement Plan will include activities directed at the broader community, not just for the CAG.

15. One commenter stated that there should be a public comment period on all future Records of Decision.

CERCLA and the NCP require that EPA take public comment on proposed remedial actions before it signs a Record of Decision.

16. A few commenters felt that the public should be involved in technical meetings.

EPA and MDEQ recognize that there are some stakeholders who are more interested in technical information and details than other stakeholders. In fact, the meetings conducted by MDEQ under the RCRA License often contained detailed technical information to address this interest. During development of the Community Involvement Plan and community outreach activities, the Agencies will consider the desire of some stakeholders for more technical detail. EPA and MDEQ anticipate that it is likely that some future meetings may contain detailed technical information. However, the Agencies want to develop the Community Involvement Plan to see how best to meet this need within the context of broader community involvement.

17. One commenter expressed concerns with the make-up of the participants on the CAG.

A Superfund CAG is one way for people in the community surrounding a Superfund site to participate in EPA's decision-making process and to present and discuss their needs and concerns. The CAG will not replace other forms of public input, but will provide an opportunity for a more in-depth exploration of issues important to the community and will help identify common ground in the community.

EPA and MDEQ did not select the members of the CAG, but EPA did select Doug Sarno, an independent facilitator hired to help manage the process. Six local leaders worked together as a Steering Committee to select members of the CAG. The committee reviewed 46 applications

submitted by local stakeholders. It sought to identify a group of manageable size that could represent the overall community with regard to background, interests, age, gender, affiliations, geography, and viewpoints. The committee has identified a 23-member group with people from Bay City, Saginaw, Midland, and several other communities representing a very wide range of backgrounds and interests.

18. One commenter asked that a safe and confidential mechanism be available for individuals to share information or suspicions with EPA.

EPA hopes that people who have information to share will contact any of the remedial project managers or community involvement personnel listed on EPA's Web site at <http://www.epa.gov/region5/sites/dowchemical/index.htm>, or the MDEQ contacts listed at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846_9847-43808--00.html#DEQ_Contacts. EPA Region 5 also has a toll-free number at 800-621-8431.

However, EPA also has a Web site where individuals may anonymously report what appears to be a possible violation of environmental laws and regulations at <http://www.epa.gov/compliance/complaints/index.html>.

III. GENERAL COMMENTS ON THE AGREEMENT

19. Some commenters felt that the Settlement Agreement was difficult for the public to understand.

EPA and MDEQ understand why some commenters think that the Settlement Agreement is difficult for the public to understand. The Settlement Agreement is a legal document, not a document prepared for the general public. EPA and MDEQ worked together, and with Dow, to make the Settlement Agreement understandable. In many instances, however, complex technical issues and complex legal terms, concepts, and principles cannot be simplified without losing the meaning intended by the Parties. Accordingly, while the Parties to the Settlement Agreement did strive to use plain language (see <http://www.plainlanguage.gov>) and worked to make the agreement understandable, in many instances that could not be done without compromising the intent of the Parties. In order to ensure that technical issues would be properly addressed through the work that Dow is required to perform under the Settlement Agreement, and to ensure that the rights and responsibilities of the Parties to the Settlement Agreement are properly expressed and preserved, the Parties chose to use clear technical and legal terms and concepts.

In an attempt to clarify the materials, EPA provided simplified fact sheets to the public during negotiations and throughout the public comment period to try to make the work and process clearer and more transparent. Additionally, EPA and MDEQ's public meeting presentations were made in plain language, and EPA and MDEQ answered questions about the proposed Settlement Agreement during the comment period. These fact sheets and meeting materials were

made available at the public meetings and via EPA's Web site at <http://www.epa.gov/region5/sites/dowchemical/index.htm>.

As work under the Settlement Agreement proceeds, EPA and MDEQ will work with the CAG, the general public, and other stakeholders to ensure that actions being taken under the Settlement Agreement are clear and transparent to the public.

20. One commenter noted that the Settlement Agreement used language similar to other Superfund (CERCLA) agreements.

This observation is correct. The bases for many of the terms and conditions found in the Settlement Agreement can be found in "model" language developed and adopted by EPA for use in CERCLA remedial investigation and feasibility study administrative settlement agreements, and in "model" language developed and adopted by EPA for use in CERCLA remedial design administrative settlement agreements. EPA regional offices are encouraged to conform as closely as possible to the terms of model agreements issued by EPA headquarters, subject to modifications needed to address site-specific circumstances. Accordingly, most of the terms and conditions found in the Settlement Agreement are identical to, or very similar to, those found in other CERCLA administrative settlement agreements entered into by EPA.

21. A few commenters felt that the timeline was too long. One commenter felt that the proposal for the first segment of the Tittabawassee River should come sooner.

As stated in the response to comment 3, EPA and MDEQ believe that it is important that the community understand that cleanup of the Site will take time. The overall approach to the Site is to proceed systematically in an upstream to downstream fashion, and to break the Site into manageable river segments. However, because this systematic approach will take time, the Settlement Agreement also contains provisions to assess and address acute and near-term exposure (Task 1) and contaminant transport (Task 2) risks throughout the Site early in the process. In June 2009, EPA issued a fact sheet titled "Timeline for Achieving Comprehensive Cleanup" that outlines the timeline for Tasks 1 and 2 and the first few segments of the Tittabawassee River. The steps leading to a cleanup proposal for the first river segment include analyzing the existing data, filling any data gaps, developing response objectives, and developing and comparing response alternatives. These steps are complex and require time to complete. MDEQ is currently requiring Dow to conduct extensive characterization of potential source areas in the first segment under the RCRA License (referred to as "H-12" work). The H-12 work will accelerate the characterization of the first segment and the identification and filling of data gaps. EPA and MDEQ believe that the proposed timeline is aggressive, but achievable. (see <http://www.epa.gov/region5/sites/dowchemical/pdfs/dow-timeline-fs-200906.pdf>)

22. *A few commenters felt that no more study is needed, and that action should proceed.*

EPA and MDEQ do not agree that the Site has already been completely studied. However, the Agencies do agree that considerable information is available from work completed under the RCRA License, particularly for the Tittabawassee River. The Agencies intend to streamline the work to be conducted and to reduce redundancies by using previously completed work, if it is adequate to meet the needs of the Settlement Agreement. Ultimately, the studies and investigations will need to meet the requirements of the Superfund regulations at 40 C.F.R. 300.430. However, as the investigations proceed, the Settlement Agreement provides many opportunities for response actions to be developed as soon as sufficient information is available to support the evaluation of effective response alternatives.

23. *Some commenters stated that they felt the concerns of home owners were not being adequately addressed in the process. Some commented that the properties of people living in the contaminated areas need to be addressed sooner, especially if the cleanup will take a long time. They expressed concerns with the well-being of the residents. One commenter stated that the exposure pathway is complete for humans.*

EPA and MDEQ have attempted to consider the concerns of homeowners in the Settlement Agreement. The overall approach to the Site is to conduct comprehensive cleanup in an upstream to downstream fashion. However, some tasks will be conducted on a Site-wide basis. Tasks 1 and 2 of the SOW are Site-wide work that will be initiated immediately, and the provisions will continue for the duration of the Agreement. These tasks require Dow to begin evaluating and assessing potential acute or near-term exposure risks (Task 1) and contaminant transport risks (Task 2). The Agencies anticipate that measures taken under Task 1 will assess and, if necessary, develop response options focused on exposure control for the most contaminated residential properties.

The overall Site approach, combined with the Site-wide Tasks 1 and 2, should allow acute or near-term problems to continue to be addressed immediately, while developing a complete solution and minimizing recontamination or re-work. Recontamination of downstream properties is a concern if a comprehensive cleanup has not occurred upstream. Exposure control should mitigate potential risks until a comprehensive approach is implemented. Additionally, the SOW includes provisions to develop response options out of sequence or sooner, if needed.

It is also very important to understand that the Interim Response Actions (“IRAs”) established under the RCRA License will continue until a legally enforceable future response action is established. This means that Dow is still required to conduct ongoing IRA activities, including flood response, on the Priority 1 and Priority 2 properties along the Tittabawassee River. However, additional response actions beyond those required by the IRAs may be developed for the Priority 1 and Priority 2 properties under Task 1 and/or as part of comprehensive cleanup, based on best available science and circumstances at the property.

24. Some commenters stated that people should be compensated for damages.

EPA and MDEQ do not have an opinion as to whether people should be compensated for damages, presumably for damages related to the contamination that is the subject of the investigation covered by the Settlement Agreement. EPA and MDEQ are environmental regulatory agencies that do not have a role in determining whether someone should be compensated for damages. EPA and MDEQ are responsible for making sure that environmental laws and regulations are implemented and followed. Questions regarding whether compensation for damages related to contamination are appropriate are typically answered in the context of court actions not involving EPA or MDEQ.

25. One commenter felt that the Agreement would be clearer if it explicitly identified the previous data that will be used in determining what existing data are acceptable and what new data are needed. The commenter indicated that Appendix F of the Administrative Settlement Agreement and Order on Consent ("AOC") gives the Sampling, Analysis, Studies, and Orders that have already been completed for portions of the Site.

Paragraph 13.p in the Findings of Fact of the AOC explains the intent of the sampling, analyses, studies, and orders listed in Appendix F to the AOC (emphasis added):

U.S. EPA's and MDEQ's understanding of potential hazardous substances in soils at the Site is based on various sampling, analysis, and studies regarding dioxin/furans and other contaminants, in the Tittabawassee River, the Saginaw River, and the Saginaw Bay. The sampling, analysis, studies, and orders relied on by U.S. EPA and MDEQ **include, but are not limited to**, the sampling, analysis, studies, and orders listed in Appendix F to this Settlement Agreement.

Any previous data or information that is used to meet the requirements of the Settlement Agreement must be identified and summarized by Dow and reviewed for completeness and sufficiency by the Agencies. Depending on the Task, the previous work may include some of the information listed in Appendix F to the AOC, but may include other information as well. MDEQ did not relieve Dow of compliance with the RCRA License requirements during the negotiation period, and other data and information will be available as a result of ongoing work under the RCRA License. There is an Administrative Record for the Site that contains information that forms the bases for decision-making. The Administrative Record will be updated as appropriate.

26. One commenter felt that the Agreement would be clearer if the SOW uses language that defines a clear sequence of events for the work through cleanup. The commenter felt that as currently written, this SOW is not presented in a progressive order that uses each step to advance to the next. The commenter also expressed concerns that public notice and comment periods are not included the description of the work.

