EPA Region 5 Records Ctr.
223969

Five-Year Review Report

Second Five-Year Review Report
for
Kentwood Landfill Site
Kentwood, Michigan

October 2004

PREPARED BY:

The United States Environmental Protection Agency, Region 5
Chicago, Illinois

Approved By: Date:

Richard C Karl 10-26-04

Richard C. Karl, Director
Superfund Division
U.S. EPA Region V

Second Five-Year Review Report

Table of Contents

List of Acronyms
Executive Summary
Five-Year Review Summary Forms

I. Introduction 1

II. Site Chronology 2

III. Background 3

IV. Remedial Actions 5

A. Remedy Selection 5

B. Remedy Implementation 5

C. System Operation/Operation and Maintenance 7

V. Progress Since the Last Five-Year Review 8

VI. Five-Year Review Process 12

A. Administrative Components 12

B. Community Involvement 13

C. Document Review 13

D. Data Review 13

E. Site Inspection 15

F. Risk Information Review 16

G. Interviews 16

VII. Technical Assessment 17

VIII. Issues 18

IX. Recommendations 18

X. Protectiveness Statement 18

XI. Next Review 18

List of Tables

Table 1 Chronology of Site Events
Table 2 Annual System Operations/O&M Costs
Table 3 Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
Table 4 Landfill Groundwater Monitoring (Inorganics)
Table 5 Landfill Leachate Monitoring Data
Table 6 Landfill Surface Water Monitoring Data
Table 7 Landfill Sediment sampling Data
Table 8 Private Well Monitoring Data

List of Figures

Figure 1 Site Map
Figure 2 Ground water, Surface Water, Sediment, and Leachate Sampling Locations

Attachments:

Deed Restriction
City of Kentwood Ordinance No. 9-92

List of Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
GSI	Groundwater Surface Water Interface
HASP	Health and Safety Plan
KCDPW	Kent County Department of Public Works
LGCCP	Leachate & Groundwater Collection, Conveyance & Pretreatment System
MCLs	Maximum Contaminant Levels
MDEQ	Michigan Department of Environmental Quality
MDPH	Michigan Department of Public Health
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
POTW	Public Owned Treatment Works
ppb	Parts per Billion
PRP	Potentially Responsible Party
RD/RA	Remedial Design/Remedial Action
RDWC	Residential Drinking Water Criteria
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SMCLs	Secondary Maximum Contaminant Levels
SVOC	Semi-Volatile Compound
SWDA	Safe Drinking Water Act
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Executive Summary

The remedy for the Kentwood Landfill Site in Kentwood, Michigan included capping of the landfill, constructing a gas venting system, leachate and groundwater extraction and treatment systems, and institutional controls. The institutional controls included deed restrictions to regulate the development of the Kentwood Landfill property and groundwater use restrictions in the areas that have contaminated groundwater. The site achieved construction completion on September 27, 1995. U.S. EPA completed the first five-year review of this landfill site on October 15, 1999.

The assessment of this second five-year review found that the remedy was constructed in accordance with the requirements of the Record of Decision (ROD). The remedy is functioning as designed. The immediate threats have been addressed and the remedy is expected to remain protective of human health and the environment.

Five-year Review Summary Form

SITE IDENTIFICATION		
Site Name: Kentwood Landfill Site		
EPA ID: MID000260281		
Region: 5	**State:** Michigan	**City:** Kentwood
SITE STATUS		
NPL Status: Final		
Remedial Status: Complete		
Multiple Operable Units? No	**Construction Completion date:** 09-27-1995	
Has site been put into reuse? No		
REVIEW STATUS		
Lead Agency: U.S. EPA		
Author name: Nan Gowda		
Author title: Remedial Project Manager	**Author affiliation:** U.S. EPA	
Review period: April 28, 2004 through September 14, 2004		
Date of Site Inspection: August 05, 2004		
Type of review: Statutory		
Review number: 2 (Second Five-Year Review)		
Triggering Action: Previous Five-Year Review Report		
Triggering Action Date (*from WasteLan*): October 15,1999		
Due Date (*five years after triggering action date*): October 15, 2004		

Second Five-Year Review Summary Form

Deficiencies:

Based on the site inspection, there was evidence of settling in the northwest portion of the original fill. This settling may affect future drainage at the Kentwood Landfill Site.

Recommendations and Follow-up Actions:

U.S. EPA recommends that Kent County improve drainage and fill settled areas in the northwest portion of the landfill by December 31, 2004.

Protectiveness Statement:

The remedy for this site remains protective of human health and the environment. The deed restrictions and the City Ordinance effectively prohibit the use of contaminated groundwater at and near the landfill site. Effective on-site treatment and discharge of the groundwater/leachate from the landfill site and effective enforcement of the deed restrictions and City Ordinance should continue to meet the objectives outlined in the ROD.

Kentwood Landfill Site
Kentwood, Michigan
Second Five-Year Review Report

I. Introduction

The purpose of the five-year review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, five-year review reports identify deficiencies found during the review, if any, and identify recommendations to address them.

The Agency is preparing this Five-Year Review report pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The Agency interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

The United States Environmental Protection Agency (U.S. EPA), Region V, conducted the second five-year review of the remedy implemented at the Kentwood Landfill Site in Kentwood, Michigan. This review was conducted by Nan Gowda, Remedial Project Manager for the entire site from April 28, 2004 through September 14, 2004. This documents the results of the review.

This is the second five-year review for the Kentwood Landfill Site. The triggering action for this statutory review is October 15, 1999, which is the signature date of the First Five-Year Review Report. The five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

Table 1: Chronology of Events

Event	Date
Operation of Site as open dump by Paris Township	Early 1950s - 1/1968
Operation of Site as open dump by City of Kentwood	1/1968 - 6/1970
Design and Operation of Engineered Landfill by Kent County Department of Public Works (KCDPW)	1971
20 acres of engineered landfill added by KCDPW	6 /1975
Landfill closed and native soils cap installed	5/1976
Site proposed for National Priorities List (NPL)	12/30/1982
Leachate collection system added to "original fill"	Fall 1981 - Spring 1983
Site finalized for NPL	9/8/1983
Administrative Order by Consent to conduct RI/FS	12/13/1985
Remedial Investigation/Feasibility Study (RI/FS) Reports	12/1985 - 12/1990
RI/FS Reports and Proposed Plan identifying U.S. EPA's preferred remedy released for public comments	2/14/1991
Record of Decision (ROD) signature	3/29/1991
Consent Decree (CD) to perform Remedial Design/Remedial Action (RD/RA) entered in U.S. District Court	12/11/1991
RA Construction begins	7/18/1994
Leachate and Groundwater Collection, Conveyances and Pretreatment System Monitoring Program (LGCCP) completed, inspected, and approved for startup testing	2/21/1995
Remedial Action Construction completed, inspected, and approved	9/27/1995
U.S. EPA approves Final RD/RA Construction Report	3/26/1996
First Five-Year Review completed	10/15/1999

III. Background

Physical Characteristics

The Kentwood Landfill Superfund Site occupies 72 acres at 4900 Walma Road in the City of Kentwood, Kent County, Michigan. The landfill is located approximately two miles southeast of Grand Rapids, Michigan. The landfill site is bordered by City of Kentwood municipal buildings to the west, a church and a residential area to the south, a shallow ravine and Plaster Creek to the east, and a residential subdivision and municipally owned property to the north.

Land and Resource Use

The Kentwood Landfill site was used as a municipal landfill since the early 1950s. Currently, the landfill is inactive and fenced with access restrictions. There are deed restrictions and a City Ordinance prohibiting the installation of groundwater drinking water wells in the vicinity of the landfill. The current and projected land uses for the area surrounding the landfill site are for the City of Kentwood Offices and for residential purposes. EPA has identified the Kentwood Landfill Site as an EPA Headquarters' Return to Use Pilot Site. Kent County and the City of Kentwood have indicated that they plan on reusing this landfill property as a golf driving range.

History of Contamination

The Kentwood Landfill Site originated as the Paris Township Dump in the early 1950s. Refuse was dumped into ravines and burned. In 1966, the site was licensed as a solid waste disposal facility by the Michigan Department of Public Health (MDPH) with the stipulation that refuse would be covered daily and burning would cease. In January 1968, the MDPH transferred the license to the City of Kentwood. The City of Kentwood operated the landfill until it was closed in June 1970.

In 1971, the Kent County Department of Public Works (KCDPW) took over the operation of the landfill and obtained a license from MDPH. Kent County designed an engineered landfill and the facility was licensed in accordance with Michigan Act 87 (PA of 1965). The operation plan for this engineered landfill called for the excavation of 11 landfill cells around the ravine and filling of the ravine. A clay berm was to be constructed at the down-water-gradient end of the cells supposedly to contain leachate.

In June 1975, KCDPW was issued a license to operate an additional landfill on a 20-acre site just southeast of the original landfill. This landfill is called the southern extension. The plans for this landfill called for the excavation of five cells, each cell having a leachate collection sump. The leachate sumps were not inter connected. Leachate was to be removed by pumping

the liquid into a truck and hauling it to a sanitary sewer connected to the City of Wyoming Wastewater Treatment Facility for treatment.

Both the original and southern extension landfill cells were constructed into the clay rich till that forms the base for the uppermost aquifer beneath the site area (upper aquifer). As a result, the landfill waste is in direct hydraulic connection with the upper aquifer groundwater.

Available records indicate that Kentwood Landfill accepted general refuse, garbage, rubbish, construction and demolition waste. The original site and the southern extension were capped in late 1975 and early 1976. Kentwood Landfill was closed in May 1976.

Leachate containing volatile organic compounds (VOCs) contaminated the soil and groundwater. A concern about the potential impact to the public through direct contact with or through the ingestion of the leachate, or ingestion of leachate-contaminated groundwater resulted in the Kentwood Landfill site being placed on the National Priorities List (NPL) as proposed on December 30, 1982. The site was placed on the NPL as final on September 8, 1983.

Initial Response

The City of Kentwood and Kent County (collectively referred to as the "Municipalities") signed an Administrative Order by Consent (AOC) with U.S. EPA on December 13, 1985 to conduct a Remedial Investigation/Feasibility Study (RI/FS) at the Kentwood Landfill Site.

Between 1985 and 1990, the Municipalities conducted a RI/FS under the oversight of U.S. EPA and the Michigan Department of Environmental Quality (MDEQ). A leachate collection system was constructed at the eastern side of the original landfill in order to intercept leachate breakouts (surface water). The construction took place between the fall of 1991 and the spring of 1993. This collection system consisted of six interconnected manholes to a central lift station pumping into a force main to a sanitary sewer leading to the City of Wyoming Wastewater Treatment Facility.

Basis for Taking Action

The RI/FS Report concluded that both the groundwater in the upper aquifer and the leachate were contaminated with VOCs and metals. The media of concern for human exposures were identified primarily as groundwater and soils. Leachate from the landfills was the major source of contamination of these environmental media. Surface water was not considered for human exposure due to the negligible impact on this medium by the site contaminants. Surface water, however, was evaluated for environmental impact.

The contaminants of concern identified in groundwater included acetone, benzene, chloroethane, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, 1,2-dichloropropane, tetrachloroethene, vinyl chloride, antimony, arsenic, barium, chromium, and lead.

The contaminants of concern identified in leachate and leachate breakouts included acetone, benzene, chloroethane, 1,1-dichloroethane, 1,2-dichloroethene, 1,2-dichloropropane, methylene chloride, trichloroethene, vinyl chloride, antimony, arsenic, barium, cadmium, and lead.

The contaminants of concern identified in surface soil included acetone, 2-butanone, ethylbenzene, toluene, xylene, 4-methylphenol, fluoranthene, phenanthrene, butyl benzyl phthalate, bis (2-ethylhexyl) phthalate, di-n- butyl phthalate, arsenic, barium, chromium, nickel, and zinc.

The ROD stated that the site posed an unacceptable risk to human health principally from the use of contaminated groundwater, and posed risks to non-human receptors from contaminants released from the site into surface waters. The ROD concluded that actual or threatened releases of hazardous substances from this site, if not addressed by implementation of the selected response action, may present an imminent and substantial endangerment to public health, welfare, or the environment.

IV. Remedial Actions

A. Remedy Selection

U.S. EPA issued a Record of Decision (ROD) on March 29, 1991 specifying the following remedy:

- Access restrictions and Institutional Controls
- Site Monitoring
- Cap Improvements
- Landfill Gas Control
- Leachate Collection and treatment
- Treatment of contaminated groundwater from on-site and off-site Extraction Wells
- Discharge of treated leachate and groundwater to a Publicly Owned Treatment Works (POTW) Facility

B. Remedy Implementation

In a Consent Decree (CD) entered into with U.S. EPA, the Municipalities agreed to conduct the RD/RA for the Kentwood Landfill Site. Site construction began on July 18, 1994.

In general, the remedial activities were conducted as planned. The Leachate and Groundwater Collection, Conveyance and Pretreatment system (LGCCP) was built and was operational and functional as of February 8, 1995. Cap configurations and the leachate extraction system, as designed and implemented, were more comprehensive tasks than originally identified

or estimated in the RI/FS. Areas of refuse found during construction that were beyond original site estimates were addressed during construction by relocating wastes prior to capping. The construction schedule had to be extended to address these issues.

The pre-final inspection was conducted at the Kentwood Landfill Site on August 11. 1995, with representatives from U.S. EPA, MDEQ, Earth Tech, the City of Kentwood, Kent County and Montgomery Watson in attendance. The punch list items identified during the pre-final inspection were minor, indicating that activities performed at the site were done according to the design specifications set forth in the RA package. The pretreatment system and groundwater/leachate systems functioned properly with continuous automated operation. The effluent met discharge limitations imposed by the City of Wyoming POTW under Permit Number 125 as an industrial user. The annual costs are shown in Table 2.

U.S. EPA and MDEQ have determined that all RA construction activities, including the implementation of institutional controls were performed according to specifications. The Preliminary Close-out Report for the Kentwood Landfill Site was completed on September 27, 1995.

Table 2: Annual System Operations/O&M Costs

Dates		Total Cost rounded to nearest $100
From	To	
1/1/1980	12/31/1993	$ 3,904,400
1/1/1994	12/31/1994	$ 2,110,400
1/1/1995	12/31/1995	$ 2,242,500
1/1/1996	12/31/1996	$ 399,800
1/1/1997	12/31/1997	$ 395,100
1/1/1998	12/31/1998	$ 287,800
1/1/1999	12/31/1999	$ 560,800
1/1/2000	12/31/2000	$ 383,600
1/1/2001	12/31/2001	$ 305,800
1/1/2002	12/31/2002	$ 361,700
1/1/2003	12/31/2003	$ 339,000

C. System Operation/Operation and Maintenance

The Kentwood Landfill Pretreatment System consists of aeration, potassium permanganate oxidation, pH adjustment, metals precipitation, clarification, and discharge to the City of Wyoming POTW. The average groundwater/leachate flow rate through the plant is 10-15 gallons per minute (gpm), however; the system is designed and permitted to treat up to 50 gpm. The incoming leachate and groundwater are pumped to an influent holding (mix) tank where potassium permanganate ($KMnO_4$) addition and aeration occur.

Aeration is necessary to

(1) completely mix the wastewater and $KMnO_4$ solution and maintain suspension of solids,
(2) oxidize soluble ferric iron (Fe^{2+}) to insoluble ferrous iron (Fe^{3+}),
(3) raise the pH from approximately 7.0 to 9.0, thus minimizing or eliminating the need for further chemical pH adjustment, and
(4) strip and oxidize trace volatile and semi-volatile organic compounds, thus reducing $KmnO_4$ consumption.

Upon leaving the mix tank, wastewater flows to a circular clarifier with a sludge raking mechanism. Prior to entering the clarifier, a dilute polymer is added to the wastewater stream to promote settling of zinc and other metals. Over seven hours of detention time are available in the clarifier based on a capacity of 12,000 gallons and a flow rate of 26.6 gpm. After clarification, the wastewater flows via gravity to a holding tank where wastewater is stored for discharge to the POTW or pumped to a tanker truck.

Sludge generated in the circular clarifier is periodically pumped to a plate and frame filter press. Sludge cake produced is temporarily stored in a roll-off dumpster located beneath the filter press. Accumulated sludge cake is periodically trucked to a licensed sanitary landfill where it is disposed of as non-hazardous waste.

The pretreatment system is housed in an insulated metal-frame sided building. In addition to housing the pretreatment equipment, the pretreatment building also has an office and restroom facility. The office houses a personal computer that functions as the pretreatment system control panel. The computer employs an animated graphics display to monitor and control the different pretreatment system processes. The computer system also records operating data for trending, plotting, and alarm reporting. An autodialer/telephone link alerts on-call staff by pager or telephone of pretreatment system alarm conditions. The pretreatment system personal computer is accessible via modem from remote locations to allow for off-site control of the pretreatment plan (PTP).

The pretreatment plant building is equipped with fire detection, suppression, and alarm systems. In addition, the pretreatment building has passive gas detection and alarm systems to

monitor and activate pretreatment plant ventilation controls should lower explosive limit (LEL) conditions exist inside the building. The automated building ventilation system also controls temperature and humidity conditions inside the plant.

The municipalities are conducting long-term monitoring and maintenance activities according to the operation and maintenance (O&M) plan that was approved by U.S.. EPA on April 3, 1996. The primary activities associated with O&M include the following:

1. Daily log: Filled out for each day an operator is on site. Includes checks of all PTP equipment and processes.
2. Weekly Plant Check List: Completed each week. Includes checking tanks and major equipment such as the compressor and blower.
3. Weekly Wells Check List: Includes inspection of extraction wells and associated pumps, lift station pumps and manholes (in southern extension). Completed on a weekly basis.
4. Monthly Discharge Summary: Summary of flow out of the PTP on a daily basis based on flow meter readings.
5. Monthly Check List: Inspection of all PTP system operations and scheduled maintenance of Tanks, Air Compressor, Blower, Computer System, Fire Protection System, Gas Detection System, and Filter Press; also includes inspection of lift station, extraction wells, manholes, gas vents, and air relief valves at the landfill site.
6. Semi Annual Check list: A thorough site inspection, which includes inspection of the leachate breakout collection system, landfill cover system, storm water drainage system, site fencing, signs and structures, gas vents, and monitoring wells. These are in addition to the ongoing weekly and monthly O&M activities.
7. Plant Monitoring: Monthly and quarterly analytical monitoring of PTP influent and effluent.

V. Progress Since the Last Five-Year Review

U.S. EPA, in its first Five-Year Review Report (October 15, 1999), concluded that the remedy selected for the Kentwood Landfill Site remained protective of human health and the environment. U.S. EPA, however, made the following recommendations and required the following actions to be taken by the municipalities:

U.S. EPA's Recommendation Number 1

Recommendations regarding lead in residential wells to the northeast of the landfill:

- **Ensure that the analytical detection limits for lead are at or below the recommended cleanup levels.**
- **Ensure that ALL residential wells impacted by lead (to the north and northeast) are identified and sampled.**

- **Contact residents with these wells**
- **Ask residents to not to use contaminated groundwater from their well, but instead use public water supply**
- **Request a written agreement from each resident specifying they will not use their well water for drinking purposes**
- **Request that PRPs offer to perform well abandonment for those residents with wells, since the residents have public water supplied already.**
- **Have PRPs sample all residential wells**
- **Demonstrate groundwater capture northeast of the landfill**

The Municipalities took the following steps to address U.S. EPA's Recommendation Number 1

A detection limit of 3.0 ug/L is used for lead analysis in residential well water, groundwater, surface water, and leachate. This is well below the cleanup criteria of 5 ug/L.

During the Remedial Investigation, a residential well survey was conducted that found eight (8) wells between the landfill and 44th Street to the north. Of these, three (3) wells were selected for annual monitoring. Two (2) wells are in the middle aquifer, and one (1) well is in the upper aquifer. The original three wells have been sampled since 1995. The only exceedance of the lead cleanup criteria of 5 ug/L was detected in only one of the wells. Following sampling of this well in 1999, the resident switched to municipal water. In a follow up survey conducted in 2003, all residential well owners between the landfill and 44th Street were contacted. There were only five residential wells remaining in use in the area. Two (2) of these five wells were already in the monitoring program. Beginning with the May 2004 sampling event, the other three (3) wells in the area were added to the monitoring program. In the 2004 monitoring event, no lead was found to exceed the cleanup criteria of 5 ug/L.

There is no need at this time to ask residents not to use private wells for drinking water purposes, since there is no evidence of contaminated groundwater in any of the residential wells that are currently being used for drinking water purposes. The resident whose well was contaminated with lead already switched to municipal water in 1999. Sampling of the residential wells will continue annually.

Based on over ten (10) years of quarterly groundwater contour maps, and the limited migration of other landfill contaminants, the Municipalities have adequately demonstrated that the extraction wells are adequately capturing contaminated groundwater near the landfill boundary.

U.S. EPA's Recommendation Number 2

Require a revised proposal to address attributability of lead contamination to the landfill including:

- **cross-section from landfill wells to the northeast residential area wells**
- **include elevations of the ravine north of Mrs. Biddle's property; may need to install piezometers or new borings to get enough data to show groundwater elevations, contiguity of confining layers, etc.**
- **gamma-ray logs for all the wells**
- **monthly water level surveys of all site wells, gas vents, manholes, and adjacent residential wells for one year to determine whether the groundwater flow direction changes seasonally.**

Since no exceedances of the cleanup criteria have been noted in the residential wells, with the exception of one of the wells which is no longer a drinking water well, attributability of the lead contamination to the landfill is not necessary.

U.S. EPA's Recommendation Number 3

Proposal to stop leachate breakouts to the South

- **Augment leachate capture system**
- **A cross-section map(s) from the southern extension to the south would be helpful to understand leachate movement, including elevations of seeps, ephemeral stream, Plaster Creek, water table, landfill cells, extraction well screens, etc.**

Leachate breakouts are still present to the south of the Southern Extension. Analytical results of the leachate in this area show the presence of some inorganic compounds including arsenic, chromium, and lead above state and federal drinking standards. There were no volatile organic compounds detected above state and federal drinking water standards. Public access to this area is restricted through fencing. The leachate extraction well EW14 near this area is currently sufficient to control leachate outbreaks in this vicinity. Installation of additional extraction wells in the Southern Extension is not necessary at this time.

U.S. EPA's Recommendation Number 4

PRPs are not up to date on O&M Reports. They are required to submit deliverables as soon as possible and no later than May, 2000, or will be issued a Notice of Violation under the Consent Decree.

O&M Progress reports are up to date and have been submitted in a timely manner since 2000.

U.S. EPA's Recommendation Number 5

Resolve perched water flooding in refuse cells, as seen in the gas vent/wells to the northwest. One gas well was converted into an extraction well, and it only helped minimally. Three wells in the area are submerged.

The Municipalities have indicated that they are proposing to modify the northwest portion of the landfill for the purpose of constructing a golf driving range. This may involve regrading the northwest portion of the landfill with additional fill. Once these new grades are finalized, the Municipalities will submit a work plan for the conversion of the two gas vents in the area of the perched leachate to extraction wells.

U.S. EPA's Recommendation Number 6

Offer new criteria: the lower of the part 201 residential drinking water or GSI Criteria. These are, in general, less stringent than the current Type B criteria in the ROD and may be more realistically achieved for cleanup goals.

State of Michigan Part 201 Groundwater Cleanup Residential Drinking Water Standards (02' Part 201 Res DWC) replaced Part 307 Type 'B'/1991 Groundwater Cleanup Criteria, Residential Drinking Water Standards, which were in effect at the time of signing of the ROD. The Municipalities are currently using the 02' Part 201 Res DWC to compare the groundwater data and to assess cleanup progress.

Although not a requirement, the Municipalities compared the June 2004 groundwater data to the GSI criteria to ensure that Plaster Creek was protected. The only exceedance of GSI criteria in wells near Plaster Creek was for xylenes and zinc at monitoring well MW04S. Because these exceedances are isolated and not egregious, they are insignificant and no further action is necessary to protect human health and the environment.

U.S. EPA's Recommendation Number 7

Further evaluate the effectiveness of the remedy, utilizing computer programs as they become available through the Post Construction and Closure (PCC) group at U.S. EPA.

Following the 1999 five-year review, attempts were made to utilize the resources of the PCC group at U.S. EPA. However, this group was not maintained, and no further action has been taken.

In addition, the 1999 five-year review site inspection noted the following:

- **Erosion of the ravine in the Consumers Energy (CE) Ravine between the Original Fill and Southern Extension Fill areas of the Site. This erosion may endanger the foundation of an existing high-voltage electric transmission tower.**
- **Areas in the Southern Extension are showing settling, and potential ponding could occur over time. A few areas atop the landfill also showed signs of settling.**
- **There are still areas of leachate breakout.**

In late 1999, the Municipalities re-graded the CE Ravine and installed a storm drain to aid in the transfer of storm water from the western top of the ravine to the bottom of the ravine to prevent groundwater/leachate from breaking out in the ravine area. Storm water no longer flows over ground down through the ravine. Five years after completion of the project, the ravine remains stabilized.

No further settling has been observed. Surface drainage has been maintained and no ponding has been observed. Leachate breakouts have remained stable in size and contaminant level since the last five-year review, with the exception of a new leachate breakout , LE12 and the apparent growth of LE08. An additional extraction well EW-14 was installed in the CE Ravine. EW-14 has been successful in eliminating one breakout from the Southern Extension, and continues to pump large volumes of leachate/groundwater.

