FIRST FIVE-YEAR REVIEW REPORT

FOR THE

IOWA CITY FORMER MANUFACTURED GAS PLANT SUPERFUND SITE
JOHNSON COUNTY, IOWA

Prepared by

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Region 7
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2-13-15
Date

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LIST OF ABBREVIATIONS

AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	Contaminant of Concern
DNAPL	Dense Nonaqueous Phase Liquid
EPA	United States Environmental Protection Agency
FMGP	Former Manufactured Gas Plant
FYR	Five-Year Review
IIGE	Iowa-Illinois Gas and Electric Company
IDNR	Iowa Department of Natural Resources
LLC	Limited Liability Company
LNAPL	Light Nonaqueous Phase Liquid
MCL	Maximum Contaminant Level
NPL	National Priorities List
OU	Operable Unit
O&M	Operation and Maintenance
PAHs	Polynuclear Aromatic Hydrocarbons
PECs	Probable Effects Concentrations
PQL	Practical Quantitation Limit
RAO	Remedial Action Objective
RBC	Risk Based Concentration
ROD	Record of Decision
RSL	Regional Screening Level
TBCs	To Be Considereds
TI	Technical Impracticability
UCL	Upper Confidence Limit
VOC	Volatile Organic Compound
µg/kg	Microgram per kilogram
µg/L	Microgram per Liter
$\mu g/m^3$	Microgram per cubic meter

EXECUTIVE SUMMARY

This is the first Five-Year Review (FYR) for the Iowa City Former Manufactured Gas Plant (FMGP) Superfund site located in Iowa City, Johnson County, and Iowa. The purpose of this FYR is to review information to determine if the remedy is and will continue to be protective of human health and the environment. The triggering action for this statutory review is the date of the start of on-site construction of the remedial action.

The site is located east of downtown Iowa City at 505 East Burlington Street in a mixed commercial and residential area and is approximately 1.5 acres in size. The site property is currently occupied by the Iowa-Illinois Square (formerly known as the Iowa-Illinois Manor) apartment building, which contains 54 units, occupied by approximately 150 residents. The apartment building and paved parking areas cover the majority of the site.

Ralston Creek runs parallel to Van Buren Street, which is located on the west side of the site, and adjacent to the site. This reach of the creek is tile lined and heavily vegetated. The city owns the creek in this area.

Manufactured coal gas was produced at the site beginning in approximately 1857 until approximately 1937, when natural gas became available in the area. The production of manufactured gas created waste products that are resistant to natural decay and typically remain at FMGP sites for decades. The primary waste is a dense, oily liquid known as "coal tar", which condensed out of the gas during various stages of its production, leading to contamination of soil, groundwater and sediment which came into contact with the coal tar. Coal tar is a mixture of chemicals known as polynuclear aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs), specifically benzene, toluene, ethylbenzene and xylenes (BTEX). Other contaminants frequently associated with the production of manufactured gas are arsenic, cyanides and some metals.

In 1983, during the design and construction of the apartment building, an investigation was conducted by the property owner due to the discovery of oily wastes at the site. During this investigation, it was determined that fill material containing what was believed to be manufactured gas plant refuse was present in the subsurface. As a result of the discovery of this material in the subsurface and vapors encountered during the investigation, the design of the foundation of the apartment building was modified, a liner was placed under a portion of the building and a passive venting system was installed in the crawl space.

In March 1999, the EPA, MidAmerican Energy Company and the Iowa-Illinois Manor Partnership entered into an Administrative Order on Consent (AOC) for site characterization activities. In December 2003, when the EPA determined that a time-critical removal action was necessary to remove contamination associated with the FMGP along the northern edge of the site, MidAmerican and the Manor Partnership entered into a second AOC to conduct this work. In January 2004, MidAmerican removed the contents of the underground tank, filled it with inert material, and recovered groundwater and light nonaqueous phase liquid (LNAPL) from two monitoring wells.

In August 2004, MidAmerican and the Manor Partnership entered into a third AOC with the EPA to conduct a feasibility study. MidAmerican conducted some additional limited field investigations, completed a treatability study involving the removal of LNAPL, and completed a Feasibility Study Report dated June 2006.

In September 2006 the EPA signed a Record of Decision (ROD) that selected the remedy for the site. The major components of the selected remedy are:

- Implementation of institutional controls to prohibit the installation of water wells, maintain conditions in Ralston Creek, and maintain conditions within the Iowa-Illinois Square apartment building.
- Implementation of a technical impracticability (TI) waiver of applicable or relevant and appropriate requirements (ARARs) within the identified TI zone.
- Groundwater monitoring for contaminants of concern (COCs) and natural attenuation parameters.
- Evaluation of potential indoor air exposure at off-site locations from groundwater within the TI zone.
- Sediment monitoring for COCs in Ralston Creek.
- Indoor air monitoring for COCs in the Iowa-Illinois Square apartment building.
- Recovery of LNAPL from the unconsolidated aquifer.

On November 26, 2008, MidAmerican Energy Company and Iowa-Illinois Manor, LLC, entered into a Consent Decree to perform a remedial design and remedial actions at the site. Remedial actions include recovery of LNAPL from monitoring wells; monitored natural attenuation of groundwater; monitoring of air, sediment, and groundwater; and implementation of ICs, including environmental covenants. The remedial design was started on July 10, 2008, and concluded on January 29, 2010. On-site construction of the remedial action began on February 17, 2010.

The remedy is performing as expected, with natural attenuation processes continuing to occur in the contaminated groundwater plume as demonstrated through evaluation of contaminant concentrations and natural attenuation parameters. Groundwater outside of the TI zone is meeting the action levels except for elevated levels of manganese at MW-7 and intermittent elevated levels of naphthalene at MW-35. MW-7 is upgradient of the contamination source so it is likely that the manganese is naturally occurring and not the result of contamination from the site.

Sediment sampling results have been quite variable, with six of the nine COCs exceeding the performance standards in one downstream sample in 2011, compared to one COC performance standard exceedance in 2012 and none exceeded in 2013. As additional samples are collected, the statistical analysis of this data will become more robust. The condition of the tile lining has not degraded significantly during the remedial action but there are areas of damage, which was discussed with representatives of the city during the five-year review inspection.

LNAPL gauging and recovery continues consistent with the LNAPL Recovery Plan. LNAPL recovery has been minimal since the beginning of the remedial action.

Air in the crawlspace beneath the Iowa-Illinois Square apartment building is monitored through annual sampling for benzene and naphthalene, the COCs present at the site that are sufficiently volatile to potentially move from groundwater into air. While low levels of benzene have been detected in air in the crawlspace that exceeded the indoor air action level on two occasions, these wells were within the acceptable cancer risk range and remain protective of human health for indoor air for apartment dwellers. Naphthalene has not been detected above the analytical detection limit.

An institutional control in the form of an environmental covenant was filed with the Johnson County Recorder on June 4, 2009, on the site property, currently occupied by the Iowa-Illinois Square

apartments. The environmental covenant prohibits installation of wells on the site, other than monitoring wells, restricts excavation deeper than six feet below grade without prior notification and approval of the EPA except in cases of emergency, and requires notification to the EPA a minimum of 60 calendar days prior to transfer of title of the property or change in use.

An institutional control in the form of an environmental covenant was filed with the Johnson County Recorder on December 15, 2010, on the stretch of Ralston Creek located west of the site. The environmental covenant prohibits installation of wells on the property, other than monitoring wells and restricts excavation or other disturbance to the tile lining without prior notification and approval of the EPA, except in cases of emergency.

Additional institutional controls in the form of a state rule governing installation of wells in areas of contamination, a city code requiring connection to the public water supply and a county ordinance requiring notification regarding setbacks from contamination for groundwater well installation remain in force and provide additional layers of protection.

The remedy for the Iowa City FMGP site is protective of human health and the environment.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Iowa City Former Manufactured Gas Plant Site		
EPA ID: IAD 984591172		
Region: 7	**State:** IA	**City/County:** Iowa City/Johnson County

SITE STATUS	
NPL Status: Non-NPL	
Multiple OUs? No	**Has the site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: EPA ***[If "Other Federal Agency", enter Agency name]*:** Click here to enter text.
Author name (Federal or State Project Manager): Diana Engeman
Author affiliation: EPA-Region 7
Review period: 1/28/2014 - 1/12/2015
Date of site inspection: 7/7/2014
Type of review: Statutory
Review number: 1
Triggering action date: 2/17/2010
Due date *(five years after triggering action date)*: 2/17/2015

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
OU 00. There are no issues or recommendations identified in the Five-Year Review.

Sitewide Protectiveness Statement	
Protectiveness Determination: Protective	*Addendum Due Date (if applicable):* Click here to enter a date.
Protectiveness Statement: The remedy at the Iowa City Former Manufactured Gas Plant site is protective of human health and the environment.	

I. INTRODUCTION

The purpose of conducting a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy continues to be protective of human health and the environment. The methods, findings and conclusions of a FYR are documented in a FYR report. In addition, a FYR report identifies any issues found during the review, and documents any recommendations to address the issues.

The U.S. Environmental Protection Agency conducts a FYR and prepares a FYR report pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, section 121, and the National Contingency Plan. 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 judgment 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 EPA interpreted this requirement further in the National Contingency Plan, 40 Code of Federal Regulations section 300.430(f)(4)(ii), which 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 actions no less often than every five years after the initiation of the selected remedial action.

The EPA conducted a FYR on the remedy implemented at the Iowa City Former Manufactured Gas Plant (FMGP) Superfund site in Iowa City, Johnson County, Iowa. The EPA is the lead agency for developing and implementing the remedy for the site. The Iowa Department of Natural Resources (IDNR), as the support agency representing the state of Iowa, has reviewed the supporting documentation and provided input to the EPA during the FYR process.

This is the first FYR for the Iowa City FMGP Superfund site. The triggering action for this statutory review is the date of the start of on-site construction of the remedial action. The FYR is required because hazardous substances, pollutants or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure. The site is addressed as one Operable Unit (OU). This OU is the subject of this FYR.

A. SITE CHRONOLOGY

Table 1

Event	Date
Initial discovery of problem or contamination	12/12/1990
Preliminary Assessment completed	4/19/1991
Site Investigation completed	8/7/1996
Expanded Site Investigation completed	9/9/1998
Administrative Order on Consent (AOC) for Site Characterization signed	3/29/1999
AOC for Removal Action signed	12/16/2003
Removal Action completed	7/26/2004
AOC for Feasibility Study signed	8/13/2004
Remedial Investigation/Feasibility Study complete and Record of Decision (ROD) signed	9/26/2006
ROD modified by memorandum	6/17/2008
Consent Decree entered	11/26/2008
Remedial Design start	7/10/2008
Remedial Design complete	1/19/2010
On-site Remedial Action construction start	2/17/2010
Construction completion date	8/2/2010

B. BACKGROUND

Physical Characteristics

The site is located east of downtown Iowa City at 505 East Burlington Street in a mixed commercial and residential area and is approximately 1.5 acres in size. The site property is currently occupied by the Iowa-Illinois Square apartment building. Nearby commercial enterprises include the L&M Mighty Shop, a convenience store and gas station, to the north; an apartment building to the south on the property previously occupied by two auto garages. To the west, across Ralston Creek, the Burlington Commons apartment building was constructed on property previously occupied by Hanson Auto Body Shop. The Iowa City Recreation Center and municipal parking lot are located northwest of the site. The current site layout is shown in Figure 1. The site vicinity and current groundwater monitoring network is depicted in Figure 2.

Land and Resource Use

The site property is currently occupied by the Iowa-Illinois Square (formerly known as the Iowa-Illinois Manor) apartment building, which contains 54 units, occupied by approximately 150 residents. As shown in Figure 1, the apartment building and paved parking areas cover the majority of the site. Grass-covered and landscaped areas are located along the adjacent streets and along the margins of the building with the exception of the eastern side of the building, which is covered with landscaping rock. Ralston Creek runs parallel to Van Buren Street, which is located on the west side, and adjacent to the site. This reach of the creek is tile lined and heavily vegetated. The city owns the creek in this area.

A survey of water wells and potential groundwater usage within a one-mile radius of the site was conducted. Eleven water wells were identified within the search radius and four of these are potentially

used as a source of drinking water. None of the existing water wells are located in the contaminated plume area or are likely to ever be impacted by the site.

The city supplies potable water to the University of Iowa, residences and businesses within the city limits of Iowa City. The municipal water supply is drawn from intakes located on the Iowa River and a well field located north of Iowa City, outside the one-mile search radius. Wells screened in the Silurian and Cambro-Ordovician aquifers within the one-mile radius and owned by the University were utilized by the city primarily for blending with the surface water supply during spring runoff. However, with the completion of a new city water treatment plant, the city no longer uses these wells as a blending source.

The University also supplies some of its own water. The University-owned wells described in the previous paragraph are on standby as a potential blending source for times when the University's surface water supply is not of suitable quality. The other water wells located within the one-mile radius are not utilized for drinking water.

The potential for new water well installations within the search radius is low. The city enforces a municipal ordinance (City Code Section 14-3C-10) that prohibits the installation of private water wells where a municipal water supply line is available within 300 feet. Additionally, the ordinance provides the city authority to require owners of existing private wells to connect to the municipal water supply if a water supply line exists within 300 feet. The Iowa City well ordinance has been approved for use as an institutional control by the IDNR for leaking underground storage tank sites and other state-lead projects.

Ralston Creek is a perennial stream with highly variable flow. It is managed primarily for storm water drainage rather than for recreational use. Buried utility lines run beside and beneath Ralston Creek near the site. In the immediate vicinity of Ralston Creek, it appears that groundwater discharges to the creek under base-flow conditions. It is not anticipated that the use or management of the creek will change in the future. The stretch of the creek adjacent to the site is owned by the city.

Ralston Creek ultimately discharges in the Iowa River several miles downstream of the site. The confluence of Ralston Creek and the Iowa River is a fishery and likely a nursery for fish. The Iowa River is used as a source of drinking water for the city of Iowa City and the University. It is not anticipated that this usage will change in the future.

History of Contamination

Manufactured coal gas was produced at the site beginning in approximately 1857 until approximately 1937, when natural gas became available in the area. After ceasing gas production, the facilities were used into the 1950s for distribution of natural gas. The layout of the FMGP facilities as they existed in 1926 is shown in blue in Figure 1.

The production of manufactured gas created waste products that are resistant to natural decay and typically remain at FMGP sites for decades. The primary waste is a dense, oily liquid known as "coal tar", which condensed out of the gas during various stages of its production. Although some of this coal tar was sold, substantial amounts leaked from storage and processing facilities or was discharged at the site. Soil, groundwater and sediment which came into contact with the coal tar became contaminated, and in many cases, continues to be contaminated. Coal tar was a mixture of chemicals known as

polynuclear aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs), specifically benzene, toluene, ethylbenzene and xylenes (BTEX). Other contaminants frequently associated with the production of manufactured gas are arsenic, cyanides and some metals.

The Iowa City FMGP operated under several names throughout its period of operation. For the majority of the years it was operated by Tri-City Railway and Light Company, a subsidiary of United Light and Power Company. In the early 1940s Iowa-Illinois Gas and Electric Company (IIGE) purchased Tri-City Railway and Light Company.

Following closure of the manufactured gas plant operations, the site was utilized by IIGE as a service facility until approximately 1971. At some point after 1971, the property was sold to Ron Shank, who operated a bar on the property. The property was purchased from Ron Shank on December 31, 1982, by the Iowa-Illinois Manor Partnership. The buildings on the property were demolished and the Iowa-Illinois Manor apartments were constructed in 1983. The property is currently owned by Iowa-Illinois Square, following its June 18, 2009, purchase from the Iowa-Illinois Manor Partnership.

In 1983, during the design and construction of the apartment building, an investigation was conducted by the property owner due to the discovery of oily wastes at the site. During this investigation, it was determined that fill material containing what was believed to be manufactured gas plant refuse was present in the subsurface. As a result of the discovery of this material in the subsurface and vapors encountered during the investigation, the design of the foundation of the apartment building was modified, a liner was placed under a portion of the building and a passive venting system was installed in the crawl space.

Based on historical maps, Ralston Creek has been relocated twice during development of the area. The portion of Ralston Creek located near the site has been relocated and channelized from its native location. An 1839 map of Iowa City shows Ralston Creek meandering across the current location of the site. Based on a review of Sanborn® maps, it appears the meander at the site was eliminated prior to 1888, and then Ralston Creek was further straightened and tile-lined at some time between 1948 and 1970 to place it in its current location. Ralston Creek is currently located approximately 40 feet west of the site.

The EPA conducted investigations at the site and issued an Expanded Site Investigation Report in 1998 in which it was determined further investigation was warranted due to the presence of elevated levels of BTEX, PAHs, cyanides, arsenic and lead. Contamination was found in soil and groundwater.

Initial Response

In March 1999, the EPA, MidAmerican Energy Company (a successor to IIGE) and the Manor Partnership entered into an Administrative Order on Consent (AOC) for site characterization activities. From October 1999 through March 2004 MidAmerican conducted this investigative work. The final Site Characterization Report, dated August 2003, including the baseline risk assessment and all amendments to the Report, constitute the final Remedial Investigation Report for the site.

In December 2003, the EPA determined that a time-critical removal action was necessary to remove contamination associated with the FMGP along the northern edge of the site. This work was necessary to minimize exposure to city and utility workers doing construction work in the area, and to address an underground tank in the area. MidAmerican and the Manor Partnership entered into an AOC to conduct

this work. In January 2004, MidAmerican removed the contents of the underground tank, filled it with inert material, and recovered groundwater and light nonaqueous phase liquid (LNAPL) from two monitoring wells.

In August 2004, MidAmerican and the Manor Partnership entered into a third AOC with the EPA to conduct a feasibility study. MidAmerican conducted some additional limited field investigations, completed a treatability study involving the removal of LNAPL, and completed a Feasibility Study Report dated June 2006. The Site Characterization Report, the Feasibility Study Report and other documents in the Administrative Record file may be reviewed for a more complete source of information regarding the history of the site.

Basis for Taking Action

A baseline risk assessment was conducted as part of the site characterization. It included a human health baseline risk assessment and a screening level ecological risk assessment. The following lists the contaminants that were identified as contaminants of concern (COCs) for each media affected:

Soil
Arsenic
Cyanide
Iron
Manganese
Aroclor 1254
Aroclor 1260
Acenaphthylene
Benzo(a)anthracene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Chrysene
Dibenzo(a,h)anthracene
Indeno(1,2,3-c,d)pyrene
2-Methylnaphthalene
Naphthalene
Benzene
Ethylbenzene

Indoor Air
Benzene
Naphthalene

Surface Water
Benzene

Groundwater
Aluminum
Arsenic
Chromium
Cyanide
Iron
Lead
Manganese
Acenaphthene
Acenaphthylene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Chrysene
Dibenzo(a,h)anthracene
Fluorene
Indeno(1,2,3-c,d)pyrene
2-Methylnaphthalene
Naphthalene
Phenanthrene
Benzene
Ethylbenzene
Toluene
Xylenes, total

Sediment
Arsenic
Iron
Benzo(a)anthracene
Benzo(b)fluoranthene
Benzo(a)pyrene

Although there were no current exposures to groundwater for residents, it was determined that potential future exposures through consumption of contaminated groundwater or through inhalation of the vapor from showering or cooking could present a significant carcinogenic risk as well as noncarcinogenic health effects if exposure were to occur. The contaminants posing the greatest carcinogenic risks in groundwater were benzo(a)pyrene, benzene and dibenzo(a,h)anthracene. The majority of the noncarcinogenic health effects due to exposure to groundwater were posed by naphthalene and benzene.

Contaminants in soil and indoor air did not pose a significant threat provided exposure to subsurface soil contamination did not occur in the future and site conditions preventing indoor air exposures did not change in the future.

Exposure to contaminants in surface water did not pose an unacceptable level of risk to humans or ecological receptors. The significant ecological resource to be protected is the fishery located at the confluence of Ralston Creek and the Iowa River. It was determined that in the future, comparing sediment samples from Ralston Creek in the vicinity of the site to consensus-based probable effects concentrations of PAHs for freshwater ecosystems would serve as an indicator of possible new contribution of contamination from the site into the creek.

C. REMEDIAL ACTIONS

Remedy Selection

The ROD for the Iowa City FMGP site was signed on September 26, 2006. Remedial action objectives (RAOs) were developed during the Feasibility Study, utilizing data collected during the remedial investigation, to aid in the development and screening of remedial alternatives that were considered for the ROD. Separate RAOs were developed for soil, groundwater, indoor air and Ralston Creek. The RAOs for the site are to:

- Prevent and/or reduce human exposure to groundwater containing COCs that exceed applicable or relevant and appropriate requirements (ARARs) or health-based levels.
- Prevent and/or reduce future soil exposure risks to acceptable levels by maintaining the existing land use. The future soil RAO may be reevaluated if the building is removed or its use changed.
- Prevent and/or reduce future human exposure to indoor air containing COCs that exceed health-based levels.
- Maintain the existing ecological steady state and prevent and/or reduce future unacceptable risks to human health and the environment in Ralston Creek.

The major components of the selected remedy are:

- Implementation of institutional controls to prohibit the installation of water wells, maintain conditions in Ralston Creek, and maintain conditions within the Iowa-Illinois Square apartment building.
- Implementation of a technical impracticability (TI) waiver of ARARs within the identified TI zone.
- Monitored natural attenuation of groundwater.
- Groundwater monitoring for COCs and natural attenuation parameters.

- Evaluation of potential indoor air exposure at off-site locations from groundwater within the TI zone.
- Sediment monitoring for COCs in Ralston Creek.
- Indoor air monitoring for COCs in the Iowa-Illinois Square apartment building.
- Recovery of LNAPL from the unconsolidated aquifer.

Action levels are the concentrations of the COCs in the affected media that must not be exceeded to ensure that the RAOs will be met. These levels were initially developed for this site during the Feasibility Study. The processes for doing so for each media are described below.

The action levels for groundwater were determined based upon the following hierarchy:

- The maximum contaminant level (MCL) pursuant to the Safe Drinking Water Act for the contaminant when an MCL is available.
- For contaminants without an MCL, the action level is calculated based on an excess lifetime cancer risk of 1×10^{-6} and/or a target hazard quotient of 1.
- When the calculated risk-based action level is below the laboratory practical quantitation limit (PQL), the PQL is used as the action level, provided it falls within the acceptable risk range of $1x10^{-4}$ to $1x10^{-6}$ excess lifetime cancer risk.

The action levels for groundwater at the site, and the rationale for their selection, as described in the ROD, are as listed in Table 2.

Table 2
ACTION LEVELS FOR GROUNDWATER
in µg/L

Contaminant of Potential Concern	Chemical-Specific ARARs (MCLs)	Risk-Based Concentration (RBC)	PQL	Selected Groundwater Action Level (Basis for Selection)
2-methylnaphthalene	-	61.2	-	61.2 (RBC)
Acenaphthene	-	914	-	914 (RBC)
Acenaphthylene	-	362	-	362 (RBC)
Benzene	5	-	-	5 (MCL)
Benzo(a)anthracene	-	0.009	0.13	0.13 (PQL)
Benzo(a)pyrene	0.2	-	-	0.2 (MCL)
Benzo(b)fluoranthene	-	0.005	0.1	0.1 (PQL)
Benzo(k)fluoranthene	-	0.05	0.14	0.14 (PQL)
Chrysene	-	0.85	-	0.85 (RBC)
Cyanide	200	-	-	200 (MCL)
Dibenzo(a,h)anthracene	-	0.0003	0.033	0.033 (PQL)
Ethylbenzene	700	-	-	700 (MCL)
Fluorene	-	490	-	490 (RBC)
Indeno(1,2,3-cd)pyrene	-	0.005	0.1	0.1 (PQL)
Naphthalene	-	6.2	-	6.2 (RBC)*
Phenanthrene	-	294	-	294 (RBC)
Toluene	1,000	-	-	1,000 (MCL)
Xylenes, total	10,000	-	-	10,000 (MCL)
Manganese	-	775	-	775 (RBC)
Cyanide	200	-	-	200 (MCL)

Note:

* The groundwater action level for naphthalene was 6.2 µg/L in the 2006 ROD. It was changed to 1.1 µg/L based on a change from health-based levels for noncancer health effects to humans to health-based levels due to cancer risk to humans. This change was documented in a June 17, 2008, Memorandum for Record.

Soil action levels were not established as surface soil at the site does not pose an unacceptable level of risk. Prevention of future exposure to subsurface soil is addressed through institutional controls.

Action levels for indoor air were calculated for benzene and naphthalene based on an excess cancer risk of 1 x 10^{-6} and/or a target hazard quotient of 1. The action levels for benzene and naphthalene in indoor air, established in the ROD, were 0.8 microgram per cubic meter (µg/m^3) and 1.3 µg/m^3, respectively. The action level for naphthalene in indoor air was changed from 1.3 µg/m^3 to 0.056 µg/m^3 in a June 17,

2008 Memorandum for Record. The action level was modified due to a change from health-based levels for noncancer health effects to human beings to health-based levels due to cancer risk in humans.

Sediment samples from Ralston Creek were compared against consensus-based probable effects concentrations (PECs) of PAHs for freshwater ecosystems (nonhuman receptors) as indicators of possible contribution of contaminants from the site into the creek. PECs are contaminant concentrations that have been developed for specific compounds above which the inhabitants of a body of freshwater could be negatively affected. The PECs are listed in Table 3. These levels are significantly lower than any concentration that would pose a threat to human health, so they are sufficiently low to be protective of human exposure to creek sediment.

Table 3
RALSTON CREEK SEDIMENT PERFORMANCE STANDARDS
in micrograms per kilogram (µg/kg) dry weight

Contaminant of Potential Concern	Performance Standards
Anthracene	845
Benzo(a)anthracene	1,050
Benzo(a)pyrene	1,450
Chrysene	1,290
Fluoranthene	2,230
Fluorene	536
Naphthalene	561
Phenanthrene	1,170
Pyrene	1,520
Total PAHs	22,800

Remedy Implementation

On November 26, 2008, MidAmerican Energy Company and Iowa-Illinois Manor, LLC, entered into a Consent Decree to perform a remedial design and remedial actions at the site. Remedial actions include recovery of LNAPL from monitoring wells; monitored natural attenuation of groundwater; monitoring of air, sediment, and groundwater; and implementation of institutional controls, including environmental covenants. The remedial design was started on July 10, 2008, and concluded on January 29, 2010. On-site construction of the remedial action began on February 17, 2010.

A groundwater monitoring program was designed to monitor groundwater for COCs and natural attenuation parameters. Groundwater monitoring events have occurred semiannually, generally in April and October, since October 2009. These data are used to evaluate compliance with groundwater action levels, groundwater plume stability and remedial action progress via natural attenuation over time.

It was noted in the ROD that the extent of groundwater contamination in bedrock downgradient of the site had not been fully characterized during the remedial investigation but that this lack of information would not change the decision regarding the appropriate remedy. It was further noted that determining this extent of contamination might necessitate a change in the boundaries of the TI zone. In 2011, two additional monitoring wells were installed to delineate the downgradient extent of contamination in bedrock and the TI zone. Those wells are MW-56 and MW-57. Based on sampling of those wells, it was determined that there was no need to change the boundaries of the TI zone as described in the ROD.

An LNAPL recovery plan was developed to manage the recovery of free product from the unconsolidated aquifer in the vicinity of monitoring well MW-8 on the northern edge of the site. Per the LNAPL Recovery Plan, LNAPL recovery and gauging will continue in the wells near MW-8 until the recovery rate is less than or equal to 0.1 gallon per month and the LNAPL thickness remains less than 0.02 foot for 12 consecutive months. LNAPL is recovered through the placement of absorbent "socks" in the affected wells to passively recover free product.

In October 2009, at the request of the EPA, the dense nonaqueous phase liquid (DNAPL) thickness was measured and then the DNAPL was removed in two monitoring wells, MW-26 and MW-27, so that a recovery rate could be determined. Since that time, the DNAPL has been gauged and removed from those wells at least semiannually.

An indoor air monitoring program was designed to monitor benzene and naphthalene in the crawlspace beneath the Iowa-Illinois Square apartment building. Air monitoring is conducted in the crawlspace as this area is directly over the source of contamination and should be unaffected by sources of the contaminants other than the site. Benzene and naphthalene can be found in many other sources routinely found in indoor living spaces, such as cigarette smoke. Air samples are collected annually at three locations, generally in March. The action levels were established in the ROD for indoor air in living spaces. Since the air that is sampled is not in the actual living space, the indoor air monitoring program assumed that there was an attenuation factor of 0.01 for samples collected in the crawlspace so established that as long as the contaminant levels measured in the crawlspace do not exceed 80 $\mu g/m^3$ for benzene or 5.6 $\mu g/m^3$ for naphthalene it is assumed that the indoor air in the apartments does not exceed the indoor air action levels and remains protective of human health.

In addition to air monitoring at the Iowa-Illinois Square apartment building, subslab soil gas at another off-site building located over the contaminated groundwater plume was sampled in 2010 to determine whether there were potential off-site impacts to indoor air. It was determined that there were no off-site indoor air impacts due to the site.

A sediment monitoring program was designed to determine whether there are measurable changes in the concentrations of contaminants entering Ralston Creek sediment from subsurface soil or groundwater. Sediment samples are collected annually, generally in October, from two locations near the site. One is at the upstream end of the site and the other is at the downstream end of the site. During the sampling event, the tile liner of the creek is inspected to determine whether its condition is remaining relatively the same. It is recognized that the tile liner has not been completely intact since investigations began at the site but it has served as a barrier to movement of contamination from the site into the creek in the condition that it was in at the time the remedy for the site was selected.

An institutional control in the form of an environmental covenant has been placed on the site property (currently occupied by the Iowa-Illinois Square apartment building) and was filed with the Johnson

County Recorder on June 4, 2009. The environmental covenant prohibits installation of wells on the site, other than monitoring wells, restricts excavation deeper than six feet below grade without prior notification and approval of the EPA except in cases of emergency, and requires notification to the EPA a minimum of 60 calendar days prior to transfer of title of the property or change in use.

An institutional control in the form of an environmental covenant has been placed on the stretch of Ralston Creek located west of the site and was filed with the Johnson County Recorder on December 15, 2010. The environmental covenant prohibits installation of wells on the site, other than monitoring wells and restricts excavation or other disturbance to the tile lining without prior notification and approval of the EPA, except in cases of emergency.

System Operations/Operation and Maintenance

Operation and maintenance activities at the site include semiannual groundwater monitoring, periodic LNAPL and DNAPL gauging and recovery, annual inspection of the Ralston Creek tile liner, annual sediment sampling, annual inspection of the liner and venting system beneath the Iowa-Illinois Square apartment building and annual sampling of the crawlspace air beneath the building. The condition of all monitoring wells is noted during each sampling event. The condition of the tile liner in Ralston Creek is noted during annual sediment sampling and during the last two years representatives of the city have been present to discuss maintenance of the creek banks. LNAPL recovery has occurred consistent with the LNAPL Recovery Plan in the Remedial Design.

The operation and maintenance (O&M) costs are shown in the following table. The actual costs were provided by MidAmerican Energy Company.

Table 4
O&M COSTS

Year	Approximate Cost
2010	$87,000
2011	$282,000
2012	$61,000
2013	$91,000
2014 (January-October)	$65,000
TOTAL	**$586,000**

These costs are consistent with the O&M costs for this remedy in the ROD, which are estimated to be approximately $82,000 per year during this period. Not included in that estimate was the additional air monitoring that occurred in a building over the groundwater plume in 2010 and the installation of two deep monitoring wells in 2011. These activities account for the elevated costs in 2011.

II. PROGRESS SINCE THE LAST REVIEW

This is the first FYR for this site.

III. FIVE YEAR REVIEW PROCESS

Administrative Components

MidAmerican Energy Company, the property owner, the city and the state were notified of the initiation of the FYR. The FYR team was led by Diana Engeman, the EPA Remedial Project Manager for the site. EPA support personnel on the FYR team included a hydrogeologist, human health and ecological risk assessors, the site attorney and the community engagement specialist. A representative of the Iowa Department of Natural Resources reviewed the FYR Report.

