

# **ENVIRONMENTAL INFORMATION DOCUMENT**

**For**

**Ash Street Pump Station and Force Main**

**Northern KY Sanitation District No. 1**

**KIA/SRF Loan No. A11-12**



engineering | architecture | geospatial

**SX21037110**

**SX21037111**

**September 2013**

***Revised 9-30-2013***

## Table of Contents

<b>A.</b>	<b>Proposed Project and Funding Status</b> .....	<b>1</b>
<b>B.</b>	<b>Existing Environment</b> .....	<b>2</b>
<b>C.</b>	<b>Existing Wastewater Facilities/Drinking Water System</b> .....	<b>4</b>
<b>D.</b>	<b>Need for Proposed Actions and Facilities</b> .....	<b>8</b>
<b>E.</b>	<b>Alternative Analysis</b> .....	<b>9</b>
<b>F.</b>	<b>Environmental Consequences/Mitigative Measures</b> .....	<b>14</b>
<b>G.</b>	<b>Public Participation/Sources Consulted</b> .....	<b>16</b>

<b>Exhibit 1</b>	<b>USGS Map of Proposed Ash Street Pump Station and Force Main</b>
<b>Appendix A</b>	<b>Technical Memorandum by Third Rock Consultants</b>
<b>Appendix B</b>	<b>Archaeology Survey, Cultural Resource Survey, Cultural Historic Baseline Survey, Tree Impact Assessment</b>
<b>Appendix C</b>	<b>Clearinghouse Letters; Scoping Letters and Responses</b>
<b>Appendix D</b>	<b>Technical Memorandum by Hazen and Sawyer</b>
<b>Appendix E</b>	<b>Ash Street Pump Station Site Evaluation</b>
<b>Appendix F</b>	<b>Ash Street Force Main Alternative Analysis</b>
<b>Appendix G</b>	<b>Correspondence with Private Property Owners and Minutes of Public Meetings</b>

**Environmental Information Document (EID)**  
**Ash Street Pump Station and Force Main**  
**Northern KY Sanitation District No. 1**  
**Revised September 30, 2013**

**A. Proposed Project and Funding Status**

The project consists of construction of a 7 MGD Pump Station, 27,000 LF of 20" force main, 750 LF of 24" gravity sewer upstream of the existing Silver Grove pump station, 7,600 LF of new Silver Grove force main (12"), and 6,000 LF of low pressure sewer system for eleven homes. Currently, Melbourne and Silver Grove flow by gravity to the Silver Grove Pump Station, which pumps to the Highland Heights Pump Station, which conveys all flow to the Dry Creek WWTP sanitary sewer system. The current Ash Street Pump Station and Force Main project will intercept flows from the cities of Silver Grove and Melbourne and convey all flows to the Riley Road Pump Station, which will ultimately convey flows to the new 4 MGD Eastern Regional Water Reclamation Facility. In the future, the Highland Heights Pump Station will be redirected to the Silver Grove system and convey all flows to Ash Street. When the Highland Heights pump station is diverted, in-line wastewater storage will be required to store peak wastewater flows. The proposed project will mitigate a typical yearly recurring CSO in the City of Silver Grove and is part of a master plan to provide more availability of capacity in the Dry Creek WWTP sanitary sewer system by diverting the flows to the Eastern Regional sanitary sewer system.

The pump station will be constructed in Silver Grove, KY (Campbell County), approximately 13' below the 100-year floodplain of the Ohio River and Four Mile Creek. The force mains, gravity sewer, and low pressure sewer are also located within the floodplains of the Ohio River or Four Mile Creek in Campbell County, KY. The pump station facility will consist of four (4) each wastewater pumps, pump control, odor control facilities, wastewater screening equipment, backup power generation, a building facility constructed above the 100 year floodplain, and other appurtenances. Exhibit 1 provides a locational map of the project. The Ash Street Pump Station will receive flows from the Silver Grove/Melbourne area and the Silver Grove pump station. Ultimately, the Highland Heights pump station will be redirected to the Silver Grove pump station and then to the Ash Street pump station. The Ash Street pump station will convey all flows to the Reilly Road pump station, located near the intersection of the AA Highway (KY 9) and Four Mile Rd. (KY 547). The Reilly Road pump station will convey all flows to the Eastern Regional Water Reclamation Facility. The Reilly Road pump station concept was designed to ultimately convey these flows to the Eastern Regional Water Reclamation Facility.

The total project cost estimate is \$19,000,000. The project is funded by the Kentucky Infrastructure Authority Fund A, Federally Assisted Wastewater Loan Program in the amount of \$15,187,500, with local funds providing the remainder of the project cost.

## **B. Existing Environment**

An environmental study was completed concerning the existing environment. Third Rock Consultants issued the Technical Memorandum for that study on June 3, 2011. A copy of this report is provided in Appendix A. Cultural Resource Analysts conducted a “Cultural Resource Survey” of the project, resulting in a report dated August 8, 2011. They also performed a Cultural Historic Baseline Survey and issued that report in May, 2012. Additionally, Cultural Resource Analysts performed an archaeological survey, the report of which is dated April 17, 2012. A Tree Impact Assessment by Arborist Care Urban Forestry was commissioned, as well. These reports are included in Appendix B. In summary, the following observations were reported:

**Surface Waters** The project area is located in the watershed of Fourmile Creek, and a section of the force main runs along Fourmile Creek. Fourmile Creek (HUC 05100205030) is a perennial stream with a watershed area of 17.8 square miles.

**Groundwater** Underground storage tanks and hazardous materials have been researched. The pipeline location avoids areas of potential UST contamination. One hazardous spill site has been identified which is in the vicinity of the pipeline. The site has been mitigated, however, it is still being monitored.

**Wetlands** Three locations within the project area have been designated as wetlands. These are the Pump Station site, with 0.393 acres, an area south of Poplar Ridge Road about 25 feet east of the pipeline route, and an area west of Ash Street.

**Air quality non-attainment areas** The project area has no air quality issues. There will be several air release valves installed on the force main, with odor control devices to “scrub” the air that is released.

**Endangered or threatened species** The project area is identified as potential habitat for two federally listed endangered species, the Indiana bat and running buffalo clover. There are approximately 435 acres of potential bat summer foraging and roosting habitat, but no caves in the area. Based on current land use, previous construction and field observations, there is no running buffalo clover in the project area.

**Prime agricultural lands** There are prime agricultural lands located in the project area, but the implementation of the project will have no effect on them.

**Recognized scenic, recreational areas** There are no recognized scenic or recreational areas within the project area.

**Archaeological** An archaeological survey of the project area was performed by Cultural Resource Analysts, Inc. with no findings of archaeological significance.

**Historic** Over two hundred (200) sites were evaluated as part of the “Cultural Historic Baseline Survey”, and ten (10) of those are listed on the National Register of Historic Places. Other structures were deemed to be significant enough to require special conditions during construction, in particular the restriction of blasting in some areas and the seismographic monitoring of other areas.

**Valuable flora and fauna areas** The study by Arborist Care Urban Forestry reports the observations and recommendations made in relation to the historic and significant trees affected by the project. These are located primarily in the historic Camp Springs area and along streambanks.

**Wild or scenic rivers** No wild or scenic rivers are identified in the project area.

**Drinking water sources** The source of the area’s drinking water is the Ohio River. The CSOs that occur in the project area ultimately flow to the Ohio River.

**Floodplains** The pump station site and the lower part of the force main are in the floodplain of the Ohio River and are subject to backwater flooding. The remainder of the force main is in the floodplain of Fourmile Creek. It is anticipated that up to 25 stream crossings will occur.

**Use of potential receiving streams** The facilities included in this project will ultimately discharge wastewater to the Eastern Regional Water Reclamation Facility, which discharges to the Ohio River. The Ohio River is used as a navigable waterway, for recreation, and as the raw water source for the surrounding areas.

**Parkland or other public lands** Silver Grove’s city park is located on Ash Street, north of West Second Street, approximately 200 feet from the pump station site. Morscher Park, a recreational facility with ball fields, is located on the south side of KY 8 in the north part of the project area.

**Environmental justice** The socioeconomic environment is described in detail in the report issued by Third Rock Consultants. Public meetings have been held with citizen groups in Camp Springs and the project area. The subject of environmental justice was reviewed and it was determined that no specific population is anticipated to be disproportionately affected by potential adverse effects of the project.

The scoping letters, as required by the KDOW, were issued and responses obtained from the appropriate agencies. The request to the Natural Resources and Conservation Service did not get a response. These requests and responses, along with the clearinghouse review letters, are provided in Appendix C. Based on the review of existing conditions, responses from regulatory agencies, and the aforementioned studies, it is apparent that some special conditions concerning construction methods and restoration will be required.

### C. Existing Wastewater Facilities/Drinking Water System

The city of Melbourne discharges flow to the city of Silver Grove, which discharges flow through a 10" diameter gravity line to the Silver Grove pump station. Silver Grove pump station pumps to the Highland Heights pump station, which ultimately conveys flows to the Dry Creek Wastewater Treatment Plant. Melbourne's system is a separate wastewater collection system, but Silver Grove's system is a combined wastewater and storm water system. During wet weather events, the system surcharges and overflows. The Silver Grove pump station also experiences the effects of the inflow and infiltration and overflows. Average dry weather flow from Melbourne and Silver Grove is 0.17 MGD, with a peak flow of 0.3 MGD. The estimated wet weather peak flow is 6.19 MGD. The Highland Heights area also experiences combined sewer overflows. The construction of the Eastern Regional Water Reclamation Facility presented the option of rerouting the flows from the Silver Grove and, eventually, the Highland Heights pump stations to the new wastewater treatment plant.

The Ash Street pump station will receive flows from the diverted Silver Grove pump station and force main. In the future, the Highland Heights pump station flows will be diverted to the Silver Grove pump station. The proposed Ash Street pump station and force main will ultimately deliver flow to the Eastern Regional Water Reclamation Facility, via the Riley Road pump station and force main. A map of the proposed improvements is provided in Exhibit 1. Flow projections from the Ash Street Project, without future consideration of future Highland Heights pump station diversion are provided in Table C-1 below.

**Table C-1**  
**Flow Projections**  
**Ash Street Pump and Station and Force Main**  
**Silver Grove Pump Station and Force Main**

<b>Condition</b>	<b>Total Flow Silver Grove PS (MGD)</b>	<b>Total Flow Ash Street Pump Station (MGD)</b>
Average Dry Weather Flow	0.41	0.57
Peak Dry Weather Flow	0.63	1.51
Peak Flow (5 min)	2.20	8.10
Peak Flow (30 min)	2.11	7.92
Peak Flow (1 Hour)	2.04	6.89

The Ash Street pump station is sized for 7 MGD. Available storage capacity exists in the wetwell for the peak flows (5 minutes and 30 minute) in excess of the pump station capacity. In-system storage facilities will be required when the Highland Heights pump station is diverted to the Silver Grove pump station.

The Riley Road pump station is a relatively new pump station and currently has a firm capacity of 9.36 MGD (2 pump sets), expandable to a firm capacity of 11.8 MGD with the addition of a fourth pump (3 pump sets in operation). The future projected average daily wet weather flows without the addition of the Ash Street pump station are 3.36 MGD. The Riley Road pump station was designed and constructed to accept future flows from the Ash Street project.

The Eastern Regional Water Reclamation Facility (ERWRF) is a new 4.0 MGD nominal capacity plant located on a "greenfield" site adjacent to the existing Alexandria Wastewater Treatment Plant on KY 10, just south of the City of Alexandria. The site was designed to accommodate a modular future expansion to 8 MGD design average flow, 24 MGD peak daily flow and 40 MGD peak hourly flow. The facility was placed into service in September 2007. In addition to normal domestic wastewater flow, the plant is designed to accommodate the wide range of existing wet weather flow due to infiltration/inflow and industrial users. The ERWRF design parameters are provided in Table C-2, and the current operating conditions are listed in Table C-3.