VI. Five-Year Review Process

A. Administrative Components

In its April 28, 2004 letter to the MDEQ Project Manager, Bruce VanOtteren, U.S. EPA notified MDEQ of its intention to conduct the Statutory Five-Year Review of the Kentwood Landfill Site in Kentwood, Michigan. The Kentwood Landfill Review team was led by Nan Gowda, U.S. EPA Remedial Project Manager (RPM) for the Kentwood Landfill Site, Bruce VanOtteren, Project Manager, MDEQ, Molly Sherwood, Environmental Compliance Manager, KCDPW, and Robert Paulson, Community Involvement Coordinator (CIC), U.S. EPA. The review team's responsibility included the following components:

- Community Involvement
- Document Review
- Data Review
- Site Inspection
- Risk Information Review, and
- Local Interviews

B. Community Involvement

In coordination with Robert Paulson, U.S. EPA placed an advertisement in the Grand Rapids Press Newspaper on July 5, 2004 to notify the local residents of its intention to conduct the five-year review and to solicit public comments on matters relating to the Kentwood Landfill Site. Although no written comments were received from the local residents, a few residents expressed interest in meeting with U.S. EPA and MDEQ representatives.

C. Document Review

The five-year review consisted of a review of the following relevant documents:

1. Record of Decision (3/29/1991) for Kentwood Landfill Site

2. Consent Decree to perform Remedial Design/Remedial Action for the Kentwood Landfill Site (12/11/1991)

3. First Five-Year Review Report (October 1999) for the Kentwood Landfill Site

4. Kentwood Landfill Remedial Action Operation and Maintenance Semi-Annual Reports for 2003 and 2004.

5. Surface Water, Sediments, Leachate, private residential water wells, and groundwater monitoring data for 2004.

6. Deed Restriction for the Kentwood Landfill Site

7. City of Kentwood Ordinance prohibiting the installation of groundwater drinking water wells within certain areas.

D. Data Review

Review of Groundwater, Surface Water, Leachate, Sediments and Private well water monitoring:

The Municipalities regularly conduct monitoring of groundwater wells, leachate, surface water, sediments, and private residential wells. Six of the groundwater wells (MW11S, MW24S, MW28S, MW7M, MW8M, and MW25M) are monitored on a quarterly basis. Five of the monitoring wells (MW4S, MW7S, MW8S, MW18S, and MW33S) are monitored on a semi-annual basis. Groundwater well MW19S, leachate outbreaks in 12 active locations, surface water, and sediments of Plaster Creek and its two on-site tributaries are monitored on an annual basis. In addition, the Municipalities currently conduct monitoring of six private residential wells on an annual basis.

This five-year review will compare the analytical results to both federal and state standards. Federal Standards are the National Primary and Secondary Drinking Water Standards. State Standards include the most current State of Michigan Part 201 Groundwater Cleanup Residential Drinking Water Standards ('02 Part 201 Res DWC). This review will also compare analytical results of leachate and sediment samples to the most current State of Michigan Part 201 Residential Soil Direct Contact criteria.

Groundwater Monitoring

In 1995, six of the twelve monitoring wells (MW4S, MW7S, MW8S, MW11S, MW18S, and MW33S) sampled contained volatile organic compounds (VOCs) including Benzene, 1,2-Dichloroethene, Trichloroethene (TCE), and Vinyl Chloride at levels above their respective federal and state standards. The 2004 groundwater sampling results indicated the presence of VOCs in only three of the monitoring wells (MW4S, MW7S, and MW8S). VOCs detected include Benzene, 1,2- Dichloroethene, and Vinyl Chloride at levels above their respective federal and state standards. In general, most of the monitoring wells sampled since 1995 contained lead and arsenic in levels above federal and state standards. In the 2004 monitoring, lead was detected in monitoring well MW8M, and arsenic was found in monitoring well MW19S above federal and state standards. Lead and arsenic were not detected in any other wells. In addition, inorganic compounds including iron, manganese, and sodium were found above state standards in most of the monitoring wells.

Surface Water Monitoring

No VOCs were detected in any of the surface water samples collected in 2004. Aluminum and Iron were detected in almost all of the surface water samples. Aluminum and Iron with levels above state or federal secondary drinking water standards are not considered to present a risk to human health. These levels are established only as guidelines in managing drinking water for aesthetic considerations such as taste, color, and odor.

Sediment Monitoring

No VOCs above either the federal or state standards were detected in any of the sediment samples collected in 2004. Aluminum, iron, and lead were detected in most of the sediment samples at levels well below the State of Michigan Part 201 Residential Soil Direct Contact criteria.

Leachate Breakout Data Review

No VOCs above either the federal or state standards were detected in any of the leachate samples collected in 2004. Aluminum and iron were found above state standards in almost all of the leachate samples. Other inorganic compounds found above state standards included arsenic in Leachate sample LEBR07 and lead in Leachate samples LEBR07, LEBR08, and LEBR10.

Barium was found in Leachate sample LEBR12. Nickel was found in Leachate Samples LEBR01 and LEBR12.

Private Residential Wells

No VOCs were detected in any of the private residential wells sampled in 2004. Iron and Manganese were the only inorganic compounds detected above state standards. Iron was detected in five of the residential wells (PW-01, PW-03, PW-07, PW-08, and PW-09). Manganese was detected in two of the residential wells (PW-01 and PW-07). Iron and manganese with levels above state or federal secondary drinking water standards are not considered to present a risk to human health. These levels are established only as guidelines in managing drinking water for aesthetic considerations such as taste, color, and odor.

E. Site Inspection

Nan Gowda of the U.S. EPA, Bruce VanOtteren of the MDEQ, and Molly Sherwood of the KCDPW, conducted a site inspection on August 5, 2004. The purpose of the inspection was to determine current site conditions and to assess the protectiveness of the remedy. The following site conditions were observed and noted:

Fencing was generally found to be in good condition with appropriate signage. Gates were locked, and there was no evidence of unauthorized access to the site. A portion of fence, approximately 100 feet in length, had been temporarily taken down at the time of the inspection. Molly Sherwood stated that this was to facilitate the transport and stockpiling of clay to be used for the repair of settled areas of the landfill and for future site improvement. The fence would be reinstalled after the repair work was completed.

The landfill cap was generally found to be in good condition. There were no cracks or eroded areas observed during the site inspection. There were also no areas of disturbance, such as animal burrows. There were areas of settling observed, particularly in the northwest portion of the original fill. It does not appear the settling is great enough to affect surface drainage. Molly indicated that this area is, however, scheduled to undergo cap improvement in order to improve drainage and fill settled areas.

Minimal settling was observed in the southern extension. It does not appear that drainage has been affected. Cap vegetation is very healthy and growing well. Molly indicated that the cap had been mowed approximately one month before the inspection and was due for another mowing.

A number of leachate outbreaks were inspected during the August 5 site visit. According to Bruce VanOtteren and Molly Sherwood who have more historical knowledge of the site, the leachate outbreaks were not substantially larger in size than in previous years. There were also

no new leachate outbreaks observed. It appears that the leachate outbreaks are substantially under control at this time

F. Risk Information Review

The following applicable or relevant and appropriate requirements (ARARs) were reviewed for changes that could affect protectiveness:

- State of Michigan Part 201 Groundwater Cleanup Residential Drinking Water Standards/2002 (02' Part 201Res DWC)
- State of Michigan Part 201 Residential Soil Direct Contact criteria (02' Part 201 Res DCC)
- Federal Safe Drinking Water Act (SDWA) National Primary Drinking Water Standards and National Secondary Drinking Water Standards.

02' Part 201Res DWC standards replace Part 307 Type 'B'/1991, Groundwater Cleanup Criteria, Residential Drinking Water Standards, which were in effect at the time of signing of the ROD. The new standards, although less stringent than the Part 307 Standards, are still protective of human health and the environment.

G. Interviews

Nan Gowda, U.S. EPA, Bob Paulson, U.S. EPA, and Bruce VanOtteren, MDEQ met with the following City of Kentwood and Kent County Officials and residents of Kentwood, Michigan:

Mr. Ron Woods, Director of Public Works, City of Kentwood
Mr. Ron Landis, Kent County Director of Engineering Services, Kent County
Ms. Molly Sherwood, Environmental Compliance Manager, Kent County DPW, Kent County
Citizens - Ms. Carmen Biddle, Mr. Mark Dreisbach, Mr. Scott Plummer, and Mr. Tom Taylor

The meeting was held on August 5, 2004 at the City of Kentwood Department of Public Works Office. No significant problems regarding the site were identified during the meeting.

Mark Dreisbach, a resident of Kentwood, expressed concern about a large residential development near the landfill site. Scott Plummer, another resident of Kentwood, wanted to know if the lateral extent of the groundwater contaminant plume extends into nearby residential areas. Carmen Biddle wanted to know if there is a mechanism in place to let new home buyers know of the current site conditions that may be of concern to the residents. Mrs. Biddle also expressed a non-site related concern about a water erosion which is ruining her swamp trees. She

said that land continually being developed up-gradient from her residence resulted in higher volume and velocity of water coming through her property.

Nan Gowda said that the Kentwood Landfill Site has been identified as an EPA Headquarters' Tear Down the Wall Initiative (Return to Use). The Municipalities were interested in redeveloping the Kentwood Landfill as a golf driving range. Some residents stated that the landfill should be reused to benefit local residents instead of a golf driving range. Some of the suggestions included the idea of adding an outdoor nature classroom and/or a bike/walking path. City and County officials expressed interest in the additional suggestions. Nan Gowda stated that any decision to reuse the landfill should be made by the Municipalities, as the owners of the landfill site. EPA will support any appropriate landfill reuse, as long as the integrity of the landfill is not compromised and there is no risk to human health and the environment.

Ron Woods stated that the City had purchased all properties adjacent to the landfill. There are deed restrictions and a City Ordinance prohibiting the installation of groundwater drinking water wells in the vicinity of the landfill area. Molly Sherwood stated that the groundwater contaminant plume does not extend into the residential neighborhood and is contained within an area currently owned by the City. Nan Gowda stated that based on the review of the sampling results of private residential drinking water wells, there is no evidence of contaminated groundwater in any of the residential wells that are currently being used for drinking water purposes. Results of the most recent surface water and sediments samples collected in June 2004 indicate that there are no contaminants of concern which would pose an unacceptable risk to human health and the environment.

VII. Technical Assessment

The review of documents, ARARs, risk assumptions, and the results of the site inspection indicates that the remedy is functioning as intended by the ROD. Operation and Maintenance of the landfill cap and the Kentwood Landfill Pre-treatment system has, on the whole, been effective. In order to address some areas in the northwest portion of the landfill, where settling has been observed and to improve drainage, Kent County is in the process of filling the low areas of the landfill and regrading to improve drainage.

Benzene, 1,2-dichloroethene, vinyl chloride, lead, and arsenic were the only contaminants detected at levels above federal and state drinking water standards. Benzene was detected in only one (MW4S) of the twelve monitoring wells sampled. 1,2-dichloroethene and vinyl chloride were detected in monitoring wells MW7S and MW8S. Lead was detected in monitoring well MW8M. Arsenic was detected in monitoring well MW19S. In general, leachate breakouts have remained stable in size and contaminant levels have declined since the last five-year review. There were no contaminants above federal or state standards in either the surface water or private residential drinking water wells. Although some inorganic contaminants such as aluminum, iron, manganese, and sodium were detected above both federal and state standards, these contaminants

are not considered to present a risk to human health. The state and federal standards are established only as guidelines in managing drinking water for aesthetic considerations such as taste, color, or odor.

Leachate and groundwater extracted from the landfill site are effectively being treated at the on-site Kentwood Landfill Pre-treatment System. The institutional controls that are in place include the prohibition of consumptive or other use of groundwater underlying the Kentwood property that would cause exposure of humans or animals to such groundwater. In addition, the institutional controls prohibit all residential, commercial, or agricultural use of the site property. The City of Kentwood Ordinance prohibits the installation of groundwater drinking water wells within certain areas in the vicinity of the landfill site. (See attached deed restriction and groundwater ordinance)

VIII. Issues

There was evidence of settling in the northwest portion of the original fill. Although this settling does not appear to affect surface drainage, Kent County has already made plans to repair the settled areas of the landfill and to improve drainage.

IX. Recommendations

U.S. EPA recommends that Kent County improve drainage and fill settled areas in the northwest portion of the landfill by December 31, 2004.

X. Protectiveness Statement

The remedy for this site remains protective of human health and the environment. The deed restrictions and city ordinance effectively prohibit the use of contaminated groundwater at and near the landfill site. Effective on-site treatment and discharge of the groundwater/leachate from the landfill site and effective enforcement of the deed restrictions and city ordinance should continue to meet the objectives outlined in the ROD.

XI. Next Review

This is a statutory site that requires on going five-year reviews. The next review for the Kentwood Landfill Site is required by October 2009, five years from the date of this review.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-4S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW4S 6/30/1995	MW4S D 6/30/1995	MW4S 11/22/1995	MW4S 5/16/2000	MW4S 11/16/2000	MW4S 5/9/2001	MW4S 11/30/2001
Volatiles										
Acetone	ug/L	730	NA	13	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	**19**	**16**	**20**	**21**	**26**	**18**
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	1.0	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	4.0	7.0	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	1.0	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	**54**	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	7.0	<10	20	46	14	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	3.0	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	4.0	120	130	110	250	260	160
Semi-Volatiles										
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	**8.0**	5.0	--	<10	--	<10	--
di-n-Butylphthalate	ug/L	880	NA	<10	1.0	--	<10	--	<10	--
1,4-Dichlorobenzene	ug/L	75	75	21	21	--	<10	--	15	--
Diethylphthalate	ug/L	5,500	NA	16	15	--	<10	--	<10	--
2,4-Dimethylphenol	ug/L	370	NA	<10	<10	--	<10	--	<10	--
2-Methylnaphthalene	ug/L	260	NA	2.0	2.0	--	<10	--	<10	--
Naphthalene	ug/L	520	NA	17	17	--	<10	--	<10	--
Pesticides & PCB's										
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	<0.05	--	0.23	--	<0.05	--
(beta-BHC or beta-HCH)										
Benzenehexachloride	ug/L	0.2	NA	<0.05	<0.05	--	<0.05	--	<0.05	--
(gamma-BHC or Lindane)										

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-4S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW4S 5/24/2002	MW4S 12/10/2002	MW4S 5/20/2003	MW4S 12/12/2003	MW4S 6/17/2004
Volatiles								
Acetone	ug/L	730	NA	11	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	**20**	<10	**15**	<10	**21**
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	13	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	190	68	120	65	130
Semi-Volatiles								
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	<10	--	<10	--	<10
di-n-Butylphthalate	ug/L	880	NA	<10	--	<10	--	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	--	<10	--	<10
Diethylphthalate	ug/L	5,500	NA	<10	--	<10	--	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	--	<10	--	<10
2-Methylnaphthalene	ug/L	260	NA	<10	--	<10	--	<10
Naphthalene	ug/L	520	NA	<10	--	<10	--	<10
Pesticides & PCB's								
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	<0.05	--	<0.05
(beta-BHC or beta-HCH)								
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	<0.05	--	<0.05
(gamma-BHC or Lindane)								

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Montoring Data (Volatile Organic Compounds)
MW-7S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW7S 6/30/1995	MW7S 11/22/1995	MW7S 5/16/2000	MW7S 5/9/2001	MW7S 11/29/2001	MW7S 5/24/2002	MW7S 12/9/2002	MW7S 5/20/2003	MW7S 12/11/2003	MW7S 6/17/2004
Volatiles													
Acetone	ug/L	730	NA	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	**16**	**13**	**26**	**16**	**12**	**13**	**10**	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	40	25	27	<10	<10	15	11	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	60	41	120	130	100	96	<10	100	100	94
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	19	19	**263**	**418**	**390**	**540**	**481**	**850**	**780**	**760**
1,2-Dichloropropane	ug/L	5.0	5.0	2.0	1.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	5.0	4.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	**23**	**18**	**19**	**22**	**12**	**14**	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	**9.0**	<10	**380**	**260**	**540**	**330**	**180**	**400**	**320**	**360**
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles													
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	3.0	--	<10	<10	--	<10	--	<10	--	<10
di-n-Butylphthalate	ug/L	880	NA	1.0	--	<10	<10	--	<10	--	<10	--	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	--	<10	<10	--	<10	--	<10	--	<10
Diethylphthalate	ug/L	5,500	NA	8.0	--	<10	<10	--	<10	--	<10	--	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	--	<10	<10	--	<10	--	<10	--	<10
2-Methylnaphthalene	ug/L	260	NA	<10	--	<10	<10	--	<10	--	<10	--	<10
Naphthalene	ug/L	520	NA	<10	--	<10	<10	--	<10	--	<10	--	<10
Pesticides & PCB's													
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	0.19	<0.05	--	<0.05	--	<0.05	--	<0.05
(beta-BHC or beta-HCH)													
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	<0.05	<0.05	--	<0.05	--	<0.05	--	<0.05
(gamma-BHC or Lindane)													

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW7M 6/29/1995	MW7M D 6/29/1995	MW7M 9/21/1995	MW7M 11/22/1995	MW7M 2/15/2000	MW7M D 2/15/2000	MW7M 5/15/2000	MW7M D 5/15/2000
Volatiles											
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	3.0	3.0	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles											
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	3.0	2.0	--	--	--	--	<10	<10
di-n-Butylphthalate	ug/L	880	NA	<10	2.0	--	--	--	--	<10	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	<10	--	--	--	--	<10	<10
Diethylphthalate	ug/L	5,500	NA	<10	<10	--	--	--	--	<10	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	<10	--	--	--	--	<10	<10
2-Methylnaphthalene	ug/L	260	NA	<10	<10	--	--	--	--	<10	<10
Naphthalene	ug/L	520	NA	<10	<10	--	--	--	--	<10	<10
Pesticides & PCB's											
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	<0.05	--	--	--	--	<0.05	<0.05
(beta-BHC or beta-HCH)											
Benzenehexachloride	ug/L	0.2	NA	<0.05	<0.05	--	--	--	--	<0.05	<0.05
(gamma-BHC or Lindane)											

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW7M 11/16/2000	MW7M 3/9/2001	MW7M D 3/9/2001	MW7M 5/8/2001	MW7M D 5/8/2001	MW7M 8/22/2001	MW7M D 8/22/2001	MW7M 11/29/2001
Volatiles											
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles											
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	--	--	<10	<10	--	--	--
di-n-Butylphthalate	ug/L	880	NA	--	--	--	<10	<10	--	--	--
1,4-Dichlorobenzene	ug/L	75	75	--	--	--	<10	<10	--	--	--
Diethylphthalate	ug/L	5,500	NA	--	--	--	<10	<10	--	--	--
2,4-Dimethylphenol	ug/L	370	NA	--	--	--	<10	<10	--	--	--
2-Methylnaphthalene	ug/L	260	NA	--	--	--	<10	<10	--	--	--
Naphthalene	ug/L	520	NA	--	--	--	<10	<10	--	--	--
Pesticides & PCB's											
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	--	--	<0.05	<0.05	--	--	--
(beta-BHC or beta-HCH)											
Benzenehexachloride	ug/L	0.2	NA	--	--	--	<0.05	<0.05	--	--	--
(gamma-BHC or Lindane)											

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW7M 2/27/2002	MW7M 5/24/2002	MW7M 9/9/2002	MW7M 12/9/2002	MW7M D 12/9/2002	MW7M 3/17/2003	MW7M D 3/17/2003	MW7M 5/20/2003
Volatiles											
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles											
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	<10	--	--	--	--	--	<10
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	--	--	--	<10
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	--	--	--	<10
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	--	--	--	<10
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	--	--	--	<10
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	--	--	--	<10
Naphthalene	ug/L	520	NA	--	<10	--	--	--	--	--	<10
Pesticides & PCB's											
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	--	--	--	--	--	<0.05
(beta-BHC or beta-HCH)											
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	--	--	--	--	--	<0.05
(gamma-BHC or Lindane)											

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds) MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW7M 12/11/2003	MW7M D 12/11/2003	MW7M 2/26/2004	MW7M 6/14/2004	MW7M D 6/14/2004
Volatiles								
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10
Semi-Volatiles								
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	--	--	<10	<10
di-n-Butylphthalate	ug/L	880	NA	--	--	--	<10	<10
1,4-Dichlorobenzene	ug/L	75	75	--	--	--	<10	<10
Diethylphthalate	ug/L	5,500	NA	--	--	--	<10	<10
2,4-Dimethylphenol	ug/L	370	NA	--	--	--	<10	<10
2-Methylnaphthalene	ug/L	260	NA	--	--	--	<10	<10
Naphthalene	ug/L	520	NA	--	--	--	<10	<10
Pesticides & PCB's								
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	--	--	<0.05	<0.05
(beta-BHC or beta-HCH)								
Benzenehexachloride	ug/L	0.2	NA	--	--	--	<0.05	<0.05
(gamma-BHC or Lindane)								

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-8S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW8S 6/30/1995	MW8S 11/22/1995	MW8S 5/16/2000	MW8S 5/9/2001	MW8S 11/29/2001	MW8S 5/24/2002	MW8S 12/9/2002
Volatiles										
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	16	26	23	<10	<10	12	12
1,1-Dichloroethane	ug/L	880	NA	95	100	99	86	66	56	48
1,1-Dichloroethene	ug/L	7.0	7.0	7.0	**9.0**	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	**1,100**	**1,100**	**793**	**691**	**480**	**380**	**380**
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	**40**	**8.0**	16	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	**130**	**110**	**82**	**49**	**26**	**34**	**25**
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	**180**	**230**	**35**	**23**	<10	**26**	**12**
Vinyl Chloride	ug/L	2.0	2.0	**170**	**120**	**120**	**58**	**100**	**46**	**42**
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles										
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	4.0	--	<10	<10	--	<10	<10
di-n-Butylphthalate	ug/L	880	NA	<10	--	<10	<10	--	<10	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	--	<10	<10	--	<10	<10
Diethylphthalate	ug/L	5,500	NA	<10	--	<10	<10	--	<10	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	--	<10	<10	--	<10	<10
2-Methylnaphthalene	ug/L	260	NA	<10	--	<10	<10	--	<10	<10
Naphthalene	ug/L	520	NA	<10	--	<10	<10	--	<10	<10
Pesticides & PCB's										
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	<0.05	<0.05	--	<0.05	<0.05
(beta-BHC or beta-HCH)										
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	<0.05	<0.05	--	<0.05	<0.05
(gamma-BHC or Lindane)										

(1) '02 Part 201 criteria taken from Michigan Administrative Rules
for Part 201 Environmental Remediation, December 21, 2002.
(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds) MW-8S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW8S 5/20/2003	MW8S 12/11/2003	MW8S 6/17/2004
Volatiles						
Acetone	ug/L	730	NA	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10
Chloroethane	ug/L	430	NA	16	<10	<10
1,1-Dichloroethane	ug/L	880	NA	46	50	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	**420**	**380**	**440**
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	**19**	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	**59**	**49**	**64**
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10
Semi-Volatiles						
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	<10	--	<10
di-n-Butylphthalate	ug/L	880	NA	<10	--	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	--	<10
Diethylphthalate	ug/L	5,500	NA	<10	--	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	--	<10
2-Methylnaphthalene	ug/L	260	NA	<10	--	<10
Naphthalene	ug/L	520	NA	<10	--	<10
Pesticides & PCB's						
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	<0.05
(beta-BHC or beta-HCH)						
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	<0.05
(gamma-BHC or Lindane)						

(1) '02 Part 201 criteria taken from Michigan Administrative Rules
for Part 201 Environmental Remediation, December 21, 2002.
(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-8M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW8M 6/27/1995	MW8M 9/22/1995	MW8M 11/22/1995	MW8M 2/15/2000	MW8M 5/15/2000	MW8M 11/16/2000	MW8M 3/9/2001	MW8M 5/8/2001	MW8M 8/22/2001	MW8M 11/29/2001
Volatiles													
Acetone	ug/L	730	NA	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	3.0	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles													
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	**11**	--	--	--	<10	--	--	<10	--	--
di-n-Butylphthalate	ug/L	880	NA	3.0	--	--	--	11	--	--	<10	--	--
1,4-Dichlorobenzene	ug/L	75	75	<10	--	--	--	<10	--	--	<10	--	--
Diethylphthalate	ug/L	5,500	NA	<10	--	--	--	<10	--	--	<10	--	--
2,4-Dimethylphenol	ug/L	370	NA	<10	--	--	--	<10	--	--	<10	--	--
2-Methylnaphthalene	ug/L	260	NA	<10	--	--	--	<10	--	--	<10	--	--
Naphthalene	ug/L	520	NA	<10	--	--	--	<10	--	--	<10	--	--
Pesticides & PCB's													
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	--	--	<0.05	--	--	<0.05	--	--
(beta-BHC or beta-HCH)													
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	--	--	<0.05	--	--	<0.05	--	--
(gamma-BHC or Lindane)													

(1) '02 Part 201 criteria taken from Michigan Administrative Rules
for Part 201 Environmental Remediation, December 21, 2002.
(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-8M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW8M 2/26/2002	MW8M 2/26/2002	MW8M 5/24/2002	MW8M 9/9/2002	MW8M 12/9/2002	MW8M 9/9/2002	MW8M 5/20/2003	MW8M 12/11/2003	MW8M 2/26/2004	MW8M 6/17/2004
Volatiles													
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	11	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles													
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	--	<10	--	--	--	<10	--	--	<10
di-n-Butylphthalate	ug/L	880	NA	--	--	<10	--	--	--	<10	--	--	<10
1,4-Dichlorobenzene	ug/L	75	75	--	--	<10	--	--	--	<10	--	--	<10
Diethylphthalate	ug/L	5,500	NA	--	--	<10	--	--	--	<10	--	--	<10
2,4-Dimethylphenol	ug/L	370	NA	--	--	<10	--	--	--	<10	--	--	<10
2-Methylnaphthalene	ug/L	260	NA	--	--	<10	--	--	--	<10	--	--	<10
Naphthalene	ug/L	520	NA	--	--	<10	--	--	--	<10	--	--	<10
Pesticides & PCB's													
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	--	<0.05	--	--	--	<0.05	--	--	<0.05
(beta-BHC or beta-HCH)													
Benzenehexachloride	ug/L	0.2	NA	--	--	<0.05	--	--	--	<0.05	--	--	<0.05
(gamma-BHC or Lindane)													