The review, which began on January 28, 2014, consisted of the following components:

- Community Involvement
- Document Review
- Data Review
- Site Inspection
- Five-Year Review Report Development and Review

Community Notification and Involvement

Activities to involve the community in the five-year review process were initiated with a notice that was published in the local newspaper, the *Iowa City Press Citizen* on April 18, 2014, stating that the EPA was conducting a review of the remedy at the site and inviting the public to submit any comments to the EPA. The results of the review and the report will be made available at the site information repository located at Iowa City Public Library, 123 South Linn Street, Iowa City, Iowa. The EPA did not receive any comments from the public during the FYR.

Document Review

This FYR consisted of a review of relevant documents including annual progress reports and monitoring data. Applicable groundwater, sediment and air cleanup standards as listed in the September 2006 ROD, as modified by a memorandum dated June 17, 2008, were reviewed. A list of documents reviewed is in Attachment 1.

Data Review

Groundwater

Groundwater sampling has occurred semiannually, in April and October, since the start of the remedial action in 2010. Several of the wells have been sampled periodically since 1999. Sampling is conducted to determine if COC concentrations in groundwater outside the TI zone comply with the action levels and natural attenuation processes are sufficient to maintain COC compliance with action levels outside the TI zone. During each sampling event, water levels are measured in wells so that groundwater flow direction may be determined in each of the water-bearing units. The unconsolidated aquifer at the site is an unconfined unit that has been divided into two units, referred to as the water table zone and the bedrock surface zone, to facilitate evaluation. The groundwater flow at the water table is westerly at the site with an overall southwesterly flow in this zone, toward the Ralston Creek channel. Groundwater flow at the bedrock surface is consistently in a southwesterly direction at the site. Groundwater flow in the Devonian and Silurian bedrock aquifers is southwesterly at the site.

Compliance with action levels outside of the TI zone is evaluated by sampling seven compliance monitoring wells: MW-7, MW-29, MW-33, MW-35 MW-41, MW-56 and MW-57, for the COCs listed in Table 2. Well locations can be referenced in Figure 2. Compliance with the action levels is determined by performing a statistical hypothesis test. A 95-percent upper confidence level (UCL) of the true mean concentration for each COC is calculated using data from the site. By definition, the 95-percent UCL of the true mean concentration of a COC at a monitoring well is a value that, when calculated repeatedly for randomly drawn data sets, equals or exceeds the true mean concentration of the COC 95-percent of the time.

Thirteen of the seventeen COCs have not been detected in any of the seven compliance monitoring wells during the remedial action monitoring events. The 13 COCs that have not been detected are benzene, toluene, ethylbenzene, xylenes, acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, debenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and cyanide. In the unconsolidated aquifer, only manganese at MW-7 exceeded the action level. Manganese levels have fluctuated above the risk-based level during sampling events since the implementation of the remedial action. Because MW-7 is upgradient of the TI zone and the site, and manganese is not present in other compliance wells in the unconsolidated aquifer, it is probable that elevated levels of manganese in this well are naturally occurring and not site-related.

In the bedrock aquifer, the action level for naphthalene was exceeded at MW-35 in October 2010 and April 2013. However, the April 2013 detection of naphthalene at 1.11 µg/L only exceeded the action level of 1.1 µg/L by a very small amount and was also detected in the associated method blank, bringing into question the validity of this value. Manganese exceeded the action level at MW-33 in April 2010. The exceedances of naphthalene and manganese have been sporadic and do not indicate any plume stability issues. There have been no other exceedances of an action level in the compliance monitoring wells in the bedrock aquifer. Attachment 2 lists the groundwater monitoring results.

Containment of the contaminated groundwater plume within the TI zone through natural attenuation processes is evaluated through analysis of COC concentrations and plume stability. Trends in contaminant mass and plume stability provide the primary line of evidence of the natural attenuation of COCs. Geochemical data provide a secondary line of evidence of natural attenuation by indicating destruction of COC mass through biodegradation processes. Concentrations of COCs are measured at wells within the TI zone as well as at the compliance wells outside the TI zone to evaluate the COC distribution throughout the plume. The Mann-Kendall trend test analysis is used to identify increasing and decreasing concentration trends at the 90-percent confidence level for each COC detected in each monitoring well. Detailed analyses of each COC at each monitoring well is included in each Remedial Action Annual Report. Numerous field measurements and laboratory analyses were performed to evaluate the destruction of COC mass through biodegradation processes. Detailed analyses of these data are reported in each Remedial Action Annual Report.

Attachment 4 is a table that shows the most recent summary of this trend analysis. The contaminated groundwater plume appears to be stable, however, 8 of 13 wells sampled within the TI zone has at least one COC with a statistically significant increasing concentration trend. These data also indicate that 17 of 19 COCs exhibit no statistically significant trend or a statistically significant decreasing concentration for each of the seven compliance monitoring wells which are outside of the TI zone. Naphthalene was determined to be statistically increasing at MW-35 at the 90-percent confidence level. Manganese was determined to be statistically increasing at MW-35 but has not exceeded the action level since October 2003. The furthest downgradient monitoring wells within the TI zone are MW-36 and MW-37, which

are located approximately 75 feet from the southwest boundary of the TI zone. Benzene exceeded the MCL in samples from these wells in 2013. In addition, six COCs have statistically significant increasing concentration trends at these wells but have not ever exceeded the action level. Compliance wells MW-56 and MW-57 are over 500 feet downgradient of MW-36 and MW-37 therefore it is possible for elevated levels of benzene to exist in groundwater in the area between these monitoring points. Locations of the monitoring wells were determined based on the ability to obtain access to the property for well installation and continue to have access for long-term monitoring. It is difficult to place monitoring wells in technically optimal locations in an area as highly developed as the one where this plume is located.

It has been concluded that natural attenuation of organic COCs is occurring as depth increases through various microbial degradation processes along the groundwater flow path to the southwest.

Based on limited exceedances of COCs in compliance monitoring wells, and the evidence that biodegradation is occurring within the TI zone, it is concluded that the plume is stable and the TI zone established in the 2006 ROD is still appropriate.

LNAPL Gauging and Recovery

Significant quantities of LNAPL were observed in monitoring wells LMW-4, MW-2, MW-8, MW-44, MW-47 and MW-48 during the course of investigations at the site. Prior to completion of the feasibility study, a treatability study was conducted to assess vacuum extraction for recovery of LNAPL. During the course of that treatability study, which took place from April through August 2005, approximately 105 gallons of LNAPL were removed from LMW-4, MW-8 and MW-48 through vacuum extraction, with the rate decreasing significantly with each recovery event. It was determined through data gathered during that study that the use of absorbent socks would be the most effective method to remediate residual LNAPL.

Six monitoring wells that are within the TI zone were originally designated as LNAPL recovery wells in the LNAPL Recovery Plan. The wells are LMW-4, MW-2, MW-8, MW-44, MW-47 and MW-48. Monitoring wells MW-3, MW-45, MW-46, MW-49, MW-50 and MW-51 were gauged to monitor for potential migration of LNAPL. In general, the plan was to place absorbent socks into wells that had a measurable amount of LNAPL of greater than 0.02 foot. A sock would remain in the well until a recovery rate is less than or equal to 0.1 gallon per month and the LNAPL thickness is less than 0.02 foot for 12 consecutive months. Gauging and recovery was to occur every two weeks to begin with and eventually move to a quarterly basis when the rate of LNAPL recovery warranted the reduced frequency.

LNAPL gauging and recovery began in March 2010. Biweekly events ended after one month because the absorbent socks were not fully saturated. Gauging and recovery continued on a monthly basis for three months and then decreased to a quarterly basis because, once again, the socks were not fully saturated. LNAPL gauging and recovery continues on a quarterly basis except at MW-46 and LMW-4. MW-46 was abandoned in 2013 due to an obstruction in the well. LNAPL greater than 0.02 foot in thickness had not ever been measured in that well. In 2013, LMW-4 met the criteria for termination of LNAPL recovery and monitoring, as stated in the LNAPL Recovery Plan. That well was re-designated as a monitoring well.

LNAPL recovery rates at all recovery wells were less than 0.1 gallon per month from March 2010 through 2014 and recovery rates have been very low. LNAPL gauging and recovery will continue as described in the LNAPL Recovery Plan, with the addition and deletion of recovery wells occurring as the plan describes and with the approval of the EPA.

DNAPL Gauging and Recovery

DNAPL recovery was not a component of the remedy selected in the ROD but in 2011 the EPA requested that MidAmerican Energy add semiannual DNAPL gauging and recovery at MW-26 and MW-27. This request was made by the EPA due to investigative work done in 2009 and 2010 to determine the rate of DNAPL recovery that could be achieved in these two wells which had historically been found to have significant amounts on DNAPL in them. DNAPL gauging and recovery was conducted semiannually in 2011 and quarterly since 2012. Since 2009, 25.5 gallons of DNAPL have been removed from MW-26 and 6.1 gallons from MW-27. While the rate of DNAPL recovery has decreased in both wells over this time period, significant quantities of DNAPL continue to be recovered and current plans are to continue to do so in the future.

Ralston Creek Sediment Sampling and Liner Inspection

Sediment sampling and creek liner inspection have been conducted annually since 2010 to determine whether changes have occurred that may result in movement of contamination from the subsurface at the site into the sediment of Ralston Creek. It was recognized at the time the ROD was written that there were multiple off-site sources of the same contaminants found at the site making their way into the creek but the levels of those contaminants were found at higher levels in sediment adjacent to the site. Ensuring that the levels of those contaminants did not increase over time would ensure that the sediment in the creek did not pose an unacceptable level of risk to ecological receptors or humans. In the ROD, it was recognized that the liner, while not fully intact, does provide a physical barrier between contamination at the site and the creek sediment.

Sediment is sampled at one upstream and one downstream location annually and analyzed for total PAHs and nine COCs: anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenathrene and pyrene. Figure 3 shows the sediment sampling locations. Attachment 3 lists the sediment sampling results. At the upstream sampling location, RC-4, only one COC, naphthalene, exceeded the performance standard during one sampling event in April 2010. At the downstream sampling location, RC-5, naphthalene has exceeded the performance standard in 2010, 2011 and 2012. In November 2011, benzo(a)anthracene, chrysene, fluoranthene, phenanthrene and pyrene were also above their respective performance standards at RC-5. The concentrations of COCs have been highly variable over time, likely due to the transient nature of sediment in creek channels. It will be more valuable to evaluate trends in the data rather than relying on the assessment of individual data points. The Mann-Kendall analysis has been used to evaluate trends but to date, no statistical trends at the 90-percent confidence level were evident. In addition to review of trends, statistical testing using a 95-percent UCL of the true mean concentration for each COC will be conducted once the minimum of eight samples needed have been collected. Data will continue to be collected annually and those results will provide a more robust data set with which to conduct the statistical trend and mean analyses.

The creek liner is inspected annually when the sediment samples are collected. One of the most significant observations during these inspections has been the amount of vegetation growing along the steep creek banks. Small vegetation is needed to maintain the stability of the creek bank but large trees growing along the bank, with roots pushing into the liner, are likely to damage the liner. This has been

brought to the attention of the city and they have made a commitment to remove the woody growth. The tile liner has never been in particularly good condition and it has been noted during the annual inspections that further degradation appears to be occurring, likely due to freeze-thaw cycles. This was also discussed with representatives of the city during the five-year review inspection and they acknowledged that it was in the city's best interest to maintain the stability of the creek bank. They said they were willing to look into whether there was anything they might be able to do to provide at least minimal maintenance of the liner.

Air Monitoring and Building Inspection

Air sampling of the air in the crawlspace of the Iowa-Illinois Square apartment building has been conducted annually since March 2010. Air samples are collected from three locations and analyzed for naphthalene and benzene, the two contaminants in groundwater that are sufficiently volatile to move from the subsurface soil or groundwater into the crawlspace air. The air monitoring results are shown in Table 5. The air sampling locations are shown in Figure 4.

Table 5
AIR MONITORING RESULTS
in µg/m³

Sample Location	Sample Date	Parameter (µg/m³)	
		Benzene	Naphthalene
SP-N	March 15-16, 2010	ND*	ND
SP-N	March 10-11, 2011	0.65	ND
SP-N	March 15-16, 2012	0.68	ND
SP-N	March 12-13, 2013	ND	ND
SP-N	March 13-14, 2014	0.60	ND
SP-C	March 15-16, 2010	ND	ND
SP-C	March 10-11, 2011	0.81	ND
SP-C	March 15-16, 2012	0.81	ND
SP-C	March 12-13, 2013	ND	ND
SP-C	March 13-14, 2014	0.81	ND
SP-S	March 15-16, 2010	ND	ND
SP-S	March 10-11, 2011	0.74	ND
SP-S	March 15-16, 2012	0.79	ND
SP-S	March 12-13, 2013	0.66	ND
SP-S	March 13-14, 2014	1.0	ND
DUPLICATE SP-S	March 15-16, 2010	ND	ND
DUPLICATE SP-S	March 10-11, 2011	0.75	ND
DUPLICATE SP-C	March 15-16, 2012	0.85	ND
DUPLICATE SP-N	March 12-13, 2013	ND	ND
DUPLICATE SP-N	March 13-14, 2014	0.58	ND

* ND—Non-detect

As described previously, since the air that is sampled is not in the actual living space, the Air Monitoring Plan established that as long as the contaminant levels measured in the crawlspace do not exceed performance standards of 80 µg/m³ for benzene or 5.6 µg/m³ for naphthalene it could be assumed that the indoor air in the apartments would not exceed the action levels. This was based on an assumption that an attenuation factor of 0.01 for the crawlspace was appropriate. During the past five years naphthalene has not been detected in crawlspace air above the detection limit of 2.6 µg/m³. Benzene has been detected on several occasions with concentrations ranging from 0.58 to 1.0 µg/m³, well below the performance standard of 80 µg/m³.

Recently the EPA has revised guidance pertaining to vapor intrusion sampling that establishes an attenuation factor of 1.0 when using crawlspace samples to predict indoor air levels, rather than an attenuation factor of 0.01. This means that the air sampling results obtained in the crawlspace should be compared to the indoor air action levels to determine protectiveness. The benzene levels that have been

detected in the crawlspace air, in Table 5, exceeded the established indoor air action levels of 0.85 $\mu g/m^3$ in 2014. Although the action level was exceeded, the sampling result is still within the acceptable cancer risk range of $1x10^{-4}$ to $1x10^{-}$. Changes to the Air Monitoring Plan need to be made to reflect the change in attenuation factor for the crawlspace air sampling. It would also be advisable to determine whether an analytical method exists that could achieve lower detection limits for both compounds.

During each air sampling event, the condition of the passive venting system and the liner that is under a portion of the crawlspace is observed. The venting system has always been unobstructed and the liner, with a thick layer of gravel over the top, has been undisturbed.

Site Inspection

The inspection of the site was conducted on July 7 and 8, 2014. In attendance were Diana Engeman, EPA project manager; Venessa Madden, EPA ecological risk assessor; Bryan Clark, property owner; Jennifer McIvor, Environmental Manager for MidAmerican Energy Company; Kevin Armstrong, MWH, project manager for MidAmerican's environmental consultant; Ron Knoche, City Engineer, city of Iowa City; and Ben Clark, Senior Civil Engineer, city of Iowa City. The purpose of the inspection was to assess the protectiveness of the remedy. The Site Inspection Report is Attachment 5.

The building owner provided access to the crawlspace beneath the Iowa-Illinois Square apartment building so that conditions there could be observed. There is nothing stored in the crawlspace that could impact air sampling. The area with the liner cover with gravel was undisturbed.

The members of the city engineering office were present to discuss maintenance of the eastern bank of Ralston Creek. The city provides maintenance of the creek bank and earlier in the summer had done some trimming of vegetation on the eastern bank. However, the woody growth along the eastern bank was not removed and several trees have grown up over the years in that area. While vegetation of the creek banks helps to maintain the stability of the steep slope, tree roots will tend to have a destructive effect on the tile liner. The EPA asked that trees and woody growth be removed and continue to be removed periodically. The city engineer agreed that they could do that. The site inspection also included an examination of the tile liner conditions, to the extent that it was possible to do so because the water level was a bit higher than normal and vegetation covered a lot of the liner. The EPA requested that the city consider more aggressive maintenance to improve or maintain the condition of the liner on the eastern bank of the stretch of the creek adjacent to the site as it is a physical barrier that limits the movement of site contaminants into the surface water and sediment in that area.

The city inquired whether the EPA had any grants available that might assist them in their liner maintenance effort. At this time there are no EPA grant monies available to fund the tile liner and creek bank maintenance efforts. The city engineer confirmed that maintaining a stable creek bank is something that the city recognizes as important.

IV. TECHNICAL ASSESSMENT

Question A: Is the remedy functioning as intended by the decision documents?

Remedial Action Performance

The remedy is performing as expected, with natural attenuation processes continuing to occur in the contaminated groundwater plume within the TI zone as demonstrated through evaluation of the

contaminant concentrations and natural attenuation parameters that are sampled. Groundwater outside of the TI zone in the unconsolidated aquifer is meeting the action levels except for sporadic exceedances of manganese at MW-7. This well is upgradient of the site contamination source so it is likely that the manganese is naturally occurring and not the result of contamination from the site. In the bedrock aquifer, the action level for naphthalene was exceeded at MW-35 in October 2010 and April 2013. However, the April 2013 detection of naphthalene at 1.11 µg/L only exceeded the action level of 1.1 µg/L by a very small amount and was also detected in the associated method blank, bringing into question the validity of this value. Due to the sporadic exceedances and recent sampling results, it was determined that these results were not indicative of a remedy issue. Manganese exceeded the action level at MW-33 in April 2010 but has not exceeded risk-based levels since that sampling event in the bedrock aquifer. There have no other exceedances of an action level in the compliance monitoring wells in the bedrock aquifer.

Data for each COC in groundwater were statistically evaluated annually for concentration trends using the Mann-Kendall test. This test is used to identify increasing and decreasing concentration trends at the 90-percent confidence level for each COC detected at each monitoring well. Based on this analysis for COCs in each well, the contaminated groundwater plume appears to be stable.

Numerous geochemical parameters are measured to determine the presence and identity of biodegradation processes occurring within the groundwater plume. A detailed description of these processes are included in each Remedial Action Annual Report. In general, the data analysis supports the conclusion that intrinsic bioremediation is occurring to some degree throughout the contaminated groundwater plume.

Sediment sampling results have been quite variable, with six of the nine COCs exceeding the performance standards in one downstream sample in 2011, compared to one COC exceedance in 2012 and none exceeded in 2013. As additional samples are collected, the statistical analysis of this data will become more robust. The condition of the tile lining has not degraded significantly during the remedial action but there are areas of damage, which was discussed with representatives of the city during the five-year review inspection.

LNAPL gauging and recovery continues consistent with the LNAPL Recovery Plan. Six wells are identified as recovery wells and an additional six wells were gauged. One of the wells that was gauged, MW-46, was plugged and abandoned in 2013 due to an obstruction in the well. One recovery well, LMW-4, was reclassified as a monitoring well in 2013 because it met the criteria for termination of LNAPL recovery as laid out in the LNAPL Recovery Plan. LNAPL recovery continues at a very low rate in the remaining five recovery wells Since implementation of the remedy, the PRP have been recovering DNAPL from two additional bedrock wells where DNAPL has historically been found in recoverable quantities. DNAPL recovery will continue from these two wells.

The vapor intrusion mitigation system components (liner and passive venting) are operating as intended in the crawlspace. Air in the crawlspace beneath the Iowa-Illinois Square apartment building is monitored through annual sampling for benzene and naphthalene, the COCs present at the site that are sufficiently volatile to potentially move from groundwater into air. While benzene has been detected in air in the crawlspace and has exceeded the indoor air action level action level in March 2014 and in a duplicate sample in March 2012, these levels did not exceed the acceptable cancer risk range that would indicate it could pose a health threat for indoor air for apartment dwellers. Naphthalene has not been detected above the analytical detection limit. In the future it will be advisable to determine whether an analytical method is available that can achieve lower detection limits for both compounds.

System Operations/O&M

The operating procedures, as currently implemented, continue to maintain the effectiveness of the remedy and are expected to do so in the future. Requests to modify the operating procedures will be reviewed by the EPA when any requests are made. The process for DNAPL recovery will be added to the LNAPL Recovery Plan. In addition, the EPA is working with the city to develop a more robust maintenance plan for woody vegetation and tile integrity in Ralston Creek.

Implementation of ICs and Other Measures

An institutional control in the form of an environmental covenant was filed with the Johnson County Recorder on June 4, 2009, on the site property, currently occupied by the Iowa-Illinois Square apartments. The environmental covenant prohibits installation of wells on the site, other than monitoring wells, restricts excavation deeper than six feet below grade without prior notification and approval of the EPA except in cases of emergency, and requires notification to the EPA a minimum of 60 calendar days prior to transfer of title of the property or change in use. This institutional control remains protective, and has resulted in notification to the EPA twice in the past five years that excavation was required in areas that were potentially contaminated, ensuring that appropriate measures were taken to protect workers and the public from exposure and proper disposal of contaminated soil.

An institutional control in the form of an environmental covenant was filed with the Johnson County Recorder on December 15, 2010, on the stretch of Ralston Creek located west of the site. The environmental covenant prohibits installation of wells on the property, other than monitoring wells and restricts excavation or other disturbance to the tile lining without prior notification and approval of the EPA, except in cases of emergency. This institutional control continues to be protective.

Institutional controls in the form of a state rule governing installation of wells in areas of contamination, a city code requiring connection to the public water supply and a county ordinance requiring notification regarding setbacks from contamination for groundwater well installation remain in force and provide additional layers of protection.

Question B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy section still valid?

Changes in Standards and To-Be-Considereds (TBCs)

- *Have there been changes to risk-based cleanup levels or standards identified as ARARs in the ROD that call into question the protectiveness of the remedy?*

  In 2008, the ROD was modified by memorandum to change the action levels for naphthalene in groundwater and indoor air because a significant change was made to the toxicity values for that compound which made the previous action levels not sufficiently protective. The revised action levels in the ROD are protective and reflect the latest science and toxicity information.

  No other changes to ARARs or the ROD have been made, and the action levels remain protective of potential current/future land and resource uses.

- *Are there newly promulgated standards that call into question the protectiveness of the remedy?*

  No new standards have been promulgated.

- *Have TBCs used in selecting cleanup levels at the site changed in way that could affect the protectiveness of the remedy?*

  Ecological TBCs are based on Probable Effect Levels (MacDonald et al., 2000), which have not changed.

  Changes in Exposure Pathways

- *Has land use or expected land use on or near the site changed (e.g., industrial to residential, commercial to residential)?*

  Land use of the site remains unchanged but the use of two parcels of property adjacent to or very near the site have changed since implementation of the remedial action. An apartment building has been constructed to the south of the site on property previously occupied by two auto garages. According to the owner of this building, it was constructed on a slab with the garages occupying the ground level of the building. To the west, across Ralston Creek, the Burlington Commons apartment building was constructed on property previously occupied by Hanson Auto Body Shop.

- *Have any human health or ecological routes of exposure or receptors changed or been newly identified (e.g., dermal contact where none previously existed, new populations or species identified on site or near the site) that could affect the protectiveness of the remedy?*

  No new contaminants, exposure pathways or receptors have been identified.

- *Are there newly identified contaminants or contaminant sources?*

  We are not aware of any new contaminants.

- *Are there unanticipated toxic byproducts of the remedy not previously addressed by the decision documents (e.g., byproducts not evaluated at the time of remedy selection)?*

  No toxic by-products of the remedy have been identified.

- *Have physical site conditions or the understanding of these conditions changed in a way that could affect the protectiveness of the remedy?*

  The tile lining of Ralston Creek is deteriorating partially due to vegetation growing through the tiles. This lining provides a protective barrier for the creek, as it blocks migration of some of the site-related waste. If the liner continues to deteriorate, contaminant concentrations in the sediment may increase. Therefore, the EPA has requested that the city assist with the maintenance of the liner by removing the woody vegetation that has become established along the eastern bank of the creek. The city engineer said they were agreeable to this request.

Changes in Toxicity and Other Contaminant Characteristics

- *Have toxicity factors for contaminants of concern at the site changed in a way that could affect the protectiveness of the remedy?*

  There have been some changes to the toxicity factors which have changed the regional screening levels (RSLs) found in the Regional Screening Levels Summary Table (http://www.epa.gov/region9/superfund/prg/), however none of the changes rise to the level of significance that would call into question the protectiveness of the remedy. The default exposure factors were modified in February 2014, therefore some RSLs may have increased based on current information, while others decreased. The overall impact of those changes may make a particular RSL increase or decrease, however, the overall effect on the contaminants for this site does not call into question the protectiveness of the remedy.

- *Have other contaminant characteristics changed in a way that could affect protectiveness of the remedy?*

  No.

Changes in Risk Assessment Methods

- *Have standardized risk assessment methodologies changed in a way that could affect the protectiveness of the remedy?*

  There were no changes to the human health or ecological standardized risk assessment methodologies that would affect the protectiveness of the remedy.

  Recently, vapor intrusion guidance has modified the attenuation factor to 1.0 when using crawlspace samples to predict indoor air levels, rather than an attenuation factor of 0.01. This means that the air sampling results obtained in the crawlspace should be compared to the indoor air action levels to determine protectiveness. The most recent sampling events were analyzed using the 1.0 attenuation factor and both benzene and napthalene concentrations remain within the acceptable risk range for both contaminants. Due to this change, it is recommended that changes to the Air Monitoring Plan be made to reflect the change in attenuation factor for the crawlspace air sampling. It would also be advisable to determine whether an analytical method exists that could achieve lower detection limits for both compounds.

Expected Progress Toward Meeting RAOs

The remedy is progressing as expected toward meeting the RAOs.

- The remedy is preventing human exposure to groundwater containing COCs that exceed applicable or relevant and appropriate requirements (ARARs) or health-based levels.
- The remedy is preventing soil exposure risks to acceptable levels by maintaining the existing land use. If necessary, the future soil RAO may be reevaluated if the building is removed or its use changed.
- The remedy is preventing human exposure to indoor air containing COCs that exceed health-based levels.

- The remedy continues to maintain the existing ecological steady state and prevent and/or reduce future unacceptable risks to human health and the environment in Ralston Creek.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy? No.

- *Have newly found ecological risks been found?*

  No.

- *Are there impacts from natural disasters (e.g., a 100-year flood)?*

  No.

- *Has any other information come to light which could affect the protectiveness of the remedy?*

  There have been changes in the use of properties near the site but it is not believed that these changes in land use impact the protectiveness of the remedy. The property directly south of the site was originally an auto repair facility. That building and another garage to the south of that building were demolished and a multi-unit residential building was built on the property. It is owned by the owner of the Iowa-Illinois Square apartment building. Since they were aware of the potential for contamination related to the site, the building was constructed on a slab with garage space on the ground level and living spaces above. This should minimize any potential for vapor intrusion from the site.

  The other property where the land use has changed is across Ralston Creek to the west of the site. Formerly that property was the location of an automotive body shop. That building was demolished and a multi-unit apartment building was constructed on the property. Previous sampling of that property did not indicate that this change in use should be of concern.

Technical Assessment Summary

Based upon a review of the analytical data, an inspection of the site and a review of the institutional controls for the site, the remedy is performing as intended by the ROD. There is no exposure to groundwater contamination due to the institutional controls that are in place for the plume within the TI zone. Groundwater monitoring confirms that water outside the TI zone is not exceeding action levels. Natural attenuation continues to occur within the contaminated groundwater plume.

The LNAPL recovery system has been effective in reducing the volume of LNAPL in the subsurface and continues to function as designed. DNAPL recovery from two bedrock wells has been implemented. This activity is planned to continue and will be incorporated into the LNAPL Recovery Plan.

The implementation of institutional controls for Ralston Creek and maintenance of the creek bank and liner have been effective in maintaining the ecological steady state in the creek. Improved maintenance of the eastern creek bank and liner by the city will aid in the future protectiveness of the element of the remedy.

The crawlspace liner and passive venting system continue to prevent exposure to indoor air containing contaminants above health-based levels as has been demonstrated by air monitoring in the crawlspace. In the future, levels of air contaminants measured in the crawlspace will be compared to the indoor air action levels due to a change in the attenuation factor from 0.01 to 1.0 when comparing crawlspace air samples to indoor air levels. The EPA will work with the PRP to determine if the analytical methods for indoor air should be modified to allow for lower detection limits.

V. ISSUES/RECOMMENDATIONS AND FOLLOW-UP ACTIONS

There are no issues that adversely affect current or future protectiveness of the remedy.

The following recommendations are technical improvements but do not affect the protectiveness of the remedy were identified:

- The analytical method utilized for air samples should be reviewed to determine whether a method is available with detection limits below the indoor air action levels.
- Since the attenuation factor for comparison of crawlspace air samples to indoor air levels is now 1.0, crawlspace air samples should be compared to the air action levels rather than performance standards that are two orders of magnitude greater than the action levels. The Air Monitoring Plan should be modified to document this change to the data evaluation protocol and action levels.
- DNAPL recovery has begun from two monitoring wells with significant product recovery. DNAPL recovery from these wells will continue and the LNAPL Recovery Plan should be modified to reflect this change.

During the site inspection, evidence of deterioration of the tile liner in Ralston Creek was identified. The EPA will work with the city to develop plans for removal of woody vegetation and alternatives to improve tile liner integrity.

VI. PROTECTIVENESS STATEMENT

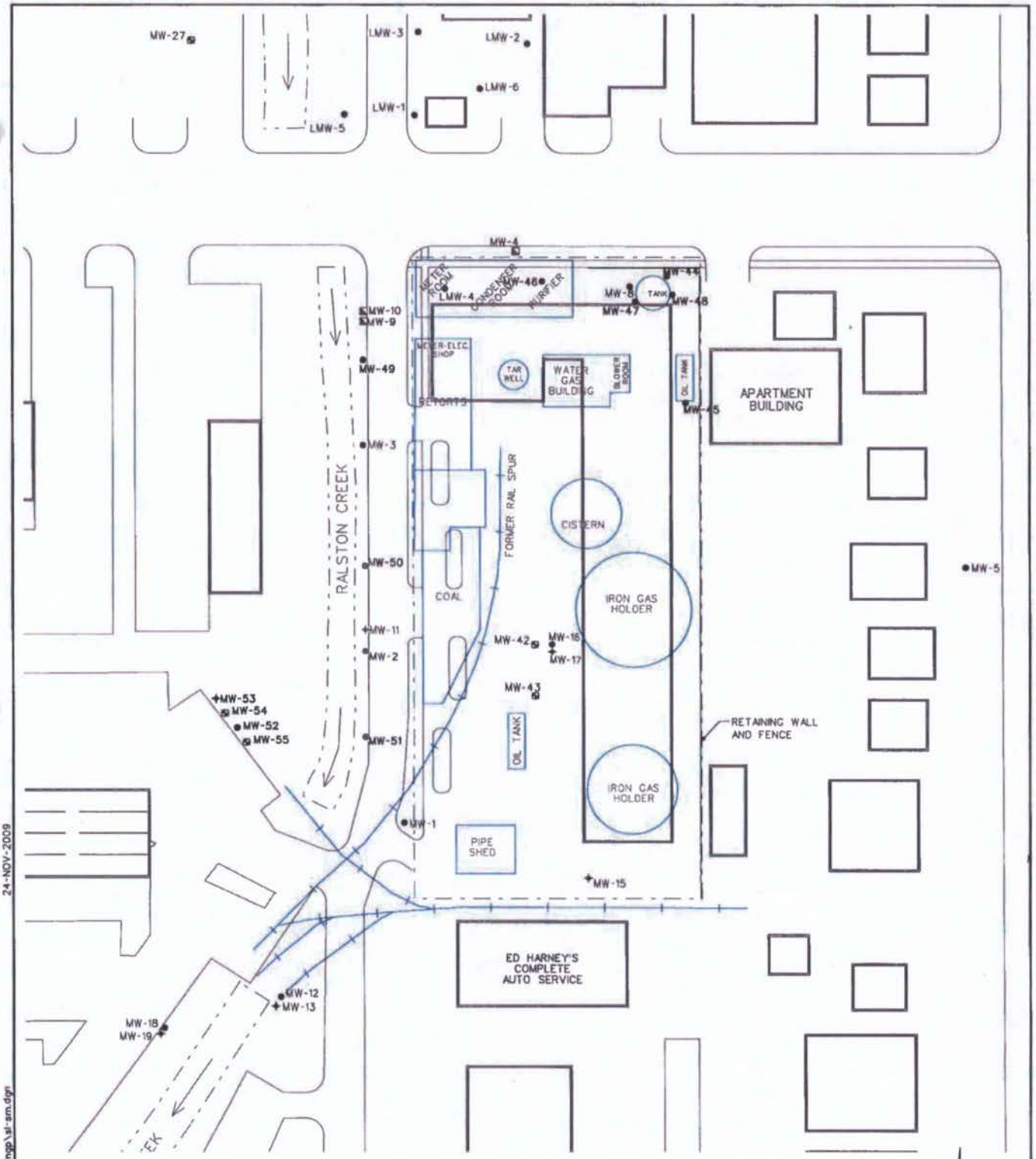
Sitewide Protectiveness Statement	
Protectiveness Determination: Protective	*Addendum Due Date (if applicable):* Click here to enter a date.
Protectiveness Statement: The remedy for the Iowa City FMGP is protective of human health and the environment.	

