
Revised Scope of Work Midland Area Soils

Prepared for
The Dow Chemical Company

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Midland, Michigan 48667

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CH2MHILL

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Abbreviations and Acronyms

| | |
|----------|---|
| CA | corrective action |
| CSM | Conceptual Site Model |
| DQO | data quality objective |
| Facility | The Dow Chemical Company's Midland Plant |
| IRA | Interim Response Activity |
| License | Dow's Part 111 Hazardous Waste Facility Operating License |
| MDEQ | Michigan Department of Environmental Quality |
| NOD | Notice of Deficiency |
| PCOI | potential constituent of interest |
| QA | quality assurance |
| QC | quality control |
| RCRA | Resource Conservation and Recovery Act |
| RI | Remedial Investigation |
| SAP | Sampling and Analysis Plan |
| SOP | standard operating procedure |
| SOW | Scope of Work |

Revised SOW: Midland Area Soils

1. Purpose and Scope

This Scope of Work (SOW) is being submitted pursuant to Dow's Part 111 Hazardous Waste Facility Operating License (License), issued on June 12, 2003. Condition XI.B.3., requires Dow to submit "... a scope of work (SOW) for conducting a Remedial Investigation (RI)..." to Michigan Department of Environmental Quality (MDEQ) for review and approval. This SOW addresses the Midland Area Soils, one of the areas identified in Condition XI.B.2 of the License. A separate SOW will be submitted by Dow for the Tittabawassee River Sediments and Floodplain.

This SOW presents the general processes Dow will use to develop the RI and subsequent corrective actions (CAs). It also outlines the steps involved in the implementation of the RI, which will be elaborated upon in the RI Work Plan that will be submitted to MDEQ for review and approval following approval of this SOW. The requirements for RIs are generally set forth in R 299.5528 of the administrative rules for Part 201 of Act 451 (hereafter referred to as R 299.5528).

The License also requires Dow to propose Interim Response Activities (IRAs) and a Public Participation Plan along with the SOW. This SOW presents IRAs that will be implemented immediately to address potential exposure pathways that have been identified from existing information, as well as IRAs that will be done to develop information to determine whether there is an exposure concern. It also provides an outline of the basis and processes upon which the specific RI Work Plan and procedures will be based.

The SOW has been revised to incorporate work Dow has completed since initial submittal and to reflect responses to agency and public comments received from MDEQ between August 14, 2003 and the Notice of Deficiency transmitted to Dow on December 12, 2003. The organization of the document has also been revised such that the SOW sections correspond directly to the conditions of the License (e.g. Section III: Interim Response Actions (XI.B.3.(a)) relates to Condition XI.B.3.(a) of the License).

2. Scope of Work Objectives

The objectives of this SOW are to:

- Present the basic elements of the immediate IRAs and the RI
- Result in conditions that are protective of human health and the environment
- Meet the requirements of the applicable sections of Parts 111 and 201 of Act 451, as well as relevant Resource Conservation and Recovery Act (RCRA) regulations and guidance
- Present the implementable IRA Work Plans as an attachment

- Clearly outline the processes, schedules, and prioritization Dow will use to develop and implement IRAs and the RI Work Plan, consistent with the process outlined in the License
- Meet the requirements of the License

This SOW describes an overall framework for the RI Work Plan. Specific technical details for the RI Work Plan and other actions will be developed and presented in separate work plans, and submitted to MDEQ for review and approval in accordance with the requirements of the License.

3. Interim Response Activities (XI.B.3.(a))

3.1 Objective

IRAs are short-term actions that are taken to control potentially unacceptable risk while site characterization is underway or before a final remedy is selected.

3.2 IRAs Identified to Date

Pursuant to Condition XI.B.3.(a) of the License, Dow will conduct IRAs as necessary for the protection of public health.

The following IRAs have been identified to date for the Midland Area Soils based on discussions with MDEQ and without admissions by Dow as to the need for such measures:

- Communications
 - Public Information Materials
 - Community Information Centers
 - Activity Advisory: Disturbance of Soil/Sediment
 - Advisory Signage
- Midland Soils
 - Corning Lane
 - Areas Proximal to the Facility

Further description of the IRAs proposed for the Midland Soils area are provided in Attachments A and B of this SOW, along with detailed work plans that can be implemented immediately upon MDEQ approval.