The Settlement Agreement, including the SOW, does not require Dow to conduct construction or implementation of selected cleanups. However, construction and implementation of selected cleanups are expected to be required at the Site, and EPA and MDEQ expect that Dow will conduct those cleanup activities under a separate settlement agreement. Furthermore, because the Settlement Agreement is a legal document, it presents the work that Dow must do, but does not include all of the steps in the process that EPA will conduct, in consultation with MDEQ. For example, public notice and public comment periods are activities that EPA will conduct, as required, in consultation with MDEQ. EPA and MDEQ attempted to explain the sequence of events for the Site through cleanup at the various public meetings and in the meeting materials posted on the Site Web site. As needed, EPA and MDEQ will continue to work with the community to explain the Superfund process and how the Settlement Agreement fits into that process.

In regard to Dow's work that is specified in the SOW, Section VI, Scope of Operable Unit 1 Tasks, and Section VII, Scope of Operable Unit 2 Tasks, are presented in a progressive order that uses each step to advance to the next. The work specified in Section V, Scope of General Site-wide Tasks, will continue throughout the life of the Settlement Agreement, and is not sequential in nature. Exhibit B to the SOW (Schedule for Major Deliverables) offers a relatively clear sequence of events that are expected to occur.

27. One commenter was pleased to see that the natural resource trustees have been included in the process, but felt that further articulation of the Trustees' role in the AOC would be appreciated. The commenter expressed concerns that the confidentiality agreement applying to the Natural Resource Damage Assessment (NRDA) was being used to shield information, and wondered about the effect on the Settlement Agreement of that confidentiality agreement.

EPA and MDEQ recognize that the Trustees are valuable partners at the Site. However, EPA and MDEQ do not agree that the Settlement Agreement needs to be modified to further articulate their role. The Trustees have statutorily defined roles that will not be affected by the Agreement. Regarding the confidentiality agreement in place for the NRDA, that confidentiality agreement does not apply to any of the work to be conducted under the Settlement Agreement.

28. One commenter felt that a glossary and acronym list would have been helpful as a reference guide for readers who may not recognize or remember them easily.

The Settlement Agreement contained a list of definitions, including acronyms used in the Settlement Agreement in Section IV of the AOC. However, because this section was not at the beginning of the document, it may not have been apparent to all reviewers. EPA and MDEQ are also providing a glossary and acronym list used in the Settlement Agreement as an attachment to this Responsiveness Summary.

IV. GENERAL COMMENTS ON THE SCOPE OF THE WORK

29. *One commenter stated that in addition to the Tittabawassee River, Saginaw River and Saginaw Bay site, the commenter would like to see a comprehensive work plan developed for remediation of the dioxin contaminated properties in the city of Midland and adjacent communities. The commenter felt that a schedule should be drafted and approved as soon as possible and that the project work should not be delayed any longer.*

The MDEQ is currently working with Dow and the city of Midland to implement corrective actions for soil contamination in the city of Midland in accordance with the conditions of the Dow RCRA License. Dow submitted a Pilot Site Characterization Work Plan on December 11, 2009, and revised Presumptive Remedy Work Plan and Pilot Corrective Action Plan on December 17, 2009, to the MDEQ for review. These plans contain proposed schedules for MDEQ review and approval. EPA's RCRA Corrective Action program has been assisting MDEQ in overseeing implementation of the corrective action requirements of Dow's RCRA License.

30. *A few commenters expressed concern that source control did not seem to be addressed by the Agreement and felt that it is important that sources of contamination are controlled to prevent recontamination. One commenter felt that source control should be addressed in the division of work between MDEQ and EPA.*

EPA and MDEQ agree that source control is essential. Primary source control, including removal, consolidation, and isolation of waste materials on the plant site, and control of contaminated groundwater that has the potential to vent into the river at the Dow plant site, is required by the RCRA License. Groundwater control has been directly addressed by the installation and continuous operation and monitoring of groundwater containment and control systems. The operation, monitoring, and maintenance of closed historic waste management units is also addressed by the RCRA License. Secondary or reservoir sources directly adjacent to the Dow plant site are currently being addressed under the RCRA License (H-12 program) and this work is scheduled for transition to the Settlement Agreement. Other potential reservoir sources such as eroding bank deposits will continue to be evaluated and addressed as contaminant transport risks under Tasks 2 and 8 of the SOW. Although the AOC and SOW do not directly identify source control, source control considerations are included in Tasks 2 and 8, and EPA guidance requiring source control evaluation is included in Exhibit C of the SOW.

EPA issued the "Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites", OSWER Directive 9285.6-08, February 12, 2002. This policy document outlines 11 principles for sediment sites. The first principle is "Control Sources Early" because of the potential for future recontamination of sediments. EPA and MDEQ will ensure that this principle is applied as work is conducted under the Settlement Agreement.

31. Some commenters felt that it should be a priority for EPA and MDEQ to rely on science, rationality, and objectivity in implementing the Agreement.

EPA and MDEQ acknowledge these comments. The Agencies intend to use the best available science, rationality, and objectivity in implementing the Agreement.

32. One commenter stated that the commenter had data and information on contamination in the area and offered to share this information with EPA and MDEQ.

MDEQ contacted this individual directly to obtain the information the commenter wanted to share with the Agencies. Additional follow-up by EPA and MDEQ will be conducted as necessary.

33. A few commenters (including the technical advisor provided by EPA to the community at the public meeting) commented that the Agreement should clarify the methods and intent of the biota monitoring required in the SOW.

EPA and MDEQ believe that monitoring of the Site over time will be important for purposes of assessing and documenting baseline and ongoing conditions, and to provide a basis for comparing and assessing the effectiveness of response options. Task 4 of the SOW requires Dow to develop and implement a Site-wide Monitoring Plan that includes biota monitoring. EPA and MDEQ did not want to negotiate rigid, unchanging requirements for the monitoring plan because information needs will change over time. As stated in Task 4: “EPA, MDEQ, and the Respondent intend the Site-Wide Monitoring Plan to evolve and change over time to reflect changing data quality objectives and information needs.”

EPA and MDEQ recognize that Site monitoring and the monitoring results may be of interest to the community. As such, EPA and MDEQ intend to seek input on the Site-wide monitoring approach through the CAG, and through other stakeholder involvement, as appropriate.

34. Some commenters (including the technical advisor provided by EPA to the community at the public meeting) commented that the Agreement should require that risks are appropriately characterized and assessed. They specifically mentioned risks to children and cumulative risks. Some expressed concern that contaminant uptake be considered.

The SOW contains work provisions requiring Dow to appropriately characterize and assess risks. Tasks 10 and 13 of the SOW require Dow to assess potential risks to both human health and the environment from Site-related contaminants. The requirements for the conduct of the risk assessments are found in Section VIII.D of the SOW. The risk assessments will be conducted consistent with EPA guidance, and will consider sensitive populations, such as children, cumulative risk, and contaminant uptake.

35. *Some commenters stated that they felt that the other chemical contaminants (in addition to dioxin) known to be released by Dow should be characterized and assessed.*

Other chemical contaminants in addition to dioxin are being characterized and assessed under the RCRA License and this work is being transitioned to the Settlement Agreement. The Settlement Agreement requires Dow to assess its hazardous substances, pollutants or contaminants located at, or released or threatened to be released from the Site.

V. SPECIFIC SETTLEMENT AGREEMENT PROVISIONS

Administrative Settlement Agreement and Order on Consent (“AOC”)

36. *One commenter expressed concerns with the dispute resolution provisions of paragraph 65 of the Settlement Agreement. The commenter stated that Dow was at a disadvantage because EPA is the ultimate decision-maker under the dispute resolution provisions. The commenter felt that a formal process using neutral third parties (e.g., mediation) should be employed.*

EPA and MDEQ disagree with the commenter’s conclusion that a formal process using a neutral third person should be used for deciding disputes under the Settlement Agreement. EPA and MDEQ also do not agree with the commenter’s conclusion that Dow will be disadvantaged in formal disputes arising under the Settlement Agreement, because the Settlement Agreement provides that EPA is the ultimate decision maker under that dispute resolution process.

First, under CERCLA, also known as the Superfund law, the President delegated cleanup decision making authority to the Administrator of the EPA under Executive Order 12580. This authority was further delegated by the Administrator to the Regional Administrator and then to the Director of EPA’s Region V Superfund Division. Thus, the lawful decision making authority for deciding disputes that may arise under the Settlement Agreement lies with EPA.

Accordingly, it would be questionable, from a legal standpoint, for EPA to attempt to give to a third person its lawfully delegated cleanup decision making authority. The AOC does not preclude the Parties from utilizing a mediator during the negotiation period, so long as the mediator is not given the authority to make cleanup decisions.

Second, in deciding disputes, EPA must develop an administrative record reflecting both Dow’s position and EPA’s position on the disputed matter, and EPA must decide the dispute based on that record. This helps to ensure that its decision making is fair. EPA notes that if Dow does not accept EPA’s decision in a dispute, and does not perform the work or other task that EPA concludes Dow is obligated to perform, then EPA can either seek to enforce the terms of the decision against Dow, or seek stipulated penalties from Dow. In either case, a federal Court could become involved, and EPA’s position before the Court would be that in reviewing EPA’s decision the Court would be bound to review that decision based on the administrative record using an arbitrary and capricious standard of review. Thus, while the Court, as a third person,

would not be deciding the dispute, a reviewing Court would review EPA's decision making process in deciding whether to require Dow to comply or pay penalties.

Finally, it is standard practice in these types of enforcement orders for the EPA or MDEQ be the final decision maker under a dispute resolution process. As noted in the response to comment 20, the bases for many of the terms and conditions found in the Settlement Agreement can be found in "model" language developed and adopted by EPA for use in CERCLA remedial investigation and feasibility study administrative settlement agreements, and in "model" language developed and adopted by EPA for use in CERCLA remedial design administrative settlement agreements.

On the commenter's second point, it can be inferred that by signing the Settlement Agreement Dow has indicated that it believes that its interests under the dispute resolution process are adequately represented and protected without the involvement of a neutral third person.

37. A few other commenters favored the dispute resolution provisions of the Settlement Agreement.

EPA and MDEQ acknowledge these comments.