VII. NEXT REVIEW

The next FYR report for the Iowa City Former Manufactured Gas Plant Superfund site is required five years from the completion date of this review.

FIGURE 1

Current Site Layout



LEGEND:

LMW● WATER TABLE MONITORING WELL (L&M MIGHTY SHOP SITE)

MW● WATER TABLE MONITORING WELL (FMGP SITE)

✦ BEDROCK SURFACE MONITORING WELL

NOTES:

1. HISTORIC STRUCTURES SHOWN IN BLUE.
2. HISTORIC MAP SOURCE: 1926 & 1933 SANBORN FIRE INSURANCE MAPS

DESIGNED BY	JANET BALDWIN	
DRAWN BY	NORA DAY	
CHECKED BY	KEVIN ARMSTRONG	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

0 40 80
SCALE IN FEET

PROJECT
MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE
IOWA CITY, IOWA

MWH

TITLE
SITE LAYOUT

FIGURE
1-2

24-NOV-2009

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FIGURE 2

Site Vicinity and Current Groundwater Monitoring Network

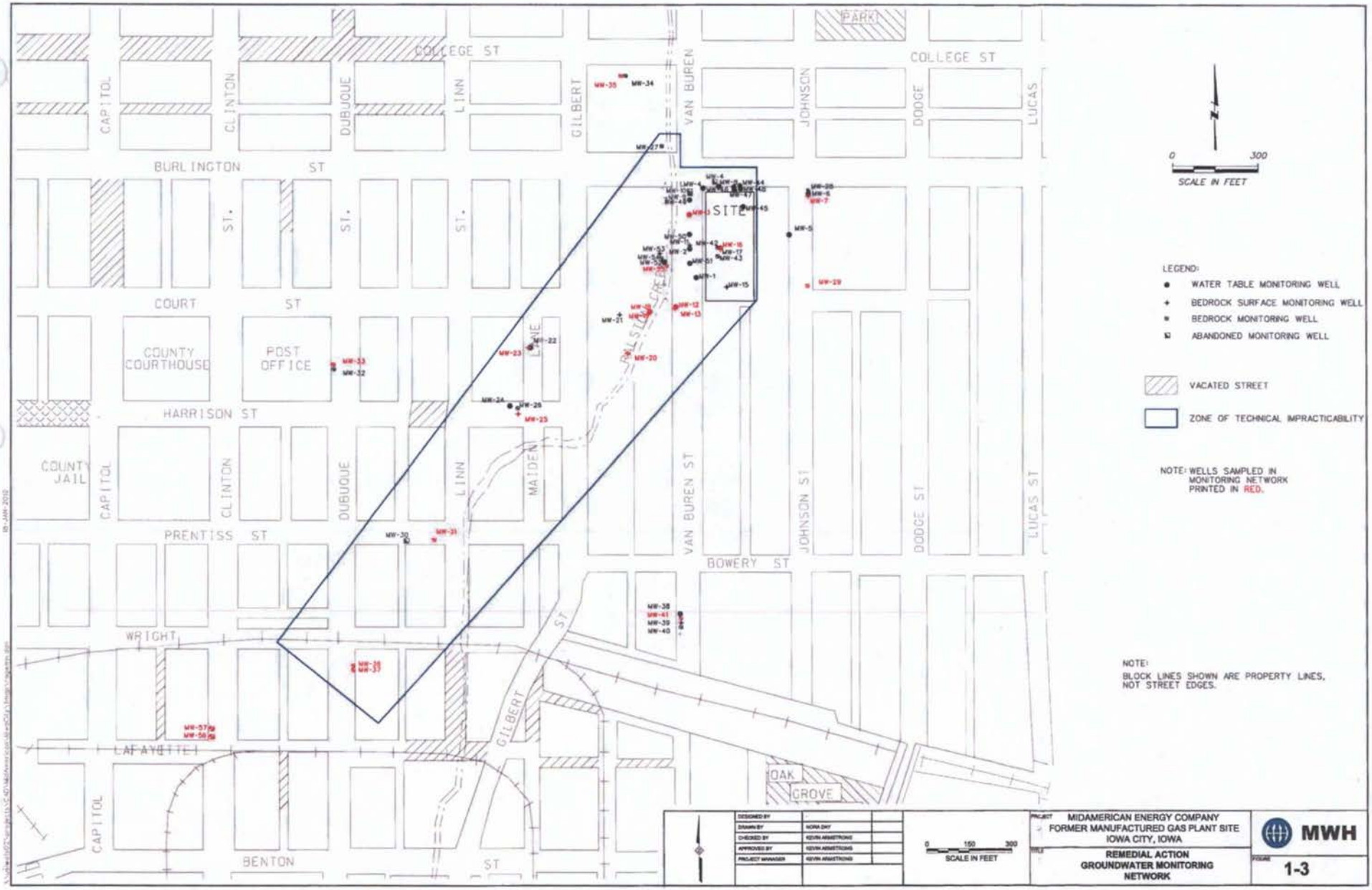
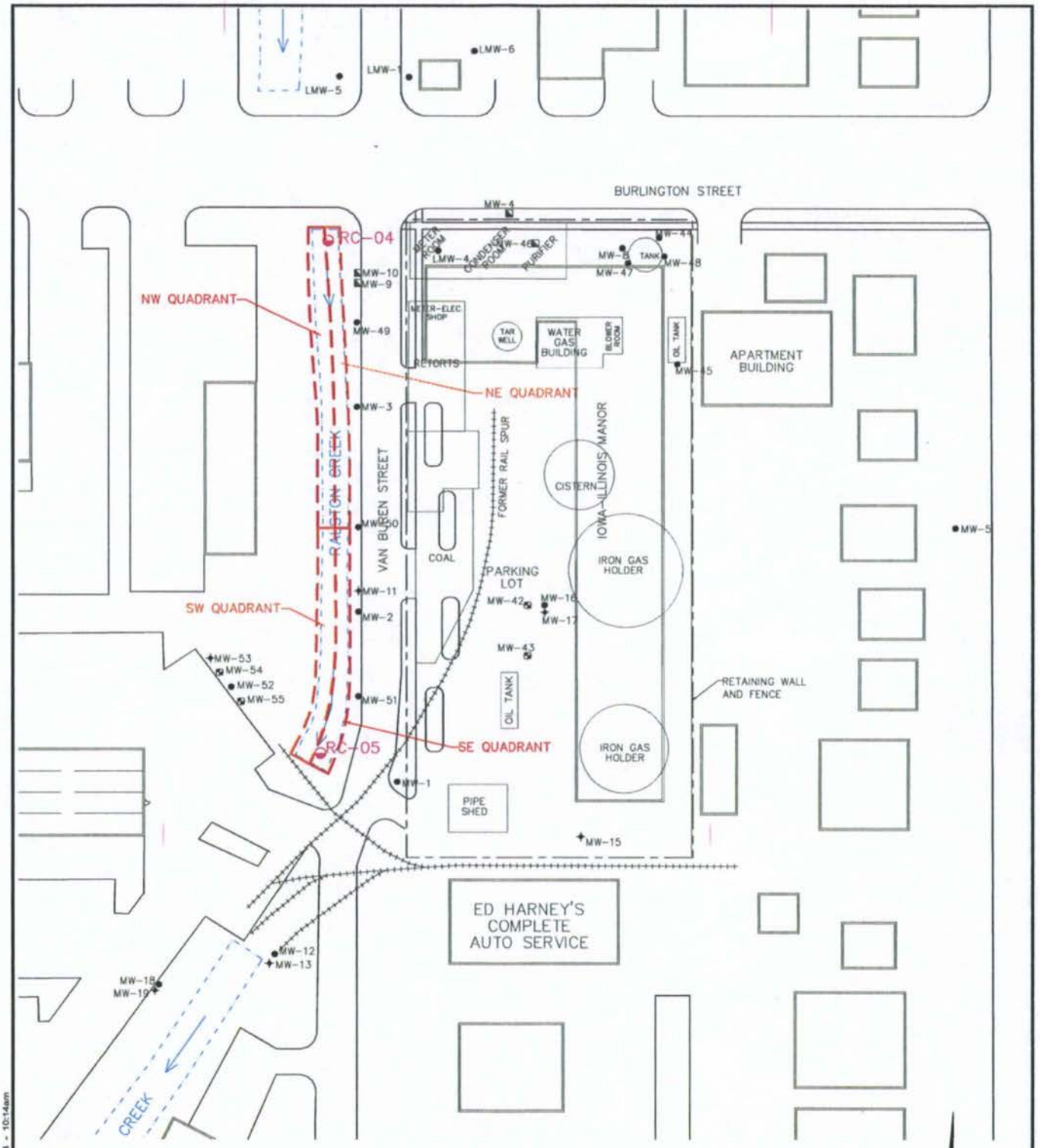

COLLEGE ST
PARK
CAPITOL
CLINTON
DUBUQUE
LINN
GILBERT
VAN BUREN
JOHNSON
DODGE
LUCAS
BURLINGTON ST
SITE
COURT ST
COUNTY COURTHOUSE
POST OFFICE
HARRISON ST
COUNTY JAIL
MAIDEN LANE
PRENTISS ST
BOWERY ST
WRIGHT
LAFAYETTE
BENTON ST
OAK GROVE
0 300
SCALE IN FEET
LEGEND:
WATER TABLE MONITORING WELL
BEDROCK SURFACE MONITORING WELL
BEDROCK MONITORING WELL
ABANDONED MONITORING WELL
VACATED STREET
ZONE OF TECHNICAL IMPRACTICABILITY
NOTE: WELLS SAMPLED IN MONITORING NETWORK PRINTED IN RED.
NOTE:
BLOCK LINES SHOWN ARE PROPERTY LINES, NOT STREET EDGES.
0 150 300
SCALE IN FEET
MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE
IOWA CITY, IOWA
REMEDIAL ACTION
GROUNDWATER MONITORING
NETWORK
MWH
1-3

FIGURE 3

Ralston Creek Sediment Sampling Location & Tile Liner Inspection Area



LEGEND:

LMW● WATER TABLE MONITORING WELL

● BEDROCK MONITORING WELL

✦ BEDROCK SURFACE MONITORING WELL

▣ ABANDONED WELL

RC ● RALSTON CREEK SEDIMENT SAMPLING LOCATION

TILE LINER INSPECTION AREA

DESIGNED BY	KEVIN ARMSTRONG	
DRAWN BY	KAI CRICK	
CHECKED BY	KEVIN ARMSTRONG	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

0 40 80
SCALE IN FEET

PROJECT: MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE
IOWA CITY, IOWA

TITLE: **RALSTON CREEK SEDIMENT SAMPLING LOCATIONS AND TILE LINER INSPECTION AREA**

MWH

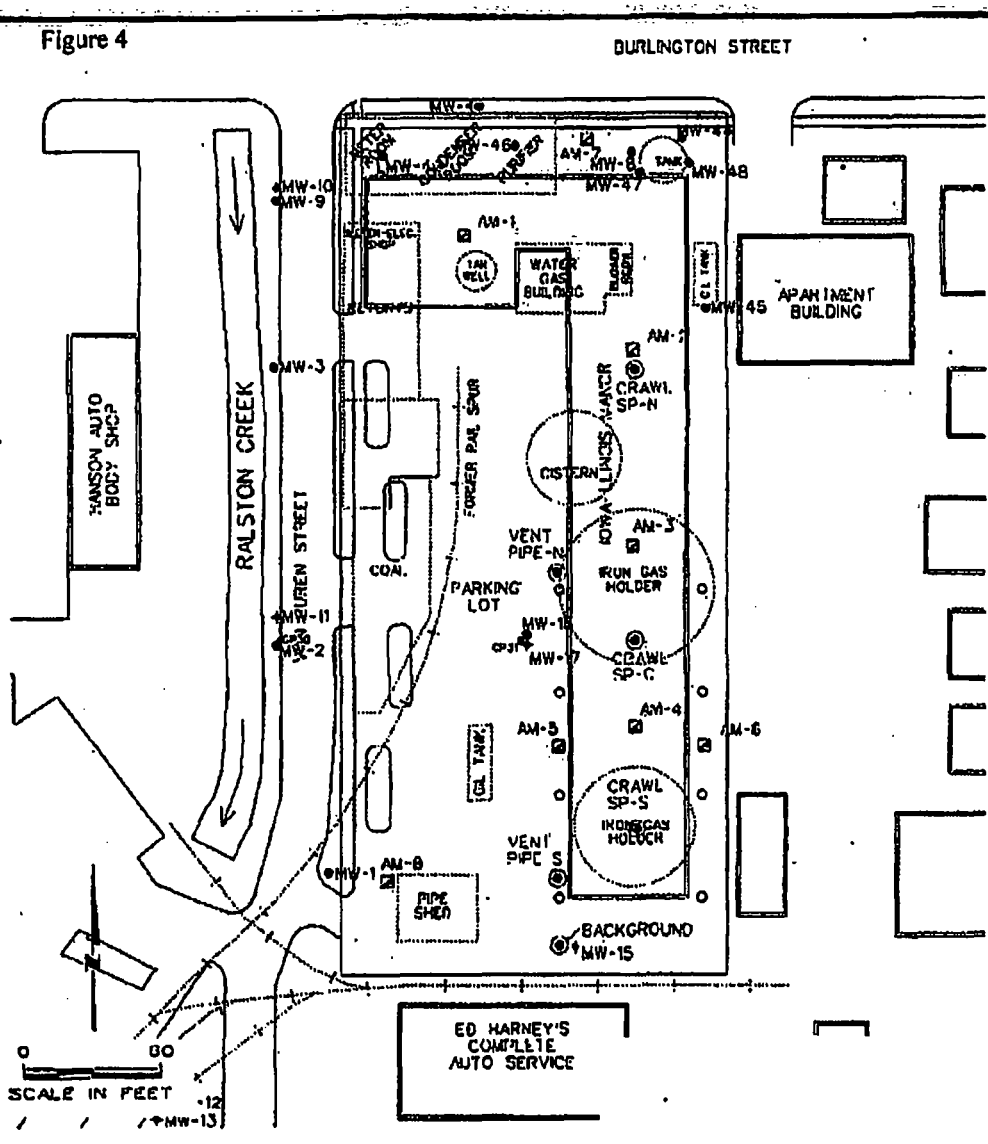
FIGURE: **2-2**

C:\pw\work\dfms12425\RCSSL&TLIA 2-2.dwg Feb 11, 2014 - 10:14am

FIGURE 4

Air Sampling Locations

Figure 4



LEGEND:

- [MW] WATER TABLE MONITORING WELL (L&M MIGHTY SHOP SITE)
- MW WATER TABLE MONITORING WELL (FMGP SITE)
- BEDROCK SURFACE MONITORING WELL
- AIR SAMPLING LOCATION (ESI)
- AMBIENT AIR SAMPLING LOCATION (RI)
- PASSIVE VENT

NOTES:

1. HISTORIC STRUCTURES SHOWN DASHED.
2. HISTORIC MAP SOURCE: 1926 & 1933 SANBORN FIRE INSURANCE MAPS

MWH Des Moines Iowa	MIDAMERICAN ENERGY COMPANY FORMER MANUFACTURED GAS PLANT SITE IOWA CITY, IOWA	AIR SAMPLING LOCATIONS	FIGURE 4

ATTACHMENT 1

List of Documents Reviewed

ATTACHMENT 1

DOCUMENTS REVIEWED

Record of Decision, Iowa City Former Manufactured Gas Plant Site, Iowa City, Iowa, prepared by USEPA, September 26, 2006.

Letter regarding Further Evaluation of Metals in Groundwater, from MWH to USEPA, January 17, 2008.

Letter regarding Approval of Elimination of Some Metals from List of COCs, USEPA to MidAmerican Energy Company, April 10, 2008.

Memorandum for Record regarding Record of Decision Modification, Change to Action Levels for Naphthalene in Groundwater and Indoor Air, prepared by USEPA, June 17, 2008.

Consent Decree, Docket Number 3:08-cv-0133-JAJ, November 26, 2008.

Quality Assurance Project Plan for Air Monitoring, prepared by Stanley Consultants, Inc., April 2009.

Air Monitoring Program, prepared by Stanley Consultants, Inc., April 2009.

Environmental Covenant, Iowa-Illinois Manor, LLC, May 21, 2009.

Remedial Design Report, prepared by MWH, November 11, 2009.

Air Sampling Report, prepared by Stanley Consultants, Inc., May 2010.

Air Annual Progress Report, prepared by Stanley Consultants, Inc., July 2010.

Environmental Covenant, City of Iowa City, December 15, 2010.

Remedial Action Annual Report 2010, prepared by MWH, March 2011.

Air Sampling Report, prepared by Stanley Consultants, Inc., April 2011.

Air Annual Progress Report, prepared by Stanley Consultants, Inc., June 2011.

Remedial Action Annual Report 2011, prepared by MWH, February 2012.

Air Sampling Report, prepared by Stanley Consultants, Inc., April 2012.

Air Annual Progress Report, prepared by Stanley Consultants, Inc., August 2012.

Remedial Action Annual Report 2012, prepared by MWH, February 2013.

Air Annual Progress Report, prepared by Stanley Consultants, Inc., July 2013.

Remedial Action Annual Report 2013, prepared by MWH, February 2014.

Air Sampling Report, prepared by Stanley Consultants, Inc., May 2014.

Air Annual Progress Report, prepared by Stanley Consultants, Inc., December 2014.

ATTACHMENT 2

Groundwater Monitoring Results

Iowa City, Iowa Former Manufactured Gas Plant Site
MidAmerican Energy Company

Groundwater Analytical Results

		Performance Standard	MW03-GW-001 25-Oct-1999		MW03-GW-002 22-Jun-2000		MW03-GW-003 11-Jul-2001		MW03-GW-004 12-Dec-2001		MW03-GW-0410 09-Apr-2010 DV			MW03-GW-1010 06-Oct-2010		MW03-GW-0411 13-Apr-2011	
VOCs	*Units*																
Benzene	µg/L	5	175		56		139		125		1540			134		81.8	
Toluene	µg/L	1000	38.8		7.6		74.3		19.7		934			29.0		37.2	
Ethylbenzene	µg/L	700	363		113		382		355		1460	C9	J+	492		298	
Xylenes, Total	µg/L	10000	278		96.6		259		286		1280			285		206	
PAHs																	
Acenaphthene	µg/L	914	25.6		8.89		23.8		26.4		209			76.5		35.3	
Acenaphthylene	µg/L	362	37.5		9.43		20.4		0.19	U	177			11.8		5.75	
Anthracene	µg/L	---	0.69		0.54		0.65		1.03		136			2.47		0.994	
Benzo(a)anthracene	µg/L	0.13	0.10	U	0.10	U	0.10	U	0.10	U	51.7			0.100	U	0.111	U
Benzo(a)pyrene	µg/L	0.2	0.10	U	0.10	U	0.10	U	0.10	U	35.3			0.100	U	0.111	U
Benzo(b)fluoranthene	µg/L	0.1	0.10	U	0.10	U	0.10	U	0.10	U	29.1			0.100	U	0.111	U
Benzo(ghi)perylene	µg/L	---	0.10	U	0.10	U	0.10	U	0.10	U	9.36			0.100	U	0.111	U
Benzo(k)fluoranthene	µg/L	0.14	0.10	U	0.10	U	0.10	U	0.10	U	7.16			0.100	U	0.111	U
Chrysene	µg/L	0.85	0.10	U	0.10	U	0.10	U	0.10	U	40.9			0.100	U	0.111	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.10	U	0.10	U	0.10	U	0.22		2.67	MDL		0.00810	U,MDL	0.111	U
Fluoranthene	µg/L	---	0.10	U	0.23		0.10	U	0.10	U	110			0.337		0.231	
Fluorene	µg/L	490	11.5		3.22		11.7		18.4		184			28.4		10.2	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.10	U	0.10	U	0.10	U	0.10	U	8.49			0.100	U	0.111	U
Naphthalene	µg/L	1.1	493		2.83	J	438		501		5370			309		119	
Phenanthrene	µg/L	294	7.6		0.58		6.59		12		348			8.18		3.80	
Pyrene	µg/L	---	0.19	U	0.19	U	0.19	U	0.19	U	97.7			0.302		0.111	U
1-Methylnaphthalene	µg/L	---	na		na		na		208		793			288		149	
2-Methylnaphthalene	µg/L	61.2	7.1		0.72		6.13		7.82		132			0.931		0.216	
Inorganics																	
Cyanide, Total	mg/L	---	8.4		3.21		5.63	J	3.2		na			na			
Cyanide, WAD	mg/L	0.2	na		na		na		na		0.0100	U		0.0100	U,CN5	0.0100	U,CN5
Manganese, Total	mg/L	0.775	4		2.8		2.52		2.77		2.45			2.54		1.71	
Natural Attenuation Parameters																	
Nitrate	mg/L	---	1.0	U	1.0	U	1.0	UJ	na		na			na		na	
Nitrite	mg/L	---	na		na		na		na		na			na		na	
Ammonia	mg/L	---	18		5.27		13.6		na		na			na		na	
Manganese, Dissolved	mg/L	---	na		na		2.08		2.5		na			na		na	
Iron, Dissolved	mg/L	---	na		na		0.20		0.14		na			na		na	
Sulfate	mg/L	---	110		440		120		na		na			na		na	
Sulfide	mg/L	---	7.5		0.69		5.6		na		na			na		na	
Methane	µg/L	---	na		na		na		na		na			na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na			na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na			na		na	
Orthophosphate	mg/L	---	na		na		na		na		na			na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na			na		na	
Chloride	mg/L	---	na		na		na		na		na			na		na	

Iowa City, Iowa Former Manufactured Gas Plant Site
MidAmerican Energy Company

Groundwater Analytical Results

		Performance Standard	MW03-GW-1011 25-Oct-2011		DV	MW03-GW-0412 12-Apr-2012		DV	MW3-GW-1012 10-Oct-2012		DV	MW3-GW-0413 11-Apr-2013		DV	MW3-GW-1013 23-Oct-2013		DV	MW12-GW-001 25-Oct-1999	
VOCs	*Units*																		
Benzene	µg/L	5	82.2			77.2			91.8			20.1			86.1			10	
Toluene	µg/L	1000	29.7			23.6			29.7			8.90			26.8			1.0	U
Ethylbenzene	µg/L	700	344			340			435			76.2			360			1.0	U
Xylenes, Total	µg/L	10000	230			218			266			68.1			238			5.3	
PAHs																			
Acenaphthene	µg/L	914	41.1	RL1	J-	59.2		J-	60.4		J-	26.1		J-	54.5		J-	16.1	
Acenaphthylene	µg/L	362	14.3	RL1	J-	7.47		J-	5.62		J-	5.46		J-	5.58		J-	33.8	
Anthracene	µg/L	---	2.84	RL1	J-	1.07		J-	0.928		J-	0.900		J-	1.01	U	UJ	0.61	
Benzo(a)anthracene	µg/L	0.13	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.128	U	UJ	1.01	U	UJ	0.10	U
Benzo(a)pyrene	µg/L	0.2	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.149	U	UJ	1.01	U	UJ	0.10	U
Benzo(b)fluoranthene	µg/L	0.1	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.287	U	UJ	1.01	U	UJ	0.10	U
Benzo(ghi)perylene	µg/L	---	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.181	U	UJ	1.01	U	UJ	0.10	U
Benzo(k)fluoranthene	µg/L	0.14	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.191	U	UJ	1.01	U	UJ	0.10	U
Chrysene	µg/L	0.85	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.117	U	UJ	1.01	U	UJ	0.10	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.289	RL1,J,MDL	J-	0.0170	U,MDL	UJ	0.0130	U,MDL	UJ	0.181	U	UJ	0.172	U	UJ	0.10	U
Fluoranthene	µg/L	---	1.00	U,RL1	UJ	0.135		J-	0.258		J-	0.521	U	UJ	1.01	U	UJ	0.10	U
Fluorene	µg/L	490	10.4	RL1	J-	20.8		J-	19.1		J-	8.57		J-	17.4		J-	8.7	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	1.00	U,RL1	UJ	0.100	U	UJ	0.100	U	UJ	0.181	U	UJ	1.01	U	UJ	0.10	U
Naphthalene	µg/L	1.1	270	RL1	J-	212	B1,B	B, J-	227		J-	2.62	B	B,J-	100	B*	J-,J+,B	3.32	J
Phenanthrene	µg/L	294	12.2	RL1	J-	10.4		J-	10.9		J-	3.00		J-	9.7		J-	10.3	
Pyrene	µg/L	---	1.00	U,RL1	UJ	0.118		J-	0.176		J-	0.585	U	UJ	1.01	U	UJ	0.19	U
1-Methylnaphthalene	µg/L	---	237	RL1	J-	232		J-	234		J-	57.8		J-	177		J-	na	
2-Methylnaphthalene	µg/L	61.2	1.32	RL1	J-	0.414		J-	0.574		J-	0.143		J-	1.01	U	UJ	1.8	
Inorganics																			
Cyanide, Total	mg/L	---	na			na			na			na			na			0.0694	
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0264			0.0100	U		0.0730			0.0233			na	
Manganese, Total	mg/L	0.775	1.70			2.40			2.00			1.010			1.2			4	
Natural Attenuation Parameters																			
Nitrate	mg/L	---	na			na			na			na			na			1.0	U
Nitrite	mg/L	---	na			na			na			na			na			0.10	U
Ammonia	mg/L	---	na			na			na			na			na			2.5	
Manganese, Dissolved	mg/L	---	na			na			na			na			na			na	
Iron, Dissolved	mg/L	---	na			na			na			na			na			na	
Sulfate	mg/L	---	na			na			na			na			na			150	
Sulfide	mg/L	---	na			na			na			na			na			5.2	
Methane	µg/L	---	na			na			na			na			na			59	
Alkalinity, Total	mg/L	---	na			na			na			na			na			460	
Total Kjeldahl Nitrogen	mg/L	---	na			na			na			na			na			2.9	
Orthophosphate	mg/L	---	na			na			na			na			na			0.10	U
Total Organic Carbon	mg/L	---	na			na			na			na			na			26.33	
Chloride	mg/L	---	na			na			na			na			na			na	