**Table C-2  
Design Parameters  
Eastern Regional Water Reclamation Facility**

**Flow Rates in MGD**

Domestic	
Average Daily	3.583
Peak Daily	10.749
Peak Hourly	17.915
Peaking Factor	3
Industrial	
Average Daily	0.372
Peak Daily	1.116
Peak Hourly	1.86
Peaking Factor	3
I/I	
Average Daily	0.045
Peak Daily	0.135
Peak Hourly	0.225
Peaking Factor	3
Total Flow	
Average Daily	4
Peak Daily	12
Peak Hourly	20
Peaking Factor	3
Design Flow	
Average Daily	4
Peak Factor	
Average Daily	3

**Average Concentration & Loading Rates**

Domestic Portion (pound/day)	
BOD	5,990
TSS	6,399
TKN	1,122
P	151
Industrial (pound/day)	
BOD	1,616
TSS	1,474
TKN	46
P	16
Total (mg/l)	
BOD	228
TSS	236
TKN	35
P	5
Total (pound/day)	
BOD	7,606
TSS	7,873
TKN	1,168
P	167

<b>Table C-3 Eastern Regional Water Reclamation Facility Current Conditions – 2012</b>			
<b>Permit Limits</b>			
	Monthly Avg. (mg/L)	Weekly Avg. (mg/L)	Daily Max. (mg/L)
cBOD	15	22.5	
TSS	30	45	
NH3 (5/1-10/31)	4.0		6.0
NH3 (11/1-4/30)	10.0		15.0
Chlorides	600		1200
Total Phosphorous (5/1-10/31)	1.0		2.0
Total Phosphorous (11/1-4/30)	2.0	4.0	
<b>Current Influent Averages</b>			
cBOD	592		
NH3	21		
TSS	187		
<b>Current Effluent Averages</b>			
cBOD	3.6		
NH3	<0.279		
TSS	6.1		

Flows			
Current Influent Flow Rate	1.70 mgd		
Current Influent Flow Rate	0.85 mgd		

The ERWRF is a secondary treatment facility. Flows greater than 12 MGD, but less than 20 MGD are diverted to an aerated equalization facility located on the WWTP site. The facility processes are:

- Flow Measurement (1)
- Mechanical Fine Screening (2) w/Screenings Press (1)
- Grit Removal (2)
- Influent Pumping (5)
- Aerated Equalization Basins (2)
- Oxidation Ditches (2)
- Final Clarifiers (2)
- Return/Waste Pumping Station
- UV Disinfection (2)
- Effluent Flow Measurement (1)
- Post Aeration – Concrete Steps(1)
- Sludge Holding Tanks (2)
- Belt Filter Presses (2)
- Sludge Chemical Feed Facility (1)
- Other Supporting Equipment Facilities

The diversion of the Silver Grove and future Highland Heights pump stations, via the new Ash Street pump station, will mitigate a CSO in the City of Silver Grove in a typical year. In addition, the diversion of these flows to the ERWRF will provide additional capacity in the Dry Creek WWTP collection system and lessen impact of combined sewer and sanitary sewer overflows. The diversion of flows to the ERWRF will also provide needed flow for process sustainment. Currently, a large industrial customer in the ERWRF collection system has a high chloride discharge that is close to the discharge limit of the facility. The received flows from the Ash Street project will assist in reduction of the chloride concentration through dilution with normal domestic wastewater.

**D. Need for Proposed Actions and Facilities**

The project is needed to mitigate an existing combined sewer overflow that occurs during a typical year storm in the Silver Grove area. Due to the drainage conditions surrounding that

particular CSO, sewer overflows remain on the surface, leaving solids in that location after the waters have abated. This is obviously a water quality and public health issue. The project will also reduce other overflows in the Highland Heights area. The Technical Memorandum (6/10/2009), as prepared by Hazen & Sawyer Environmental Engineers & Scientists, describes the need for proposed actions. The memorandum is provided in Appendix D. The report states: “the overall goal of the study is to remedy this public health concern, as well as to provide the benefits of reducing and/or eliminating other CSO’s in the Highland Heights and Silver Grove areas and reducing flow to the Ohio River Interceptor in alignment with previous and current strategies.

## **E. Alternative Analysis**

Initially, a study was performed (Hazen and Sawyer, described above) concerning the need to divert flows from the Dry Creek Wastewater Reclamation Facility to the Eastern Regional Wastewater Facility. A copy of the study is contained in Appendix D. The alternatives that were evaluated include:

1. Replace the 10” diameter gravity sewer from Silver Grove to the SG Pump Station with a 24” diameter line, and upgrade the pump station for the increased flows and to pump to the Eastern Regional WRF.
2. Construct new pump station to receive flow from the Silver Grove area, and sized to eventually receive flow from the Highland Heights area and to convey sewage to the Riley Road pump station and ultimately to the Eastern Regional WRC.

In summary, the diversion of flows from the Silver Grove area to the proposed Ash Street pump station will reduce sanitary sewer overflows in the Dry Creek drainage basin and also mitigate a typical year combined sewer overflow in the Silver Grove area.

As a result of preliminary engineering, the Ash Street Pump Station was upsized from a preliminary sized 6 MGD to a 7 MGD pump station to further reduce the future need for in-system wastewater storage when Highland Heights is diverted to this system. In addition, the force main was upsized from an 18” diameter pipeline to a 20” diameter pipeline to accommodate the additional pumping capacity and to allow for limited future connection of small sanitary sewer systems along the route to serve existing development, should local interest occur. The alternatives for analysis are separated into three separate phases:

1. Ash Street Force Pump Station – Silver Grove, KY
2. Ash Street 20” Force Main – Silver Grove to Riley Road Pump Station
3. Replacement Collector Sewer – Between the City of Silver Grove and Industrial Blvd on KY 8 (Mary Ingles Highway).

## Ash Street Pump Station

The Ash Street Pump Station was originally sited at its current proposed location, on Ash Street in Silver Grove, KY, across the street from the existing local park. The site contains an abandoned large sewage pumping station constructed in 1936 under the Federal WPA program. The SD1 has agreed to demolish the pump station as part of an agreement with the City of Silver Grove. The City of Silver Grove donated the land to the SD1. Several alternative pump station locations were considered. The pump station location had to be within the vicinity of the existing gravity sewer route, between the City of Silver Grove and the existing Silver Grove Pump Station. At the request of SD1, a study was conducted to determine the optimum site for the pump station. A copy of the study is provided in Appendix E. The initially proposed site was the selected alternative, however, the pump station was moved to the rear of the site at the request of public comment. Visual landscape screenings, odor control, lighting pollution minimization, and noise control are incorporated into the design.

## 20" Ash Street Force Main

The selected route for the force main was initially along KY 547, Four Mile Road, as outlined in the 2009 Hazen and Sawyer report. Four Mile Creek closely follows the route of Four Mile Road and meanders adjacent to the selected route the entire way.

In follow up to requests by interested parties, eight alternative routes were investigated by SD1. Appendix F contains maps that summarize the considered routes. Detailed costs are also contained in Appendix F and the following is a brief synopsis of each route:

- |          |   |
|----------|---|
| Route 1  | Route 1 is the original selected route along the corridor of Four Mile Rd. (KY 547). Numerous studies have been conducted to determine the effect this route would have on the environment and area. As a result of study and the findings, all Four Mile Creek crossings will either be directional drilled or bored, air release valves will be minimized, and construction near historical structures will be limited. The estimated opinion of cost for the Route 1 is \$8,187,050.   |
| Route 1A | Route 1A utilizes a portion of Route 1. At Tug Fork Rd., the force main routes away from Four Mile Rd., to Poplar Ridge Rd, and returning to Route 1, south of Camp Springs. The route would avoid Camp Springs. Another pump station costing \$4,000,000 would be required due to the high drainage divide and resulting additional pumping. Tug Fork Rd. and Poplar Ridge Road are narrow and crooked county roads that require entire road closure to construct the force main due to the large amount of force main that would be in the pavement. A creek follows Tug Fork Rd. and would require crossing/mitigation along a significant amount of the route. Historical structure existence is unknown at this time. No studies have been conducted in this region. The road is unstable in several |

locations by observation of visual pavement “slips”. Construction would be slow and difficult. Estimated opinion of construction cost is \$16,001,575.

- Route 1B Route 1B utilizes a portion of Route 1, then routes cross country. It was hopeful that a current pipeline or powerline easement existed that could be paralleled. None exist at the current time. The route does require the pipeline to be routed through hilly terrain. As a minimum, a second lift set of pumps would be required at the Ash Street Pump Station and would cost approximately \$2,000,000. In addition, total redesign of the pump station would be required. The route is not accessible for maintenance, completely divides parcels for the cross country route, requires slow construction in steep and rocky terrain, and requires excessive tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this corridor. Estimated opinion of cost is \$10,487,631.25.
- Route 1C Route 1C utilizes Uhl Rd., Messmer Hill Rd., a cross country segment, Alexandria Pike, and the right-of-way of the AA Highway (KY 9). Similar to Route 1A, narrow, crooked, and unstable county roads will be utilized. Accessibility is also a concern in the cross country segment. A considerable amount of road would be closed to construct the force main. Where private easement would be available, a considerable amount of tree removal will be required. In addition, due to the high elevation route, another \$4,000,000 pump station would be required. Adjacent creeks to the road also result in the same difficulties as Route 1A. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is \$15,691,750.
- Route 2 Route 2 considers a western route along KY 8, Doddsworth Rd., East Alexandria Pike (East), and the AA Highway (KY 9) right-of-way. The route is considerably longer than Routes 1 through 1C. Another pump station costing \$4,000,000 would be required due to the high drainage divide that would be pumped over. Doddsworth has numerous narrow and crooked areas and will require a substantial amount of road closure for construction. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is \$18,987,062.
- Route 2A Route 2A is near identical to Route 2 and considers a western route along KY 8, Doddsworth Rd., East Alexandria Pike (West), and the AA Highway (KY 9) right-of-way. The route is considerably longer than Routes 1 through 1C. Another pump station costing \$4,000,000 would be required

due to the high drainage divide that would be pumped over. Doddsworth has numerous narrow and crooked areas and will require a substantial amount of road closure for construction. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is \$19,209,437.

Route 3 Route 3 considers an eastern route through Melbourne. The route is along KY 8, Ten Mile Road, Kohls Rd., and Fender Rd. The right-of-way along KY 8 is congested and tight. Several utilities exist in the area. Obstructions of structures, signs, and etc. exist along this KY 8 route. Ten Mile Road is narrow and crooked and similar to these other county road considerations. The route is considerably longer than Routes 1 through 1C. Another pump station costing \$4,000,000 would be required due to the high drainage divide that would be pumped over. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is \$19,903,687.

Route 3A Route 3A is near identical to Route 3 and considers an eastern route through Melbourne. The route is along KY 8, Ten Mile Road, and Fender Rd. The right-of-way along KY 8 is congested and tight. Several utilities exist in the area. Obstructions of structures, signs, and etc. exist along this KY 8 route. Ten Mile Road is narrow and crooked and similar to these other county road considerations. The route is considerably longer than Routes 1 through 1C. Another pump station costing \$4,000,000 would be required due to the high drainage divide that would be pumped over. Substantially more easements will be required on this route. Similar concerns exist for tree removal. Historical structure existence is unknown at this time. No studies have been conducted in this region. Estimated opinion of cost is \$19,682,687.

Both cost and non-cost factors have been considered for selection of the viable Ash Street Force Main Route. The non-cost criteria includes stream bank restoration, traffic maintenance, tree removal, cultural/historic elements, impact to properties (easements), and access for maintenance. Table E-1 provides a synopsis and scoring system of the non-cost factors. The alternative with the lowest sum total in the non-cost scoring is the highest rank alternative based on non-cost factors.

In review of Table E-1, the lowest capital cost is Route 1 and the highest ranked non-cost factor alternative is route 1C. Route 1 is the selected alternative. The Route 1 capital costs are near 50% of the Route 1C capital cost and it is the second ranked non-cost factor alternative. The criteria evaluation details are included in Appendix F.

**Table E-1  
Evaluation of Alternatives Matrix  
Ash Street Force Main**

<b>Non-Cost Consideration</b>	<b>Route 1</b>	<b>Route 1A</b>	<b>Route 1B</b>	<b>Route 1C</b>	<b>Route 2</b>	<b>Route 2A</b>	<b>Route 3</b>	<b>Route 3A</b>
Streambank Restoration	3.0	6.0	7.5	3.0	5.0	5.0	5.0	5.0
Traffic Maintenance	3.2	5.4	0.6	3.6	6.0	6.6	9.0	9.0
Tree Removal	0.9	1.4	8.5	2.5	2.0	2.5	5.0	5.0
Cultural/Historical	10	5.0	7.0	1.0	1.0	1.0	1.0	1.0
Impact to Residences/Business/Farms - Easements	5.0	7.0	4.0	5.0	8.5	8.5	9.5	9.5
Access to Maintenance	3.1	2.0	8.5	2.0	2.0	2.0	2.0	2.0
<b>Sum Total</b>	<b>25.2</b>	<b>26.8</b>	<b>36.1</b>	<b>17.1</b>	<b>24.5</b>	<b>25.6</b>	<b>31.5</b>	<b>31.5</b>
<b>Cost in \$ Million</b>	<b>\$8.2M</b>	<b>\$16.0M</b>	<b>\$10.5M</b>	<b>\$15.7M</b>				

Replacement Collector Sewer and Silver Grove Force Main.

The sewer between Ash Street, in Silver Grove, and the Silver Grove Pump Station along KY 8 is being abandoned by this project. The existing sanitary sewer is in very poor shape with existing reverse grades and extremely deteriorated facilities. A majority of this sewer is located over 20' below the 100-year floodplain and results in excessive inflow/infiltration resulting in SSO occurrence in the area and downstream in the collection system. Refer to the Hazen and Sawyer study for the details on this matter.

The Silver Grove Pump Station will remain in service, however, its flows will be diverted to the new Ash Street Pump Station via a new Silver Grove Force Main. The route of the force main will be completely located in either the CSX Railroad right-of-way, the KY 8 right-of-way, or on existing City of Silver Grove right-of-way for future dedicated streets. The route of the force main was to be either side of the street in the available right-of-way. The southernmost right of way of KY 8 has water and gas utilities present.