3.3 IRA Categories

Dow has identified the following categories for IRAs:

- Category 1: IRAs in the form of actions taken with the objective of reducing potential exposure
- Category 2: IRAs that may identify sub-areas for prioritized investigation and/or evaluation, from information that may be available before the overall RI is completed.

During implementation of the RI, additional IRAs may be identified and the following process for review of potential future IRAs is proposed:

- The need for the IRA is identified by Dow or MDEQ.

- Dow may elect to implement an IRA at any time. Dow will communicate with MDEQ and proceed with the IRA, while documenting the effort appropriately for the purpose of obtaining MDEQ approval of the action.
- If immediate action is not required, upon concurrence with MDEQ, Dow may submit an IRA Work Plan for review and approval as provided for in Condition XI.G. Once the IRA Work Plan is approved, it will be implemented as provided for in Condition XI.G and in accordance with the MDEQ approved work plan.

4. Proposed RI Approach, Phasing, and Prioritization of Work (XI.B.3.(b))

The RI Work Plan will be developed to meet the applicable requirements of the Operating License, Part 111 R 299.9629 and R 299.5528. As written in R 299.5528.(1), *“The purpose of a remedial investigation is to assess site conditions in order to select an appropriate remedial action, if one is required, that adequately addresses those conditions. The remedial investigation identifies the source or sources of any contamination and defines the nature and extent of contamination originating from that source. Defining the nature and extent of contamination includes identifying contamination that may have migrated beyond the facility boundary of the source property in excess of applicable generic residential cleanup criteria...”*

This section outlines Dow’s proposed approach to development of the RI. The table below provides an overview of how the elements of R 299.5528 are being addressed in this SOW and in the RI Work Plan. Each of the elements noted below will be considered and addressed within the RI Work Plan, and the RI scope will be designed to provide information necessary for appropriate evaluations.

| R 299.5528 Section | Requirement | Proposal to Address |
|---------------------------|---|---|
| (3)(a) | Definition of the nature and extent of contamination... | The RI will be designed to appropriately define “nature and extent.” Section VI of this SOW outlines how investigation areas will be identified, and the RI Work Plan will present a detailed scope of the investigation. |
| (3)(b) | Risks to the public health, safety, and welfare and to the environment and natural resources, including the identification of any water wells.... | The Current Conditions Report section of the RI Work Plan will make a preliminary evaluation of risk, based on existing information, and the RI will be designed to provide the additional information necessary to better evaluate potential risk. The Current Conditions Report will also identify all existing water wells and wellhead zones, and the RI will evaluate those found to be within the bounds of the investigation area. |

| R 299.5528 Section | Requirement | Proposal to Address |
|-------------------------------|--|--|
| (3)(c) | Relevant exposure pathways. | The Current Conditions Report section of the RI Work Plan will present a preliminary list of all potential exposure pathways, and the investigation will obtain data to show which pathways are complete and which pathways are not relevant to future corrective action work. |
| (3)(d) | All of the following with respect to hazardous substances that are present: (i) Amount, (ii) Concentration, (iii) Hazardous properties, (iv) Environmental fate, (v) Bioaccumulative properties, (vi) Persistence, (vii) Mobility, and (viii) Physical state. | The Current Conditions Report will present a preliminary Conceptual Site Model (CSM) of conditions in the offsite investigation area, based on available information. The RI will be designed to provide additional information that may be needed to complete the evaluation. Details regarding the scope of the investigation will be presented in the RI Work Plan. |
| (3)(e) | All of the following with respect to the physical setting of the Facility: (i) Geology, (ii) Hydrology, (iii) Hydrogeology, (iv) Depth to saturated zone, (v) Hydrologic gradients, (vi) Proximity to aquifers, (vii) Proximity to surface water, (viii) Proximity to floodplains, and (ix) Proximity to wetlands. | The Current Conditions Report will present a preliminary CSM of conditions in the offsite investigation area, based on available information. The RI will be designed to provide additional information that may be needed to complete the evaluation. Details regarding the scope of the investigation will be presented in the RI Work Plan. |
| (3)(f) | Current and potential groundwater use. | The Current Conditions Report will summarize all available information on current and potential groundwater use and the RI will obtain information to fill data gaps as necessary. |
| (3)(g) | Source identification and evaluation. | The Current Conditions Report will identify potential sources, if present, and the RI Work Plan will provide detailed investigation plans as appropriate. |
| (3)(i) | The likelihood of future releases if the hazardous substances remain at the Facility. | The potential for future releases from offsite sources will be evaluated during the RI by obtaining information on nature and extent, as well as fate and potential transport mechanisms. Details will be provided in the RI Work Plan. |
| (3)(j) | The extent to which natural or human-made barriers currently contain the hazardous substances and the adequacy of the barriers. | The RI will identify whether such barriers exist and the extent to which containment is provided. The Work Plan will describe the scope of the evaluation in detail. |