Iowa City, Iowa Former Manufactured Gas Plant Site
MidAmerican Energy Company

Groundwater Analytical Results

		Performance Standard	MW12-GW-002 21-Jun-2000		MW12-GW-003 11-Jul-2001		MW12-GW-004 12-Dec-2001		MW12-GW-005 16-Apr-2002		MW12-GW-1002 01-Nov-2002		MW12-GW-0103 07-Jan-2003		MW12-GW-1003 22-Oct-2003		MW12-GW-0404 06-Apr-2004	
VOCs	*Units*																	
Benzene	µg/L	5	2.5		15.5		7		1.0	U	2.1		11.0		7.5		1.0	U
Toluene	µg/L	1000	1.0	U	1.0	U	1.0	U	1.0	U	2	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	1.0	U	1.8		1.0	U	1.0	U	2	U	1.0	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	3.0	U	7.3		3.0	U	3.0	U	7	U	3.0	U	2.6		1.0	U
PAHs																		
Acenaphthene	µg/L	914	4.80		40.4		21.9		1.48		21		52		22		2.4	U
Acenaphthylene	µg/L	362	11.1		82.6		27.3		1.29		1	U	1.0	U	100		8.4	
Anthracene	µg/L	---	0.10	U	0.13		0.39		0.19	U	0.17		0.17		0.51		0.018	Ja
Benzo(a)anthracene	µg/L	0.13	0.10	U	0.10	U	0.10	U	0.19	U	0.10	U	0.10	U	0.14	U	0.12	U
Benzo(a)pyrene	µg/L	0.2	0.10	U	0.10	U	0.10	U	0.19	U	0.10	U	0.10	U	0.14	U	0.12	U
Benzo(b)fluoranthene	µg/L	0.1	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.052	U	0.048	U
Benzo(ghi)perylene	µg/L	---	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.21	U	0.19	U
Benzo(k)fluoranthene	µg/L	0.14	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.052	U	0.048	U
Chrysene	µg/L	0.85	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.14	U	0.12	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.31	U	0.29	U
Fluoranthene	µg/L	---	0.10	U	0.10	U	0.10	U	0.19	U	0.18		0.15		1.0		0.12	U
Fluorene	µg/L	490	1.71		22.8		3.51		0.35		5		5.3		7.2		0.19	Ja
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.10	U	0.10	U	0.10	U	0.10	U	0.10		0.10	U	0.14	U	0.12	U
Naphthalene	µg/L	1.1	0.33	J	2.05		0.11		0.10	U	1		0.62		0.95	Ja	1.2	U
Phenanthrene	µg/L	294	0.47		13.6		1.1		0.26		5.4		5.1		8.3		0.16	
Pyrene	µg/L	---	0.19	U	0.19	U	0.19	U	0.19	U	0.1		0.10	U	0.26	U	0.24	U
1-Methylnaphthalene	µg/L	---	na		na		0.19	U	0.19	U	na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.19	U	0.19	U	0.19	U	0.19	U	na		na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.0217		0.016		0.022		0.010	U	0.009		0.0166		0.018		0.0084	B
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	4.2		3.04		4.39		3		3.41		3.4		2.6		2.1	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	1.0	UJ	1.0	U	na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	1.29		2.73		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	na		2.97		4.69		2.8		3.2		2.92		2.6		2.1	
Iron, Dissolved	mg/L	---	na		3.84		4.74		4.9		6.48		6.89		6.0		4.1	
Sulfate	mg/L	---	140		130		na		na		na		na		na		na	
Sulfide	mg/L	---	0.05	U	0.12		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW12-GW-1004 20-Oct-2004		MW12-GW-0405 15-Apr-2005		MW12-GW-1005 11-Oct-2005		MW12-GW-0406 10-Apr-2006		MW12-GW-1006 10-Oct-2006		MW12-GW-0407 17-Apr-2007		MW12-GW-1007 09-Oct-2007		MW12-GW-0408 15-Apr-2008	
VOCs	*Units*																	
Benzene	µg/L	5	6.0		1.0	U*	3.8		1	U	2.27		1	U	5.09		1	U
Toluene	µg/L	1000	1.0	U	1.0	U*	1.0	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	700	1.0	U	1.0	U*	1.0	U	1	U	1	U	1	U	1	U	1	U
Xylenes, Total	µg/L	10000	1.9		2.0	U*	1.6	J	3	U	3	U	3	U	3	U	3	U
PAHs																		
Acenaphthene	µg/L	914	29		1.2	Ja	50		1.68		33.1		0.915		39.8		2.59	
Acenaphthylene	µg/L	362	110		6.7		180		1.17		49		0.6		34.9		1.87	
Anthracene	µg/L	---	0.80		0.032	Ja	1.2		0.0585		1.94		0.01	U	1.18		0.0264	J
Benzo(a)anthracene	µg/L	0.13	0.13	U	0.12	U	0.042	Ja	0.019	U	0.00419	J	0.003	U	0.0102	J	0.003	U
Benzo(a)pyrene	µg/L	0.2	0.13	U	0.12	U	0.034	Ja	0.019	U	0.032	U	0.032	U	0.032	U	0.032	U
Benzo(b)fluoranthene	µg/L	0.1	0.050	U	0.047	U	0.037	Ja	0.037	U	0.013	U	0.013	U	0.013	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.20	U	0.19	U	0.20	U	0.032	U	0.009	U	0.009	U	0.009	U	0.009	U
Benzo(k)fluoranthene	µg/L	0.14	0.050	U	0.047	U	0.051	U	0.023	U	0.015	U	0.015	U	0.015	U	0.015	U
Chrysene	µg/L	0.85	0.13	U	0.12	U	0.027	Ja	0.02	U	0.0281	J	0.005	U	0.005	U	0.005	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.30	U	0.28	U	0.31	U	0.033	U	0.01	U	0.01	U	0.01	U	0.01	U
Fluoranthene	µg/L	---	1.5		0.050	Ja	4.2		0.0813		1.68		0.01	U	1.42		0.01	U
Fluorene	µg/L	490	14		0.28		21		0.718		29		0.328		41.1		1.99	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.13	U	0.12	U	0.13	U	0.038	U	0.007	U	0.007	U	0.007	U	0.007	U
Naphthalene	µg/L	1.1	0.58	Ja	1.2	U	1.3	U	0.104		1.02		0.054	U	14.6		0.054	U
Phenanthrene	µg/L	294	15		0.20		24		0.271		24		0.0328	J	24.2		0.007	U
Pyrene	µg/L	---	0.34		0.23	Ua	1.8		0.271		6.93		0.019	U	3.44		0.029	J
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		0.052	U	0.052	U	1.34		0.052	U
Inorganics																		
Cyanide, Total	mg/L	---	0.013		0.012		0.0066	B	0.01	U	0.01	U	0.01	U	0.01	U	0.0139	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	2.6		2.2		2.9		1.77		2.15		1.85		2.28		2.13	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		0.10	U	0.10	U	0.1	U	0.1	U	na		na		na	
Nitrite	mg/L	---	na		0.020	U	0.020	U	0.1	U	0.1	U	na		na		na	
Ammonia	mg/L	---	na		0.14	B	3.4		0.84		0.84		na		na		na	
Manganese, Dissolved	mg/L	---	2.6		2.2		2.7		1.68		na		na		na		na	
Iron, Dissolved	mg/L	---	6.6		5.4		6.9		3.55		3.55		na		na		na	
Sulfate	mg/L	---	na		53		140		87.9		87.9		na		na		na	
Sulfide	mg/L	---	na		1.0	U	0.50	B	1	U	1	U	na		na		na	
Methane	µg/L	---	na		36		59		329		329		na		na		na	
Alkalinity, Total	mg/L	---	na		380		350		347		347		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		0.73		3.8		1.27		1.27		na		na		na	
Orthophosphate	mg/L	---	na		0.015	B	0.050	U	0.1	U	0.1	U	na		na		na	
Total Organic Carbon	mg/L	---	na		3.6		3.3		3.46		3.46		na		na		na	
Chloride	mg/L	---	na		na		na		144		144		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW12-GW-0410 08-Apr-2010		DV	MW12-GW-1010 05-Oct-2010		MW12-GW-0411 13-Apr-2011		MW12-GW-1011 26-Oct-2011		DV	MW12-GW-0412 12-Apr-2012		DV	MW12-GW-1012 10-Oct-2012	
VOCs	*Units*																
Benzene	µg/L	5	2.07			15.2		1.00	U	2.52			1.00	U		1.00	U
Toluene	µg/L	1000	1.00	U		1.00	U	1.00	U	1.00	U		1.00	U		1.00	U
Ethylbenzene	µg/L	700	1.00	U		1.00	U	1.00	U	1.00	U		1.00	U		1.00	U
Xylenes, Total	µg/L	10000	6.00	U		7.77		3.00	U	5.15			3.00	U		3.00	U
PAHs																	
Acenaphthene	µg/L	914	20.4		J+	65.0		6.32		27.4		J-	5.73			29.8	
Acenaphthylene	µg/L	362	15.4		J+	37.5		3.43		21.6		J-	5.11			31.6	
Anthracene	µg/L	---	0.409		J+	1.40		0.100	U	0.340		J-	0.100	U		0.173	
Benzo(a)anthracene	µg/L	0.13	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Benzo(a)pyrene	µg/L	0.2	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Benzo(ghi)perylene	µg/L	---	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Chrysene	µg/L	0.85	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.00810	U,MDL		0.00810	U,MDL	0.100	U	0.0207	J,MDL	J-	0.0170	U,MDL		0.0130	U,MDL
Fluoranthene	µg/L	---	0.552		J+	2.78		0.155		0.927		J-	0.15			0.702	
Fluorene	µg/L	490	10.1		J+	30.3		2.00		14.5		J-	1.28			14.7	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U		0.100	U	0.100	U	0.100	U	UJ	0.100	U		0.100	U
Naphthalene	µg/L	1.1	0.569		J+	1.89		0.102		0.683		J-	0.186	B	UB	0.420	
Phenanthrene	µg/L	294	7.68		J+	23.9		0.741		8.46		J-	0.452			1.46	
Pyrene	µg/L	---	0.270		J+	1.56		0.100	U	0.656		J-	0.112			0.488	
1-Methylnaphthalene	µg/L	---	1.46		J+	9.14		0.185		0.975		J-	0.153			0.455	
2-Methylnaphthalene	µg/L	61.2	0.100	U		0.125		0.100	U	0.100	U	UJ	0.100			0.171	
Inorganics																	
Cyanide, Total	mg/L	---	na			na		na		na			na			na	
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U	0.0100	U	0.0100	U		0.0100	U		0.0100	U
Manganese, Total	mg/L	0.775	1.82			2.55		1.90		2.33			1.65			2.19	
Natural Attenuation Parameters																	
Nitrate	mg/L	---	na			na		na		na			na			na	
Nitrite	mg/L	---	na			na		na		na			na			na	
Ammonia	mg/L	---	na			na		na		na			na			na	
Manganese, Dissolved	mg/L	---	na			na		na		na			na			na	
Iron, Dissolved	mg/L	---	na			na		na		na			na			na	
Sulfate	mg/L	---	na			na		na		na			na			na	
Sulfide	mg/L	---	na			na		na		na			na			na	
Methane	µg/L	---	na			na		na		na			na			na	
Alkalinity, Total	mg/L	---	na			na		na		na			na			na	
Total Kjeldahl Nitrogen	mg/L	---	na			na		na		na			na			na	
Orthophosphate	mg/L	---	na			na		na		na			na			na	
Total Organic Carbon	mg/L	---	na			na		na		na			na			na	
Chloride	mg/L	---	na			na		na		na			na			na	

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Groundwater Analytical Results

		Performance Standard	MW12-GW-0413 11-Apr-2013		DV	MW12-GW-1013 23-Oct-2013		DV	MW16-GW-001 26-Oct-1999		MW16-GW-002 22-Jun-2000		MW16-GW-003 11-Jul-2001		MW16-GW-004 12-Dec-2001		MW16-GW-005 18-Apr-2002	
VOCs	*Units*																	
Benzene	µg/L	5	0.500	U		82.7			24.1		8.1		10.2		8.7		6.2	
Toluene	µg/L	1000	1.00	U		5.24			56.9		10.6		3.5		2.8		1.7	
Ethylbenzene	µg/L	700	1.00	U		17.3			14.5		5.9		11.7		8.7		4	
Xylenes, Total	µg/L	10000	3.00	U		39.8			111		33.0		28.9		18.6		9.7	
PAHs																		
Acenaphthene	µg/L	914	2.82		J-	78			12.7		6.36		2.57		6.37		2.3	
Acenaphthylene	µg/L	362	1.39		J-	26			41.7		13.1		3.12		17		6.88	
Anthracene	µg/L	---	0.100	U	UJ	1.91			9.5		11.3		3.83		4.38		1.57	
Benzo(a)anthracene	µg/L	0.13	0.100	U	UJ	0.100	U		3.7		5.46		2.86		1.27		0.69	
Benzo(a)pyrene	µg/L	0.2	0.100	U	UJ	0.100	U		1.88		3.75		1.62		0.77		0.44	
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	UJ	0.100	U		0.58		1.53		0.45		0.12		0.14	
Benzo(ghi)perylene	µg/L	---	0.100	U	UJ	0.100	U		0.79		1.81		0.65		0.33		0.18	
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	UJ	0.100	U		0.14		0.10	U	0.11		0.10	U	0.10	U
Chrysene	µg/L	0.85	0.100	U	UJ	0.100	U		1.9		2.98		1.3		0.56		0.39	
Dibenzo(a,h)anthracene	µg/L	0.033	0.0177	U	UJ	0.0173	U		0.14		0.11		0.21		0.1		0.10	U
Fluoranthene	µg/L	---	0.100	U	UJ	3.04			6.5		15.8		6.44		2.64		2.62	
Fluorene	µg/L	490	0.490		J-	30.5			28.3		22.6		4.11		10.1		3.85	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	UJ	0.100	U		0.78		1.30		0.69		0.23		0.2	
Naphthalene	µg/L	1.1	0.310	B	J-	18.2	B*	J+,B	190		83.6		0.53		30.8		16.4	
Phenanthrene	µg/L	294	0.100	U	UJ	27.7			28.6		9.71		2.86		12.6		3.77	
Pyrene	µg/L	---	0.100	U	UJ	1.13			2.18		7.94		2.16		0.39		1.35	
1-Methylnaphthalene	µg/L	---	0.100	U	UJ	89.3			na		na		na		22		na	
2-Methylnaphthalene	µg/L	61.2	0.100	U	UJ	0.192			55.1		0.19	U	0.19	U	2.58		1.1	
Inorganics																		
Cyanide, Total	mg/L	---	na			na			0.3917		0.217		0.176	J	0.216		0.087	
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U		na		na		na		na		na	
Manganese, Total	mg/L	0.775	2.120			2.53			4		1.7		0.623		0.694		0.249	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na			na			1.0	U	1.0	U	1.0	UJ	na		na	
Nitrite	mg/L	---	na			na			0.10	U	na		na		na		na	
Ammonia	mg/L	---	na			na			1.2		0.93		0.63		na		na	
Manganese, Dissolved	mg/L	---	na			na			na		na		0.231		0.225		0.181	
Iron, Dissolved	mg/L	---	na			na			na		na		2.19		2.35		2	
Sulfate	mg/L	---	na			na			310		370		300		na		na	
Sulfide	mg/L	---	na			na			1.8		0.18		1.0	U	na		na	
Methane	µg/L	---	na			na			279		na		na		na		na	
Alkalinity, Total	mg/L	---	na			na			350		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na			na			1.6		na		na		na		na	
Orthophosphate	mg/L	---	na			na			0.10	U	na		na		na		na	
Total Organic Carbon	mg/L	---	na			na			35.64		na		na		na		na	
Chloride	mg/L	---	na			na			na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW16-GW-1002 28-Oct-2002		MW16-GW-0103 08-Jan-2003		MW16-GW-0404 06-Apr-2004		MW16-GW-0405 15-Apr-2005		MW16-GW-0406 12-Apr-2006		MW16-GW-1006 11-Oct-2006		MW16-GW-0407 17-Apr-2007		MW16-GW-1007 10-Oct-2007	
VOCs	*Units*																	
Benzene	µg/L	5	6.6		9.8		3.2		7.8	*	3.5		5.01		3.18		5.2	
Toluene	µg/L	1000	2	U	2.0		0.66	Ja	1.6	*	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	700	5.1		9.4		2.3		7.6	*	2.45		3.72		2.6		2.56	
Xylenes, Total	µg/L	10000	11		15		4.7		13	*	3	U	4.21		3.18		4.36	
PAHs																		
Acenaphthene	µg/L	914	11		6.3	J	4.1		5.7		3.07		5.15		2.27		8.23	
Acenaphthylene	µg/L	362	11	U	10	U	28		78		7.83		14.4		7.51		33.1	
Anthracene	µg/L	---	2.6		6.0	J	2.2		4.4		2.16		4.1		1.58		3.59	
Benzo(a)anthracene	µg/L	0.13	2.5		10	J	0.63		1.9		0.35		0.232		0.108	J	0.361	
Benzo(a)pyrene	µg/L	0.2	1.7		6.4	J	0.53		1.2		0.271		0.032	U	0.032	U	0.058	J
Benzo(b)fluoranthene	µg/L	0.1	2.4		8.9	J	0.3		0.69		0.293		0.0529	J	0.013	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.36		2.2	J	0.19	Ja	0.43		0.0989	J	0.009	U	0.009	U	0.0577	J
Benzo(k)fluoranthene	µg/L	0.14	0.68		2.5	J	0.17	M	0.45		0.113	J	0.015	U	0.015	U	0.0163	J
Chrysene	µg/L	0.85	1.6		6.7	J	0.46		1.2		0.334		0.147		0.0969	J	0.204	
Dibenzo(a,h)anthracene	µg/L	0.033	1.20		3.3	J	0.29	U	0.25	J	0.033	U	0.01	U	0.01	U	0.01	U
Fluoranthene	µg/L	---	8.8		19	J	4.8		9.8		2.78		6.2		2.34		4.72	
Fluorene	µg/L	490	8.2		13	J	7.1		12		9.31		18.5		8.87		26.4	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	1.1	U	1.0	U	0.16		0.46		0.132		0.007	U	0.007	U	0.007	U
Naphthalene	µg/L	1.1	26		16	J	7.6		44		3.53		3.95		3.99		7.19	
Phenanthrene	µg/L	294	6.1		21	J	3.1		13		6.17		10.3		4.22		15.6	
Pyrene	µg/L	---	5.4		15	J	1.9		4.8		8		11.3		4.54		12.3	
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		1.27		0.552		1.78	
Inorganics																		
Cyanide, Total	mg/L	---	0.217		0.137		0.12		0.17		0.198		0.287		0.132		0.264	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.21		1.27		0.15		0.18		0.124		0.174		0.12		0.178	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		0.061	B	0.1	U	na		na		na	
Nitrite	mg/L	---	na		na		na		0.012	B	0.1	U	na		na		na	
Ammonia	mg/L	---	na		na		na		0.2	U	0.257		na		na		na	
Manganese, Dissolved	mg/L	---	0.182		0.268		0.14		0.16		0.13		na		na		na	
Iron, Dissolved	mg/L	---	1.64		2.71		1.7		2.3		2.19		na		na		na	
Sulfate	mg/L	---	na		na		na		240		241		na		na		na	
Sulfide	mg/L	---	na		na		na		1.5		1	U	na		na		na	
Methane	µg/L	---	na		na		na		48		26	U	na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		360		428		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		0.72		1	U	na		na		na	
Orthophosphate	mg/L	---	na		na		na		0.017	B	0.1	U	na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		3.3		4.6		na		na		na	
Chloride	mg/L	---	na		na		na		na		54.3		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW16-GW-0408 15-Apr-2008		MW16-GW-0410 08-Apr-2010		MW16-GW-1010 06-Oct-2010		MW16-GW-0411 12-Apr-2011		MW16-GW-1011 25-Oct-2011		DV	MW16-GW-0412 11-Apr-2012		DV
VOCs	*Units*															
Benzene	µg/L	5	9.14		30.2		41.4		16.8		10.9			6.62		
Toluene	µg/L	1000	1.06		5.40		3.29		5.09		1.00	U		1.00	U	
Ethylbenzene	µg/L	700	6.62		21.0		33.4		12.8		10.8			6.12		
Xylenes, Total	µg/L	10000	5.56		24.8		33.7		14.3		8.67			4.75		
PAHs																
Acenaphthene	µg/L	914	4.63		5.75		5.14		102		4.54		J-	4.10	RL1	J-
Acenaphthylene	µg/L	362	14.4		16.2		10.0		108		12.9		J-	9.05	RL1	J-
Anthracene	µg/L	---	1.44		3.19		3.06		2.51		2.31		J-	1.72	RL1	J-
Benzo(a)anthracene	µg/L	0.13	0.34		0.588		2.55		1.96		4.46		J-	3.39	RL1	J-
Benzo(a)pyrene	µg/L	0.2	0.25		0.575		2.90		1.62		3.64		J-	2.59	RL1	J-
Benzo(b)fluoranthene	µg/L	0.1	0.218		0.501		2.62		1.51		3.17		J-	2.31	RL1	J-
Benzo(ghi)perylene	µg/L	---	0.148		0.157		0.923		0.623		1.34		J-	1.00	U,RL1	UJ
Benzo(k)fluoranthene	µg/L	0.14	0.121	J	0.2		0.920		0.559		1.52		J-	1.14	RL1	J-
Chrysene	µg/L	0.85	0.336		0.520		2.27		1.75		3.64		J-	2.75	RL1	J-
Dibenzo(a,h)anthracene	µg/L	0.033	0.0349	J	0.0547	J,MDL	0.326	MDL	0.207	MDL	0.461	J,MDL	J-	0.332	RL1,J,MDL	J-
Fluoranthene	µg/L	---	3.98		3.03		6.94		4.80		5.84		J-	7.85	RL1	J-
Fluorene	µg/L	490	12.5		13.6		7.96		21.5		7.85		J-	4.99	RL1	J-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.138		0.155		0.999		0.612		1.36		J-	1.00	U,RL1	UJ
Naphthalene	µg/L	1.1	2.77		42.4		39.3		310		6.91		J-	4.18	RL1	J-
Phenanthrene	µg/L	294	5.84		8.38		5.20		35.4		3.82		J-	2.46	RL1	J-
Pyrene	µg/L	---	2.55		2.30		6.23		4.00		10.7		J-	8.36	RL1	J-
1-Methylnaphthalene	µg/L	---	na		9.24		21.9		595		7.29		J-	4.19	RL1	J-
2-Methylnaphthalene	µg/L	61.2	0.855		0.194		0.326		8.82		0.349		J-	1.00	U,RL1	UJ
Inorganics																
Cyanide, Total	mg/L	---	0.131		na		na		na		na			na		
Cyanide, WAD	mg/L	0.2	na		0.0198		0.0100	U	0.0100	U	0.0100	U		0.0100	U	
Manganese, Total	mg/L	0.775	0.171		0.153		0.102		0.128		0.142			0.29		
Natural Attenuation Parameters																
Nitrate	mg/L	---	na		0.10	U	0.10	U	0.10	U	0.10	U		0.100	U	
Nitrite	mg/L	---	na		0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Ammonia	mg/L	---	na		0.461		0.613		0.468		0.535			0.509		
Manganese, Dissolved	mg/L	---	na		0.156		0.0797	S3	0.106		0.104			0.146		
Iron, Dissolved	mg/L	---	na		1.59		0.906		1.73		1.23			2.38		
Sulfate	mg/L	---	na		243		385		244		206			183		
Sulfide	mg/L	---	na		5.00	U	5.00	U	17		10	U		10	U	
Methane	µg/L	---	na		261		274		87		120			120		
Alkalinity, Total	mg/L	---	na		319		201		269		266			306		
Total Kjeldahl Nitrogen	mg/L	---	na		1.00	U	1.19		1.00	U	1.31			1.00	U	
Orthophosphate	mg/L	---	na		0.1	U	0.100	U	0.100	U	0.100	U		0.100	U	
Total Organic Carbon	mg/L	---	na		2.59		1.93	ET	na		2.50			na		
Chloride	mg/L	---	na		33.6		28.8		na		na			na		

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Groundwater Analytical Results

		Performance Standard	MW16-GW-1012 10-Oct-2012		MW16-GW-0413 10-Apr-2013		MW16-GW-1013 23-Oct-2013 DV		MW18-GW-001 04-Apr-2000		MW18-GW-002 21-Jun-2000		MW18-GW-003 10-Jul-2001		MW18-GW-004 12-Dec-2001	
VOCs	*Units*															
Benzene	µg/L	5	8.21		4.14		6.12		0.5	U	0.5	U	0.5	U	1.0	U
Toluene	µg/L	1000	1.24		1.00	U	1.00	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	8.05		3.64		5.7		1.0	U	1.0	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	7.74		5.25		5.31		3.0	U	3.0	U	3.0	U	3.0	U
PAHs																
Acenaphthene	µg/L	914	6.18		3.06		5.75		0.19	U	0.19	U	0.19	U	0.19	U
Acenaphthylene	µg/L	362	16.5		8.08		10.8		0.19	U	0.19	U	0.19	U	0.19	U
Anthracene	µg/L	---	1.69		1.12		0.969		0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)anthracene	µg/L	0.13	1.38		1.57		0.449		0.10	U	0.10	U	0.10	U	0.10	U
Benzo(a)pyrene	µg/L	0.2	0.650		1.76		0.219		0.10	U	0.10	U	0.10	U	0.10	U
Benzo(b)fluoranthene	µg/L	0.1	0.708		1.66		0.199		0.10	U	0.10	U	0.10	U	0.10	U
Benzo(ghi)perylene	µg/L	---	0.168		0.650		0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Benzo(k)fluoranthene	µg/L	0.14	0.23		0.724		0.138		0.10	U	0.10	U	0.10	U	0.10	U
Chrysene	µg/L	0.85	1.05		1.57		0.439		0.10	U	0.10	U	0.10	U	0.10	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0666	J,MDL	0.288		0.0332		0.10	U	0.10	U	0.10	U	0.10	U
Fluoranthene	µg/L	---	5.57		4.78		4.03		0.10	U	0.10	U	0.10	U	0.10	U
Fluorene	µg/L	490	10.6		4.92		8.48		0.19	U	0.19	U	0.19	U	0.19	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.170		0.629		0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Naphthalene	µg/L	1.1	6.70		7.90		4.28	B* J+,B	0.10	U	0.14		0.14		0.10	U
Phenanthrene	µg/L	294	4.39		2.18		3.33		0.10	U	0.10	U	0.10	U	0.10	U
Pyrene	µg/L	---	6.21		4.63		1.61		0.19	U	0.19	U	0.19	U	0.19	U
1-Methylnaphthalene	µg/L	---	7.56		6.56		4.02		na		na		na		0.19	U
2-Methylnaphthalene	µg/L	61.2	0.231		0.258		0.312		0.19	U	0.19	U	0.19	U	0.19	U
Inorganics																
Cyanide, Total	mg/L	---	na		na		na		0.0148		0.0158	J	0.010	U	0.028	
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	0.0121		na		na		na		na	
Manganese, Total	mg/L	0.775	0.234		0.0974		0.142		2.8		4		5.76		3.26	
Natural Attenuation Parameters																
Nitrate	mg/L	---	0.100	U	0.471		na		1.0	U	1.0	U	1.0	U	na	
Nitrite	mg/L	---	0.100	U	0.100	U	na		na		na		na		na	
Ammonia	mg/L	---	0.492		0.238		na		0.20	U	0.44		0.20	U	na	
Manganese, Dissolved	mg/L	---	0.125		0.0704		na		na		na		4.72		2.91	
Iron, Dissolved	mg/L	---	1.74		0.505		na		na		na		1.18		2.7	
Sulfate	mg/L	---	169		114		na		310		300		230		na	
Sulfide	mg/L	---	10	U	12.0		na		5.0	UJ	0.05	U	1.0	U	na	
Methane	µg/L	---	180		44.4		na		na		na		na		na	
Alkalinity, Total	mg/L	---	316		255		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	1.00	U	1.00	U	na		na		na		na		na	
Orthophosphate	mg/L	---	0.100	U	0.100	U	na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW18-GW-005 16-Apr-2002		MW18-GW-1002 30-Oct-2002		MW18-GW-0103 08-Jan-2003		MW18-GW-1003 22-Oct-2003		MW18-GW-0404 07-Apr-2004		MW18-GW-1004 19-Oct-2004		MW18-GW-0405 14-Apr-2005		MW18-GW-1005 12-Oct-2005	
VOCs	*Units*																	
Benzene	µg/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	µg/L	1000	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	3.0	U	7.0	U	3.0	U	1.0	U	1.0	U	1.0	U	2.0	U	2.0	U
PAHs																		
Acenaphthene	µg/L	914	0.19	U	0.51	U	0.55	U	2.9	U	2.8	U	2.6	U	2.3	U	2.6	U
Acenaphthylene	µg/L	362	0.19	U	1	U	1.1	U	1.5	U	1.4	U	1.3	U	1.2	U	1.3	U
Anthracene	µg/L	---	0.19	U	0.051	U	0.055	U	0.057	U	0.056	U	0.052	U	0.047	U	0.052	U
Benzo(a)anthracene	µg/L	0.13	0.19	U	0.1	U	0.11	U	0.15	U	0.14	U	0.13	U	0.12	U	0.13	U
Benzo(a)pyrene	µg/L	0.2	0.19	U	0.1	U	0.11	U	0.15	U	0.14	U	0.13	U	0.12	U	0.13	U
Benzo(b)fluoranthene	µg/L	0.1	0.10	U	0.1	U	0.11	U	0.057	U	0.056	U	0.052	U	0.047	U	0.052	U
Benzo(ghi)perylene	µg/L	---	0.10	U	0.1	U	0.11	U	0.23	U	0.22	U	0.21	U	0.19	U	0.21	U
Benzo(k)fluoranthene	µg/L	0.14	0.10	U	0.1	U	0.11	U	0.057	U	0.056	U	0.052	U	0.047	U	0.052	U
Chrysene	µg/L	0.85	0.10	U	0.1	U	0.11	U	0.15	U	0.14	U	0.13	U	0.12	U	0.13	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.11		0.1	U	0.11	U	0.34	U	0.33	U	0.31	U	0.28	U	0.31	U
Fluoranthene	µg/L	---	0.19	U	0.1	U	0.11	U	0.15	U	0.14	U	0.13	U	0.12	U	0.13	U
Fluorene	µg/L	490	0.19	U	0.1	U	0.11	U	0.29	U	0.28	U	0.26	U	0.23	U	0.26	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.10	U	0.1	U	0.11	U	0.15	U	0.14	U	0.13	U	0.12	U	0.13	U
Naphthalene	µg/L	1.1	0.10	U	0.51	U	0.55	U	1.5	U	1.4	U	1.3	U	1.2	U	1.3	U
Phenanthrene	µg/L	294	0.10	U	0.10	U	0.11	U	0.11	U	0.11	U	0.10	U	0.093	Ua	0.10	U
Pyrene	µg/L	---	0.19	U	0.1	U	0.11	U	0.29	U	0.28	U	0.26	U	0.23	U	0.26	U
1-Methylnaphthalene	µg/L	---	0.19	U	na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.19	U	na		na		na		na		na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.013		0.005	U	0.00983		0.018		0.0060	B	0.013		0.010	U	0.020	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	3.4		2.4		2.65		2.4		3.6		1.7		3.2		1.5	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	2.9		2.44		2.18		2.0		3.1		1.6		2.9		1.5	
Iron, Dissolved	mg/L	---	1.3		2.89		2.53		3.1		4.1		5.4		6.0		3.1	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	*mg/L*	---	*na*		*na*		*na*		*na*		*na*		*na*		*na*		*na*	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW18-GW-0406 12-Apr-2006		MW18-GW-1006 10-Oct-2006		MW18-GW-0407 17-Apr-2007		MW18-GW-1007 10-Oct-2007		MW18-GW-0408 15-Apr-2008		MW18-GW-0410 08-Apr-2010		MW18-GW-1010 06-Oct-2010		MW18-GW-0411 12-Apr-2011	
VOCs	*Units*																	
Benzene	µg/L	5	1	U	1.00	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U
Toluene	µg/L	1000	1	U	1.00	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U
Ethylbenzene	µg/L	700	1	U	1.00	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U
Xylenes, Total	µg/L	10000	3	U	3.00	U	3	U	3.00	U	3.00	U	6.00	U	3.00	U	3.00	U
PAHs																		
Acenaphthene	µg/L	914	0.13	U	0.0490	U	0.049	U	0.0544	U	0.049	U	0.100	U	0.124		0.100	U
Acenaphthylene	µg/L	362	0.17	U	0.0850	U	0.085	U	0.0944	U	0.085	U	0.100	U	0.139		0.100	U
Anthracene	µg/L	---	0.0093	U	0.0100	U	0.01	U	0.0111	U	0.01	U	0.100	U	0.100	U	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.019	U	0.0030	U	0.003	U	0.00333	U	0.003	U	0.100	U	0.100	U	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.019	U	0.0320	U	0.032	U	0.0356	U	0.032	U	0.100	U	0.100	U	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.037	U	0.0130	U	0.013	U	0.0144	U	0.013	U	0.100	U	0.100	U	0.100	U
Benzo(ghi)perylene	µg/L	---	0.032	U	0.0090	U	0.009	U	0.01	U	0.009	U	0.100	U	0.100	U	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.023	U	0.0150	U	0.015	U	0.0167	U	0.015	U	0.100	U	0.100	U	0.100	U
Chrysene	µg/L	0.85	0.02	U	0.0050	U	0.005	U	0.00556	U	0.005	U	0.100	U	0.100	U	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.033	U	0.0100	U	0.01	U	0.0111	U	0.01	U	0.00810	U,MDL	0.00973	J,MDL	0.0170	U,MDL
Fluoranthene	µg/L	---	0.032	U	0.0100	U	0.01	U	0.0111	U	0.01	U	0.100	U	0.100	U	0.100	U
Fluorene	µg/L	490	0.029	U	0.0100	U	0.01	U	0.0111	U	0.01	U	0.100	U	0.100	U	0.100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.038	U	0.0070	U	0.007	U	0.00778	U	0.007	U	0.100	U	0.100	U	0.100	U
Naphthalene	µg/L	1.1	0.23		0.0540	U	0.054	U	0.06	U	0.054	U	0.100	U	1.99		0.132	
Phenanthrene	µg/L	294	0.015	U	0.0202	J	0.007	U	0.00778	U	0.007	U	0.100	U	0.100	U	0.100	U
Pyrene	µg/L	---	0.036	U	0.0190	U	0.019	U	0.0211	U	0.019	U	0.100	U	0.100	U	0.100	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		0.100	U	0.919		0.101	
2-Methylnaphthalene	µg/L	61.2	na		0.0520	U	0.052	U	0.0578	U	0.052	U	0.100	U	0.123		0.100	U
Inorganics																		
Cyanide, Total	mg/L	---	0.021		0.0255		0.0208		0.0213		0.0133		na		na		na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		0.0100	U	0.0100	U	0.0113	
Manganese, Total	mg/L	0.775	1.87		na		na		na		na		3.44		1.35		1.70	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	1.86		na		na		na		na		na		na		na	
Iron, Dissolved	mg/L	---	3		na		na		na		na		na		na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW18-GW-1011 25-Oct-2011		DV	MW18-GW-0412 11-Apr-2012		MW18-GW-1012 10-Oct-2012		DV	MW18-GW-0413 10-Apr-2013		MW18-GW-1013 23-Oct-2013		DV
VOCs	*Units*														
Benzene	µg/L	5	1.00	U		1.00	U	1.00	U		0.500	U	0.500	U	
Toluene	µg/L	1000	1.00	U		1.00	U	1.00	U		1.00	U	1.00	U	
Ethylbenzene	µg/L	700	1.00	U		1.00	U	1.00	U		1.00	U	1.00	U	
Xylenes, Total	µg/L	10000	3.00	U		3.00	U	3.00	U		3.00	U	3.00	U	
PAHs															
Acenaphthene	µg/L	914	0.100	U	UJ	0.225		0.100	U	UJ	0.455		1.09	U	
Acenaphthylene	µg/L	362	0.100	U	UJ	0.100	U	0.100	U	UJ	0.450		1.09	U	
Anthracene	µg/L	---	0.100	U	UJ	1.250		0.100	U	UJ	0.100	U	1.09	U	
Benzo(a)anthracene	µg/L	0.13	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Benzo(a)pyrene	µg/L	0.2	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Benzo(ghi)perylene	µg/L	---	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Chrysene	µg/L	0.85	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170	U,MDL	UJ	0.0170	U,MDL	0.0130	U,MDL	UJ	0.0172	U	0.185	U	
Fluoranthene	µg/L	---	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Fluorene	µg/L	490	0.100	U	UJ	0.990		0.100	U	UJ	0.106		1.09	U	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	UJ	0.100	U	0.100	U	UJ	0.100	U	1.09	U	
Naphthalene	µg/L	1.1	0.157		J-	1.71		0.339		J-	1.42		3.27	B*	J+,B
Phenanthrene	µg/L	294	0.100	U	UJ	0.416		0.100	U	UJ	0.172		1.09	U	
Pyrene	µg/L	---	0.100	U	UJ	0.105		0.100	U	UJ	0.100	U	1.09	U	
1-Methylnaphthalene	µg/L	---	0.142		J-	0.71		0.114		J-	2.52		1.09	U	
2-Methylnaphthalene	µg/L	61.2	0.100	U	UJ	0.162		0.100	U	UJ	0.100	U	1.09	U	
Inorganics															
Cyanide, Total	mg/L	---	na			na		na			na		na		
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U	0.0100	U		0.0100	U	0.0100	U	
Manganese, Total	mg/L	0.775	1.22			1.64		1.22			1.410		1.34		
Natural Attenuation Parameters															
Nitrate	mg/L	---	na			na		na			na		na		
Nitrite	mg/L	---	na			na		na			na		na		
Ammonia	mg/L	---	na			na		na			na		na		
Manganese, Dissolved	mg/L	---	na			na		na			na		na		
Iron, Dissolved	mg/L	---	na			na		na			na		na		
Sulfate	mg/L	---	na			na		na			na		na		
Sulfide	mg/L	---	na			na		na			na		na		
Methane	µg/L	---	na			na		na			na		na		
Alkalinity, Total	mg/L	---	na			na		na			na		na		
Total Kjeldahl Nitrogen	mg/L	---	na			na		na			na		na		
Orthophosphate	mg/L	---	na			na		na			na		na		
Total Organic Carbon	mg/L	---	na			na		na			na		na		
Chloride	mg/L	---	na			na		na			na		na		

