

## DECISION DOCUMENT

HERSHBERGER LANDFILL  
MSL# 180-0386  
UNION COUNTY  
April 22, 1997

### DECLARATION

This decision document presents the Ohio Environmental Protection Agency's (Ohio EPA's) selected remedial action for the Hershberger Landfill, located north of Plain City, Union County, Ohio. The major components of the selected remedial action are as follows:

- Leachate collection, storage and treatment/disposal at a Publicly Owned Treatment Works;
- Cap augmentation, repair and revegetation;
- Landfill gas management;
- The implementation of an approved ground water monitoring plan; and
- Institutional and engineering controls including complete site fencing, signage, and deed restrictions.

The selected remedial action is protective of human health and the environment, attains applicable state requirements, and is cost effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site. Because this remedial action will result in hazardous substances remaining on-site, the Ohio EPA will monitor the status of the remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment. The remedial action will be required to meet the performance standards contained in this document.

### DECISION SUMMARY

The Hershberger Landfill is located at 10519 Crottinger Road, Plain City in Jerome Township, southeast Union County. The area of the landfill is approximately 15 acres (See Figure 1). The landfill operated from 1970-1975 and accepted municipal and industrial wastes. Beginning in 1974, uncontrolled leachate outbreaks were noted. The operator, Jonas Hershberger, attempted to control the leachate but failed. Beginning in 1985, the Ohio EPA and five companies that

allegedly disposed industrial waste at the landfill began negotiations to develop a solution to the leachate outbreaks. In August 1991, four of the companies signed an Administrative Order on Consent with the Ohio EPA to perform a Remedial Investigation/Feasibility Study (RI/FS). The companies that signed the Consent Order were American National Can Company, Monsanto Corporation, OM Scott and Sons Company, and PPG Industries, Inc. The RI took place during 1992-1993. The Ohio EPA approved the RI Report in August 1995 and approved the FS in August 1996.

The purpose of the RI was to characterize the nature and extent of contamination, assess the baseline risks to human health and the environment, and determine the need for further action. The RI data indicates that the extent of contamination is limited to the leachate, surface water, sediment, and surface soil. The source of the contamination is the leachate emanating from the landfill at the northern, eastern, and southern boundaries. The leachate flows northeast, east, and west from the landfill. The analytical data indicates the leachate contains several volatile organic compounds, semi-volatile organic compounds and inorganics (See Table 1); however, the landfill's contribution to the inorganic constituents is uncertain. The surface flow is controlled by drainage tiles at the northern and southern boundaries. The maximum extent of contamination is approximately 2500 feet in an intermittent stream to the northeast and 1200 feet in an intermittent stream to the east (See Figure 2).

According to the RI, direct contact with the leachate exceeds Ohio EPA's human health risk criteria for non-carcinogenic risks. The organic contaminants that contributed most to the risk are 2-butanone, 4-methyl 2-pentanone, ethylbenzene, nitrobenzene, and 4-methylphenol. Acceptable non-cancer risk is defined as a hazard index score of less than 1, which is based on toxic properties of the contaminants. The hazard index score due to incidental ingestion of leachate and dermal contact at Hershberger was calculated at 19 and 2 respectively. Generally, acceptable exposure concentrations for carcinogens represent an excess cancer risk range of between 1 in 10,000 and 1 in 1,000,000, depending on specific site conditions. The carcinogenic risk did not exceed 1 in 10,000 (See Table 2). Based on this assessment, preventing direct contact with the leachate is necessary to reduce the risk to acceptable levels.

The purpose of the FS was to choose the appropriate remedy for the landfill. In order to facilitate the FS process the Ohio EPA consulted the United States Environmental Protection Agency (US EPA), Office of Solid Waste and Emergency Response (OSWER) Directive *Presumptive Remedy for CERCLA Municipal Landfill Sites* (OSWER Directive 9355.0-47FS), dated September 1993. The US EPA identified containment as the presumptive remedy for CERCLA municipal landfill sites. The Ohio EPA agreed with US EPA's findings and selected containment as the preferred remedy at the Hershberger Landfill. Therefore, the FS focused on alternatives that are specific to containment (i.e., landfill cap designs, leachate collection systems, leachate disposal alternatives, and engineering controls). The Ohio EPA used the following eight evaluation criteria to choose the remedy:

1. Overall protection of human health and the environment;
2. Compliance with applicable or relevant and appropriate laws, rules, standards and

- criteria;
3. Long term effectiveness and permanence;
  4. Reduction of toxicity, mobility, and/or volume through treatment;
  5. Short-term effectiveness;
  6. Implementability;
  7. Cost; and,
  8. Community acceptance.

A summary of the comparative analysis of the containment alternatives evaluated in the FS is provided in Table 3. Complete descriptions of the comparative analysis' are in the *Final Feasibility Study for the Hershberger Landfill, Plain City, Ohio*, dated June 5, 1996.

To evaluate community acceptance, the Ohio EPA public noticed the *Preferred Plan, Hershberger Landfill, Union County* on October 1, 1996. A public hearing was held on November 20, 1996 and written comments were accepted until December 4, 1996. A summary of the community response is provided in the Responsiveness Summary section in this document. Based on the community response, the Ohio EPA determined that the Preferred Plan is generally acceptable to the community.

The chosen remedy for the Hershberger Landfill is summarized below.

Landfill Cap Repair and Revegetation. This includes filling in areas of differential settlement, stabilizing minor erosion, and establishing vegetation. One of the main purposes of cap repair is to prevent desiccation cracking, which is thought to be the principal cause of water infiltration. This alternative was chosen because it is effective at reducing water infiltration; it is the most cost-effective alternative; it exceeds the requirements for the cap at the time the landfill closed; the necessity of a leachate collection system lessens the importance of the more elaborate cap designs; and this cap design is considered more implementable than the other alternatives.

Complete Perimeter Curtain Drain. A perforated pipe will be installed in a narrow trench inside the waste around the entire perimeter of the landfill. The leachate will drain by gravity to an underground storage tank, where it will be temporarily stored. This alternative was chosen because it is considered to provide the greatest degree of long-term effectiveness and it is considered the most reliable and permanent alternative.

Direct Discharge to a Publicly Owned Treatment Works (POTW). The leachate will be pumped out of the underground storage tank and transported to a POTW where it will be treated. The POTW will need to have an Ohio EPA approved industrial pretreatment program. This alternative will also require a Permit to Install (PTI) from the Ohio EPA, and the permission of the superintendent of the POTW. This alternative was chosen because it is the most implementable, reliable, technically effective, and cost-effective alternative.

Passive Landfill Gas Venting Modified for Possible Conversion to an Active Extraction System. The gas will be vented through vertical vents in a perimeter drain or a permeable cutoff trench,

which will prevent horizontal migration. This alternative was chosen because it is the most cost-effective alternative. The long-term effectiveness of the passive system is approximately the same as the active system. Also, the passive system will be designed so that it can be easily converted to an active system, if necessary.

Institutional/Engineering Controls. Institutional and engineering controls are used to restrict access, which will reduce the risk of exposure and help to protect the integrity of the remedy. This includes complete site fencing, deed restrictions, and signage.

Ground Water Monitoring. An approved ground water monitoring plan will be implemented as part of the operation and maintenance of the landfill.

Explosive Gas Monitoring. An explosive gas monitoring plan in accordance with current solid waste regulations will be implemented as an applicable requirement.

## **Performance Standards**

Performance standards are the applicable standards and criteria for the remedial design, remedial action, and operation and maintenance at the Hershberger Landfill. The Ohio EPA identified and referenced applicable standards contained in state law that specifically address the remedial action or other circumstances for each component of the chosen remedy.

### Landfill Cap Standards:

1. The landfill cap shall be constructed so that it is substantial compliance with Ohio Administrative Code (OAC) Rule 3745-27-10, as effective July 29, 1976. Substantial compliance shall be defined as meeting the specific criteria outlined herein.
2. The cap material used to fill in areas of differential settling shall meet the following specifications:
  - a. 100% of the material particles must pass a 10-inch screen, with no more than two particles from a 50 cubic foot sample retained on a 6-inch screen.
  - b. 95% of the material particles must pass a 3-inch screen.
  - c. 70% of the material particles must pass the #10 screen.
  - d. The material that passes the #10 sieve (sand, silt, and clay fractions) must be classified using the United States Department of Agriculture textural classification chart and be a soil type listed in OAC 3745-27-09(F)(4) [effective 1976], or a soil classified as "clay" under the USDA textural classification chart.

3. Cover material used to augment the existing cap shall meet the following construction specifications:
  - a. Materials shall be compacted to at least 90% of the maximum Standard Proctor Density (American Society of Testing and Materials (ASTM) method D-698). To achieve the required compaction rate, the material will be compacted using loose lifts, no greater than 8 inches thick prior to compaction.
  - b. Field permeability of the cap material shall not exceed  $1 \times 10^{-5}$  cm/sec or laboratory permeability of a cap sample shall not exceed  $1 \times 10^{-6}$  cm/sec.
  - c. A top soil layer of at least 6 inches thick shall be placed over areas of the cap exhibiting surface slopes of less than 5%. A vegetative layer to form a complete and dense vegetative cover shall be established and maintained. Spot application of topsoil shall be applied to the landfill outslopes (areas with surface slopes greater than 5%) at places exhibiting erosion or lacking vegetation. A dense vegetative cover shall be established and maintained at these areas.
  - d. The cover shall be constructed to minimize ponding and erosion.
4. The following tests shall be performed during the placement of clay soils:
  - a. During construction of the cap augmentation, compaction shall be monitored to ensure the proper specifications are met using either of the following methods: nuclear densimeter (ASTM D-2922); sand cone (ASTM D-1556); or, rubber balloon (ASTM D-2167) at a rate of no less than one test for every acre-lift of clay soils.
  - b. Upon completion of the placing of clay soils and before placement of topsoil, the field permeability of the cap material shall be determined using Boutwell two-stage permeameter, or other acceptable means, at a rate of no less than one test for every two acres of cap augmentation. Alternatively, laboratory permeability with a Shelby Tube sample may be used.
5. The cover shall be inspected and maintained in accordance with OAC 3745-27-14 (A)(2)[effective 1994].