| R 299.5528 Section | Requirement | Proposal to Address |
|-------------------------------|--|---|
| (3)(k) | The impact of any planned demolition activities on conditions at the Facility. | During the Current Conditions Report, Dow will identify planned activities within the offsite area, and address this point if applicable. It should be noted the majority of property within the offsite area is not owned by Dow, and property owners are under no obligation to notify Dow of future demolition activities. Further, Dow notes that this condition is more applicable to a typical operating facility than the offsite areas being characterized under this RI. |
| (3)(l) | The extent to which hazardous substances have migrated or are expected to migrate from the area of release | Past and future migration potential from offsite areas will be investigated during the RI by obtaining information on nature and extent, as well as fate and potential transport mechanisms. Details will be provided in the RI Work Plan. |
| (3)(m) | An evaluation of injury to, destruction of, or loss of natural resources related to the release. | The Current Conditions Report will present a preliminary evaluation based on relevant available information on natural resources within the study area. The RI will be designed to provide the information necessary to fill existing data gaps. Ecological Risk Assessments (ERAs) will be performed if further evaluation is necessary. |
| (3)(n) | Contribution of the hazardous substances at the Facility to contamination of the air, land, or water. | This will be assessed by the RI as part of the definition of nature and extent. |
| (3)(o) | Legally applicable or relevant and appropriate state and federal requirements. | These will be cited in the RI Work Plan, as well as relevant guidance. |
| (3)(p) | Sampling design and rationale for parameter selection. | The RI Work Plan will provide details on both of these points. Sampling designs will be presented in site-specific work plans and will include data quality objectives. The rationale for parameter selection will consider the Potential Constituents of Interest list presented in the Current Conditions Report, as well as site-specific sampling objectives. |

| R 299.5528 Section | Requirement | Proposal to Address |
|-------------------------------|--|---|
| (3)(q) | A description of monitoring well construction. | This will be provided, along with descriptions of other methodologies and protocols, as one of the Standard Operating Procedures (SOPs). These SOPs are under development, they will be provided to MDEQ for review, and will be referenced by all sampling plans as appropriate. |
| (3)(r) | A description of, and rationale for, any geophysics techniques used in the investigation. | Dow does not anticipate using geophysical techniques, however, the RI Work Plan will provide details on whatever specific sampling and investigation techniques will be used during investigations. |
| (3)(s) | Sample collection and preparation procedures. | This will be provided, along with descriptions of other methodologies and protocols, as one of the SOPs. These SOPs are under development, they will be provided to MDEQ for review, and will be referenced by all sampling plans, as appropriate. |
| (3)(t) | Identification of the laboratory or laboratories responsible for sample analysis. | The Core Program Plans being drafted by Dow will include a Program Management Plan that will identify key contractors involved with the RI. |
| (3)(u) | Laboratory methods used to generate all remedial investigation data | The Core Program Plans being drafted by Dow will include a QAPP to address laboratory issues, and SOPs and the site-specific sampling plans will cite specific analytical methods to be used. |
| (3)(v) | A description of any statistical methods used to evaluate laboratory data relative to cleanup criteria | The RI Work Plan will describe the proposed approach to data evaluation. Dow will also provide a work plan for the development of site-specific cleanup criteria to MDEQ for review and approval, which will provide a detailed description of the methods proposed for use. |
| (3)(w) | Other matters appropriate to the Facility | Will be identified and addressed as necessary. |

4.1 Proposed Phasing

Work to be performed under the Offsite CA program will be generally phased as follows:

4.1.1 Perform IRAs

The first phase of offsite corrective action work will be to implement IRAs (described in detail in Appendices A and B). The primary objective of these IRAs is to identify and if necessary mitigate potential human exposures during this interim period prior to commencement of the

RI. Additional objectives of the Midland IRA will be to obtain information regarding conditions in the four IRA areas located north and east of the Midland Plant for use in the development of site-specific cleanup criteria and RI scoping. The IRA information will be incorporated into the Current Conditions Report and preliminary CSM sections of the RI Work Plan.

