

EPA
PRESENTATION
Plan for Vapor Intrusion
Investigation

Motors Liquidation Co.
(MLC)
Moraine Facilities Site

September 30, 2010

Overview

- History and site status
- Vapor intrusion and investigation process
- Evaluation and schedule

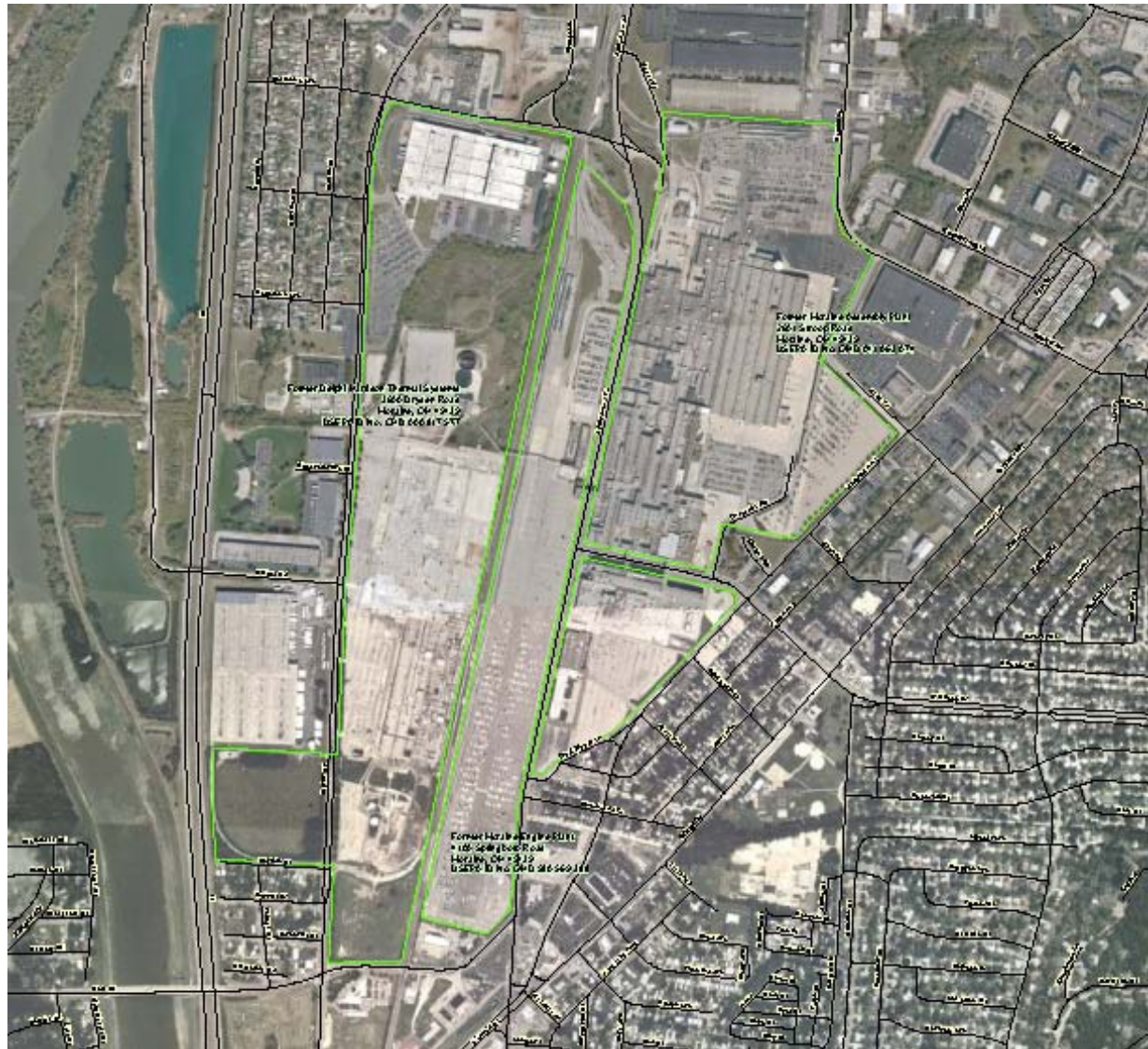
Site History

- Manufacturing by Frigidaire until 1979
- General Motors (GM) ended operations
 - Engine Plant → 2000
 - Delphi Thermal → 2003
 - Assembly Plant → 2008