Leachate Management:

1. The objective of leachate management is to prevent the flow of leachate emanating from the landfill surface to the extent necessary to protect human health and the environment. To meet this objective, a system shall be designed and constructed to collect and dispose of the leachate. The leachate collection and disposal system shall be constructed,

operated and maintained in accordance with OAC 3745-27-08(C)(5)[effective 1994] and OAC 3745-27-14(A)(1)[effective 1994] and shall:

- Rely on gravity drainage;
  - Be established near the landfill perimeter;
  - Have an aggregate backfill with permeability of no less than  $1 \times 10^{-3}$  cm/sec;
  - Have materials of construction compatible with chemical compounds present in the leachate;
  - Have conveyance piping of a minimum diameter of 6 inches;
  - Have a minimum trench depth of 6 feet; and
  - Have clean-out ports and solids knock-out sumps.
2. The Hershberger Landfill PRP Group shall be responsible for quarterly inspections of the leachate collection system in accordance with 3745-27-14(A)(3) [effective 1994].

Landfill Gas Management:

1. The explosive gas monitoring plan shall be prepared and implemented in accordance with OAC 3745-27-12 [effective 1994].

Ground Water Monitoring:

1. A ground water monitoring sampling and analysis plan shall be prepared and implemented in accordance with OAC 3745-27-10 (C)(2) and [effective 1994].
2. The monitoring parameters shall be those constituents listed in OAC 3745-27-10, Appendix I [effective 1994].
3. The monitoring wells that shall be monitored are MW-1I, MW-2I, MW-3I, MW-4I, and MW-5I.
4. The frequency of ground water monitoring shall be once every three years.

Institutional and Engineering Controls:

1. Controls to maintain the integrity of the landfill cap, leachate management system, drainage system and any other component of the landfill design shall be implemented in accordance with OAC 3745-27-14 [effective 1994].

## **RESPONSIVENESS SUMMARY**

The purpose of the responsiveness summary is to address public comments received on the Preferred Plan, RI/FS Report, and other information in the Administrative Record. No

comments were received on the RI/FS Report or the Administrative Record, therefore, this section contains a summary of the verbal and written comments on the Preferred Plan and the Ohio EPA's responses.

The Ohio EPA issued the Preferred Plan for public review and comment on October 1, 1996. On November 20, 1996 a public information session and hearing was held at the Jerome Township Hall in Union County. Five members of the community testified at the hearing. The deadline for written comments was December 4, 1996. The comments on the Preferred Plan are contained in Attachment A, *Ohio Environmental Protection Agency, Public Hearing and Written Comments, Hershberger Landfill Preferred Plan*. The comments in Attachment A are summarized and addressed below.

Comment. Several residents expressed concern about potential ground water contamination. One resident noted that there is a downward vertical gradient between the shallow and/or intermediate wells and the deep wells in at least three of the well pairs at the site. The concern is that the downward gradient could drive the contamination into the aquifers where local residents obtain their potable water. Other residents are concerned about the sampling frequency, monitoring well placement, and depth of wells.

Ohio EPA Response. The Ohio EPA is also concerned about protecting the ground water and will require continued ground water monitoring as required by current solid waste regulations. Based on our evaluation of the potential for contaminant migration, we concluded that contaminant migration from the Hershberger Landfill to the underlying potable water aquifer(s) is highly unlikely. We considered all possible transport mechanisms including advective transport, waste-induced changes in permeability, direct conduits, free migration, and molecular diffusion. A direct conduit; for example, an abandoned water well beneath the landfill, is the only conceivable way contaminants could migrate to the aquifer(s). The principal reasons for this conclusion are provided below.

- In order for the contaminants to impact the ground water aquifer(s), they must first migrate through a uniform 55-90 foot thick low permeability silty-clay till that underlies the landfill. Assuming the worst case scenario in which a particle of ground water migrates freely through the till, the Ohio EPA calculates it would take over 1500 years for that particle of ground water to move downward 55 feet. In reality, it would take much longer due to retardation factors and longer still, if ever, for a particle of organic contamination to migrate 55 feet in its toxic form. It would take longer for the organic contaminants to migrate unchanged through the till because they are subject to natural attenuation processes, principally biodegradation.
- Direct measurement of ground water confirms that the contaminants have not migrated to the ground water. For example, no contaminants associated with the landfill were detected at MW-2S, which is screened in a vertical fracture six feet below the base of the landfill. If any appreciable vertical migration of contaminants has occurred, then it is very likely that the contaminants would have been detected in this well.

- The apparent downward vertical hydraulic gradient was noted in the RI Report (Section 6.2, Page 6-14). The downward gradient was measured at well clusters MW-1 and MW-5 between the intermediate and deep wells. The difference in the static water levels are between .005-.007 feet. In order for the downward vertical hydraulic gradient to "drive" contaminants from the intermediate to the deep aquifer, contaminated ground water must first reach the intermediate aquifer. As described above, this is unlikely even in a worst-case scenario.
- The vertical hydraulic conductivity of the till meets or exceeds current federal and state standards for recompacted clay liners constructed at the base of landfills. The vertical conductivity of the unoxidized till was measured at  $1 \times 10^{-8}$  cm/sec to  $2.5 \times 10^{-8}$  cm/sec. The state and federal standard for recompacted clay liners is  $1 \times 10^{-7}$  cm/sec.

Comment. Some residents were concerned about the permanence of the containment action and suggested technologies that might reduce the toxicity of the waste through treatment technologies.

Ohio EPA Response. The Ohio EPA chose containment as the preferred alternative based on US EPA's guidance *Presumptive Remedy at CERCLA Municipal Landfill Sites*. US EPA found that containment is nearly always the preferred alternative at landfills. The reason for this is that other potential remedial technologies either cannot be implemented or would be ineffective because of the technical difficulties in treating the large volumes of mixed solid and industrial/hazardous waste in landfills.

Comment. Some residents expressed concern about the ability or motivation of the of the potentially responsible parties (PRPs) to follow through with the work and subsequent operation and maintenance in the long-term. The residents stated that it is important to have a financial assurance instrument in place.

Ohio EPA Response. The PRPs will enter into a legally binding agreement called an Administrative Order on Consent (Consent Order) with the Ohio EPA for the remedial design/ remedial action and operation and maintenance of the chosen remedy. By agreeing to the terms and conditions in the Consent Order, the PRPs will be obligated to perform the work specified in the Consent Order. A financial assurance instrument may be included in the Consent Order, but this has not been determined yet.

Comment. Some residents expressed concern about the ability of the proposed cap to prevent leachate production. They stated that native Ohio clays are prone to desiccation cracking; therefore, if the cap is allowed to dry out, the same leachate problem will return. They believe the cap should prevent water infiltration.

Ohio EPA Response. Desiccation cracks are thought to be the principle factor in water infiltration and subsequent leachate production at Hershberger. One of the main objectives for the proposed cap augmentation is to prevent desiccation cracks from occurring. This will be

accomplished by establishing a thick vegetative layer that shades the cap material and provides a more consistent moisture regime. It is anticipated that this will reduce annual water infiltration by 82%. In addition, the chosen remedy stresses leachate collection/disposal, which is the only way to ensure that the leachate is contained. Therefore, the volume of water infiltration through the cap is not critical in reducing the risk.

Comment. One resident expressed a concern about the pace of the progress at the site.

Ohio EPA Response. The Ohio EPA and the PRP group have taken and are taking steps to streamline the process and facilitate the remedy as much as possible. The RI/FS process helps to ensure that the correct decisions are being made and that residents participate in those decisions, which takes time.

Comment. Some residents are concerned about the neighboring Unico Landfill and want to know what the Ohio EPA is doing about it.

Ohio EPA Response. The Ohio EPA continues to assess the situation at the Unico Landfill. An updated assessment of the site was completed during 1996. Any questions should be addressed to Emanuel Ayeñi or Deborah Strayton at the Central District Office of the Ohio EPA (614-728-3778).

Comment. One resident stated a concern over the health of the Darby Creek Drainage Basin.

Ohio EPA Response. The Ohio EPA is also concerned about the health of the Darby Creek Drainage Basin. The Ohio EPA completed a comprehensive study, *Biological and Habitat Study of Sugar Run, Hershberger Landfill, Union and Madison Counties, Ohio*, dated June 14, 1996. This study concluded that the Hershberger Landfill has not impacted Sugar Run, which confirms the conclusions of the RI Report.