4.1.2 Development of Site-specific Cleanup Criteria

While the IRAs are being conducted, Dow will be drafting the proposed approach to the development of site-specific cleanup criteria (discussed further in Section VIII of this SOW). The approach will be reviewed and submitted to MDEQ for review. Site-specific cleanup criteria will include information obtained during implementation of the IRAs. The proposed criteria will also be submitted to MDEQ for review and approval, and will be considered in the development of the RI Work Plan as well as in the data evaluation section of the RI Report.

4.1.3 RI Work Plan Preparation

Dow will prepare an RI Work Plan for the Midland Area Soils in accordance with the Operating License and Part 201 R 299.5528(3). During the implementation of the RI Work Plan, it may be necessary to propose revisions to the items shown below to appropriately reflect new information being developed during the IRAs or other work. The RI Work Plan will include an outline of the risk-based decision framework that will be used and will incorporate, if and as appropriate, site-specific cleanup criteria (as described further in Section VIII of this SOW). The RI Work Plan will consist of the following main components:

- A Current Conditions Report
- A Preliminary Conceptual Site Model (CSM)
- Site-Specific Sampling and Analysis Plans (SAPs)
- Core Program Plans

4.1.3.1 Current Conditions Report

As part of the RI work planning process, relevant existing data will be assembled, reviewed and summarized in a Current Conditions Report. The Current Conditions Report will integrate information relevant to the Midland Area Soils RI into a preliminary Conceptual Site Model and will include, as appropriate, data on historical operations, releases that have or may have had impact beyond the Facility boundary, the implementation of emission controls, physical conditions, fate and transport, potential exposure pathways, and potential receptors. The Current Conditions report will also summarize the regional location, pertinent boundary features, general physiography, topography, and current land use for Midland Area Soils, and will identify the locations of prior environmental sampling.

The Current Conditions Report will include map(s) that will depict the following:

- General geographic location
- Major parcels and ownership information
- Topography, drainage patterns, buildings, pavement, vegetation
- The location of previous sampling events and IRA work
- Color coding indicating the Michigan land use categories of property and the current zoning
- Existing information, if any, on ecological conditions

- A preliminary description of the geology, soils, physiography, and meteorology for the City of Midland

One objective of the Current Conditions Report will be to evaluate existing data, including IRA data as available in order to scope and prioritize remedial investigations. Initial investigation efforts will be focused on areas that may be identified to better understand the nature and extent of contamination and to determine the need for and focus of additional studies.

The Current Conditions Report will describe the existing information on the presence of dioxins and furans in the City of Midland. It will also identify other Potential Constituents of Interest (PCOIs), as appropriate, based on existing and available information such as:

- Relevant operational information
- Monitoring data
- Analytical data on Midland Area Soils
- Data associated with relevant historic releases that have or may have had impact beyond the Facility boundary

The Current Conditions Report will also describe constituents that will be included on the PCOI list since existing data may be insufficient to warrant eliminating constituents from consideration prior to the RI.

4.1.3.2 Preliminary Conceptual Site Model

A preliminary Conceptual Site Model (CSM) will be developed within the Current Conditions Report to integrate existing information and guide the identification of specific sampling locations. This will be a “living” model, and will be updated over time as new information is received from RI and/or IRA activities. The model will integrate information on physical site conditions, historic releases, potential migration pathways, land use, existing IRA and other analytical data into an initial picture of the investigation area. etc. and will identify data gaps to be addressed within the RI. The model will provide the basis for:

- The overall scope of the investigation
- Identification of specific areas to be investigated
- Data Quality Objectives (DQOs)
- Site-specific analyte lists

4.1.3.3 Site-Specific Sampling and Analysis Plans

As the Current Conditions Report is being finalized, Dow will be developing RI objectives and strategies for use in the design of site-specific sampling plans. These objectives and strategies will be described in the RI Work Plan, and will include:

- Process for development of DQOs as well as a list of DQOs expected to apply to all sampling activities.
- Identification of investigation objectives.
- A description of the proposed approach to sampling, to ensure that representative data sets are collected (note that approaches are anticipated to include a combination of biased/judgmental and statistical methodologies).
- Analyte lists (based on the PCOIs identified in the Current Conditions Report).