38. One commenter asked for clarification about the difference between an early final remedial action that will not require additional response actions (page 5, paragraph 12.e of the Settlement Agreement) and an early interim remedial action (page 6, paragraph 12.f) that may be followed with additional response actions. The commenter asked whether EPA classifies the Riverside Blvd. cleanup as an early final or an early interim action. The commenter expressed the opinion that it is too early in the process for EPA to give a Record of Decision on any site as a final remedy and asked that the "early final remedial action" option be removed from the Settlement Agreement.

The Settlement Agreement provides the following two definitions for Early Final Remedial Action and Early Interim Remedial Action:

"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.

“Early Interim Remedial Action” 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.

As explained in these definitions, the difference between these two cleanup concepts is that where an Early Final Remedial Action is selected in a ROD, EPA anticipates that the Early Final Remedial Action will not require additional response actions, and that where an Early Interim Remedial Action is selected in a ROD, 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. As set forth in comment 15, CERCLA and the NCP require that EPA take public comment on proposed remedial actions before it signs a Record of Decision.

The cleanup work that was performed at Riverside Boulevard was not performed under the terms of the Settlement Agreement and, instead, was a time critical removal action conducted under a separate Administrative Order on Consent. Based on the investigation work required under the Settlement Agreement, EPA may determine that more work is needed at Riverside Boulevard, or that the work performed was sufficient. In either event, that decision will be documented in a future decision document.

EPA and MDEQ do not think it is appropriate to eliminate the Early Final Remedial Action option from the Settlement Agreement. EPA and MDEQ may determine that as work progresses from upstream to downstream, selection of an Early Final Remedial Action in a ROD makes sense from a project management standpoint and that it is appropriate to document a decision that no further work may be needed for an area where Early Final Remedial Action has been taken.

39. One commenter stated that under the State's Future Response Costs (page 8, paragraph 12.cc), excluding future response costs for outside contractors and consultants that exceed \$50,000 per calendar year, and \$25,000 for analytical laboratory costs will constrain the MDEQ oversight role. The commenter felt that the amount of recoverable costs should not be limited, or at least changed to a much larger amount for each year.

EPA and MDEQ do not think that limiting MDEQ's future response costs for outside contractors and consultants and analytical laboratory costs will significantly constrain MDEQ's oversight role. In this specific case, the MDEQ is working in a support role to EPA and will typically rely on the EPA to incur and recover costs related to outside contractors, consultants, and laboratory costs. The AOC provides for the recovery of other MDEQ costs associated with oversight of the Settlement Agreement.

40. One commenter asked that the definition of "work" (page 9, paragraph 12.gg) be clarified. The commenter felt that the current definition is confusing and appears to exclude all work from the definition.

The definition of "Work" contained in the Settlement Agreement has a specific legal meaning and legal purpose. The definition includes all activities Dow is required to perform under the Settlement Agreement, but excludes certain obligations that Dow has under separate administrative orders on consent. The definition of Work in the Settlement Agreement is intended to ensure that Dow continues to be bound to fulfill those separate obligations. Altering the definition would have an impact on the legal rights and responsibilities of the Parties. The definition of Work is also tied to the covenant not to sue that Dow is receiving from the EPA under paragraph 93 of the Settlement Agreement.

41. One commenter felt that the description of flooding in the Tittabawassee River Floodplain under the Findings of Fact (page 10, paragraph 13.f) paints an inaccurate picture of the true flooding that normally occurs. The commenter stated that the Tittabawassee River floods multiple times on a yearly basis, and felt that this paragraph should reflect that.

EPA and MDEQ disagree that Paragraph V.13.f. inaccurately portrays river conditions. As stated in the AOC "[p]ortions of the Tittabawassee River floodplain are periodically inundated by floodwaters." EPA and MDEQ acknowledge that the Tittabawassee River may flood repeatedly over the course of a year.

42. A few commenters felt that the definition of "site" and the map attached as Appendix C were vague. One commenter stated that with respect to the map attached as Appendix C, while it appears that the digitized orange hashing is intended to graphically depict the Site area, it is difficult for many property owners to determine whether their property is (or is not) actually within the Site's definition. The commenter asked if EPA could provide a detailed list of parcel identification and/or property addresses that are within the geographic Site area defined in the AOC.

The definition of the Site in the Settlement Agreement reflects certain CERCLA statutory and regulatory definitions and is specific enough for EPA and MDEQ to oversee and direct Dow's investigation and feasibility study work. The definition is intentionally left flexible enough to allow EPA and MDEQ to modify the specific work required as the work progresses, based upon

where contamination is found to be located. Given the current state of Site-related data it is not possible to include in this Settlement Agreement a precise survey description of the Site. EPA does not have a list of parcels or property addresses that have been determined to be within the Site.

43. One commenter felt that the stipulated penalties are too low.

EPA and MDEQ believe that the stipulated penalty amounts are fair. Among other things, the stipulated penalties escalate over time. EPA and MDEQ further believe that the stipulated penalty amounts are sufficient to ensure that Dow will diligently complete the tasks that it is required to perform under the Settlement Agreement so as to avoid incurring penalties.

44. One commenter expressed concerns that Section III, Statement of Purpose does not include source control as one of the objectives of the Agreement.

Please see the response to comment 30.

45. One commenter stated that the text of Findings of Fact, paragraph 13.n, Page 12, indicates that sampling has shown over 200 chemicals are present at the Site. The commenter expressed concerns that there is no more discussion on whether the cleanup will treat these chemicals in addition to dioxins and furans.

Please see the response to comment 35.

46. One commenter stated that the text of VI.15, Conclusions of Law and Determinations, page 14 define the Site as a "facility" as defined in Section 101(9) of CERCLA, 42 USC 9601(9), and that portions of the Site are a "facility" as that term is defined in Section 20101(1)(o) of NREPA, Michigan Compiled Laws 324.20101(1)(o). The commenter asked how a property owner knows whether their parcel is (or is not) a "facility" within the meaning of federal law or state law or both? The commenter also asked if EPA can provide a detailed list of parcel numbers and/or property addresses that are covered by the "facility" designations described in Section VI, paragraph 15 of the AOC.

The term "facility," as used by EPA in the Settlement Agreement, is important from a legal standpoint, because defining the Site as a CERCLA "facility" is one of the legal elements that provides EPA with the statutory jurisdictional basis to take or compel cleanup work, or recover the costs of cleanup work at the Site if EPA performs the work itself. The term "facility" as defined under State law (Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended [Act 451]), is similarly important with respect to the statutory jurisdictional basis to take or compel cleanup work, or recover the costs of cleanup work at the Site. EPA and MDEQ do not have a comprehensive list of parcels or property addresses that are designated as "facilities."

Information related to properties along the Tittabawassee River that may or may not be a “facility” as defined in Section 20101(1)(o) may be found at the following Web site:

<http://www.michigan.gov/documents/deq/deq-whm-hwp-dow-TR->

[RevisedSupplementalAdvisoryDioxinFAQ-7-15-2005_251806_7.pdf](#). In general, the MDEQ has determined that there is a predictable pattern of dioxin contamination in the floodplain based on flooding. Flooding carries dioxin-contaminated sediment (soil) out of the river. When flood waters recede, the dioxin-contaminated sediment is left behind. The more often land is flooded, the more it is affected by contamination coming from the river and therefore the more likely the property is to be a “facility.” As the remedial investigation process is not yet complete, the data is not currently available to develop a comprehensive list of properties that would be considered a facility under Part 201 of Act 451. Individual property owners may contact MDEQ to request the available information on levels of contamination at or near their property(ies).

47. One commenter stated that the provisions of Covenant Not To Sue By Respondent, Section XXV, paragraph 100, page 48 contains provisions that permit Dow to reserve its right to assert claims pursuant to CERCLA against the Department of Defense, the Department of Commerce and/or the General Services Administration provided that these agencies have not resolved their liability at the Site with US EPA at of the time Dow Chemical asserts such claims. The commenter asked about the rationale behind the provisions, and what, if any, are EPA’s concerns about the federal government’s potential liability on the Site.

Dow requested language in the Settlement Agreement that would preserve its rights against other federal entities that may be responsible for contamination found at the Site. The language in the Settlement Agreement reflects language that was agreed to among the Parties regarding Dow’s rights.

In enacting CERCLA, Congress did not exempt federal agencies from liability under CERCLA. EPA does not conclude in this Settlement Agreement that the three named federal entities are, or are not, liable parties under CERCLA.

48. One commenter stated that the provisions of Covenant Not To Sue By Respondent, Section XXV, paragraphs 105 and 106, page 50 contains provisions where Dow agrees not to assert any claims and to waive all claims and causes of action against some specific entity, which is generally described. There are specific dates and amounts of gallons/tons of waste described. The commenter asked what is this referring to and who is receiving this protection – is it the state or federal government?

This language is standard “model” CERCLA settlement agreement language intended to ensure that “*de micromis*” generators of hazardous substances (people that contributed only very, very small amounts hazardous substances) at a site are not subject to costly litigation. For example, the language ensures that a person who throws away household trash that includes a hazardous

substance or pollutant (like old paint cans or discarded household batteries) found at a site cannot be sued for the costs associated with the cleanup work by one of the major generators for the waste found at the same site. This language is not directed toward protecting any specific person or entity, or any specific governmental units, but rather to a class of small contributors.

49. One commenter asked about Contribution, Section XXVIII, paragraph 113, page 52. The commenter stated Dow is being given contribution protection under the proposed AOC and asked what, if any, are the ramifications for citizens or the community.

There should be no ramifications for the community stemming from this provision. The language in paragraph 112 of the Settlement Agreement is standard “model” CERCLA settlement agreement language and is intended to ensure that a party doing work under an EPA CERCLA settlement agreement cannot be sued by another person for that “work” (or the costs that it pays under the settlement agreement) where that other person may also be liable for the work and/or the costs.

50. One commenter felt there should be a clause describing EPA’s potential response actions in case Dow does not complete the work.

The Settlement Agreement contains provisions that allow EPA, at Dow’s expense, to take over the Work required under the Agreement if Dow is not fulfilling its obligations under the Settlement Agreement. The relevant provisions are at paragraph 96 and Section XXXI of the Settlement Agreement. EPA could also take Dow to court to enforce the Settlement Agreement or seek penalties under Section XVIII of the Settlement Agreement, should Dow not comply with the requirements of the Settlement Agreement.