**Approved by:**

**Signature**

**Date**

Jan Carlson, Chief, DERR

Mike June for Jan Carlson 6.19.97

Mike Czezele, Assistant Chief, DERR

Mike Czezele \_\_\_\_\_

Raymond Beaumier, Manager, DERR

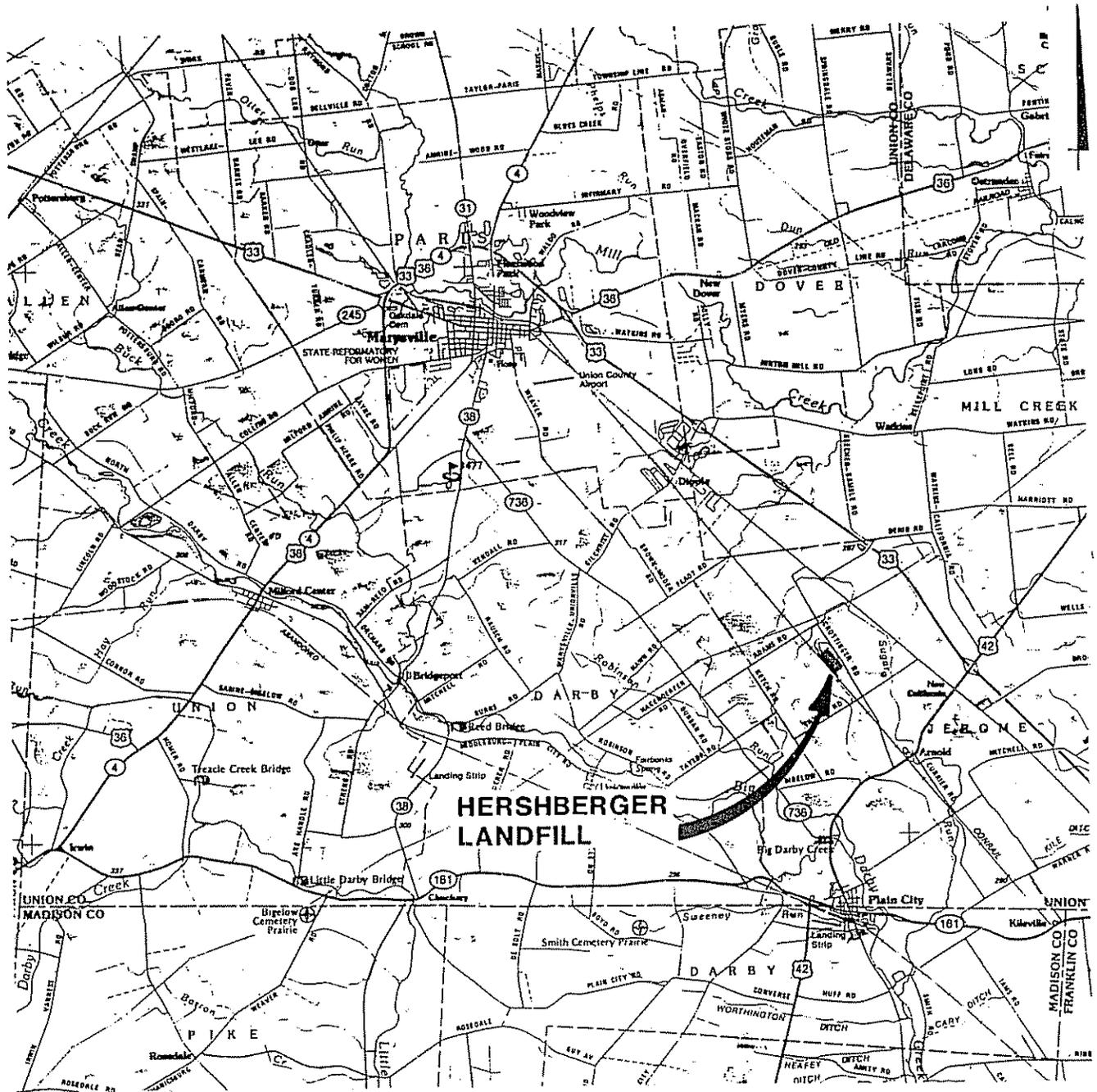
Raymond A. Beaumier 6/19/97

Deborah Strayton, Supervisor, DERR

Deborah Strayton 6/19/97

# Figures

Hershberger Landfill Decision Document



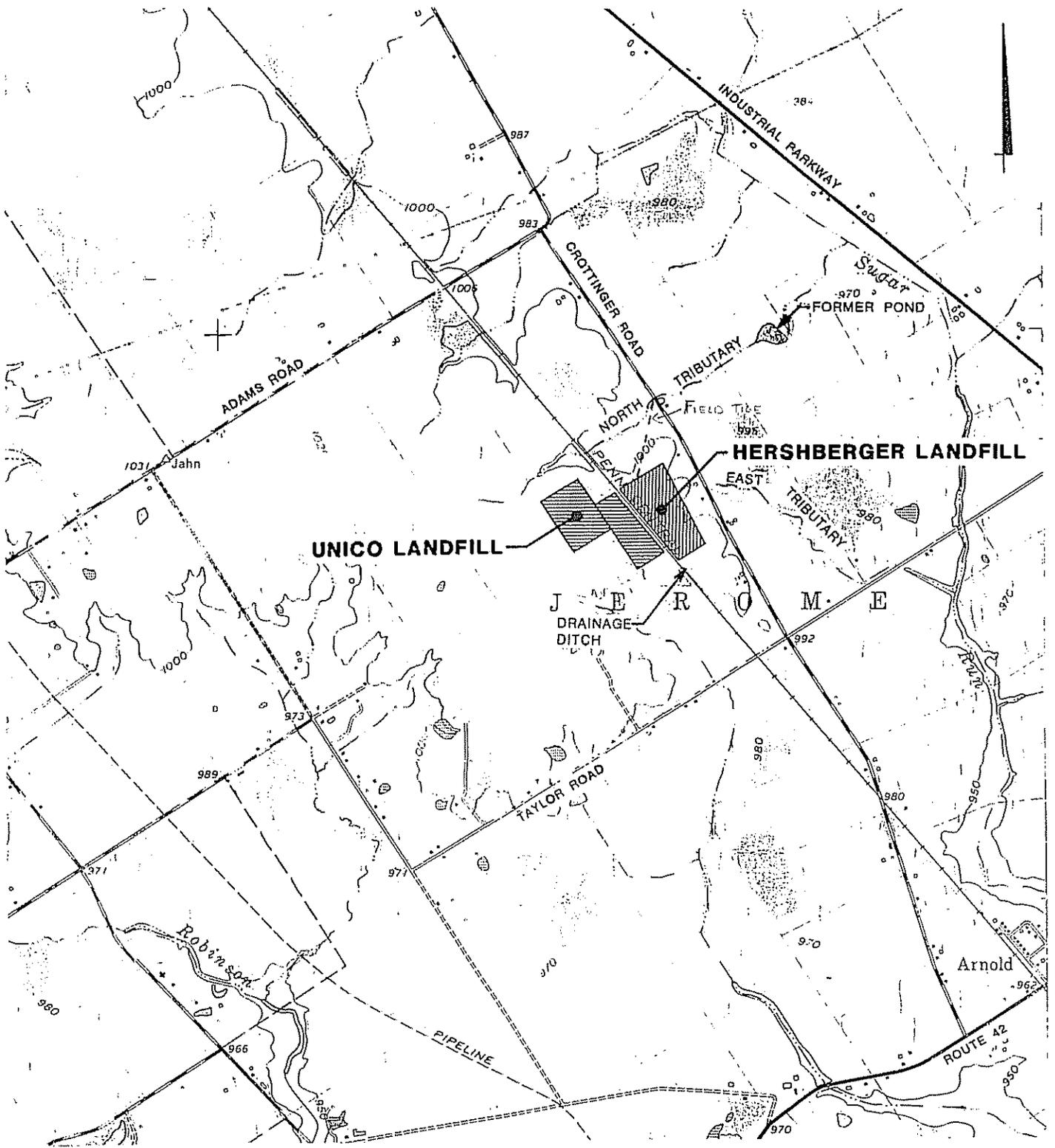
SOURCE: OHIO ATLAS AND GAZETTEER, 1987, DELORME MAPPING COMPANY, FREEPORT, MAINE.

SCALE: 1:150,000



MAP LOCATION

**Figure 1**  
**Geographic Location Map**  
 Hershberger Landfill  
 Decision Document



SOURCE: MARYSVILLE, OHIO USGS QUADRANGLE, 1973.



QUADRANGLE LOCATION

**Figure 2**  
**Site Location Map**  
 Hershberger Landfill  
 Decision Document

# Tables

Hershberger Landfill Decision Document

# TABLE 1

## Constituents Detected in Leachate, Surface Water and Sediment During the Remedial Investigation at Hershberger Landfill

<u>Volatile Organics</u>	<u>Semi-Volatile Organics</u>	<u>Inorganics</u>
Benzene	Diethyl phthalate	Antimony
Chlorobenzene	Di-n-butyl phthalate	Aluminum
Toluene	Butylbenzyl phthalate	Arsenic
Ethylbenzene	Bis(2-ethylhexyl)phthalate	Barium
m/p Xylenes	Di-n-octyl phthalate	Beryllium
o-Xylenes	Isophorone	Cadmium
Acetone	Nitrobenzene	Cobalt
2-Butanone	Napthalene	Chromium
4-Methyl-2-pentanone	Fluoranthene	Copper
2-Hexanone	Benzoic acid	Iron
1,1 Dichloroethane	Phenol	Lead
cis 1,2 Dichloroethene	4-Methylphenol	Magnesium
Trichloroethene	2,4-Dimethylphenol	Manganese
	3-Nitroaniline	Mercury
	Benzo(b)fluoranthene	Nickel
	Benzo(a)pyrene	Selenium
	Dibenzo(a,h)anthracene	Silver
	Benzo(g,h,i)perylene	Thallium
	4-Chloro-3-methylphenol	Vanadium
		Zinc
		Cyanide

## Table 2

### Hershberger Landfill Risk Summary

Medium/Exposure Route	Non-carcinogenic Hazard Index Score	Carcinogenic Risk
<u>Leachate</u>		
Dermal	2	8E-06
Oral	19	1E-04
<u>Soil</u>		
Dermal	0.03	4E-06
Oral	0.3	6E-05
<u>Surface Water</u>		
Dermal	0.03	2E-06
Oral	0.2	1E-06
<u>Sediment</u>		
Dermal	0.08	6E-06
Oral	0.7	5E-05