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-11S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW11S 3/28/1995	MW11S D 3/28/1995	MW11S 6/30/1995	MW11S 9/22/1995	MW11S 2/15/2000	MW11S 11/16/2000	MW11S 3/9/2001	MW11S 5/8/2001	MW11S 8/22/2001	MW11S 11/29/2001
Volatiles													
Acetone	ug/L	730	NA	<10	<10	2.0	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	2.0	3.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	5.0	5.0	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	**5.0**	**5.0**	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles													
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	--	2.0	--	--	--	--	<10	--	--
di-n-Butylphthalate	ug/L	880	NA	--	--	<10	--	--	--	--	<10	--	--
1,4-Dichlorobenzene	ug/L	75	75	--	--	<10	--	--	--	--	<10	--	--
Diethylphthalate	ug/L	5,500	NA	--	--	<10	--	--	--	--	<10	--	--
2,4-Dimethylphenol	ug/L	370	NA	--	--	<10	--	--	--	--	<10	--	--
2-Methylnaphthalene	ug/L	260	NA	--	--	<10	--	--	--	--	<10	--	--
Naphthalene	ug/L	520	NA	--	--	<10	--	--	--	--	<10	--	--
Pesticides & PCB's													
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	--	<0.05	--	--	--	--	<0.05	--	--
(beta-BHC or beta-HCH)													
Benzenehexachloride	ug/L	0.2	NA	--	--	<0.05	--	--	--	--	<0.05	--	--
(gamma-BHC or Lindane)													

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-11S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW11S 2/26/2002	MW11S 5/24/2002	MW11S 9/9/2002	MW11S 12/9/2002	MW11S 3/17/2003	MW11S 5/20/2003	MW11S 12/11/2003	MW11S 2/26/2004	MW11S 6/17/2004
Volatiles												
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	1.1	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles												
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	<10	--	--	--	<10	--	--	<10
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	--	<10	--	--	<10
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	--	<10	--	--	<10
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	--	<10	--	--	<10
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	--	<10	--	--	<10
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	--	<10	--	--	<10
Naphthalene	ug/L	520	NA	--	<10	--	--	--	<10	--	--	<10
Pesticides & PCB's												
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	--	--	--	<0.05	--	--	<0.05
(beta-BHC or beta-HCH)												
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	--	--	--	<0.05	--	--	<0.05
(gamma-BHC or Lindane)												

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-18S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW18S 6/30/1995	MW18S 11/22/1995	MW18S D 5/16/2000	MW18S 11/16/2000	MW18S D 5/9/2001	MW18S D 5/9/2001	MW18S 11/29/2001	MW18S 5/24/2002	MW18S 12/10/2002
Volatiles												
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	11	32	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	30	14	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	14	5.0	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	1.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	**14**	**6.0**	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	**15**	**6.0**	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles												
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	3.0	--	<10	--	<10	<10	--	<10	--
di-n-Butylphthalate	ug/L	880	NA	1.0	--	<10	--	<10	<10	--	<10	--
1,4-Dichlorobenzene	ug/L	75	75	<10	--	<10	--	<10	<10	--	<10	--
Diethylphthalate	ug/L	5,500	NA	<10	--	<10	--	<10	<10	--	<10	--
2,4-Dimethylphenol	ug/L	370	NA	<10	--	<10	--	<10	<10	--	<10	--
2-Methylnaphthalene	ug/L	260	NA	<10	--	<10	--	<10	<10	--	<10	--
Naphthalene	ug/L	520	NA	<10	--	<10	--	<10	<10	--	<10	--
Pesticides & PCB's												
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	--
(beta-BHC or beta-HCH)												
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	--
(gamma-BHC or Lindane)												

(1) '02 Part 201 criteria taken from Michigan Administrative Rules
for Part 201 Environmental Remediation, December 21, 2002.
(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-18S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW18S 5/20/2003	MW18S 12/12/2003	MW18S 6/17/2004
Volatiles						
Acetone	ug/L	730	NA	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	12
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	29
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10
Semi-Volatiles						
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	<10	--	<10
di-n-Butylphthalate	ug/L	880	NA	<10	--	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	--	<10
Diethylphthalate	ug/L	5,500	NA	<10	--	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	--	<10
2-Methylnaphthalene	ug/L	260	NA	<10	--	<10
Naphthalene	ug/L	520	NA	<10	--	<10
Pesticides & PCB's						
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	<0.05
(beta-BHC or beta-HCH)						
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	<0.05
(gamma-BHC or Lindane)						

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-19S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW19S 6/30/1995	MW19S 5/16/2000	MW19S 5/8/2001	MW19S 5/28/2002	MW19S 5/20/2003	MW19S 6/17/2004
Volatiles									
Acetone	ug/L	730	NA	5.0	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	5.0	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	6.0	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	3.0	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	2.0	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10
Semi-Volatiles									
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	32	<10	<10	<10	<10	<10
di-n-Butylphthalate	ug/L	880	NA	4.0	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	<10	<10	<10	<10	<10
Diethylphthalate	ug/L	5,500	NA	22	<10	<10	<10	<10	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	ug/L	260	NA	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	520	NA	<10	<10	<10	<10	<10	<10
Pesticides & PCB's									
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
(beta-BHC or beta-HCH)									
Benzenehexachloride	ug/L	0.2	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
(gamma-BHC or Lindane)									

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-24S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW24S 3/28/1995	MW24S 6/29/1995	MW24S 9/22/1995	MW24S 11/21/1995	MW24S 2/15/2000	MW24S 5/16/2000	MW24S 5/16/2000	MW24S 9/14/2000	MW24S 11/16/2000
Volatiles												
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	2.0	<10	3.0	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	3.0	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles												
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	2.0	--	--	--	<10	--	--	--
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	--	<10	--	--	--
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	--	<10	--	--	--
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	--	<10	--	--	--
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	--	<10	--	--	--
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	--	<10	--	--	--
Naphthalene	ug/L	520	NA	--		--	--	--	<10	--	--	--
Pesticides & PCB's					<0.05							
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--		--	--	--	<0.05	--	--	--
(beta-BHC or beta-HCH)					<0.05							
Benzenehexachloride	ug/L	0.2	NA	--		--	--	--	<0.05	--	--	--
(gamma-BHC or Lindane)												

(1) '02 Part 201 criteria taken from Michigan Administrative Rules
for Part 201 Environmental Remediation, December 21, 2002.
(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-24S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW24S 3/9/2001	MW24S 5/8/2001	MW24S 8/22/2001	MW24S 11/29/2001	MW24S 2/26/2002	MW24S 5/24/2002	MW24S 9/9/2002	MW24S D 9/9/2002	MW24S 12/9/2002
Volatiles												
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles												
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	<10	--	--	--	<10	--	--	--
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	--	<10	--	--	--
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	--	<10	--	--	--
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	--	<10	--	--	--
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	--	<10	--	--	--
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	--	<10	--	--	--
Naphthalene	ug/L	520	NA	--	<10	--	--	--	<10	--	--	--
Pesticides & PCB's												
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	--	--	--	<0.05	--	--	--
(beta-BHC or beta-HCH)												
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	--	--	--	<0.05	--	--	--
(gamma-BHC or Lindane)												

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-24S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW24S D 3/17/2003	MW24S 5/20/2003	MW24S 12/11/2003	MW24S 2/26/2004	MW24S 6/17/2004
Volatiles								
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10
Semi-Volatiles								
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	<10	--	--	<10
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	<10
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	<10
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	<10
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	<10
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	<10
Naphthalene	ug/L	520	NA	--	<10	--	--	<10
Pesticides & PCB's								
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	--	--	<0.05
(beta-BHC or beta-HCH)								
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	--	--	<0.05
(gamma-BHC or Lindane)								

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-25M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW25M 6/29/1995	MW25M 9/22/1995	MW25M D 9/22/1995	MW25M 11/21/1995	MW25M D 11/21/1995	MW25M 2/15/2000	MW25M 5/16/2000	MW25M D 5/16/2000	MW25M 9/14/2000	MW25M 11/16/2000
Volatiles													
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	4.0	3.0	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	3.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	2.0	3.0	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles													
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	6.0	--	--	--	--	--	<10	<10	--	--
di-n-Butylphthalate	ug/L	880	NA	<10	--	--	--	--	--	<10	<10	--	--
1,4-Dichlorobenzene	ug/L	75	75	<10	--	--	--	--	--	<10	<10	--	--
Diethylphthalate	ug/L	5,500	NA	<10	--	--	--	--	--	<10	<10	--	--
2,4-Dimethylphenol	ug/L	370	NA	<10	--	--	--	--	--	<10	<10	--	--
2-Methylnaphthalene	ug/L	260	NA	<10	--	--	--	--	--	<10	<10	--	--
Naphthalene	ug/L	520	NA	<10	--	--	--	--	--	<10	<10	--	--
Pesticides & PCB's													
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	--	--	--	--	<0.05	<0.05	--	--
(beta-BHC or beta-HCH)													
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	--	--	--	--	<0.05	<0.05	--	--
(gamma-BHC or Lindane)													

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-25M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW25M 11/16/2000	MW25M 3/9/2001	MW25M 5/8/2001	MW25M 8/22/2001	MW25M 11/30/2001	MW25M 2/27/2002	MW25M 5/28/2002	MW25M D 5/28/2002	MW25M 9/9/2002	MW25M 12/10/2002	MW25M d 12/10/2002
Volatiles														
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles														
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	--	<10	--	--	--	<10	<10	--	--	--
di-n-Butylphthalate	ug/L	880	NA	--	--	<10	--	--	--	<10	<10	--	--	--
1,4-Dichlorobenzene	ug/L	75	75	--	--	<10	--	--	--	<10	<10	--	--	--
Diethylphthalate	ug/L	5,500	NA	--	--	<10	--	--	--	<10	<10	--	--	--
2,4-Dimethylphenol	ug/L	370	NA	--	--	<10	--	--	--	<10	<10	--	--	--
2-Methylnaphthalene	ug/L	260	NA	--	--	<10	--	--	--	<10	<10	--	--	--
Naphthalene	ug/L	520	NA	--	--	<10	--	--	--	<10	<10	--	--	--
Pesticides & PCB's														
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	--	<0.05	--	--	--	<0.05	<0.05	--	--	--
(beta-BHC or beta-HCH)														
Benzenehexachloride	ug/L	0.2	NA	--	--	<0.05	--	--	--	<0.05	<0.05	--	--	--
(gamma-BHC or Lindane)														

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-25M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW25M 3/17/2003	MW25M 5/20/2003	MW25M d 5/20/2003	MW25M 12/12/2003	MW25M D 12/12/2003	MW25M 2/26/2004	MW25M 6/17/2004	MW25M D 6/17/2004
Volatiles											
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles											
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	<10	<10	--	--	--	<10	<10
di-n-Butylphthalate	ug/L	880	NA	--	<10	<10	--	--	--	<10	<10
1,4-Dichlorobenzene	ug/L	75	75	--	<10	<10	--	--	--	<10	<10
Diethylphthalate	ug/L	5,500	NA	--	<10	<10	--	--	--	<10	<10
2,4-Dimethylphenol	ug/L	370	NA	--	<10	<10	--	--	--	<10	<10
2-Methylnaphthalene	ug/L	260	NA	--	<10	<10	--	--	--	<10	<10
Naphthalene	ug/L	520	NA	--	<10	<10	--	--	--	<10	<10
Pesticides & PCB's											
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	<0.05	--	--	--	<0.05	<0.05
(beta-BHC or beta-HCH)											
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	<0.05	--	--	--	<0.05	<0.05
(gamma-BHC or Lindane)											

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-28S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW28S 3/27/1995	MW28S 6/29/1995	MW28S 9/22/1995	MW28S 11/21/1995	MW28S 2/15/2000	MW28S 5/15/2000	MW28S 9/14/2000	MW28S 11/16/2000
Volatiles											
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	2.0	3.0	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles											
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	3.0	--	--	--	<10	--	--
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	--	<10	--	--
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	--	<10	--	--
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	--	<10	--	--
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	--	<10	--	--
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	--	<10	--	--
Naphthalene	ug/L	520	NA	--	<10	--	--	--	<10	--	--
Pesticides & PCB's											
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	--	--	--	--	--	--
(beta-BHC or beta-HCH)											
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	--	--	--	--	--	--
(gamma-BHC or Lindane)											

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) *Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.*

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-28S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW28S 3/9/2001	MW28S 5/8/2001	MW28S 8/22/2004	MW28S 11/29/2001	MW28S 2/27/2002	MW28S 5/24/2002	MW28S d 5/24/2002	MW28S 9/9/2002
Volatiles											
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10	<10	<10
Semi-Volatiles											
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	<10	--	--	--	<10	<10	--
di-n-Butylphthalate	ug/L	880	NA	--	<10	--	--	--	<10	<10	--
1,4-Dichlorobenzene	ug/L	75	75	--	<10	--	--	--	<10	<10	--
Diethylphthalate	ug/L	5,500	NA	--	<10	--	--	--	<10	<10	--
2,4-Dimethylphenol	ug/L	370	NA	--	<10	--	--	--	<10	<10	--
2-Methylnaphthalene	ug/L	260	NA	--	<10	--	--	--	<10	<10	--
Naphthalene	ug/L	520	NA	--	<10	--	--	--	<10	<10	--
Pesticides & PCB's											
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	<0.05	--	--	--	<0.05	<0.05	--
(beta-BHC or beta-HCH)											
Benzenehexachloride	ug/L	0.2	NA	--	<0.05	--	--	--	<0.05	<0.05	--
(gamma-BHC or Lindane)											

(1) '02 Part 201 criteria taken from Michigan Administrative Rules
for Part 201 Environmental Remediation, December 21, 2002.
(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-28S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW28S 12/9/2002	MW28S 3/17/2003	MW28S 5/20/2003	MW28S 12/11/2003	MW28S 2/26/2004	MW28S 6/17/2004
Volatiles									
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	880	NA	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	<10	<10	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	<10	<10	<10	<10	<10	<10
Semi-Volatiles									
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	--	--	<10	--	--	<10
di-n-Butylphthalate	ug/L	880	NA	--	--	<10	--	--	<10
1,4-Dichlorobenzene	ug/L	75	75	--	--	<10	--	--	<10
Diethylphthalate	ug/L	5,500	NA	--	--	<10	--	--	<10
2,4-Dimethylphenol	ug/L	370	NA	--	--	<10	--	--	<10
2-Methylnaphthalene	ug/L	260	NA	--	--	<10	--	--	<10
Naphthalene	ug/L	520	NA	--	--	<10	--	--	<10
Pesticides & PCB's									
beta-Hexachlorocyclohexane	ug/L	0.88	NA	--	--	<0.05	--	--	<0.05
(beta-BHC or beta-HCH)									
Benzenehexachloride	ug/L	0.2	NA	--	--	<0.05	--	--	<0.05
(gamma-BHC or Lindane)									

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-33S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW33S 6/30/1995	MW33S 11/22/1995	MW33S D 11/22/1995	MW33S 5/16/2000	MW33S 11/16/2000	MW33S 5/9/2001	MW33S 11/30/2001
Volatiles										
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	**13**	**12**	**12**	<10	**10**	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	7.0	5.0	5.0	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	25	22	22	67	53	<10	<10
1,1-Dichloroethane	ug/L	880	NA	97	77	72	52	42	46	<10
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	70	49	47	22	23	22	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	18	12	12	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	2.0	2.0	5.0	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	1.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	1.0	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	2.0	1.0	1.0	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	17	13	<10	<10	<10	<10	<10
Xylenes (Total)	ug/L	280	10,000	16	16	16	<10	<10	<10	<10
Semi-Volatiles										
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	4.0	--	--	<10	--	<10	--
di-n-Butylphthalate	ug/L	880	NA	<10	--	--	<10	--	<10	--
1,4-Dichlorobenzene	ug/L	75	75	4.0	--	--	<10	--	<10	--
Diethylphthalate	ug/L	5,500	NA	22	--	--	<10	--	<10	--
2,4-Dimethylphenol	ug/L	370	NA	<10	--	--	<10	--	<10	--
2-Methylnaphthalene	ug/L	260	NA	<10	--	--	<10	--	<10	--
Naphthalene	ug/L	520	NA	17	--	--	<10	--	<10	--
Pesticides & PCB's										
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	--	0.074	--	<0.05	--
(beta-BHC or beta-HCH)										
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	--	<0.05	--	<0.05	--
(gamma-BHC or Lindane)										

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 3: Kentwood Landfill Groundwater Monitoring Data (Volatile Organic Compounds)
MW-33S

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCLs	MW33S 5/28/2002	MW33S 12/10/2002	MW33S d 12/10/2002	MW33S 5/20/2003	MW33S 12/12/2003	MW33S 6/17/2004
Volatiles									
Acetone	ug/L	730	NA	<10	<10	<10	<10	<10	<10
Benzene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	13,000	NA	<10	<10	<10	<10	<10	<10
Carbon Disulfide	ug/L	800	NA	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	100	100	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	430	NA	20	57	57	49	81	53
1,1-Dichloroethane	ug/L	880	NA	14	36	36	22	18	12
1,1-Dichloroethene	ug/L	7.0	7.0	<10	<10	<10	<10	<10	<10
1,2-Dichloroethene, Total	ug/L	170	170	<10	16	15	<10	<10	<10
1,2-Dichloropropane	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	8.5	NA	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	700	<10	<10	<10	<10	<10	<10
Methylene Chloride	ug/L	5.0	NA	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	790	1,000	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	5.0	5.0	<10	<10	<10	<10	<10	<10
Vinyl Chloride	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10
Xylenes (Total)	*ug/L*	*280*	*10,000*	*<10*	*<10*	*<10*	*<10*	*<10*	*<10*
Semi-Volatiles									
bis (2-Ethylhexyl) phthalate	ug/L	6.0	NA	<10	--	--	<10	--	<10
di-n-Butylphthalate	ug/L	880	NA	<10	--	--	<10	--	<10
1,4-Dichlorobenzene	ug/L	75	75	<10	--	--	<10	--	<10
Diethylphthalate	ug/L	5,500	NA	<10	--	--	<10	--	<10
2,4-Dimethylphenol	ug/L	370	NA	<10	--	--	<10	--	<10
2-Methylnaphthalene	ug/L	260	NA	<10	--	--	<10	--	<10
Naphthalene	ug/L	520	NA	<10	--	--	<10	--	<10
Pesticides & PCB's									
beta-Hexachlorocyclohexane	ug/L	0.88	NA	<0.05	--	--	<0.05	--	<0.05
(beta-BHC or beta-HCH)									
Benzenehexachloride	ug/L	0.2	NA	<0.05	--	--	<0.05	--	<0.05
(gamma-BHC or Lindane)									

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Values shaded exceed Part 201 Drinking Water Criteria or Federal MCLs.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-4S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW4S 6/30/1995	MW4S D 6/30/1995	MW4S 11/22/1995	MW4S 5/16/2000	MW4S 11/16/2000	MW4S 5/9/2001	MW4S 11/30/2001	MW4S 5/24/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	**77**	**69**	**73**	**57**	**86**	37	**78**	45
Barium	ug/L	2,000	2,000	460	410	520	341	437	335	445	360
Beryllium	ug/L	4.0	4.0	<5	<5	--	<5	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	<5	<5	--	<5	--	<5	--	<5
Calcium	ug/L	NA	NA	170,000	160,000	--	174,000	--	230,000	--	<5,000
Chromium	ug/L	100	100	<10	<10	<10	20	20	<10	<10	14
Cobalt	ug/L	40	NA	<50	<50	--	<50	--	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	<25	--	<25	--	<25	--	<25
Iron	ug/L	300	NA	**33,000**	**28,000**	**33,000**	**31,500**	**36,700**	**47,100**	**34,340**	**94,000**
Lead	ug/L	4.0	15*	<3	<3	**5.1**	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	170,000	160,000	--	130,000	--	112,000	--	120,000
Manganese	ug/L	50	NA	**260**	**250**	--	**368**	--	**429**	--	**350**
Mercury	ug/L	2.0	2.0	<0.2	<0.2	--	<0.2	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	90	69	77	<40	89	<40	86	63
Potassium	ug/L	NA	NA	96,000	90,000	--	69,000	--	53,000	--	57,000
Selenium	ug/L	50	50	7	6.6	--	<5	--	7.7	--	22
Silver	ug/L	34	NA	<10	<10	--	<10	--	<10	--	<10
Sodium	ug/L	120,000	NA	**310,000**	**280,000**	--	**266,000**	--	**264,000**	--	**300,000**
Thallium	ug/L	2.0	2.0	<10	<10	--	<10	--	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	<50	--	<50	--	<50	--	<50
Zinc	ug/L	2,400	NA	1,300	1,000	--	1,730	--	**2,580**	--	910
Cyanide	ug/L	200	200	<5	<5	--	<5	--	<5	--	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics) MW-4S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW4S 12/10/2002	MW4S 5/20/2003	MW4S 12/12/2003	MW4S 6/1704
Aluminum	ug/L	50	NA	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	1.9	<60	<60	<60
Arsenic	ug/L	50	50	**54**	40	25	27
Barium	ug/L	2,000	2,000	380	<200	259	385
Beryllium	ug/L	4.0	4.0	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	--	<5	--	<5
Calcium	ug/L	NA	NA	--	178,000	--	190,000
Chromium	ug/L	100	100	9.1	<10		<10
Cobalt	ug/L	40	NA	--	<50	--	<50
Copper	ug/L	1,000	1,300*	--	<25	--	<25
Iron	ug/L	300	NA	**20,000**	**32,800**	**21,800**	**37,400**
Lead	ug/L	4.0	15*	<3	<3	**6.6**	<3
Magnesium	ug/L	400,000	NA	--	105,000	--	110,000
Manganese	ug/L	50	NA	--	**386**	--	**388**
Mercury	ug/L	2.0	2.0	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	78	57		49
Potassium	ug/L	NA	NA	--	59,000	--	64,000
Selenium	ug/L	50	50	--	24	--	<5
Silver	ug/L	34	NA	--	<10	--	<10
Sodium	ug/L	120,000	NA	--	**222,000**	--	**223,000**
Thallium	ug/L	2.0	2.0	--	<10	--	<10
Vanadium	ug/L	4.5	NA	--	<50	--	<50
Zinc	ug/L	2,400	NA	--	1,250	--	670
Cyanide	ug/L	200	200	--	<5	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-7S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW7S 6/30/1995	MW7S 11/22/1995	MW7S 5/16/2000	MW7S 5/9/2001	MW7S 11/29/2001	MW7S 5/24/2002	MW7S 12/9/2002	MW7S 5/20/2003	MW7S 12/11/2003	MW7S 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	**240**	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	16	19	**59**	32	40	40	29	37	46	39
Barium	ug/L	2,000	2,000	410	410	220	<200	<200	<200	95	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	<5	<5	--	<5	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	6.0	--	<5	<5	--	<5	--	<5	--	<5
Calcium	ug/L	NA	NA	310,000	--	295,000	356,000	--	340,000	--	392,000	--	404,000
Chromium	ug/L	100	100	<10	<10	13	<10	<10	<10	2.3	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	<50	<50	--	<50	--	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	--	<25	<25	--	<25	--	<25	--	<25
Iron	ug/L	300	NA	6,300	5,800	**21,600**	**28,600**	**22,100**	**27,000**	**20,000**	**28,800**	**32,900**	**30,300**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	230,000	--	198,000	186,000	--	110,000	--	122,000	--	136,000
Manganese	ug/L	50	NA	630	--	**371**	**354**	--	**360**	--	**411**	--	**388**
Mercury	ug/L	2.0	2.0	<0.2	--	<0.2	<0.2	--	<0.2	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	63	<40	<40	<40	<40	<40	21	<40	<40	<40
Potassium	ug/L	NA	NA	58,000	--	74,000	78,000	--	50,000	--	42,000	--	46,000
Selenium	ug/L	50	50	15	--	9.7	9.2	--	10	--	<5	--	<5
Silver	ug/L	34	NA	<10	--	<10	<10	--	<10	--	<10	--	<10
Sodium	ug/L	120,000	NA	54,000	--	**335,000**	**334,000**	--	**250,000**	--	**310,000**	--	**363,000**
Thallium	ug/L	2.0	2.0	<10	--	<10	<10	--	<10	--	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	--	<50	<50	--	<50	--	<50	--	<50
Zinc	ug/L	2,400	NA	23	--	99	58	--	62	--	78	--	23
Cyanide	ug/L	200	200	<5	--	<5	<5	--	<5	--	<5	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCL	MW7M 6/30/1995	MW7M 9/21/1995	MW7M 11/22/1995	MW7M 2/15/2000	MW 7M D 2/15/2000	MW7M 5/15/2000	MW 7M 9/14/2000	MW 7M 3/9/2001	MW 7M D 3/9/2001
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	--	--	--	<5	--	--	--
Cadmium	ug/L	5.0	5.0	<5	--	--	--	--	<5	--	--	--
Calcium	ug/L	NA	NA	68,000	--	--	--	--	79,000	--	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	--	--	--	<50	--	--	--
Copper	ug/L	1,000	1,300*	<25	--	--	--	--	<25	--	--	--
Iron	ug/L	300	NA	290	**1,500**	**390**	**510**	**500**	**510**	**530**	**500**	**510**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	18,000	--	--	--	--	17,000	--	--	--
Manganese	ug/L	50	NA	19	--	--	--	--	17	--	--	--
Mercury	ug/L	2.0	2.0	<0.2	--	--	--	--	<0.2	--	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	<5,000	--	--	--	--	<5,000	--	--	--
Selenium	ug/L	50	50	<5	--	--	--	--	<5	--	--	--
Silver	ug/L	34	NA	<10	--	--	--	--	<10	--	--	--
Sodium	ug/L	120,000	NA	73,000	--	--	--	--	71,000	--	--	--
Thallium	ug/L	2.0	2.0	<10	--	--	--	--	<10	--	--	--
Vanadium	ug/L	4.5	NA	<50	--	--	--	--	<50	--	--	--
Zinc	ug/L	2,400	NA	96	--	--	--	--	<20	--	--	--
Cyanide	ug/L	200	200	<5	--	--	--	--	<5	--	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) Action Levels are shown for lead and copper