51. One commenter felt that the Settlement Agreement did not address EPA or MDEQ checking Dow’s analytical results.

Neither EPA nor MDEQ have waived any rights to obtain independent analytical results. Paragraph 50 of the AOC discusses sampling and indicates that split or duplicate samples may be taken by EPA or MDEQ. Additionally, paragraph 49 of the AOC and the SOW require that all of Dow’s analytical work must be conducted under a Quality Assurance Project Plan (QAPP). The QAPP is used to ensure that all data is of sufficient quality to meet the sampling objectives. The QAPP will be reviewed and approved by EPA, in consultation with MDEQ, to ensure that Dow’s analytical results will be accurate and precise.

52. One commenter was concerned that there was no cost estimate in the Agreement.

Section XXXI of the Settlement Agreement provides an estimate of the costs of the Work. Specifically, paragraph 118, in relevant part, provides: “[w]ithin thirty (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.” This amount does not include the costs that Dow would incur (in addition to the estimated cost of the Work) in reimbursing EPA and MDEQ their agreed-upon oversight costs.

53. One commenter discussed Part III. Statement of Purpose, Paragraph 10a. The commenter felt that it is appropriate for EPA and MDEQ to recover costs incurred with respect to the Agreement. However, the commenter felt that it is important that the Agencies conduct oversight in a fiscally prudent manner.

EPA and MDEQ intend to conduct oversight of Dow’s work under the Agreement in an appropriate manner. Since 1995, EPA has had an initiative to address the cost of oversight activities at sites where the responsible parties are performing work. In the intervening years, EPA has taken steps to implement PRP oversight reform. On May 17, 2000, EPA issued the guidance entitled, “Interim Guidance on Implementing the Superfund Administrative Reform on PRP Oversight,” OSWER Directive No. 9200.0-32P. This document emphasizes the need for open dialogue between EPA and PRPs who have settled with EPA as a way to foster improved relationships and to attain appropriate levels of oversight. This guidance recommends that EPA offer settling PRPs the opportunity to discuss their oversight expectations and to provide suggestions on how to conduct oversight. More recently, EPA issued its “Results-Based Approaches and Tailored Oversight Guidance” for RCRA corrective action facilities which expands the “Corrective Action Oversight” guidance issued in January 1992. The tailored oversight guidance in Section III promotes flexibility and the use of different oversight levels within the corrective action program based on facility-specific conditions rather than a pre-determined one size fits all process. EPA recommends that Superfund program managers use this approach to complement the current Superfund oversight guidance when considering the level of oversight to perform at a particular site.

EPA and MDEQ also note that under Section XX of the AOC, if Dow questions or disagrees with cost items that are being billed to Dow, then Dow may invoke dispute resolution with respect to those costs. Dow’s payment of those costs will be required consistent with the resolution of the dispute.

54. One commenter discussed Part VIII. Designation of Contractors and Project Coordinators, Paragraphs 24 and 25. The commenter felt that the designated Project Coordinators identified for the three Parties are all knowledgeable and experienced professionals who have variously worked together in the past and should serve the project well. The commenter encouraged ongoing coordination among the Parties as a key to successful implementation of this Agreement.

EPA and MDEQ acknowledge this comment. The Parties all recognize that experienced project coordinators are essential due to the magnitude and complexity of the Site. EPA and MDEQ intend to use ongoing coordination and open communication between the Agencies, and with Dow, to assist in successful implementation of the Agreement.

55. One commenter discussed Part XI, MDEQ Review of Submissions and Coordination of License Provision, Paragraphs 47 and 48. The commenter expressed concerns that because these paragraphs appear to state that the RCRA License related document, Saginaw River and Saginaw Bay Remedial Investigation Scope of Work, will be withdrawn through a license modification following the Agreement being signed by all Parties, that it is imperative that comparable work regarding the Saginaw River and Saginaw Bay is incorporated in the SOW and a remedial investigation to fill any data gaps will be conducted under the Agreement .

The commenter is correct that MDEQ has agreed to propose a major modification of the RCRA License and withdraw the Saginaw River/Bay SOW approved by MDEQ under the RCRA License. Work that would have been done under the RCRA SOW will now be done as Operable Unit 2 (“OU 2”) as outlined in the Superfund SOW, Appendix A of the Settlement Agreement. The Superfund SOW contains a detailed description of the work and the tasks that Dow will undertake to complete investigation and characterization of the Site, to develop cleanup options, and to conduct detailed engineering design of any selected cleanup, including the Lower Saginaw River and Saginaw Bay, which have been designated as OU 2.

Some tasks will be conducted on a Site-wide basis, while others apply to a specific Operable Unit. Tasks 1 and 2 are Site-wide work, and the provisions will continue for the duration of the Agreement. These tasks will require Dow to begin evaluating and assessing potential acute or near-term exposure risks (Task 1) and contaminant transport risks (Task 2). Some of the areas to be evaluated under Task 1 are within the Lower Saginaw River, and information from those areas will help in determining whether certain floodplain areas need work in advance of an overall cleanup. The Agencies anticipate that measures taken under Task 2 to stabilize significant contaminant movement will benefit the downstream portions of the Site by reducing additional movement of contaminants from upstream. Additionally, Task 4 requires Dow to conduct Site-wide monitoring so that conditions throughout the Site can be evaluated over time.

In addition to potential early actions under the Site-wide tasks, the Superfund SOW, Tasks 11 through 16, require a complete characterization and assessment of cleanup options for the Lower Saginaw River and Saginaw Bay. However, in regard to timing, the Agreement recognizes that:

Because Work expected to be performed earlier under the general Site-wide or OU 1 tasks may reasonably be expected to influence conditions in OU 2, the Work required by this Section of the SOW is intended to use and build on that prior Work, as appropriate, to meet the objectives of this Agreement. As such, the Parties anticipate that the following tasks may be deferred until substantial response actions in OU 1 have occurred.

The Agencies understand the desire to see the Site work move to completion as quickly as possible. However, because of the dynamic nature of river systems and changes that are expected to occur as the upstream portions of the Site are remediated, it is likely that conditions will have changed by the time final remedial decisions are considered for OU 2. Therefore, in the interim, it is important to carefully focus resources on addressing near-term risks and developing a clear understanding of baseline conditions in OU 2 – rather than spending time and resources now to extensively characterize the downstream portions of the Site.

56. One commenter discussed Part XIII. Site Access Paragraph 56. The commenter expressed concerns that the statement: “For the purposes of this Paragraph ‘best efforts’ includes the payment of reasonable sums of money in consideration of access” might encourage human nature holding out for some increased arbitrary dollar figure – leading to issues that might affect implementation of the work. The commenter said that landowners themselves expressed concern about this ‘dollar value vagueness’ in the public meeting, potentially pitting one neighbor against the other and impeding this project. The commenter suggested that the sentence be omitted from the Agreement and felt that the Respondent will use best efforts to access/assess a site – in consideration of landowner wishes and a reasonable assessment of potential health /environmental threat – including the possible alternative use of institutional controls on the parcel if reasonable cause exists.

EPA and MDEQ do not agree that this provision should be deleted. The Site access provision is standard “model” CERCLA settlement agreement language and is intended to ensure that in appropriate cases compensation is provided by a PRP to a property owner whose land is accessed in order to conduct the work under a settlement agreement, particularly where the work results in a long-term occupation of the property-owner’s land – for example, installation of a long-term groundwater monitoring well. The standard is a flexible one. In some cases, “best efforts” will not include payment of any money at all. In the event that a property owner makes payment demands upon Dow that EPA agrees are not reasonable, then EPA may use its statutory authorities to secure access, thus assuring that Work under the Settlement Agreement can proceed.

Statement of Work (SOW): Appendix A to the AOC

57. One commenter felt that there was no clear schedule.

A schedule for the work that Dow is to conduct can be found as Exhibit B to the SOW. Additionally, EPA developed a fact sheet titled “Timeline for Achieving Comprehensive Cleanup” which was issued in June 2009 to explain in simple terms the schedule of the most significant work under the Settlement Agreement. Please note that the fact sheet was developed with the assumption that the Settlement Agreement would be effective in November 2009, and we now know that the Settlement Agreement will not be effective until January 21, 2010. The

fact sheet can be found at <http://www.epa.gov/region5/sites/dowchemical/pdfs/dow-timeline-fs-200906.pdf>.

58. Some commenters felt that a “data gaps report” should be required.

In developing the technical scope of work required in the SOW, EPA and MDEQ considered that extensive data collection has already occurred under the RCRA License. Accordingly, the Agencies intend that additional data collection efforts may be focused in nature, particularly for the Tittabawassee River. However, the SOW contains provisions for the identification and filling of data gaps for areas where additional information is needed to meet the objectives of the work. The SOW at Section V, Tasks 1.2 and 2.2, Section VI, Task 8.1.3, and Section VII, Task 12.2.3 contains provisions for the identification and filling of data gaps.

59. One commenter expressed concern that public involvement is not mentioned in Section I, Purpose, other than by reference to federal regulations.

The Settlement Agreement includes both the AOC and SOW and their attachments. Public involvement activities are required by CERCLA and the National Contingency Plan (“NCP”), 40 CFR Part 300. EPA, in consultation with MDEQ, is responsible for developing and implementing community involvement activities for the Site. Both Section V, Task 3 of the SOW, and paragraph 31 of the AOC, are clear that EPA, in consultation with MDEQ, will conduct community involvement activities consistent with CERCLA and the NCP.

60. One commenter suggested that Section I, first bullet, page 1 be amended to state that investigation of the nature and extent of contamination in the Saginaw River and Saginaw Bay would extend until the soil and sediment samples come back clean, even if this meant sampling into Lake Huron.

EPA’s remedial investigation process is directed by CERCLA and the NCP. The investigation of the nature and extent of contamination in the Saginaw River and Saginaw Bay will be conducted to meet the requirements of CERCLA and the NCP. CERCLA and the NCP do not require investigation of the nature and extent of contamination at a site until samples from media known to be contaminated show no contamination whatsoever. There are existing background levels of some of the contaminants that are unrelated to releases from the Site, and samples may never be “clean.”

61. One commenter expressed concerns with Section II, Response Actions to Transition from RCRA to CERCLA, on page 3. The commenter expressed concerns that this is a major modification of Dow’s Operating License and Dow’s obligation under RCRA to address its contamination and felt that the public is entitled to a public hearing on these modifications before EPA and MDEQ sign the Settlement Agreement.