A gravity sewer system with a small duplex pump station shall be constructed to reconnect nineteen (19) properties. These homes were originally connected to the sewer in the floodplain. The gravity sewer will now be reconstructed out of the floodplain and be specifically provided to serve these nineteen (19) properties.

Summary of Alternative Analysis

The alternative analysis was separated into three separate project locations, the Ash Street Pump Station, the Ash Street Force Main, and the Replacement Collector Sewer and Silver Grove Force Main. Considerable analysis has been conducted on available, affordable, and acceptable routes. The selected alternatives of the site consist of the following:

1. The Ash Street Pump Station is located on Ash Street, across from the local park and adjacent to the existing abandoned pump station that will be demolished.
2. The force main will route between the proposed Ash Street Pump Station and the Riley Road Pump Station located at the intersection of the AA Highway and KY 547. The force main will generally follow the Four Mile Road corridor (KY 547). The route does deviate farther away from Four Mile Road in areas where extreme grade change would occur and in areas to eliminate damage to streambanks.
3. Replacement Collector Sewer and the Silver Grove Force Main will be constructed in a combination of right-of-way and private property.

## **F. Environmental Consequences / Mitigative Measures**

The environmental effect of the selected alternative has been documented in Section B, Existing Environment. Several mitigative measures have been taken to reduce or eliminate the effect of the project on the environment and/or cultural resources of the area. The following are the specific design parameters and features utilized to achieve the protection of the environment and the cultural resources:

1. **General:** The use of the public right-of-way of KY 547 was maximized to reduce encroachment on undisturbed properties. In addition, a large majority of the pipeline route is located within the 100-year floodplain to also minimize the disturbance to developable and farmable property.
2. **Water Quality Certification:**
  - a) The project is authorized under the provisions of Nationwide Permits No. 12 and No. 33 and must comply with their terms and general conditions.
  - b) Numerous creek crossings are required. Deep creek crossings will utilize “directional drilling” technology to eliminate the concern of streambank erosion. All crossings of Four Mile Creek shall have directional drill or boring technology utilized. The remainder of creek crossings will utilize natural streambank/riparian restoration with the use of live stakes and shrubs and erosion control matting. Construction timelines will be limited to avoid periods of high rainfall and stream flow.
  - c) Effective erosion and sedimentation controls and a best management practices will be employed and the removal of vegetation will be minimized.
  - d) Three wetland areas have been identified. The pipeline route is not encroaching on two of these areas, however, concern exists that the adjacent pipeline excavation could act as a French drain and cause damage. “Trench stops” will be utilized every 25’ in the bedding and backfill of the trench to prevent the flow of water in order to avoid the potential of damage to the wetlands. The third wetland is on the pump station site. The District will pay mitigation fees to the

Northern Kentucky Mitigation Bank for permanently affecting the wetland, and will observe all requirements listed in the WQC permit.

3. **Endangered Species:** Indiana bat habitat has been identified in the area. Removal of trees will be limited to the time period of October 15<sup>th</sup> to March 15<sup>th</sup> to avoid disturbance of possible roosting sites.
4. **All cultural resource concerns** have been avoided where possible and pipeline routes relocated where concerns existed. One historical significant structure, a smokehouse in Camp Springs, KY, is adjacent to the road and a local business. Since no other route is available, “directional drilling” technology is being utilized to avoid all possible disturbance of this structure. Blasting will not be performed within 200 feet of the other sites that were identified as being historically significant, and seismographic monitoring will be performed in other identified areas. Identified historically significant trees will be avoided or minimally impacted by the method of “directional drilling.” All other requirements and recommendations that are included in the Cultural Historic Baseline Survey (Appendix B) and the letter from the State Historic Preservation Office to Lee Anne Devine, dated July 19, 2013 (Appendix C) will be implemented and followed.
5. **Green infrastructure** is utilized, where feasible. For example, a rain garden, bioswales, and permeable pavement are designed at the pump station site.
6. **Required Permits:**
  - a) Kentucky Division of Water Permit to Construct
  - b) Kentucky Transportation Cabinet Right-of-Way Encroachment Permit
  - c) Kentucky 401 Water Quality Certification
  - d) Nationwide Permit No. 12, Utility Line Activities
  - e) Nationwide Permit No. 33, Temporary Construction, Access and Dewatering
  - f) CSX Railroad Encroachment Permit

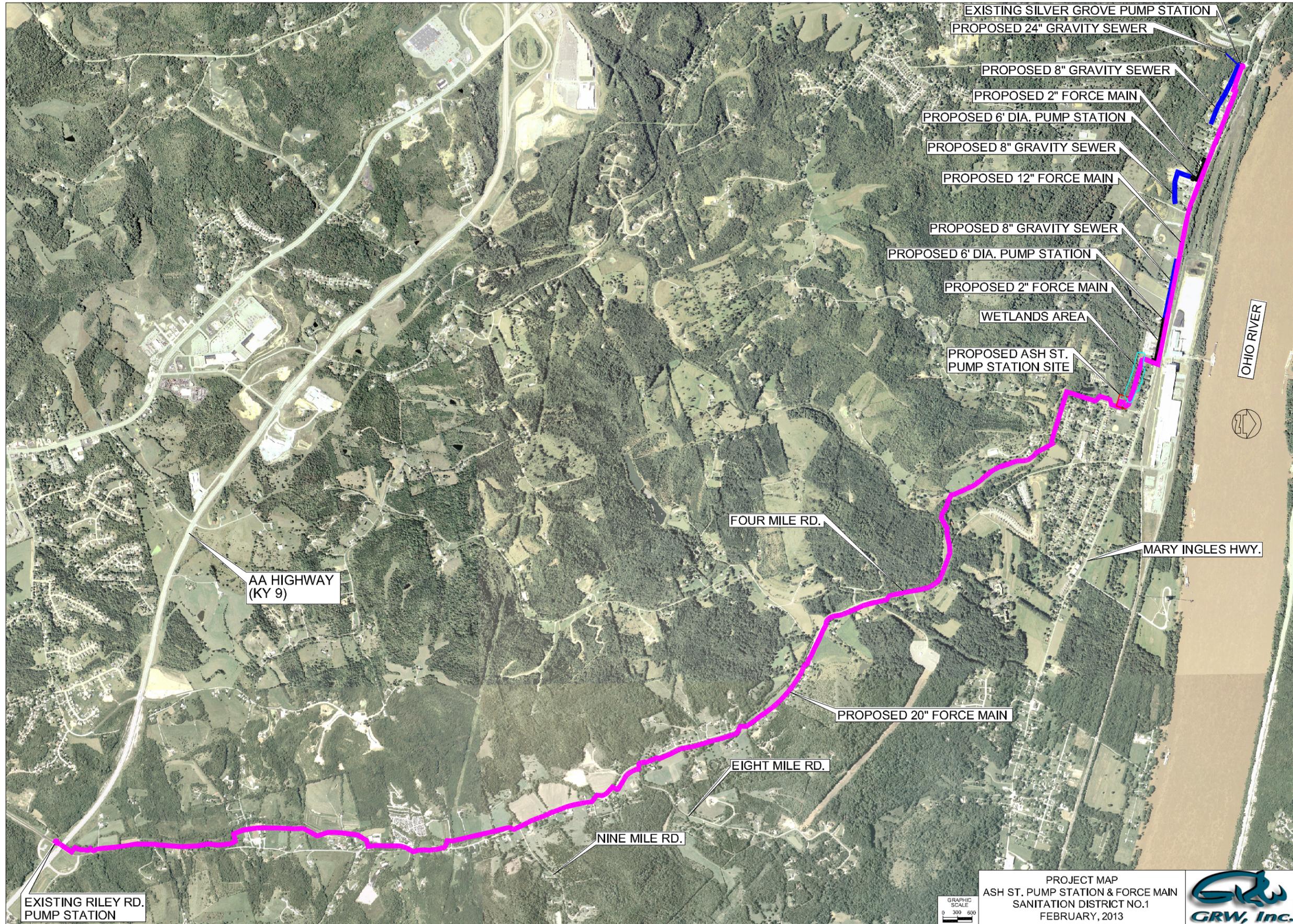
## **G. Public Participation / Sources Consulted**

Letters were sent to all property owners notifying them of the project, and requesting permission to access their property. Correspondence concerning the project has been received from Camp Springs Initiative and Ms. Anna Zinkhon of Silver Grove, KY. Copies of this correspondence are included in Appendix G.

Sanitation District No. 1 and GRW have conducted two preliminary public meetings at the Camp Springs, KY Volunteer Fire Department. The Owner and Engineer have also attended a public community meeting organized by local residents to discuss the details of the meeting. Minutes of these meetings are included in Appendix G.

**EXHIBIT 1**

**USGS MAP OF PROPOSED ASH STREET  
PUMP STATION AND FORCE MAIN**



EXISTING SILVER GROVE PUMP STATION

PROPOSED 24" GRAVITY SEWER

PROPOSED 8" GRAVITY SEWER

PROPOSED 2" FORCE MAIN

PROPOSED 6' DIA. PUMP STATION

PROPOSED 8" GRAVITY SEWER

PROPOSED 12" FORCE MAIN

PROPOSED 8" GRAVITY SEWER

PROPOSED 6' DIA. PUMP STATION

PROPOSED 2" FORCE MAIN

WETLANDS AREA

PROPOSED ASH ST. PUMP STATION SITE

OHIO RIVER



AA HIGHWAY (KY 9)

FOUR MILE RD.

MARY INGLES HWY.

PROPOSED 20" FORCE MAIN

EIGHT MILE RD.

NINE MILE RD.

EXISTING RILEY RD. PUMP STATION



PROJECT MAP  
ASH ST. PUMP STATION & FORCE MAIN  
SANITATION DISTRICT NO.1  
FEBRUARY, 2013



**APPENDIX A**

**TECHNICAL MEMORANDUM BY  
THIRD ROCK CONSULTANTS**



## TECHNICAL MEMORANDUM

**To:** Joe Henry, GRW Engineers, Inc.

**From:** Virginia Goodman

**Re:** Existing Conditions Overview, Ash Street Force Main, Campbell County, Kentucky

**Date:** June 3, 2011

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### AQUATIC AND TERRESTRIAL ENVIRONMENT

#### General Environmental Setting

The proposed Ash Street Force Main (ASFM) runs along Fourmile Creek and KY 547 for most of its length, ending at KY 9, approximately five miles south of Silver Grove (Exhibits 1 and 2, attached). Fourmile Creek is a perennial stream with a watershed of 17.8 square miles. The lower 30 percent of the proposed force main is in the floodplain of the Ohio River and is subject to backwater flooding that may last for several days. The remainder of the line, from the mouth of Owl Creek south to KY 9, is located in a more steeply dissected upland setting. This portion of the line is in the narrower Fourmile Creek floodplain and is less subject to sustained flooding. The steep, hilly watershed is dominated by Eden soil, a deep, well drained and somewhat droughty silty clay loam.

The area is rural, with a mix of agricultural, commercial, and residential land uses. Agro-tourism farms, vineyards, and bed and breakfasts are located in the Camp Springs community, an area that contains many stone houses and barns built by German immigrants in the late 1800s. Most of the farmland directly impacted by the proposed force main is in hay/pasture or woodland. Only a small portion of the land is used for row crops.

#### Stream Crossings

The force main will involve 25 stream crossings: nine crossings of perennial Fourmile Creek and 16 crossings of ephemeral and intermittent tributaries (Table 1, page 2; Exhibits 1 and 2, attached). The stream crossings will be excavated to a depth so that the pipe is four feet below the existing streambed. The open trench within the stream will be backfilled with concrete and the excavated banks reshaped to a 2:1 slope. In addition to the pipeline crossings, temporary crossings for equipment and materials will also be required.

**TABLE 1 – SUMMARY OF STREAM CROSSINGS**

CROSSING	PERENNIAL	INTERMITTENT	EPHEMERAL	WETTED WIDTH (FEET)
1	X			15
2			X	2.5
3		X		6.5
3a		X		3
4			X	2
5			X	2.5
6		X		8
7		X		9
8	X			20
9		X		6
10	X			15
11		X		8
12	X			20
13	X			20
14	X			15
15			X	2
16		X		3
17	X			20
18		X		6
19			X	6
20			X	1.5
21		X		9
22			X	1.5
23	X			20
24	X			20

**Wetlands**

Two wetland areas were identified along the proposed route. The first, located just south of Poplar Ridge Road (Exhibit 1, attached), is the shallow remnant of what was once a much larger pond. The pipeline will be located uphill, approximately 25 feet east, and will not directly impact the vegetated pond. However, the trench bottom will be five to seven feet below the existing grade and below the level of the adjacent pond. An indirect impact could occur, in that the rock fill around the pipe could act as a “French drain,” intercepting subsurface flow off the hillside that would ordinarily feed into the wetland. Depending on the porosity of the soil between the wetland and the trench, it might also drain water from the wetland.