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCL	MW 7M 5/8/2001	MW 7M D 5/8/2001	MW 7M 8/22/2001	MW 7M D 8/22/2001	MW 7M 11/29/2001	MW7M 2/27/2002	MW7M 5/24/2002	MW7M 9/9/2002	MW7M 12/9/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	3.6	<10	2.1	3.9
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200	32	<200	32	30
Beryllium	ug/L	4.0	4.0	<5	<5	--	--	--	--	<5	--	--
Cadmium	ug/L	5.0	5.0	<5	<5	--	--	--	--	<5	--	--
Calcium	ug/L	NA	NA	68,000	72,000	--	--	--	--	66,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	5.9	<10	1.3	<10
Cobalt	ug/L	40	NA	<50	<50	--	--	--	--	<50	--	--
Copper	ug/L	1,000	1,300*	<25	<25	--	--	--	--	<25	--	--
Iron	ug/L	300	NA	**470**	**510**	**480**	**480**	**510**	80	**630**	**340**	**340**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	**9.2**	<3	**4.9**	<3
Magnesium	ug/L	400,000	NA	15,000	17,000	--	--	--	--	16,000	--	--
Manganese	ug/L	50	NA	<15	16	--	--	--	--	15	--	--
Mercury	ug/L	2.0	2.0	<0.2	<0.2	--	--	--	--	<0.2	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	3.1	<40	1.9	1.0
Potassium	ug/L	NA	NA	<5,000	<5,000	--	--	--	--	<5,000	--	--
Selenium	ug/L	50	50	<5	<5	--	--	--	--	<5	--	--
Silver	ug/L	34	NA	<10	<10	--	--	--	--	<10	--	--
Sodium	ug/L	120,000	NA	67,000	72,000	--	--	--	--	66,000	--	--
Thallium	ug/L	2.0	2.0	<10	<10	--	--	--	--	<10	--	--
Vanadium	ug/L	4.5	NA	<50	<50	--	--	--	--	<50	--	--
Zinc	ug/L	2,400	NA	<20	<20	--	--	--	--	<20	--	--
Cyanide	ug/L	200	200	<5	<5	--	--	--	--	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) Action Levels are shown for lead and copper

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-7M

PARAMETERS	UNITS	'02 Part 201 Drinking Water	Federal MCL	MW7M dup 12/9/2002	MW7M 12/9/2002	MW7M dup 12/9/2002	MW7M 5/20/2003	MW7M 12/11/2003	MW7M dup 12/11/2003	MW7M 6/14/2004	MW7M D 6/14/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	4.3	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	30	<200	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	--	--	<5	--	--	<5	<5
Cadmium	ug/L	5.0	5.0	--	--	--	<5	--	--	<5	<5
Calcium	ug/L	NA	NA	--	--	--	77,000	--	--	76,000	76,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	--	--	<50	--	--	<50	<50
Copper	ug/L	1,000	1,300*	--	--	--	<25	--	--	<25	<25
Iron	ug/L	300	NA	**330**	**510**	**510**	**530**	240	240	**520**	**520**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	--	--	17,000	--	--	17,000	17,000
Manganese	ug/L	50	NA	--	--	--	17	--	--	16	15
Mercury	ug/L	2.0	2.0	--	--	--	<0.2	--	--	<0.2	<0.2
Nickel	ug/L	100	NA	1.1	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	--	--	<5,000	--	--	<5,000	<5,000
Selenium	ug/L	50	50	--	--	--	<5	--	--	<5	<5
Silver	ug/L	34	NA	--	--	--	<10	--	--	<10	<10
Sodium	ug/L	120,000	NA	--	--	--	74,000	--	--	78,000	75,000
Thallium	ug/L	2.0	2.0	--	--	--	<10	--	--	<10	<10
Vanadium	ug/L	4.5	NA	--	--	--	<50	--	--	<50	<50
Zinc	ug/L	2,400	NA	--	--	--	55	--	--	46	51
Cyanide	ug/L	200	200	--	--	--	<5	--	--	<10	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) Action Levels are shown for lead and copper

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-8S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW8S 6/30/1995	MW8S 11/22/1995	MW8S 5/16/2000	MW8S 5/9/2001	MW8S 11/29/2001	MW8S 5/24/2002	MW8S 12/9/2002	MW8S 5/20/2003
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	13	4.9	<10
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200	<200	63	<200
Beryllium	ug/L	4.0	4.0	<5	--	<5	<5	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	<5	--	<5	<5	--	<5	--	<5
Calcium	ug/L	NA	NA	300,000	--	328,000	322,000	--	280,000	--	274,000
Chromium	ug/L	100	100	<10	<10	14	<10	<10	<10	2.2	<10
Cobalt	ug/L	40	NA	<50	--	<50	<50	--	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	--	<25	<25	--	<25	--	<25
Iron	ug/L	300	NA	140	**380**	**2,680**	**8,040**	**3,230**	**5,300**	**9,500**	**17,500**
Lead	ug/L	4.0	15*	**4.2**	**5.4**	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	170,000	--	143,000	143,000	--	120,000	--	141,000
Manganese	ug/L	50	NA	**2,400**	--	**4,510**	**3,170**	--	**4,300**	--	**1,440**
Mercury	ug/L	2.0	2.0	<0.2	--	<0.2	<0.2	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	23	<40
Potassium	ug/L	NA	NA	14,000	--	16,000	16,000	--	12,000	--	12,000
Selenium	ug/L	50	50	<5	--	5	6.6	--	<5	--	<5
Silver	ug/L	34	NA	<10	--	<10	<10	--	<10	--	<10
Sodium	ug/L	120,000	NA	**300,000**	--	**357,000**	**349,000**	--	**290,000**	--	**404,000**
Thallium	ug/L	2.0	2.0	<10	--	<10	<10	--	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	--	<50	<50	--	<50	--	<50
Zinc	ug/L	2,400	NA	3,600	--	40	57	--	43	--	<20
Cyanide	ug/L	200	200	<5	--	<5	<5	--	<5	--	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-8S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW8S 6/30/1995	MW8S 12/11/2003	MW8S 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10
Barium	ug/L	2,000	2,000	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	<5
Cadmium	ug/L	5.0	5.0	<5	--	<5
Calcium	ug/L	NA	NA	300,000	--	249,000
Chromium	ug/L	100	100	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	--	<25
Iron	ug/L	300	NA	140	**19,200**	**31,200**
Lead	ug/L	4.0	15*	**4.2**	<3	<3
Magnesium	ug/L	400,000	NA	170,000	--	133,000
Manganese	ug/L	50	NA	**2,400**	--	**689**
Mercury	ug/L	2.0	2.0	<0.2	--	<0.2
Nickel	ug/L	100	NA	<40	<40	<40
Potassium	ug/L	NA	NA	14,000	--	17,000
Selenium	ug/L	50	50	<5	--	<5
Silver	ug/L	34	NA	<10	--	<10
Sodium	ug/L	120,000	NA	**300,000**	--	**464,000**
Thallium	ug/L	2.0	2.0	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	--	<50
Zinc	ug/L	2,400	NA	3,600	--	124
Cyanide	ug/L	200	200	<5	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-8M

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW8M 6/27/1995	MW8M 9/22/1995	MW8M 11/22/1995	MW8M 2/15/2000	MW8M 5/15/2000	MW8M 9/14/2000	MW8M 11/16/2000	MW8M 3/9/2001	MW8M 5/8/2001	MW8M 8/22/2001	MW8M 11/29/2001
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	--	--	<5	--	--	--	<5	--	--
Cadmium	ug/L	5.0	5.0	<5	--	--	--	<5	--	--	--	<5	--	--
Calcium	ug/L	NA	NA	11,000	--	--	--	23,000	--	--	--	27,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	--	--	<50	--	--	--	<50	--	--
Copper	ug/L	1,000	1,300*	<25	--	--	--	<25	--	--	--	<25	--	--
Iron	ug/L	300	NA	<100	250	<100	<100	<100	<100	<100	<100	<100	<100	<100
Lead	ug/L	4.0	15*	<3	**36**	**61**	**18**	**19**	**11**	**6.4**	3.0	**7.4**	**15**	**15**
Magnesium	ug/L	400,000	NA	<5,000	--	--	--	15,000	--	--	--	19,000	--	--
Manganese	ug/L	50	NA	<50	--	--	--	<50	--	--	--	<50	--	--
Mercury	ug/L	2.0	2.0	<0.2	--	--	--	<0.2	--	--	--	<0.2	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	<5,000	--	--	--	<5,000	--	--	--	<5,000	--	--
Selenium	ug/L	50	50	<5	--	--	--	<5	--	--	--	<5	--	--
Silver	ug/L	34	NA	<10	--	--	--	<10	--	--	--	<10	--	--
Sodium	ug/L	120,000	NA	44,000	--	--	--	34,000	--	--	--	<5,000	--	--
Thallium	ug/L	2.0	2.0	<10	--	--	--	<10	--	--	--	<10	--	--
Vanadium	ug/L	4.5	NA	<50	--	--	--	<50	--	--	--	<50	--	--
Zinc	ug/L	2,400	NA	22	--	--	--	326	--	--	--	192	--	--
Cyanide		200	200	<5	--	--	--	<5	--	--	--	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-8M

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW8M 2/26/2002	MW8M D 2/26/2002	MW8M 5/24/2002	MW3M 9/9/2002	MW8M 12/9/2002	MW8M 3/17/2003	MW8M 5/20/2003	MW8M 12/11/2003	MW8M 2/26/2004	MW8M 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	3.3	4.0	<10	3.1	1.7	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	70	73	<200	63	46	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	--	<5	--	--	--	<5	--	--	<5
Cadmium	ug/L	5.0	5.0	--	--	<5	--	--	--	<5	--	--	<5
Calcium	ug/L	NA	NA	--	--	25,000	--	--	--	26,000	--	--	18,000
Chromium	ug/L	100	100	5.2	3.6	<10	1.9	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	--	<50	--	--	--	<50	--	--	<50
Copper	ug/L	1,000	1,300*	--	--	<25	--	--	--	<25	--	--	<25
Iron	ug/L	300	NA	<100	<100	<100	96	<100	<100	<100	<100	<100	<100
Lead	ug/L	4.0	15*	**16**	**17**	<3	69	**23**	<3	<3	**9.3**	**12**	**20**
Magnesium	ug/L	400,000	NA	--	--	17,000	--	--	--	19,000	--	--	18,000
Manganese	ug/L	50	NA	--	--	<50	--	--	--	<50	--	--	<50
Mercury	ug/L	2.0	2.0	--	--	<0.2	--	--	--	<0.2	--	--	<0.2
Nickel	ug/L	100	NA	1.3	1.1	<40	1.9	0.48	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	--	<5,000	--	--	--	<5,000	--	--	<5,000
Selenium	ug/L	50	50	--	--	<5	--	--	--	<5	--	--	<5
Silver	ug/L	34	NA	--	--	<10	--	--	--	<10	--	--	<10
Sodium	ug/L	120,000	NA	--	--	31,000	--	--	--	33000	--	--	33000
Thallium	ug/L	2.0	2.0	--	--	<10	--	--	--	<10	--	--	<10
Vanadium	ug/L	4.5	NA	--	--	<50	--	--	--	<50	--	--	<50
Zinc	ug/L	2,400	NA	--	--	26	--	--	--	27	--	--	980
Cyanide		200	200	--	--	<5	--	--	--	<5	--	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-11S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW11S 3/28/1995	MW11S D 3/28/1995	MW11S 6/29/1995	MW11S 9/22/1995	MW11S 11/22/1995	MW11S 2/15/2000	MW-11S 9/14/2000	MW-11S 11/16/2000
Aluminum	ug/L	50	NA	**59**	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	45	42	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	--	<5	--	--	--	--	--
Cadmium	ug/L	5.0	5.0	--	--	<5	--	--	--	--	--
Calcium	ug/L	NA	NA	--	--	110,000	--	--	--	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	--	<50	--	--	--	--	--
Copper	ug/L	1,000	1,300*	--	--	<25	--	--	--	--	--
Iron	ug/L	300	NA	58	58	220	<100	100	**460**	**1,210**	**1,080**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	--	41,000	--	--	--	--	--
Manganese	ug/L	50	NA	--	--	40	--	--	--	--	--
Mercury	ug/L	2.0	2.0	--	--	<0.2	--	--	--	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	--	<5,000	--	--	--	--	--
Selenium	ug/L	50	50	--	--	<5	--	--	--	--	--
Silver	ug/L	34	NA	--	--	<10	--	--	--	--	--
Sodium	ug/L	120,000	NA	--	--	8,600	--	--	--	--	--
Thallium	ug/L	2.0	2.0	--	--	<10	--	--	--	--	--
Vanadium	ug/L	4.5	NA	--	--	<50	--	--	--	--	--
Zinc	ug/L	2,400	NA	--	--	770	--	--	--	--	--
Cyanide	ug/L	200	200	--	--	<5	--	--	--	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-11S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW-11S 3/9/2001	MW-11S 5/8/2001	MW-11S 8/22/2001	MW-11S 11/29/2001	MW11S 2/26/2002	MW11S 5/24/2002	MW11S 9/9/2002	MW11S 12/9/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	2.8	<10	1.9	1.5
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	43	<200	47	44
Beryllium	ug/L	4.0	4.0	--	<5	--	--	--	<5	--	--
Cadmium	ug/L	5.0	5.0	--	<5	--	--	--	<5	--	--
Calcium	ug/L	NA	NA	--	105,000	--	--	--	95,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	14	<10	5.5	<10
Cobalt	ug/L	40	NA	--	<50	--	--	--	<50	--	--
Copper	ug/L	1,000	1,300*	--	<25	--	--	--	<25	--	--
Iron	ug/L	300	NA	**810**	**840**	**580**	**630**	**480**	**790**	**1,200**	**340**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	39,000	--	--	--	31,000	--	--
Manganese	ug/L	50	NA	--	**298**	--	--	--	**170**	--	--
Mercury	ug/L	2.0	2.0	--	<0.2	--	--	--	<0.2	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	4.1	<40	3.6	2.1
Potassium	ug/L	NA	NA	--	<5,000	--	--	--	<5,000	--	--
Selenium	ug/L	50	50	--	<5	--	--	--	<5	--	--
Silver	ug/L	34	NA	--	<10	--	--	--	<10	--	--
Sodium	ug/L	120,000	NA	--	8,100	--	--	--	6,600	--	--
Thallium	ug/L	2.0	2.0	--	<10	--	--	--	<10	--	--
Vanadium	ug/L	4.5	NA	--	<50	--	--	--	<50	--	--
Zinc	ug/L	2,400	NA	--	27	--	--	--	20	--	--
Cyanide	ug/L	200	200	--	<5	--	--	--	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-11S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW11S 3/17/2003	MW11S 5/20/2003	MW11S 12/11/2003	MW11S 2/26/2004	MW11S 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	**6,860**	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	<5	--	--	<5
Cadmium	ug/L	5.0	5.0	--	<5	--	--	<5
Calcium	ug/L	NA	NA	--	97,000	--	--	82,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	<50	--	--	<50
Copper	ug/L	1,000	1,300*	--	<25	--	--	<25
Iron	ug/L	300	NA	160	**590**	**6,040**	170	**490**
Lead	ug/L	4.0	15*	<3	<3	**41**	<3	<3
Magnesium	ug/L	400,000	NA	--	34,000	--	--	30,000
Manganese	ug/L	50	NA	--	**158**	--	--	**254**
Mercury	ug/L	2.0	2.0	--	<0.2	--	--	<0.2
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	<5,000	--	--	<5,000
Selenium	ug/L	50	50	--	<5	--	--	<5
Silver	ug/L	34	NA	--	<10	--	--	<10
Sodium	ug/L	120,000	NA	--	9,400	--	--	78,000
Thallium	ug/L	2.0	2.0	--	<10	--	--	<10
Vanadium	ug/L	4.5	NA	--	<50	--	--	<50
Zinc	ug/L	2,400	NA	--	225	--	--	170
Cyanide	ug/L	200	200	--	<5	--	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-18S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW18S 6/30/1995	MW18S 11/22/1995	MW18S D 5/16/2000	MW18S 11/16/2000	MW18S 5/9/2001	MW18S D 5/9/2001	MW18S 11/29/2001	MW18S 5/24/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	<5	--	<5	<5	--	<5
Cadmium	ug/L	5.0	5.0	<5	--	<5	--	<5	<5	--	<5
Calcium	ug/L	NA	NA	130,000	--	82,000	--	81,000	87,000	--	92,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	<50	--	<50	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	--	<25	--	<25	<25	--	<25
Iron	ug/L	300	NA	**12,000**	**10,000**	**7,570**	**6,310**	**7,250**	**7,710**	**6,460**	**7,300**
Lead	ug/L	4.0	15*	<3	<3	<3	**13**	**15**	**16**	**12**	<3
Magnesium	ug/L	400,000	NA	85,000	--	41,000	--	43,000	46,000	--	46,000
Manganese	ug/L	50	NA	**1,400**	--	**908**	--	**721**	**784**	--	**630**
Mercury	ug/L	2.0	2.0	<0.2	--	<0.2	--	<0.2	<0.2	--	<0.2
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	5,900	--	<5,000	--	<5,000	<5,000	--	<5,000
Selenium	ug/L	50	50	<5	--	<5	--	<5	<5	--	<5
Silver	ug/L	34	NA	<10	--	<10	--	<10	<10	--	<10
Sodium	ug/L	120,000	NA	98,000	--	57,000	--	59,000	64,000	--	61,000
Thallium	ug/L	2.0	2.0	<10	--	<10	--	<10	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	--	<50	--	<50	<50	--	<50
Zinc	ug/L	2,400	NA	880	--	753	--	708	753	--	240
Cyanide	ug/L	200	200	<5	--	<5	--	<5	<5	--	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-18S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW18S 12/10/2002	MW18S 5/20/2003	MW18S 12/12/2003	MW18S 6/17/2004
Aluminum	ug/L	50	NA	<200	**330**	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60
Arsenic	ug/L	50	50	7.8	19	<10	<10
Barium	ug/L	2,000	2,000	28	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	--	<5	--	<5
Calcium	ug/L	NA	NA	--	77,000	--	112,000
Chromium	ug/L	100	100	0.89	<10	<10	<10
Cobalt	ug/L	40	NA	--	<50	--	<50
Copper	ug/L	1,000	1,300*	--	<25	--	<25
Iron	ug/L	300	NA	**5,500**	**15,500**	**5,660**	**5,380**
Lead	ug/L	4.0	15*	**14**	**89**	<3	<3
Magnesium	ug/L	400,000	NA	--	37,000	--	57,000
Manganese	ug/L	50	NA	--	23	--	<15
Mercury	ug/L	2.0	2.0	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	7.6	<40	<40	<40
Potassium	ug/L	NA	NA	--	<5,000	--	<5,000
Selenium	ug/L	50	50	--	<5	--	<5
Silver	ug/L	34	NA	--	<10	--	<10
Sodium	ug/L	120,000	NA	--	48,000	--	78,000
Thallium	ug/L	2.0	2.0	--	<10	--	<10
Vanadium	ug/L	4.5	NA	--	<50	--	<50
Zinc	ug/L	2,400	NA	--	**9,970**	--	137
Cyanide	ug/L	200	200	--	<5	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-19S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW19S 6/30/1995	MW19S 5/16/2000	MW19S 5/8/2001	MW19S 5/28/2002	MW19S 5/20/2003	MW19S 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	82	**92**	**68**	**160**	34	**107**
Barium	ug/L	2,000	2,000	380	334	353	300	305	321
Beryllium	ug/L	4.0	4.0	<5	<5	<5	<5	<5	<5
Cadmium	ug/L	5.0	5.0	6	<5	<5	<5	<5	<5
Calcium	ug/L	NA	NA	200,000	210,000	196,000	180,000	195,000	191,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	<50	<50	<50	<50	<50	<50
Copper	ug/L	1,000	1,300*	<25	<25	<25	<25	<25	<25
Iron	ug/L	300	NA	**28,000**	**23,800**	**24,000**	**27,000**	**28,600**	**23,600**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	68,000	46,000	47,000	49,000	55,000	58,000
Manganese	ug/L	50	NA	**160**	**119**	**103**	**84**	**83**	**92**
Mercury	ug/L	2.0	2.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	13,000	11,000	9,500	8,300	8,900	7,900
Selenium	ug/L	50	50	<5	<5	<5	<5	<5	<5
Silver	ug/L	34	NA	<10	<10	<10	<10	<10	<10
Sodium	ug/L	120,000	NA	59,000	64,000	67,000	79,000	92,000	90,000
Thallium	ug/L	2.0	2.0	<10	<10	<10	<10	<10	<10
Vanadium	ug/L	4.5	NA	<50	<50	<50	<50	<50	<50
Zinc	ug/L	2,400	NA	510	250	160	420	<20	152
Cyanide	ug/L	200	200	<5	<5	<5	<5	<5	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-24S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW24S 3/28/1995	MW24S 6/29/1995	MW24S 9/22/1995	MW24S 11/21/1995	MW24S 2/15/2000	MW24S 5/15/2000	MW24S 9/14/2000	MW24S 11/16/2000
Aluminum	ug/L	50	NA	<200	<200	<200	**3,600**	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	13	<200	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	<5	--	--	--	<5	--	--
Cadmium	ug/L	5.0	5.0	--	<5	--	--	--	<5	--	--
Calcium	ug/L	NA	NA	--	70,000	--	--	--	52,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	<50	--	--	--	<50	--	--
Copper	ug/L	1,000	1,300*	--	<25	--	--	--	<25	--	--
Iron	ug/L	300	NA	60	280	**360**	**21,000**	**560**	**550**	**1,210**	**590**
Lead	ug/L	4.0	15*	<3	<3	<3	**48**	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA		28,000			--	19,000	--	--
Manganese	ug/L	50	NA	--	<15	--	--	--	**64**	--	--
Mercury	ug/L	2.0	2.0	--	<0.2	--	--	--	0.2	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	<5,000	--	--	--	<5,000	--	--
Selenium	ug/L	50	50	--	<5	--	--	--	<5	--	--
Silver	ug/L	34	NA	--	<10	--	--	--	<10	--	--
Sodium	ug/L	120,000	NA	--	20,000	--	--	--	18,000	--	--
Thallium	ug/L	2.0	2.0	--	<10	--	--	--	<10	--	--
Vanadium	ug/L	4.5	NA	--	<50	--	--	--	<50	--	--
Zinc	ug/L	2,400	NA	--	2,100	--	--	--	28	--	--
Cyanide	ug/L	200	200	--	<5	--	--	--	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-24S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW24S 3/28/1995	MW24S 3/9/2001	MW24S 5/8/2001	MW24S 8/22/2001	MW24S 11/29/2001	MW24S 2/26/2002	MW24S 5/24/2002	MW24S 9/9/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	13	<200	<200	<200	<200	34	<200	50
Beryllium	ug/L	4.0	4.0	--	--	<5	--	--	--	<5	--
Cadmium	ug/L	5.0	5.0	--	--	<5	--	--	--	<5	--
Calcium	ug/L	NA	NA	--	--	50,000	--	--	--	60,000	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	9.3	<10	2.6
Cobalt	ug/L	40	NA	--	--	<50	--	--	--	<50	--
Copper	ug/L	1,000	1,300*	--	--	<25	--	--	--	<25	--
Iron	ug/L	300	NA	60	220	240	**440**	230	**600**	**570**	**710**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA		--	20,000	--	--	--	23,000	--
Manganese	ug/L	50	NA	--	--	25	--	--	--	<15	--
Mercury	ug/L	2.0	2.0	--	--	<0.2	--	--	--	<0.2	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	3.2	<40	2.5
Potassium	ug/L	NA	NA	--	--	<5,000	--	--	--	<5,000	--
Selenium	ug/L	50	50	--	--	<5	--	--	--	<5	--
Silver	ug/L	34	NA	--	--	<10	--	--	--	<10	--
Sodium	ug/L	120,000	NA	--	--	25,000	--	--	--	29,000	--
Thallium	ug/L	2.0	2.0	--	--	<10	--	--	--	<10	--
Vanadium	ug/L	4.5	NA	--	--	<50	--	--	--	<50	--
Zinc	ug/L	2,400	NA	--	--	28	--	--	--	<20	--
Cyanide	ug/L	200	200	--	--	<5	--	--	--	<5	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-24S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW24S 3/28/1995	MW24S D 9/9/2002	MW24S 12/9/2002	MW24S 3/19/2003	MW24S 5/20/2003	MW24S 12/11/2003	MW24S 2/26/2004	MW24S 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	1.2	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	13	47	45	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	--	--	--	<5	--	--	<5
Cadmium	ug/L	5.0	5.0	--	--	--	--	<5	--	--	<5
Calcium	ug/L	NA	NA	--	--	--	--	69,000		--	108,000
Chromium	ug/L	100	100	<10	1.3	<10	<10	<10	<10	<10	10
Cobalt	ug/L	40	NA	--	--	--	--	<50	--	--	<50
Copper	ug/L	1,000	1,300*	--	--	--	--	<25	--	--	<25
Iron	ug/L	300	NA	60	**690**	**690**	**480**	**1,300**	**1,400**	**420**	**1,130**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA		--	--	--	24,000	--	--	41,000
Manganese	ug/L	50	NA	--	--	--	--	39	--	--	41
Mercury	ug/L	2.0	2.0	--	--	--	--	<0.2	--	--	<0.2
Nickel	ug/L	100	NA	<40	2.7	1.5	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	--	--	--	<5,000	--	--	<5,000
Selenium	ug/L	50	50	--	--	--	--	<5	--	--	<5
Silver	ug/L	34	NA	--	--	--	--	<10	--	--	<10
Sodium	ug/L	120,000	NA	--	--	--	--	33,000	--	--	208,000
Thallium	ug/L	2.0	2.0	--	--	--	--	<10	--	--	<10
Vanadium	ug/L	4.5	NA	--	--	--	--	<50	--	--	<50
Zinc	ug/L	2,400	NA	--	--	--	--	<20	--	--	<20
Cyanide	ug/L	200	200	--	--	--	--	<5	--	--	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-25M