Site History

- EPA Administrative Orders require environmental corrective action – 1991 and 1997
- Ohio EPA oversees closure and post-closure of hazardous waste management units

Site View



Environmental Status

- Former releases of volatile organic compounds (VOCs) and other contaminants into soil and groundwater
- City of Dayton supplies drinking water source locally

What has happened at the Site?

1995

- Facility investigation underway– Harrison/Delphi Thermal
- Groundwater Interim Measures initiated - Capture zone design

1997

- Facility investigation expands to cover adjacent GM Facilities (Engine and Assembly Plants)

1999

- Scope of Interim Measures for groundwater expanded – combination of in-situ technologies

2006

- 2000: Results from multi-phase site investigation and risk assessment
- 2001: Site-wide groundwater monitoring initiated
- 2004: Additional soil investigations and excavation completed
- 2006: Identified data gaps in extent of contamination in off-site groundwater

What has happened at the Site?

2008

- Off-site migration of groundwater contamination toward the southwest was delineated
- Risk assessment indicates no adverse exposure via vapor intrusion to homes at Southwest residential area
- Corrective Measures Proposal (August 2008)
- Corrective Measures Proposal Addendum (November 2008)

2009

- GM Corporation and certain subsidiaries filled voluntary petitions for relief under Chapter 11 of the U.S. Bankruptcy Code
- Motors Liquidation Company (MLC) currently owns these three Facilities

2010

- EPA guidance recommends the use of multiple lines of evidence in evaluating vapor intrusion
- MLC's Vapor Intrusion Verification Workplan

LEGEND

- MONITORING WELL (UPPER AQUIFER)
- RECOVERY WELL (TW-2)
- ⊙ MONITORING WELL (LOWER AQUIFER)
- PIEZOMETER
- CARBON SOURCE INTRODUCTION WELLS
- ✂ FIRE WELL
- ▲ PRODUCTION WELL CONVERTED TO MONITORING WELL
- ⦿ INACTIVE PRODUCTION WELL (31, 39, 118, 12A)
- ⊕ MONTGOMERY COUNTY WELL
- ⊞ MONTGOMERY COUNTY WELL
- ◇ STREAM GAUGE
- RIVER LEVEE
- CITY OF MORAINES MONITORING WELL
- ▭ FORMER BUILDING FOOTPRINT
- SURFACE WATER FEATURE

NOTES:

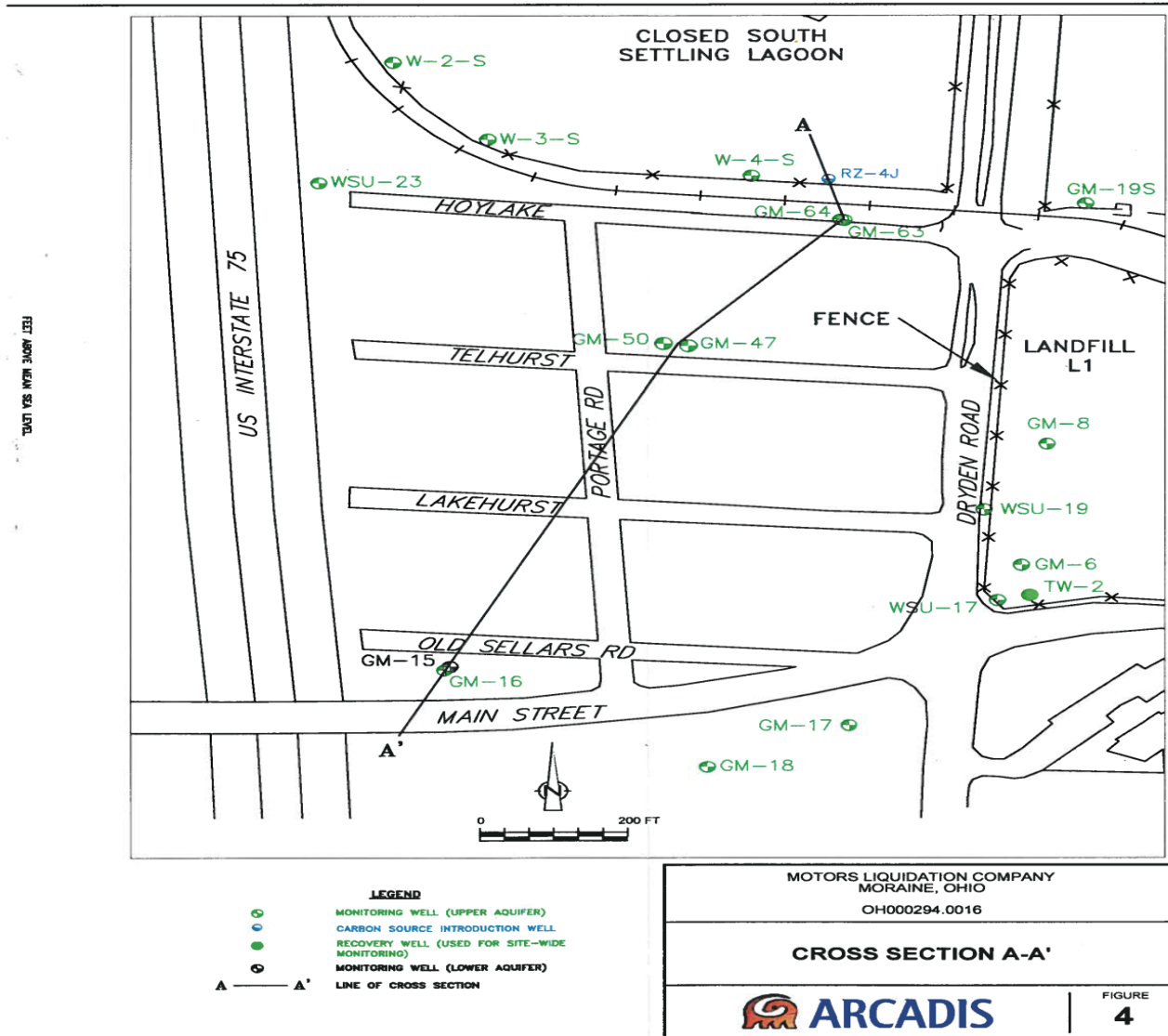
- ORANGE INDICATES LOWER AQUIFER WELLS.
- BLACK INDICATES UPPER AQUIFER WELLS.

-2)

(WER AQUIFER)