The second wetland is located just west of Ash Street in Silver Grove (Exhibit 2, attached). The line at this point enters an area of bottomland hardwood forest located on somewhat poorly drained Newark soil. Some of the soils along the proposed route have been disturbed by the placement of fill and excavation during the construction of an existing sewer line. This previous disturbance creates an atypical wetland soil situation. Three plots were sampled to determine if the area is a wetland, and each had a somewhat different soil profile. All three plots contain a predominance of hydrophytic vegetation, exhibit wetland hydrology, and have hydric soils.

### **Threatened and Endangered Species**

Based on information provided by the US Fish and Wildlife Service Kentucky Ecological Services Field Office, only two federally listed species could occur within the project area: the Indiana bat (*Myotis sodalis*) and running buffalo clover (*Trifolium stoloniferum*). The project area includes approximately 435 acres of Indiana bat summer foraging and roosting habitat. The proposed force main's route and Indiana bat habitat are shown on Exhibits 1 and 2, attached. Because of the project area geology, no caves that would provide winter habitat are present.

Based on current land use, previous road construction, and field observations, running buffalo clover is not present within the project area. A large majority of the proposed route is in open fields or maintained roadsides, neither of which provide the habitat necessary for this species. Those portions of the line that are wooded are heavily shaded floodplains that receive little disturbance.

### **Prime or Unique Agricultural Lands**

The proposed force main will not significantly impact prime or unique agricultural land. Prime farmland is shown on Exhibits 1 and 2, attached.

### **Floodplains**

Nearly the entire proposed route lies in the floodplain of Fourmile Creek or the Ohio River. Construction of the buried force main will not adversely affect the functions of the floodplain or flood levels.

## **SOCIOECONOMIC ENVIRONMENT**

Unincorporated Camp Springs, which comprises the southern two-thirds of the proposed corridor, was settled by immigrants from Germany's Rhine River wine district in the mid-1800s. These immigrants constructed the community's distinctive stone buildings and established numerous farms and vineyards in this area. The Camp Springs area was listed on the National Register of Historic Places in the early 1980s. The community's architectural and agricultural histories have contributed to the area's agro-tourism economy. Camp Springs promotes its stone houses with a self-guided walking/biking tour. Several commercial farms and vineyards, such as Neltner's Farm & Greenhouses, sell area produce and host a variety of small-scale family-friendly festivals and activities throughout the year. Camp Springs Vineyard, located along KY 547 just south of Nine Mile Road, and Stonebrook Winery (further east of the proposed line) are regional wineries open for tours/tastings. In addition, the Camp Springs House Bed and Breakfast and Camp Springs Tavern along KY 547 cater to local residents as well as regional tourists. Habitats Native Plant Nursery, a wholesale native plant nursery, is located along Owl Creek Road.

Misty Ridge Farm, located along Owl Creek Road, provides horse boarding, breeding, and riding lessons, and has an indoor arena as well as the Circle Z Tack and Gift Shop. The Northern Kentucky Saddle Club, a nonprofit horse and event hall facility, is located on KY 547 at Poplar Ridge Road.

Two recreational facilities are located in the vicinity of the proposed force main. Morscher Park, a recreational complex with baseball and soccer fields, is located on the south side of KY 8. Silver Grove's City Park is located on Ash Street, north of West Second Street. The city park contains a baseball diamond, picnic tables, and playground equipment. Diehard Paintball, a private recreational facility, is located on KY 8 near the force main's proposed western terminus. A cemetery is also present in the area, on Gresskamp Road.

Demographic data for the project area was compiled from the US Census Bureau's 2010 Census as well as the 2005-2009 American Community Survey (ACS), which provides population, demographic, and housing

estimates. This data is listed in Tables 2 and 3. The ACS's level of detail is not as geographically precise as the decennial census; however, it provides the most current economic data available at the state, county, and census tract levels. Census data indicates that Campbell County's population is wealthier and less racially diverse than Kentucky as a whole - the county's per capita and median household income are higher than the statewide average, the percentage of individuals living below the poverty level is lower, and the county's percentage of minority residents is half that of the state average.

**TABLE 2 - DEMOGRAPHIC INFORMATION**

	KENTUCKY	CAMPBELL	CT 531	CT 529	CT 519.03	CT 519.01
Population	4,339,367	90,336	5,810	5,362	5,316	4,986
White (%)	86.3	93.4	96.1	97.0	97.5	96.1
Black or African American (%)	7.7	2.5	0.7	0.5	0.4	0.7
American Indian and Alaska Native (%)	0.2	0.1	0.1	0.2	0.1	0.1
Asian (%)	1.1	0.8	0.0	0.6	0.3	1.1
Native Hawaiian or Other Pacific Islander (%)	0.0	0.0	0.0	0.0	0.0	0.0
Some Other Race (%)	0.1	0.1	0.2	0.1	0.0	0.2
Two or More Races (%)	1.5	1.4	0.9	0.9	0.8	0.9
Hispanic or Latino* (%)	3.1	1.7	0.9	0.6	0.9	0.7
Minority** (%)	13.7	6.6	3.9	3.0	2.5	3.9

\*Hispanic Origin is not considered a separate race by the US Census. The number shown is counted twice, once as Hispanic Origin and once as one of the other racial groups listed above.

\*\*Hispanic Origin not included to avoid duplication.

Source: 2010 US Census, American FactFinder

**TABLE 2 - ECONOMIC INFORMATION (2009)**

	KENTUCKY	CAMPBELL	CT 531	CT 529	CT 519.03	CT 519.01
Median Household Income	\$41,197	\$51,890	\$55,142	\$65,402	\$71,208	\$68,438
Per Capita Income	\$22,284	\$27,138	\$28,764	\$26,946	\$28,502	\$28,019
Income in the Past 12 Months Below Poverty Level (%)	17.4	10.4	10.6	6.8	3.9	5.3

Source: American Community Survey (2009), US Census Bureau

Of the four census tracts (CT) located along the proposed force main line, all (CT 539, 529, 519.03, and 519.01) contain a smaller percentage of minority residents and residents living below the poverty level than Campbell County as a whole. These census tracts are shown in Figure 1, attached. Three of the four census tracts studied have a lower percentage of individuals living below the poverty level than Campbell County as a whole; CT 531 has a slightly higher percentage than the county.

**Environmental Justice**

Two mobile home communities are located in CT 531 – Lakeview Mobile Home Court, just west of Ash Street, and Green Valley Trailer Park, on KY 547 south of Third Street. Though census economic data is

not available to the block level due to privacy concerns, mobile home communities are often comprised of individuals with lower incomes. No other potential environmental justice populations have been identified in the proposed corridor.

Neither mobile home community is anticipated to bear a disproportionate share of the project's adverse effects. The Green Valley Trailer Park is approximately 500 feet from the proposed force main, and is separated from the main's route by a wooded area. The Lakeview Mobile Home Court is closer to the proposed force main, with the closest homes approximately 200 feet from the line, and vegetative screening is also present in the area. Air vents to release methane gas (outfitted with carbon scrubbers to minimize odor) are proposed at five points along the proposed line; however, these vents are not located in the vicinity of either mobile home court. The Lakeview community is located near an undeveloped lot across Ash Street from Silver Grove's City Park; discussions with a local resident indicated that the lot periodically experiences sewer overflows. The proposed new force main will reduce overflows, improving the quality of life in this area.

Public involvement is an important component of the project and will ensure that any unidentified environmental justice population will have an opportunity to be heard.

#### **Air Quality**

While Campbell County is not in attainment for any transportation-related pollutants, the proposed force main installation is not a transportation project. Thus it is exempt from any air quality studies. Seven methane gas vents will be located along the proposed force main route. All will be outfitted with carbon scrubbers to minimize odor.

#### **Noise**

Camp Springs and Silver Grove are quiet communities that attract visitors to their historic setting and peaceful environment along the Ohio River. Primary noise generators along the corridor are vehicles, including daily commuters to/from Lafarge Gypsum and residents utilizing the area's recreational facilities that attract people for soccer and baseball games. Noise is also generated by the active railroad tracks paralleling KY 8. While installation of the proposed force main will generate construction noise to some degree, the force main itself upon its completion will not generate any noise discernable to the community.

#### **UNDERGROUND STORAGE TANKS/HAZARDOUS MATERIALS**

The project limits were evaluated for the presence of hazardous waste issues. The focus was to determine if the project has any significant potential to encounter contaminated soil or groundwater or buried waste during construction activities.

This effort included a review of an environmental agency database search. The objective was to identify records for properties along the project limits that have been the subject of environmental regulatory action. Each record was evaluated for its potential to represent or create an environmental condition within the project limits. An executive summary of the database report is included in Appendix A.

A series of historical resources were examined to identify historic land use that has the potential to create an environmental condition within the project limits. These included aerial photographs, geologic maps, and topographic maps.

A site reconnaissance was conducted on May 2, 2011 to evaluate the locations of features and facilities identified in the records and historical resources.

Third Rock also conducted interviews with representatives of regulatory environmental agencies, property owners, or other individuals that might have knowledge of the conditions within the project limits.

Based on the data collected, the following facilities required assessment and warranted consideration of their potential to represent a risk of encountering contaminated soil or groundwater during construction.

### **Facilities of Interest**

#### **Camp Springs Grocery**

According to the database report mapping, this facility appears to have been located near the pump station at the southwest quadrant of the interchange with KY 9 and KY 547. Records reviewed from the Kentucky Division of Waste Management's (DWM) Underground Storage Tank Branch indicate that the facility has been closed since 1985. According to the records the tanks were filled with concrete and left in place. The precise location of this facility was not determined. Efforts to contact the previous owner were not successful. No facility structures appear to remain at the location. The contents of the regulatory agency file are included in Appendix B. If the assumed location of the facility is correct, it is not anticipated that this site represents a potential risk of encountering the underground storage tanks that were left in place.

#### **Morton International/Rohm and Haas Chemicals LLC**

This facility, located at 199C Poplar Ridge Road, was identified in the database research as a hazardous waste generator, a state hazardous waste site, and a superfund consent decree site. It is located in the southwestern quadrant of the Fourmile Creek crossing of Poplar Ridge Road. A review of the regulatory agency file was conducted to evaluate the status of the facility. Relevant portions of the file contents are included in Appendix C.

A tri-level brick home and a barn are currently located at this address. The site was previously utilized to clean adhesive application equipment utilizing chlorinated solvents between 1982 and 2001. A series of site investigations indicated that this activity resulted in groundwater contamination that migrated to the east toward and under Fourmile Creek. The US Environmental Protection Agency filed a case against Morton International, Inc. resulting in a consent decree dated January 17, 2001 requiring the cleanup of the impacted groundwater. Subsequent cleanup efforts have resulted in the property gaining compliance. Susan L. Mallette of the Kentucky DWM issued a "No Further Action" letter dated April 29, 2011.

The proposed force main will be located approximately 100 feet east of Fourmile Creek and the proposed route does not cross the property line of this facility. Based on the cleanup effort completed by the property owner, this facility does not represent a constraint to the project. Susan L. Mallette concurred with this finding via telephone on May 26, 2011.

#### **Reitman Auto Parts**

This facility is located at 6810 Four Mile Road (KY 547) and is engaged in the resale of used auto and truck parts and automotive recycling. This type of facility is typically expected to exhibit surface spills of automotive fluids. The proposed force main will be located along KY 547 in front of the facility and not within the areas of the facility where potential soil or groundwater impacts may have occurred. Based on the position of the project, this facility is not likely to represent a risk to the project. It should be noted that a 250-gallon oil tank is located in close proximity to the project limits near the north end of the property. Care should be taken not to undermine or disturb this tank during construction.