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW25M 6/29/1995	MW25M 9/22/1995	MW25M D 9/22/1995	MW25M 11/21/1995	MW25M D 11/21/1995	MW25M 2/15/2000	MW25M 5/16/2000	MW25M D 5/16/2000	MW25M 9/14/2000	MW25M 11/16/2000
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	**77**	**75**	**70**	**73**	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	<200	280	280	290	280	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	--	--	--	--	<5	<5	--	--
Cadmium	ug/L	5.0	5.0	<5	--	--	--	--	--	<5	<5	--	--
Calcium	ug/L	NA	NA	69,000	--	--	--	--	--	63,000	63,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	--	--	--	--	<50	<50	--	--
Copper	ug/L	1,000	1,300*	<25	--	--	--	--	--	<25	<25	--	--
Iron	ug/L	300	NA	**2,400**	**28,000**	**29,000**	**28,000**	**28,000**	**1,500**	**1,370**	**1,470**	**1,430**	**1,220**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	23,000	--	--	--	--	--	25,000	25,000	--	--
Manganese	ug/L	50	NA	**95**	--	--	--	--	--	**94**	98	--	--
Mercury	ug/L	2.0	2.0	<0.2	--	--	--	--	--	<0.2	<0.2	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	<5,000	--	--	--	--	--	<5,000	<5,000	--	--
Selenium	ug/L	50	50	<5	--	--	--	--	--	<5	<5	--	--
Silver	ug/L	34	NA	<10	--	--	--	--	--	<10	<10	--	--
Sodium	ug/L	120,000	NA	49,000	--	--	--	--	--	42,000	40,000	--	--
Thallium	ug/L	2.0	2.0	<10	--	--	--	--	--	<10	<10	--	--
Vanadium	ug/L	4.5	NA	<50	--	--	--	--	--	<50	<50	--	--
Zinc	ug/L	2,400	NA	<20	--	--	--	--	--	<20	<20	--	--
Cyanide	ug/L	200	200	<5	--	--	--	--	--	<5	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-25M

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW25M D 11/16/2000	MW25M 3/9/2001	MW25M 5/8/2001	MW25M 8/22/2001	MW25M 11/30/2001	MW25M 2/27/2002	MW25M 5/28/2002	MW25M D 5/28/2002	MW25M 9/9/2002	MW25M 12/10/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	1.4	<10	<10	1.8	1.5
Barium	ug/L	2,000	2,000	<200	<200	<200	<200	<200	72	<200	<200	86	63
Beryllium	ug/L	4.0	4.0	--	--	<5	--	--	--	<5	<5	--	--
Cadmium	ug/L	5.0	5.0	--	--	<5	--	--	--	<5	<5	--	--
Calcium	ug/L	NA	NA	--	--	94,000	--	--	--	45,000	46,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	14	<10	17	<10	<10	1.3	<10
Cobalt	ug/L	40	NA	--	--	<50	--	--	--	<50	<50	--	--
Copper	ug/L	1,000	1,300*	--	--	<25	--	--	--	<25	<25	--	--
Iron	*ug/L*	*300*	*NA*	***1,230***	***3,010***	***940***	***1,940***	***1,620***	***1,200***	***1,300***	***1,300***	***600***	***1,500***
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	--	45,000	--	--	--	22,000	23,000	--	--
Manganese	ug/L	50	NA	--	--	54	--	--	--	51	52	--	--
Mercury	ug/L	2.0	2.0	--	--	<0.2	--	--	--	<0.2	<0.2	--	--
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	3.8	<40	<40	2.5	1.3
Potassium	ug/L	NA	NA	--	--	<5,000	--	--	--	<5,000	<5,000	--	--
Selenium	ug/L	50	50	--	--	<5	--	--	--	<5	<5	--	--
Silver	ug/L	34	NA	--	--	<10	--	--	--	<10	<10	--	--
Sodium	ug/L	120,000	NA	--	--	26,000	--	--	--	55,000	56,000	--	--
Thallium	ug/L	2.0	2.0	--	--	<10	--	--	--	<10	<10	--	--
Vanadium	ug/L	4.5	NA	--	--	<50	--	--	--	<50	<50	--	--
Zinc	ug/L	2,400	NA	--	--	<20	--	--	--	<20	<20	--	--
Cyanide	ug/L	200	200	--	--	<5	--	--	--	<5	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-25M

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW25M D 12/10/2002	MW25M 3/17/2003	MW25M 5/20/2003	MW25M D 5/20/2003	MW25M 12/12/2003	MW25M D 12/12/2003	MW25M 2/26/2004	MW25M 6/17/2004	MW25M D 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	1.7	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	63	<200	<200	<200	<200	<200	<200	<200	<200
Beryllium	ug/L	4.0	4.0	--	--	<5	<5	--	--	--	<5	<5
Cadmium	ug/L	5.0	5.0	--	--	<5	<5	--	--	--	<5	<5
Calcium	ug/L	NA	NA	--	--	66,000	66,000	--	--	--	61,000	59,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	--	<50	<50	--	--	--	<50	<50
Copper	ug/L	1,000	1,300*	--	--	<25	<25	--	--	--	<25	<25
Iron	ug/L	300	NA	**1,500**	**1,530**	**1,420**	**1,420**	**1,820**	**1,810**	**1,310**	**1,210**	**1,160**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	<5,000	24,000	24,000	--	--	--	23,000	23,000
Manganese	ug/L	50	NA	--	<15	71	81	--	--	--	71	70
Mercury	ug/L	2.0	2.0	--	<0.2	<0.2	<0.2	--	--	--	<0.2	<0.2
Nickel	ug/L	100	NA	1.4	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	--	<5,000	<5,000	<5,000	--	--	--	<5,000	<5,000
Selenium	ug/L	50	50	--	<5	<5	<5	--	--	--	<5	<5
Silver	ug/L	34	NA	--	<10	<10	<10	--	--	--	<10	<10
Sodium	ug/L	120,000	NA	--	<5,000	41,000	41,000	--	--	--	43,000	43,000
Thallium	ug/L	2.0	2.0	--	<10	<10	<10	--	--	--	<10	<10
Vanadium	ug/L	4.5	NA	--	<50	<50	<50	--	--	--	<50	<50
Zinc	ug/L	2,400	NA	--	<20	<20	<20	--	--	--	<20	<20
Cyanide	ug/L	200	200	--	<5	<5	<5	--	--	--	<5	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-28S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW28S 3/27/1995	MW28S 6/29/1995	MW28S 9/22/1995	MW28S 11/21/1995	MW28S 2/15/2000	MW28S 5/15/2000	MW28S 9/14/2000	MW28S 9/14/2000
Aluminum	ug/L	50	NA	**68**	<100	<100	<100	<100	<100	<100	<100
Antimony	ug/L	6.0	6.0	<30	<30	<30	<30	<30	<30	<30	<30
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	17	<10	<10	<10	<10	<10	<10	<10
Beryllium	ug/L	4.0	4.0	--	<5	--	--	--	<5	--	--
Cadmium	ug/L	5.0	5.0	--	<5	--	--	--	<5	--	--
Calcium	ug/L	NA	NA	--	15,000	--	--	--	13,000	--	--
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	<10	--	--	--	<10	--	--
Copper	ug/L	1,000	1,300*	--	<20	--	--	--	<20	--	--
Iron	ug/L	300	NA	91	<25	<25	<25	<25	<25	<25	<25
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	<200	--	--	--	<200	--	--
Manganese	ug/L	50	NA	--	<10	--	--	--	<10	--	--
Mercury	ug/L	2.0	2.0	--	<0.2	--	--	--	<0.2	--	--
Nickel	ug/L	100	NA	<10	<10	<10	<10	<10	<10	<10	<10
Potassium	ug/L	NA	NA	--	<200	--	--	--	<200	--	--
Selenium	ug/L	50	50	--	<5	--	--	--	<5	--	--
Silver	ug/L	34	NA	--	<10	--	--	--	<10	--	--
Sodium	ug/L	120,000	NA	--	<200	--	--	--	<200	--	--
Thallium	ug/L	2.0	2.0	--	<5	--	--	--	<5	--	--
Vanadium	ug/L	4.5	NA	--	<10	--	--	--	<10	--	--
Zinc	ug/L	2,400	NA	--	<20	--	--	--	<20	--	--
Cyanide	ug/L	200	200	--	<5	--	--	--	<5	--	--

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-28S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW28S 11/16/2000	MW28S 3/9/2001	MW28S 5/8/2001	MW28S 8/22/2001	MW28S 11/29/2001	MW28S 2/27/2002	MW28S 5/24/2002	MW28S D 5/24/2002
Aluminum	ug/L	50	NA	<100	<100	<100	<100	<100	<100	<100	<100
Antimony	ug/L	6.0	6.0	<30	<30	<30	<30	<30	<30	<30	<30
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	<10	<10	<10	<10	<10	9.3	<10	<10
Beryllium	ug/L	4.0	4.0	--	--	<5	--	--	--	<5	<5
Cadmium	ug/L	5.0	5.0	--	--	<5	--	--	--	<5	<5
Calcium	ug/L	NA	NA	--	--	12,000	--	--	--	12,000	11,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	2	<10	<10
Cobalt	ug/L	40	NA	--	--	<10	--	--	--	<10	<10
Copper	ug/L	1,000	1,300*	--	--	<20	--	--	--	<20	<20
Iron	ug/L	300	NA	<25	<25	<25	<25	<25	<25	<25	<25
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	--	<200	--	--	--	<200	<200
Manganese	ug/L	50	NA	--	--	<10	--	--	--	<10	<10
Mercury	ug/L	2.0	2.0	--	--	<0.2	--	--	--	<0.2	<0.2
Nickel	ug/L	100	NA	<10	<10	<10	<10	<10	<10	<10	<10
Potassium	ug/L	NA	NA	--	--	<200	--	--	--	<200	<200
Selenium	ug/L	50	50	--	--	<5	--	--	--	<5	<5
Silver	ug/L	34	NA	--	--	<10	--	--	--	<10	<10
Sodium	ug/L	120,000	NA	--	--	<200	--	--	--	<200	<200
Thallium	ug/L	2.0	2.0	--	--	<5	--	--	--	<5	<5
Vanadium	ug/L	4.5	NA	--	--	<10	--	--	--	<10	<10
Zinc	ug/L	2,400	NA	--	--	<20	--	--	--	25	33
Cyanide	ug/L	200	200	--	--	<5	--	--	--	<5	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-28S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW28S 9/9/2002	MW28S 12/9/2002	MW28S 3/19/2003	MW28S 5/20/2003	MW28S 12/11/2003	MW28S 2/26/2004	MW28S 6/17/2004
Aluminum	ug/L	50	NA	<100	<100	<100	<100	<100	<100	<100
Antimony	ug/L	6.0	6.0	<30	<30	<30	<30	<30	<30	<30
Arsenic	ug/L	50	50	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	2,000	2,000	10	10	<10	<10	<10	<10	<10
Beryllium	ug/L	4.0	4.0	--	--	--	--	--	--	<5
Cadmium	ug/L	5.0	5.0	--	--	--	--	--	--	<5
Calcium	ug/L	NA	NA	--	--	--	15,000	--	--	13,000
Chromium	ug/L	100	100	0.84	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	--	--	--		--	--	<10
Copper	ug/L	1,000	1,300*	--	--	--		--	--	<20
Iron	ug/L	300	NA	100	<25	<25	<25	160	<100	<25
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	--	--	--		--	--	<200
Manganese	ug/L	50	NA	--	--	--		--	--	<10
Mercury	ug/L	2.0	2.0	--	--	--		--	--	<0.2
Nickel	ug/L	100	NA	0.68	<10	<10	<10	<10	<10	<10
Potassium	ug/L	NA	NA	--	--	--	<200	--	--	<200
Selenium	ug/L	50	50	--	--	--	<5	--	--	<5
Silver	ug/L	34	NA	--	--	--	<10	--	--	<10
Sodium	ug/L	120,000	NA	--	--	--	<200	--	--	<200
Thallium	ug/L	2.0	2.0	--	--	--	<5	--	--	<5
Vanadium	ug/L	4.5	NA	--	--	--	<10	--	--	<10
Zinc	ug/L	2,400	NA	--	--	--	25	--	--	26
Cyanide	ug/L	200	200	--	--	--	<5	--	--	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-33S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW33S 6/30/1995	MW33S 11/22/1995	MW33S D 11/22/1995	MW33S 5/16/2000	MW33S 11/16/2000	MW33S 5/9/2001	MW33S 11/30/2001	MW33S 5/28/2002
Aluminum	ug/L	50	NA	<200	<200	<200	<200	<200	<200	<200	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	37	36	36	**63**	38	37	46	18
Barium	ug/L	2,000	2,000	380	360	360	280	278	<200	<200	<200
Beryllium	ug/L	4.0	4.0	<5	--	--	<5	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	10	--	--	<5	--	<5	--	<5
Calcium	ug/L	NA	NA	170,000	--	--	187,000	--	238,000	--	190,000
Chromium	ug/L	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	40	NA	<50	--	--	<50	--	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	--	--	<25	--	<25	--	<25
Iron	ug/L	300	NA	**44,000**	**46,000**	**46,000**	**30,400**	**45,200**	**23,800**	**40,800**	**15,000**
Lead	ug/L	4.0	15*	<3	<3	<3	<3	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	58,000	--	--	58,000	--	44,000	--	36,000
Manganese	ug/L	50	NA	**370**	--	--	**270**	--	**824**	--	**810**
Mercury	ug/L	2.0	2.0	<0.2	--	--	<0.2	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	<40	<40	<40	<40	<40	<40	<40	<40
Potassium	ug/L	NA	NA	16,000	--	--	14,000	--	6,200	--	<5,000
Selenium	ug/L	50	50	<5	--	--	<5	--	<5	--	<5
Silver	ug/L	34	NA	<10	--	--	<10	--	<10	--	<10
Sodium	ug/L	120,000	NA	50,000	--	--	51,000	--	34,000	--	14,000
Thallium	ug/L	2.0	2.0	<10	--	--	<10	--	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	--	--	<50	--	<50	--	<50
Zinc	ug/L	2,400	NA	<20	--	--	<20	--	<20	--	<20
Cyanide	ug/L	200	200	<5	--	--	<5	--	<5	--	<5

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 4: Kentwood Landfill Groundwater Monitoring Data (Inorganics)
MW-33S

PARAMETERS	UNIT	'02 Part 201 Drinking Water	Federal MCL	MW33S 6/30/1995	MW33S 12/10/2002	MW33S D 12/10/2002	MW33S 5/20/2003	MW33S 12/12/2003	MW33S 6/17/2004
Aluminum	ug/L	50	NA	<200	<200	<200	<200	**760**	<200
Antimony	ug/L	6.0	6.0	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	50	50	37	37	38	34	34	48
Barium	ug/L	2,000	2,000	380	290	310	<200	291	276
Beryllium	ug/L	4.0	4.0	<5	--	--	<5	--	<5
Cadmium	ug/L	5.0	5.0	10	--	--	<5	--	<5
Calcium	ug/L	NA	NA	170,000	--	--	188,000	--	183,000
Chromium	ug/L	100	100	<10	2.7	2.5	<10	10	<10
Cobalt	ug/L	40	NA	<50	--	--	<50	--	<50
Copper	ug/L	1,000	1,300*	<25	--	--	<25	--	<25
Iron	ug/L	300	NA	**44,000**	**33,000**	**36,000**	**37,500**	**48,300**	**41,800**
Lead	ug/L	4.0	15*	<3	0.45	<3	<3	<3	<3
Magnesium	ug/L	400,000	NA	58,000	--	--	61,000	--	58,000
Manganese	ug/L	50	NA	**370**	--	--	**186**	--	**224**
Mercury	ug/L	2.0	2.0	<0.2	--	--	<0.2	--	<0.2
Nickel	ug/L	100	NA	<40	9.0	9.1	<40	<40	<40
Potassium	ug/L	NA	NA	16,000	--	--	14,000	--	15,000
Selenium	ug/L	50	50	<5	--	--	<5	--	<5
Silver	ug/L	34	NA	<10	--	--	<10	--	<10
Sodium	ug/L	120,000	NA	50,000	--	--	66,000	--	67,000
Thallium	ug/L	2.0	2.0	<10	--	--	<10	--	<10
Vanadium	ug/L	4.5	NA	<50	--	--	<50	--	<50
Zinc	ug/L	2,400	NA	<20	--	--	<20	--	29
Cyanide	ug/L	200	200	<5	--	--	<5	--	<10

(1) '02 Part 201 criteria taken from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(2) Shaded values exceed Part 201 criteria or MCL.

(3) * - Action Levels are shown for lead and copper.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 01 6/30/1995	LEBR 01 5/17/2000	LEBR 01 5/10/2001	LEBR 01 5/20/2002	LEBR 01 5/21/2003	LEBR 01 DUP 5/21/2003	LEBR 01 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**3,200**	**21,500**	**61,000**	**620**	**23,600**	**23,300**	**1,560**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	35	36	**176**	46	**91**	**117**	20
Barium	ug/L	200	2,000	2,000	14,000,000	1,600	464	2,590	260	461	647	361
Chromium	ug/L	10	100	100	460,000	<10	37	**165**	15	51	62	12
Iron	ug/L	100		300	58,000,000	91,000	**608,000**	**1,230,000**	**32,000**	**151,000**	**203,000**	**18,900**
Lead	ug/L	3	15@tap	4.0	NA	3.0	**11**	**127**	4.6	**33**	**42**	<3
Nickel	ug/L	40	100	100	74,000,000	40	**156**	**717**	**110**	**441**	**615**	**154**
Temperature	°C			--	--	No data	11.4	13.8	7.4	13.4	13.4	19.6
pH	s.u.			--	--	No data	6.93	7.13	7.50	7.19	7.19	7.24
Conductivity	µmhos/cm			--	--	No data	3,800	3,840	320	3,220	3,220	5,678
Redox	mV			--	--	No data	OR	-70	150	-60	-60	-97
Acetone	ug/L	10		730	31,000,000	9.0	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	4.0	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	3.0	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	<10	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	11	<10	10	<10	<10	<10	11
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	1.0	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	<10	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	10	<10	38	<10	20	21	46

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 02 6/30/1995	LEBR 02 5/17/2000	LEBR 02 5/10/2001	LEBR 02 5/20/2002	LEBR 02 5/21/2003	LEBR 02 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**150,000**					
Antimony	ug/L	60	6	6.0	68,000	**100**	N	N	N	N	N
Arsenic	ug/L	10	50	50	4,300	<10	O	O	O	O	O
Barium	ug/L	200	2,000	2,000	14,000,000	**16,000**					
Chromium	ug/L	10	100	100	460,000	<30	D	D	D	D	D
Iron	ug/L	100		300	58,000,000	**4,400,000**	I	I	I	I	I
Lead	ug/L	3.0	15@tap	4.0		<3.0	S	S	S	S	S
Nickel	ug/L	40	100	100	74,000,000	**530**	C	C	C	C	C
Temperature	°C			--		No data	H	H	H	H	H
pH	s.u.			--		7.41	A	A	A	A	A
Conductivity	µmhos/cm			--		No data	R	R	R	R	R
Redox	mV			--		No data	G	G	G	G	G
Acetone	ug/L	10		730	31,000,000	<10	E	E	E	E	E
Benzene	ug/L	10	5.0	5.0	11,000	<10					
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10					
Bromoform	ug/L	10	100 (80)	100	140,000	<10					
Bromomethane	ug/L	10		10	70,000	<10					
2-Butanone	ug/L	10		13,000	240,000,000	<10					
Carbon disulfide	ug/L	10		800	1,200,000	<10					
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10					
Chlorobenzene	ug/L	10		100	86,000	<10					
Chloroethane	ug/L	10		430	44,000	<10					
Chloroform	ug/L	10	100 (80)	100	150,000	<10					
Chloromethane	ug/L	10		260	490,000	<10					
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10					
1,1-Dichloroethane	ug/L	10		880	2,400,000	13					
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10					
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10					
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	1.0					
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10					
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10					
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10					
Ethylbenzene	ug/L	10	700	74	170,000	<10					
2-Hexanone	ug/L	10		1,000	5,200,000	<10					
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10					
Methylene chloride	ug/L	10		5.0	220,000	<10					
Styrene	ug/L	10	100	100	9,700	<10					
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10					
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10					
Toluene	ug/L	10	1,000	790	530,000	<10					
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10					
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10					
Trichloroethene	ug/L	10	5	5.0	37,000	<10					
Vinyl chloride	ug/L	10	2	2.0	570	<10					
total-Xylenes	ug/L	10	1,000	280	190,000	<10					

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 03 6/30/1995	LEBR 03 5/17/2000	LEBR 03 5/10/2001	LEBR 03 5/20/2002	LEBR 03 5/21/2003	LEBR 03 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**1,300**	**181,000**	**39,700**	**290,000**	**55,600**	**660**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	**51**	**185**	**234**	**190**	**198**	11
Barium	ug/L	200	2,000	2,000	14,000,000	1,400	**3,250**	**4,440**	**2,900**	**3,410**	**1,340**
Chromium	ug/L	10	100	100	460,000	<30	**192**	**111**	**460**	98	<10
Iron	ug/L	100		300	58,000,000	**47,000**	**1,200,000**	**1,160,000**	**1,100,000**	**954,000**	**67,600**
Lead	ug/L	3	15@tap	4.0		**4.8**	**264**	**156**	**410**	**180**	<3.0
Nickel	ug/L	40	100	100	74,000,000	<100	**144**	**204**	**390**	**124**	<40
Temperature	°C			--		No data	12.4	15.0	9.0	14.3	17.7
pH	s.u.			--		6.86	6.47	6.96	6.90	7.10	7.00
Conductivity	µmhos/cm			--		No data	1,426	4,010	600	1,932	2,146
Redox	mV			--		No data	OR	-75	120	-80	-114
Acetone	ug/L	10		730	31,000,000	3.0	<10	<10	<10	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	4.0	<10	**12**	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	1.0	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	170	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	14	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	38	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	3	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	**10**	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	<10	<10	56	<10	11	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 04 6/30/1995	LEBR 04 5/17/2000	LEBR 04 5/10/2001	LEBR 04 5/20/2002	LEBR 04 5/21/2003	LEBR 04 6/16/2004
Aluminum	ug/L	200		50	64,000,000						
Antimony	ug/L	60	6	6.0	68,000	N	N	N	N	N	N
Arsenic	ug/L	10	50	50	4,300	O	O	O	O	O	O
Barium	ug/L	200	2,000	2,000	14,000,000						
Chromium	ug/L	10	100	100	460,000	D	D	D	D	D	D
Iron	ug/L	100		300	58,000,000	I	I	I	I	I	I
Lead	ug/L	3	15@tap	4.0		S	S	S	S	S	S
Nickel	ug/L	40	100	100	74,000,000	C	C	C	C	C	C
Temperature	°C			--		H	H	H	H	H	H
pH	s.u.			--		A	A	A	A	A	A
Conductivity	µmhos/cm			--		R	R	R	R	R	R
Redox	mV			--		G	G	G	G	G	G
Acetone	ug/L	10		730	31,000,000	E	E	E	E	E	E
Benzene	ug/L	10	5.0	5.0	11,000						
Bromodichloromethane (THM)	ug/L	10	100 (80)	100	14,000						
Bromoform (THM)	ug/L	10	100 (80)	100	140,000						
Bromomethane	ug/L	10		10	70,000						
2-Butanone	ug/L	10		13,000	240,000,000						
Carbon disulfide	ug/L	10		800	1,200,000						
Carbon tetrachloride	ug/L	10	5	5.0	4,600						
Chlorobenzene	ug/L	10		100	86,000						
Chloroethane	ug/L	10		430	44,000						
Chloroform (THM)	ug/L	10	100 (80)	100	150,000						
Chloromethane	ug/L	10		260	490,000						
Dibromochloromethane	ug/L	10	100 (80)	100	18,000						
1,1-Dichloroethane	ug/L	10		880	2,400,000						
1,2-Dichloroethane	ug/L	10	5	5.0	19,000						
1,1-Dichloroethene	ug/L	10	7	7.0	11,000						
total 1,2-Dichloroethene	ug/L	10	100	170	200,000						
1,2 Dichloropropane	ug/L	10	5	5.0	16,000						
trans-1,3-Dichloropropene	ug/L	10		NA	13,000						
cis-1,3-Dichloropropene	ug/L	10		NA	13,000						
Ethylbenzene	ug/L	10	700	74	170,000						
2-Hexanone	ug/L	10		1,000	5,200,000						
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000						
Methylene chloride	ug/L	10		5.0	220,000						
Styrene	ug/L	10	100	100	9,700						
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700						
Tetrachloroethene	ug/L	10	5	5.0	12,000						
Toluene	ug/L	10	1,000	790	530,000						
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000						
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000						
Trichloroethene	ug/L	10	5	5.0	37,000						
Vinyl chloride	ug/L	10	2	2.0	570						
total-Xylenes	ug/L	10	1,000	280	190,000						