Under the Settlement Agreement, modification of Dow's RCRA License is considered to be a major modification. The EPA and MDEQ do not agree that it is necessary to hold a public hearing prior to signature of the Settlement Agreement. A full public participation process as required under Part 111, Hazardous Waste Management, of Act 451 will be conducted by the MDEQ for the major RCRA License modification. This will include holding a public hearing during the 60-day public comment period. The MDEQ, in conjunction with the EPA, will consider input received from the community during the public comment period in determining the final major RCRA License modification language.

62. *One commenter expressed concerns with Section III. Document Review, page 3. The commenter was concerned because no mention is made of public review of documents and felt that Superfund public participation requirements provide for document review.*

As discussed in response to comment 16, EPA and MDEQ recognize that there are some stakeholders who are more interested in technical information and details than other stakeholders. As allowed by law, EPA and MDEQ will make documents available to the public. EPA and MDEQ anticipate that the Community Involvement Plan will address the dissemination of technical information.

63. *One commenter expressed concerns with Section V, paragraph 1.1, page 4. The commenter felt that the referenced map in Exhibit D does not clearly identify and delineate the boundaries of the exposure units.*

The discussion in Section V, paragraph 1.1 and the map appended as Exhibit D to the SOW were intentionally left flexible enough to allow EPA and MDEQ, working with Dow, to modify the work areas as the assessments required under Task 1 are conducted. The general locations of the exposure units were identified before the current level of extensive data was available. All available data will be used to refine exposure unit boundaries as Task 1 progresses. Please also see the response to comment 46.

64. *One commenter suggested ideas to enhance the activities anticipated pursuant to Section V, Task 3. Community Involvement, page 8. The commenter suggested: that the public be involved in creating the Community Involvement Plan; that EPA provide periodic updates (e.g., monthly or quarterly); though EPA will be working with the CAG, the public involvement plan should include involvement of the public at large; and that the monthly and annual reports by Dow be posted on the EPA Web site.*

As discussed in the response to comment 13, EPA and MDEQ intend that the community involvement activities will be robust, and beyond what is required by the law. The suggestions offered by the commenter will be carefully considered as EPA continues to develop the Community Involvement Plan, and EPA anticipates that many of these suggestions will be

incorporated into the final plan. The Community Involvement Plan will incorporate activities for the broader community, not just the CAG.

65. *One commenter felt that Sub-task 4.2, Sediment and Contaminant Loading, page 12 would be clearer if the spatial extent of the investigation were described in general, and the purpose of the monitoring work as it relates to the studies and data collection that have already occurred was described, as well.*

Sub-task 4.2, Sediment and Contaminant Loading is just one element of Task 4 – which requires Dow to develop and implement a Site-wide Monitoring Plan. As discussed in the response to comment 33, EPA and MDEQ believe that monitoring of the Site over time will be important to assess and document baseline and ongoing conditions, and to provide a basis for comparing and assessing the effectiveness of response options. EPA and MDEQ did not want to negotiate rigid, unchanging requirements (such as spatial extent) for the monitoring plan, because information needs will change over time.

66. *One commenter felt that Sub-task 8.1.1, Executive Summary of Existing Documents, page 17 creates confusion by stating that the decision to go forward with a RI or early action response is based on the information from “documents prepared or approved under the License,” without clarifying what these documents are, who prepared them or to what they refer. The commenter felt that it is unclear whether these documents refer to the sampling, studies, analyses and orders listed in Appendix F, or if there is a different set of documents that are not described elsewhere in the AOC.*

Please see the response to comment 25.

67. *One commenter felt that Sub-task 13.2, Define Sources of Contamination, page 32 does not explain Dow’s role in controlling sources once they have identified them. The commenter expressed concern that this section also states that Dow is only responsible for finding its own sources of contamination, and felt that the SOW could have a provision for how to consider runoff from other sources.*

Under CERCLA, a responsible party is responsible for the cost of the investigation and cleanup of only its own contamination. As a practical matter, where a responsible party’s contamination is mixed with another party’s contamination, then the party doing the work will often be assessing all of the contamination, and not only its own. Additionally, there are other federal and State authorities that may be applicable to other potential sources of contamination to the lower Saginaw River and Bay (for example, there are other RCRA facilities in the watershed).

68. *One commenter felt that Sub-task 13.4.2, Ecological Risk Assessment, page 34 should refer to the EPA’s “Guidelines for Conducting Ecological Risk Assessment” (1998) as a basis for the risk assessment. Additionally, the commenter was concerned because there is no specific*

mention of rare and endangered species; while the Michigan state Web site lists 14 in this area.

The discussion of the ecological risk assessment found in Section VII, Sub-task 13.4.2 refers to the requirements of the provisions of SOW Section VIII.D.2, which cites “Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments,” (EPA-540-R-97-006, June 1997), OSWER Directive 9285.7-25. Additionally, the “Guidelines for Ecological Risk Assessment,” U.S. EPA, EPA/630/R-95/002F, April 1998 is listed at #58 on the Partial List of Guidance, attached as Exhibit C to the SOW. Ecological risk assessments will include identification of rare and endangered species.

69. One commenter felt that EPA should conduct the Human Health Risk Assessment required in Sub-task 13.4, paragraph 1, Human Health Risk Assessment, page 33, rather than having Dow conduct this work.

EPA’s “Revised Policy on Performance of Risk Assessments During Remedial Investigation /Feasibility Studies (RI/FSS) Conducted by Potentially Responsible Parties,” OSWER Directive No. 9835.15.c, January 26, 1996, reaffirms EPA’s commitment to allow PRPs to conduct risk assessments under adequate EPA oversight. EPA, in consultation with MDEQ, will ensure that the risk assessment work done by Dow is consistent with the requirements specified in the Settlement Agreement.

VI. DOW’S ROLE

70. Some commenters expressed the opinion that it was appropriate for Dow to take responsibility for the work and to pay for the work, rather than burdening the taxpayers.

EPA and MDEQ acknowledge these comments. EPA’s policy is “enforcement first” – EPA has a strong commitment to have PRPs, such as Dow, conduct the work wherever appropriate. This Settlement Agreement is consistent with EPA’s “enforcement first” policies in that it requires Dow to conduct the work and to reimburse costs incurred by EPA and MDEQ in overseeing Dow’s work under the Settlement Agreement.

In addition, Dow’s obligations to perform corrective action for releases to the Site are set forth in its RCRA License and Part 111 of Act 451. Under the Settlement Agreement, Dow retains these obligations. However, there is a process in the Settlement Agreement in which some of these corrective action obligations may be satisfied.

71. Some commenters felt that Dow should not be allowed to conduct the work and that EPA should conduct the work and bill Dow. One commenter suggested that, at a minimum, EPA design the investigation work for the Site. They expressed concerns with Dow’s potential obstructions and delays through legal and political maneuvers.

As discussed above in the response to comment 70, EPA's policy is "enforcement first" – with a strong commitment to have PRPs conduct the work wherever appropriate. This policy promotes the "polluter pays" principle and helps conserve federal resources for use at sites where no viable responsible parties exist. EPA's experience has shown that, with adequate oversight, PRPs can perform acceptable work under Settlement Agreements. Detailed and thorough work plans, reports, and other documents are required of Dow and are subject to approval by EPA, in consultation with MDEQ. These plans, reports, and documents ensure that Dow will conduct adequate work by setting forth work and deliverable requirements, specifying procedures and relevant guidance documents, and establishing oversight expectations. EPA also has the ability to seek penalties under the Settlement Agreement, and this provides an incentive for Dow to meet the requirements of the Agreement. Moreover, EPA and MDEQ retain their rights to conduct all or a portion of the work if Dow's work may cause an endangerment to human health or the environment or does not meet the terms and conditions of the Agreement.

72. A few commenters wanted to make sure Dow would be responsible for cleanup work at the Site.

For actions necessary to respond to the release or threatened release of hazardous substances at a site, the Superfund law imposes liability on several classes of persons, called PRPs. Superfund is a "strict liability" statute, which means that liability attaches without regard to "intent" or "fault," and can be imposed retroactively (PRPs can be held liable for acts which occurred prior to Superfund's enactment in 1980).

EPA believes that Remedial Investigation and Feasibility Study ("RI/FS") activities are necessary at this Site. The RI/FS activities may result in EPA and MDEQ concluding that a response action is necessary, requiring the implementation of removal or Remedial Action ("RA"). If an RA or non-time critical removal is required, a RD must be completed before the cleanup can be implemented.

EPA has identified Dow as a PRP. As a PRP, Dow may be required to take actions necessary to respond to the release or threatened release of hazardous substances at the Site. Under the terms of the Settlement Agreement, Dow has agreed to conduct an RI, FS, and RD at the Site. The Settlement Agreement notes that if a removal or remedial action is required, that will be documented in an Action Memorandum (in the case of a removal action) or a Record of Decision (in the case of a remedial action). Once those documents have been issued, EPA will look to Dow to implement the removal or remedial action.

EPA expects to first request that Dow sign a separate settlement agreement – an Administrative Order on Consent (in the case of a removal action) or a Consent Decree (in the case of a remedial action) – wherein Dow will voluntarily agree to perform the required response action. If Dow does not sign a settlement agreement, then under Superfund EPA may: (1) issue a Unilateral

Administrative Order (“UAO”) to Dow, directing Dow to conduct the work, or (2) perform the work itself and later sue Dow for the cost of the work. If Dow fails to comply with a settlement agreement or a UAO, then EPA can seek to enforce the settlement agreement or UAO in federal district court. In any one of these scenarios, Dow will be responsible for the cost of the cleanup at the Site.

Additionally, Dow’s obligations to perform corrective action for releases to the Site are set forth in its RCRA License and Part 111 of Act 451. Under the Settlement Agreement, Dow retains these obligations. There is a process in the Settlement Agreement in which some of these corrective action obligations may be satisfied. In the event that Dow does not fully satisfy its corrective action obligations by implementation of the Settlement Agreement, the MDEQ retains the authority to compel additional corrective action to satisfy the RCRA License obligations and Part 111 of Act 451.

Therefore, given the existing legal authorities, EPA and MDEQ are confident that Dow will conduct or fund cleanup work at the Site.

73. Some commenters felt that Dow should have no role in the public involvement process. They expressed concerns with how Dow portrays information.