**TABLE 3 COMPARISON OF ALL REMEDIAL ALTERNATIVES (page 1 of 2)**

<b>REMEDIAL ALTERNATIVE</b>	<b>PURPOSE</b>	<b>POTENTIAL FOR NEGATIVE ENVIRONMENTAL EFFECTS</b>	<b>EXPECTED EFFECTIVENESS</b>	<b>EXPECTED RELIABILITY</b>	<b>PRESENT WORTH OF CONSTRUCTION AND O&amp;M COSTS (i=8%, n=20 yrs)</b>
Well Points	Leachate Collection	Minimized by double containment pipe	Moderately Effective	Moderately Reliable	\$ 608,600
Toe Drain	Leachate Collection	Minimized by double containment pipe	Ineffective	Reliable	Not Considered
Partial Curtain Drain	Leachate Collection	Minimized by double containment pipe	Moderately Effective	Moderately Reliable	\$ 322,500
Complete Curtain Drain	Leachate Collection	Minimized by double containment pipe	Most Effective	Most Reliable	\$ 379,000
Above Ground Leachate Storage	Leachate Storage	Minimized by engineering redundancy	Moderately Effective	Unreliable due to freeze damage	Not Considered
Below Ground Leachate Storage	Leachate Storage	Minimized by engineering redundancy	Most Effective	Most Reliable	\$ 129,000
On-site Treatment With Direct Discharge	Leachate Disposal	Minimized by engineering design and operational oversight	Moderately Effective	Moderately Reliable	\$ 1,068,400
Direct Discharge to POTW	Leachate Disposal	Minimized by discharge protocol and SPCC Plan	Most Effective	Most Reliable	\$ 1,004,000
On-Site Pretreatment With Discharge to POTW	Leachate Disposal	Minimized by engineering design and operational oversight	Moderately Effective	Moderately Reliable	Not Considered
Cap Repair And Revegetation	Leachate Prevention	Potential for off-site sedimentation minimized by erosion control plan.	Effective	Moderately Reliable	\$ 386,400

REMEDIAL ALTERNATIVE	PURPOSE	POTENTIAL FOR NEGATIVE ENVIRONMENTAL EFFECTS	EXPECTED EFFECTIVENESS	EXPECTED RELIABILITY	PRESENT WORTH OF CONSTRUCTION AND O&M COSTS (i=8%, n=20 yrs)
3% Cap Augmentation	Leachate Prevention	Potential for off-site sedimentation minimized by erosion control plan and terms of NPDES permit.	Effective	Moderately Reliable	\$ 696,100
5% Cap Augmentation	Leachate Prevention	Potential for off-site sedimentation minimized by erosion control plan and terms of NPDES permit.	Slightly more effective than 3%	Moderately Reliable	\$ 1,177,000
Current Design Standard Cap	Leachate Prevention	Potential for off-site sedimentation minimized by erosion control plan and terms of NPDES permit.	Effective	Moderately Reliable	\$ 2,300,000
Passive Gas Venting	Reduce Explosion Risk	Based on results of RI, none.	Moderately Effective	Reliable	\$ 3,360 in addition to complete curtain drain
Active Gas Collection	Reduce Explosion Risk	Based on results of RI, none.	Effective	Moderately Reliable	\$ 343,400 in addition to complete curtain drain
Fencing	Reduce Human Contact With Leachate	None.	Moderately Effective	Reliable	\$ 68,700
Signage	Reduce Human Contact With Leachate	None.	Moderately Effective	Moderately Reliable	Negligible
Deed Restriction	Reduce Human Contact With Leachate	None.	Moderately Effective	Reliable	Negligible

# Attachment 1

Public Hearing and Written Comments

on the Preferred Plan

Hershberger Landfill

**HERSHBERGER SITE GROUP**

**James L. Kilby - Chairman**

Monsanto Company  
800 North Lindbergh Boulevard -- F2EA  
St. Louis, Missouri 63167

314/694-6443 phone  
314/694-6262 fax

December 2, 1996

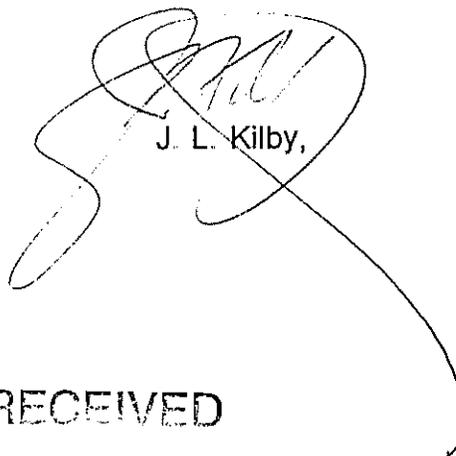
Fred Myers  
Site Coordinator  
Ohio EPA  
Central District Office  
3232 Alum Creek Drive  
Columbus, OH 43207

Re: Hershberger Landfill  
Preferred Plan Public Comments

Dear Mr. Myers:

The Hershberger Group strongly supports OEPA's September 24, 1996 Preferred Plan for remediation at the Hershberger Landfill. The Hershberger Group is composed of American National Can, The Goodyear Tire & Rubber Company, Monsanto, MRC Holdings, PPG Industries and O.M. Scott & Sons.

Sincerely,



J. L. Kilby,

JLK/pmh  
cc: T. Dimond  
J. Karaganis  
N. Rountree  
D. Morris  
S. Doran  
D. Weber

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DEC 03 1996

OHIO EPA/CDO

120296FM.LTR

# Union County Health Department

Administration and Nursing Office • 621 South Plum Street • (513) 642-0801 • Fax: (513) 642-1568  
Environmental Health Office • 239 West Fifth Street • (513) 642-2053 • Fax: (513) 642-2080  
Marysville, Ohio 43040

Serving the  
Union  
County  
General  
Health  
District

December 4, 1996

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DEC 06 1996

OHIO EPA/CDO

Ohio Environmental Protection Agency  
Central District Office  
3232 Alum Creek Drive  
Columbus, OH 43207  
ATTN: Fred Myers, Site Coordinator

RE: Hershberger Landfill

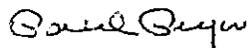
Dear Sir:

Enclosed are several well logs of private water wells drilled near the Hershberger Landfill. The well logs appear to indicate that many wells in the area are much shallower than the reported 190 feet to water bearing formations.

While this may not indicate a more serious problem in regards to well contamination, the logs seem to contradict statements made at the public hearing on November 20, 1996.

If you have any questions, please contact this office.

Sincerely,



Paul Pryor, R.S.  
Supervising Sanitarian

PP/jj

CROHNGER Rd

N  
↓

LANDFILL →

Adams Rd →

9366	WALLE JAMES H	873-5613	9044
9400	BERRY JOSEPH E	873-5715	
9451	CH/ AN STEVE	873-3396	+ CUF
9499	WALTON DAVID M	873-4358	1632
	MORRIS ROBERT	873-8618	
	PRICE JEAN	00	
9579	LONG JACK	873-8178	1652
9595	GRYWALSKI ROGER	873-4148	1662
9640	ROSE SALLY S	00	5
9682	SEILER KAREN	873-1353	5
	SEILER MARK	873-1353	
9695	BABBS DENNIS P	873-1814	5
9707	WRIGHT GREGORY L	873-1109	4
9794	TRACHSEL VICTORIA L	873-4151	2
9800	MILLER DAVID W	00	
9821	COOPERIDER WILLIAM	873-4982	3
9848	WOODELL LINDA	00	+6
9860	SPARKS THOMAS	873-4705	+6
9890	GARNER MICHAEL S	00	+6
	MILLER ALBERT S	873-4184	4
9895	HAY S M	873-3695	
9920	TAYLOR DAN L	873-8297	
10079	ARMENTROUT KENNETH	873-5710	
10125	ESTEP JAMES	873-5769	+6
	HUFF MIKE	873-3251	+6
	HUFF SHELLIE	873-3251	+6
10259	MILLER ELLEN	873-4749	+6
* 10400	GROOMS ROGER N	00	+6
* 10415	GINGERICH DAVID	873-3023	
10481	GINGERICH ABRAHAM R	873-5340	
10519	GINGERICH MARVIN	00	+6
	MILLINGTON WILLIAM	00	+6
	GINGERICH CHRIS W	00	
* 10595	STOTTLEMYER GEORGE	873-3274	4
10684	STOTTLEMYER LINDA	873-5758	
* 10700	STOTTLEMYER RICHARD	873-5758	
* 10925	FRIEND DEWITT JR	873-1522	+6
11021	FARRIS JIM T	873-8175	+6
11065	HESS DONALD	873-5277	9
11120	PROCHASKA DAVID	873-8773	
	PROCHASKA SUSAN	873-8773	
11131	SORG KAROLINA	00	+6
11160	HEGENDERFER DEBBIE	873-1812	5
11200	GROSS DAVID L REV	873-3672	0
11263	PRESTON L T	873-5338	+6
	TRUE FAITH BAPT CH	873-3293	9
11491	MATHERS CLAUDE	873-4375	
11731	RAUSCH MARK R	873-4531	
11858	LAMBERT ALBERT	873-5041	
11880	RACINE MARC R	00	
11897	OILER DALE	873-5398	
*	1 BUS	59 RES	12 NEW

CUMBERLAND 43140 LONDON

WEALTH CODE 5 9

1565	DILLON WALTER	852-2056	
1570	PERRIN LEO A	852-0914	2
1575	CAIN BERNARD J	00	+6
1585	BECKER ROBT	852-3866	
	POTTS NANCY J	00	
1590	WESSEL KELSO L	852-1422	
1615	XXXX	00	
1620	GARRET P A	852-0777	4
1635	DILLON CURTIS	852-1211	
1640	WATKINS PAUL W DR	852-7537	4
1650	BOWMAN R	852-5486	

# WELL LOG AND DRILLING REPORT

746251

Ohio Department of Natural Resources, Division of Water  
1939 Fountain Square Drive, Columbus, Ohio 43224 Phone (614) 265-6739

Permit Number \_\_\_\_\_

USE OR USE PEN  
IF TRANSCRIBING  
PRESS HARD

COUNTY Union

TOWNSHIP Jerome

SECTION/LOT No. \_\_\_\_\_  
(CIRCLE ONE)

OWNER/BUILDER George Stottemyer/Heartsstone  
(CIRCLE ONE OR BOTH)

PROPERTY ADDRESS McKinley Bldgs 10700 Crotinger Rd  
(ADDRESS OF WELL LOCATION A)

LOCATION OF PROPERTY Approx 1/2 mile NW of Taylor Rd on the East side of Crotinger Rd

## CONSTRUCTION DETAILS

**CASING** Borehole Diameter 4 1/2 in.  
 Diameter 4 1/2 in. Length 100 ft. Wall Thickness 5/16 in. Material Reinforced Volume used 3 #  
 Diameter \_\_\_\_\_ in. Length \_\_\_\_\_ ft. Wall Thickness \_\_\_\_\_ in. Method of installation Preassembled  
 Material Steel Volume used \_\_\_\_\_ #  
 Depth: placed from 100 ft. to \_\_\_\_\_ ft.

