FACT SHEET

Approved Work Plan for Cleanup of Midland Area Soils
Updated June 1, 2012

- Background:
  - Dioxins are a family of chemicals comprising 75 different types of dioxin compounds and 135 related compounds called furans. They are unintended by-products of certain industrial processes and also occur due to activities such as backyard burning of household trash.

  - Dioxin contamination in the city of Midland is the result of airborne emissions from historic waste management practices at The Dow Chemical Company Michigan Operations (Dow). Emissions released into the air from incinerators and Dow's manufacturing operations contained dioxins, which ended up in the soil downwind of the plant. Dioxin emissions from Dow have decreased dramatically over the years as processes were modernized. Dow's rotary kiln incinerator now enables 99.999 percent efficiency in eliminating chemical emissions.

  - Soil samples collected in the city of Midland indicate that, in some locations, there is dioxin contamination above Michigan's generic residential cleanup level and possibly above the Midland Action Level of 250 parts per trillion (ppt) for properties in the city of Midland.

- Dow will implement cleanup in the city of Midland in accordance with a Midland Area Soils Work Plan (Work Plan) approved by the Michigan Department of Environmental Quality (DEQ) on June 1, 2012, in accordance with Dow's Hazardous Waste Management Facility Operating License to address historic releases of dioxin and other chemicals to Midland soils in defined residential areas (see map of the Initial Boundary of Resolution Area on the next page). The final boundary of the Resolution Area will be based on the results of the remediation design sampling program.

- The Work Plan has three main components:
  - **A Midland Action Level for dioxin of 250 ppt.** This Midland-specific soil cleanup level will be used as the action level for determining whether residential or residential-like property will need a cleanup. Local data was used to determine this action level.

  - **An incremental composite soil sampling approach.** The soil sampling methodology is described in the Work Plan and will be used to determine which properties in identified neighborhoods require cleanup.

  - **A remediation approach.** The cleanup will be the removal of 12 inches of soil and replacement with clean soil including a new lawn and landscaping. Specific details, including preservation of trees and shrubs, will be worked out with each property owner.

- Additional Information:
  - Property with 250 ppt or less will not be considered contaminated under Michigan law with respect to releases from Dow.

  - Properties outside the final Resolution Area are presumed to be below 250 ppt.

  - The remediation schedule for properties in the Resolution Area will be designed to minimize the time between sampling of a property and the completion of a cleanup for a property that has data above the action level.

- Following is the anticipated timeline:
    - The Work Plan was approved on June 1, 2012.
    - Design sampling for the first-year neighborhoods will begin in June 2012.
    - Necessary cleanup work for these neighborhoods will begin by late summer and be completed in 2012. Additional neighborhoods will be completed on the schedule in the approved Work Plan, which could take as long as six years.

- More information about the cleanup process and the approved Work Plan can be found at http://www.michigan.gov/deqdioxin and www.midlandresolution.com or by contacting Mr. Al Taylor, Resource Management Division, DEQ, at 517-335-4799 or taylora@michigan.gov.

Current Boundary of Midland Soils Resolution Area