EPA, in consultation with MDEQ, is responsible for developing and implementing community involvement activities for the Site. The SOW states:

Although implementing the Community Involvement Plan is the responsibility of EPA, the Respondent [Dow], if directed by EPA, shall assist by providing information regarding the Site’s history; participating in public meetings; assisting in preparing fact sheets for distribution to the general public; or conducting other community involvement activities approved by EPA. The Respondent agrees to work cooperatively with EPA on community involvement activities.

The SOW also states:

All Respondent-conducted community involvement activities, conducted pursuant to the EPA Community Involvement Plan for the Site, shall be planned and developed in coordination with EPA, in consultation with MDEQ.

Additionally, under paragraph 31 of the AOC, any written communication by Dow directed at providing information to the public regarding work under the Settlement Agreement that is not conducted pursuant to the EPA Community Involvement Plan for the Site “shall prominently include” the following disclaimer:

“This communication represents only the view of The Dow Chemical Company and not the views of U.S. EPA, MDEQ, or any other entity, agency or individual.”

EPA and MDEQ intend to ensure that information shared with the community under the Settlement Agreement is fair and accurate.

74. One commenter expressed concern that a change in ownership of any property currently owned by Dow should not change Dow’s responsibility.

EPA does not believe that a change in ownership of property currently owned by Dow will effect Dow’s CERCLA obligations.

VII. ECONOMIC IMPACTS

75. Some commenters felt that the Settlement Agreement and the ultimate cleanup would have positive benefits for the area and local economy.

EPA and MDEQ acknowledge these comments.

76. A few commenters expressed concerns that Dow not be driven from the community because the company has such influence on the area economy.

EPA and MDEQ recognize that corporations like Dow make business decisions based on a number of reasons related to their fiduciary responsibilities. EPA and MDEQ expect that the Work required under the Settlement Agreement will not significantly affect Dow’s business profile.

77. A few commenters were concerned because they felt that their property values had been lowered because of contamination or potential contamination found on the property and that they may have trouble selling their property.

EPA and MDEQ recognize that environmental contamination problems impact communities in a variety of ways, including potentially impacting property values. There are also a number of other factors that affect property values that are unrelated to environmental contamination, including the current economy and the local housing market. EPA and MDEQ are environmental regulatory agencies that do not have a role in determining impacts to property values. EPA and MDEQ are responsible for making sure that environmental laws and regulations are implemented and followed. As a result of regulatory actions, EPA and MDEQ believe that the actions taken to date and that actions that may be taken in the future to clean up the Site will reduce the effect environmental contamination has on property values and instead will hopefully result in a positive effect overall.

VIII. CONCERNS ABOUT SPECIFIC PROPERTIES

78. Some commenters asked specific questions about their property – whether data was available and what specific actions might be taken to address the contamination on their property.

Any property owner who is interested in the data collected on or near their property may contact MDEQ or EPA and the Agencies will summarize data at and near individual parcels and provide this information to local residents. It is important to note that not every property has been sampled.

Tasks 1, 2, and 8 in the SOW contain provisions that require an assessment of data gaps. When additional data is needed, it will be developed, as necessary to support early actions (Task 1 and/or Task 2 in the SOW) and/or to support final remedial activities as the remedial process moves downstream. Therefore, additional properties may be sampled in the future. Regarding the concern about what specific actions might be taken to address the contamination on individual properties, please see the response to comment 86 below. The community, including individual property owners, will have input before cleanups are selected and implemented.

Some specific comments related to individual properties include:

- a. *One commenter asked about the test results and corrective action for his property across the river from West Michigan Park. The commenter indicated that the commenter was aware that there are several hot spots along the Stroebel Drain that runs east from the railroad bridge and was concerned that the commenter did not see any test data or corrective action for that section of the river.*

The most recent analytical data for areas along the Tittabawassee River is contained in the Final GeoMorph Site Characterization Report, Tittabawassee River and Floodplain Soils, Midland, Michigan. Upon request, the MDEQ or EPA will summarize the adjacent data. Other than interim response activities under the RCRA License to address near-term exposure concerns, corrective actions have not been conducted in this area.

- b. *One commenter stated that they live on the Tittabawassee River and their home is designated Priority 1 [which means that during March 2004 flood water was less than 20 feet from their home]. The commenter is concerned that ongoing flooding, combined with poor vegetation cover, may result in exposure to contaminants when dust is generated (e.g., through mowing). The commenter expressed dissatisfaction with the IRAs offered by Dow because the commenter does not believe the IRAs are effective or protective. The commenter stated that they have raised this issue repeatedly with AKT Peerless, who manages the IRAs for Dow, but AKT Peerless has refused to consider any other options. The commenter asked the EPA if they have any suggestions.*

The EPA and MDEQ are aware of Dow's policy of not making improvements to properties as part of conducting IRAs. However, one goal of the investigation and cleanup activities for the Tittabawassee River under the Settlement Agreement will be to find ways of reducing the contamination or exposure to contamination in the river and on properties along the river by systematically addressing contamination from upstream to downstream. Dow remains responsible for continuing the IRAs previously approved by the MDEQ, which include flood response activities for Priority 1 and Priority 2 properties (e.g., restoring IRAs that have been disturbed and removing flood contamination from homes). Certain properties will be reevaluated for further early response action as part of Task 1 of the SOW. In the meantime, the EPA and MDEQ urge residents to continue following the advice contained in the MDEQ/ Michigan Department of Community Health ("MDCH") brochures on ways to minimize exposure to dioxin contamination as the commenter has been doing (e.g., use of dust masks while mowing, avoiding contact with potentially contaminated soils and sediments when possible or washing after exposure).

- c. *One commenter raised concerns for eroding banks releasing contaminants into the river and recommended reinforcement of banks on river curves where they erode. [written comment 16]*

EPA and MDEQ agree that eroding banks releasing contaminants into the river is a concern that needs to be evaluated. These evaluations of contaminant transport risks and possible response actions will be conducted under Tasks 2 and/or 8 of the SOW.

79. *A few property owners stated that they did not want their property stripped of vegetation and denuded of trees. One commenter pointed out the work done by Dow under an EPA order at Riverside Drive as an example of how cleanup could be done while retaining or replacing vegetation.*

Regarding the concern about what specific actions might be taken to address the contamination, please see the response to comment 86 below. The community, including individual property owners, will have input before cleanups are selected and implemented. In addition to the work at Riverside Drive, Dow is conducting pilot studies to assess response options that remove less vegetation. EPA and MDEQ will consider Riverside Drive, the pilot study results, and other information when evaluating options.

80. *One commenter, the chair of the Saginaw County Parks and Recreation Commission, expressed concerns regarding the dioxin contamination at Imerman Park, indicating that for the past few years Dow has been cleaning up the park after any flooding. The commenter stated that schools throughout Saginaw County that previously used this park for different athletic activities have stopped using the park since learning of the contamination due to*

concerns for the young people's well-being. The commenter questioned what Dow's responsibility for cleanup for Imerman Park would be going forward and whether this is addressed in the Superfund cleanup process.

The Settlement Agreement lays out the future process and schedule that Dow will be required to follow for assessing the Site and developing cleanup options, including the portion of the Site which includes Imerman Park. Until such time as final cleanup activities have been implemented, Dow remains responsible for continuing the IRAs previously approved by the MDEQ, which include removing flood sediment from Imerman Park and other parks and boat launches in the community. The MDEQ has notified local school administrators about the measures that can be taken to minimize student athletes' exposure to dioxin contamination at Imerman Park if the schools choose to continue to use that park for cross country meets and other events. These measures include encouraging use of the wood-chipped paths, avoiding contact with exposed soils and river sediments, using the concrete pad at the park for stretching, etc., and using the wash facilities available at the park before eating and after any exposure to potentially contaminated soil. The MDEQ and EPA will continue to respond to inquiries from schools concerning this issue as they arise.

IX. COMMENTS ON DIOXIN

81. Some commenters stated that the concerns over dioxin have been overblown and that future studies and cleanups should be limited. Other commenters felt that the health impacts of dioxin are well documented scientifically. One commenter felt that the fear stirred up over dioxin causes more problems than the dioxin.

EPA and MDEQ both have cleanup programs that are based on reduction of actual or potential risk. Both Agencies rely on their scientists, including toxicologists, to advise the cleanup programs on the potential risks and toxicity of environmental contaminants. EPA is currently conducting a reassessment of the toxicity of dioxin. That reassessment is expected in 2010. EPA and MDEQ will use the most up-to-date information about dioxin toxicity in decision-making. In regard to potential fear among the community, EPA and MDEQ intend to use appropriate risk communication to convey accurate information about dioxin.

82. Some commenters expressed concerns about the health of people who might be exposed to contaminants. One commenter asked that people and pets be assessed for contaminants. One commenter asked about the impacts on health to people in Thomas Township.

EPA and MDEQ work with health agencies such as the Agency for Toxic Substances and Disease Registry (ATSDR) and MDCH to understand potential health effects to people from environmental contamination. ATSDR and MDCH have completed a number of health consultations for the Site that can be found at the MDCH web link below and MDEQ and EPA offices and the Site repositories, including:

- 8/12/04 Health Consultation, Dioxin Contamination in Soil, The Dow Chemical Company, Michigan Division, Midland Location, Midland, Midland County, Michigan
- 8/12/04 Health Consultation, Tittabawassee River Floodplain Dioxin Contamination, Tittabawassee River, Midland, Midland County, Michigan
- 4/29/05 Petitioned Health Consultation, Dioxins in Wild Game Taken from the Tittabawassee River Floodplain South of Midland, Midland and Saginaw Counties, Michigan
- 11/1/07 Exposure Investigation Report: Dioxin Exposure in Adults Living in the Tittabawassee River Floodplain
- 2/4/08 Health Consultation, Evaluation of Saginaw River Dioxin Exposures and Health Risks, Saginaw River, City of Saginaw, Saginaw County, Michigan
- 8/19/09 Health Consultation, Dioxin Contamination on Residential Property in the Tittabawassee River Floodplain, Saginaw County, Michigan

EPA and MDEQ have no plans to test people or pets for contaminants. Exposure to chemicals like dioxin can come from a variety of sources, such as food, as well as from the environment. Cleanup of the Site is expected to reduce unacceptable risks from environmental exposures to Site-related contaminants. Individuals who want information about how to get themselves tested at their own expense can contact ATSDR or MDCH. MDCH already has a blood testing information bulletin on its Web site along with all of the health consultations listed above found at http://www.michigan.gov/mdch/0,1607,7-132-2945_5105_51514-113198--,00.html.