**PIPE**  Steel  Galv.  PVC  Other \_\_\_\_\_  
 Threaded  Welded  Solvent  Other \_\_\_\_\_

**GRAVEL PACK (Filter Pack)**  
 Material Silica sand Volume used 300 #  
 Method of installation Gravity  
 Depth: placed from 100 ft. to 110 ft.

**PITLESS DEVICE**  Adapter  Preassembled unit  
 Use of Well  Rotary  Cable  Augered  Driven  Dug  Other \_\_\_\_\_  
 Date of Completion 4/11/92

**SCREEN**  
 Type (wire wrapped, louvered, etc.) None Material Steel  
 Length 3 ft. Diameter 5 in.  
 Set between 107 ft. and 110 ft. Slot 0.050

### WELL LOG\*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.  
 Show color, texture, hardness, and formation:  
 sandstone, shale, limestone, gravel, clay, sand, etc.

	From	To
<u>Brown Clay</u>	<u>0</u>	<u>17</u>
<u>Grey Yellow Clay</u>	<u>13</u>	<u>60</u>
<u>Sand + Gravel</u>	<u>60</u>	<u>74</u>
<u>Blue Blue Clay</u>	<u>74</u>	<u>86</u>
<u>...</u>	<u>86</u>	<u>110</u>

### WELL TEST

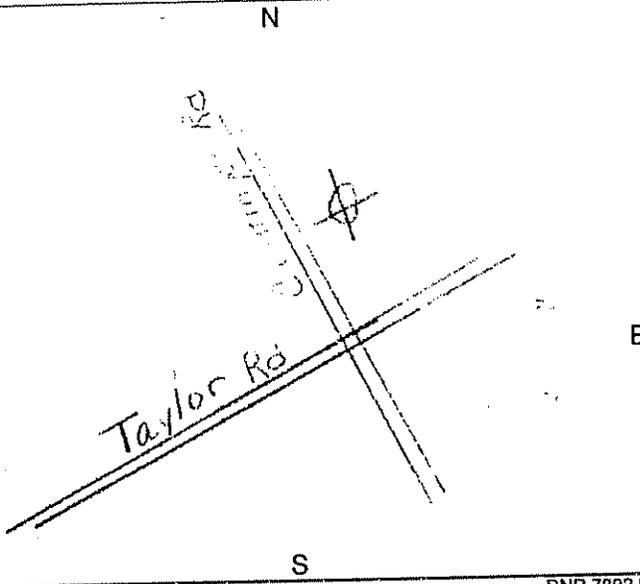
Bailing  Pumping\*  Other \_\_\_\_\_  
 Test rate 90 gpm Duration of test 1 hrs.  
 Drawdown 17 ft.  
 Measured from:  top of casing  ground level  Other \_\_\_\_\_  
 Static Level (depth to water) \_\_\_\_\_ ft. Date: \_\_\_\_\_  
 Quality (clear, cloudy, taste, odor) \_\_\_\_\_  
 \*(Attach a copy of the pumping test record, per section 1521.05, ORC)

### PUMP

Type of pump \_\_\_\_\_ Capacity \_\_\_\_\_ gpm  
 Pump set at 100 ft.  
 Pump installed by \_\_\_\_\_

### SKETCH SHOWING WELL LOCATION

Show distances well lies from numbered state highways,  
 street intersections, county roads, etc.



**RECEIVED**  
 MAY 28 1992  
 UNION CO. HEALTH DEPT.

\*If additional space is needed to complete well log, use next consecutively numbered form.

DNR 7802.90

Drilling Firm Brambore Bros Well Drilling Signed Christina Gorman  
 Address 12733 ST RT 603 Date 4/11/92  
 City, State, Zip Jhansdown Ohio 43031 ODH Registration Number 308

# WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources, Division of Water  
1939 Fountain Square Drive, Columbus, Ohio 43224 Phone (614) 265-6739

750219

Permit Number 514-92

OWNER William Miller TOWNSHIP Jerome SECTION/LOT No. \_\_\_\_\_  
(CIRCLE ONE)  
PROPERTY ADDRESS 10400 Coopers Rd  
(ADDRESS OF WELL LOCATION A)  
NO. OF PROPERTY 1 mi South of Adams Rd

## CONSTRUCTION DETAILS

Borehole Diameter 1.9 in.  
 5 in. Length 170 ft. Wall Thickness 7.5 in. Material RENOWITE Volume used \_\_\_\_\_  
 in. Length \_\_\_\_\_ ft. Wall Thickness \_\_\_\_\_ in. Method of installation Limestone cuttings  
 Steel  Galv.  PVC  Other \_\_\_\_\_  
 Threaded  Welded  Solvent  Other \_\_\_\_\_  
 Length \_\_\_\_\_ Type \_\_\_\_\_ Wall Thickness \_\_\_\_\_ in. Depth: placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 wrapped, touvered, etc.) \_\_\_\_\_ Material \_\_\_\_\_  
 ft. Diameter \_\_\_\_\_ in.  Rotary  Cable  Augered  Driven  Dug  Other \_\_\_\_\_  
 ft. and \_\_\_\_\_ ft. Slot \_\_\_\_\_ Date of Completion 5-4-92

### WELL LOG\*

DEPTH(S) AT WHICH WATER IS ENCOUNTERED.  
 color, texture, hardness, and formation:  
 silt, shale, limestone, gravel, clay, sand, etc.

	From	To
clay	0	60
silt-gravel	60	70
clay	70	85
silt Boulders	85	106
clay-gravel	106	155
silt-gravel	155	168
limestone	168	214

### WELL TEST

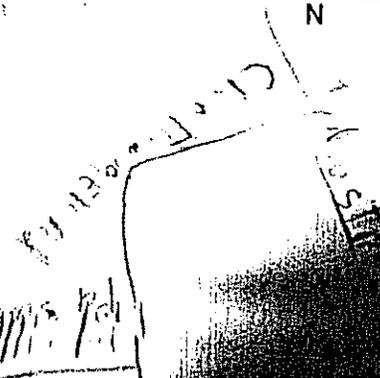
Bailing  Pumping\*  Other \_\_\_\_\_  
 Test rate 25 gpm Duration of test \_\_\_\_\_ hrs  
 Drawdown \_\_\_\_\_ ft.  
 Measured from:  top of casing  ground level  Other \_\_\_\_\_  
 Static Level (depth to water) 57 ft. Date: 5-4-92  
 Quality (clear, cloudy, taste, odor) clear  
 \*(Attach a copy of the pumping test record, per section 1521.05, ORC)

### PUMP

Type of pump \_\_\_\_\_ Capacity \_\_\_\_\_ gpm  
 Pump set at \_\_\_\_\_ ft.  
 Pump installed by \_\_\_\_\_

### SKETCH SHOWING WELL LOCATION

Show distances well lies from numbered state highways, street intersections, county roads, etc.



RECEIVED



# WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources  
 Division of Water, 1939 Fountain Square Drive  
 Columbus, Ohio 43224 Phone (614) 265-6739

813218

Permit Number 1401.95

TOWNSHIP Jerome SECTION/LOT No. \_\_\_\_\_  
 (Circle One)  
 Richard Stottkamper, PROPERTY ADDRESS 10700 Crottinger Rd Plain City, C  
 (Address of well location) Number Street City

OF PROPERTY same Zip Code + 4 \_\_\_\_\_

### CONSTRUCTION DETAILS

**GROUT**  
 Material: Cuttings Volume used: 30 Gallons  
 Method of installation: Wet Method  
 Depth: placed from Bottom ft. to Surface ft.