- Developing information that may be used for the selection and evaluation of remedial action alternatives
- The decision process proposed to evaluate data and determine appropriate next steps.

Site-specific SAPs will be prepared to reflect the overall RI objectives and strategies. These SAPs will provide the site-specific details associated with field sampling efforts, and will include:

- Sampling event objective
- Site-specific DQO(s)
- Description of sampling effort
- Sampling locations (figure with locations shown on a GIS aerial photo base map)
- Sample details (a matrix indicating media to be sampled, sampling interval, and analytes)

4.1.3.4 Core Program Plans

Dow is currently drafting several Core Program Plans for use during IRA and RI activities. These plans will provide the baseline for multiple program efforts, and will be incorporated by reference into future work plans and documents. This will allow Dow to expedite and streamline the development of future deliverables, and will assure consistency across program activities. These Core Program Plans will include:

- **Project Management Plan:** The Project Management Plan will provide a more detailed discussion of the approach to management of the RI, as well as personnel expected to be responsible for conducting various elements of work. The Project Management Plan will also include:
 - A description of qualifications of the personnel performing or directing the RI, including contractor personnel
 - The overall management approach to the RI
- **Data Collection Quality Assurance Project Plan (QAPP):** The QAPP will document monitoring procedures, sampling procedures, field measurements, and sample analysis performed during the investigation to characterize the environmental setting, to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. The Data Collection Strategy section of the Data Collection Quality Assurance Project Plan will include the following:
 - Description of the intended uses for the data and of the necessary level of precision and accuracy for these intended uses
 - Description of methods and procedures to be used
 - Description of the rationale used to assure that the data accurately represent a characteristic of a population, or an environmental condition. Examples of factors which will be considered and discussed include:
 - Environmental conditions at the time of sampling
 - Number of sampling points
 - Representativeness of selected media
 - Representativeness of selected analytical parameters

- **Data Management Plan:** The Data Management Plan will outline the procedures for recording and tracking investigation data and results and will include specifications for database setup and management. This plan will identify and set up data documentation materials and procedures.
- **Health and Safety Plan:** This plan will describe the overall objectives and procedures to be followed during implementation of field activities. Individual Sampling and Analysis plans will provide additional, site-specific Health and Safety Plans with details such as a list of hazards associated with the sampling event and area, appropriate Personal Protective Equipment, emergency contact information, routes to nearest medical facilities, etc.
- **SOPs:** SOPs are currently being developed and will describe the standard practices and methodologies and analytical reporting limits to be used across all RI work to ensure consistency and appropriate level of data quality. These SOPs will include sampling protocols for various environmental media, monitoring well details and appropriate analytical methods.

Dow anticipates providing working drafts of many of the Core Program Plan sections to MDEQ for review prior to submittal of IRA sampling plans. The SOPs will also be provided to MDEQ for review as they become available. The objective of providing these submittals early will be to allow MDEQ sufficient time to review the proposed plans, thus expediting the overall schedule such that fieldwork under an approved work plan can begin as soon as possible.

4.1.4 Implement the MDEQ-Approved RI Work Plan

While MDEQ is performing its final review of the RI Work Plan, Dow will begin implementation preparations, such as:

- Prequalification of sampling contractors and analytical laboratories
- Identification of permits, if any, needed to perform work
- Negotiations for property access, where necessary
- Logistical planning for field equipment, sample handling, etc.

Once MDEQ has approved the RI Work Plan and appropriate site access (where necessary) has been obtained, Dow will provide MDEQ with notification of the field activities five working days prior to the scheduled start date and proceed with activities such as:

- Obtaining necessary utility clearances
- Procurement of materials and equipment
- Finalize contracts for sampling contractors and analytical laboratories
- Mobilization of sampling contractors and field teams

4.1.5 Report Preparation

Once work has been completed for a given IRA or for the RI work, the following tasks will be done, as appropriate, to prepare a draft report:

- Perform data validation to ensure appropriate quality assurance and quality control (QA/QC) and to verify that DQOs were met
- Evaluate data according to the decision process outlined within the RI Work Plan