83. The Midland Department of Public Health commented about MDEQ residential cleanup threshold for dioxin, the ramifications of being designated a "facility" when dioxin levels exceed this threshold, and EPA's guidance regarding dioxin in residential soils. They felt that there are a number of studies (by Dow and MDCH) that need to be considered, and their conclusion is that there is little evidence to support impacts to human or environmental health from the dioxin contamination.

EPA and MDEQ remain committed to using the best available science. MDEQ believes that the MDEQ Part 201 of Act 451 residential soil direct contact criterion was developed using the best available science when it was developed in 1995. The 1998 EPA standard cited by this commenter is undergoing reevaluation by EPA's Office of Research and Development and Office of Solid Waste and Emergency Response. EPA's proposed interim preliminary remediation goals ("PRGs") are currently open for public comment. It is also important to

understand that under Part 201 of Act 451 and CERCLA, site-specific cleanup levels and/or performance measures may be considered.

As stated in the response to comment 46, the term “facility” is legally important under both Part 201 of Act 451 and CERCLA, as it provides the legal ability to require response activities at a site for release of contaminants that meets the definition of “facility” including investigation and remediation of the contamination.

The EPA and MDEQ will consider all relevant information and studies available in making science-based decisions regarding the Site. Please also refer to the responses to comments 81, 85 and 89.

84. One commenter asked that maps be posted along the rivers and available at local areas such as libraries, schools, and environmental station displaying the levels and distribution of contaminants in particular hot spots that should be avoided.

Maps and figures that display the distribution of Site-related contaminants are available at EPA and MDEQ offices and the Site repositories. At this time, EPA and MDEQ do not believe it would be practical to post these figures along the rivers. Several high use areas have been posted with advisory signage, including soil contact, fish, and game consumption advisories.

MDEQ, MDCH and/or the Michigan Department of Agriculture have placed several general advisories for the Site, including advisories for: fish; wild game; food farming and gardening; soil movement; and a revised advisory for owners of property affected by migrating dioxin contamination. These advisories can be found at http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846_9847-43808--,00.html#Advisories. EPA and MDEQ encourage the public to comply with these advisories, or any revised advisories, as work progresses.

Additionally, as part of the IRA process conducted under the RCRA License, informational materials were developed and provided to river residents on reducing exposure to dioxin at home, reducing exposure to dioxin during agricultural activities, and on health issues associated with dioxin and furan exposure. These informational brochures can be found at http://www.michigan.gov/deq/0,1607,7-135-3307_29693_21234-70485--,00.html and at the local information repositories. EPA and MDEQ will evaluate whether additional efforts to disseminate this information are needed at this time.

85. One commenter felt the dioxin standards should be more rigorous.

In May 2009, EPA Administrator Lisa P. Jackson committed to accelerate EPA’s scientific work on dioxin. Her goal is to issue a final dioxin assessment by the end of 2010. In addition, EPA’s Office of Research and Development and Office of Solid Waste and Emergency Response have reviewed current dioxin cleanup guidance set by EPA and the states and have proposed draft

interim PRGs that are currently open for public comment (see <http://www.epa.gov/superfund/policy/remedy/sfremedy/remedies/dioxinsoil.html>).

It is very important to note that PRGs are not cleanup standards. They are chemical-specific concentration goals for specific media (e.g. soil, sediment, water and air) and land use combinations at sites. They serve as a target to use during the initial development, analysis, and selection of cleanup alternatives. Under CERCLA, PRGs may be used as a starting point to establish site-specific goals that may be higher or lower, depending on circumstances at the Site. EPA, in consultation with MDEQ, will use the best available scientific information, if the Agencies establish site-specific dioxin goals for the Site. The Settlement Agreement anticipates that response actions may be developed using performance measures, and that specific dioxin numbers may not be established for the Site.

X. REMEDY OPTIONS AND CLEANUP GOALS

86. Some commenters expressed concerns that the Settlement Agreement does not specify what the cleanup will be, what cleanup numbers will be used, which areas will be addressed, and how the cleanup will be done.

EPA and MDEQ have been clear from the start of negotiations that any Settlement Agreement would NOT specify the cleanup actions or cleanup numbers.

In a letter to the Saginaw Bay watershed community dated May 26, 2009, EPA Administrator Lisa P. Jackson addressed this issue, stating:

The order will not set cleanup levels or define the nature or stringency of the cleanup actions that ultimately will be required. These decisions will be made solely by EPA, not by Dow, in a public and transparent process that is informed by the requirements of CERCLA and EPA's extensive implementing guidance.

EPA, in consultation with MDEQ, will develop cleanup proposals in the future that will go through the appropriate public involvement process prior to finalizing decisions.

87. One commenter stated that once remedial decisions have been made, there should be provisions to reopen the decisions based on new information.

EPA's remedial action selection process is directed by CERCLA and the NCP. Under CERCLA and the NCP, EPA must review remedial actions where hazardous substances are left behind every five years. CERCLA and the NCP also provide for reopening remedial decisions based on new information.

CERCLA 121(c), as amended, provides:

If a remedial action is selected that results in any hazardous substances, pollutants, or contaminants remaining at the site, the remedial action shall be reviewed no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

The NCP at 40 CFR § 300.430(f)(4)(ii) provides:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The process and steps for amending a selected remedial action are spelled out in the NCP at 40 CFR § 300.825.

88. One commenter stated that the Site should be cleaned up so that fish are safe to eat.

EPA and MDEQ acknowledge this comment. Task 8.3.1 of the SOW outlines General Response Objectives, or cleanup objectives, to help reduce exposures to and transport of contaminated media for the purposes of achieving acceptable levels of human health and ecological risks. One of the General Response Objectives is: “Reducing current or potential future unacceptable human health risks to consumers of contaminated fish or wild game.”

89. Some commenters, including the Chlorine Chemistry Division of the American Chemistry Council, stated that the University of Michigan Dioxin Exposure Study should be fully considered when assessing cleanup options. They felt that the study might support a more limited cleanup for soils in the area. Some commenters also felt that the Michigan State University work on ecological effects and the dioxin exposure study conducted by MDCH should be emphasized when developing remedies.

EPA scientists have reviewed the University of Michigan Dioxin Exposure Study and have discussed the relevance of the study to the Site. EPA’s review can be found at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=214244>. EPA and MDEQ will consider all relevant information and studies available in making science-based decisions regarding the Site.

90. One commenter felt that programs should be established to allow fishers and game hunters to exchange their catch from areas within the advisories for clean fish and game. An alternative to the fish exchange would be the establishment of fishing areas stocked with clean fish. The same commenter felt that parks should be developed elsewhere in the area away from the contaminated areas.

As discussed in the response to comment 86, the Settlement Agreement does not include response actions. The commenter's suggestions are considered response actions. However, the Settlement Agreement does contain provisions that allow EPA and MDEQ to evaluate exposure control early in the process, and these suggestions will be considered as response options are developed.

91. *A few commenters expressed concern that the Settlement Agreement does not include language regarding relocation.*

Under the terms of the AOC, Dow has agreed to conduct a RI, FS, and RD at the Site. The AOC notes that if a removal or remedial action is required, that will be documented in an Action Memorandum (in the case of a removal action) or a Record of Decision (in the case of a remedial action).

It is possible that temporary relocation (in the case of a removal action or remedial action) or permanent relocation (in the case of a remedial action) will be required at the Site. CERCLA Section 101(24) grants explicit authority to conduct permanent relocations by defining remedial action to include, "...the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health..." 42 U.S.C. §9601(24). Additionally, the NCP, which constitutes CERCLA's implementing regulations, states that, "[t]emporary or permanent relocation of residents, businesses, and community facilities may be provided where it is determined necessary to protect human health and the environment", 40 CFR section 300, App. D(g). However, the decision regarding whether or not to include relocation as part of a response action at the Site will not be made until an Action Memorandum or Record of Decision is issued by EPA at a later date.

The ability to conduct permanent or temporary relocation is *not* tied to National Priority List status. However, including temporary or permanent relocation as part of a Superfund response action is unusual.

Temporary Relocation

The most recent EPA policy document regarding temporary relocation is titled "Superfund Response Actions: Temporary Relocations Implementation Guidance" ("Temporary Relocation Guidance")(April 2002). The Temporary Relocation Guidance details how the decision to select temporary relocation should be made, and states that there are three primary reasons why a Region may select temporary relocation as part of a response action:

1. Health threats—The contamination may pose an unacceptable threat to human health, or implementation of the response action may pose an unacceptable health risk to residents (e.g., there could be an increased chance of exposure during sampling, bulking, and excavation);
2. Safety of residents—The response action itself may pose an unacceptable risk to residents (e.g., use of heavy construction equipment too near a house could threaten the integrity of the structure or pose an attractive nuisance to children); and
3. Efficiency of the response action—The response action can be implemented more quickly and at a lower cost if residents are not in the area (e.g., work hours can be extended to include early morning and late evening hours when residents would normally be at home).

Temporary relocation should not be selected if health and safety risks or circumstances that pose an unreasonable inconvenience can be adequately addressed by other means without significantly increasing the overall cost or duration of the response action. However, on a case-by-case basis, in unusual situations, Regions may select temporary relocation when they think the response action creates too much of a disruption to residents (e.g., use of heavy, noisy equipment may keep them awake at night, they may not be able to easily access their homes during the response action, and they may have concerns over strong odors from the contaminated area).

Temporary Relocation Guidance at 11.

Permanent Relocation

The most recent EPA policy document regarding permanent relocation is titled “Interim Policy on the Use of Permanent Relocations as Part of Superfund Remedial Actions” (“Permanent Relocation Guidance”)(June 30, 1999). This document states the following:

Having proven our ability to successfully restore contaminated property at many Superfund sites, generally, EPA's preference is to address the risks posed by the contamination by using well-designed methods of cleanup which allow people to remain safely in their homes and businesses. This is consistent with the mandates of CERCLA identified above, and the implementing requirements of the NCP which emphasize selecting remedies that protect human health and the environment, maintain protection over time, and minimize untreated waste.

Because of CERCLA's preference for cleanup, it will generally not be necessary to routinely consider permanent relocation as a potential remedy component. Whenever permanent relocation is under consideration, EPA must ensure that the vacated properties do not pose a current or future risk to human health and the environment for those that may come in contact with the site. As a result, some type of cleanup or other response action generally will be needed to address the vacated properties.