**GRAVEL PACK (Filter Pack)**  
 Material: \_\_\_\_\_ Volume used: \_\_\_\_\_  
 Method of installation: \_\_\_\_\_  
 Depth: placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**SCREEN**  
 Type (wire wrapped, louvered, etc.): \_\_\_\_\_ Material: \_\_\_\_\_  
 Length: \_\_\_\_\_ ft. Diameter: \_\_\_\_\_ in.  
 Set between \_\_\_\_\_ ft. and \_\_\_\_\_ ft. Slot \_\_\_\_\_

WELL LOG*	
INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.	
Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	
	From To
<u>Top Soil</u>	<u>0 1</u>
<u>Yellow Clay</u>	<u>1 20</u>
<u>Gray Clay</u>	<u>20 49</u>
<u>Sand</u>	<u>49 50</u>
<u>Gray Clay - Sand</u>	<u>50 70</u>
<u>Sand</u>	<u>70 80</u>
<u>Sand &amp; Gravel</u>	<u>80 85</u>
<u>Gray Clay</u>	<u>85 87</u>
<u>Sand &amp; Gravel</u>	<u>87 90</u>
<u>Water</u>	

### WELL TEST

Bailing  Pumping\*  Other \_\_\_\_\_  
 Test rate: Exp 1/2 gpm Duration of test: 21 hrs.  
 Drawdown: \_\_\_\_\_ ft.  
 Measured from:  top of casing  ground level  Other \_\_\_\_\_  
 Static Level (depth to water): 46 ft. Date: Aug 7/95  
 Quality: clear, cloudy, taste, odor

\*(Attach a copy of the pumping test record, per section 1521.05, ORC)

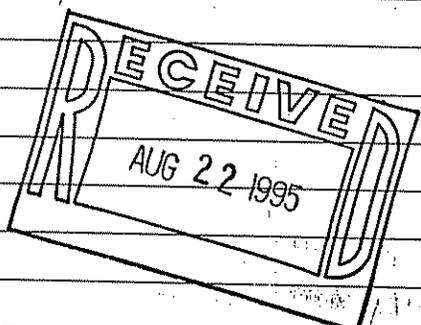
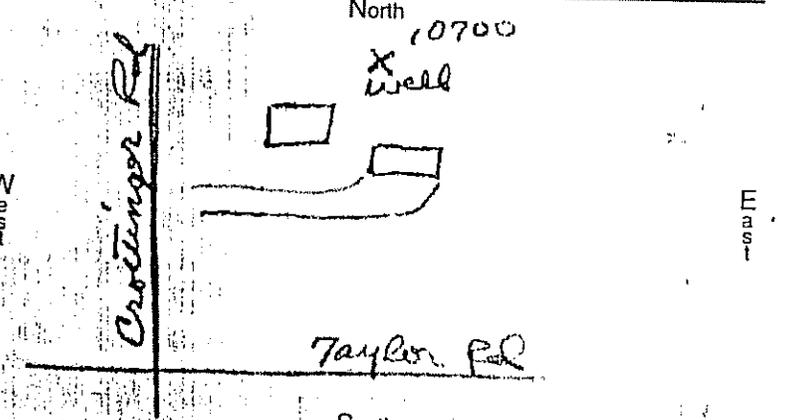
### PUMP

Type of pump: PITCHER PUMP Capacity: \_\_\_\_\_ gpm  
 Pump set at: set pump at 60' ft.  
 Pump installed by: \_\_\_\_\_

### WELL LOCATION

Location of well in State Plane coordinates, if available:  
 Zone \_\_\_\_\_ x \_\_\_\_\_ y \_\_\_\_\_  
 Elevation of well \_\_\_\_\_ ft./m. Datum plain:  NAD27  NAD83  
 Source of coordinates:  GPS  Survey  Other \_\_\_\_\_

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks.



additional space is needed to complete well log, use next consecutively numbered form.)  
 Drilling Firm: Arthur C. Plummer - Son Signed: Robert L. Plummer  
 Address: 7101 Mills Rd Date: Aug 7/95  
 State, Zip: Oshtander, Ohio 43061 ODH Registration Number: 141

# WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources, Division of Water  
1939 Fountain Square Drive, Columbus, Ohio 43224 Phone (614) 265-6739

783005

Permit Number

895-94

OWNER  
BING  
ID

Union

TOWNSHIP

Jerome

SECTION/LOT No.  
(CIRCLE ONE)

BUILDER  
(IF OTHER THAN OWNER)

Dewitt

Friend

PROPERTY ADDRESS

10925 Crothinger Rd  
(ADDRESS OF WELL LOCATION)

LOCATION OF PROPERTY

700' SOUTH OF ADAMS Rd ON W. SIDE

## CONSTRUCTION DETAILS

**PIPE**  
 Diameter 5 in. Length 78 ft. Wall Thickness 265 in. Material BENOXITE Volume used \_\_\_\_\_  
 Diameter \_\_\_\_\_ in. Length \_\_\_\_\_ ft. Wall Thickness \_\_\_\_\_ in. Method of installation NATURAL MATERIAL  
 Steel  Galv.  PVC  \_\_\_\_\_  
 Threaded  Welded  Solvent  Other \_\_\_\_\_  
 Length \_\_\_\_\_ Type \_\_\_\_\_ Wall Thickness \_\_\_\_\_ in. Depth: placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**GROUT**  
 Pitless Device  Adapter  Preassembled unit  
 Use of Well \_\_\_\_\_  
 Rotary  Cable  Augered  Driven  Dug  Other \_\_\_\_\_  
 Date of Completion 6-29

### WELL LOG\*

DATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.

Flow color, texture, hardness, and formation:  
 Sandstone, shale, limestone, gravel, clay, sand, etc.

	From	To
CLAY	0	40
CLAY SAND		
GRAVEL MIX	40	75
LIMESTONE	75	134

### WELL TEST

Bailing  Pumping\*  Other \_\_\_\_\_  
 Test rate 15 gpm Duration of test \_\_\_\_\_ hrs.  
 Drawdown \_\_\_\_\_ ft.  
 Measured from:  top of casing  ground level  Other \_\_\_\_\_  
 Static Level (depth to water) 55 ft. Date: 6-29  
 Quality (clear, cloudy, taste, odor) CLEAR

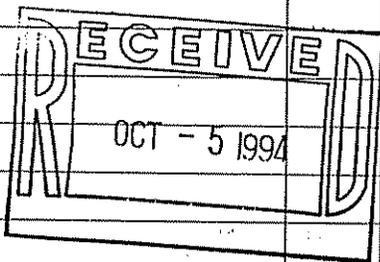
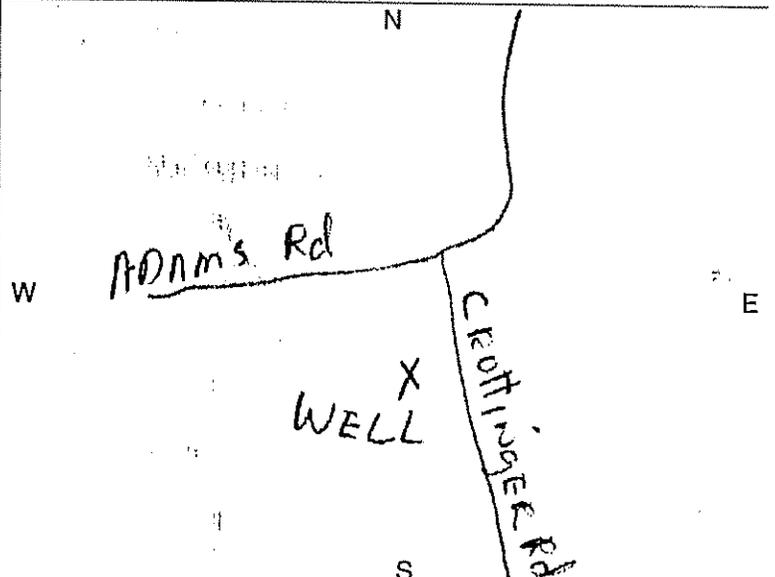
\*(Attach a copy of the pumping test record, per section 1521.05, ORC)

### PUMP

Type of pump Sub Capacity 10 gpm  
 Pump set at 100 ft.  
 Pump installed by SEISMIC DRILLING

### SKETCH SHOWING WELL LOCATION

Show distances well lies from numbered state highways,  
 street intersections, county roads, etc.



WELL IS 134' DEEP

If additional space is needed to complete well log, use next consecutively numbered form.

Firm Seismic Drilling  
1219 N MAIN  
 City, Zip MARION 43302

I hereby certify the information given is accurate and correct to the best of my knowledge.  
 Signed W.D. Daniel Rose  
 Date 6-29-94  
 ODH Registration Number 311

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQUARE DRIVE, COLUMBUS, OHIO 43224

# WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources  
 Division of Water, 1939 Fountain Square Drive  
 Columbus, Ohio 43224 Phone (614) 265-6739

001001

Permit Number 145075

TOWNSHIP Jerome

SECTION/LOT No. \_\_\_\_\_  
 (Circle One)

OWNER Scott Flading PROPERTY ADDRESS 10440 Crattiger Rd  
 (Both) (Address of well location) (Number) (Street) (City)

NAME OF PROPERTY 10440 Crattiger Rd Zip Code + 4 \_\_\_\_\_

## CONSTRUCTION DETAILS

Casing (Length below grade) Borehole Diameter 7 7/8 in. GROUT Branded  
 meter 5 in. Length\* 117 ft. Wall Thickness 3/32 in. Material Bestenite Volume used 225 #  
 meter \_\_\_\_\_ in. Length\* \_\_\_\_\_ ft. Wall Thickness \_\_\_\_\_ in. Method of installation Shim  
 Steel  Galv.  PVC  \_\_\_\_\_  
 Threaded  Welded  Solvent  \_\_\_\_\_  
 Length \_\_\_\_\_ Type \_\_\_\_\_ Wall Thickness \_\_\_\_\_ in. Depth: placed from 117 ft. to surface ft.  
 Pitless Device  Adapter  Preassembled unit  
 Use of Well Domestic  
 Rotary  Cable  Augered  Driven  Dug  Other  
 Date of Completion 3.26.96

## WELL LOG\*

DATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.

Flow color, texture, hardness, and formation:  
 sandstone, shale, limestone, gravel, clay, sand, etc.