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 05 6/30/1995	LEBR 05 5/17/2000	LEBR 05 5/10/2001	LEBR 05 5/20/2002	LEBR 05 D 5/20/2002	LEBR 05 5/21/2003	LEBR 05 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**13,000**	**12,300**	**2,270**	**720**	**800**	**2,910**	**4,690**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	15	29	14	33	13	15	23
Barium	ug/L	200	2,000	2,000	14,000,000	1,600	324	253	240	230	207	298
Chromium	ug/L	10	100	100	460,000	21	17	<10	<10	<10	<10	<10
Iron	ug/L	100		300	58,000,000	**43,000**	**42,800**	**14,400**	**17,000**	**18,000**	**13,200**	**36,500**
Lead	ug/L	3	15@tap	4.0		**14**	**10**	4.0	<3.0	<3.0	<3.0	**6.9**
Nickel	ug/L	40	100	100	74,000,000	<40	<40	<40	<40	<40	<40	<40
Temperature	°C			--		No data	11.3	11.3	7.1	No Data	13.0	18.6
pH	s.u.			--		7.53	6.86	6.86	7.29	No Data	7.20	7.48
Conductivity	µmhos/cm			--		No data	1,245	1,245	1,400	No Data	1,430	1,353
Redox	mV			--		No data	85	85	120	No Data	-30	-82
Acetone	ug/L	10		730	31,000,000	5	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	<10	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	<10	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	2	<10	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 06 6/30/1995	LEBR 06 5/17/2000	LEBR 06 5/10/2001	LEBR 06 5/20/2002	LEBR 06 5/21/2003	LEBR 06 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**1,800**	**219,000**	**14,100**	**200,000**	**29,100**	**800**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	14	**259**	**97**	**490**	**61**	17
Barium	ug/L	200	2,000	2,000	14,000,000	1,200	**2,260**	566	**5,300**	348	848
Chromium	ug/L	10	100	100	460,000	<10	**201**	**34**	**490**	30	30
Iron	ug/L	100		300	58,000,000	**41,000**	**510,000**	**87,400**	**1,600,000**	**66,500**	**135,000**
Lead	ug/L	3	15@tap	4.0		**4.0**	**250**	**64**	**700**	**46**	<3.0
Nickel	ug/L	40	100	100	74,000,000	<40	**607**	**108**	**860**	70	<40
Temperature	°C			--		No data	12.2	14.6	9.7	13.7	18.9
pH	s.u.			--		6.69	6.53	6.90	6.68	6.57	6.58
Conductivity	µmhos/cm			--		No data	1,154	835	760	1,078	1,191
Redox	mV			--		No data	-65	-40	66	-25	-122
Acetone	ug/L	10		730	31,000,000	5	<10	<10	47	<10	22
Benzene	ug/L	10	5.0	5.0	11,000	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	23	22	28	21	70
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	26	50	37	11	66	19
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	55	<10	14	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	**10**	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	**32**	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	<10	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 07 6/30/1995	LEBR 07 5/17/2000	LEBR 07 5/10/2001	LEBR 07 D 5/10/2001	LEBR 07 5/20/2002	LEBR 07 5/21/2003	LEBR 07 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**6,300**	**17,300**	**3,360**	**9,020**	**170,000**	**10,600**	**4,580**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	<10	**99**	**66**	**217**	**260**	**113**	**54**
Barium	ug/L	200	2,000	2,000	14,000,000	1,800	370	275	847	**3,900**	375	235
Chromium	ug/L	10	100	100	460,000	26	27	<10	24	**380**	15	<30
Iron	ug/L	100		300	58,000,000	**170,000**	**114,000**	**61,000**	**248,000**	**930,000**	**95,000**	**33,200**
Lead	ug/L	3	15@tap	4.0		**150**	**7.5**	<3.0	**10**	**200**	**7.4**	**4.5**
Nickel	ug/L	40	100	100	74,000,000	<40	42	<40	<40	**430**	41	<40
Temperature	°C			--		No data	11.6	12.7	12.7	7.6	12.0	16.2
pH	s.u.			--		7.14	6.66	7.09	7.09	7.44	6.98	7.18
Conductivity	µmhos/cm			--		No data	1,524	1,154	1,154	1,300	1,666	1,427
Redox	mV			--		No data	90	40	40	120	25	29
Acetone	ug/L	10		730	31,000,000	4.0	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	3.0	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	<10	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	<10	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	2.0	<10	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 08 6/30/1995	LEBR 08 5/17/2000	LEBR 08 5/17/2000	LEBR 08 5/10/2001	LEBR 08 5/20/2002	LEBR 08 5/21/2003	LEBR 08 6/16/2004	LEBR 08 D 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**150,000**	**12,900**	**16,800**	**6,320**	**6,300**	**4,730**	**8,610**	**17,900**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	37	16	18	17	16	**118**	25	37
Barium	ug/L	200	2,000	2,000	14,000,000	**3,300**	419	494	555	540	643	630	806
Chromium	ug/L	10	100	100	460,000	96	14	20	<10	12	18	18	17
Iron	ug/L	100		300	58,000,000	**320,000**	**30,100**	**37,500**	**47,500**	**60,000**	**54,800**	**47,600**	**72,600**
Lead	ug/L	3	15@tap	4.0		**280**	**11**	**16**	**14**	**18**	**35**	**15**	**31**
Nickel	ug/L	40	100	100	74,000,000	**190**	<40	<40	<3.0	<3.0	**117**	<3.0	<3.0
Temperature	°C			--		No data	12.8	11.8	14.1	9.4	13.1	16.4	16.5
pH	s.u.			--		8.01	6.75	6.61	6.64	7.43	6.65	6.75	6.74
Conductivity	µmhos/cm			--		No data	1,806	1,814	2,050	1,900	2,240	1,984	1,985
Redox	mV			--		No data	OR	OR	5	62	OR	-120	-119
Acetone	ug/L	10		730	31,000,000	8.0	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	2.0	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	2.0	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	23	14	14	20	<10	34	16	17
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	4.0	<10	<10	14	<10	**150**	48	49
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	**10**	<10	<10	<10	<10	**130**	**56**	**53**
total-Xylenes	ug/L	10	1,000	280	190,000	<10	<10	<10	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 09 6/30/1995	LEBR 09 5/13/1999	LEBR 09 5/17/2000	LEBR 09 5/10/2001	LEBR 09 5/20/2002	LEBR 09 5/21/2003	LEBR 09 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**3,900**	**1,480**	**4,770**	**410**	**26,000**	**650**	**680**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	21	23	41	19	**95**	20	19
Barium	ug/L	200	2,000	2,000	14,000,000	1,400	<200	<200	<200	**2,300**	<200	<200
Chromium	ug/L	10	100	100	460,000	<30	<30	<30	<30	54	<10	<10
Iron	ug/L	100		300	58,000,000	**39,000**	**17,100**	**34,000**	**18,800**	**1,200,000**	**13,700**	**14,900**
Lead	ug/L	3	15@tap	4.0		**16**	3.8	**18**	3.5	**56**	3.1	**4.5**
Nickel	ug/L	40	100	100	74,000,000	<100	<100	<100	<100	83	<40	<40
Temperature	°C			--		No data	10.4	10.8	13.0	9.2	11.9	15.2
pH	s.u.			--		7.31	6.67	6.69	6.93	7.13	7.02	6.97
Conductivity	µmhos/cm			--		No data	946	1,391	1,240	1,000	1,304	1,598
Redox	mV			--		No data	40	-65	-25	59	OR	-97
Acetone	ug/L	10		730	31,000,000	4.0	<10	<10	<10	10	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	23	17	13	14	<10	12	16
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	48	21	13	14	<10	<10	24
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	**10**	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	**29**	**12**	<10	<10	<10	**12**	**20**
total-Xylenes	ug/L	10	1,000	280	190,000	<10	<10	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 10 6/11/1996	LEBR 10 5/17/2000	LEBR 10 5/10/2001	LEBR 10 5/20/2002	LEBR 10 5/21/2003	LEBR 10 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**270**					
Antimony	ug/L	60	6	6.0	68,000	<60	N	N	N	N	N
Arsenic	ug/L	10	50	50	4,300	<10	O	O	O	O	O
Barium	ug/L	200	2,000	2,000	14,000,000	<200					
Chromium	ug/L	10	100	100	460,000	<10	D	D	D	D	D
Iron	ug/L	100		300	58,000,000	430	I	I	I	I	I
Lead	ug/L	3	15@tap	4.0		**6.0**	S	S	S	S	S
Nickel	ug/L	40	100	100	74,000,000	<40	C	C	C	C	C
Temperature	°C			--		No data	H	H	H	H	H
pH	s.u.			--		7.90	A	A	A	A	A
Conductivity	µmhos/cm			--		No data	R	R	R	R	R
Redox	mV			--		No data	G	G	G	G	G
Acetone	ug/L	10		730	31,000,000	<10	E	E	E	E	E
Benzene	ug/L	10	5.0	5.0	11,000	<10					
Bromodichloromethane (THM)	ug/L	10	100 (80)	100	14,000	<10					
Bromoform (THM)	ug/L	10	100 (80)	100	140,000	<10					
Bromomethane	ug/L	10		10	70,000	<10					
2-Butanone	ug/L	10		13,000	240,000,000	<10					
Carbon disulfide	ug/L	10		800	1,200,000	<10					
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10					
Chlorobenzene	ug/L	10		100	86,000	<10					
Chloroethane	ug/L	10		430	44,000	<10					
Chloroform (THM)	ug/L	10	100 (80)	100	150,000	<10					
Chloromethane	ug/L	10		260	490,000	<10					
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10					
1,1-Dichloroethane	ug/L	10		880	2,400,000	<10					
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10					
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10					
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	<10					
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10					
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10					
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10					
Ethylbenzene	ug/L	10	700	74	170,000	<10					
2-Hexanone	ug/L	10		1,000	5,200,000	<10					
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10					
Methylene chloride	ug/L	10		5.0	220,000	<10					
Styrene	ug/L	10	100	100	9,700	<10					
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10					
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10					
Toluene	ug/L	10	1,000	790	530,000	<10					
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10					
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10					
Trichloroethene	ug/L	10	5	5.0	37,000	<10					
Vinyl chloride	ug/L	10	2	2.0	570	<10					
total-Xylenes	ug/L	10	1,000	280	190,000	<10					

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 11 5/17/2000	LEBR 11 5/10/2001	LEBR 11 5/20/2002	LEBR 11 5/21/2003	LEBR 11 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**83,200**	**248,000**	**340,000**	**5,940**	**860**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	19	**60**	**400**	<10	20
Barium	ug/L	200	2,000	2,000	14,000,000	493	2,980	5,800	<200	535
Chromium	ug/L	10	100	100	460,000	93	**291**	**770**	<10	<10
Iron	ug/L	100		300	58,000,000	**92,400**	**603,000**	**2,500,000**	**14,300**	**42,600**
Lead	ug/L	3	15@tap	4.0		**40**	**250**	**710**	**5.2**	<10
Nickel	ug/L	40	100	100	74,000,000	81	**412**	**710**	**710**	<40
Temperature	°C			--		12.7	15.0	11.0	15.1	18.7
pH	s.u.			--		6.77	6.98	7.09	6.85	6.96
Conductivity	µmhos/cm			--		1,076	1,061	660	1,260	971
Redox	mV			--		OR	-65	OR	-40	-114
Acetone	ug/L	10		730	31,000,000	<10	12	71	<10	<10
Benzene	ug/L	10	5.0	5.0	11,000	<10	<10	<10	<10	<10
Bromodichloromethane (THM)	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10
Bromoform (THM)	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10
Chloroform (THM)	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 5: Kentwood Landfill Leachate Breakout Monitoring Data

PARAMETERS	UNITS	DL	Federal MCLs	'02 Part 201 Res DWC	'02 Part 201 Res DCC	LEBR 12 11/17/2000	LEBR 12 6/28/2001	LEBR 12 D 6/28/2001	LEBR 12 5/20/2002	LEBR 12 6/16/2004
Aluminum	ug/L	200		50	64,000,000	**45,800**	**92,400**	**74,600**	**30,000**	**560**
Antimony	ug/L	60	6	6.0	68,000	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	4,300	40	17	18	50	<10
Barium	ug/L	200	2,000	2,000	14,000,000	1,480	991	960	920	**2,030**
Chromium	ug/L	10	100	100	460,000	78	**101**	92	62	<10
Iron	ug/L	100		300	58,000,000	**369,000**	**223,000**	**193,000**	**280,000**	**34,900**
Lead	ug/L	3	15@tap	4.0		**50**	**93**	**79**	**33**	<3.0
Nickel	ug/L	40	100	100	74,000,000	**569**	**294**	**270**	**130**	**135**
Temperature	°C			--		4.8	18.8	18.7	8.2	21.0
pH	s.u.			--		7.08	6.81	6.83	7.14	7.25
Conductivity	µmhos/cm			--		1,763	2,060	2,060	220	3,625
Redox	mV			--		No Data	35	30	150	-130
Acetone	ug/L	10		730	31,000,000	<10	<10	<10	<10	11
Benzene	ug/L	10	5.0	5.0	11,000	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	100 (80)	100	14,000	<10	<10	<10	<10	<10
Bromoform	ug/L	10	100 (80)	100	140,000	<10	<10	<10	<10	<10
Bromomethane	ug/L	10		10	70,000	<10	<10	<10	<10	<10
2-Butanone	ug/L	10		13,000	240,000,000	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10		800	1,200,000	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	4,600	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10		100	86,000	<10	<10	<10	<10	<10
Chloroethane	ug/L	10		430	44,000	<10	<10	<10	<10	<10
Chloroform	ug/L	10	100 (80)	100	150,000	<10	<10	<10	<10	<10
Chloromethane	ug/L	10		260	490,000	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	100 (80)	100	18,000	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10		880	2,400,000	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	19,000	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	11,000	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	100	170	200,000	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	16,000	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10		NA	13,000	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	170,000	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10		1,000	5,200,000	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10		1,800	13,000,000	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10		5.0	220,000	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	9,700	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10		8.5	4,700	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	12,000	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	530,000	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	1,300,000	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	21,000	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	37,000	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	570	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	1,000	280	190,000	<10	<10	<10	<10	<10

Federal MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

'02 Part 201 Res DWC - Residential Drinking Water Criteria taken from MDEQ Administrative Rules for Part 201 Environmental Remediation, December 21, 2004.

Table 6: Kentwood Landfill Surface Water Monitoring Data

PARAMETERS	UNITS	Detection Limit	Federal Drinking Water MCLs	'02 Part 201 Residential DWC	KWSW-01 6/28/1995	KWSW-01 5/17/2000	KWSW-01 5/10/2001	KWSW-01 5/30/2002	KWSW-01 5/21/2003	KWSW-01 duplicate 5/21/2003	KWSW-01 6/16/2004
Aluminum	ug/L	200	NA	50	**940**	**1,900**	<200	**730**	<200	**980**	**1,480**
Antimony	ug/L	60	6	6.0	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	200	2,000	2,000	<200	<200	<200	<200	<200	<200	<200
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
Iron	ug/L	100	NA	300	**1,200**	**1,520**	**540**	**1,400**	**540**	**1,330**	**1,810**
Lead	ug/L	3	15 @ tap	4.0	<3	<3	<3	<3	<3	<3	<3
Nickel	ug/L	40	10	100	<40	<40	<40	<40	<40	<40	<40
Temperature (Celcius)	°C	NA	NA	NA	22.1	17.9	18.2	21	16.3	16.3	21.4
pH (S.U.)	s.u.	NA	NA	NA	8.08	7.72	8.15	7.72	7.85	7.85	7.86
Conductivity (umhos/cm)	µmhos/cm	NA	NA	NA	655	593	780	700	740	740	678
Redox (mV)	mV	NA	NA	NA	222	195	125	160	130	130	-19
Acetone	ug/L	10	NA	730	3	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10	NA	10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10	NA	13,000	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10	NA	800	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10	NA	430	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10	NA	260	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10	NA	880	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	170	170	<10	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10	NA	1,000	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10	NA	1,800	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10	NA	5.0	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10	NA	8.5	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	<10	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	10,000	280	<10	<10	<10	<10	<10	<10	<10

(1) U.S. EPA MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

(2) '02 Part 201 criteria from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(3) NA - Not Available

Table 6: Kentwood Landfill Surface Water Monitoring Data

PARAMETERS	UNITS	Detection Limit	Federal Drinking Water MCLs	'02 Part 201 Residential DWC	KWSW-02 6/28/1995	KWSW-02 Duplicate 6/28/1995	KWSW-02 5/17/2000	KWSW-02 5/10/2001	KWSW-02 Duplicate 5/10/2001	KWSW-02 5/30/2002	KWSW-02 Duplicate 5/30/2002	KWSW-02 5/21/2003	KWSW-02 6/16/2004
Aluminum	ug/L	200	NA	50	<200	<200	**1,890**	<200	<200	**740**	**720**	**950**	**1,440**
Antimony	ug/L	60	6	6.0	<60	<60	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	<10	<10	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	200	2,000	2,000	<200	<200	<200	<200	<200	<200	<200	<200	<200
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Iron	ug/L	100	NA	300	**350**	**350**	**1,580**	**600**	**610**	**1,600**	**1,500**	**1,270**	**1,900**
Lead	ug/L	3	15 @ tap	4.0	<3	<3	<3	<3	<3	<3	<3	<3	<3
Nickel	ug/L	40	10	100	<40	<40	<40	<40	<40	<40	<40	<40	<40
Temperature (Celcius)	°C	NA	NA	NA	21.7	21.7	14.5	16.9	16.9	20		15.9	20.3
pH (S.U.)	s.u.	NA	NA	NA	7.96	7.96	7.78	8.00	7.97	7.65		7.92	7.84
Conductivity (umhos/cm)	µmhos/cm	NA	NA	NA	650	650	597	780	777	700		721	669
Redox (mV)	mV	NA	NA	NA	198	198	195	175	175	120		65	69
Acetone	ug/L	10	NA	730	3	3	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10	NA	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10	NA	13,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10	NA	800	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10	NA	430	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10	NA	260	<10	<10	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10	NA	880	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	170	170	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10	NA	1,000	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10	NA	1,800	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10	NA	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10	NA	8.5	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	<10	<10	<10	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	10,000	280	<10	<10	<10	<10	<10	<10	<10	<10	<10

(1) U.S. EPA MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

(2) '02 Part 201 criteria from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(3) NA - Not Available

Table 6: Kentwood Landfill Surface Water Monitoring Data

PARAMETERS	UNITS	Detection Limit	Federal Drinking Water MCLs	'02 Part 201 Residential DWC	KWSW-03 6/30/1995	KWSW-03 5/17/2000	KWSW-03 5/10/2001	KWSW-03 5/30/2002	KWSW-03 5/21/2003	KWSW-03 6/16/2004
Aluminum	ug/L	200	NA	50	**820**	**2,160**	**330**	**960**	**900**	**2,940**
Antimony	ug/L	60	6	6.0	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	<10	<10	<10	<10	<10	<10
Barium	ug/L	200	2,000	2,000	910	<200	<200	<200	<200	<200
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10
Iron	ug/L	100	NA	300	**1,300**	**1,640**	**820**	**1,600**	**1,330**	**3,680**
Lead	ug/L	3	15 @ tap	4.0	<3	<3	<3	<3	<3	<3
Nickel	ug/L	40	10	100	<40	<40	<40	<40	<40	<40
Temperature (Celcius)	°C	NA	NA	NA	21.9	13.3	16.0	21	15.5	20.1
pH (S.U.)	s.u.	NA	NA	NA	7.86	7.90	7.96	7.75	7.34	7.88
Conductivity (umhos/cm)	µmhos/cm	NA	NA	NA	850	612	695	690	733	667
Redox (mV)	mV	NA	NA	NA	210	155	120	160	125	77
Acetone	ug/L	10	NA	730	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10	NA	10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10	NA	13,000	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10	NA	800	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10	NA	430	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10	NA	260	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10	NA	880	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	170	170	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10	NA	1,000	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10	NA	1,800	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10	NA	5.0	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10	NA	8.5	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	10,000	280	<10	<10	<10	<10	<10	<10

(1) U.S. EPA MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

(2) '02 Part 201 criteria from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(3) NA - Not Available

Table 6: Kentwood Landfill Surface Water Monitoring Data

PARAMETERS	UNITS	Detection Limit	Federal Drinking Water MCLs	'02 Part 201 Residential DWC	KWSW-04 6/28/1995	KWSW-04 5/17/2000	KWSW-04 5/10/2001	KWSW-04 5/30/2002	KWSW-04 5/21/2003	KWSW-04 6/16/2004
Aluminum	ug/L	200	NA	50	**3,400**	<200	**360**	<200	**940**	**230**
Antimony	ug/L	60	6	6.0	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	<10	<10	<10	<10	<10	<10
Barium	ug/L	200	2,000	2,000	**2,200**	<200	<200	<200	<200	<200
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10
Iron	ug/L	100	NA	300	**8,000**	**380**	**1,370**	**3,400**	**1,290**	**690**
Lead	ug/L	3	15 @ tap	4.0	<3	<3	<3	<3	<3	<3
Nickel	ug/L	40	10	100	<40	<40	<40	<40	<40	<40
Temperature (Celcius)	°C	NA	NA	NA	22.1	19.8	16.7	29	17.0	20.3
pH (S.U.)	s.u.	NA	NA	NA	7.99	7.90	8.27	7.48	8.05	8.13
Conductivity (umhos/cm)	µmhos/cm	NA	NA	NA	999	623	735	930	668	830
Redox (mV)	mV	NA	NA	NA	201	185	90	150	110	-35
Acetone	ug/L	10	NA	730	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10	NA	10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10	NA	13,000	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10	NA	800	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10	NA	430	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10	NA	260	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10	NA	880	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	170	170	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10	NA	1,000	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10	NA	1,800	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10	NA	5.0	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10	NA	8.5	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	10,000	280	<10	<10	<10	<10	<10	<10

(1) U.S. EPA MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

(2) '02 Part 201 criteria from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(3) NA - Not Available

Table 6: Kentwood Landfill Surface Water Monitoring Data

PARAMETERS	UNITS	Detection Limit	Federal Drinking Water MCLs	'02 Part 201 Residential DWC	KWSW-05 6/29/1995	KWSW-05 5/17/2000	KWSW-05 5/10/2001	KWSW-05 5/30/2002	KWSW-05 5/21/2003	KWSW-05 6/16/2004	KWSW-05 Duplicate 6/16/2004
Aluminum	ug/L	200	NA	50	**11,000**	<200	<200	<200	<200	<200	<200
Antimony	ug/L	60	6	6.0	<60	<60	<60	<60	<60	<60	<60
Arsenic	ug/L	10	50	50	<10	<10	<10	<10	<10	<10	<10
Barium	ug/L	200	2,000	2,000	1,000	<200	<200	<200	<200	<200	<200
Chromium	ug/L	10	100	100	12	<10	<10	<10	<10	<10	<10
Iron	ug/L	100	NA	300	**15,000**	**480**	**170**	**820**	200	270	**310**
Lead	ug/L	3	15 @ tap	4.0	**8.4**	<3	<3	<3	<3	<3	<3
Nickel	ug/L	40	10	100	<40	<40	<40	<40	<40	<40	<40
Temperature (Celcius)	°C	NA	NA	NA	14.2	12.7	14.1	17	14.2	16.3	16.3
pH (S.U.)	s.u.	NA	NA	NA	7.31	7.54	7.89	7.79	7.42	7.97	7.96
Conductivity (umhos/cm)	μmhos/cm	NA	NA	NA	415	723	876	840	1063	1170	1177
Redox (mV)	mV	NA	NA	NA	263	170	120	160	35	34	27
Acetone	ug/L	10	NA	730	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
Bromoform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
Bromomethane	ug/L	10	NA	10	<10	<10	<10	<10	<10	<10	<10
2-Butanone	ug/L	10	NA	13,000	<10	<10	<10	<10	<10	<10	<10
Carbon disulfide	ug/L	10	NA	800	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
Chloroethane	ug/L	10	NA	430	<10	<10	<10	<10	<10	<10	<10
Chloroform	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	10	NA	260	<10	<10	<10	<10	<10	<10	<10
Dibromochloromethane	ug/L	10	NA	100	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/L	10	NA	880	2	<10	<10	<10	<10	<10	<10
1,2-Dichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	ug/L	10	7	7.0	<10	<10	<10	<10	<10	<10	<10
total 1,2-Dichloroethene	ug/L	10	170	170	9	<10	<10	<10	<10	<10	<10
1,2 Dichloropropane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	ug/L	10	NA	21	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	10	700	74	<10	<10	<10	<10	<10	<10	<10
2-Hexanone	ug/L	10	NA	1,000	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone	ug/L	10	NA	1,800	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	ug/L	10	NA	5.0	<10	<10	<10	<10	<10	<10	<10
Styrene	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	10	NA	8.5	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethene	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Toluene	ug/L	10	1,000	790	<10	<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	ug/L	10	200	200	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	10	5	5.0	<10	<10	<10	<10	<10	<10	<10
Trichloroethene	ug/L	10	5	5.0	4	<10	<10	<10	<10	<10	<10
Vinyl chloride	ug/L	10	2	2.0	**3**	<10	<10	<10	<10	<10	<10
total-Xylenes	ug/L	10	10,000	280	<10	<10	<10	<10	<10	<10	<10

(1) U.S. EPA MCLs - U.S. EPA Safe Drinking Water Maximum Contaminant Levels

(2) '02 Part 201 criteria from Michigan Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