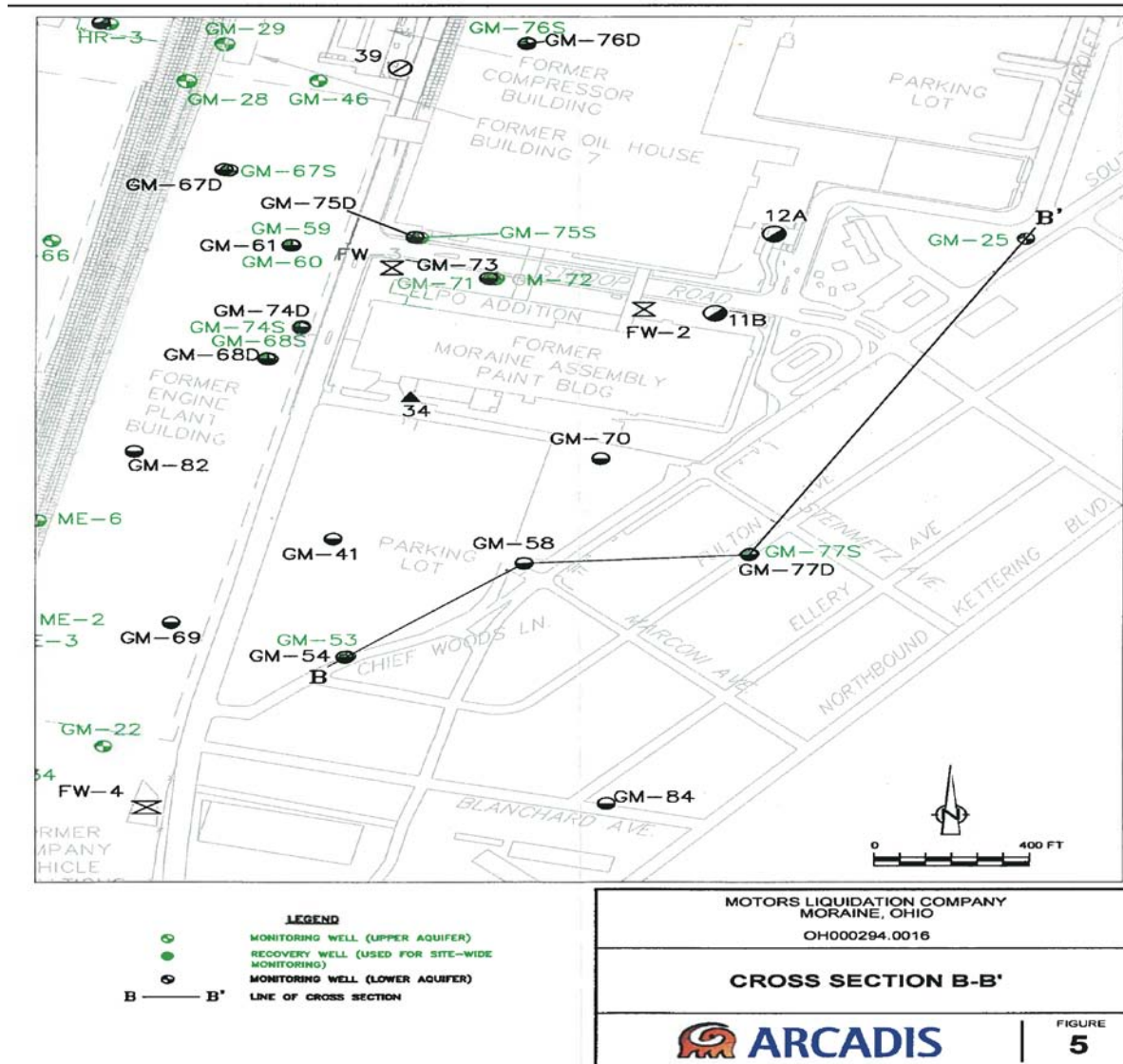
Existing Groundwater Wells

SOUTHWEST NEIGHBORHOOD



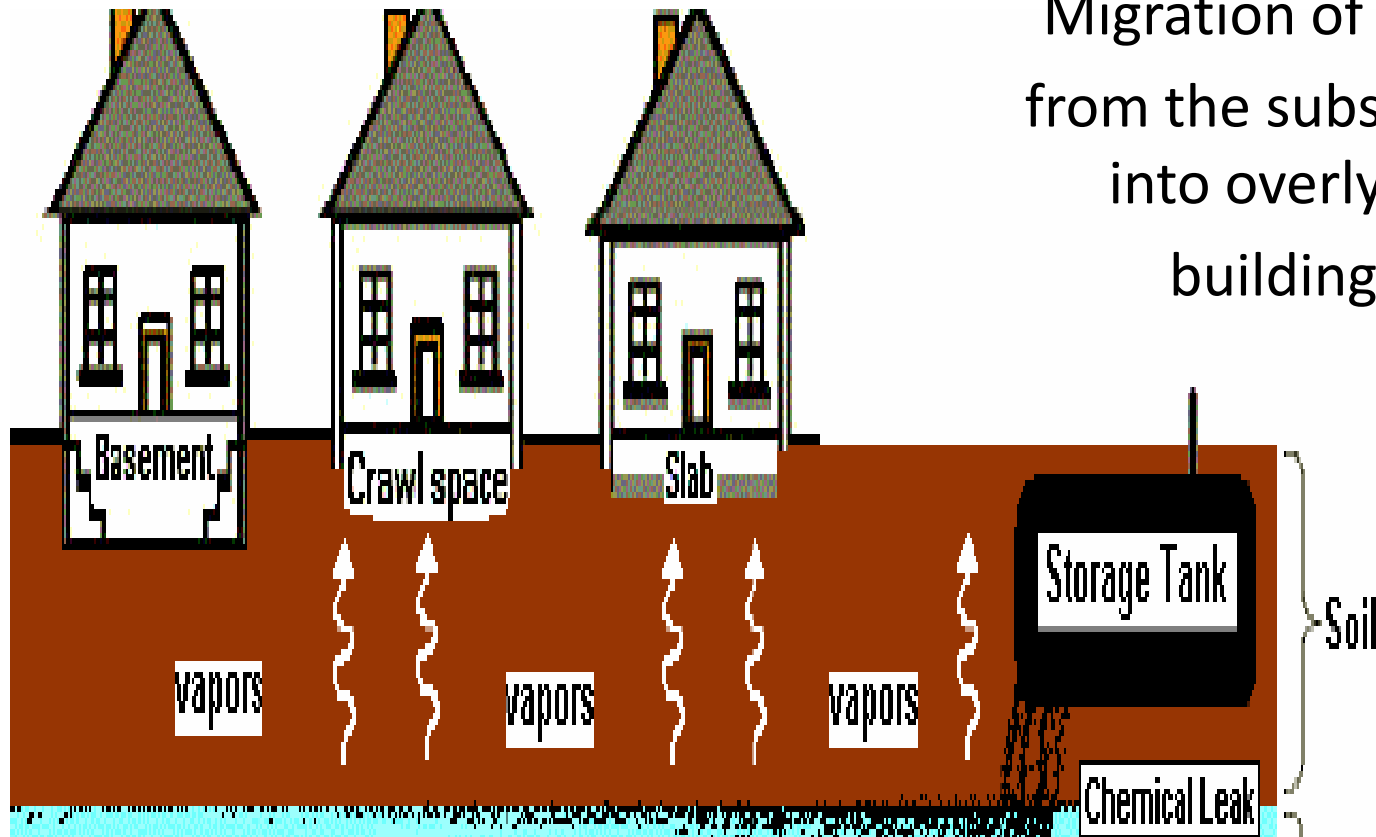
Existing Groundwater Wells

EAST NEIGHBORHOOD



What is Vapor Intrusion?

Migration of VOCs
from the subsurface
into overlying
buildings



Vapor Intrusion Potentials

MLC Moraine

- Main VOCs in groundwater off-site are PCE, TCE, cis-1,2-DCE and Toluene
- Existing VOC data for groundwater in Southwest and East neighborhoods, but below water table
- Groundwater levels
- Other possible sources of VOCs

Vapor Intrusion Potentials

MLC Moraine

- VOCs in groundwater below water table
 - East neighborhood: irregularly collected results between 2006 to 2008 are below detection limits, except at one well where PCE was detected below drinking water standard (5 micrograms per liter)
 - Southwest neighborhood: results from 2009 above drinking water standard

Vapor Intrusion Investigation

PHASE 1 – Fall 2010 and Spring 2011

- Sampling in right-of-way areas
 - 8 sample locations in Southwest neighborhood
 - One sample location near City Municipal Building
 - Water table groundwater samples
 - Soil gas sample collection at 3 depths per location