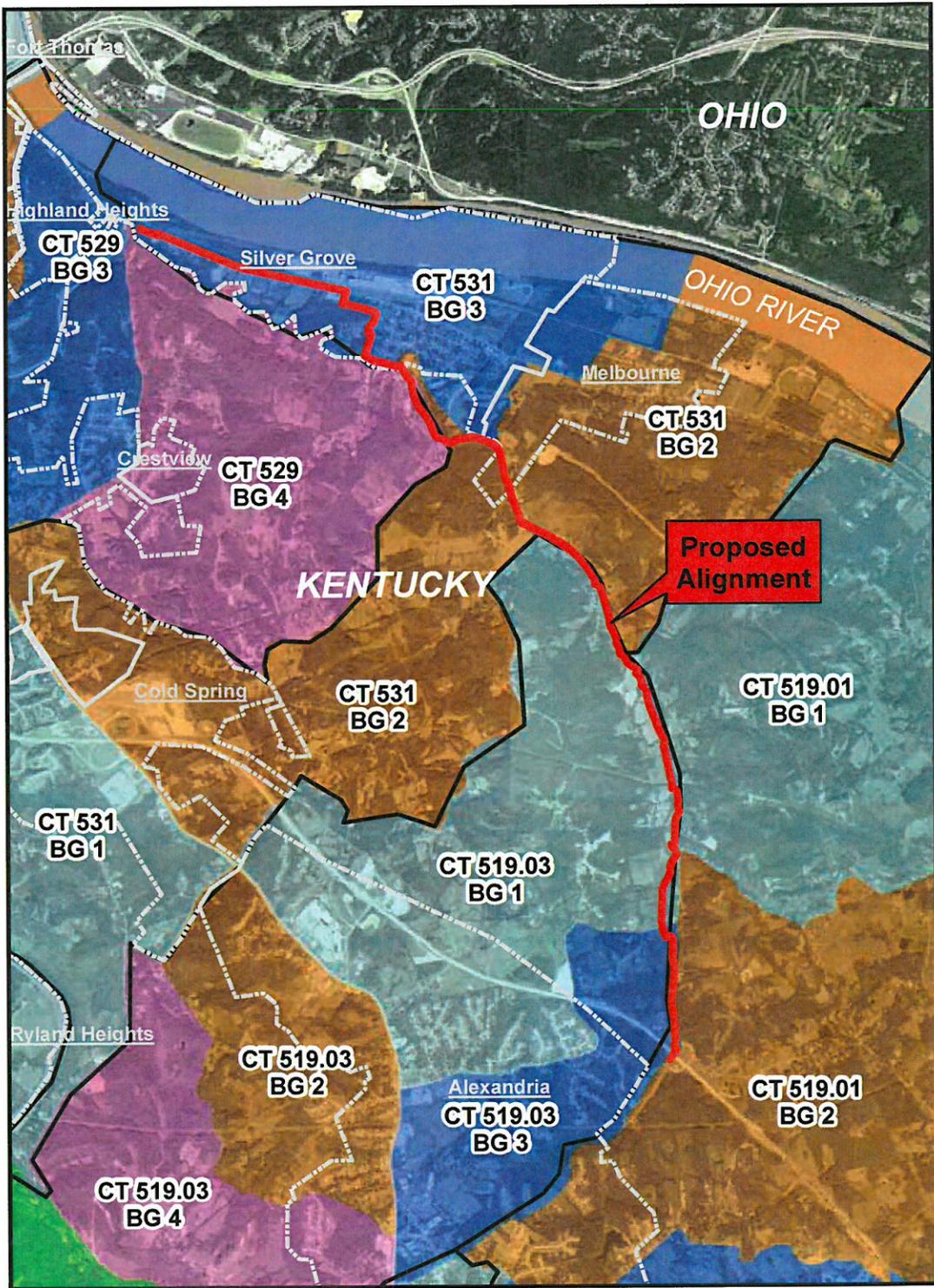
### Gasoline Stations

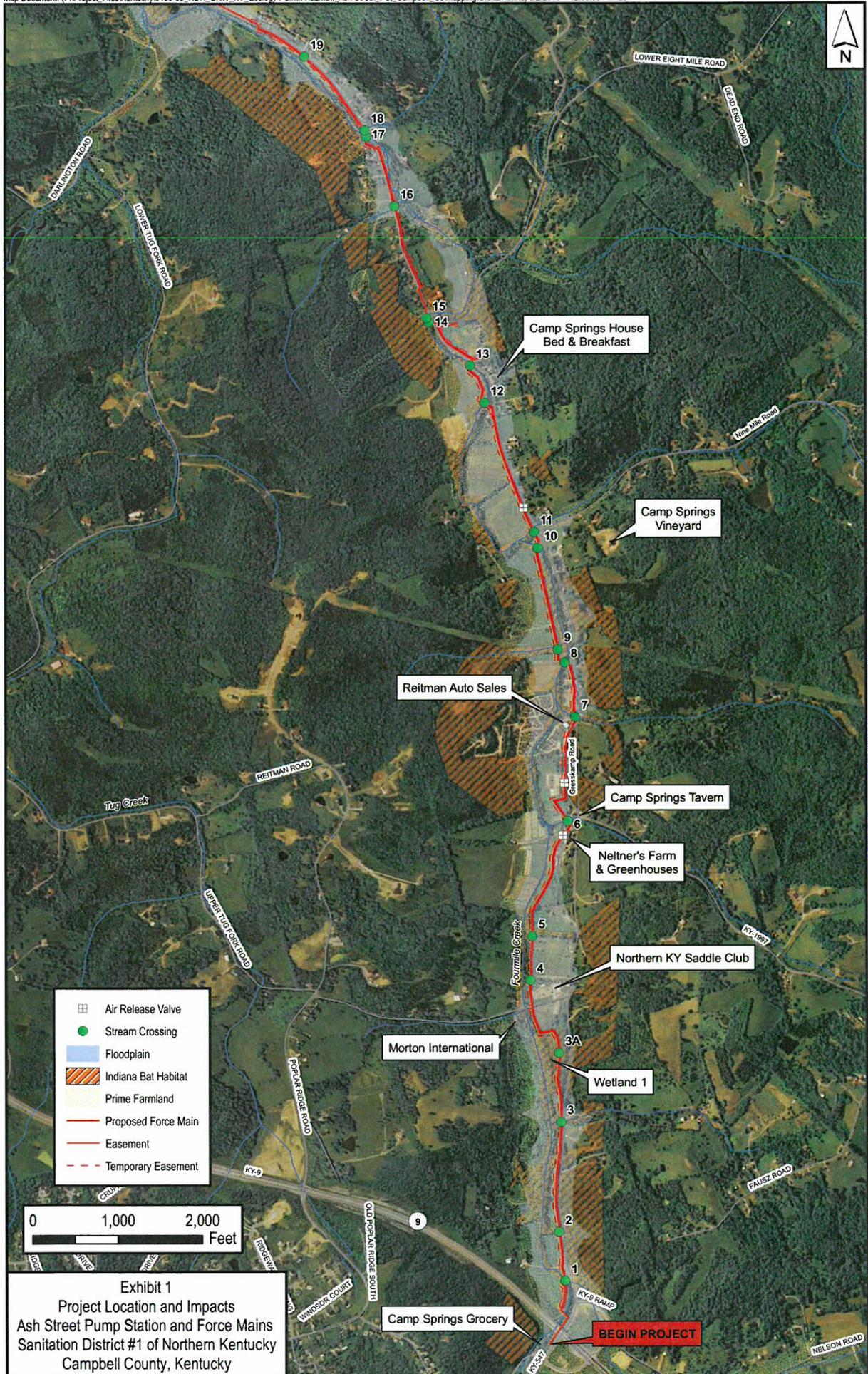
Two gasoline stations are located on the south side of KY 8, across the road from the proposed project. One of the stations, located at 4720 KY 8, is not open for business. The second (Silver Grove BP) is located at 4618 KY 8. The database report does not indicate that these facilities have a record of releases of petroleum products to the environment. Both of these facilities are of sufficient distance from the project that undetected releases of petroleum products would not likely pose a significant risk.

### **General Condition**

The use of fuel oil for residential heating is a common practice in the area of the project. Above-ground fuel oil tanks were observed at several residential structures in the project area. However, no residential storage was observed in close proximity to the project limits. Though not documented or observed in the project area, the use of underground storage tanks for residential storage of this fuel should be assumed. The selected contractor should be made aware of this potential and if tanks are encountered, contact the Owner immediately.

FIGURE 1 - PROJECT AREA CENSUS TRACTS





**Exhibit 1**  
**Project Location and Impacts**  
**Ash Street Pump Station and Force Mains**  
**Sanitation District #1 of Northern Kentucky**  
**Campbell County, Kentucky**

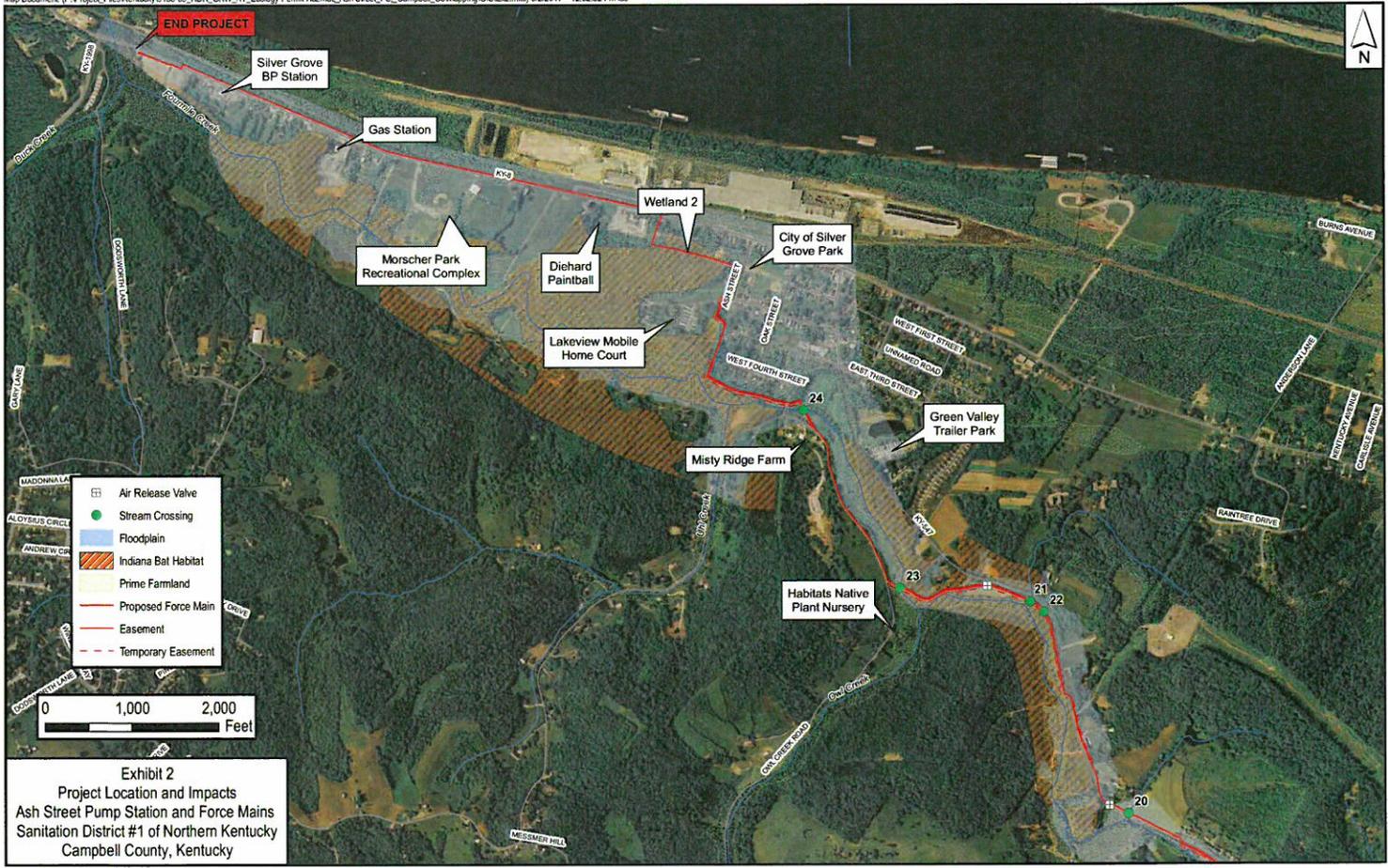


Exhibit 2  
Project Location and Impacts  
Ash Street Pump Station and Force Mains  
Sanitation District #1 of Northern Kentucky  
Campbell County, Kentucky

**APPENDIX A – ENVIRONMENTAL DATABASE REPORT, EXECUTIVE SUMMARY**

**Ash Street Pump Station**  
Silver Grove, KY 41085

Inquiry Number: 3053055.1s  
April 28, 2011

## EDR DataMap™ Corridor Study

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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# EXECUTIVE SUMMARY

## TARGET PROPERTY INFORMATION

### ADDRESS

SILVER GROVE, KY 41085  
SILVER GROVE, KY 41085

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

### FEDERAL RECORDS

NPL.....	National Priority List
Proposed NPL.....	Proposed National Priority List Sites
Delisted NPL.....	National Priority List Deletions
NPL LIENS.....	Federal Superfund Liens
CERCLIS.....	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP.....	CERCLIS No Further Remedial Action Planned
LIENS 2.....	CERCLA Lien Information
CORRACTS.....	Corrective Action Report
RCRA-TSDF.....	RCRA - Treatment, Storage and Disposal
RCRA-LQG.....	RCRA - Large Quantity Generators
RCRA-CESQG.....	RCRA - Conditionally Exempt Small Quantity Generator
US ENG CONTROLS.....	Engineering Controls Sites List
US INST CONTROL.....	Sites with Institutional Controls
ERNS.....	Emergency Response Notification System
HMIRS.....	Hazardous Materials Information Reporting System
DOT OPS.....	Incident and Accident Data
US CDL.....	Clandestine Drug Labs
US BROWNFIELDS.....	A Listing of Brownfields Sites
DOD.....	Department of Defense Sites
FUDS.....	Formerly Used Defense Sites
LUCIS.....	Land Use Control Information System
CONSENT.....	Superfund (CERCLA) Consent Decrees
ROD.....	Records Of Decision
UMTRA.....	Uranium Mill Tailings Sites
ODI.....	Open Dump Inventory
DEBRIS REGION 9.....	Torres Martinez Reservation Illegal Dump Site Locations
MINES.....	Mines Master Index File
TRIS.....	Toxic Chemical Release Inventory System
TSCA.....	Toxic Substances Control Act
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS.....	Section 7 Tracking Systems
ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System