	From	To
	0	50
gravel	50	57
gravel	57	68
gravel	68	72
gravel	72	87
gravel	87	89
limestone	89	112
limestone	112	142

## WELL TEST

Bailing  Pumping\*  Other \_\_\_\_\_  
 Test rate 25 gpm Duration of test 60 hrs.  
 Drawdown 10 ft.  
 Measured from:  top of casing  ground level  Other \_\_\_\_\_  
 Static Level (depth to water) 50 ft. Date: 3.26.96  
 Quality (clear, cloudy, taste, odor) clear

\*(Attach a copy of the pumping test record, per section 1521.05, ORC)

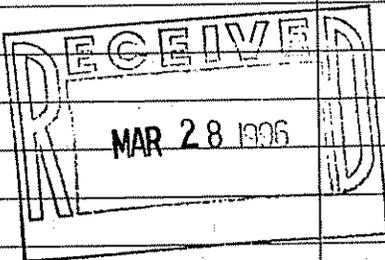
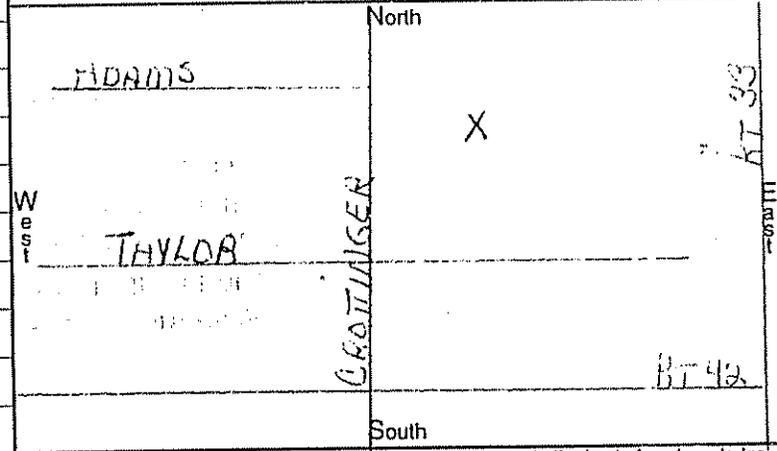
## PUMP

Type of pump Submersible Capacity 1/2 HP gpm  
 Pump set at 100' ft.  
 Pump installed by R.C. Barry Inc

## WELL LOCATION

Location of well in State Plane coordinates, if available:  
 Zone \_\_\_\_\_ x \_\_\_\_\_ y \_\_\_\_\_  
 Elevation of well \_\_\_\_\_ ft./m. Datum plain:  NAD27  NAD83  
 Source of coordinates:  GPS  Survey  Other \_\_\_\_\_

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks.



additional space is needed to complete well log, use next consecutively numbered form ) I hereby certify the information given is accurate and correct to the best of my knowledge.  
 Drilling Firm R.C. Barry Inc Signed Mark Cantrell 1996  
 Address 6467 W. Broad St Date 3.26.96  
 City, State, Zip Walloway OH 43119 ODH Registration Number 368

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR DIVISION OF WATER, 1939 FOUNTAIN SQ DRIVE, COLS., OHIO 43224

# WELL LOG AND DRILLING REPORT

PEN  
AIBING  
ARD

Ohio Department of Natural Resources  
Division of Water, 1939 Fountain Square Drive  
Columbus, Ohio 43224 Phone (614) 265-6739

838962

Permit Number 1543-96

UNION TOWNSHIP SEROME SECTION/LOT No. \_\_\_\_\_  
(Circle One)  
BUILDER MATTHEW KAREN FRIEND PROPERTY ADDRESS 10821 CROTCHINGER RD  
(Circle One) First Last (Address of well location) Number Street City  
LOCATION OF PROPERTY 1/2 mi SOUTH OF Adams Rd Zip Code + 4 \_\_\_\_\_

### CONSTRUCTION DETAILS

NG (Length below grade) Borehole Diameter 7 1/2 in. GROUT  
Casing Diameter 5 in. Length 170 ft. Wall Thickness 265 in. Material CUTTINGS BENMITE Volume used \_\_\_\_\_  
Casing Diameter \_\_\_\_\_ in. Length \_\_\_\_\_ ft. Wall Thickness \_\_\_\_\_ in. Method of Installation POUR  
① Steel ① Galv. ① PVC ① \_\_\_\_\_ Depth: placed from 0 ft to 170 ft.  
② \_\_\_\_\_ ② Other \_\_\_\_\_ GRAVEL PACK (Filter Pack)  
Material \_\_\_\_\_ Volume used \_\_\_\_\_  
① Threaded ① Welded ① Solvent ① \_\_\_\_\_ Method of Installation \_\_\_\_\_  
② \_\_\_\_\_ ② Other \_\_\_\_\_ Depth: placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Pitless Device  Adapter  Preassembled unit  
Use of Well \_\_\_\_\_  
① Rotary  Cable  Augered  Driven  Dug  Other \_\_\_\_\_  
Date of Completion 6-21-96

### WELL LOG\*

DATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.  
Flow color, texture, hardness, and formation:  
Sandstone, shale, limestone, gravel, clay, sand, etc.

	From	To
<u>CLAY</u>	<u>0</u>	<u>70</u>
<u>SAND GRAVEL CLAY</u>	<u>70</u>	<u>168</u>
<u>LIMESTONE</u>	<u>168</u>	<u>225</u>

### WELL TEST

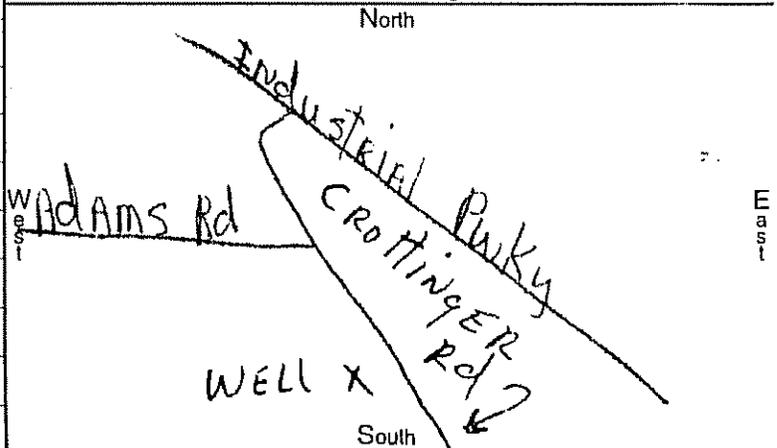
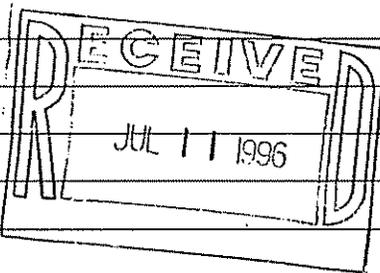
Bailing  Pumping\*  Other \_\_\_\_\_  
Test rate 50 gpm Duration of test \_\_\_\_\_ hrs  
Drawdown \_\_\_\_\_ ft.  
Measured from:  Top of casing  ground level  Other \_\_\_\_\_  
Static Level (depth to water) 58 ft. Date: 6-21  
Quality (clear, cloudy, taste, odor) CLEAR  
\*(Attach a copy of the pumping test record, per section 1521.05, ORC)

### PUMP

Type of pump SUB Capacity 10 gpm  
Pump set at 75 ft.  
Pump installed by SEISMIC DRILG.

### WELL LOCATION

Location of well in State Plane coordinates, if available:  
Zone \_\_\_\_\_ x \_\_\_\_\_ y \_\_\_\_\_  
Elevation of well \_\_\_\_\_ ft /m. Datum plain:  NAD27  NAD83  
Source of coordinates:  GPS  Survey  Other \_\_\_\_\_  
Sketch a map showing distance well lies from numbered state highways,  
street intersections, county roads, buildings or other notable landmarks.



Additional space is needed to complete well log, use next consecutively numbered form) I hereby certify the information given is accurate and correct to the best of my knowledge.  
Drilling Firm Seismic Drilg. Signed W.D. Darrell Rose  
Address 1219 N MAIN Date \_\_\_\_\_  
State, Zip MARION 43302 ODH Registration Number 311

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OHIO ENVIRONMENTAL PROTECTION AGENCY  
PUBLIC HEARING

Re: -  
Hershberger Landfill :  
Preferred Plan :

- - -

Wednesday Evening Session  
November 20, 1996  
Jerome Township Community  
Center  
9777 Industrial Parkway  
Plain City, Ohio

Heard pursuant to assignment at 7:30 p.m.

BEFORE:

Ric Queen, Public Involvement Coordinator  
Fred Myers, Division of Emergency and  
Remedial Response  
Brian Tucker, Division of Emergency and  
Remedial Response

- - -

**ORIGINAL**

Armstrong & Okey, Inc.  
185 South Fifth Street  
Columbus, Ohio 43215  
(614) 224-9481 - (800) 223-9481  
Fax - (614) 224-5724

- - -

RECEIVED  
DEC 13 1996  
OHIO EPA/CDO  
LEGAL RECORDS SECTION  
96 DEC -5 AM 8:37

OHIO EPA  
RECEIVED

1 Wednesday Evening Session

2 November 20, 1996

3 - - -

4 MR. QUEEN: We'll now convene for the  
5 public hearing.

6 The purpose of tonight's hearing is to  
7 obtain comments on the preferred plan issued on  
8 October 1, 1996 by Ohio EPA, which outlines the  
9 Agency's preferred alternative to address  
10 contamination at the Hershberger Landfill.

11 The Hershberger Landfill is located in  
12 Union County off Crottinger Road, north of Plain  
13 City in Jerome Township.

14 Testimony and all written comments received  
15 as part of the official record will be considered  
16 by Ohio EPA as part of its analysis of the  
17 technical, social and economic considerations  
18 associated with the proposed plan.

19 All exhibits including maps, photographs,  
20 letters, and any physical evidence referred to in  
21 your testimony will, if you wish, become a part of  
22 the official record and cannot be returned.

23 A court reporter is here tonight to make a  
24 stenographic record of the proceedings.

25 Written comments must be received by Ohio

1 EPA by the close of business on December 4, 1996,  
2 or can be filed with me tonight.

3 Comments may be sent to Ohio EPA, Central  
4 District Office, Attention Fred Myers, Site  
5 Coordinator, 3232 Alum Creek Drive, Columbus, Ohio,  
6 43207.

7 The final decision will be communicated to  
8 all involved parties, persons who have submitted  
9 comments and all persons who present testimony at  
10 tonight's hearing.

11 Final actions of the Director may be  
12 appealed to the Environmental Board of Review. The  
13 Board is a separate board from Ohio EPA and reviews  
14 cases in accordance with Ohio's laws and rules.