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		Performance Standard	MW07-GW-001 26-Oct-1999		MW07-GW-002 21-Jun-2000		MW07-GW-003 10-Jul-2001		MW07-GW-004 11-Dec-2001		MW07-GW-005 16-Apr-2002		MW07-GW-1002 28-Oct-2002		MW07-GW-0103 07-Jan-2003		MW07-GW-0404 08-Apr-2004	
VOCs	*Units*																	
Benzene	µg/L	5	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Toluene	µg/L	1000	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	7.0	U	3.0	U	1.0	U
PAHs																		
Acenaphthene	µg/L	914	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.53	U	0.51	U	2.7	U
Acenaphthylene	µg/L	362	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	1.1	U	1.0	U	1.4	U
Anthracene	µg/L	---	0.10	U	0.10	U	0.10	U	0.10	U	0.19	U	0.053	U	0.051	U	0.054	U
Benzo(a)anthracene	µg/L	0.13	0.10	U	0.10	U	0.10	U	0.10	U	0.19	U	0.11	U	0.10	U	0.14	U
Benzo(a)pyrene	µg/L	0.2	0.10	U	0.10	U	0.10	U	0.10	U	0.19	U	0.11	U	0.10	U	0.14	U
Benzo(b)fluoranthene	µg/L	0.1	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.054	U
Benzo(ghi)perylene	µg/L	---	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.22	U
Benzo(k)fluoranthene	µg/L	0.14	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.054	U
Chrysene	µg/L	0.85	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.14	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.33	U*
Fluoranthene	µg/L	---	0.10	U	0.10	U	0.10	U	0.10	U	0.19	U	0.11	U	0.10	U	0.14	U
Fluorene	µg/L	490	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.11	U	0.10	U	0.27	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.14	U
Naphthalene	µg/L	1.1	0.10	UJ	0.10	U	0.10	U	0.17		0.10	U	0.53	U	0.51	U	1.4	U*
Phenanthrene	µg/L	294	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.11	U	0.10	U	0.11	U
Pyrene	µg/L	---	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.11	U	0.10	U	0.27	U
1-Methylnaphthalene	µg/L	---	na		na		na		0.19	U	0.19	U	na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.25	U	0.19	U	0.19	U	0.19	U	0.19	U	na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.0085		0.0050	UJ	0.010	U	0.010	U	0.010	U	0.005	U	0.00500	U	0.010	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	13		10		4.37		3.96		3.6		na		9.28		9.6	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	1.0	U	2.4		2.4		na		na		na		na		na	
Nitrite	mg/L	---	0.10	U	na		na		na		na		na		na		na	
Ammonia	mg/L	---	0.20	U	0.20	U	0.20	U	na		na		na		na		na	
Manganese, Dissolved	mg/L	---	na		na		2.80		3.37		0.838		2.65		1.88		1.2	
Iron, Dissolved	mg/L	---	na		na		0.10	U	0.10	U	0.10	U	0.05	U	0.05	U	0.10	U
Sulfate	mg/L	---	330		200		180		na		na		na		na		na	
Sulfide	mg/L	---	1.00	U	0.05	U	0.41		na		na		na		na		na	
Methane	µg/L	---	26		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	370		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	1.0	U	na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	0.10	U	na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	26.48		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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		Performance Standard	MW7-GW-0405 13-Apr-2005		MW7-GW-0406 12-Apr-2006		MW7-GW-0407 17-Apr-2007		MW7-GW-0408 15-Apr-2008		MW7-GW-0410 08-Apr-2010		MW7-GW-0411 12-Apr-2011		MW7-GW-0412 11-Apr-2012		DV	MW07-GW-0413 09-Apr-2013	
VOCs	*Units*																		
Benzene	µg/L	5	1.0	U	1	U	1	U	1	U	1.00	U	1.00	U	1.00	U		0.500	U
Toluene	µg/L	1000	1.0	U	1	U	1	U	1	U	1.00	U	1.00	U	1.00	U		1.00	U
Ethylbenzene	µg/L	700	1.0	U	1	U	1	U	1	U	1.00	U	1.00	U	1.00	U		1.00	U
Xylenes, Total	µg/L	10000	2.0	U	3	U	3	U	3	U	6.00	U	3.00	U	3.00	U		3.00	U
PAHs																			
Acenaphthene	µg/L	914	2.3	U	0.13	U	0.049	U	0.049	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Acenaphthylene	µg/L	362	1.2	U	0.17	U	0.085	U	0.085	U	0.100	U	0.100	U	0.100	U	UJ	0.10	U
Anthracene	µg/L	---	0.047	U	0.0093	U	0.01	U	0.01	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.12	U	0.019	U	0.003	U	0.003	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.12	U	0.019	U	0.032	U	0.032	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.047	U	0.037	U	0.013	U	0.013	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(ghi)perylene	µg/L	---	0.19	U	0.032	U	0.009	U	0.009	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.047	U	0.023	U	0.015	U	0.015	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Chrysene	µg/L	0.85	0.12	U	0.02	U	0.005	U	0.005	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.28	U	0.033	U	0.01	U	0.01	U	0.0081	U,MDL	0.017	U,MDL	0.017	U,MDL	UJ	0.0175	U
Fluoranthene	µg/L	---	0.12	U	0.032	U	0.01	U	0.01	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Fluorene	µg/L	490	0.23	U	0.029	U	0.01	U	0.01	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.12	U	0.038	U	0.007	U	0.007	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Naphthalene	µg/L	1.1	1.2	U	0.1	U	0.054	U	0.054	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Phenanthrene	µg/L	294	0.093	U	0.015	U	0.007	U	0.007	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Pyrene	µg/L	---	0.23	U	0.036	U	0.019	U	0.019	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		0.100	U	0.100	U	0.100	U	UJ	0.100	U
2-Methylnaphthalene	µg/L	61.2	na		na		0.052	U	0.052	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Inorganics																			
Cyanide, Total	mg/L	---	0.010	U	0.01	U	0.01	U	0.01	U	na		na		na			na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		0.01	U	0.01	U	0.01	U		0.0100	U
Manganese, Total	mg/L	0.775	2.3		16		na		na		2.42		6.15		1.67			1.350	
Natural Attenuation Parameters																			
Nitrate	mg/L	---	1.8		3.69		na		na		0.95	P2	0.93	P2	1.37	P2		3.28	
Nitrite	mg/L	---	0.020	U	0.1	U	na		na		0.100	U	0.100	U	0.100	U		0.100	U
Ammonia	mg/L	---	0.20	U	0.2	U	na		na		0.200	U	0.200	U	0.200	U		0.200	U
Manganese, Dissolved	mg/L	---	2.0		1.19		na		na		2.11		1.77		1.45			1.18	
Iron, Dissolved	mg/L	---	0.10	U	0.1	U	na		na		0.100	U	0.100	U	0.100	U		0.100	U
Sulfate	mg/L	---	180		139		na		na		156		146		139			118	
Sulfide	mg/L	---	1.0	U	1	U	na		na		5.00	U	19.00		10	U		12.8	
Methane	µg/L	---	na		26	U	na		na		26.0	U	0.58	U	0.58	U		0.580	U
Alkalinity, Total	mg/L	---	370		399		na		na		400		372		375			432	
Total Kjeldahl Nitrogen	mg/L	---	0.34	B	1	U	na		na		1.00	U	0.10	U	1.00	U		1.39	
Orthophosphate	mg/L	---	0.099		0.1	U	na		na		0.100	U	0.100	U	0.100	U		0.100	U
Total Organic Carbon	mg/L	---	2.0		2.19		na		na		1.13		na		na			na	
Chloride	mg/L	---	na		138		na		na		227		na		na			na	

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Groundwater Analytical Results

		Performance Standard	MW13-GW-001 25-Oct-1999		MW13-GW-002 21-Jun-2000		MW13-GW-003 11-Jul-2001		MW13-GW-004 12-Dec-2001		MW13-GW-0410 09-Apr-2010 DV			MW13-GW-1010 05-Oct-2010		MW13-GW-0411 13-Apr-2011	
VOCs	*Units*																
Benzene	µg/L	5	62.8		18.5		97.2		68.9		5.65			5.85		4.07	
Toluene	µg/L	1000	122		1.5		3.0		5.0	U	1.00	U		1.00	U	1.00	U
Ethylbenzene	µg/L	700	261		16.4		68.9		41.6		2.55			2.58		1.57	
Xylenes, Total	µg/L	10000	374		19.1		60.3		25		6.00	U		3.90		3.29	
PAHs																	
Acenaphthene	µg/L	914	43.6		54.9		63.0		35.8		17.0		J+	19.1		14.3	
Acenaphthylene	µg/L	362	246		177		223		12.6		70.1		J+	67.0		56.3	
Anthracene	µg/L	---	13.5		18.9		19.7		13.7		5.01		J+	8.72		1.66	
Benzo(a)anthracene	µg/L	0.13	5.1		5.0	U	8.5		6.78		1.27		J+	3.85		0.544	
Benzo(a)pyrene	µg/L	0.2	2.27		2.36		3.9		3.77		1.00	U		2.61		0.199	
Benzo(b)fluoranthene	µg/L	0.1	0.58		0.86		1.0	U	1.0	U	1.00	U		1.96		0.173	
Benzo(ghi)perylene	µg/L	---	1.08		0.10	U	1.0	U	1.88		1.00	U		0.895		0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.43		0.16		1.0	U	1.0	U	1.00	U		0.922		0.100	U
Chrysene	µg/L	0.85	2.04		5.0	U	2.8		2.95		1.16		J+	3.64		0.475	
Dibenzo(a,h)anthracene	µg/L	0.033	0.2		0.20		1.0	U	1.0	U	0.0810	U,MDL		0.280	MDL	0.100	U
Fluoranthene	µg/L	---	0.10	U	11.8		12.6		10.7		4.97		J+	8.25		2.21	
Fluorene	µg/L	490	77.2		121		129		47.2		26.7		J+	25.0		21.8	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.9		0.79		1.9		1.0	U	1.00	U		0.814		0.100	U
Naphthalene	µg/L	1.1	943		8.19	J	175		13.9		1.44		J+	1.49		0.474	
Phenanthrene	µg/L	294	46.9		70.4		87.3		39.1		36.8		J+	34.7		31.8	
Pyrene	µg/L	---	0.19	U	0.19	U	1.9	U	1.9	U	4.23		J+	11.0		2.87	
1-Methylnaphthalene	µg/L	---	na		na		na		81.5		12.1		J+	12.4		5.31	
2-Methylnaphthalene	µg/L	61.2	346		70.9		53.9		7.66		1.00	U		0.431		0.100	U
Inorganics																	
Cyanide, Total	mg/L	---	0.0143		0.0099		0.010	UJ	0.010	U	na			na		na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		0.0100	U		0.0100	U	0.0100	U
Manganese, Total	mg/L	0.775	15		6.3		5.35		2.99		2.26			2.21		2.33	
Natural Attenuation Parameters																	
Nitrate	mg/L	---	1.0	U	1	UJ	1.0	U	na		na			na		na	
Nitrite	mg/L	---	na		na		na		na		na			na		na	
Ammonia	mg/L	---	0.91		1.49		1.14		na		na			na		na	
Manganese, Dissolved	mg/L	---	na		na		2.87		3.03		na			na		na	
Iron, Dissolved	mg/L	---	na		na		9.60		10.2		na			na		na	
Sulfate	mg/L	---	190		170		140		na		na			na		na	
Sulfide	mg/L	---	1.00	U	1	U	1.0	U	na		na			na		na	
Methane	µg/L	---	na		na		na		na		na			na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na			na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na			na		na	
Orthophosphate	mg/L	---	na		na		na		na		na			na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na			na		na	
Chloride	mg/L	---	na		na		na		na		na			na		na	

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		Performance Standard	MW13-GW-1011 26-Oct-2011		DV	MW13-GW-0412 12-Apr-2012		DV	MW13-GW-1012 10-Oct-2012		DV	MW13-GW-0413 11-Apr-2013		DV	MW13-GW-1013 23-Oct-2013		DV	MW19-GW-001 04-Apr-2000		MW19-GW-002 21-Jun-2000	
VOCs	*Units*																				
Benzene	µg/L	5	3.84			3.17			3.68			3.29			4.59			915		1070	
Toluene	µg/L	1000	1.00	U		1.00	U		1.00	U		1.00	U		1.00	U		91.5		110	
Ethylbenzene	µg/L	700	1.28			1.08			1.00	U		1.00	U		1.00	U		225		241	
Xylenes, Total	µg/L	10000	3.00	U		3.00	U		3.00	U		3.00	U		3.00	U		457		511	
PAHs																					
Acenaphthene	µg/L	914	7.08			7.37		J-	10.6		J-	11.3		J-	13.8			71.7		29.0	
Acenaphthylene	µg/L	362	48.7			29.9		J-	44.9		J-	41.4		J-	47.8			272		52.3	
Anthracene	µg/L	---	1.92			1.04		J-	0.900		J-	1.08		J-	1.29			8.2		3.54	
Benzo(a)anthracene	µg/L	0.13	0.908			0.294		J-	0.363		J-	0.347		J-	0.709			5.0	U	0.69	J
Benzo(a)pyrene	µg/L	0.2	0.526			0.100	U	UJ	0.100	U	UJ	0.141	U	UJ	0.314			5.0	U	0.39	
Benzo(b)fluoranthene	µg/L	0.1	0.489			0.100	U	UJ	0.100	U	UJ	0.273	U	UJ	0.288			5.0	U	0.14	
Benzo(ghi)perylene	µg/L	---	0.194			0.100	U	UJ	0.100	U	UJ	0.172	U	UJ	0.123			5.0	U	0.15	
Benzo(k)fluoranthene	µg/L	0.14	0.112			0.100	U	UJ	0.100	U	UJ	0.182	U	UJ	0.112			5.0	U	0.10	U
Chrysene	µg/L	0.85	0.743			0.250		J-	0.265		J-	0.245		J-	0.715			5.0	U	0.10	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0695	J,MDL	UB	0.0170	U,MDL	UJ	0.0130	U,MDL	UJ	0.172	U	UJ	0.0425			5.0	U	0.10	U
Fluoranthene	µg/L	---	2.59			2.52		J-	2.55		J-	2.91		J-	4.47			5.0	U	3.84	
Fluorene	µg/L	490	15.4			12		J-	16.8		J-	16.5		J-	20.1			77.0		20.3	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.150			0.100	U	UJ	0.100	U	UJ	0.172	U	UJ	0.1	U		5.0	U	0.10	
Naphthalene	µg/L	1.1	0.579			0.362	B	UB,J-	0.572		UB,J-	1.43	B	UB,J-	0.724	B*	J+,B	1680		924	
Phenanthrene	µg/L	294	16.1			17.8		J-	19.0		J-	14.8		J-	22.9			38.4		14.9	
Pyrene	µg/L	---	3.83			2.73		J-	3.66		J-	3.74		J-	2.14			9.5	U	0.19	U
1-Methylnaphthalene	µg/L	---	4.59			2.47		J-	3.55		J-	3.17		J-	3.13			na		na	
2-Methylnaphthalene	µg/L	61.2	0.100	U		0.100	U	UJ	0.122		J-	0.237		J-	0.106			39.6		21.6	
Inorganics																					
Cyanide, Total	mg/L	---	na			na			na			na			na			0.0100		0.0113	J
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U		0.0100	U		0.0100	U		0.0100	U		na		na	
Manganese, Total	mg/L	0.775	2.13			2.16			2.28			2.260			2.34			10		9.4	
Natural Attenuation Parameters																					
Nitrate	mg/L	---	na			na			na			na			na			1.0	U	1.0	U
Nitrite	mg/L	---	na			na			na			na			na			na		na	
Ammonia	mg/L	---	na			na			na			na			na			2.03		2.34	
Manganese, Dissolved	mg/L	---	na			na			na			na			na			na		na	
Iron, Dissolved	mg/L	---	na			na			na			na			na			na		na	
Sulfate	mg/L	---	na			na			na			na			na			53		48	
Sulfide	mg/L	---	na			na			na			na			na			5.0	UJ	0.05	U
Methane	µg/L	---	na			na			na			na			na			na		na	
Alkalinity, Total	mg/L	---	na			na			na			na			na			na		na	
Total Kjeldahl Nitrogen	mg/L	---	na			na			na			na			na			na		na	
Orthophosphate	mg/L	---	na			na			na			na			na			na		na	
Total Organic Carbon	mg/L	---	na			na			na			na			na			na		na	
Chloride	mg/L	---	na			na			na			na			na			na		na	

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		Performance Standard	MW19-GW-003 10-Jul-2001		MW19-GW-004 12-Dec-2001		MW19-GW-005 17-Apr-2002		MW19-GW-1002 30-Oct-2002		MW19-GW-0103 08-Jan-2003		MW19-GW-1003 22-Oct-2003		MW19-GW-0404 07-Apr-2004		MW19-GW-1004 19-Oct-2004	
VOCs	*Units*																	
Benzene	µg/L	5	867		868		829		760	J	34	J	960		1100		1400	
Toluene	µg/L	1000	108		122		94		89	J	4.4	J	110		150		110	
Ethylbenzene	µg/L	700	258		250		196		190	J	12	J	270		270		270	
Xylenes, Total	µg/L	10000	528		450		419		410	J	25	J	540		500		490	
PAHs																		
Acenaphthene	µg/L	914	3.8	U	58.1		79.4		140	J	280	J	120		120		140	
Acenaphthylene	µg/L	362	9.3		206		122		10	U	10	U	1900		1600		2200	
Anthracene	µg/L	---	2.0	U	3.68		9.5	U	7		6.6	J	7.3		7.1		7.8	
Benzo(a)anthracene	µg/L	0.13	0.10		0.11		0.19	U	1	U	1.0	U	1.3	U	0.12	Ja	1.4	U
Benzo(a)pyrene	µg/L	0.2	0.10	U	0.10	U	0.19	U	1	U	1.0	U	1.3	U	0.052	Ja	1.4	U
Benzo(b)fluoranthene	µg/L	0.1	0.10	U	0.10	U	0.10	U	1	U	1.0	U	0.51	U	0.052	Ua	0.54	U
Benzo(ghi)perylene	µg/L	---	0.10	U	0.10	U	0.10	U	1	U	1.0	U	2.0	U	0.21	U	2.2	U
Benzo(k)fluoranthene	µg/L	0.14	0.10	U	0.10	U	0.10	U	1	U	1.0	U	0.51	U	0.052	U	0.54	U
Chrysene	µg/L	0.85	0.10	U	0.10	U	0.10	U	0.16		1.0	U	1.3	U	0.10	Ja	1.4	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.10	U	0.10	U	0.11		1	U	1.0	U	3.0	U	0.31	U	3.2	U
Fluoranthene	µg/L	---	0.10	U	0.81		1.78		4.9		4.6	J	5.6		5.1		5.4	
Fluorene	µg/L	490	3.8	U	28.5		50.8		27		30	J	28		25		25	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.10	U	0.10	U	0.10	U	1.00	U	1.0	U	1.3	U	0.14	U	1.4	U
Naphthalene	µg/L	1.1	998		1,160		1,530		1,900		1,600	J	2200		1800		2100	
Phenanthrene	µg/L	294	2.0	U	22.3		29.6		39		43	J	45		45		46	
Pyrene	µg/L	---	0.19	U	0.19	U	1.61		2.6		2.3	J	2.5	Ua	0.84		2.7	Ua
1-Methylnaphthalene	µg/L	---	na		388		510		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	3.8	U	31		35.6		na		na		na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.011		0.010	U	0.010	U	0.005	U	0.006		0.012		0.010	U	0.010	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	6.63		5.52		5.3		5.09		5.08		5.7		5.3		5.1	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	1.0	U	na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	2.07		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	5.45		5.52		4.9		5.06		5.21		5.0		5.1		4.8	
Iron, Dissolved	mg/L	---	5.14		5.59		5.0		6.87		7.42		5.6		5.4		5.6	
Sulfate	mg/L	---	80		na		na		na		na		na		na		na	
Sulfide	mg/L	---	1.0	U	na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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		Performance Standard	MW19-GW-0405 14-Apr-2005		MW19-GW-1005 12-Oct-2005		MW19-GW-0406 12-Apr-2006		MW19-GW-1006 10-Oct-2006		MW19-GW-0407 17-Apr-2007		MW19-GW-1007 10-Oct-2007		MW19-GW-0408 15-Apr-2008		MW19-GW-0410 08-Apr-2010	
VOCs	*Units*																	
Benzene	µg/L	5	2000	*	1000		1130		1290		1180		538		870		1100	
Toluene	µg/L	1000	150	*	120		48.4		82.2		112		179		87.3		158	
Ethylbenzene	µg/L	700	300	*	220		173		211		184		112		151		187	
Xylenes, Total	µg/L	10000	550	*	380		312		368		331		293		261		440	
PAHs																		
Acenaphthene	µg/L	914	160		170		135		147		155		158		146		152	RL1
Acenaphthylene	µg/L	362	2200		2200		125		148		120		201		156		152	RL1
Anthracene	µg/L	---	7.7		9.1		7.32		7.88		7.19		7.88		6.86		13.8	RL1
Benzo(a)anthracene	µg/L	0.13	0.12		0.36	Ja	0.704		0.167		0.0784	J	0.148		0.214		1.00	U,RL1
Benzo(a)pyrene	µg/L	0.2	0.12	U	0.16	Ja	0.019	U	0.0909	J	0.0356	U	0.032	U	0.186	J	1.00	U,RL1
Benzo(b)fluoranthene	µg/L	0.1	0.047	U	0.23	U	0.037	U	0.0702	J	0.0144	U	0.013	U	0.117		1.00	U,RL1
Benzo(ghi)perylene	µg/L	---	0.19	U	0.93	U	0.032	U	0.009	U	0.01	U	0.009	U	0.113		1.00	U,RL1
Benzo(k)fluoranthene	µg/L	0.14	0.047	U	0.23	U	0.023	U	0.0381	J	0.0167	U	0.015	U	0.015	U	1.00	U,RL1
Chrysene	µg/L	0.85	0.067	Ja	0.24	Ja	0.02	U	0.0972	J	0.0409	J	0.0839	J	0.005	U	1.00	U,RL1
Dibenzo(a,h)anthracene	µg/L	0.033	0.28	U	1.4	U	0.033	U	0.01	U	0.0111	U	0.01	U	0.0287	J	0.0810	U,RL1,MDL
Fluoranthene	µg/L	---	5.9		6.1		0.032	U	3.95		3.11		2.89		4.79		2.65	RL1
Fluorene	µg/L	490	27		25		69.2		86.5		81.6		162		106		34.8	RL1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.12	U	0.60	U	0.038	U	0.007	U	0.00778	U	0.007	U	0.0833	J	1.00	U,RL1
Naphthalene	µg/L	1.1	1700		1300		1030		1060		967		871		737		620	RL1
Phenanthrene	µg/L	294	48		49		45.8		48.6		47.1		60.3		62.1		45.4	RL1
Pyrene	µg/L	---	0.57		1.4	M	23.8		16.8		16		14.3		0.019	U	1.92	RL1
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		900	RL1
2-Methylnaphthalene	µg/L	61.2	na		na		na		46.5		43.1		29.9		40		13.6	RL1
Inorganics																		
Cyanide, Total	mg/L	---	0.010	U	0.0058	B	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		0.0100	U
Manganese, Total	mg/L	0.775	4.9		4.8		7.63		na		na		na		na		3.84	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		0.10	U
Nitrite	mg/L	---	na		na		na		na		na		na		na		0.100	
Ammonia	mg/L	---	na		na		na		na		na		na		na		2.31	
Manganese, Dissolved	mg/L	---	4.9		4.3		4.3		na		na		na		na		3.70	
Iron, Dissolved	mg/L	---	6.3		6.0		4.77		na		na		na		na		5.31	
Sulfate	mg/L	---	na		na		na		na		na		na		na		34.4	
Sulfide	mg/L	---	na		na		na		na		na		na		na		5.00	U
Methane	µg/L	---	na		na		na		na		na		na		na		68.0	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		389	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		2.61	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		0.100	U
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		3.01	
Chloride	mg/L	---	na		na		na		na		na		na		na		182	

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		Performance Standard	MW19-GW-1010 06-Oct-2010		MW19-GW-0411 12-Apr-2011		MW19-GW-1011 25-Oct-2011		DV	MW19-GW-0412 11-Apr-2012		DP02-GW-0412 11-Apr-2012		DV	MW19-GW-1012 10-Oct-2012		DV
VOCs	*Units*																
Benzene	µg/L	5	1060		864		964			968		984			870		
Toluene	µg/L	1000	161		170		152			173		176			139		
Ethylbenzene	µg/L	700	256		217		208			212		212			229		
Xylenes, Total	µg/L	10000	406		347		328			319		315			355		
PAHs																	
Acenaphthene	µg/L	914	126		99.5		56.5		J-	89.2		97.6	RL1	J-	91.0		J-
Acenaphthylene	µg/L	362	127		99.9		129		J-	98.3		103	RL1	J-	73.8		J-
Anthracene	µg/L	---	13.3		10.3		6.50		J-,J-	8.05		8.21	RL1	J-	8.30		J-
Benzo(a)anthracene	µg/L	0.13	0.144		0.120		0.147		J-,J-	0.145		1.00	U,RL1	UJ	0.161		J-
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	0.100	U	UJ	0.100	U	1.00	U,RL1	UJ	0.100	U	UJ
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	0.100	U	UJ	0.100	U	1.00	U,RL1	UJ	0.100	U	UJ
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	0.100	U	UJ	0.100	U	1.00	U,RL1	UJ	0.100	U	UJ
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	0.100	U	UJ	0.100	U	1.00	U,RL1	UJ	0.100	U	UJ
Chrysene	µg/L	0.85	0.122		0.106		0.127		J-,J-	0.125		1.00	U,RL1	UJ	0.101		J-
Dibenzo(a,h)anthracene	µg/L	0.033	0.00810	U,MDL	0.017	U,MDL	0.0170	U,MDL	UJ	0.0170	U,MDL	0.170	U,RL1,MDL	UJ	0.0130	U,MDL	UJ
Fluoranthene	µg/L	---	1.66		1.46		2.62		J-,J-	1.93		2.11	RL1	J-	2.13		J-
Fluorene	µg/L	490	28.8		24.8		8.07		J-	20.5		23.6	RL1	J-	27.7		J-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	0.100	U	UJ	0.100	U	1.00	U,RL1	UJ	0.100	U	UJ
Naphthalene	µg/L	1.1	488		384		416		J-	292		372	RL1	J-	292		J-
Phenanthrene	µg/L	294	53.5		37.7		29.8		J-	37.1		44.8	RL1	J-	31.1		J-
Pyrene	µg/L	---	1.03		1.47		5.55		J-,J-	1.85		2.21	RL1	J-	2.12		J-
1-Methylnaphthalene	µg/L	---	733		619		652		J-	483		595	RL1	J-	504		J-
2-Methylnaphthalene	µg/L	61.2	10.8		5.84		9.71		J-,J-	8.85		11.3	RL1	J-	11.8		J-
Inorganics																	
Cyanide, Total	mg/L	---	na		na		na			na		na			na		
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	0.0100	U		0.0100	U	0.0100	U		0.0100	U	
Manganese, Total	mg/L	0.775	3.63		4.11		3.59			3.89		3.67			3.92		
Natural Attenuation Parameters																	
Nitrate	mg/L	---	0.10	U,M1	0.10	U	0.10	U		0.100	U	na			0.100	U	
Nitrite	mg/L	---	0.100	U	0.100	U	0.100	U		0.100	U	na			0.100	U	
Ammonia	mg/L	---	2.23		2.26		2.14			2.22		na			2.14		
Manganese, Dissolved	mg/L	---	3.64		3.51		3.76			3.99		na			4.10		
Iron, Dissolved	mg/L	---	5.46		4.37		5.21			5.56		na			5.76		
Sulfate	mg/L	---	31.4		34.4		36.5			36.8		na			38.0		
Sulfide	mg/L	---	5.00	U	10.00	U	10	U		10	U	na			10	U	
Methane	µg/L	---	74.6		21		28			31		na			43		
Alkalinity, Total	mg/L	---	376		351		345			311		na			345		
Total Kjeldahl Nitrogen	mg/L	---	2.90		2.85		2.85			2.4		na			2.57		
Orthophosphate	mg/L	---	0.100	U	0.100	U	0.100	U		0.100	U	na			0.100	U	
Total Organic Carbon	mg/L	---	2.65		na		2.32	ET		na		na			na		
Chloride	mg/L	---	193		na		na			na		na			na		

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Groundwater Analytical Results