## EXECUTIVE SUMMARY

MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
RAATS.....	RCRA Administrative Action Tracking System
FEMA UST.....	Underground Storage Tank Listing
COAL ASH DOE.....	Steam-Electric Plant Operation Data
FEDERAL FACILITY.....	Federal Facility Site Information listing
PCB TRANSFORMER.....	PCB Transformer Registration Database
US HIST CDL.....	National Clandestine Laboratory Register
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List

### STATE AND LOCAL RECORDS

OH SHWS.....	This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
OH DERR.....	Division of Emergency & Remedial Response's Database
OH TOWNGAS.....	DERR Towngas Database
KY SWF/LF.....	Solid Waste Facilities List
OH SWF/LF.....	Licensed Solid Waste Facilities
OH UIC.....	Underground Injection Wells Listing
KY SWRCY.....	Recycling Facilities
KY HIST LF.....	Historical Landfills
OH SWRCY.....	Recycling Facility Listing
OH HIST LF.....	Old Solid Waste Landfill
OH LUST.....	Leaking Underground Storage Tank File
KY SB193.....	SB193 Branch Site Inventory List
OH UNREG LTANKS.....	Ohio Leaking UST File
OH UST.....	Underground Storage Tank File
OH ARCHIVE UST.....	Archived Underground Storage Tank Sites
OH SPILLS.....	Emergency Response Database
KY ENG CONTROLS.....	Engineering Controls Site Listing
OH ENG CONTROLS.....	Sites with Engineering Controls
KY INST CONTROL.....	State Superfund Database
OH INST CONTROL.....	Sites with Institutional Engineering Controls
KY VCP.....	Voluntary Cleanup Program Sites
OH VCP.....	Voluntary Action Program Sites
KY DRYCLEANERS.....	Drycleaner Listing
OH DRYCLEANERS.....	Drycleaner Facility Listing
OH BROWNFIELDS.....	Ohio Brownfield Inventory
KY BROWNFIELDS.....	Kentucky Brownfield Inventory
KY CDL.....	Clandestine Drug Lab Location Listing
OH CDL.....	Clandestine Drug Lab Locations
OH NPDES.....	NPDES General Permit List
KY AIRS.....	Permitted Airs Facility Listing
OH AIRS.....	Title V Permits Listing
OH USD.....	Urban Setting Designation Sites
KY PSTEAF.....	Facility Ranking List
OH HIST ENG CONTROLS.....	Operation & Maintenance Agreements Database
OH HIST INST CONTROLS.....	Institutional Controls Database
OH HIST USD.....	Urban Setting Designations Database
KY COAL ASH.....	Coal Ash Disposal Sites
OH CRO.....	Cessation of Regulated Operations Facility Listing
OH COAL ASH.....	Coal Ash Disposal Site Listing

### TRIBAL RECORDS

INDIAN RESERV.....	Indian Reservations
--------------------	---------------------

## EXECUTIVE SUMMARY

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands  
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land  
INDIAN UST..... Underground Storage Tanks on Indian Land  
INDIAN VCP..... Voluntary Cleanup Priority Listing

### EDR PROPRIETARY RECORDS

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### FEDERAL RECORDS

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are 2 RCRA-SQG sites within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
<b><i>GRAPHIC RESOURCES INCORPORATED</i></b>	<b><i>300 INDUSTRIAL RD</i></b>	<b><i>1</i></b>	<b><i>4</i></b>
<b><i>ROHM AND HAAS CHEMICALS LLC</i></b>	<b><i>199C POPLAR RIDGE ROAD</i></b>	<b><i>20</i></b>	<b><i>32</i></b>

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 02/17/2010 has revealed that there is 1 RCRA-NonGen site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
<b><i>CSX TRANSPORTATION - STEVENS Y</i></b>	<b><i>12 MILE PIKE ROAD</i></b>	<b><i>2</i></b>	<b><i>19</i></b>

## EXECUTIVE SUMMARY

**FINDS:** The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 04/14/2010 has revealed that there are 16 FINDS sites within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
<b>GRAPHIC RESOURCES INCORPORATED</b>	<b>300 INDUSTRIAL RD</b>	<b>1</b>	<b>4</b>
<b>CSX TRANSPORTATION - STEVENS Y</b>	<b>12 MILE PIKE ROAD</b>	<b>2</b>	<b>19</b>
SILVER GROVE SCHOOL	101 W THIRD ST	5	21
TARVIN RESIDENCE	5680 FOUR MILE RD	8	23
PARNELL RESIDENCE	3004 EIGHT MILE RD	9	24
SMART RESIDENCE	273E DARLINGTON RD	10	24
SCHMIDT RESIDENCE	273F DARLINGTON RD	10	25
RATH RESIDENCE	6225 LOWER TUG FORK RD	10	25
PARNELL RESIDENCE #2	2942 EIGHT MILE RD	11	27
BORN RESIDENCE	6228 FOUR MILE RD	13	28
DOYLE RESIDENCE	6385 FOUR MILE RD	14	29
BEZOLD RESIDENCE	2814 NINE MILE RD	15	30
MEYER RESIDENCE	6692 FOUR MILE RD	16	30
ST JOSEPH PARISH	6833 FOUR MILE RD	17	31
CAMP SPRINGS TAVERN	7009 STONEHOUSE RD	18	32
<b>ROHM AND HAAS CHEMICALS LLC</b>	<b>199C POPLAR RIDGE ROAD</b>	<b>20</b>	<b>32</b>

### STATE AND LOCAL RECORDS

**KY SHWS:** The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Protection's Uncontrolled Site Branch List.

A review of the KY SHWS list, as provided by EDR, and dated 01/19/2011 has revealed that there are 3 KY SHWS sites within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
SILVER GROVE POST OFFICE Facility Status: Closed	301 FOUR MILE PIKE	4	21
SILVER GROVE SCHOOL Facility Status: Closed	101 W 3RD ST	5	22
MORTON INTERNATIONAL Facility Status: Active	1951 POPLAR RIDGE RD	19	32

## EXECUTIVE SUMMARY

KY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Owner/Facility Report of All Tanks Regardless of Status list.

A review of the KY UST list, as provided by EDR, and dated 02/04/2011 has revealed that there is 1 KY UST site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
CAMP SPRINGS GRO	KY 547	21	41

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, has revealed that there is 1 NY MANIFEST site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
<i>GRAPHIC RESOURCES INCORPORATED</i>	<i>300 INDUSTRIAL RD</i>	<i>1</i>	<i>4</i>

KY NPDES: A listing of permitted wastewater facilities.

A review of the KY NPDES list, as provided by EDR, and dated 11/29/2010 has revealed that there are 10 KY NPDES sites within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
TARVIN RESIDENCE	5680 FOUR MILE RD	8	23
PARNELL RESIDENCE	3004 EIGHT MILE RD	9	24
RATH RESIDENCE	6225 LOWER TUG FORK RD	10	25
PARNELL RESIDENCE #2	2854 EIGHT MILE RD	11	26
BLEVINS ESTATE	6110 FOUR MILE RD	12	27
BORN RESIDENCE	6228 FOUR MILE RD	13	27
DOYLE RESIDENCE	6385 FOUR MILE RD	14	28
BEZOLD RESIDENCE	2814 NINE MILE RD	15	29
MEYER RESIDENCE	6692 FOUR MILE RD	16	30
ST JOSEPH PARISH	6833 FOUR MILE RD	17	31

KY LEAD: A listing of lead related inspections.

A review of the KY LEAD list, as provided by EDR, and dated 03/01/2010 has revealed that there are 3 KY LEAD sites within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
Not reported	111 WEST 1ST STREET	3	21
Not reported	317 EAST SECOND STREET	6	22
Not reported	5247 FOUR MILE	7	22

## EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
 <u>FEDERAL RECORDS</u>	
NPL	0
Proposed NPL	0
Delisted NPL	0
NPL LIENS	0
CERCLIS	0
CERC-NFRAP	0
LIENS 2	0
CORRACTS	0
RCRA-TSDF	0
RCRA-LQG	0
RCRA-SQG	2
RCRA-CESQG	0
RCRA-NonGen	1
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
HMIRS	0
DOT OPS	0
US CDL	0
US BROWNFIELDS	0
DOD	0
FUDS	0
LUCIS	0
CONSENT	0
ROD	0
UMTRA	0
ODI	0
DEBRIS REGION 9	0
MINES	0
TRIS	0
TSCA	0
FTTS	0
HIST FTTS	0
SSTS	0
ICIS	0
PADS	0
MLTS	0
RADINFO	0
FINDS	16
RAATS	0
FEMA UST	0
COAL ASH DOE	0
FEDERAL FACILITY	0
PCB TRANSFORMER	0
US HIST CDL	0
SCRD DRYCLEANERS	0
COAL ASH EPA	0
 <u>STATE AND LOCAL RECORDS</u>	
KY SHWS	3

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
OH SHWS	0
OH DERR	0
OH TOWNGAS	0
KY SWF/LF	0
OH SWF/LF	0
OH UIC	0
KY SWRCY	0
KY HIST LF	0
OH SWRCY	0
OH HIST LF	0
OH LUST	0
KY SB193	0
OH UNREG LTANKS	0
KY UST	1
OH UST	0
OH ARCHIVE UST	0
NY MANIFEST	1
OH SPILLS	0
KY ENG CONTROLS	0
OH ENG CONTROLS	0
KY INST CONTROL	0
OH INST CONTROL	0
KY VCP	0
OH VCP	0
KY DRYCLEANERS	0
OH DRYCLEANERS	0
OH BROWNFIELDS	0
KY BROWNFIELDS	0
KY CDL	0
OH CDL	0
KY NPDES	10
OH NPDES	0
KY AIRS	0
OH AIRS	0
OH USD	0
KY PSTEAF	0
KY LEAD	3
OH HIST ENG CONTROLS	0
OH HIST INST CONTROLS	0
OH HIST USD	0
KY COAL ASH	0
OH CRO	0
OH COAL ASH	0
 <u>TRIBAL RECORDS</u>	
INDIAN RESERV	0
INDIAN ODI	0
INDIAN LUST	0
INDIAN UST	0
INDIAN VCP	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
<b><u>EDR PROPRIETARY RECORDS</u></b>	
Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

**APPENDIX B – CAMP SPRINGS GROCERY REGULATORY FILE INFORMATION**

# Notification for Underground Storage Tanks

FORM APPROVED  
OMB NO. 2050-0049  
APPROVAL EXPIRES 6-30-88

FOR TANKS IN **KY**

RETURN COMPLETED FORM TO

Natural Resources Cabinet  
Division of Waste Management  
Attention: Vicki Pettus  
18 Rellly Road  
Frankfort, KY 40601

APR 24 1986

I.D. Number

STATE USE ONLY

4528-019

Date Received

4/24/86

DWM/PROGRAM

## GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, mine-working, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

## INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

0

### I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

JOE SANDFORS D.B.A. CAMP SPRINGS 620

Street Address

R.R. Ky 547

County

CAMPBELL

City

MELBOURNE

State

Ky

ZIP Code

41059

Area Code

Phone Number

606-635-9122

Type of Owner (Mark all that apply)

Current

State or Local Gov't

Private or Corporate

Former

Federal Gov't (GSA facility I.D. no.)

Ownership uncertain

### II. LOCATION OF TANK(S)

(If same as Section I, mark box here )

Facility Name or Company Site Identifier, as applicable

Street Address or State Road, as applicable

R.R. Ky 547

County

CAMPBELL

City (nearest)

MELBOURNE

State

Ky

ZIP Code

41059

Indicate number of tanks at this location

3

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands

### III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here )

Job Title

Area Code

Phone Number

### IV. TYPE OF NOTIFICATION

Mark box here only if this is an amended or subsequent notification for this location.

### V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative

JOE SANDFORS owner

Signature

Joe Sandfors

Date Signed

4/21/86

CONTINUE ON REVERSE SIDE





COMMONWEALTH OF KENTUCKY  
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
FRANKFORT OFFICE PARK  
18 REILLY ROAD  
FRANKFORT, KENTUCKY 40601

NOV 09 1989

MEMORANDUM

TO: JOE SANDFOSS  
RR KY 547  
MELBOURNE, KY 41059

FROM: Joan Cullen-Lollis, Supervisor *JCL*  
Underground Storage Tank Program

DATE: October 25, 1989

SUBJECT: Request for Updated Underground Storage Tank Information



The Division of Waste Management, Underground Storage Tank Program is updating its records of underground storage tank registrations. Please examine the enclosed information regarding your underground storage tank(s). If information listed is incorrect, please clearly mark changes. If there are no changes, please mark "No Changes Necessary". Return the enclosed forms to this agency no later than November 15, 1989. This information will be used to verify or correct our existing records.

Please note that you have been assigned the Facility I.D. #4528019. It is necessary that you refer to this number with any future correspondence with this agency.