15 Decisions of the Board may be appealed to  
16 the Court of Appeals in Franklin County. Or, if  
17 the appeal arises from the alleged violation of a  
18 law or regulation, to the Court of Appeals of the  
19 district in which the violation was alleged to have  
20 occurred. Any order of the Court of Appeals is  
21 also appealable to the Ohio Supreme Court.

22 If you wish to present testimony at  
23 tonight's hearing and have not already completed a  
24 blue card, please do so at this time. The cards  
25 are available at the registration table or from

1 Kevin.

2 There was no pre-registration for  
3 testifying at this hearing. Persons will be called  
4 to testify in the order in which we received the  
5 blue cards.

6 If you wish to speak later in the hearing,  
7 please complete a blue card and bring it to me when  
8 you have decided to testify. Once you have given  
9 testimony it will not be possible for you to  
10 testify a second time. However, you may submit  
11 additional written testimony tonight or before the  
12 end of the comment period.

13 There is no cross-examination of speakers  
14 or representatives of Ohio EPA in public hearings  
15 of this type. Ohio EPA public hearings afford  
16 citizens an opportunity to provide input.

17 Therefore, I will not be able to answer  
18 questions during tonight's hearing. If you have a  
19 question, phrase your testimony in the form of a  
20 question and the Agency will address your question  
21 in writing.

22 Out of courtesy to elected officials here  
23 tonight, I request that they make themselves known  
24 to me at this time and I will call on them first to  
25 testify, if they so request.

1           As I call your name, step up to the  
2 microphone, state your name and spell it for the  
3 record.

4           Edward Ambercrombie.

5           MR. AMBERCROMBIE: I filled out the card  
6 but I don't have any testimony to give.

7           MR. QUEEN: Okay, thank you very much.  
8 Ann Christy.

9           MS. CHRISTY: Greetings, my name is Ann  
10 Christy, and these are some of the issues that I  
11 wanted to address.

12           In the remedial investigation report  
13 looking at the groundwater information it appears  
14 there is a downward vertical gradient between the  
15 shallow and/or intermediate wells and the deep  
16 wells in at least three of the well pairs on the  
17 site.

18           I'm concerned that this would be driving  
19 the groundwater and any untrained contamination  
20 deeper into the well that people are currently  
21 using for drinking water.

22           I'm concerned with the liability issues and  
23 how long this remedial or containment option is  
24 going to take place.

25           Because it is a containment option and not

1 a treatment option I think it's important that the  
2 remedial work plan includes ongoing monitoring and  
3 ongoing maintenance forever. If it can't for legal  
4 reasons then I would recommend that we perhaps look  
5 again at treatment options rather than just  
6 containment options.

7 And I would recommend looking at -- the  
8 excavation is expensive but perhaps some of the  
9 flushing technologies that landfills like LaPar  
10 Landfill have successfully used in New Jersey.

11 Finally I'd like to address the question of  
12 the cap and the cap materials. If we are using  
13 native Ohio clays for that cap I think we need to  
14 be very careful because those clays are by their  
15 very nature prone to desiccation cracking.

16 We need to make sure that that is  
17 maintained because if it dries out in five years,  
18 ten years, we're going to have the same problem  
19 again.

20 So these are the issues I wanted to  
21 address, thank you.

22 MR. QUEEN: Thank you.

23 The next person wishing to testify is  
24 Richard Kaunis.

25 MR. KAUNIS: I have no testimony.

1 MR. QUEEN: Thank you.

2 Next person wishing to testify is Richard  
3 Murray.

4 MR. MURRAY: No, I don't need to testify.

5 MR. QUEEN: Thank you.

6 Next person wishing to testify is Dick  
7 Noland.

8 MR. NOLAND: My name is Dick Noland,  
9 N-o-l-a-n-d.

10 I guess I would like to comment on the  
11 monitoring well work and how it might be revised.  
12 I would like to see the monitoring wells put in  
13 such that they create a hydraulic gradient around  
14 the landfills so that we know we're sampling  
15 whatever we're getting from the landfill.

16 I think that would be the worst case and  
17 would be more representative of what might happen  
18 in future years.

19 I would -- I guess I agree with the  
20 previous testimony that the cover -- in my mind I  
21 would rather see a cover that prevents any leachate  
22 rather than one that could allow moisture into the  
23 landfill.

24 So those are the two points that I wish to  
25 comment on.

1 MR. QUEEN: Thank you.

2 Is there anyone else wishing to testify  
3 this evening?

4 MR. PRIDY: I'm sorry, I didn't fill out a  
5 blue card. My name is Eric Pridy and I live on  
6 Jerome Road which is five miles from this landfill,  
7 so I have no personal involvement or no personal  
8 interest in it at all, but since I am a township  
9 trustee I feel I have an obligation to represent  
10 the people here in this room and people that aren't  
11 here in this room also that might be adversely  
12 affected by this landfill.

13 I want to make it very clear, we don't  
14 consider the EPA to be the enemy here tonight but I  
15 do personally feel that you're taking a rather  
16 low-keyed approach to this problem that a lot of  
17 people are very sensitive about, especially if they  
18 live close by and they derive their drinking water  
19 from wells.

20 So I would only urge that this thing be  
21 processed and moved forward with all expediency and  
22 I would also suggest that the Unico Landfill  
23 probably is as bad if not worse in some cases and  
24 it should -- we should get that process started  
25 also to address that particular situation.

1           That's all I have to say, and thank you  
2 very much.

3           MR. QUEEN: Thank you.

4           Next person wishing to testify is Paul  
5 Pryor.

6           MR. PRYOR: My name is Paul Pryor,  
7 P-r-y-o-r. I'm with the Union County Health  
8 Department.

9           I've been with the Health Department the  
10 last two years and tried to follow this situation  
11 fairly closely.

12           Given the legal requirements or lack  
13 thereof to force companies to do some remediation  
14 at the sites, essentially these companies are  
15 volunteering to do this remediation, so the  
16 solution that was presented tonight may be the best  
17 that we can get.

18           However, I do have some concerns still  
19 about the groundwater and the more monitoring.  
20 It's been almost four years since any groundwater  
21 monitoring was done and I really believe that some  
22 additional groundwater monitoring should be done  
23 before a final decision is made on the plan just to  
24 see if there's anything new to show up.

25           And I also feel that possibly every three

1 years might be not enough monitoring to keep an eye  
2 on the water out there. I think the possibility of  
3 groundwater contamination is very slim but there  
4 certainly isn't any guarantee.

5 And I would also like to see some financial  
6 assurance included in the final solution if  
7 possible to assure that some future work and  
8 monitoring will be taken care of and not have the  
9 whole project go down the drain after five years.  
10 Thank you.

11 MR. QUEEN: Thank you.

12 Next person wishing to testify is Bob Carl.

13 MR. CARL: Hi, I'm Bob Carl with the Darby  
14 Creek Association. We're here tonight to learn  
15 more about the preferred plan.

16 We've been following this for about three  
17 years. I first learned about it about five years  
18 ago. But the last three years, especially the last  
19 year and a half, two years, and I'll phrase this as  
20 a question, I'm also concerned, as Mr. Pryor was,  
21 about what assurance does the public have that the  
22 engineering firm contracted by the PRPs will be  
23 responsible enough to follow through with the work  
24 and once the ongoing work continues to monitoring  
25 what if the company happens to go bankrupt or

1 otherwise bails from their contract, is the public  
2 stuck with the bill? Who will continue with the  
3 work?

4 I know we've heard things about trusts  
5 being set up and assurance but they are still being  
6 negotiated apparently and nothing firm in hand.

7 Couple other points I'd like to make, again  
8 the 1992 core sampling, the groundwater bothers me  
9 that it's four years ago. I've been out to the  
10 site several times in the last year and a half and  
11 it's very disturbing what's out there. And I  
12 wasn't there in '92 but I've been there in '93,  
13 '94, '95, '96 and it's very disturbing.

14 Concerned about human health issues, there  
15 have been reports of cancer, even -- I can't think  
16 of her name, I can't think of the woman's name that  
17 actually owned the land -- Emma Gingerich died of  
18 cancer. In fact she complained of serious  
19 headaches for years before her death.

20 The health of Darby Creek with Sugar Run  
21 and the tributaries that are very close to -- I'm  
22 sorry, Sugar Run and it's a tributary to Darby  
23 Creek, home to 86 pieces of fish, 41 mollusks and a  
24 large variety of other wildlife, that we really  
25 have been working hard, the Darby partners, in the

1 last many years, 10 years, 25 years, working to  
2 protect Darby Creek.

3 So these are issues I'd like to bring to  
4 the attention of the EPA. Thank you.

5 MR. QUEEN: Thank you.

6 Is there anyone else wishing to testify  
7 this evening?

8 I'd like to thank you for your interest and  
9 testimony and remind you to please leave your  
10 completed customer surveys at the table outside.

11 As a reminder, written comments will be  
12 accepted through the close of business on  
13 December 4, 1996.

14 Seeing no further requests to present  
15 testimony at this time, this concludes tonight's  
16 public hearing. Thank you for attending. The time  
17 is 7:43.

18 (Hearing adjourned.)

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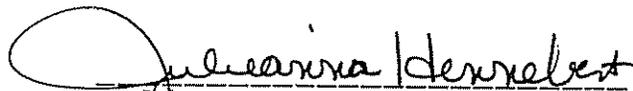
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## CERTIFICATE

1  
2 I do hereby certify that the foregoing is a  
3 true and correct transcript of the proceedings  
4 taken by me at the public hearing before the Ohio  
5 Environmental Protection Agency in the matter of  
6 Hershberger Landfill Preferred Plan on Wednesday,  
7 November 20, 1996, and carefully compared with my  
8 original stenographic notes.

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12 Julieanna Hennebert,  
13 Registered Professional  
14 Reporter.  
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