		Performance Standard	MW19-GW-0413 10-Apr-2013	DV	MW19-GW-1013 23-Oct-2013	DV	MW20-GW-001 02-Apr-2001	MW20-GW-003 10-Jul-2001	MW20-GW-004 12-Dec-2001	MW20-GW-005 18-Apr-2002	MW20-GW-1002 30-Oct-2002	MW20-GW-0103 09-Jan-2003
VOCs	*Units*											
Benzene	µg/L	5	977	J-	840		2300	2800	3000	3140	1.7	2000 J
Toluene	µg/L	1000	134		99.9		906	1130	1430	1270	0.79	1300 J
Ethylbenzene	µg/L	700	186		179		969	987	1220	1050	0.67	1300
Xylenes, Total	µg/L	10000	316		296		997	1010	1220	1170	0.78	450
PAHs												
Acenaphthene	µg/L	914	134		112		71.9	65.5	95.7	54.6	0.041	420 J
Acenaphthylene	µg/L	362	134		111		198	250	443	240	11 U	10 U
Anthracene	µg/L	---	9.27		5.31		10 U	5.91	10 U	5.0 U	7.8	6.4 J
Benzo(a)anthracene	µg/L	0.13	0.147		1.02	U	0.39	0.13	0.4	0.56	0.71	0.45 J
Benzo(a)pyrene	µg/L	0.2	0.100	U	1.02	U	0.22	0.10 U	0.17	0.22	0.34	0.18 J
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	1.02	U	0.10 U	0.10 U	0.10 U	0.10 U	0.45	0.24 J
Benzo(ghi)perylene	µg/L	---	0.100	U	1.02	U	0.10 U	0.10 U	0.10 U	0.10 U	1.1 U	1.0 U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	1.02	U	0.10 U	0.10 U	0.10 U	0.10 U	1.1 U	1.0 U
Chrysene	µg/L	0.85	0.137		1.02	U	0.26	0.10 U	0.10 U	0.21	0.34	0.24 J
Dibenzo(a,h)anthracene	µg/L	0.033	0.0173	U	0.173	U	0.10 U	0.10 U	0.10 U	0.10 U	1.1 U	1.0 U
Fluoranthene	µg/L	---	1.55		1.29		1.5	2.07	0.10 U	0.10 U	6.4	3.8 J
Fluorene	µg/L	490	31.7		25.8		56.9	58.3	74.3	64.7	29	41 J
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	1.02	U	0.10 U	0.1 U	0.10 U	0.10 U	1.1 U	1.0 U
Naphthalene	µg/L	1.1	400		352	B* J+,B	1880	1940	3220	1830	2700	2700 J
Phenanthrene	µg/L	294	38.2		60.1		29.4	26.3	40.1	27.8	43	43 J
Pyrene	µg/L	---	1.59		1.83		0.19 U	0.19 U	0.19 U	1.52	3.8	2.1 J
1-Methylnaphthalene	µg/L	---	770		665		na	na	662	na	na	na
2-Methylnaphthalene	µg/L	61.2	13.4		11.1		353	303	485	277	na	na
Inorganics												
Cyanide, Total	mg/L	---	na		na		0.021	0.17	0.02	0.015	0.005 U	0.00574
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	na	na	na	na	na	na
Manganese, Total	mg/L	0.775	4.05		3.61		1.07	0.918	0.94	0.986	0.897	0.953
Natural Attenuation Parameters												
Nitrate	mg/L	---	0.100	U	na		1.0 U	1.0 U	na	na	na	na
Nitrite	mg/L	---	0.100	U	na		na	na	na	na	na	na
Ammonia	mg/L	---	2.25		na		0.20 UJ	0.20 U	na	na	na	na
Manganese, Dissolved	mg/L	---	4.11		na		na	0.884	0.94	0.926	0.824	0.906
Iron, Dissolved	mg/L	---	5.56		na		na	14.9	15.5	16	14.6	15.8
Sulfate	mg/L	---	34.9		na		120	130	na	na	na	na
Sulfide	mg/L	---	10.0	U	na		2.0 U	0.10 U	na	na	na	na
Methane	µg/L	---	28.8		na		na	na	na	na	na	na
Alkalinity, Total	mg/L	---	365		na		na	na	na	na	na	na
Total Kjeldahl Nitrogen	mg/L	---	2.83		na		na	na	na	na	na	na
Orthophosphate	mg/L	---	0.100	U	na		na	na	na	na	na	na
Total Organic Carbon	mg/L	---	na		na		na	na	na	na	na	na
Chloride	mg/L	---	na		na		na	na	na	na	na	na

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Groundwater Analytical Results

		Performance Standard	MW20-GW-1003 22-Oct-2003		MW20-GW-0404 08-Apr-2004		MW20-GW-1004 20-Oct-2004		MW20-GW-0405 14-Apr-2005		MW20-GW-1005 11-Oct-2005		MW20-GW-0406 12-Apr-2006		MW20-GW-1006 10-Oct-2006		MW20-GW-0407 17-Apr-2007	
VOCs	*Units*																	
Benzene	µg/L	5	2800		2800		1700		4700		2700		2830		2140		2360	
Toluene	µg/L	1000	1500		1400		920		3500		1500		1860		1180		1510	
Ethylbenzene	µg/L	700	1300		1300		830		1900		1200		1540		1170		1290	
Xylenes, Total	µg/L	10000	1400		1400		900		2500		1800		1730		1260		1380	
PAHs																		
Acenaphthene	µg/L	914	96		140		100		120		160		205		141		121	
Acenaphthylene	µg/L	362	2000		1900		1400		1900		1900		168		119		85.6	
Anthracene	µg/L	---	7.0		5.6		5.4		6.7		17		38		7.16		5.75	
Benzo(a)anthracene	µg/L	0.13	0.62	Ja	0.54	Ja	0.50	Ja	0.16		6.6		17		0.609		0.131	J
Benzo(a)pyrene	µg/L	0.2	1.4	Ua	0.37	Ja	1.3	U	0.018	Ja	3.9		16.5		0.542		0.0759	J
Benzo(b)fluoranthene	µg/L	0.1	0.53	U	0.53	U	0.50	U	0.047	U	1.6		10.9		0.37		0.0144	U
Benzo(ghi)perylene	µg/L	---	2.1	U	2.1	U	2.0	U	0.19	U	1.0	Ja	5.74		0.168		0.01	U
Benzo(k)fluoranthene	µg/L	0.14	0.53	U	0.53	U	0.50	U	0.047	U	0.90		7.01		0.21		0.0167	U
Chrysene	µg/L	0.85	0.33	Ja	0.43	Ja	0.32	Ja	0.090	Ja	4.6		11.5		0.44		0.0589	J
Dibenzo(a,h)anthracene	µg/L	0.033	3.2	U	3.2	U	3.0	U	0.28	U	3.0	U	1.81		0.0322	J	0.0111	U
Fluoranthene	µg/L	---	7.2		7.0		5.5		6.3		23		42.6		4.42		5.32	
Fluorene	µg/L	490	34		40		29		37		44		140		88.6		79.1	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	1.4	U	1.4	U	1.3	U	0.12	U	1.2	Ja	6.19		0.129		0.00778	U
Naphthalene	µg/L	1.1	3800		3700		2400		3400		3400		3340		2640		2470	
Phenanthrene	µg/L	294	41		48		33		43		64		120		40.8		32	
Pyrene	µg/L	---	2.6	Ua	2.3	Ja	2.5	Ua	0.72		13		234		22.4		13.7	
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		na		428		388	
Inorganics																		
Cyanide, Total	mg/L	---	0.011		0.0079	B	0.010		0.0099	B	0.0085	B	0.1	U	0.01	U	0.0108	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	1.2		0.88		0.79		0.78		0.89		1.18		na		na	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		0.10	U	0.020	U	0.1	U	na		na	
Nitrite	mg/L	---	na		na		na		0.020	U	0.020	U	0.1	U	na		na	
Ammonia	mg/L	---	na		na		na		0.20	U	0.22		0.2	U	na		na	
Manganese, Dissolved	mg/L	---	0.85		0.81		0.79		0.80		0.74		0.698		na		na	
Iron, Dissolved	mg/L	---	15		15		14		15		14		13.4		na		na	
Sulfate	mg/L	---	na		na		na		88		130		112		na		na	
Sulfide	mg/L	---	na		na		na		1.0	U	0.90	B	1	U	na		na	
Methane	µg/L	---	na		na		na		26		63		151		na		na	
Alkalinity, Total	mg/L	---	na		na		na		430		380		456		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		0.26	B	0.50		1	U	na		na	
Orthophosphate	mg/L	---	na		na		na		0.019	B	0.050	U	0.1	U	na		na	
Total Organic Carbon	mg/L	---	na		na		na		6.7		9.5		6.66		na		na	
Chloride	mg/L	---	na		na		na		na		na		134		na		na	

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Groundwater Analytical Results

		Performance Standard	MW20-GW-1007 09-Oct-2007		MW20-GW-0408 15-Apr-2008		MW20-GW-0410 08-Apr-2010			DV	MW20-GW-1010 06-Oct-2010		MW20-GW-0411 12-Apr-2011		MW20-GW-1011 25-Oct-2011			DV	MW20-GW-0412 11-Apr-2012			DV
VOCs	*Units*																					
Benzene	µg/L	5	1800		1920		549				637		919		1250				2490			
Toluene	µg/L	1000	1120		1070		272				247		353		361				846			
Ethylbenzene	µg/L	700	1100		1100		978	C9	J+		947		865		974				1180			
Xylenes, Total	µg/L	10000	1170		1240		929				1010		1160		1090				1190			
PAHs																						
Acenaphthene	µg/L	914	149		123		79.5	RL1			92.9		94.0		39.3		J-		78.6	RL1		J-
Acenaphthylene	µg/L	362	301		77.1		82.5	RL1			133		96.9		91.9		J-		48.3	RL1		J-
Anthracene	µg/L	---	5.67		6.07		10.0	U,RL1			8.98		7.13		6.51		J-		2.37	RL1		J-
Benzo(a)anthracene	µg/L	0.13	0.22		0.348		10.0	U,RL1			0.161		0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Benzo(a)pyrene	µg/L	0.2	0.156	J	0.304		10.0	U,RL1			0.100	U	0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Benzo(b)fluoranthene	µg/L	0.1	0.013	U	0.203		10.0	U,RL1			0.100	U	0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Benzo(ghi)perylene	µg/L	---	1.18		0.137		10.0	U,RL1			0.100	U	0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Benzo(k)fluoranthene	µg/L	0.14	0.015	U	0.015	U	10.0	U,RL1			0.100	U	0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Chrysene	µg/L	0.85	0.18		0.0649	J	10.0	U,RL1			0.140		0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Dibenzo(a,h)anthracene	µg/L	0.033	0.01	U	0.01	U	0.81	U,RL1,MDL			0.00810	U,MDL	0.0170	U,MDL	0.276	J,MDL	J-		0.170	U,MDL		UJ
Fluoranthene	µg/L	---	2.14		3.87		10	U,RL1			3.25		1.37		2.23		J-		1.14	RL1		J-
Fluorene	µg/L	490	152		88.2		41.1	RL1			49.8		48.5		19.6		J-		30.6	RL1		J-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.007	U	0.14		10.0	U,RL1			0.100	U	0.100	U	1.00	U	UJ		1.00	U,RL1		UJ
Naphthalene	µg/L	1.1	3210		2180		1940	RL1			2100		1890		1690		J-		1510	B1 B		J-
Phenanthrene	µg/L	294	42.7		44.4		42.4	RL1			42.2		37.4		22.9		J-		28.4	RL1		J-
Pyrene	µg/L	---	13		0.019	U	10.0	U,RL1			2.52		1.48		3.77		J-		1.23	RL1		J-
1-Methylnaphthalene	µg/L	---	na		na		457	RL1			637		497		430		J-		328	RL1		J-
2-Methylnaphthalene	µg/L	61.2	482		362		154	RL1			164		146		158		J-		176	RL1		J-
Inorganics																						
Cyanide, Total	mg/L	---	0.0109		0.01	U	na				na		na		na				na			
Cyanide, WAD	mg/L	0.2	na		na		0.0100	U			0.0100	U	0.0100	U	0.0100	U			0.0100	U		
Manganese, Total	mg/L	0.775	na		na		0.592				0.557		0.616		0.581				0.584			
Natural Attenuation Parameters																						
Nitrate	mg/L	---	na		na		na				na		na		na				na			
Nitrite	mg/L	---	na		na		na				na		na		na				na			
Ammonia	mg/L	---	na		na		na				na		na		na				na			
Manganese, Dissolved	mg/L	---	na		na		na				na		na		na				na			
Iron, Dissolved	mg/L	---	na		na		na				na		na		na				na			
Sulfate	mg/L	---	na		na		na				na		na		na				na			
Sulfide	mg/L	---	na		na		na				na		na		na				na			
Methane	µg/L	---	na		na		na				na		na		na				na			
Alkalinity, Total	mg/L	---	na		na		na				na		na		na				na			
Total Kjeldahl Nitrogen	mg/L	---	na		na		na				na		na		na				na			
Orthophosphate	mg/L	---	na		na		na				na		na		na				na			
Total Organic Carbon	mg/L	---	na		na		na				na		na		na				na			
Chloride	mg/L	---	na		na		na				na		na		na				na			

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		Performance Standard	MW20-GW-1012 10-Oct-2012	DV	MW20-GW-0413 10-Apr-2013	DV	MW20-GW-1013 23-Oct-2013	DV	MW23-GW-005 17-Apr-2002		MW23-GW-1002 31-Oct-2002		MW23-GW-0103 08-Jan-2003		MW23-GW-1003 21-Oct-2003		MW23-GW-0404 06-Apr-2004	
VOCs	*Units*																	
Benzene	µg/L	5	3640		3310		2770		14.1		10		16		22		13	
Toluene	µg/L	1000	1360		1440		1320		1.0	U	2.0	U	1.0	U	1	U	1	U
Ethylbenzene	µg/L	700	1600		1510		1460		1.0	U	2.0	U	4.1		0.79	J	0.73	Ja
Xylenes, Total	µg/L	10000	1620		1610		1530		6.9		7.9		11		8.8		7.6	
PAHs																		
Acenaphthene	µg/L	914	75.0	J-	143	J+	88.3	J-	0.19	U	110		45	J	24		28	
Acenaphthylene	µg/L	362	40.2	J-	50.5	J+	40.4	J-	52.6		1.0	U	1.0	U	240		200	
Anthracene	µg/L	---	1.77	J-	29.6	U	2.38	J-	0.26		0.22		0.42	J	0.34		0.47	
Benzo(a)anthracene	µg/L	0.13	0.111	J-	12.2	U	1.02	U UJ	0.19	U	0.1	U	0.10	U	0.14	U	0.12	U
Benzo(a)pyrene	µg/L	0.2	0.100 U	UJ	14.3	U	1.02	U UJ	0.19	U	0.1	U	0.10	U	0.14	U	0.12	U
Benzo(b)fluoranthene	µg/L	0.1	0.100 U	UJ	27.6	U	1.02	U UJ	0.10	U	0.10	U	0.10	U	0.054	U	0.048	U
Benzo(ghi)perylene	µg/L	---	0.100 U	UJ	17.3	U	1.02	U UJ	0.10	U	0.10	U	0.10	U	0.22	U	0.19	U
Benzo(k)fluoranthene	µg/L	0.14	0.100 U	UJ	18.4	U	1.02	U UJ	0.10	U	0.10	U	0.10	U	0.054	U	0.048	U
Chrysene	µg/L	0.85	0.100 U	UJ	11.2	U	1.02	U UJ	0.10	U	0.10	U	0.10	U	0.14	U	0.12	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0130 U,MDL	UJ	17.3	U	0.173	U UJ	0.10	U	0.10	U	0.10	U	0.33	U	0.29	U
Fluoranthene	µg/L	---	1.14	J-	50	U	1.02	U UJ	0.19	U	0.1		0.22	J	0.37		0.82	
Fluorene	µg/L	490	26.1	J-	47.7	J+	29.3	J-	7.38	J	15		9.6	J	9.0		9.4	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100 U	UJ	17.3	U	1.02	U UJ	0.10	U	0.10	U	0.10	U	0.14	U	0.12	U
Naphthalene	µg/L	1.1	2380	J-	3870	B B,J+	2290	B J-,J+,B	1.32		0.9		3.7	J	1.0	Ja	1.3	
Phenanthrene	µg/L	294	19.3	J-	43.5	J+	32.1	J-	2.88		4	J	5.9	J	5.0		6.8	
Pyrene	µg/L	---	1.23	J-	56.1	U	1.09	J-	0.19	U	0.1	U	0.10	U	0.27	U	0.24	U
1-Methylnaphthalene	µg/L	---	371	J-	604	J+	412	J-	14.4		14.4		na		na		na	
2-Methylnaphthalene	µg/L	61.2	262	J-	505	J+	307	J-	0.19	U	na		na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	na		na		na		0.010	U	0.005	U	0.005	U	0.01	U	0.01	U
Cyanide, WAD	mg/L	0.2	0.0100 U		0.189		0.0100 U		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.607		0.587		0.603		0.302		0.299		0.309		3.9		0.63	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	na		na		na		0.295		0.272		0.296		0.28		0.28	
Iron, Dissolved	mg/L	---	na		na		na		4		3.63		4.61		3.4		3.5	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW23-GW-1004 20-Oct-2004		MW23-GW-0405 15-Apr-2005		MW23-GW-1005 11-Oct-2005		MW23-GW-0406 11-Apr-2006		MW23-GW-1006 11-Oct-2006		MW23-GW-0407 18-Apr-2007		MW23-GW-1007 10-Oct-2007		MW23-GW-0408 16-Apr-2008	
VOCs	*Units*																	
Benzene	µg/L	5	21		22	*	21		8.7		5.91		9.25		13.3		12.7	
Toluene	µg/L	1000	1	U	1.0	U*	1.0	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	700	1	U	1.0	U*	1.0	U	1	U	1	U	1	U	1	U	1	U
Xylenes, Total	µg/L	10000	7.4		8.2	*	5.9		7.12		6.08		5.84		6.15		5.56	
PAHs																		
Acenaphthene	µg/L	914	25		36		32		27.3		24.7		21.3		28.2		20	
Acenaphthylene	µg/L	362	240		340		270		48.1		41.6		38.9		35.8		37.2	
Anthracene	µg/L	---	0.47		0.72		0.40		0.0106	U	0.706		0.592		0.664		0.291	
Benzo(a)anthracene	µg/L	0.13	0.13	U	0.12	U	0.12	U	0.0216	U	0.003	U	0.004	U	0.003	U	0.003	U
Benzo(a)pyrene	µg/L	0.2	0.13	U	0.12	U	0.12	U	0.0216	U	0.032	U	0.0427	U	0.032	U	0.032	U
Benzo(b)fluoranthene	µg/L	0.1	0.050	U	0.047	U	0.046	U	0.0216	U	0.013	U	0.0173	U	0.013	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.20	U	0.19	U	0.19	U	0.0364	U	0.009	U	0.012	U	0.009	U	0.009	U
Benzo(k)fluoranthene	µg/L	0.14	0.050	U	0.047	U	0.046	U	0.0261	U	0.015	U	0.02	U	0.015	U	0.015	U
Chrysene	µg/L	0.85	0.13	U	0.12	U	0.12	U	0.0227	U	0.005	U	0.00667	U	0.005	U	0.005	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.30	U	0.28	U	0.28	U	0.0375	U	0.01	U	0.0133	U	0.01	U	0.01	U
Fluoranthene	µg/L	---	0.73		1.1		0.63		0.0364	U	0.603		0.466		0.447		0.272	
Fluorene	µg/L	490	9.6		14		10		24.8		24		19.7		37.3		24.5	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.13	U	0.12	U	0.12	U	0.0432	U	0.007	U	0.00933	U	0.007	U	0.007	U
Naphthalene	µg/L	1.1	1.3	U	1.2	U	1.2	U	1.04		1.34		1.6		1.13		0.663	
Phenanthrene	µg/L	294	6.6		10		5.9		8.74		7.94		6.8		8.41		7.16	
Pyrene	µg/L	---	0.25	U	0.23	U	0.23	U	3.44		2.62		2.21		2.64		0.019	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		0.513		0.378		0.052	U	0.052	U
Inorganics																		
Cyanide, Total	mg/L	---	0.01	U	0.0027	B	0.0027	B	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.35		0.29		0.54		0.257		na		na		na		na	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	0.29		0.30		0.28		0.294		na		na		na		na	
Iron, Dissolved	mg/L	---	3.7		3.8		0.17		4.29		na		na		na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW23-GW-0410 08-Apr-2010		DUP2-GW-0410 08-Apr-2010		MW23-GW-1010 05-Oct-2010		MW23-GW-0411 12-Apr-2011		MW23-GW-1011 24-Oct-2011		DV	MW23-GW-0412 11-Apr-2012		DV	MW23-GW-1012 09-Oct-2012	
VOCs	*Units*																	
Benzene	µg/L	5	11.4		13.2		13.2		15.3		16.8			10.8			9.99	
Toluene	µg/L	1000	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U		1.00	U
Ethylbenzene	µg/L	700	1.00	U,C9	1.00	U,C9	1.00	U	1.00	U	1.00	U		1.00	U		1.00	U
Xylenes, Total	µg/L	10000	6.00	U	6.00	U	4.11		5.22		4.44			4.43			4.57	
PAHs																		
Acenaphthene	µg/L	914	19.3		21.4		17.7		22.5		9.14		J-	16.5		J-	21.1	
Acenaphthylene	µg/L	362	39.2		45.0		34.1		41.0		31.6		J-	30.5		J-	33.8	
Anthracene	µg/L	---	0.778		0.705		0.479		0.485		0.252		J-	0.225		J-	0.279	
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Chrysene	µg/L	0.85	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.00810	U,MDL	0.00810	U,MDL	0.00810	U,MDL	0.0170	U,MDL	0.0170	U,MDL	UJ	0.0170	U,MDL	UJ	0.0130	U,MDL
Fluoranthene	µg/L	---	0.425		0.430		0.299		0.400		0.247		J-	0.208		J-	0.245	
Fluorene	µg/L	490	13.1		15.4		11.5		14.2		5.43		J-	9.75		J-	13.8	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U
Naphthalene	µg/L	1.1	0.701		0.614		0.407		0.449		0.514		J-	0.491	B	UB,J-	0.816	
Phenanthrene	µg/L	294	8.66		11.6		8.18		8.68		7.37		J-	5.55		J-	8.00	
Pyrene	µg/L	---	0.311		0.299		0.327		0.428		0.253		J-	0.229		J-	0.235	
1-Methylnaphthalene	µg/L	---	1.86		1.56		1.25		1.34		0.934		J-	0.933		J-	1.22	
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.126	
Inorganics																		
Cyanide, Total	mg/L	---	na		na		na		na		na			na			na	
Cyanide, WAD	mg/L	0.2	0.0100	U	0.01	U	0.0100	U	0.0100	U	0.0100	U	UJ	0.0100	U		0.0100	U
Manganese, Total	mg/L	0.775	0.323		0.325		0.464		0.397		0.316			0.339			0.362	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na			na			na	
Nitrite	mg/L	---	na		na		na		na		na			na			na	
Ammonia	mg/L	---	na		na		na		na		na			na			na	
Manganese, Dissolved	mg/L	---	na		na		na		na		na			na			na	
Iron, Dissolved	mg/L	---	na		na		na		na		na			na			na	
Sulfate	mg/L	---	na		na		na		na		na			na			na	
Sulfide	mg/L	---	na		na		na		na		na			na			na	
Methane	µg/L	---	na		na		na		na		na			na			na	
Alkalinity, Total	mg/L	---	na		na		na		na		na			na			na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na			na			na	
Orthophosphate	mg/L	---	na		na		na		na		na			na			na	
Total Organic Carbon	mg/L	---	na		na		na		na		na			na			na	
Chloride	mg/L	---	na		na		na		na		na			na			na	

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Groundwater Analytical Results

		Performance Standard	MW23-GW-0413 10-Apr-2013			MW23-GW-1013 22-Oct-2013			MW25-GW-005 17-Apr-2002		MW25-GW-1002 29-Oct-2002		MW25-GW-0103 08-Jan-2003		MW25-GW-1003 21-Oct-2003		MW25-GW-0404 06-Apr-2004		MW25-GW-1004 20-Oct-2004	
					DV			DV												
VOCs	*Units*																			
Benzene	µg/L	5	5.35			8.41			39.9		19		31		5.9		2.2		5.3	
Toluene	µg/L	1000	1.00	U		1.00	U		1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	1.00	U		1.00	U		1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	4.11			3.72			6.4	J	7	U	3.0	U	1.8		1.1		1.6	
PAHs																				
Acenaphthene	µg/L	914	24.1			17			3.81	J	6.4		9.0		4.4		5.0		4.3	
Acenaphthylene	µg/L	362	39.9			24.6			7.4	J	1	U	1.0	U	53		40		41	
Anthracene	µg/L	---	0.336			0.206			0.19	U	0.051	U	0.051	U	0.049	Ua	0.0073	Ja	0.0073	Ja
Benzo(a)anthracene	µg/L	0.13	0.121	U		0.100	U		0.19	U	0.1	U	0.10	U	0.13	U	0.13	U	0.13	U
Benzo(a)pyrene	µg/L	0.2	0.141	U		0.100	U		0.19	U	0.1	U	0.10	U	0.13	U	0.13	U	0.13	U
Benzo(b)fluoranthene	µg/L	0.1	0.273	U		0.100	U		0.10	U	0.1	U	0.10	U	0.049	U	0.049	U	0.050	U
Benzo(ghi)perylene	µg/L	---	0.172	U		0.100	U		0.10	U	0.1	U	0.10	U	0.19	U	0.19	U	0.20	U
Benzo(k)fluoranthene	µg/L	0.14	0.182	U		0.100	U		0.10	U	0.1	U	0.10	U	0.049	U	0.049	U	0.050	U
Chrysene	µg/L	0.85	0.111	U		0.100	U		0.10	U	0.1	U	0.10	U	0.13	U	0.13	U	0.13	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.172	U		0.0173	U		0.10	U	0.1	U	0.10	U	0.29	U	0.29	U	0.30	U
Fluoranthene	µg/L	---	0.495	U		0.223			0.19	U	0.1	U	0.10	U	0.13	U	0.13	U	0.13	U
Fluorene	µg/L	490	15.4			9.47			0.19	U	0.1	U	0.25		0.28		0.35		0.26	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.172	U		0.100	U		0.10	U	0.1	U	0.10	U	0.13	U	0.13	U	0.13	U
Naphthalene	µg/L	1.1	0.923	B	UB	0.451			0.10	U	1.5		0.8		1.3	U	1.3	U	1.3	U
Phenanthrene	µg/L	294	10.2			4.02			0.10	U	0.10	U	0.10	U	0.014	Ja	0.097	U	0.099	U
Pyrene	µg/L	---	0.556	U		0.236			0.19	U	0.1	U	0.10	U	0.24	U	0.24	U	0.25	U
1-Methylnaphthalene	µg/L	---	1.33			0.841			0.19	U	na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.118			0.100	U		0.19	U	na		na		na		na		na	
Inorganics																				
Cyanide, Total	mg/L	---	na			na			0.010	U	0.005	U	0.009		0.010	U	0.010	U	0.010	U
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.318		J-	0.303			0.406		0.41		0.42		0.74		0.49		0.46	
Natural Attenuation Parameters																				
Nitrate	mg/L	---	na			na			na		na		na		na		na		na	
Nitrite	mg/L	---	na			na			na		na		na		na		na		na	
Ammonia	mg/L	---	na			na			na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	na			na			0.382		0.488		0.41		0.38		0.38		0.34	
Iron, Dissolved	mg/L	---	na			na			3.7		3.84		3.92		3.3		3.2		2.8	
Sulfate	mg/L	---	na			na			na		na		na		na		na		na	
Sulfide	mg/L	---	na			na			na		na		na		na		na		na	
Methane	µg/L	---	na			na			na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na			na			na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na			na			na		na		na		na		na		na	
Orthophosphate	mg/L	---	na			na			na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na			na			na		na		na		na		na		na	
Chloride	mg/L	---	na			na			na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW25-GW-0405 14-Apr-2005		MW25-GW-1005 11-Oct-2005		MW25-GW-0406 13-Apr-2006		MW25-GW-1006 11-Oct-2006		MW25-GW-0407 18-Apr-2007		MW25-GW-1007 10-Oct-2007		MW25-GW-0408 15-Apr-2008	
VOCs	*Units*															
Benzene	µg/L	5	11		1.8		25.8		10.7		27		14.4		27.2	
Toluene	µg/L	1000	1.0	U	1.0	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	700	1.0	U	1.0	U	1	U	1	U	1	U	1	U	1	U
Xylenes, Total	µg/L	10000	2.3		1.1	J	7.81		5.15		4.39		3.8		6.14	
PAHs																
Acenaphthene	µg/L	914	6.2		5.2		7.58		8.71		7.32		12.5		11.2	
Acenaphthylene	µg/L	362	57		48		13.5		16.5		12.2		0.085	U	19.4	
Anthracene	µg/L	---	0.047	Ua	0.051	U	0.0395	J	0.0472	J	0.0287	J	0.0235	J	0.0299	J
Benzo(a)anthracene	µg/L	0.13	0.12	U	0.13	U	0.019	U	0.003	U	0.003	U	0.00908	J	0.003	U
Benzo(a)pyrene	µg/L	0.2	0.12	U	0.13	U	0.019	U	0.032	U	0.032	U	0.032	U	0.032	U
Benzo(b)fluoranthene	µg/L	0.1	0.047	U	0.051	U	0.037	U	0.013	U	0.013	U	0.013	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.19	U	0.20	U	0.032	U	0.009	U	0.009	U	0.009	U	0.009	U
Benzo(k)fluoranthene	µg/L	0.14	0.047	U	0.051	U	0.023	U	0.015	U	0.015	U	0.015	U	0.015	U
Chrysene	µg/L	0.85	0.12	U	0.13	U	0.02	U	0.094	J	0.005	U	0.0221	J	0.005	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.28	U	0.30	U	0.033	U	0.01	U	0.01	U	0.01	U	0.01	U
Fluoranthene	µg/L	---	0.12	U	0.13	U	0.032	U	0.0149	J	0.01	U	0.01	U	0.01	U
Fluorene	µg/L	490	0.37		0.29		2.77		3.31		2.79		10.6		8.81	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.12	U	0.13	U	0.038	U	0.007	U	0.007	U	0.007	U	0.007	U
Naphthalene	µg/L	1.1	1.2	U	1.3	U	0.401		0.534		1.16		0.632		0.62	
Phenanthrene	µg/L	294	0.093	U	0.10	U	0.161		0.214		0.164		0.22		0.007	U
Pyrene	µg/L	---	0.23	Ua	0.25	U	0.036	U	0.019	U	0.019	U	0.019	U	0.019	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		0.171	J	0.17	J	0.0793	J	0.052	U
Inorganics																
Cyanide, Total	mg/L	---	0.010	U	0.010	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.42		0.40		0.305		na		na		na		na	
Natural Attenuation Parameters																
Nitrate	mg/L	---	0.10	U	0.10	U	0.1	U	na		na		na		na	
Nitrite	mg/L	---	0.020	U	0.020	U	0.1	U	na		na		na		na	
Ammonia	mg/L	---	0.15	B	0.20	U	0.2	U	na		na		na		na	
Manganese, Dissolved	mg/L	---	0.39		0.37		0.336		na		na		na		na	
Iron, Dissolved	mg/L	---	2.7		3.0		2.89		na		na		na		na	
Sulfate	mg/L	---	120		120		112	M1	na		na		na		na	
Sulfide	mg/L	---	1.0	U	1.0	U	1	U	na		na		na		na	
Methane	µg/L	---	4		4.2		26	U	na		na		na		na	
Alkalinity, Total	mg/L	---	360		330		385		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	0.18	B	0.17	B	1	U	na		na		na		na	
Orthophosphate	mg/L	---	0.008	B	0.050	U	0.1	U	na		na		na		na	
Total Organic Carbon	mg/L	---	1.4		1.5		1.42		na		na		na		na	
Chloride	mg/L	---	na		na		99.4	M1	na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW25-GW-0410 08-Apr-2010		MW25-GW-1010 05-Oct-2010		MW25-GW-0411 12-Apr-2011		MW25-GW-1011 25-Oct-2011		DV	DP02-GW-1011 25-Oct-2011		DV	MW25-GW-0412 10-Apr-2012		DV	DP01-GW-0412 10-Apr-2012		DV
VOCs	*Units*																			
Benzene	µg/L	5	139		131		46.4		88.6			88.4			82.2			76.8		
Toluene	µg/L	1000	1.76		1.00	U	1.00	U	1.00	U		1.00	U		1.00	U		1.00	U	
Ethylbenzene	µg/L	700	1.72		1.00	U	1.00	U	1.00	U		1.00	U		1.00	U		1.00	U	
Xylenes, Total	µg/L	10000	19.2		13.2		4.32		3.41			3.01			3.00	U		3.00	U	
PAHs																				
Acenaphthene	µg/L	914	18.5		16.6		10.1		8.95		J-	8.94		J-	6.19		J-	7.56		J-
Acenaphthylene	µg/L	362	22.1		18.3		9.94		9.21		J-	9.50		J-	6.56		J-	9.43		J-
Anthracene	µg/L	---	0.359		0.322		0.118		0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Chrysene	µg/L	0.85	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Dibenzo(a,h)anthracene	µg/L	0.033	0.00810	U,MDL	0.00810	U,MDL	0.0170	U,MI	0.0170	U,MDL	UJ	0.0170	U,MDL	UJ	0.0170	U,MDL	UJ	0.0170	U,MDL	UJ
Fluoranthene	µg/L	---	0.150		0.163		0.123		0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Fluorene	µg/L	490	4.64		5.09		2.35		1.56		J-	1.60		J-	0.804		J-	1.00		J-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Naphthalene	µg/L	1.1	1.87		0.738		0.789		0.240		J-	0.162		J-	0.12		J-	0.135		J-
Phenanthrene	µg/L	294	2.70		2.59		1.74		1.19		J-	1.25		J-	0.381		J-	0.545		J-
Pyrene	µg/L	---	0.112		0.183		0.145		0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
1-Methylnaphthalene	µg/L	---	26.3		18.0		2.2		0.938		J-	0.863		J-	0.332		J-	0.426		J-
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ
Inorganics																				
Cyanide, Total	mg/L	---	na		na		na		na			na			na			na		
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	0.0100	U	0.0100	U		0.0100	U		0.0100	U		0.0100	U	
Manganese, Total	mg/L	0.775	0.354		0.336		0.373		0.315			0.312			0.325	R		0.295		
Natural Attenuation Parameters																				
Nitrate	mg/L	---	0.10	U	0.10	U	0.10	U	0.10	U		0.100	U		0.100	U		0.100	U	
Nitrite	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U		0.100	U		0.100	U,H	
Ammonia	mg/L	---	0.200	U	0.200	U	0.200	U	0.200	U		0.200	U		0.200	U		0.200	U	
Manganese, Dissolved	mg/L	---	0.343		0.324		0.317		0.333			0.328			0.311			0.316		
Iron, Dissolved	mg/L	---	2.76		2.78		2.54		2.81			2.82			2.68			2.81		
Sulfate	mg/L	---	81.4		81.4		103		91.6			36.8			86.8			84.8		
Sulfide	mg/L	---	5.00	U	5.00	U	10.00	U	10	U		10	U		10	U		10	U	
Methane	µg/L	---	43.0		39.8		10		16			14			31			31		
Alkalinity, Total	mg/L	---	394		371		341		340			336			321			321		
Total Kjeldahl Nitrogen	mg/L	---	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U		1.00	U		1.00	U	
Orthophosphate	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U		0.100	U		0.100	U	
Total Organic Carbon	mg/L	---	1.00	U	1.00	U	na		1.00	U,ET		1.00	U,ET		na			na		
Chloride	mg/L	---	83.5		89.1		na		na			na			na			na		