Your assistance in this matter would be appreciated. Should you have any questions, please do not hesitate to contact Jane Akin at (502) 564-6716.

tre

No Changes Necessary                      ✓

May. 10. 2011 2:51PM  
CARL M. SHADLEY  
SECRETARY



No. 0220 P. 5  
WALLACE G. WILKINSON  
GOVERNOR

COMMONWEALTH OF KENTUCKY  
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
FRANKFORT OFFICE PARK  
18 REILLY ROAD  
FRANKFORT, KENTUCKY 40601

MEMORANDUM

NOV 09 1989

TO: JOE SANDFOSS  
RR KY 547  
MELBOURNE, KY 41059

FROM: Joan Cullen-Lollis, Supervisor *JCL*  
Underground Storage Tank Program

DATE: October 25, 1989

SUBJECT: Request for Updated Underground Storage Tank Information



The Division of Waste Management, Underground Storage Tank Program is updating its records of underground storage tank registrations. Please examine the enclosed information regarding your underground storage tank(s). If information listed is incorrect, please clearly mark changes. If there are no changes, please mark "No Changes Necessary". Return the enclosed forms to this agency no later than November 15, 1989. This information will be used to verify or correct our existing records.

Please note that you have been assigned the Facility I.D. #4528019. It is necessary that you refer to this number with any future correspondence with this agency.

Your assistance in this matter would be appreciated. Should you have any questions, please do not hesitate to contact Jane Akin at (502) 564-6716.

tre

No Changes Necessary           ✓

FOR TANKS IN KY	RETURN COMPLETED FORM TO:	DEPARTMENT FOR ENVIRONMENTAL PROTECTION DIVISION OF WASTE MANAGEMENT UNDERGROUND STORAGE TANK SECTION 18 REILLY ROAD FRANKFORT, KENTUCKY 40601
<b>FOR STATE USE ONLY</b>		
		FACILITY ID NO. 4528019
DATE REC'D. _____		

**INSTRUCTIONS**

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than four (4) tanks are owned at this location, photocopy the Tank Description form attached to this form.

I. Ownership of Tank(s)	II. Location of Tank(s)
JOE SANDFOSS	JOE SANDFOSS
Owner Name (Corporation, Individual, Agency etc.)	Owner Name (Corporation, Individual, Agency etc.)
RR KY 547	RR KY 547
Street Address	Street Address
MELBOURNE KY 41059	CAMPBELL
City State Zip Code	County
606-635-9122	MELBOURNE 41059
Area Code Telephone Number	City Zip

**III. Type of Owner**

CURRENT	<input checked="" type="checkbox"/>	STATE/LOCAL GOVT		PRIVATE/CORP	<input checked="" type="checkbox"/>
FORMER		FEDERAL GOVT (GSA ID NO.)		OWNERSHIP UNCERTAIN	

**IV. Contact Person at Tank(s) Location**

Name: JOE SANDFALL DBA CAM	Title:	Phone: 606-635-9122
----------------------------	--------	---------------------

**V. Certification**

*QUIT BUSINESS AND RETIRED 12/84*

Signature: <u>Joseph Sandfall</u>	Date: <u>11/7/89</u>
-----------------------------------	----------------------

DESCRIPTION OF UNDERGROUND STORAGE TANK	
FACILITY ID: 4528019	TANK ID NUMBER: 0001
TANK STATUS	
Currently in Use	
Temporarily out of Use	
Permanently out of Use	
Brought into Use after 6/8/86	
Year Installed (last 2 digits e.g., 89 for present year)	77
Estimated Total Capacity (gallons)	550
Date Removed (month/year)	-----
MATERIAL OF CONSTRUCTION	
Steel	X
Concrete	
Fiberglass/Reinforced Plastic	
Unknown	
Other, please specify	
INTERNAL PROTECTION	
Cathodic Protection	
Interior Lining (epoxy resins e.g.)	
None	
Unknown	X
Other, please specify	
EXTERNAL PROTECTION	
Cathodic Protection	
Painted (asphaltic e.g.)	
Fiberglass/Reinforced Plastic Coated	
None	
Unknown	X
Other, please specify	
PIPING	
Bare steel	
Galvanized steel	
Fiberglass/Reinforced Plastic coated	
Cathodic Protection	
Unknown	X
Other, please specify	
SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME	
Empty	X
PETROLEUM: Diesel	
Kerosene	
Gasoline (include alcohol blends)	X
Used Oil	
Other, please specify	
HAZARDOUS SUBSTANCE	
Principal CERCLA Substance Name	
Chemical Abstract Service (CAS) Number	
Stores a Mixture of Substances	
Unknown	
ADDITIONAL INFORMATION (for tanks permanently taken out of service)	
Estimated date last used (month/year)	1985 112
Estimated Quantity of Substance Remaining (gallons)	0
Tank filled with Inert material (sand, concrete e.g.)	Y

DESCRIPTION OF UNDERGROUND STORAGE TANK	
FACILITY ID: 4528019	TANK ID NUMBER: 0002
TANK STATUS	
Currently in Use	
Temporarily out of Use	
Permanently out of Use	
Brought into Use after 6/8/86	
Year Installed (last 2 digits e.g., 89 for present year)	68
Estimated Total Capacity (gallons)	280
Date Removed (month/year)	-----
MATERIAL OF CONSTRUCTION	
Steel	X
Concrete	
Fiberglass/Reinforced Plastic	
Unknown	
Other, please specify	
INTERNAL PROTECTION	
Cathodic Protection	
Interior Lining (epoxy resins e.g.)	
None	
Unknown	X
Other, please specify	
EXTERNAL PROTECTION	
Cathodic Protection	
Painted (asphaltic e.g.)	
Fiberglass/Reinforced Plastic Coated	
None	
Unknown	X
Other, please specify	
PIPING	
Bare steel	
Galvanized steel	
Fiberglass/Reinforced Plastic coated	
Cathodic Protection	
Unknown	X
Other, please specify	
SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME	
Empty	X
PETROLEUM: Diesel	
Kerosene	
Gasoline (include alcohol blends)	X
Used Oil	
Other, please specify	
HAZARDOUS SUBSTANCE	
Principal CERCLA Substance Name	
Chemical Abstract Service (CAS) Number	
Stores a Mixture of Substances	
Unknown	
ADDITIONAL INFORMATION (for tanks permanently taken out of service)	
Estimated date last used (month/year)	1985 112
Estimated Quantity of Substance Remaining (gallons)	0
Tank filled with inert material (sand, concrete e.g.)	Y

DESCRIPTION OF UNDERGROUND STORAGE TANK	
FACILITY ID: 4528019	TANK ID NUMBER: 0003
TANK STATUS	
Currently in Use	
Temporarily out of Use	
Permanently out of Use	
Brought into Use after 6/8/86	
Year Installed (last 2 digits e.g., 89 for present year)	68
Estimated Total Capacity (gallons)	280
Date Removed (month/year)	
MATERIAL OF CONSTRUCTION	
Steel	X
Concrete	
Fiberglass/Reinforced Plastic	
Unknown	
Other, please specify	
INTERNAL PROTECTION	
Cathodic Protection	
Interior Lining (epoxy resins e.g.)	
None	
Unknown	X
Other, please specify	
EXTERNAL PROTECTION	
Cathodic Protection	
Painted (asphaltic e.g.)	
Fiberglass/Reinforced Plastic Coated	
None	
Unknown	X
Other, please specify	
PIPING	
Bare steel	
Galvanized steel	
Fiberglass/Reinforced Plastic coated	
Cathodic Protection	
Unknown	X
Other, please specify	
SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME	
Empty	X
<b>PETROLEUM:</b> Diesel	
Kerosene	
Gasoline (include alcohol blends)	X
Used Oil	
Other, please specify	
HAZARDOUS SUBSTANCE	
Principal CERCLA Substance Name	
Chemical Abstract Service (CAS) Number	
Stores a Mixture of Substances	
Unknown	
ADDITIONAL INFORMATION (for tanks permanently taken out of service)	
Estimated date last used (month/year)	1985 112
Estimated Quantity of Substance Remaining (gallons)	0
Tank filled with inert material (sand, concrete e.g.)	Y

4/23/91

RECEIVED  
APR 25 1991  
UST PROGRAM

Gentlemen

In regards to this storage tank situation we will try to clear up this matter. for starters this Camp Spring Grocery has been closed - shut down, out of business for nearly six years and we have him retired for nearly six years. when we were in business we had a small Mom & Pop Grocery with two small gas pumps and two small tanks when we retired we were told to fill these tanks with concrete which we did so it would be awfully hard to store anything in these tanks when they are filled with concrete. On sending back your invoice can see no reason to pay this bill ninety dollars 90.00 for something which will never be usefull or harmful to any one hope this enlightens the situation and puts an end to all these Inquiries.

Respectfully

Joe Sandfor

JAMES E. BICKFORD  
SECRETARY



PAUL E. PATTON  
GOVERNOR

COMMONWEALTH OF KENTUCKY  
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
FRANKFORT OFFICE PARK  
14 REILLY RD  
FRANKFORT KY 40601

September 2, 1997

MS HELEN SANDFOSS  
RR KY 547  
MELBORNE, KY 41059

RE: Camp Springs Grocery  
KY 547  
Melbourne - Campbell County  
UST ID# 4528019

Dear Ms. Sandfoss,

This letter is in response to your request for information concerning the closure of the underground storage tanks (UST's) at the above mentioned property. Our records indicate that the tanks were closed in place with concrete on January 1, 1985. Therefore, the following will be required:

1. Since the underground storage tanks were filled with concrete in 1985, the Division of Waste Management will not require any further information from you at this time.

The federal regulations 40 CFR Part 280.73, does allow the Underground Storage Tank Branch to require an assessment for all UST's previously closed prior to December 22, 1988. At this time, the UST Branch is only requiring assessments if there is a threat to human health, safety or the environment. Groundwater contamination, fume/odor problems, sheen on surface water, and free-phased product discovered will constitute a threat to human health, safety, or the environment. If any of these conditions occur please contact the Emergency Response Team at (502)564-2380.

It is possible the UST Branch will address the UST's closed prior to December 22, 1988, at some time. If you choose to permanently close the UST's or if you have any questions about permanently closing the UST's to standards of today, I can provide you with the requirements for permanent closure.

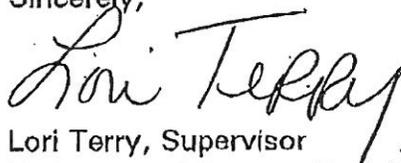


PAGE TWO  
Ms. Sandfoss  
September 2, 1997

There is also a new regulation in place with the Kentucky Petroleum Storage Tank Environmental Assurance Fund that may provide some assistance to you if you choose to permanently close your UST's. If you have questions about the new regulation please contact the KYSTEAF at 1-800-928-7782.

If you have any further questions please do not hesitate to contact me at 1-800-928-4273 extension #213.

Sincerely,

A handwritten signature in cursive script that reads "Lori Terry". The signature is written in black ink and is positioned above the typed name and title.

Lori Terry, Supervisor  
Underground Storage Tank Branch  
Division of Waste Management

NEED TO MAIL THIS IN ENVELOPE  
 MAILING ADDRESS HERE  
 RETURN TO: 192101003922 - INVOICE DATE: 04/14/91

COMPUTER GENERATED  
 POSTAL INVOICE  
 HERE  
 RETURN TO: 192101003922 - INVOICE DATE: 04/14/91

SITE#: 4528019 CAMP SPRINGS GRO  
 DUE DATE: 04/25/91 RR KY 547  
 HELBOURNE , KY 41059  
 ---TANK ID ANNUAL FEE  
 0001 30.00  
 0002 30.00  
 0003 30.00  
 Total Due 90.00

SITE#: 4528019 CAMP SPRINGS GRO  
 DUE DATE: 04/25/91 RR KY 547  
 HELBOURNE , KY 41059  
 ---TANK ID ANNUAL FEE  
 0001 30.00  
 0002 30.00  
 0003 30.00  
 Total Due 90.00

4-25-91  
**received**

Invoice disputes must be written including details.  
 If you have general questions, call (502)564-6716.  
 The annual fee is for the period 07/01/90 - 06/30/91.

Return this part with check or money order, NOT cash,  
 Write Invoice and Site Numbers on checks or letters,  
 Make checks payable to Kentucky State Treasurer.

PHONE#: 199101006922 - SITE#: 4528019  
 U. Commonwealth of Kentucky  
 N. Waste Management - USF  
 18 Reilly Road  
 Frankfort, KY 40601-1190

PHONE#: 192101003922 - SITE#: 4528019  
 U. Commonwealth of Kentucky  
 N. Waste Management - USF  
 18 Reilly Road  
 Frankfort, KY 40601-1190

MP2-603

**APPENDIX C – MORTON INTERNATIONAL / ROHM AND HAAS CHEMICALS  
REGULATORY FILE INFORMATION**



## ENERGY AND ENVIRONMENT CABINET

Steven L. Beshear  
Governor

Department for Environmental Protection  
Division of Waste Management  
200 Fair Oaks Lane, Second Floor  
Frankfort, Kentucky 40601

Leonard K. Peters  
Secretary

29 April 2011

Carl Coker, Project Manager  
Rohm and Haas Company  
Engineering Division  
3100 State Road  
Corydon, PA 19021

Re: Morton International (Melbourne Facility)  
AI# 48736, Mars# E455  
Campbell County

Dear Mr. Coker:

The Division of Waste Management's Superfund Branch has completed a review of the 2010 Monitoring Report on the Enhanced In-Situ Bioremediation of Chlorinated Solvents dated February 2011 by Parsons on behalf of Rohm and Haas Company.