- Identify areas for which no further action is required
- Identify areas for which further action is required
- Refine the description of contaminants, based on the new information
- Update the Conceptual Site Model to refine the understanding of physical site conditions, nature and extent of contamination, potential exposure pathways, fate and transport information, and potential receptors.
- Prepare a draft Report in accordance with the work plan schedule and submit it for MDEQ review and approval pursuant to Condition XI.B.5. of the License
- RI Final Report shall document compliance with the approved RI Work Plan and support further CA at the Facility, if needed

Although not specifically required under Condition XI.B of the License, Dow will submit bimonthly RI Progress Reports to MDEQ as required by Condition XI.F.6 of the License. The objective of these progress reports will be to communicate interim information (general status and, as appropriate, results of activities, complete and validated analytical data packages, etc.) to MDEQ and the public during the overall RI. This will allow MDEQ and the public to have access to the results of completed tasks while other components of the RI are being finalized and integrated into overall data and risk evaluations.

4.2 Proposed Prioritization Process

The following priorities for the Midland Area Soils Offsite Corrective Action have been established using a risk-based approach:

1. Implement the attached IRAs immediately to begin understanding exposure potential and initiate activities for reducing exposure potential, as necessary and in accordance with the Interim Action Decision Matrix, and to develop a better understanding of site conditions in the IRA areas.
2. Develop site-specific cleanup criteria such that RI data can be evaluated in an appropriate context for the purpose of determining the need for, and scope of, remedial actions.
3. Perform the RI field sampling, analytical and data evaluation to identify exceedences of site-specific cleanup criteria and determine the nature and extent of contamination.
4. Determine, based on RI results, if ecological risk evaluations are necessary for the Midland area.

Portions of the RI sampling work may be prioritized based on the results of a forward looking risk assessment of the existing data on the Midland Area Soils and an evaluation of the data gaps. The purpose of the forward looking risk assessment would be to allow an evaluation of areas where the forward looking risk assessment predicted the highest risks may be present. The initial prioritization may change based on the conclusions that are drawn from data that is collected (iterative approach). RI activities timing may also be affected by the need to obtain permission for access to property, the requirement to obtain permits from governmental agencies, weather and other conditions which Dow cannot control.

4.3 SOW Schedule

The schedule provided in Attachment C illustrates the sequence and duration of activities currently envisioned for the IRA and RI work described within this SOW. The schedule also notes tentative dates for several project milestones, the actual milestones may be reached earlier or later than the dates shown. These dates are considered tentative because they are based on presumed timeframes for the public participation process, MDEQ review and approval and other factors outside of Dow's control, such as the length of property access negotiations and weather.

Dow proposes that specific compliance dates for subsequent submittals be established as follows:

| Offsite Corrective Action Document | Submittal Deadline |
|---|--|
| Implementation of IRAs | Within 10 days of receipt of MDEQ final approval |
| RI Work Plan | Within 45 days of receipt of MDEQ final approval of site-specific cleanup criteria |
| RI Report | Within 60 days after completion of the RI |

5. Potential Exposure Pathways Without Part 201 Generic Criteria (XI.B.3.(b)(i))

The following land use, receptors, and potential exposure pathways may be applicable to the Midland Area Soils work, and currently do not have Part 201 Generic Criteria. Additional pathways (based on land use) may be added in the future as warranted by information obtained during the IRAs and RI. Note that pathways associated with higher-level food chain exposures will be considered, as necessary, under appropriate human health risk assessments.

- Media
 - Soil
 - Air
- Land Use
 - Recreational
 - Limited Residential
- Utility/construction worker receptor
- Ingestion of food grown in backyard gardens
- Exposure Pathways—inhalaion/ingestion of household dust

6. Proposed Areas for Investigation (XI.B.3.(b)(ii))

Dow will identify the specific areas to be investigated in the RI Work Plan. Investigation areas will be identified with consideration to the preliminary Conceptual Model, as described in Section IV of this SOW and existing sampling data.

Based on information collected by Dow, USEPA and MDEQ, the primary transport mechanism for offsite releases to Midland Area Soils identified to date has been through windborne particulate distribution of historic air emissions from the Facility. Other potential transport mechanisms will be evaluated in the CCR, and will be included if, and as appropriate in the RI Work Plan.