(3) NA - Not Available

Table 7: Kentwood Landfill Creek Sediment Monitoring Data

PARAMETERS	UNITS	2002 Part 201 Residential Direct Contact	KWSD-01 6/28/1995	KWSD-01 5/17/2000	KWSD-01 5/10/2001	KWSD-01 5/30/2002	KWSD-01 5/21/2003	KWSD-01 6/16/2004
Aluminum	mg/kg	50,000	2,300	4,000	2,080	6,000	3,140	3,410
Antimony	mg/kg	180	<20	<12	<12	<12	<12	<19
Arsenic	mg/kg	7.6	2.1	6.3	<2.0	2.0	<2.0	<3.1
Barium	mg/kg	37,000	89	<40	<40	<40	<40	<61
Chromium	mg/kg	790,000	4.1	6.5	2.8	9.8	4.3	<3.1
Iron	mg/kg	160,000	4,200	6,790	2,290	7,600	4,280	4,040
Lead	mg/kg	400	5	5.2	2.3	11	4.1	2.8
Nickel	mg/kg	40,000	<15	<10	<10	<10	<10	<15
Acetone	mg/kg	23,000	0.037	0.071	0.2	0.049	0.1	0.016
Benzene	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromoform	mg/kg	820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromomethane	mg/kg	320	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Butanone	mg/kg	27,000	<0.01	<0.01	0.065	<0.01	0.029	<0.01
Carbon disulfide	mg/kg	280	<0.01	<0.01	<0.025	0.01	<0.01	<0.01
Carbon tetrachloride	mg/kg	96	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorobenzene	mg/kg	260	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroethane	mg/kg	950	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroform	mg/kg	1,200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloromethane	mg/kg	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromochloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethane	mg/kg	890	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	mg/kg	91	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethene	mg/kg	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total 1,2-Dichloroethene	mg/kg	2,040	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2 Dichloropropane	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
cis-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Hexanone	mg/kg	2,500	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01
4-Methyl-2-pentanone	mg/kg	2,700	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01
Methylene chloride	mg/kg	1,300	0.002	<0.01	<0.01	<0.01	<0.01	<0.01
Styrene	mg/kg	400	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	mg/kg	53	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachloroethene	mg/kg	88	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	mg/kg	250	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,1-Trichloroethane	mg/kg	460	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-Trichloroethane	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	mg/kg	500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vinyl chloride	mg/kg	3.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total-Xylenes	mg/kg	150	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Michigan Part 201 Residential Soil Direct Contact Criteria taken from Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 7: Kentwood Landfill Creek Sediment Monitoring Data

PARAMETERS	UNITS	2002 Part 201 Residential Direct Contact	KWSD-02 6/28/1995	KWSD-02 Duplicate 6/28/1995	KWSD-02 5/19/2000	KWSD-02 5/10/2001	KWSD-02 Duplicate 5/10/2001	KWSD-02 5/30/2002	KWSD-02 Duplicate 5/30/2002	KWSD-02 5/21/2003	KWSD-02 Duplicate 5/21/2003	KWSD-02 6/16/2004
Aluminum	mg/kg	50,000	820	1,600	1,860	2,660	4,900	2,800	3,000	4,040	2,750	4,680
Antimony	mg/kg	180	<20	<20	<12	<12	<12	<12	<12	<12	<12	<15
Arsenic	mg/kg	7.6	<4	<4	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	<2.0	<2.5
Barium	mg/kg	37,000	71	70	<40	<40	<40	<40	<40	<40	<40	<49
Chromium	mg/kg	790,000	<4	2.9	4.1	4.1	7.5	6.4	5.6	6.8	3.7	<2.5
Iron	mg/kg	160,000	1,700	3,100	3,700	5,770	5,100	5,600	5,800	6,250	5,080	7,030
Lead	mg/kg	400	1.6	2.4	2.3	4.0	2.7	3.6	3.9	4.0	3.2	3.2
Nickel	mg/kg	40,000	<15	<15	<10	<10	<10	<10	<10	15	<10	<13
Acetone	mg/kg	23,000	0.019	0.015	0.027	0.037	0.026	0.074	0.062	<0.01	0.016	0.02
Benzene	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromoform	mg/kg	820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromomethane	mg/kg	320	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Butanone	mg/kg	27,000	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	0.013	<0.01	<0.01	<0.01
Carbon disulfide	mg/kg	280	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon tetrachloride	mg/kg	96	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorobenzene	mg/kg	260	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroethane	mg/kg	950	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroform	mg/kg	1,200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloromethane	mg/kg	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromochloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethane	mg/kg	890	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	mg/kg	91	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethene	mg/kg	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total 1,2-Dichloroethene	mg/kg	2,040	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2 Dichloropropane	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
cis-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Hexanone	mg/kg	2,500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Methyl-2-pentanone	mg/kg	2,700	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methylene chloride	mg/kg	1,300	0.002	0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Styrene	mg/kg	400	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	mg/kg	53	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachloroethene	mg/kg	88	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	mg/kg	250	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01
1,1,1-Trichloroethane	mg/kg	460	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-Trichloroethane	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	mg/kg	500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vinyl chloride	mg/kg	3.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total-Xylenes	mg/kg	150	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Michigan Part 201 Residential Soil Direct Contact Criteria taken from Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 7: Kentwood Landfill Creek Sediment Monitoring Data

PARAMETERS	UNITS	2002 Part 201 Residential Direct Contact	KWSD-03 6/30/1995	KWSD-03 5/19/2000	KWSD-03 5/10/2001	KWSD-03 5/30/2002	KWSD-03 5/21/2003	KWSD-03 6/16/2004
Aluminum	mg/kg	50,000	1,200	3,520	4,420	860	3,210	4,600
Antimony	mg/kg	180	<20	<12	<12	<12	<12	<18
Arsenic	mg/kg	7.6	<4	<2.0	<2.0	<2.0	<2.0	<2.9
Barium	mg/kg	37,000	80	<40	<40	<40	<40	<58
Chromium	mg/kg	790,000	7	17	11	2.8	13	14
Iron	mg/kg	160,000	2,200	5,360	4,070	1,800	4,450	6,410
Lead	mg/kg	400	2.6	4.8	5.6	1.3	4.3	5.4
Nickel	mg/kg	40,000	<15	10	<10	<10	<10	<15
Acetone	mg/kg	23,000	0.034	<0.01	0.025	0.021	0.032	0.028
Benzene	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromoform	mg/kg	820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromomethane	mg/kg	320	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Butanone	mg/kg	27,000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon disulfide	mg/kg	280	<0.01	<0.01	<0.01	0.012	<0.01	<0.01
Carbon tetrachloride	mg/kg	96	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorobenzene	mg/kg	260	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroethane	mg/kg	950	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroform	mg/kg	1,200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloromethane	mg/kg	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromochloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethane	mg/kg	890	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	mg/kg	91	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethene	mg/kg	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total 1,2-Dichloroethene	mg/kg	2,040	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2 Dichloropropane	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
cis-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Hexanone	mg/kg	2,500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Methyl-2-pentanone	mg/kg	2,700	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methylene chloride	mg/kg	1,300	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Styrene	mg/kg	400	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	mg/kg	53	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachloroethene	mg/kg	88	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	mg/kg	250	<0.01	<0.01	<0.01	<0.01	<0.01	0.018
1,1,1-Trichloroethane	mg/kg	460	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-Trichloroethane	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	mg/kg	500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vinyl chloride	mg/kg	3.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total-Xylenes	mg/kg	150	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Michigan Part 201 Residential Soil Direct Contact Criteria taken from Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 7: Kentwood Landfill Creek Sediment Monitoring Data

PARAMETERS	UNITS	2002 Part 201 Residential Direct Contact	KWSD-04 6/28/1995	KWSD-04 5/19/2000	KWSD-04 5/10/2001	KWSD-04 5/30/2002	KWSD-04 5/21/2003	KWSD-04 6/16/2004
Aluminum	mg/kg	50,000	6,100	8,670	14,900	5,000	7,820	5,240
Antimony	mg/kg	180	<20	<12	<12	<12	<12	<17
Arsenic	mg/kg	7.6	2.0	4.6	<2.0	3.0	<2.0	<2.8
Barium	mg/kg	37,000	110	49	72	42	42	<55
Chromium	mg/kg	790,000	10	13	21	8.8	12	<2.8
Iron	mg/kg	160,000	11,000	11,300	12,400	10,000	6,360	6,690
Lead	mg/kg	400	10	7.0	11	7.2	6.5	2.2
Nickel	mg/kg	40,000	11	12	14	10	<10	<14
Acetone	mg/kg	23,000	0.049	<0.01	0.068	0.5	<0.01	<0.01
Benzene	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromoform	mg/kg	820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromomethane	mg/kg	320	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Butanone	mg/kg	27,000	0.008	<0.01	<0.01	0.095	<0.01	<0.01
Carbon disulfide	mg/kg	280	<0.01	<0.01	<0.025	0.027	<0.01	<0.01
Carbon tetrachloride	mg/kg	96	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorobenzene	mg/kg	260	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroethane	mg/kg	950	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroform	mg/kg	1,200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloromethane	mg/kg	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromochloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethane	mg/kg	890	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	mg/kg	91	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethene	mg/kg	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total 1,2-Dichloroethene	mg/kg	2,040	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2 Dichloropropane	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
cis-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Hexanone	mg/kg	2,500	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01
4-Methyl-2-pentanone	mg/kg	2,700	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01
Methylene chloride	mg/kg	1,300	0.002	<0.01	<0.01	<0.01	<0.01	<0.01
Styrene	mg/kg	400	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	mg/kg	53	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachloroethene	mg/kg	88	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	mg/kg	250	<0.01	<0.01	<0.01	0.015	0.015	<0.01
1,1,1-Trichloroethane	mg/kg	460	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-Trichloroethane	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	mg/kg	500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vinyl chloride	mg/kg	3.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total-Xylenes	mg/kg	150	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Michigan Part 201 Residential Soil Direct Contact Criteria taken from Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 7: Kentwood Landfill Creek Sediment Monitoring Data

PARAMETERS	UNITS	2002 Part 201 Residential Direct Contact	KWSD-05 6/29/1995	KWSD-05 5/19/2000	KWSD-05 5/10/2001	KWSD-05 5/30/2002	KWSD-05 5/21/2003	KWSD-05 6/16/2004	KWSD-05 Duplicate 6/16/2004
Aluminum	mg/kg	50,000	2,900	3,040	9,950	2,100	8,670	1,510	4,410
Antimony	mg/kg	180	<20	<12	<12	<12	<12	<16	<20
Arsenic	mg/kg	7.6	3.2	2.4	<2.0	<2.0	<2.0	<2.7	<3.3
Barium	mg/kg	37,000	110	<40	50	<40	48	<53	<65
Chromium	mg/kg	790,000	5.9	6.1	13	4.6	11	<2.7	<3.3
Iron	mg/kg	160,000	5,100	5,010	6,420	3,900	8,940	2,500	6,030
Lead	mg/kg	400	5.9	5.1	6.0	5.5	12	3.7	7.4
Nickel	mg/kg	40,000	<15	<10	<10	<10	<10	<14	<17
Acetone	mg/kg	23,000	0.077	0.011	<0.25	0.062	0.058	<0.01	0.024
Benzene	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromoform	mg/kg	820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromomethane	mg/kg	320	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Butanone	mg/kg	27,000	0.016	0.02	<0.025	<0.01	<0.01	<0.01	<0.01
Carbon disulfide	mg/kg	280	<0.01	<0.01	<0.025	0.018	<0.01	<0.01	<0.01
Carbon tetrachloride	mg/kg	96	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorobenzene	mg/kg	260	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroethane	mg/kg	950	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroform	mg/kg	1,200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloromethane	mg/kg	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromochloromethane	mg/kg	110	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethane	mg/kg	890	0.007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	mg/kg	91	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethene	mg/kg	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total 1,2-Dichloroethene	mg/kg	2,040	0.043	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2 Dichloropropane	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
cis-1,3-Dichloropropene	mg/kg	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	mg/kg	140	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-Hexanone	mg/kg	2,500	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01
4-Methyl-2-pentanone	mg/kg	2,700	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01
Methylene chloride	mg/kg	1,300	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Styrene	mg/kg	400	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	mg/kg	53	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachloroethene	mg/kg	88	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	mg/kg	250	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,1-Trichloroethane	mg/kg	460	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-Trichloroethane	mg/kg	180	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethene	mg/kg	500	0.053	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vinyl chloride	mg/kg	3.8	0.007	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
total-Xylenes	mg/kg	150	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Michigan Part 201 Residential Soil Direct Contact Criteria taken from Administrative Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	Part 201 DWC	U.S. EPA MCL	PW01 6/28/1995	PW01 5/16/2000	PW01 5/11/2001	PW01 5/29/2002	PW01 5/22/2003	PW01 5/13/2004	PW01 DUP 5/13/2004
Aluminum	ug/L	100	50	--	<100	<100	<100	<100	<100	<100	<100
Antimony	ug/L	5	6	6	<5	<5	<5	<5	<5	<5	<5
Arsenic	ug/L	2	50	50	<2	2.6	2.4	8.4	3	2.3	2.1
Barium	ug/L	20	2,000	2,000	<20	<20	12	<20	<20	<20	<20
Beryllium	ug/L	5	4	4	<5	<5	<5	<5	<5	<5	<5
Cadmium	ug/L	1	5	5	<1	<1	<1	<1	<1	<1	<1
Calcium	ug/L	200	--	--	149,000	162,000	150,000	130,000	157,000	100,000	100,000
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	10	40	--	<10	<10	<10	<10	<10	<10	<10
Copper	ug/L	10	1,000	1,300	1.7	12	<10	11	<10	19	11
Iron	ug/L	100	300	--	**1,560**	**1,630**	**1,510**	**1,400**	**1,260**	**1,850**	**1,830**
Lead	ug/L	2	4	15	<2	<2	<2	<2	<2	**4.4**	<2
Magnesium	ug/L	500	400,000	--	19,700	20,000	19,000	17,000	20,000	19,000	19,000
Manganese	ug/L	10	50	--	**53**	**59**	49	49	**55**	**57**	**55**
Mercury	ug/L	0.2	2.0	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	ug/L	20	100	--	<20	<20	<20	<20	<20	<20	<20
Potassium	ug/L	750	--	--	1,950	2,200	2,100	2,800	2,200	2,300	2,200
Selenium	ug/L	3	50	50	4.5	<3	<3	<3	<3	<3	<3
Silver	ug/L	10	34	--	<10	<10	<10	<10	<10	<10	<10
Sodium	ug/L	500	120,000	--	77,600	90,000	82,000	64,000	83,000	83,000	81,000
Thallium	ug/L	10	2	2	<10	<10	<10	<10	<10	<10	<10
Vanadium	ug/L	10	4.5	--	<10	<10	<10	<10	<10	<10	<10
Zinc	ug/L	20	2,400	--	67	75	59	27	36	90	86
Cyanide	ug/L	5	200	200	<5	<5	<5	<5	<5	<5	<5
Temperature	°C		--	--	12.3	12.0	11.6	13.7	11.0	12.6	12.6
pH	S.U.		--	--	7.69	7.26	7.62	7.41	7.45	7.55	7.54
Conductivity	μmhos/cm		--	--	1,154	1,135	1,022	1,220	1,104	1,148	1,148
ORGANIC COMPOUNDS[a]											
Acetone	ug/L	5	730	--	<5	<5	<5	<5	<5	<5	<5
Carbon disulfide	ug/L	1	800	--	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	2	5	5	<2	<2	<2	<2	<2	<2	<2
Butylbenzylphthalate	ug/L	5	1,200	--	<5	<5	<5	<5	<5	<5	<5
di-n-Butylphthalate	ug/L	5	880	--	3.0	<5	<5	<5	<5	<5	<5
Diethylphthalate	ug/L	5	5,500	--	<5	<5	<5	<5	<5	<5	<5
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	**8.0**	<5	<5	<5	<5	<5	<5
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

[a] Only detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)
(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	Part 201 DWC	U.S. EPA MCL	PW03 6/28/1995	PW03 D 6/28/1995	PW03 5/19/2000	PW03 5/11/2001	PW03 5/29/2002	PW03 5/22/2003	PW03 5/13/2004
Aluminum	ug/L	100	50	--	<100	<100	<100	<100	<100	<100	<100
Antimony	ug/L	5	6	6	<5	<5	<5	<5	<5	<5	<5
Arsenic	ug/L	2	50	50	<2	<2	<2	<2	12	<2	<2
Barium	ug/L	20	2,000	2,000	83	79	91	96	100	97	96
Beryllium	ug/L	5	4	4	<5	<5	<5	<5	<5	<5	<5
Cadmium	ug/L	1	5	5	<1	<1	<1	<1	<1	<1	<1
Calcium	ug/L	200	--	--	99,100	97,900	128,000	119,000	100,000	124,000	100,000
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	10	40	--	<10	<10	<10	<10	<10	<10	<10
Copper	ug/L	10	1,000	1,300	5.8	3.1	<10	<10	16	12	11
Iron	ug/L	100	300	--	**558**	250	**380**	300	**360**	**380**	**400**
Lead	ug/L	2	4	15	<2	<2	<2	<2	2.1	<2	<2
Magnesium	ug/L	500	400,000	--	22,800	21,600	26,000	24,000	23,000	25,000	25,000
Manganese	ug/L	10	50	--	40	37	50	46	42	47	48
Mercury	ug/L	0.2	2.0	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	ug/L	20	100	--	<20	<20	<20	<20	<20	<20	<20
Potassium	ug/L	750	--	--	1,830	1,640	2,200	2,000	2,300	2,000	2,100
Selenium	ug/L	3	50	50	<3	<3	<3	<3	<3	<3	<3
Silver	ug/L	10	34	--	<10	<10	<10	<10	<10	<10	<10
Sodium	ug/L	500	120,000	--	66,400	62,000	81,000	72,000	61,000	70,000	69,000
Thallium	ug/L	10	2	2	<10	<10	<10	<10	<10	<10	<10
Vanadium	ug/L	10	4.5	--	<10	<10	<10	<10	<10	<10	<10
Zinc	ug/L	20	2,400	--	154	54	78	65	71	50	33
Cyanide	ug/L	5	200	200	<5	<5	<5	<5	<5	<5	<5
Temperature	°C		--	--	14	13.9	12.6	12.3	13.5	12.0	12.6
pH	S.U.		--	--	8	8	7.58	7.92	7.64	7.56	7.83
Conductivity	μmhos/cm		--	--	607	607	1,003	924	1,001	1,035	1,061
ORGANIC COMPOUNDS[a]											
Acetone	ug/L	5	730	--	<5	1	<5	<5	<5	<5	<5
Carbon disulfide	ug/L	1	800	--	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	2	5	5	1	<2	<2	<2	<2	<2	<2
Butylbenzylphthalate	ug/L	5	1,200	--	<5	<5	<5	<5	<5	<5	<5
di-n-Butylphthalate	ug/L	5	880	--	<5	4	<5	<5	<5	<5	<5
Diethylphthalate	ug/L	5	5,500	--	<5	<5	<5	<5	<5	<5	<5
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	5	**8**	<5	<5	<5	<5	<5
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<5	<5	<5	<5	<5	<5	<5

[a] Only detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)
(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	U.S. EPA MCL	'02 Part 201 DWC	PW04 6/28/1995	PW04 5/16/2000	PW04 5/11/2001	PW04 5/29/2002	PW04 5/22/2003
Aluminum	ug/L	100	--	50	<100				
Antimony	ug/L	5	6	6	<5	M	M	M	M
Arsenic	ug/L	2	50	50	<2	U	U	U	U
Barium	ug/L	20	2,000	2,000	24	N	N	N	N
Beryllium	ug/L	5	4	4	<5	I	I	I	I
Cadmium	ug/L	1	5	5	<1	C	C	C	C
Calcium	ug/L	200	--	--	49,300	I	I	I	I
Chromium	ug/L	10	100	100	<10	P	P	P	P
Cobalt	ug/L	10	--	40	<10	A	A	A	A
Copper	ug/L	10	1,300	1,000	40.2	L	L	L	L
Iron	ug/L	100	--	300	**322**				
Lead	ug/L	2	15	4	3.8	W	W	W	W
Magnesium	ug/L	500	--	400,000	12,700	A	A	A	A
Manganese	ug/L	10	--	50	<10	T	T	T	T
Mercury	ug/L	0.2	2	2	<0.2	E	E	E	E
Nickel	ug/L	20	--	100	<20	R	R	R	R
Potassium	ug/L	750	--	--	1,050				
Selenium	ug/L	3	50	50	<3				
Silver	ug/L	10	--	34	<10				
Sodium	ug/L	500	--	120,000	19,000				
Thallium	ug/L	10	2	2	<10				
Vanadium	ug/L	10	--	4.5	<10				
Zinc	ug/L	20	--	2,400	187				
Cyanide	ug/L	5	200	200	<5				
Temperature	°C		--	--	15.2				
pH	S.U.		--	--	7.17				
Conductivity	μmhos/cm		--	--	438				
					252				
ORGANIC COMPOUNDS[a]									
Acetone	ug/L	5	--	730	<5				
Carbon disulfide	ug/L	1	--	800	2				
Methylene chloride[b]	ug/L	2	5	5	<2				
Butylbenzylphthalate	ug/L	5	--	1,200	<5				
di-n-Butylphthalate	ug/L	5	--	880	<5				
Diethylphthalate	ug/L	5	--	5,500	2				
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	<5				
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	**9**				

[a] Only detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)
(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	U.S. EPA MCL	'02 Part 201 DWC	PW06 6/28/1995	PW06 5/19/2000	PW06 inside 10/18/2000	PW06 10/18/2000	PW06 5/11/2001	PW06 5/29/2002	PW06 D 5/29/2002	PW06 5/22/2003	PW06 7/25/2003
Aluminum	ug/L	100	--	50	<100	<100	--	--	190	<100	<100	**250**	--
Antimony	ug/L	5	6	6	<5	<5	--	--	<5	<5	<5	<5	--
Arsenic	ug/L	2	50	50	<2	3.3	--	--	<2	14	15	2.9	--
Barium	ug/L	20	2,000	2,000	24	<20	--	--	<20	28	28	<20	--
Beryllium	ug/L	5	4	4	<5	<5	--	--	<5	<5	<5	<5	--
Cadmium	ug/L	1	5	5	<1	<1	--	--	<1	<1	<1	<1	--
Calcium	ug/L	200	--	--	568,000	607,000	--	--	542,000	400,000	410,000	526,000	--
Chromium	ug/L	10	100	100	<10	<10	--	--	<10	<10	<10	<10	--
Cobalt	ug/L	10	--	40	<10	<10	--	--	<10	<10	<10	<10	--
Copper	ug/L	10	1,300	1,000	2.8	137	--	--	11	18	17	56	--
Iron	ug/L	100	--	300	**892**	**1,210**	--	--	**1,070**	**1,300**	**1,300**	**1,400**	--
Lead	ug/L	2	15	4	**13**	**16**	2	<2	3.8	2.2	2.2	**21**	<2
Magnesium	ug/L	500	--	400,000	21,200	23,000	--	--	20,000	21,000	21,000	24,000	--
Manganese	ug/L	10	--	50	21	27	--	--	24	27	27	27	--
Mercury	ug/L	0.2	2	2	<0.2	<0.2	--	--	<0.2	<0.2	<0.2	<0.2	--
Nickel	ug/L	20	--	100	<20	<20	--	--	<20	29	30	<20	--
Potassium	ug/L	750	--	--	3,250	3,800	--	--	3,400	3,700	3,700	3,900	--
Selenium	ug/L	3	50	50	<3	<3	--	--	<3	<3	<3	<3	--
Silver	ug/L	10	--	34	<10	<10	--	--	<10	<10	<10	<10	--
Sodium	ug/L	500	--	120,000	50,200	54,000	--	--	57,000	47,000	47,000	54,000	--
Thallium	ug/L	10	2	2	<10	<10	--	--	<10	<10	<10	<10	--
Vanadium	ug/L	10	--	4.5	<10	<10	--	--	<10	<10	<10	<10	--
Zinc	ug/L	20	--	2,400	<20	53	--	--	52	38	37	55	--
Cyanide	ug/L	5	200	200	<5	<5	--	--	<5	<5	<5	<5	--
Temperature	°C		--	--	12.5	11.9	--	--	11.6	12.7	12.7	12.4	--
pH	S.U.		--	--	7.35	7.03	--	--	7.30	7.05	7.05	6.85	--
Conductivity	µmhos/cm		--	--	2,190	2,110	--	--	1,801	229	229	2,140	--
ORGANIC COMPOUNDS[a]													
Acetone	ug/L	5	--	730	<5	<5	--	--	<5	<5	<5	<5	--
Carbon disulfide	ug/L	1	--	800	<1	<1	--	--	<1	<1	<1	<1	--
Methylene chloride	ug/L	2	5	5	<2	<2	--	--	<2	<2	<2	<2	--
Butylbenzylphthalate	ug/L	5	--	1,200	<5	<5	--	--	<5	<5	<5	<5	--
di-n-Butylphthalate	ug/L	5	--	880	1	<5	--	--	<5	<5	<5	<5	--
Diethylphthalate	ug/L	5	--	5,500	<5	<5	--	--	<5	<5	<5	<5	--
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	**7**	<5	--	--	<5	<5	<5	<5	--
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<0.01	<0.01	--	--	<0.01	<0.01	<0.01	<0.01	--

[a] Only detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)