As you may be aware, in order for us to issue a no further action letter, there needs to be four quarters of sampling with results under the applicable screening level and with the detection limits below the screening level as well. This was achieved by having the laboratory complete a second sample run for two of the samples where the detection limits were initially too high, as described in the report and in an email dated April 11, 2011 from Eric Mysona of Parsons.

Therefore, pursuant to Kentucky Revised Statute (KRS) 224.01-400, no further action is required at this site. Please be advised that the Division of Waste Management reserves the right to require further remedial action or corrective measures should they be warranted by additional information or further developments.

Thank you very much for your cooperation in this matter. If you should need any additional information, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Susan L. Mallette".

Susan L. Mallette  
Geologist Registered

ec: Eric Mysona, Project Manager, Parsons  
Wesley Turner, Shawn Cecil, Superfund Branch

## SECTION 1.0 INTRODUCTION

This work plan provides a detailed discussion of tasks to be conducted as part of the Phase III Field Investigation at the closed Morton International, Inc. (Morton) property located at 199C Poplar Ridge Road, Melbourne, Kentucky (Figure 1). Application guns containing a polymer sealant were cleaned at the site between 1982 and 2001. These guns were cleaned at the rear of the property using solvents. Subsequent to the purchase of Morton by Rohm and Haas Company, Parsons has published the following assessment reports describing impacts to the subsurface resulting from the use of solvents at the site:

- Combined Phase I and Phase II Environmental Site Assessments, Morton International, November 2001.
- Site Assessment, Morton International, March 2003.

The Combined Phase I and Phase II Environmental Site Assessment report determined the history of solvent use at the site and confirmed that the shallow soil and groundwater had been impacted. As a result of the initial investigation, a subsequent environmental site assessment was conducted in November and December 2001 to identify potential source areas for the VOCs detected in groundwater during the September 2000 investigation. In addition, as part of the 2001 study, groundwater samples were collected to evaluate the potential for migration of these compounds within the saturated zone.

Analytical results from the 2001 investigation indicated that seven VOCs were present in soil, including 1,1,1-trichloroethane (1,1,1-TCA) and its daughter products 1,1-dichloroethene (1,1-DCE), and 1,1-dichloroethane (1,1-DCA). The largest concentrations of these compounds were detected in samples collected from under the concrete pad west of the maintenance portion of the barn.

Groundwater sampling results from the 2001 investigation indicated that 1,1,1-TCA and its daughter products 1,1-DCE, 1,1-DCA, and chloroethane are present in

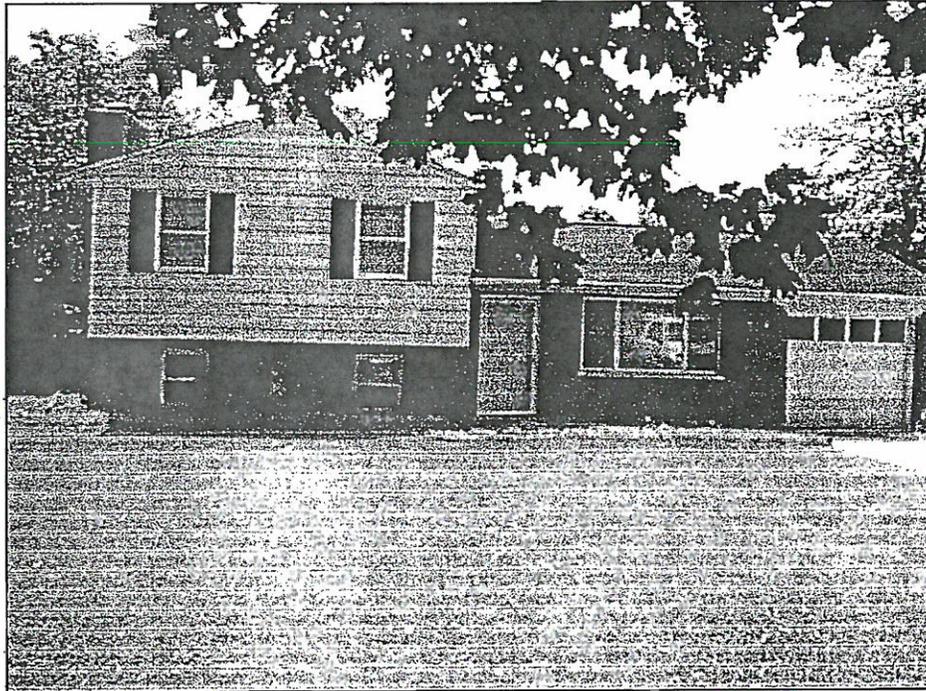
groundwater, and a plume of VOCs migrating to the northeast is present at the site. Like the soil samples, the largest concentrations in groundwater were detected in samples collected from piezometers and monitoring wells installed through and near the concrete pad west of the barn. As a result, the source area for the VOCs in soil and groundwater appears to be under the concrete pad next to the barn.

Chlorinated solvents like those detected at the site are heavier than water and generally sink and sometimes collect as a dense non-aqueous phase layer (DNAPL). The Phase III Investigation conducted in August 2003 focused on determining whether DNAPLs were present on top of bedrock at the site. Monitoring wells were installed at strategic locations to the top of bedrock. No DNAPLs were encountered, and where detected, the concentrations of chlorinated compounds in groundwater were below action levels. Therefore, impact of past practices seems to be limited to the upper zone of the aquifer. Future investigations and remedial activities will be focused on the upper portion of the aquifer only.

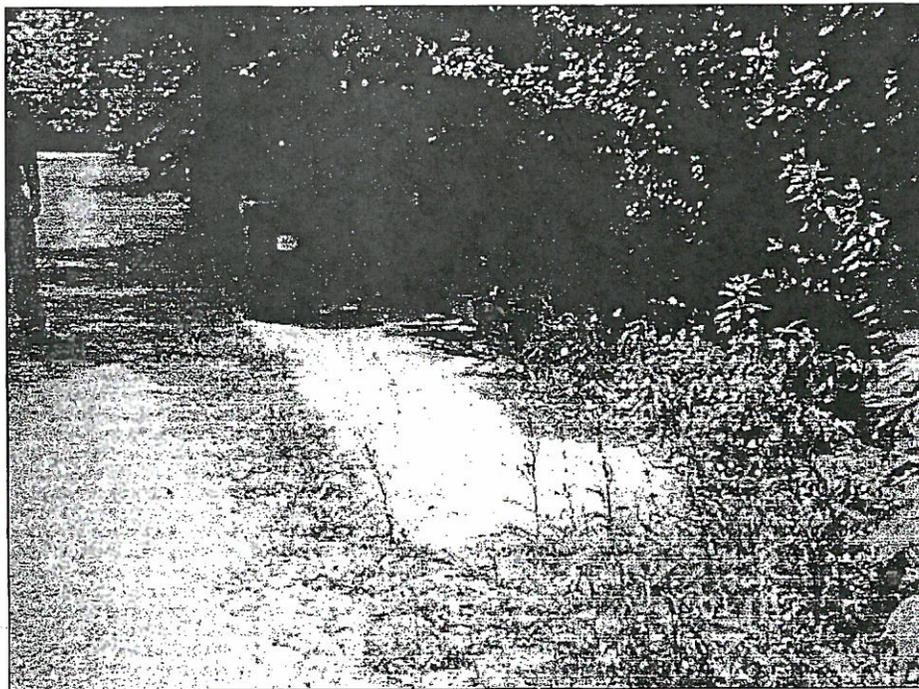
The August 2003 data indicated that the creek did not serve as a full divide as previously determined. This was evidenced by the detection of chlorinated compounds in two wells located on the east side of Four Mile Creek, indicating that the contaminants are migrating within the shallow aquifer zone, below the creek to the east. Hence, one of the objectives of the extended Phase III will be to better define the extent of the plume on the east side of Four Mile Creek. Additionally, data will be collected on site, north of the house, to determine if there is a component of migration along the creek to the north.

Recently, the property owner to the south of the site provided access to Rohm and Haas for the purpose of sampling soil and groundwater. Therefore, another objective of the Extended Phase III Assessment will be to define the extent of impacts to the south of the site.

Finally, the property owners to the west of the site have also provided access to Rohm and Haas for the purpose of sampling. Previous sampling has shown that groundwater has not migrated onto this property. Due to the fact that this adjacent property is directly upgradient, only soil samples will be collected to determine if this property was impacted by any historical surface activities at the site.



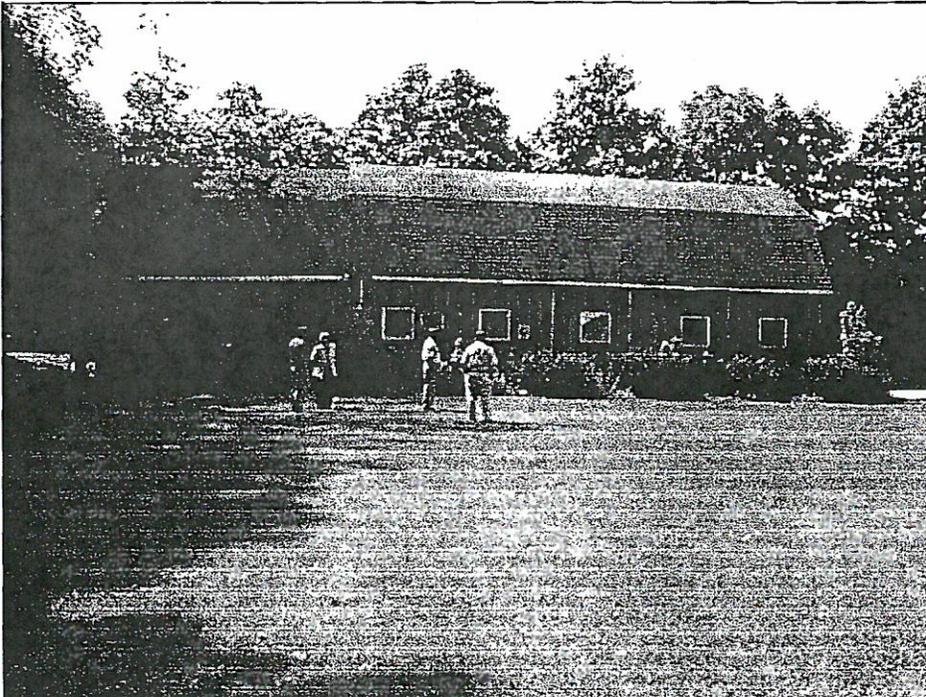
**Picture #1** is of the unoccupied residence located on the Morton International property.



**Picture #2** is of the concrete pad where the dumpsters that once contained sludge waste was stored.



**Picture #7** is of MW-7, one of the contaminated shallow wells on the Morton property.



**Picture #8** shows the total length of the barn. Morton only operated in the first 2/3rds of the barn. The Frasier family used the back of the barn for storage.

## EXECUTIVE SUMMARY

For a number of years, chlorinated solvents were used at the Melbourne Site ("the Site") to remove adhesive from applicator guns. Volatile organic compounds (VOCs) were detected in groundwater samples collected during site assessment activities in September 2000 and the source area was identified to be the concrete pad outside the barn during characterization studies in 2001. Phase III Investigations occurred in August 2003 and March 2004. The primary objectives of these investigations were to determine whether a dense non-aqueous phase liquid (DNAPL) had accumulated on the bedrock surface at the base of the aquifer and to delineate the extent of VOC impacts in the subsurface. An additional objective was to establish the baseline site conditions for comparison to conditions after a pilot scale injection of organic substrate.

In 2003, Rohm and Haas advanced six borings to bedrock and converted each to a monitoring well screened at the base of the aquifer. In addition, two shallow delineation wells were also installed. In 2004, Rohm and Haas installed five additional shallow aquifer wells (two on-site and three off-site consisting of two on the property to the south and one on Campbell County property to the east) and six soil borings on the property to the west. Parsons personnel used field test kits to record carbon dioxide, alkalinity, manganese and ferrous iron concentrations in select wells as part of the baseline characterization. Severn Trent Laboratories conducted VOC analysis (Environmental Protection Agency [EPA] Method 8260) on all the soil and groundwater samples collected in 2003 and 2004 and analysis for biogeochemical indicator parameters including nitrate (Method E353.1), chloride and sulfate (Method E300.1) on select samples in 2004. Microseeps, Inc. Laboratory analyzed select samples for methane, ethane and ethene (Method AM20GAX) and volatile fatty acids (Method AM21G) in 2004.

No DNAPL plume was discovered in the deep groundwater samples. A vertical profile of constituent concentrations in groundwater in the source area shows the highest concentrations of VOCs in the 16-18 foot interval with very few and relatively small detections of contaminants deeper than 20 feet below ground surface (bgs). Groundwater sampling results indicate that the 1,1,1-trichloroethane (1,1,1-TCA) plume is limited in