Specific investigation areas will be based on the following factors:

1. Relationship to the Facility (distance and direction, down wind versus upwind, based on wind rose). Based on information from the wind rose developed for the Facility, investigations are expected to focus on areas to the north and east of the Facility.
2. Information such as current and historic land use and site development activities will be evaluated in an attempt to identify areas that are relatively “undisturbed” and would therefore provide a clearer picture of potential contaminant distribution.
3. Current and historic wind rose and air transport modeling information (developed to support previous air permits for the Facility) will be evaluated to identify the expected direction and distance of potential migration pathways.
4. The results of IRA sampling.

7. Outline of Process to Identify and Evaluate Potential Continuing Sources (XI.B.3.(b)(iii))

The CCR will evaluate existing information to determine if there are continuing sources of dioxins, furans, or other PCOIs that may impact Midland area soils. The RI will be coordinated with the onsite portions of the Operating License, which already require Dow to identify the potential for continuing sources. This may include coordination with work being done under License Conditions X.K. Ambient Air Monitoring, X.L. Soil Monitoring Programs, and XI.R. Source Control.

8. Process for Establishing Site-Specific Cleanup Criteria (XI.B.3.(b)(iv))

Condition XI.B.3.(b)(iv) of the License states:

“The licensee has the option to propose steps to develop site-specific cleanup criteria, including proposed use of probabilistic risk assessment methods. Site-specific cleanup criteria may be developed as allowed pursuant to Part 111 of Act 451 and the associated administrative rules, provided that they are not less stringent than allowed pursuant to the provisions of RCRA. The licensee may include a description of the proposed steps to develop site-specific criteria in the SOW. A prerequisite to MDEQ approval of the site-specific criteria would be implementation

of associated requirements of Part 201 of Act 451 and the applicable administrative rules.”

As previously mentioned, Dow will be developing and presenting a proposed process for the development of site-specific cleanup criteria for use in the evaluation of RI data and the determination of final remedial actions. Dow intends to evaluate all available options for the development of site specific cleanup criteria, including the use of probabilistic risk assessment methods, and will provide the proposed approach for MDEQ review.

Dow will provide work plans describing the scope, steps, methodologies and protocols to be followed. The preliminary schedule for preparation and submittal of the Site-Specific Cleanup Criteria Work Plans is shown in the SOW Schedule, Attachment C.

9. Provisions for Conducting an Ecological Risk Assessment (XI.B.3.(b)(v))

The need for, and scope of, an ecological risk assessment will be evaluated during the RI. The CCR will summarize existing ecological data, if available, and the RI Work Plan will outline other activities to identify whether an ecological assessment is warranted for the Midland area. The conclusions of this initial assessment, along with either a recommendation to perform an ecological risk assessment or justification as to why an ecological risk assessment is not needed, will be presented for MDEQ review and approval in the RI Work Plan.

10. Proposed Plan for Public Participation (XI.B.3.(c))

The Communications IRA in Attachment A outlines Dow's plan for making information available to the public through Community Information Centers and the distribution of Public Information Materials. In the future, specific actions will be taken based on, in part, the level of community interest in various tasks and what is needed to keep the public apprised of significant developments in the RI process. In general, the following activities are envisioned to be part of a public participation program:

- **Fact Sheets.** Dow will prepare Fact Sheets to be reviewed and approved by MDEQ that will address key topics and milestones (e.g., the CA process, IRAs, the RI Work Plan, RI Findings, etc.). These Fact Sheets will be made available in the document repository and in the Community Information Centers after MDEQ approval.
- **Mailing List.** Dow will utilize the “Facility” mailing list (physical addresses and e-mail addresses) maintained by the MDEQ to facilitate communication of events and information related to the RI process. The current Facility mailing list will be included in the RI Work Plan as an Appendix.
- **Document Repository.** It is expected that the Midland Grace A. Dow Memorial Library will be the official Document Repository and the location of the Community Information Center.
- **Public Meetings.** Dow will arrange for Public Meetings in Midland to be held at times and places convenient to the public. Dow will coordinate the scheduling and planning of these meetings with MDEQ.

Public Meetings may be scheduled in conjunction with the initial submission and following approval of Dow's written submissions of work plans and significant reports. Public Meetings may be scheduled in coordination with any License modification activities.