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Groundwater Analytical Results

		Performance Standard	MW25-GW-1012 10-Oct-2012		DP02-GW-1012 10-Oct-2012		MW25-GW-0413 10-Apr-2013	DV	DP02-GW-0413 10-Apr-2013		MW25-GW-1013 23-Oct-2013	DV	DP02-GW-1013 23-Oct-2013	
VOCs	*Units*													
Benzene	µg/L	5	120		126		1140	J-	10.3		43.5		44.3	
Toluene	µg/L	1000	1.00	U	1.00	U	161		1.00	U	1.00	U	1.00	U
Ethylbenzene	µg/L	700	1.00	U	1.00	U	22.4		1.00	U	1.85		1.69	
Xylenes, Total	µg/L	10000	4.65		4.95		317		3.00	U	5.24		5.21	
PAHs														
Acenaphthene	µg/L	914	8.33		8.64		10.1		10.8		15.1		14.6	
Acenaphthylene	µg/L	362	11.2		11.6		8.56		11		13.9		13.4	
Anthracene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Chrysene	µg/L	0.85	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0130	U,MDL	0.0130	U,MDL	0.0173	U	0.0179	U	0.0183	U	0.0179	U
Fluoranthene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Fluorene	µg/L	490	0.795		0.882		0.807		0.77		1.5		1.48	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
Naphthalene	µg/L	1.1	0.185		0.220		0.989		0.218		1.66		1.57	
Phenanthrene	µg/L	294	0.331		0.400		0.158		0.107		0.464		0.433	
Pyrene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U
1-Methylnaphthalene	µg/L	---	0.479		0.542		1.60		0.756		2.27		2.19	
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.225		0.100	U	0.100	U	0.100	U	0.100	U
Inorganics														
Cyanide, Total	mg/L	---	na		na		na		na		na		na	
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U
Manganese, Total	mg/L	0.775	0.343		0.332		0.343		0.342		0.355		0.427	
Natural Attenuation Parameters														
Nitrate	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	na		na	
Nitrite	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	na		na	
Ammonia	mg/L	---	0.200	U	0.200	U	0.200	U	0.200	U	na		na	
Manganese, Dissolved	mg/L	---	0.318		0.326		0.353		0.36		na		na	
Iron, Dissolved	mg/L	---	2.81		2.85		3.030		2.980		na		na	
Sulfate	mg/L	---	80.7		82.6		92.2		92.7		na		na	
Sulfide	mg/L	---	10	U	10	U	16.9		20.9		na		na	
Methane	µg/L	---	28		28		5.65		8.01		na		na	
Alkalinity, Total	mg/L	---	355		350		365		365		na		na	
Total Kjeldahl Nitrogen	mg/L	---	1.00	U	1.00	U	1.00	U	1.00	U	na		na	
Orthophosphate	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW29-GW-1002 28-Oct-2002		MW29-GW-0103 07-Jan-2003		MW29-GW-1003 20-Oct-2003		MW29-GW-0404 07-Apr-2004		MW29-GW-1004 18-Oct-2004		MW29-GW-0405 14-Apr-2005		MW29-GW-1005 11-Oct-2005		MW29-GW-0406 12-Apr-2006	
VOCs	*Units*																	
Benzene	µg/L	5	2	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1	U
Toluene	µg/L	1000	2	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1	U
Ethylbenzene	µg/L	700	2	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1	U
Xylenes, Total	µg/L	10000	7	U	3.0	U	1.0	U	1.0	U	1.0	U	2.0	U	2.0	U	3	U
PAHs																		
Acenaphthene	µg/L	914	0.52	U	0.54	U	2.6	U	2.4	U	2.4	U	2.5	U	2.4	U	0.13	U
Acenaphthylene	µg/L	362	1	U	1.1	U	1.3	U	1.2	U	1.2	U	1.3	U	1.2	U	0.17	U
Anthracene	µg/L	---	0.052	U	0.054	U	0.051	U	0.047	U	0.048	U	0.050	U	0.047	U	0.0093	U
Benzo(a)anthracene	µg/L	0.13	0.1	U	0.11	U	0.13	U	0.12	U	0.12	U	0.13	U	0.12	U	0.019	U
Benzo(a)pyrene	µg/L	0.2	0.1	U	0.11	U	0.13	U	0.12	U	0.12	U	0.13	U	0.12	U	0.019	U
Benzo(b)fluoranthene	µg/L	0.1	0.1	U	0.11	U	0.051	U	0.047	U	0.048	U	0.050	U	0.047	U	0.037	U
Benzo(ghi)perylene	µg/L	---	0.1	U	0.11	U	0.20	U	0.19	U	0.19	U	0.20	U	0.19	U	0.032	U
Benzo(k)fluoranthene	µg/L	0.14	0.1	U	0.11	U	0.051	U	0.047	U	0.048	U	0.050	U	0.047	U	0.023	U
Chrysene	µg/L	0.85	0.1	U	0.11	U	0.13	U	0.12	U	0.12	U	0.13	U	0.12	U	0.02	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.1	U	0.11	U	0.31	U	0.28	U	0.29	U	0.30	U	0.28	U	0.033	U
Fluoranthene	µg/L	---	0.1	U	0.11	U	0.13	U	0.12	U	0.12	U	0.13	U	0.12	U	0.032	U
Fluorene	µg/L	490	0.1	U	0.11	U	0.26	U	0.24	U	0.24	U	0.25	U	0.24	U	0.029	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.1	U	0.11	U	0.13	U	0.12	U	0.12	U	0.13	U	0.12	U	0.038	U
Naphthalene	µg/L	1.1	0.52	U	0.54	U	1.3	U	1.2	U	1.2	U	1.3	U	1.2	U	0.1	U
Phenanthrene	µg/L	294	0.1	U	0.11	U	0.10	U	0.094	U	0.096	U	0.10	U	0.094	U	0.015	U
Pyrene	µg/L	---	0.1	U	0.11	U	0.26	U	0.24	U	0.24	U	0.25	U	0.24	U	0.036	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.005	U	0.00500	U	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U	0.01	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.19		0.0871		0.17		0.065		0.10		0.050		0.053		0.0579	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		0.10	U	0.027	B	0.1	U
Nitrite	mg/L	---	na		na		na		na		na		0.020	U	0.020	U	0.1	U
Ammonia	mg/L	---	na		na		na		na		na		0.45		0.27		0.377	
Manganese, Dissolved	mg/L	---	0.0541		0.0445		0.043		0.044		0.040		0.041		0.039		0.0432	
Iron, Dissolved	mg/L	---	0.807		1.16		1.1		1.2		1.1		1.0		1.4		1.4	
Sulfate	mg/L	---	na		na		na		na		na		110		120		111	
Sulfide	mg/L	---	na		na		na		na		na		1.0	U	1.0	U	1	U
Methane	µg/L	---	na		na		na		na		na		2	U	2	U	26	U
Alkalinity, Total	mg/L	---	na		na		na		na		na		330		320		366	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		0.43		0.71		1	U
Orthophosphate	mg/L	---	na		na		na		na		na		0.011	B	0.050	U	0.1	U
Total Organic Carbon	mg/L	---	na		na		na		na		na		1.3		1.4		1.77	
Chloride	mg/L	---	na		na		na		na		na		na		na		24.8	

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		Performance Standard	MW29-GW-1006 11-Oct-2006		MW29-GW-0407 17-Apr-2007		MW29-GW-1007 09-Oct-2007		MW29-GW-0408 14-Apr-2008		MW29-GW-0410 08-Apr-2010		MW29-GW-0411 12-Apr-2011		MW29-GW-0412 11-Apr-2012		MW29-GW-0413 09-Apr-2013	
VOCs	*Units*																	
Benzene	µg/L	5	1	U	1	U	1	U	1	U	1.00	U	1.00	U	1.00	U	0.500	U
Toluene	µg/L	1000	1	U	1	U	1	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U
Ethylbenzene	µg/L	700	1	U	1	U	1	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U
Xylenes, Total	µg/L	10000	3	U	3	U	3	U	3	U	6.00	U	3.00	U	3.00	U	3.00	U
PAHs																		
Acenaphthene	µg/L	914	0.049	U	0.049	U	0.049	U	0.049	U	0.100	U	0.100	U	0.100	U	0.100	U
Acenaphthylene	µg/L	362	0.085	U	0.085	U	0.085	U	0.085	U	0.100	U	0.100	U	0.100	U	0.100	U
Anthracene	µg/L	---	0.01	U	0.01	U	0.01	U	0.01	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.003	U	0.003	U	0.003	U	0.003	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.032	U	0.032	U	0.032	U	0.032	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.013	U	0.013	U	0.013	U	0.013	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(ghi)perylene	µg/L	---	0.009	U	0.009	U	0.009	U	0.009	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.015	U	0.015	U	0.015	U	0.015	U	0.100	U	0.100	U	0.100	U	0.100	U
Chrysene	µg/L	0.85	0.005	U	0.005	U	0.005	U	0.005	U	0.100	U	0.100	U	0.100	U	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.01	U	0.01	U	0.01	U	0.01	U	0.0081	U,MDL	0.0170	U,MDL	0.0170	U,MDL	0.0183	U
Fluoranthene	µg/L	---	0.01	U	0.01	U	0.01	U	0.01	U	0.100	U	0.100	U	0.100	U	0.100	U
Fluorene	µg/L	490	0.01	U	0.01	U	0.01	U	0.01	U	0.100	U	0.100	U	0.100	U	0.100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.007	U	0.007	U	0.007	U	0.007	U	0.100	U	0.100	U	0.100	U	0.100	U
Naphthalene	µg/L	1.1	1.37		0.054	U	0.054	U	0.054	U	0.100	U	0.100	U	0.100	U	0.100	U
Phenanthrene	µg/L	294	0.007	U	0.007	U	0.007	U	0.007	U	0.100	U	0.100	U	0.100	U	0.100	U
Pyrene	µg/L	---	0.019	U	0.019	U	0.11	J	0.019	U	0.100	U	0.100	U	0.100	U	0.100	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		0.100	U	0.100	U	0.100	U	0.100	U
2-Methylnaphthalene	µg/L	61.2	0.129	J	0.052	U	0.052	U	0.052	U	0.100	U	0.100	U	0.100	U	0.100	U
Inorganics																		
Cyanide, Total	mg/L	---	0.01	U	0.01	U	0.01	U	0.01	U	na		na		na		na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		0.0100	U	0.0100	U	0.0100	U	0.0100	U
Manganese, Total	mg/L	0.775	na		na		na		na		0.0444		0.0427		0.0942		0.241	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		0.10	U,R	0.100	U	0.100	U	0.100	U
Nitrite	mg/L	---	na		na		na		na		0.100	U	0.100	U	0.100	U	0.100	U
Ammonia	mg/L	---	na		na		na		na		0.322		0.35		0.338		0.371	
Manganese, Dissolved	mg/L	---	na		na		na		na		0.0381		0.0392		0.0397		0.0403	
Iron, Dissolved	mg/L	---	na		na		na		na		1.43		1.35		1.57		1.690	
Sulfate	mg/L	---	na		na		na		na		94.5		94.1		96.5		94.2	
Sulfide	mg/L	---	na		na		na		na		5.00	U	10.0	U	10.0	U	26.6	
Methane	µg/L	---	na		na		na		na		26.0	U	0.61		0.76		1.45	
Alkalinity, Total	mg/L	---	na		na		na		na		389		351		316		365	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		1.00	U	1.00	U	1.00	U	1.00	U
Orthophosphate	mg/L	---	na		na		na		na		0.100	U	0.100	U	0.100	U	0.100	U
Total Organic Carbon	mg/L	---	na		na		na		na		1.00	U	na		na		na	
Chloride	mg/L	---	na		na		na		na		28.3		na		na		na	

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		Performance Standard	MW31-GW-1002 01-Nov-2002		MW31-GW-0103 07-Jan-2003		MW31-GW-1003 21-Oct-2003		MW31-GW-0404 06-Apr-2004		MW31-GW-1004 18-Oct-2004		MW31-GW-0405 13-Apr-2005		MW31-GW-1005 11-Oct-2005		MW31-GW-0406 11-Apr-2006	
VOCs	*Units*																	
Benzene	µg/L	5	370		190		380		300		180		350		360		370	
Toluene	µg/L	1000	7.5		8.7		9.0		7.1	Ja	4.7	Ja	8.6		8.1		8.27	
Ethylbenzene	µg/L	700	420		180		370		320		200		380		350		385	
Xylenes, Total	µg/L	10000	220		250		250		210		130		250		240		243	
PAHs																		
Acenaphthene	µg/L	914	140		180	J	79		71		73		83		78		64.1	
Acenaphthylene	µg/L	362	1	U	1.1	U	730		560		670		790		750		0.17	U
Anthracene	µg/L	---	1.4	J	1.6	J	1.8		1.7		1.9		2.1		2.4		1.88	
Benzo(a)anthracene	µg/L	0.13	0.1	U	3	J	0.027	Ja	0.020	Ja	0.023	Ja	0.025	Ja	0.038	Ja	0.0608	
Benzo(a)pyrene	µg/L	0.2	0.1	U	0.11	U	0.13	U	0.13	U	0.13	U	0.13	U	0.12	U	0.0261	
Benzo(b)fluoranthene	µg/L	0.1	0.1	U	0.11	U	0.051	U	0.051	U	0.049	U	0.049	U	0.047	U	0.124	
Benzo(ghi)perylene	µg/L	---	0.1	U	0.11	U	0.20	U	0.20	U	0.19	U	0.19	U	0.19	U	0.0861	
Benzo(k)fluoranthene	µg/L	0.14	0.1	U	0.11	U	0.051	U	0.051	U	0.049	U	0.049	U	0.047	U	0.0515	
Chrysene	µg/L	0.85	0.1	U	0.11	U	0.13	U	0.13	U	0.13	U	0.13	U	0.12	U	0.0808	
Dibenzo(a,h)anthracene	µg/L	0.033	0.1	U	0.11	U	0.31	U	0.31	U	0.29	U	0.29	U	0.28	U	0.033	U
Fluoranthene	µg/L	---	0.88		0.82	J	1.5		1.7		1.4		1.6		1.7		0.032	U
Fluorene	µg/L	490	16		20	J	16		15		15		17		16		30.8	
Indeno(1,2,3-cd)pyrene	µg/L	*0.1*	*0.1*	*U*	*0.11*	*U*	*0.13*	*U*	*0.13*	*U*	*0.13*	*U*	*0.13*	*U*	*0.12*	*U*	*0.111*	
Naphthalene	µg/L	1.1	280		260	J	360		230		280		300		310		209	
Phenanthrene	µg/L	294	11		11	J	14		14		12		14		14		12.3	
Pyrene	µg/L	---	0.38		0.34	J	0.26	U	0.62		0.28		0.30	M	0.30	M	6.04	
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.005	U	0.00500	U	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U	0.01	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.146		0.158		0.16		0.15		0.15		0.16		0.16		0.157	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		0.10	U	0.043	B	0.1	U
Nitrite	mg/L	---	na		na		na		na		na		0.020	U	0.020	U	0.1	U
Ammonia	mg/L	---	na		na		na		na		na		0.17	B	0.20	U	0.2	U
Manganese, Dissolved	mg/L	---	0.144	U	0.165		0.15		0.15		0.15		0.15		0.17		0.151	
Iron, Dissolved	mg/L	---	0.552	U	0.625		0.57		0.45		0.52		0.47		0.76		0.516	
Sulfate	mg/L	---	na		na		na		na		na		24		31		26.3	
Sulfide	mg/L	---	na		na		na		na		na		1.5		1.2		1	U
Methane	µg/L	---	na		na		na		na		na		16		27		54	
Alkalinity, Total	mg/L	---	na		na		na		na		na		460		430		499	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		0.22	B	0.26	B	1	U
Orthophosphate	mg/L	---	na		na		na		na		na		0.13		0.016	B	0.1	U
Total Organic Carbon	mg/L	---	na		na		na		na		na		2.5		2.6		2.9	
Chloride	mg/L	---	na		na		na		na		na		na		na		69.9	

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		Performance Standard	MW31-GW-1006 10-Oct-2006		MW31-GW-0407 18-Apr-2007		MW31-GW-1007 09-Oct-2007		MW31-GW-0408 15-Apr-2008		MW31-GW-0409 22-Apr-2009		MW31-GW-1009 14-Oct-2009		MW31-GW-0110 14-Jan-2010	
VOCs	*Units*															
Benzene	µg/L	5	360		326		304		334		157		150		251	
Toluene	µg/L	1000	9.46		8.37		7.47		8.82		4.27		3.96		5.82	
Ethylbenzene	µg/L	700	376		369		321		319		17.9		164		248	
Xylenes, Total	µg/L	10000	237		241		201		219		117		105		167	
PAHs																
Acenaphthene	µg/L	914	81.2		71.9		63.6		78.5		27.2		29.6	M1	37.7	
Acenaphthylene	µg/L	362	0.085	U	53.4		0.085	U	0.085	U	8.73		12.5		16.6	
Anthracene	µg/L	---	2.25		2.01		1.24		2.21		0.903		2.32		1.95	
Benzo(a)anthracene	µg/L	0.13	0.0336	J	0.0198	J	0.0167		0.0303	J	0.0907	J	0.0682	J	0.101	
Benzo(a)pyrene	µg/L	0.2	0.032	U	0.032	U	0.032	U	0.032	U	0.123		0.0616	J	0.133	
Benzo(b)fluoranthene	µg/L	0.1	0.0542	J	0.0538	J	0.013	U	0.013	U	0.261		0.131		0.229	
Benzo(ghi)perylene	µg/L	---	0.009	U	0.0203	J	0.009	U	0.009	U	0.148		0.0652	J	0.158	
Benzo(k)fluoranthene	µg/L	0.14	0.015	U	0.0366	J	0.015	U	0.015	U	0.0732	J	0.0372	J	0.105	
Chrysene	µg/L	0.85	0.0407	J	0.0376	J	0.0265		0.0418	J	0.149		0.0855	J	0.161	
Dibenzo(a,h)anthracene	µg/L	0.033	0.01	U	0.01	U	0.01	U	0.01	U	0.0214	J	0.0122	J	0.0286	J
Fluoranthene	µg/L	---	1.34		1.13		0.549		1.72		0.407		0.618		0.633	
Fluorene	µg/L	490	36.2		35.4		61.2		49.2		6.40		9.87	M1	11.0	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.007	U	0.0448	J	0.007	U	0.007	U	0.129		0.0518	J	0.135	
Naphthalene	µg/L	1.1	270		202		238		274		93.0		121	M1	161	
Phenanthrene	µg/L	294	13.5		13.1		13.7		17.8		5.41		6.98	M1	9.80	
Pyrene	µg/L	---	5.35		5.05		2.97		0.019	U	0.434		0.618		0.989	
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na			
2-Methylnaphthalene	µg/L	61.2	15.7		11.1		11.2		15.7		2.69		5.41	M1	5.48	
Inorganics																
Cyanide, Total	mg/L	---	0.01	U	0.01	U	0.01	U	0.01	U	na		na		na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		0.0100	U
Manganese, Total	mg/L	0.775	na		na		na		na		na		na		0.159	
Natural Attenuation Parameters																
Nitrate	mg/L	---	na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	na		na		na		na		na		na		na	
Iron, Dissolved	mg/L	---	na		na		na		na		na		na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na	

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		Performance Standard	MW31-GW-0410 07-Apr-2010	DV	Dup1-GW-0410 07-Apr-2010	DV	MW31-GW-0710 07-Jul-2010	DV	DP01-GW-0710 07-Jul-2010	DV	MW31-GW-1010 05-Oct-2010	DV	MW31(DP)-GW-1010 05-Oct-2010	
VOCs	*Units*													
Benzene	µg/L	5	206	M1	198	M1	237		220		299		293	
Toluene	µg/L	1000	7.35		6.6		5.73		5.45		8.17		7.86	
Ethylbenzene	µg/L	700	340	C9	316	C9	288		263		357		341	
Xylenes, Total	µg/L	10000	241	M1	224	M1	174		162		202		194	
PAHs														
Acenaphthene	µg/L	914	68.9	J+	68.5	J+	35.6	H2 J-	37	H2 J-	24.9	RL1	27.8	
Acenaphthylene	µg/L	362	26.6	J+	25.0	J+	10.2		9.93		9.41	RL1	10.8	
Anthracene	µg/L	---	2.69	M1 J+	2.35	J+	1.36		1.2		1.60	RL1	1.20	
Benzo(a)anthracene	µg/L	0.13	0.151	J+	0.113	J+	0.100	U	0.100	U	1.00	U,RL1	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.230	J+	0.160	J+	0.100	U	0.100	U	1.00	U,RL1	0.122	
Benzo(b)fluoranthene	µg/L	0.1	0.410	J+	0.288	J+	0.104		0.114		1.00	U,RL1	0.241	
Benzo(ghi)perylene	µg/L	---	0.250	J+	0.175	J+	0.100	U	0.100	U	1.00	U,RL1	0.166	
Benzo(k)fluoranthene	µg/L	0.14	0.162	J+	0.130	J+	0.100	U	0.100	U	1.00	U,RL1	0.110	
Chrysene	µg/L	0.85	0.234	J+	0.175	J+	0.100	U	0.100	U	1.00	U,RL1	0.183	
Dibenzo(a,h)anthracene	µg/L	0.033	0.0414	J, MDL J+	0.0142	J,MDL J+	0.00994	J,MDL	0.0103	J, MDL	0.0810	U,RL1, MDL	0.0194	J, MDL
Fluoranthene	µg/L	---	0.832	J+	0.764	J+	0.406		0.397		1.00	U,RL1	0.517	
Fluorene	µg/L	490	19.4	J+	18.8	J+	7.69		7.24		6.80	RL1	7.83	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.208	J+	0.147	J+	0.100	U	0.100	U	1.00	U,RL1	0.129	
Naphthalene	µg/L	1.1	217	J+	223	J+	120	H2 J-	130	H2 J-	92.0	RL1	106	
Phenanthrene	µg/L	294	9.03	M1 J+	9.06	J+	6.09		5.43		5.30	RL1	5.15	
Pyrene	µg/L	---	0.767	J+	0.647	J+	0.464		0.448		1.00	U,RL1	0.541	
1-Methylnaphthalene	µg/L	---	267	J+	273	J+	135	H2 J-	145	H2 J-	93.5	RL1	109	
2-Methylnaphthalene	µg/L	61.2	4.61	M1 J+	4.38	J+	3.09		3.14		3.44	RL1	3.89	
Inorganics														
Cyanide, Total	mg/L	---	na		na		na		na		na		na	
Cyanide, WAD	mg/L	0.2	0.0100	U,M1, R	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U
Manganese, Total	mg/L	0.775	0.149		0.145		0.152		0.154		0.148		0.140	
Natural Attenuation Parameters														
Nitrate	mg/L	---	0.10	U	0.10	U	na		na		0.10	U	0.10	U
Nitrite	mg/L	---	0.100	U,M1	0.100	U	na		na		0.100	U	0.100	U
Ammonia	mg/L	---	0.200	U	0.200	U	na		na		0.200	U	0.200	U
Manganese, Dissolved	mg/L	---	0.134		0.144		na		na		0.141		0.141	
Iron, Dissolved	mg/L	---	0.860		0.934		na		na		1.11		1.11	
Sulfate	mg/L	---	37.5		40.7		na		na		51.4		50.6	
Sulfide	mg/L	---	5.00	U	5.00	U	na		na		5.00	U	5.00	U
Methane	µg/L	---	87		101		na		na		109		103	
Alkalinity, Total	mg/L	---	497		497		na		na		453		458	
Total Kjeldahl Nitrogen	mg/L	---	1.00	U,M1	1.00	U	na		na		1.00	U	1.00	U
Orthophosphate	mg/L	---	0.100	U	0.100	U	na		na		0.100	U	0.100	U
Total Organic Carbon	mg/L	---	1.23		1.27		na		na		1.21		1.21	
Chloride	mg/L	---	56.4		54.2		na		na		50.0		50.6	

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Groundwater Analytical Results

		Performance Standard	MW31-GW-0411 12-Apr-2011	DV		MW31-GW-1011 25-Oct-2011		DV	MW31-GW-0412 10-Apr-2012		MW31-GW-1012 09-Oct-2012		MW31-GW-0413 10-Apr-2013		MW31-GW-1013 22-Oct-2013		DV	MW33-GW-1002 29-Oct-2002	
VOCs	*Units*																		
Benzene	µg/L	5	264	MHA		213			229		218		255		289			2	U
Toluene	µg/L	1000	6.06			5.97			7.62		6.49		345		10.1			2	U
Ethylbenzene	µg/L	700	284	MHA		262			313		296		7.19		367			2	U
Xylenes, Total	µg/L	10000	175	MHA	J-	162			180		172		206		236			7	U
PAHs																			
Acenaphthene	µg/L	914	28.2	M1		16.6		J-	37.9		31.5		52.4		34.1			0.52	U
Acenaphthylene	µg/L	362	8.63	M1		14.0		J-	14.4		15.0		18.8		12.9			1	U
Anthracene	µg/L	---	1.26			1.46		J-	1.49		1.24		1.74		1.69			0.052	U
Benzo(a)anthracene	µg/L	0.13	0.100	U		0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Benzo(a)pyrene	µg/L	0.2	0.100	U		0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Benzo(b)fluoranthene	µg/L	0.1	0.106			0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Benzo(ghi)perylene	µg/L	---	0.100	U		0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U		0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Chrysene	µg/L	0.85	0.100	U		0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170	U,MDL		0.0170	U,MDL	UJ	0.0170	U,MDL	0.013	U,MDL	0.0191	U	0.0179	U		0.1	U
Fluoranthene	µg/L	---	0.387			0.420		J-	0.515		0.389		0.59		0.654			0.1	U
Fluorene	µg/L	490	7.06	M1	J-	9.90		J-	9.60		10.3		15.6		9.91			0.1	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100			0.100	U	UJ	0.100	U	0.100	U	0.100	U	0.100	U		0.1	U
Naphthalene	µg/L	1.1	88.5	M1		128		J-	154		122		180		166		J-	0.52	U
Phenanthrene	µg/L	294	5.67	M1	J-	8.07		J-	9.32		7.14		8.27		6.09			0.1	U
Pyrene	µg/L	---	0.413			0.416		J-	0.516		0.395		0.643		0.846			0.1	U
1-Methylnaphthalene	µg/L	---	108	M1		117		J-	164		121		198		145		J-	na	
2-Methylnaphthalene	µg/L	61.2	2.96	M1	J-	4.89		J-	5.21		5.99		9.15		7.5			na	
Inorganics																			
Cyanide, Total	mg/L	---	na			na			na		na		na		na			0.00637	
Cyanide, WAD	mg/L	0.2	0.0100	U,M1	UJ	0.0100	U		0.0100	U	0.0100	U	0.0100	U	0.0100	U		na	
Manganese, Total	mg/L	0.775	0.152			0.145			0.151		0.150		0.108		0.143			0.295	
Natural Attenuation Parameters																			
Nitrate	mg/L	---	0.10	U		0.100	U		0.100	U	0.100	U	0.100	U	na			na	
Nitrite	mg/L	---	0.100	U		0.100	U		0.100	U	0.100	U	0.100	U	na			na	
Ammonia	mg/L	---	0.200	U		0.200	U		0.200	U	0.200	U	0.200	U	na			na	
Manganese, Dissolved	mg/L	---	0.136			0.152			0.145		0.152		0.148		na			0.23	
Iron, Dissolved	mg/L	---	0.949			1.23			1.15		1.32		0.951		na			1.79	
Sulfate	mg/L	---	50.7			18.3			44.2		55.8		26.8		na			na	
Sulfide	mg/L	---	43			10	U		10	U	10	U	21.7		na			na	
Methane	µg/L	---	32			26			71		71		49		na			na	
Alkalinity, Total	mg/L	---	444			444			434		429		487		na			na	
Total Kjeldahl Nitrogen	mg/L	---	1.00	U,M1		1.00	U		1.00	U	1.00	U	1.00	U	na			na	
Orthophosphate	mg/L	---	0.100	U		0.100	U		0.100	U	0.100	U	0.100	U	na			na	
Total Organic Carbon	mg/L	---	na			1.29			na		na		na		na			na	
Chloride	mg/L	---	na			na			na		na		na		na			na	