The following list, although not inclusive, provides examples of the types of situations where permanent relocation may be considered. Generally, the primary reasons for conducting a permanent relocation would be to address an immediate risk to human health (where an engineering solution is not readily available) or where the structures (e.g., homes or businesses) are an impediment to implementing a protective cleanup. The examples are discussed in terms of how EPA could conduct an alternatives analysis applying several of the NCP nine criteria, leading to the consideration of permanent relocation as an appropriate option.

- Permanent relocation may be considered in situations where EPA has determined that structures must be destroyed because they physically block or otherwise interfere with a cleanup and methods for lifting or moving the structures safely, or conducting cleanup around the structures are not implementable from an engineering perspective. The methods may be technically unfeasible because they are too difficult to undertake or success may be too uncertain. Additionally, these methods may prove not to be cost-effective when compared with other alternatives that are protective of human health and the environment.
- Permanent relocation may be considered in situations where EPA has determined that structures cannot be decontaminated to levels that are protective of human health for their intended use, thus the decontamination alternative may not be implementable.
- Permanent relocation may be considered when EPA determines that potential treatment or other response options would require the imposition of unreasonable use restrictions to maintain protectiveness (e.g., typical activities, such as children playing in their yards, would have to be prohibited or severely limited). Such options may not be effective in the long-term, nor is it likely that those options would be acceptable to the community. For further discussion about developing remedial alternatives that include institutional controls see "Land Use in the CERCLA Remedy Selection Process."
- Permanent relocation may be considered when an alternative under evaluation includes a temporary relocation expected to last longer than one year. A lengthy temporary relocation may not be acceptable to the community. Further, when viewed in light of the balancing of tradeoffs between alternatives, the temporary relocation remedy may not be practicable, nor meet the statutory requirement to be cost-effective. Additionally, a shortage of available long-term rentals within the immediate area, may make any potential temporary relocation extremely difficult to implement. Permanent Relocation Guidance at 6-7.

92. *One commenter felt that other remedial alternatives, including biotech treatment, should be considered. The commenter expressed concern that if a cleanup method had not previously been used in Michigan, it would not be considered.*

The SOW at Task 5 includes provisions for treatability studies and pilot studies to evaluate different treatment technologies for the Site. These studies can be proposed by Dow, EPA or MDEQ.

The SOW at Task 8.4.3 states:

Each Segment-Specific Response Proposal may combine the use of removal (e.g., dredging, excavation), containment (e.g., covering and capping), control (e.g., institutional controls), treatment (e.g., density separation, contaminant fixation, addition of reactive amendments), monitored natural recovery, and other appropriate options for addressing sediments, banks and floodplains.

The SOW at Task 15 states:

The range of alternatives shall include, as appropriate, options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but which vary in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes-are managed; options involving containment with little or no treatment; options involving both treatment and containment; removal and disposal; natural recovery processes; and a no-action alternative.

EPA and MDEQ believe that the Agreement allows for consideration of a wide range of remedial alternatives. Furthermore, options may be considered whether or not they have been used in Michigan previously. However, all alternatives will be screened against established criteria, consistent with CERCLA and the NCP. The following criteria shall be used at a minimum – effectiveness, implementability, and cost – to determine whether they should be considered for the Site.

XI. SITE STATUS

93. Some commenters felt that the Site should be listed on the NPL. They are concerned that using the Superfund Alternative approach at the Site may not be sufficient and felt that actions taken would be more robust and/or effective if the Site were on the NPL.

In a letter to the Site community dated May 26, 2009, EPA Administrator Lisa P. Jackson addressed the issue of NPL listing of the Site. She stated:

I have carefully considered whether this site should be listed on the CERCLA National Priorities List and have decided that this step would cause further delay if pursued now. I am ready, however, to seek NPL listing if Dow at any time does not comply with requirements that EPA deems necessary for protection of public health and the environment. I will insist on including as part of our agreement with Dow a commitment

that Dow not challenge EPA's right to pursue NPL listing if we decide it is needed in the future.

Although we will not list the site on the NPL at this time, the actions we require of Dow under CERCLA will be based on well-established tools that EPA uses for all CERCLA cleanups. These tools will impose enforceable obligations on Dow – backed up by a range of penalties and sanctions – with minimal opportunities for time-consuming appeals to resolve disputes. While our preference is to use these tools on a negotiated basis, we will not hesitate to use them unilaterally if required. We also will undertake the work ourselves at Dow's expense if there is continued non-compliance with EPA directives. These strong enforcement tools will assure progress here after a history of delay in accomplishing significant cleanup.

While NPL listing would have the potential benefit of allowing EPA to spend taxpayer dollars on remedial action, I do not now believe that EPA will need to fund the remedy at this site. We fully expect Dow to provide that funding. Remedy selection would proceed in the same way as it would for any NPL cleanup, with EPA issuing a Record of Decision, after public input, setting the terms and conditions for cleanup. In addition, a CERCLA Order would not terminate RCRA Corrective Action obligations.

XII. MISCELLANEOUS COMMENTS

94. One commenter encouraged education of future generations about the contamination and expected cleanup, in an effort to learn from the past.

EPA and MDEQ acknowledge this comment. Both Agencies intend to learn from the past and expect that future actions will be guided by what is learned. Both Agencies also have a mission to inform the public, including future generations.

95. One commenter stated that government oversight in the past had addressed thermal pollution that affected the Tittabawassee River. The commenter felt that government oversight now would similarly help address the contaminant problem.

EPA and MDEQ acknowledge this comment.

96. One commenter supported the cleanup because of concerns with water clarity in Saginaw Bay.

EPA and MDEQ anticipate that cleanup in the watershed will reduce loadings of contaminants into Saginaw Bay. However, movement of sediments and solids may or may not occur as part of cleanup at the Site. This will be evaluated during decision-making. However, the question of water clarity is likely unrelated to Site-related issues. Saginaw Bay is shallow. The National

Oceanic and Atmospheric Administration and MDEQ's Water Bureau are looking into water quality and the concern with solids depositing on the beaches. There are a number of factors that could influence water clarity, including algae growth, wave and current patterns, and other inputs such as agricultural runoff. More information can be found at http://www.michigan.gov/deq/0,1607,7-135-7251_30353_42900---,00.html.

97. A few commenters raised concerns about the Dredged Materials Disposal Facility ("DMDF").

The Settlement Agreement and operation of the DMDF are unrelated. The U.S. Army Corps of Engineers ("Corps") runs the DMDF for purposes of managing navigational dredge materials from the lower Saginaw River. Over the past months, members of the community have approached EPA with a number of concerns about the Corps' Saginaw River dredging project and the DMDF. Many of the issues are outside EPA's jurisdiction, but EPA worked with the Corps to respond to community concerns.

Some area residents feared that contaminants suspended during dredging would move into Saginaw Bay and affect the municipal drinking water intakes there. EPA and the Corps have concluded that this would not occur. To help allay concerns, EPA sampled drinking water being drawn from Saginaw Bay when there was no dredging activity, to establish background conditions. Samples were collected of both the water entering the municipal water treatment systems and of the treated water sent to the local communities. EPA analyzed the samples for a wide range of chemicals including dioxins, furans, volatile organics, semi-volatile organics, PCBs, pesticides and metals and found no contamination. The results from this background testing are available on EPA's Web site. EPA is planning another round of sampling in spring 2010 when the Corps is expected to resume dredging.

Other public concerns about the DMDF focused on several potential problems: odors; effects on wildlife; standing water allowing mosquitoes to breed; and residential well contamination. EPA asked the Corps to address these issues. After a series of meetings, the Corps developed a fact sheet that EPA believes is responsive to the concerns that were raised. The Corps' fact sheet is online at http://bit.ly/usace_dmdf.

ACRONYM LIST

AOC – Administrative Settlement Agreement and Order on Consent
ARAR – applicable or relevant and appropriate requirement
ATSDR – Agency for Toxic Substances and Disease Registry
CAG – community advisory group
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
cfs – cubic feet per second
CLP – Contract Laboratory Program
COCs – contaminants of concern
COI – contaminant of interest
CQAP – Construction Quality Assurance Plan
CSM – conceptual site model
DMDF – Dredged Materials Disposal Facility
DQO – data quality objective
EE/CA – engineering evaluation and cost analysis
EFT – Electronic Funds Transfer
EPA – United States Environmental Protection Agency
FS – feasibility study
FSP – Field Sampling Plan
GIS – geographic information system
HHRA – Human Health Risk Assessment
HSP – Health and Safety Plan
IC – Institutional Control
IEUBK – Integrated Exposure Uptake Biokinetic
IRA – interim response action
MDAG – Michigan Department of Attorney General
MDCH – Michigan Department of Community Health
MDEQ – Michigan Department of Environmental Quality
NCP – National Oil and Hazardous Substances Pollution Contingency Plan
NELAP – National Environmental Laboratory Accreditation Program
NPL – National Priorities List
NREPA – Natural Resources and Environmental Protection Act
NRDA – Natural Resource Damage Assessment
NTCRA – Non-Time Critical Removal Action
O & M – operation and maintenance
OMMP – Operation, Maintenance and Monitoring Plan
OSC – On-Scene Coordinator
OSHA – Occupational Safety and Health Administration
OU – Operable Unit
PDI – pre-design investigation
PEAS – Pollution Emergency Alerting System
PRGs – preliminary remediation goals
PRP – potentially responsible party
QAPP – Quality Assurance Project Plan
QA/QC – quality assurance/quality control

QMP – Quality Management Plan
RA – remedial action
RAGS – Risk Assessment Guidance for Superfund
RAO – Response Action Objective
RCRA – Resource Conservation and Recovery Act
RD – Remedial and/or Response Design
RI – remedial investigation
RIWP – Remedial Investigation Work Plan
ROD – record of decision
RPM – Remedial Project Manager
SAP – Sampling and Analysis Plan
SMOA – Superfund Memorandum of Agreement
SOPs – standard operating procedures
SOW – Statement of Work
TAG – technical assistance grant
TAP – Technical Assistance Plan
TCDD – 2,3,7,8-tetrachlorodibenzo-p-dioxin
TEF – toxic equivalency factor
TEQ – toxic equivalence concentration
UAO – unilateral administrative order
UFP-QAPP – Uniform Federal Policy for Quality Assurance Project Plans
UFP-QS – Uniform Federal Policy for Implementing Environmental Quality Systems
U.S. EPA – United States Environmental Protection Agency
WHMP – MDEQ Waste and Hazardous Materials Division