Sampling Point Locations

SOUTHWEST NEIGHBORHOOD



Vapor Intrusion Investigation

PHASE 1 – Fall 2010 and Spring 2011

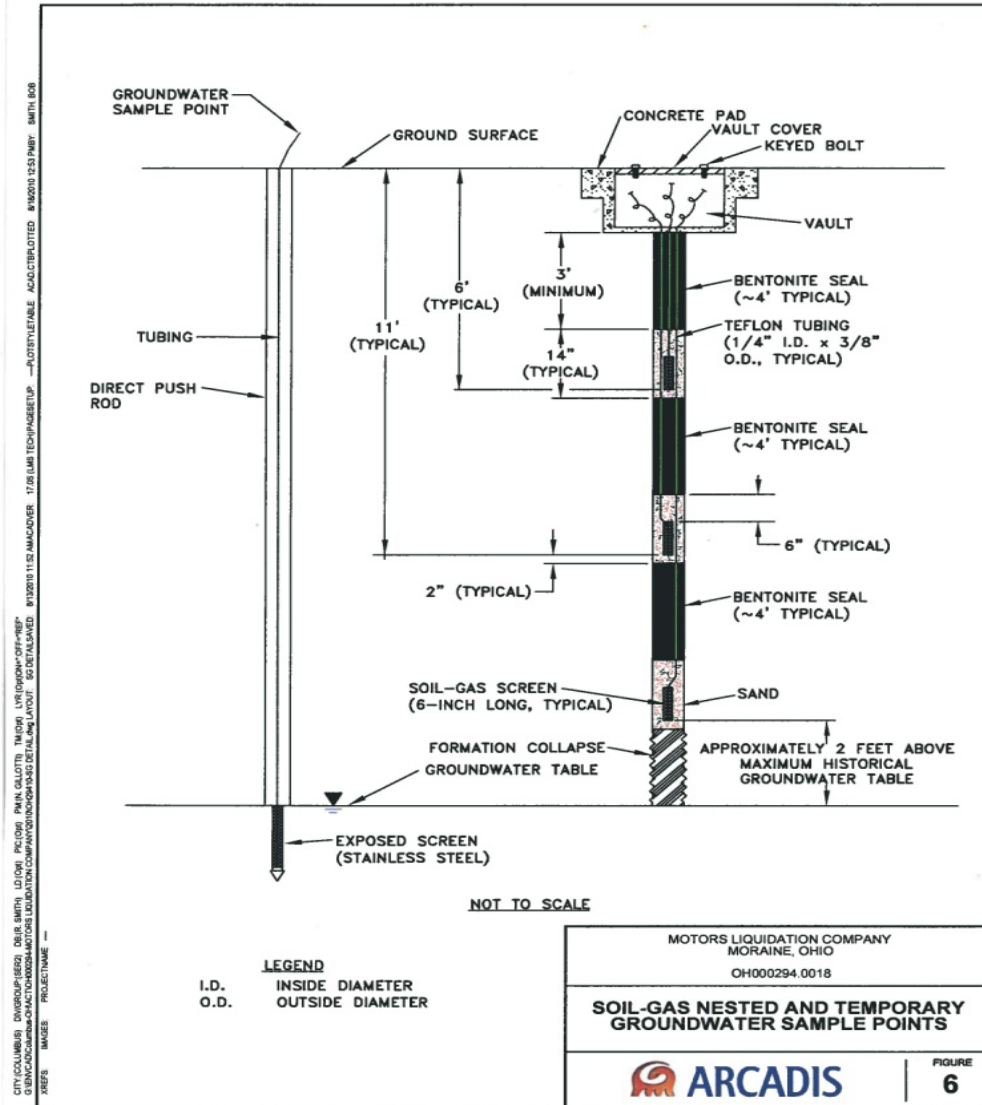
- Sampling in MLC property
 - 3 sample locations on east site boundary
 - Water table groundwater samples
 - Soil gas sample collection at 3 depths per location
 - Collection of groundwater samples from permanent wells GM-25 and GM-77S

Sampling Point Locations

MLC PROPERTY



How will groundwater and soil gas samples be collected?



Vapor Intrusion Investigation

Regardless of outcome of the results, MLC will conduct soil gas and air sampling in homes for confirmation purposes in the Southwest neighborhood

Vapor Intrusion Investigation

PHASE 2

- Sampling in homes
 - Need for access agreements
 - Collect soil gas (sub-slab) and air samples
 - Confirm evaluation from Phase 1
 - Timetable to be determined based on results

MLC PROPOSED SCHEDULE

- Field work preparation/contact Ohio Utility Protection Service (October 4 – 15)
- Drilling, groundwater sampling and soil gas sampling point installations (October 18 – November 5)
- Soil gas sampling (November 8 – 12)
- Data reporting for EPA evaluation (Winter 2011)
- Preparation for Spring sampling

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