(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	U.S. EPA MCL	'02 Part 201 DWC	PW07 5/19/2000	PW07 D 5/19/2000	PW07 5/11/2001	PW07 D 5/11/2001	PW07 5/29/2002	PW07 5/22/2003	PW07 D 5/22/2003	PW07 5/13/2004
Aluminum	ug/L	100	--	50	<100	<100	190	180	<100	230	270	<100
Antimony	ug/L	5	6	6	<5	<5	<5	<5	<5	<5	<5	<5
Arsenic	ug/L	2	50	50	13	13	13	12	23	16	15	9.8
Barium	ug/L	20	2,000	2,000	<20	<20	<20	<20	<20	<20	<20	<20
Beryllium	ug/L	5	4	4	<5	<5	<5	<5	<5	<5	<5	<5
Cadmium	ug/L	1	5	5	<1	<1	<1	<1	<1	<1	<1	<1
Calcium	ug/L	200	--	--	592,000	592,000	594,000	520,000	410,000	536,000	496,000	600,000
Chromium	ug/L	10	100	100	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	10	--	40	<10	<10	<10	<10	<10	<10	<10	<10
Conductivity	µmhos/cm		--	--	1,990	1,980	1,830	1,824	251	2,080	2,080	2,432
Copper	ug/L	10	1,300	1,000	<10	<10	<10	<10	17	<10	<10	<10
Cyanide	ug/L	5	200	200	<5	<5	<5	<5	<5	<5	<5	<5
Iron	ug/L	100	--	300	**3,550**	**3,690**	**3,140**	**3,100**	**3,100**	**3,360**	**3,220**	**3,000**
Lead	ug/L	2	15	4	<2	<2	<2	<2	2	<2	<2	<2
Magnesium	ug/L	500	--	400,000	36,000	36,000	33,000	32,000	26,000	34,000	33,000	35,000
Manganese	ug/L	10	--	50	**67**	**67**	**58**	**55**	**53**	**71**	**70**	**66**
Mercury	ug/L	0.2	2	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	ug/L	20	--	100	<20	<20	<20	<20	28	<20	<20	<20
pH	S.U.		--	--	6.84	6.9	7.02	7.04	6.91	6.90	6.92	6.97
Potassium	ug/L	750	--	--	4,200	4,100	4,000	3,600	3,300	4,100	4,000	4,600
Selenium	ug/L	3	50	50	<3	<3	<3	<3	<3	<3	<3	<3
Silver	ug/L	10	--	34	<10	<10	<10	<10	<10	<10	<10	<10
Sodium	ug/L	500	--	120,000	45,000	44,000	46,000	45,000	32,000	48,000	46,000	48,000
Temperature	°C		--	--	11.5	11.5	11.4	11.5	12.7	11.4	11.7	11.7
Thallium	ug/L	10	2	2	<10	<10	<10	<10	<10	<10	<10	<10
Vanadium	ug/L	10	--	4.5	<10	<10	<10	<10	<10	<10	<10	<10
Zinc	ug/L	20	--	2,400	<20	24	<20	<20	31	32	33	27
ORGANIC COMPOUNDS[a]												
Acetone	ug/L	5	--	730	<5	<5	<5	<5	<5	<5	<5	<5
Carbon disulfide	ug/L	1	--	800	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	2	5	5	<2	<2	<2	<2	<2	<2	<2	<2
Butylbenzylphthalate	ug/L	5	--	1,200	<5	<5	<5	<5	<5	<5	<5	<5
di-n-Butylphthalate	ug/L	5	--	880	<5	<5	<5	<5	<5	<5	<5	<5
Diethylphthalate	ug/L	5	--	5,500	<5	<5	<5	<5	<5	<5	<5	<5
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	<5	<5	<5	<5	<5	<5	<5	<5
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

[a] Only detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)

(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	U.S. EPA MCL	'02 Part 201 DWC	PW-08 5/13/2004
Aluminum	ug/L	100	--	50	<100
Antimony	ug/L	5	6	6	<5
Arsenic	ug/L	2	50	50	<2
Barium	ug/L	20	2,000	2,000	46
Beryllium	ug/L	5	4	4	<5
Cadmium	ug/L	1	5	5	<1
Calcium	ug/L	200	--	--	100,000
Chromium	ug/L	10	100	100	<10
Cobalt	ug/L	10	--	40	<10
Copper	ug/L	10	1,300	1,000	14
Iron	ug/L	100	--	300	**1,320**
Lead	ug/L	2	15	4	<2
Magnesium	ug/L	500	--	400,000	21,000
Manganese	ug/L	10	--	50	36
Mercury	ug/L	0.2	2	2	<0.2
Nickel	ug/L	20	--	100	<20
Potassium	ug/L	750	--	--	2,300
Selenium	ug/L	3	50	50	<3
Silver	ug/L	10	--	34	<10
Sodium	ug/L	500	--	120,000	75,000
Thallium	ug/L	10	2	2	<10
Vanadium	ug/L	10	--	4.5	<10
Zinc	ug/L	20	--	2,400	34
Cyanide	ug/L	5	200	200	<5
Temperature	°C		--	--	13
pH	S.U.		--	--	7.65
Conductivity	µmhos/cm		--	--	1,088
ORGANIC COMPOUNDS[a]					
Acetone	ug/L	5	--	730	<5
Carbon disulfide	ug/L	1	--	800	<1
Methylene chloride	ug/L	2	5	5	<2
Butylbenzylphthalate	ug/L	5	--	1,200	<5
di-n-Butylphthalate	ug/L	5	--	880	<5
Diethylphthalate	ug/L	5	--	5,500	<5
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	<5
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<0.01

[a] Only historically detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)

(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	U.S. EPA MCL	'02 Part 201 DWC	PW-09 5/13/2004
Aluminum	ug/L	100	--	50	<100
Antimony	ug/L	5	6	6	<5
Arsenic	ug/L	2	50	50	<2
Barium	ug/L	20	2,000	2,000	25
Beryllium	ug/L	5	4	4	<5
Cadmium	ug/L	1	5	5	<1
Calcium	ug/L	200	--	--	100,000
Chromium	ug/L	10	100	100	<10
Cobalt	ug/L	10	--	40	<10
Copper	ug/L	10	1,300	1,000	10
Iron	ug/L	100	--	300	**850**
Lead	ug/L	2	15	4	<2
Magnesium	ug/L	500	--	400,000	16,000
Manganese	ug/L	10	--	50	40
Mercury	ug/L	0.2	2	2	<0.2
Nickel	ug/L	20	--	100	<20
Potassium	ug/L	750	--	--	2,000
Selenium	ug/L	3	50	50	<3
Silver	ug/L	10	--	34	<10
Sodium	ug/L	500	--	120,000	69,000
Thallium	ug/L	10	2	2	<10
Vanadium	ug/L	10	--	4.5	<10
Zinc	ug/L	20	--	2,400	<20
Cyanide	ug/L	5	200	200	<5
Temperature	°C		--	--	13
pH	S.U.		--	--	7.61
Conductivity	μmhos/cm		--	--	935
ORGANIC COMPOUNDS[a]					
Acetone	ug/L	5	--	730	<5
Carbon disulfide	ug/L	1	--	800	<1
Methylene chloride	ug/L	2	5	5	<2
Butylbenzylphthalate	ug/L	5	--	1,200	<5
di-n-Butylphthalate	ug/L	5	--	880	<5
Diethylphthalate	ug/L	5	--	5,500	<5
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	<5
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<0.01

[a] Only historically detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)

(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Table 8: Kentwood Landfill Private Well Monitoring Data

INORGANIC COMPOUNDS	UNITS	DL	U.S. EPA MCL	'02 Part 201 DWC	PW010 5/13/2004
Aluminum	ug/L	100	--	50	<100
Antimony	ug/L	5	6	6	<5
Arsenic	ug/L	2	50	50	<2
Barium	ug/L	20	2,000	2,000	<20
Beryllium	ug/L	5	4	4	<5
Cadmium	ug/L	1	5	5	<1
Calcium	ug/L	200	--	--	43,000
Chromium	ug/L	10	100	100	<10
Cobalt	ug/L	10	--	40	<10
Copper	ug/L	10	1,300	1,000	18
Iron	ug/L	100	--	300	<100
Lead	ug/L	2	15	4	<2
Magnesium	ug/L	500	--	400,000	12,000
Manganese	ug/L	10	--	50	11
Mercury	ug/L	0.2	2	2	<0.2
Nickel	ug/L	20	--	100	<20
Potassium	ug/L	750	--	--	1,600
Selenium	ug/L	3	50	50	<3
Silver	ug/L	10	--	34	<10
Sodium	ug/L	500	--	120,000	3,600
Thallium	ug/L	10	2	2	<10
Vanadium	ug/L	10	--	4.5	<10
Zinc	ug/L	20	--	2,400	153
Cyanide	ug/L	5	200	200	<5
Temperature	°C		--	--	15.8
pH	S.U.		--	--	7.69
Conductivity	µmhos/cm		--	--	316
ORGANIC COMPOUNDS[a]					
Acetone	ug/L	5	--	730	<5
Carbon disulfide	ug/L	1	--	800	<1
Methylene chloride	ug/L	2	5	5	<2
Butylbenzylphthalate	ug/L	5	--	1,200	<5
di-n-Butylphthalate	ug/L	5	--	880	<5
Diethylphthalate	ug/L	5	--	5,500	<5
bis(2-Ethylhexyl)Pthalate	ug/L	5	6	6	<5
gamma-BHC (Lindane)	ug/L	0.01	0.2	0.2	<0.01

[a] Only historically detected compounds are listed.

(1) 'U.S. EPA MCL - U.S. EPA designated Maximum Contaminant Levels for Safe Drinking Water. (EPA816-F-02-013, July 2002)

(2) Part 201 DWC taken from Administrateive Rules for Part 201 Environmental Remediation, December 21, 2002.

Kentwood Landfill Site
Kent County, Michigan

State

Kentwood Landfill Site

GEOS

Figure 1: Site Map

Plot created by Eva Sinha U.S. EPA Region 5 10/12/2004
Color Infra-Red Image Date: 4/23/1996

s:\swo\kwf\EPA\5yearreview\EPA_Sampling_Points.dwg

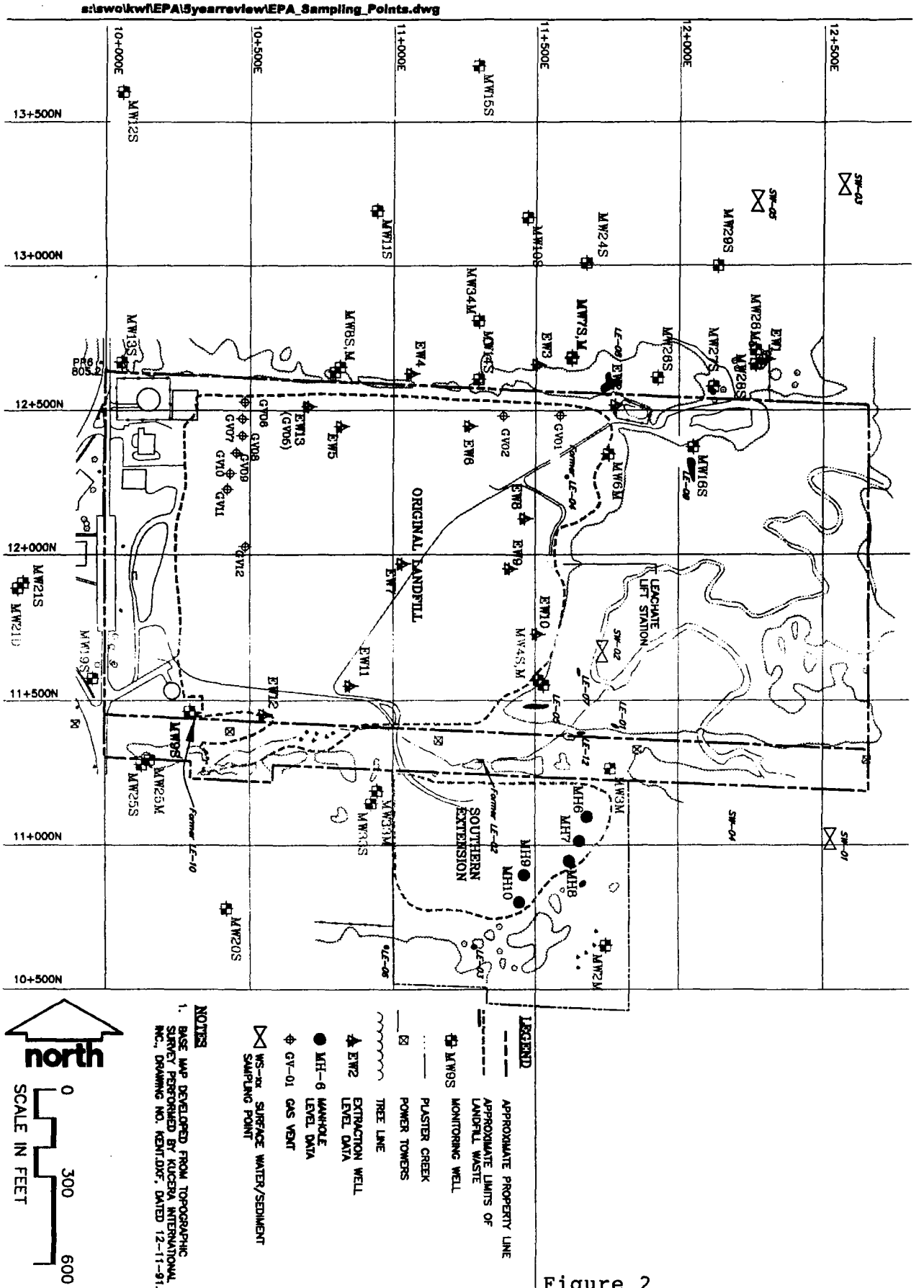


Figure 2

Ground Water, Surface Water, Sediment, Leachate Sampling Locations	Developed By KCDPW	Drawn By KCDPW – MKS/rsm
KENTWOOD LANDFILL REMEDIAL ACTION 4920 WALMA AVE., S.E. KENTWOOD, MICHIGAN	Approved By	Date 4/23/01
KENT COUNTY DEPARTMENT OF PUBLIC WORKS & THE CITY OF KENTWOOD, MICHIGAN	Reference ADAPTED FROM MWA DRAWING B2	
	Revisions	

Drawing Number

13/2

DEED RESTRICTION

The CITY OF KENTWOOD, a Michigan municipal corporation, owner in fee simple of the real estate described below, imposes the following restrictions on the described real estate ("Kentwood Property"), which is part of the City of Kentwood, Kent County, State of Michigan:

> The North 1/2 of the Southeast 1/4, except the South 132 feet, Section 27, Town 6 North, Range 11 West, City of Kentwood, Kent County, Michigan.
>
> Also:
>
> The North 5.5 acres of the East 330 feet of the Southwest 1/4 of the Southeast 1/4, and the North 9 acres of the Southeast 1/4 of the Southeast 1/4, except the East 825 feet, all in Section 27, Town 6 North, Range 11 West, Kent County, Michigan.

The following restrictions are imposed on the Kentwood Property, its present and any future owners, their authorized agents, assigns, employees or persons acting under their direction or control, for the purpose of protecting public health and the environment and preventing interference with remedial action work and maintenance work approved by the United States Environmental Protection Agency ("USEPA") and/or the United States District Court for the Western District of Michigan (the "U.S. District Court") at the Kentwood Property.

1. Until final approval by USEPA of the completion of all remedial action work and achievement of all cleanup standards at the Kentwood Property by USEPA, or until approval by the U.S. District Court, whichever first occurs, there shall be no consumptive or other use of the groundwater underlying the Kentwood

Property that could cause exposure of humans or animals to such groundwater.

2. Until the final approval of USEPA of the completion of all remedial action work and achievement of all cleanup standards at the Kentwood Property by USEPA, or until approval by the U.S. District Court, whichever first occurs, there shall be no residential, commercial, or agricultural use of the Kentwood Property, including but not limited to the construction, installation or use of any structures or buildings for residential, commercial, or agricultural purposes.

3. Until the final approval by USEPA of the completion of all remedial action work and achievement of all cleanup standards at the Kentwood Property by USEPA, or until approval by the U.S. District Court, whichever first occurs, there shall be no use of the Kentwood Property that would allow the continued presence of humans at the Kentwood Property, other than presence necessary for implementation of remedial action work or maintenance work approved by USEPA and/or the United States District Court for the Western District of Michigan. Prohibited uses which would allow the continued presence of humans at the Kentwood Property will include but not necessarily be limited to recreational and educational uses.

4. Until the final approval by USEPA of the completion of all remedial action work and achievement of all cleanup standards at the Kentwood Property by USEPA, or until approval by the U.S. District Court, whichever first occurs, there shall be no

installation, removal, construction or use of any buildings, wells, pipes, roads, ditches or any other structures at the Kentwood Property except as approved by USEPA.

5. There shall be no tampering with, or removal of, any containment or monitoring systems on the Kentwood Property.

6. There shall be no interference with the performance of work and remedial action, or with the maintenance or remedial measures approved by USEPA and/or the United States District Court for the Western District of Michigan.

7. Until the final approval by USEPA of the completion of all remedial action work and achievement of all cleanup standards at the Kentwood Property by USEPA, or until approval by the U.S. District Court, whichever first occurs, all uses of the Kentwood Property shall be consistent with the final remedial action implemented at the Kentwood Property.

8. All of the above restrictions may be released by the USEPA and/or the United States District Court for the Western District of Michigan.

9. All of the above restrictions shall run with the land and continue in perpetuity.

IN WITNESS WHEREOF, the City of Kentwood has caused these Deed Restrictions to be executed this March 23rd, 1992.

WITNESSES

John Heitman

Douglas Sporte

THE CITY OF KENTWOOD, a Michigan municipal corporation,

By: Gerald L. DeRuiter

Its: Mayor (Mayor)

ATTEST: Debie Kolehouse

STATE OF MICHIGAN)
) ss.
COUNTY OF KENT)

Acknowledged before me this 1st day of April, 1992, by Gerald L. DeRuiter and Debie Kolehouse the Mayor and Mayor's Assistant of the City of Kentwood, on behalf of the City.

Beverly J. Bacon

Notary Public, Kent County, MI
My Commission Expires:

BEVERLY J. BACON
NOTARY PUBLIC, KENT COUNTY, MICHIGAN
MY COMMISSION EXPIRES JAN. 11, 1995

Drafted by ~~and when recorded return to:~~

Clary, Nantz, Wood, Hoffius, Rankin & Cooper
Attn: Jeffrey J. Van Winkle
500 Calder Plaza
250 Monroe Avenue, N.W.
Grand Rapids, MI 49503
(616) 459-9487

STATE OF MICHIGAN
COUNTY OF KENT
RECEIVED FOR RECORD
92 APR -8 AM 8:18
REG. OF DEEDS

03777(994)34828

GROUNDWATER DRINKING WATER WELLS
CITY OF KENTWOOD, MICHIGAN
ord.no. 9 -92 eff. April 15 ,19 92

AN ORDINANCE PROHIBITING THE INSTALLATION OF GROUNDWATER DRINKING WATER WELLS WITHIN CERTAIN AREAS.

THE CITY OF KENTWOOD ORDAINS:

Sec. 1. PURPOSE.

This Ordinance is adopted in accordance with the Home Rule Cities Act, the City's Charter, other applicable law, and the Consent Decree (as defined below), and is intended to protect the safety, health and welfare of the citizens of Kentwood.

Sec. 2. DEFINITIONS.

When used in this Ordinance, the following terms shall have the following meanings:

(A) "Consent Decree" shall mean the Consent Decree dated December 11, 1991, and entered in the District Court for the Western District of Michigan, Case No. 1:91-CV-794.

(B) "Scope of Work" shall mean the scope of Work for the Remedial Design and Remedial Action Work Plan at Kentwood Landfill, Kentwood, Michigan.

(C) "Isolation Zone" shall mean that area legally described as follows and graphically described on Exhibit A attached:

A land area lying partly in section 27 and partly in section 34, T6N, R11W, City of Kentwood, MI, and described as: Beginning at the quarter corner common to sections 27 and 34;

Thence South along the North and South Quarterline of section 34 to a point 250 feet South of the quarter corner common to sections 27 and 34;

Thence East on a line parallel with the section line common to sections 27 and 34 to a point on the centerline of Wing Avenue;

Thence Northeasterly to a point on the line common to sections 27 and 34 that is 600 feet West of the section corner common to sections 27, 34, 26 and 35;

Thence East along the line common to sections 27 and 34 to the section corner common to sections 26, 27, 34 and 35;

Thence North along the line common to sections 26 and 27 to a point that is 1,000 feet North of the quarter corner common to sections 26 and 27;

Thence West on a line parallel with the East and West Quarterline of said section 27 to a point that is 750 feet West of the North and South Quarterline of said section 27;

Thence South on a line parallel with the North and South Quarterline of said section 27 to a point on the centerline of Rum Creek Drive;

Thence East along the centerline of Rum Creek Drive to its intersection with Rum Creek Court;

Thence Southerly along the centerline of Rum Creek Court to the center of the cul-de-sac at the southerly end of Rum Creek Court;

Thence Southeasterly on a line terminating at a point on the North and South Quarterline of said section 27 that is 540 feet North from the quarter corner common to sections 27 and 34;

Thence South along the North and South Quarterline of said section 27 to the quarter corner common to sections 27 and 34, the Point of Beginning.

Sec. 3. PROHIBITION OF INSTALLATION OF GROUNDWATER DRINKING WATER WELLS.

No person shall install a groundwater drinking water well within the Isolation Zone unless advance written consent to such a well is obtained from the City and the Environmental Protection Agency, which consent shall be granted in accordance with the provisions of the Consent Decree and Scope of Work. In the absence of such consent, all lots in the Restricted Area shall be serviced by public water. Any groundwater drinking water wells installed prior to the effective date of this Ordinance shall not be subject to the provisions of this Ordinance.

Sec. 4. **VIOLATIONS-PENALTIES AND INJUNCTIVE RELIEF.**

Any person, firm, or corporation convicted of violating this Ordinance shall be guilty of a misdemeanor, punishable by a fine of not more than five hundred dollars ($500), or by imprisonment in the County Jail for not more than ninety (90) days, or by both such fine and imprisonment. Each day a violation continues shall be deemed a separate offense. Notwithstanding these penal provisions, the City may seek injunctive relief to restrain any person from violating this Ordinance. A groundwater drinking water well installed in violation of this Ordinance is hereby deemed a nuisance which the City shall have the power to abate.

Sec. 5. **SEVERABILITY.**

The phrases, sentences, sections and any portion of this Ordinance are severable and the finding that any portion hereof is unconstitutional or otherwise unenforceable shall not detract from or effect the enforceability of the remainder of this Ordinance.

Sec. 6. **EFFECTIVE DATE.**

This Ordinance shall take effect on April 15, 19 92.

This Ordinance is declared to be an emergency ordinance, effective immediately upon publication thereof.

The foregoing ordinance was offered by Commissioner Christensen and supported by Commissioner Wylie.

The vote being as follows:

YEAS: Commissioner(s) Christensen, Cummings, Bardiman, VanKeulen, Wylie and Mayor DeRuiter.

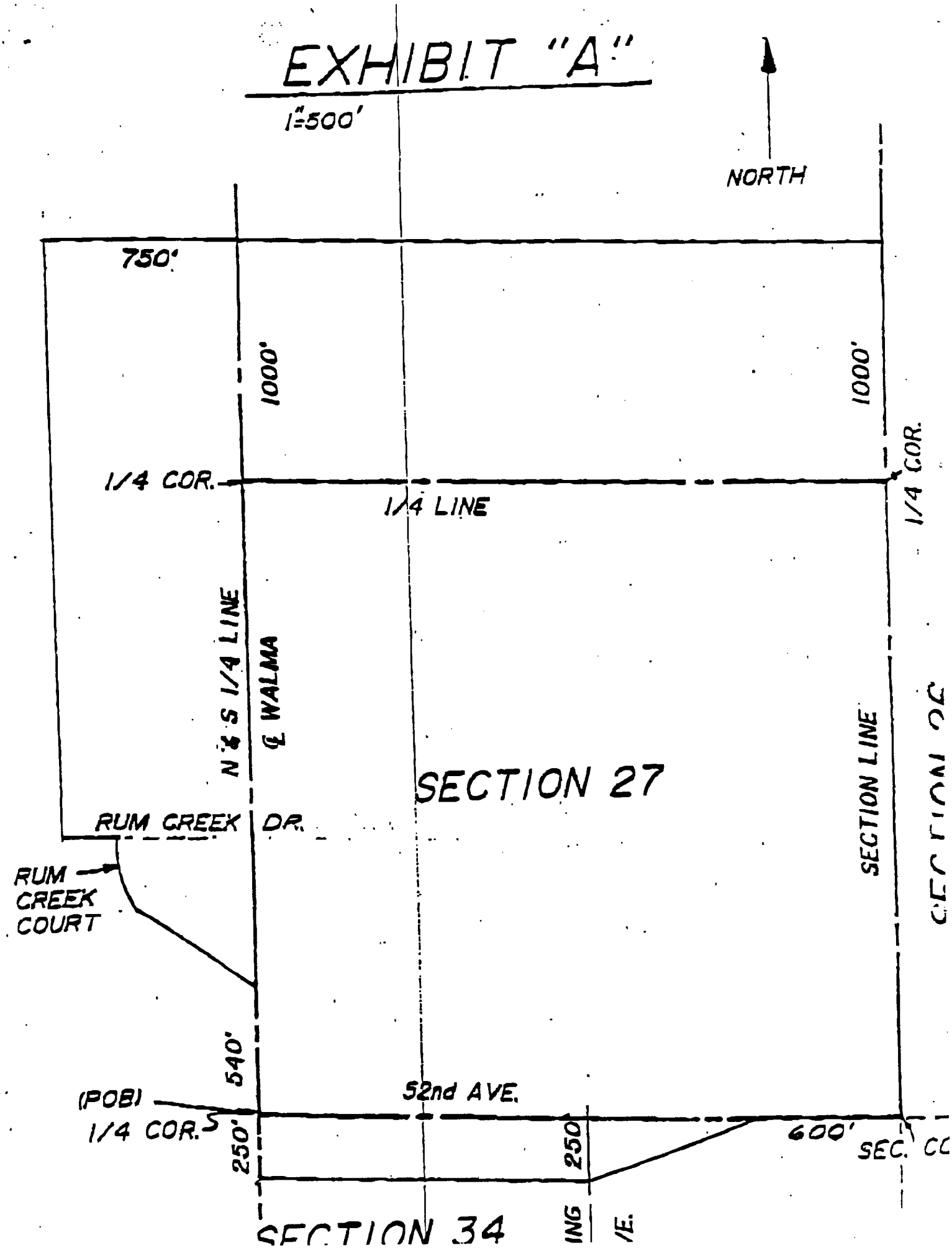
NAYS: Commissioner(s) None.

ABSENT: Commissioner(s) Mast.

Beverly J. Bacon, City Clerk

I hereby certify the foregoing to be a true copy of an ordinance adopted at a regular meeting of the Kentwood City Commission held on April 7, 1992.

Beverly J. Bacon, City Clerk

EXHIBIT "A"

1"=500'