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		Performance Standard	MW33-GW-0103 06-Jan-2003		MW33-GW-0103 09-Jan-2003		MW33-GW-1003 21-Oct-2003		MW33-GW-0404 05-Apr-2004		MW33-GW-1004 19-Oct-2004		MW33-GW-0405 12-Apr-2005		MW33-GW1005 10-Oct-2005	
VOCs	*Units*															
Benzene	µg/L	5	1.0	U	ns		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	µg/L	1000	1.0	U	ns		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	1.0	U	ns		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	3.0	U	ns		1.0	U	1.0	U	1.0	U	2.0	U	2.0	U
PAHs																
Acenaphthene	µg/L	914	0.51	U	0.52	U	2.6	U	2.5	U*	2.5	U	2.5	U	2.5	U
Acenaphthylene	µg/L	362	1.0	U	1	U	1.4	U	1.3	U*	1.3	U	1.3	U	1.3	U
Anthracene	µg/L	---	0.051	U	0.052	U	0.052	U*	0.050	U	0.050	U	0.050	U	0.050	U
Benzo(a)anthracene	µg/L	0.13	0.10	U	0.1	U	0.14	U	0.13	U	0.13	U	0.13	U	0.13	U
Benzo(a)pyrene	µg/L	0.2	0.10	U	0.1	U	0.14	U	0.13	U	0.13	U	0.13	U	0.13	U
Benzo(b)fluoranthene	µg/L	0.1	0.10	U	0.1	U	0.052	U	0.050	U	0.050	U	0.050	U	0.050	U
Benzo(ghi)perylene	µg/L	---	0.10	U	0.1	U	0.21	U	0.20	U	0.20	U	0.20	U	0.20	U
Benzo(k)fluoranthene	µg/L	0.14	0.10	U	0.1	U	0.052	U	0.050	U	0.050	U	0.050	U	0.050	U
Chrysene	µg/L	0.85	0.10	U	0.1	U	0.14	U	0.13	U	0.13	U	0.13	U	0.13	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.10	U	0.1	U	0.31	U	0.30	U	0.30	U	0.30	U	0.30	U
Fluoranthene	µg/L	---	0.10	U	0.1	U	0.14	U	0.13	U	0.13	U	0.13	U	0.13	U
Fluorene	µg/L	490	0.10	U	0.1	U	0.26	U	0.25	U*	0.25	U	0.25	U	0.25	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.10	U	0.1	U	0.14	U	0.13	U	0.13	U	0.13	U	0.13	U
Naphthalene	µg/L	1.1	0.51	U	0.52	U	1.4	U	1.3	U*	1.3	U	1.3	U	1.3	U
Phenanthrene	µg/L	294	0.10	U	0.1	U	0.10	U	0.099	U*	0.10	U	0.099	U	0.10	U
Pyrene	µg/L	---	0.10	U	0.1	U	0.26	U	0.25	U	0.25	U	0.25	U	0.25	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		na		na	
Inorganics																
Cyanide, Total	mg/L	---	0.00595		ns		0.0086	B	0.0087	B	0.010	U	0.010	U	0.010	U
Cyanide, WAD	mg/L	0.2	na		ns		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.247		ns		0.24		0.21		0.25		0.23		0.26	
Natural Attenuation Parameters																
Nitrate	mg/L	---	na		ns		na		na		na		na		na	
Nitrite	mg/L	---	na		ns		na		na		na		na		na	
Ammonia	mg/L	---	na		ns		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	0.233		ns		0.22		0.21		0.21		0.22		0.31	
Iron, Dissolved	mg/L	---	2.09		ns		2.1		2.0		1.9		1.8		2.4	
Sulfate	mg/L	---	na		ns		na		na		na		na		na	
Sulfide	mg/L	---	na		ns		na		na		na		na		na	
Methane	µg/L	---	na		ns		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		ns		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		ns		na		na		na		na		na	
Orthophosphate	mg/L	---	na		ns		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		ns		na		na		na		na		na	
Chloride	mg/L	---	na		ns		na		na		na		na		na	

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		Performance Standard	MW33-GW-0406 10-Apr-2006		MW33-GW-0410 07-Apr-2010		MW33-GW-0411 11-Apr-2011		MW33-GW-0412 10-Apr-2012		MW33-GW-0413 09-Apr-2013		MW35-GW-1002 28-Oct-2002		MW35-GW-0103 07-Jan-2003		MW35-GW-1003 22-Oct-2003	
VOCs	*Units*																	
Benzene	µg/L	5	1	U	1.00	U	1.00	U	1.0	U	0.50	U	2	U	1.0	U	1.0	U
Toluene	µg/L	1000	1	U	1.00	U	1.00	U	1.0	U	1.00	U	2	U	1.0	U	1.0	U
Ethylbenzene	µg/L	700	1	U	1.00	U	1.00	U	1.0	U	1.00	U	2	U	1.0	U	1.0	U
Xylenes, Total	µg/L	10000	3	U	6.00	U	3.00	U	1.0	U	3.00	U	7	U	3.0	U	1.0	U
PAHs																		
Acenaphthene	µg/L	914	0.13	U	0.100	U	0.100	U	0.100	U	0.100	U	0.52	U	0.54	U	2.6	U
Acenaphthylene	µg/L	362	0.17	U	0.100	U	0.100	U	0.100	U	0.100	U	1	U	1.1	U	1.4	U
Anthracene	µg/L	---	0.0093	U	0.100	U	0.100	U	0.100	U	0.100	U	0.052	U	0.054	U	0.052	U
Benzo(a)anthracene	µg/L	0.13	0.019	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.14	U
Benzo(a)pyrene	µg/L	0.2	0.019	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.14	U
Benzo(b)fluoranthene	µg/L	0.1	0.037	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.052	U
Benzo(ghi)perylene	µg/L	---	0.032	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.21	U
Benzo(k)fluoranthene	µg/L	0.14	0.023	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.052	U
Chrysene	µg/L	0.85	0.02	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.14	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.033	U	0.00810	U,J,MDL	0.0170	U,MDL	0.0170	U,MDL	0.0172	U	0.1	U	0.11	U	0.31	U
Fluoranthene	µg/L	---	0.032	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.14	U
Fluorene	µg/L	490	0.029	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.26	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.038	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.14	U
Naphthalene	µg/L	1.1	0.1	U	0.100	U	0.100	U	0.100	U	0.100	U	0.52	U	0.54	U	1.4	U
Phenanthrene	µg/L	294	0.015	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.10	U
Pyrene	µg/L	---	0.036	U	0.100	U	0.100	U	0.100	U	0.100	U	0.1	U	0.11	U	0.26	U
1-Methylnaphthalene	µg/L	---	na		0.100	U	0.100	U	0.100	U	0.100	U	na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		0.100	U	0.100	U	0.100	U	0.100	U	na		na		na	
Inorganics																		
Cyanide, Total	mg/L	---	0.01	U	na		na		na		na		0.005	U	0.00500	U	0.010	U
Cyanide, WAD	mg/L	0.2	na		0.0100	U	0.0100	U	0.0100	U	0.0100	U	na		na		na	
Manganese, Total	mg/L	0.775	0.208		1.06		0.218		0.188		0.205		0.0251		0.0158		0.98	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	0.204		na		na		na		na		0.0137		0.00744		0.0094	B
Iron, Dissolved	mg/L	---	2.26		na		na		na		na		0.198	U	0.123		0.050	U
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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		Performance Standard	MW35-GW-0404 07-Apr-2004		MW35-GW-1004 20-Oct-2004		MW35-GW-0405 13-Apr-2005		MW35-GW1005 12-Oct-2005		MW35-GW-0406 11-Apr-2006		MW35-GW-1006 10-Oct-2006		MW35-GW-0407 16-Apr-2007	
VOCs	*Units*															
Benzene	µg/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1	U	1	U	1.00	U
Toluene	µg/L	1000	1.0	U	1.0	U	1.0	U	1.0	U	1	U	1	U	1.00	U
Ethylbenzene	µg/L	700	1.0	U	1.0	U	1.0	U	1.0	U	1	U	1	U	1.00	U
Xylenes, Total	µg/L	10000	1.0	U	1.0	U	2.0	U	2.0	U	3	U	3	U	3.00	U
PAHs																
Acenaphthene	µg/L	914	2.4	U	2.7	U	2.5	U	2.3	U	0.13	U	0.049	U	0.0490	U
Acenaphthylene	µg/L	362	1.2	U	1.4	U	1.3	U	1.2	U	0.17	U	0.085	U	0.0850	U
Anthracene	µg/L	---	0.048	U	0.0089	Ja	0.050	U	0.047	U	0.0093	U	0.01	U	0.0100	U
Benzo(a)anthracene	µg/L	0.13	0.12	U	0.14	U	0.13	U	0.12	U	0.019	U	0.003	U	0.0030	U
Benzo(a)pyrene	µg/L	0.2	0.12	U	0.14	U	0.13	U	0.12	U	0.019	U	0.032	U	0.0320	U
Benzo(b)fluoranthene	µg/L	0.1	0.048	U	0.055	U	0.050	U	0.047	U	0.037	U	0.013	U	0.0130	U
Benzo(ghi)perylene	µg/L	---	0.19	U	0.22	U	0.20	U	0.19	U	0.032	U	0.009	U	0.00900	U
Benzo(k)fluoranthene	µg/L	0.14	0.048	U	0.055	U	0.050	U	0.047	U	0.023	U	0.015	U	0.0150	U
Chrysene	µg/L	0.85	0.12	U	0.14	U	0.13	U	0.12	U	0.02	U	0.005	U	0.00500	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.29	U	0.33	U	0.30	U	0.28	U	0.033	U	0.01	U	0.0100	U
Fluoranthene	µg/L	---	0.12	U	0.14	U	0.13	U	0.12	U	0.032	U	0.01	U	0.0100	U
Fluorene	µg/L	490	0.24	U	0.27	U	0.25	U	0.23	U	0.029	U	0.01	U	0.0100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.12	U	0.14	U	0.13	U	0.12	U	0.038	U	0.007	U	0.00700	U
Naphthalene	µg/L	1.1	1.2	U	1.4	U	1.3	U	1.2	U	0.1	U	0.054	U	0.0540	U
Phenanthrene	µg/L	294	0.095	U	0.048	Ja	0.10	U	0.093	U	0.015	U	0.007	U	0.00700	U
Pyrene	µg/L	---	0.24	U	0.27	U	0.25	U	0.23	U	0.036	U	0.019	U	0.0190	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		0.052	U	0.0520	U
Inorganics																
Cyanide, Total	mg/L	---	0.0061	B	0.010	U	0.010	U	0.0019	B	0.01	U	0.01	U	0.0100	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.040		0.14		0.22		0.23		0.264		na		na	
Natural Attenuation Parameters																
Nitrate	mg/L	---	na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	0.0084	B	0.044		0.19		0.25		0.249		na		na	
Iron, Dissolved	mg/L	---	0.050	U	0.050	U	0.10	U	0.10	U	0.1	U	na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW35-GW-1007 09-Oct-2007		MW35-GW-0408 15-Apr-2008		MW35-GW-0410 08-Apr-2010		MW35-GW-1010 06-Oct-2010		MW35-GW-0411 11-Apr-2011		MW35-GW-1011 24-Oct-2011		DV	MW35-GW-0412 11-Apr-2012	
VOCs	*Units*																
Benzene	µg/L	5	1.00	U	1.00	U,L1	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U
Toluene	µg/L	1000	1.00	U	1.00	U,L1	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U
Ethylbenzene	µg/L	700	1.00	U	1.00	U,L1	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U
Xylenes, Total	µg/L	10000	3.00	U	3.00	U,L1	6.00	U	3.00	U	3.00	U	3.0	U		3.0	U
PAHs																	
Acenaphthene	µg/L	914	0.057	U	0.0995	J	0.100	U	0.383		0.100	U	0.100	U	UJ	0.100	U
Acenaphthylene	µg/L	362	0.0988	U	0.0850	U	0.100	U	0.273		0.100	U	0.100	U	UJ	0.100	U
Anthracene	µg/L	---	0.0116	U	0.0351	J	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.00349	U	0.0030	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.0372	U	0.0320	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.0151	U	0.0130	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(ghi)perylene	µg/L	---	0.0105	U	0.00900	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.0174	U	0.0150	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Chrysene	µg/L	0.85	0.00581	U	0.00500	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0116	U	0.0100	U	0.0081	U,MDL	0.00810	U,MDL	0.0170	U,MDL	0.0170	U,MDL	UJ	0.0170	U,MDL
Fluoranthene	µg/L	---	0.0116	U	0.0100	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Fluorene	µg/L	490	0.0116	U	0.249		0.100	U	0.180		0.100	U	0.100	U	UJ	0.100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.00814	U	0.00700	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
Naphthalene	µg/L	1.1	0.0628	U	0.312		0.100	U	2.18		0.100	U	0.100	U	UJ	0.104	
Phenanthrene	µg/L	294	0.00814	U	0.175		0.100	U	0.145		0.100	U	0.100	U	UJ	0.100	U
Pyrene	µg/L	---	0.0221	U	0.0190	U	0.100	U	0.100	U	0.100	U	0.100	U	UJ	0.100	U
1-Methylnaphthalene	µg/L	---	na		na		0.100	U	0.632		0.100	U	0.100	U	UJ	0.125	
2-Methylnaphthalene	µg/L	61.2	0.0605	U	0.0520	U	0.100	U	0.152		0.100	U	0.100	U	UJ	0.100	U
Inorganics																	
Cyanide, Total	mg/L	---	0.0100	U	0.0100	U	na		na		na		na			na	
Cyanide, WAD	mg/L	0.2	na		na		0.0100	U	0.0100	U	0.0100	U	0.0100	U	UJ	0.0100	U
Manganese, Total	mg/L	0.775	na		na		0.354		0.355		0.326		0.358			0.325	
Natural Attenuation Parameters																	
Nitrate	mg/L	---	na		na		na		na		na		na			na	
Nitrite	mg/L	---	na		na		na		na		na		na			na	
Ammonia	mg/L	---	na		na		na		na		na		na			na	
Manganese, Dissolved	mg/L	---	na		na		na		na		na		na			na	
Iron, Dissolved	mg/L	---	na		na		na		na		na		na			na	
Sulfate	mg/L	---	na		na		na		na		na		na			na	
Sulfide	mg/L	---	na		na		na		na		na		na			na	
Methane	µg/L	---	na		na		na		na		na		na			na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na			na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na			na	
Orthophosphate	mg/L	---	na		na		na		na		na		na			na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na			na	
Chloride	mg/L	---	na		na		na		na		na		na			na	

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Groundwater Analytical Results

		Performance Standard	MW35-GW-1012 09-Oct-2012		DV	MW35-GW-0413 11-Apr-2013		DV	MW35-GW-1013 22-Oct-2013		DV	MW36-GW-1002 29-Oct-2002		MW36-GW-0103 06-Jan-2003		MW36-GW-1003 21-Oct-2003		MW36-GW-0404 06-Apr-2004	
VOCs	*Units*																		
Benzene	µg/L	5	1.00	U		0.500	U		0.500	U		110		120		150		120	
Toluene	µg/L	1000	1.00	U		1.00	U		1.00	U		2.5		3.1		1.1		1.4	
Ethylbenzene	µg/L	700	1.00	U		1.00	U		1.00	U		100		140		140		140	
Xylenes, Total	µg/L	10000	3.00	U		3.00	U		3.00	U		58		87		38		54	
PAHs																			
Acenaphthene	µg/L	914	0.100	U	UJ	0.100	U		0.100	U		60		0.5	U	35		44	*
Acenaphthylene	µg/L	362	0.100	U	UJ	0.100	U		0.100	U		1.1	U	1.0	U	310		370	*
Anthracene	µg/L	---	0.100	U	UJ	0.100	U		0.100	U		0.24		0.31	J	0.61		0.76	
Benzo(a)anthracene	µg/L	0.13	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.12	U
Benzo(a)pyrene	µg/L	0.2	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.12	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.050	U	0.048	U
Benzo(ghi)perylene	µg/L	---	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.20	U	0.19	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.050	U	0.048	U
Chrysene	µg/L	0.85	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.12	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0130	U,MDL	UJ	0.0185	U		0.0173	U		0.11	U	0.10	U	0.30	U	0.29	U
Fluoranthene	µg/L	---	0.100	U	UJ	0.100	U		0.100	U		0.14		0.15	J	0.48		0.79	
Fluorene	µg/L	490	0.100	U	UJ	0.100	U		0.100	U		7		0.22	J	7.2		9.3	*
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.12	U
Naphthalene	µg/L	1.1	0.100	U	UJ	1.11	B		0.12			54	U	26	J	14		30	*
Phenanthrene	µg/L	294	0.100	U	UJ	0.100	U		0.100	U		1.7		2.1	J	4.4		6.8	*
Pyrene	µg/L	---	0.100	U	UJ	0.100	U		0.100	U		0.11	U	0.10	U	0.25	Ua	0.24	U
1-Methylnaphthalene	µg/L	---	0.100	U	UJ	0.154			0.100	U		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.100	U	UJ	0.135			0.100	U		na		na		na		na	
Inorganics																			
Cyanide, Total	mg/L	---	na			na			na			0.005		0.00500	U	0.010	U	0.010	U
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U		0.0100	U		na		na		na		na	
Manganese, Total	mg/L	0.775	0.361			0.371			0.313			0.146		0.166		0.18		0.17	
Natural Attenuation Parameters																			
Nitrate	mg/L	---	na			na			na			na		na		na		na	
Nitrite	mg/L	---	na			na			na			na		na		na		na	
Ammonia	mg/L	---	na			na			na			na		na		na		na	
Manganese, Dissolved	mg/L	---	na			na			na			0.151		0.158		0.16		0.16	
Iron, Dissolved	mg/L	---	na			na			na			1.47		1.39		1.4		1.2	
Sulfate	mg/L	---	na			na			na			na		na		na		na	
Sulfide	mg/L	---	na			na			na			na		na		na		na	
Methane	µg/L	---	na			na			na			na		na		na		na	
Alkalinity, Total	mg/L	---	na			na			na			na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na			na			na			na		na		na		na	
Orthophosphate	mg/L	---	na			na			na			na		na		na		na	
Total Organic Carbon	mg/L	---	na			na			na			na		na		na		na	
Chloride	mg/L	---	na			na			na			na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW36-GW-1004 20-Oct-2004		MW36-GW-0405 13-Apr-2005		MW36-GW-1005 12-Oct-2005		MW36-GW-0406 12-Apr-2006		MW36-GW-1006 09-Oct-2006		MW36-GW-0407 18-Apr-2007		MW36-GW-1007 10-Oct-2007		MW36-GW-0408 16-Apr-2008	
VOCs	*Units*																	
Benzene	µg/L	5	140		120		120		91.6		60.7		30.8		82.9		1	U
Toluene	µg/L	1000	1.1		0.78	Ja	1.0	U	1	U	1.16		1	U	4.19		1	U
Ethylbenzene	µg/L	700	160		130		120		92.6		36		15.7		84		1	U
Xylenes, Total	µg/L	10000	51		39		19		10.2		11.6		3	U	7.06		3	U
PAHs																		
Acenaphthene	µg/L	914	37		41		42		28.9		28.8		24.9		37.8		7.64	
Acenaphthylene	µg/L	362	320		380		350		0.17	U	0.085	U	0.085	U	0.085	U	0.085	U
Anthracene	µg/L	---	0.87		1.1		1.1		0.815		0.792		0.447		0.567		0.0809	J
Benzo(a)anthracene	µg/L	0.13	0.13	U	0.12	U	0.12	U	0.019	U	0.003	U	0.003	U	0.003	U	0.003	U
Benzo(a)pyrene	µg/L	0.2	0.13	U	0.12	U	0.12	U	0.019	U	0.032	U	0.032	U	0.032	U	0.032	U
Benzo(b)fluoranthene	µg/L	0.1	0.052	U	0.047	U	0.048	U	0.037	U	0.013	U	0.013	U	0.013	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.21	U	0.19	U	0.19	U	0.032	U	0.009	U	0.009	U	0.009	U	0.009	U
Benzo(k)fluoranthene	µg/L	0.14	0.052	U	0.047	U	0.048	U	0.023	U	0.015	U	0.015	U	0.015	U	0.015	U
Chrysene	µg/L	0.85	0.13	U	0.12	U	0.12	U	0.02	U	0.005	U	0.005	U	0.005	U	0.005	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.31	U	0.28	U	0.29	U	0.033	U	0.01	U	0.01	U	0.01	U	0.01	U
Fluoranthene	µg/L	---	0.78		0.82		0.54		0.651		0.424		0.237		0.382		0.0648	J
Fluorene	µg/L	490	7.7		9.1		8.6		10.4		13.8		11		33.3		3.99	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.13	U	0.12	U	0.12	U	0.038	U	0.007	U	0.007	U	0.007	U	0.007	U
Naphthalene	µg/L	1.1	19		7.9		5.2		2.77		3.78		1.93		4.89		0.493	
Phenanthrene	µg/L	294	5.7		6.6		5.9		6.2		4.67		3.05		5.61		0.706	
Pyrene	µg/L	---	0.29		0.099	Ja	0.28		2.69		1.7		0.964		1.21		0.0411	J
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		0.052	U	0.29		0.052	U	0.0707	J
Inorganics																		
Cyanide, Total	mg/L	---	0.010	U	0.010	U	0.0027	B	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.18		0.18		0.25		0.154		na		na		na		na	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	0.17		0.17		0.17		0.161		na		na		na		na	
Iron, Dissolved	mg/L	---	1.2		1.3		1.6		1.44		na		na		na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW36-GW-0409 22-Apr-2009		MW36-GW-1009 14-Oct-2009		MW36-GW-0110 14-Jan-2010		DP01-GW-0110 14-Jan-2010		MW36-GW-0410 07-Apr-2010		MW36-GW-0710 07-Jul-2010		DV	MW36-GW-1010 05-Oct-2010	
VOCs	*Units*																
Benzene	µg/L	5	1	U	25.6		1.00	U	1.00	U	2.92		23.2			40.2	
Toluene	µg/L	1000	1	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U
Ethylbenzene	µg/L	700	1	U	7.13		1.00	U	1.00	U	1.00	U	4.68			20.8	
Xylenes, Total	µg/L	10000	3	U	3	U	3.00	U	3.00	U	6.00	U	4.35			4.48	
PAHs																	
Acenaphthene	µg/L	914	7.75		15.5		10.5		10.3		16.0		18.6	H2	J-	14.9	
Acenaphthylene	µg/L	362	1.85		4.6		2.01		2.04		3.28		3.78	H2	J-	3.21	
Anthracene	µg/L	---	0.0551	J	0.143		0.0487	J	0.0488	J	0.120		0.131	H2	J-	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.0250	J	0.0216	J	0.0125	J	0.0119	J	0.100	U	0.100	U,H2	UJ	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.0186	J	0.016	U	0.0160	U	0.0160	U	0.100	U	0.100	U,H2	UJ	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.0211	J	0.0158	J	0.00760	U	0.00760	U	0.100	U	0.100	U,H2	UJ	0.100	U
Benzo(ghi)perylene	µg/L	---	0.0121	J	0.00887	J	0.00810	U	0.00810	U	0.100	U	0.100	U,H2	UJ	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.00790	U	0.0077	U	0.00770	U	0.00770	U	0.100	U	0.100	U,H2	UJ	0.100	U
Chrysene	µg/L	0.85	0.0136	J	0.0101	J	0.00700	U	0.00700	U	0.100	U	0.100	U,H2	UJ	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.00760	U	0.0081	U	0.00810	U	0.00810	U	0.0081	U,MDL	0.00810	U,H2,MDL	UJ	0.00810	U,MDL
Fluoranthene	µg/L	---	0.0727	J	0.107		0.0386	J	0.0434	J	0.100	U	0.100	U,H2	UJ	0.100	U
Fluorene	µg/L	490	1.95		4.34		2.25		2.33		3.55		3.99	H2	J-	2.97	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.0101	J	0.011	U	0.0110	U	0.0110	U	0.100	U	0.100	U,H2	UJ	0.100	U
Naphthalene	µg/L	1.1	0.00590	U	0.488		0.0290	U	0.0290	U	0.184		0.889	H2	J-	1.32	
Phenanthrene	µg/L	294	0.555		0.858		0.170		0.144		0.357		0.377	H2	J-	0.295	
Pyrene	µg/L	---	0.068	J	0.111		0.0808	J	0.0831	J	0.100	U	0.100	U,H2	UJ	0.100	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		0.54		2.40	H2	J-	7.04	
2-Methylnaphthalene	µg/L	61.2	0.0195	J	0.0531	J	0.0310	U	0.0310	U	0.1	U	0.100	U,H2	UJ	0.100	U
Inorganics																	
Cyanide, Total	mg/L	---	na		na		na		na		na		na			na	
Cyanide, WAD	mg/L	0.2	na		na		0.0100	U	0.0100	U	0.0100	U	0.0100	U		0.0100	U
Manganese, Total	mg/L	0.775	na		na		0.120		0.120		0.125		0.144			0.123	
Natural Attenuation Parameters																	
Nitrate	mg/L	---	na		na		na		na		na		na			na	
Nitrite	mg/L	---	na		na		na		na		na		na			na	
Ammonia	mg/L	---	na		na		na		na		na		na			na	
Manganese, Dissolved	mg/L	---	na		na		na		na		na		na			na	
Iron, Dissolved	mg/L	---	na		na		na		na		na		na			na	
Sulfate	mg/L	---	na		na		na		na		na		na			na	
Sulfide	mg/L	---	na		na		na		na		na		na			na	
Methane	µg/L	---	na		na		na		na		na		na			na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na			na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na			na	
Orthophosphate	mg/L	---	na		na		na		na		na		na			na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na			na	
Chloride	mg/L	---	na		na		na		na		na		na			na	

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Groundwater Analytical Results

		Performance Standard	MW36-GW-0411 11-Apr-2011		MW36-GW-1011 25-Oct-2011		DV	MW36-GW-1011-DUP-01 25-Oct-2011		DV	MW36-GW-0412 10-Apr-2012		MW36-GW-1012 09-Oct-2012		DV	DP01-GW-1012 09-Oct-2012		DV
VOCs	*Units*																	
Benzene	µg/L	5	4.24		21.4			20.9			8.76		21.8			22.8		
Toluene	µg/L	1000	1.00	U	1.00	U		1.00	U		1.0	U	1.00	U		1.00	U	
Ethylbenzene	µg/L	700	1.00	U	4.95			4.72			1.0	U	2.53			2.75		
Xylenes, Total	µg/L	10000	3.00	U	4.09			4.22			3.0	U	3.00	U		3.00	U	
PAHs																		
Acenaphthene	µg/L	914	10.6		8.33		J-	7.57		J-	14.3		16.2		J-	15.7		J-
Acenaphthylene	µg/L	362	2.66		3.39			3.40			2.71		3.34		J-	3.48		J-
Anthracene	µg/L	---	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Chrysene	µg/L	0.85	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170	U,MDL	0.0170	U,MDL		0.0170	U,MDL		0.0170	U,MDL	0.0130	U,MDL	UJ	0.0130	U,MDL	UJ
Fluoranthene	µg/L	---	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Fluorene	µg/L	490	2.88		3.49			3.53			2.63		3.28		J-	3.38		J-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Naphthalene	µg/L	1.1	0.745		0.741			0.427			0.158		0.287		J-	0.246		J-
Phenanthrene	µg/L	294	0.162		0.178			0.167			0.132		0.164		J-	0.160		J-
Pyrene	µg/L	---	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
1-Methylnaphthalene	µg/L	---	1.33		6.47			6.25			0.435		1.58		J-	1.46		J-
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.100	U		0.100	U		0.100	U	0.100	U	UJ	0.100	U	UJ
Inorganics																		
Cyanide, Total	mg/L	---	na								na		na			na		
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U		0.0100	U		0.0100	U	0.0100	U		0.0100	U	
Manganese, Total	mg/L	0.775	0.127		0.159			0.147			0.12		0.141			0.144		
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na			na			na		na			na		
Nitrite	mg/L	---	na		na			na			na		na			na		
Ammonia	mg/L	---	na		na			na			na		na			na		
Manganese, Dissolved	mg/L	---	na		na			na			na		na			na		
Iron, Dissolved	mg/L	---	na		na			na			na		na			na		
Sulfate	mg/L	---	na		na			na			na		na			na		
Sulfide	mg/L	---	na		na			na			na		na			na		
Methane	µg/L	---	na		na			na			na		na			na		
Alkalinity, Total	mg/L	---	na		na			na			na		na			na		
Total Kjeldahl Nitrogen	mg/L	---	na		na			na			na		na			na		
Orthophosphate	mg/L	---	na		na			na			na		na			na		
Total Organic Carbon	mg/L	---	na		na			na			na		na			na		
Chloride	mg/L	---	na		na			na			na		na			na		

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		Performance Standard	MW36-GW-0413 09-Apr-2013		DV	DP01-GW-0413 09-Apr-2013		DV	MW36-GW-1013 22-Oct-2013		DV	DP01-GW-1013 22-Oct-2013		DV	MW37-GW-1002 29-Oct-2002		MW37-GW-0103 06-Jan-2003		MW37-GW-1003 21-Oct-2003		MW37-GW-0404 06-Apr-2004	
VOCs	*Units*																					
Benzene	µg/L	5	5.18			5.16			45.8			43.9			6.7		52		87		73	
Toluene	µg/L	1000	1.00	U		1.00	U		1.00	U		1.00	U		2	U	1.3		1.0	U	1.0	U
Ethylbenzene	µg/L	700	1.00	U		1.00	U		21.3			20.7			4.9		56		8.1		6.2	
Xylenes, Total	µg/L	10000	3.00	U		3.00	U		5.19			5.09			7	U	26		6.4		5.8	
PAHs																						
Acenaphthene	µg/L	914	22.4			21			22.6			24.6			3.4		17		15		19	*
Acenaphthylene	µg/L	362	3.51		J+	3.41			5.19			5.34			1.1	U	1.0	U	150		200	*
Anthracene	µg/L	---	0.100	U		0.100	U		0.16			0.149			0.053	U	0.051	U	0.14		0.17	
Benzo(a)anthracene	µg/L	0.13	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.13	U
Benzo(a)pyrene	µg/L	0.2	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.13	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.050	U	0.050	U
Benzo(ghi)perylene	µg/L	---	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.20	U	0.20	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.050	U	0.050	U
Chrysene	µg/L	0.85	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.13	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0173	U		0.0173	U		0.0173	U		0.0175	U		0.11	U	0.10	U	0.30	U	0.30	U
Fluoranthene	µg/L	---	0.12		J+	0.113			0.125			0.118			0.11	U	0.10	U	0.074	Ja	0.12	Ja
Fluorene	µg/L	490	4.13		J+	3.95			5.88			5.88			0.36		1.6		2.5		3.4	*
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U	0.13	U	0.13	U
Naphthalene	µg/L	1.1	0.136		J+	0.142			0.653			0.739			1.4		9.7		1.6		1.0	Ja*
Phenanthrene	µg/L	294	0.100	U		0.100	U		0.739			0.73			0.11	U	0.23		1.0		1.5	*
Pyrene	µg/L	---	0.126		J+	0.12			0.145			0.133			0.11	U	0.10	U	0.25	U	0.25	U
1-Methylnaphthalene	µg/L	---	0.305		J+	0.311			13.9			15.4			na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.100	U		0.100	U		0.100	U		0.100	U		na		na		na		na	
Inorganics																						
Cyanide, Total	mg/L	---	na			na			na			na			0.005	U	0.00500	U	0.010	U	0.010	U
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U		0.0100	U		0.0100	U		na		na		na		na	
Manganese, Total	mg/L	0.775	0.129			0.131			0.145			0.141			0.0435		0.0476		0.058		0.062	
Natural Attenuation Parameters																						
Nitrate	mg/L	---	na			na			na			na			na		na		na		na	
Nitrite	mg/L	---	na			na			na			na			na		na		na		na	
Ammonia	mg/L	---	na			na			na			na			na		na		na		na	
Manganese, Dissolved	mg/L	---	na			na			na			na			0.0381		0.0419		0.050		0.058	
Iron, Dissolved	mg/L	---	na			na			na			na			1.89		2.03		2.3		2.3	
Sulfate	mg/L	---	na			na			na			na			na		na		na		na	
Sulfide	mg/L	---	na			na			na			na			na		na		na		na	
Methane	µg/L	---	na			na			na			na			na		na		na		na	
Alkalinity, Total	mg/L	---	na			na			na			na			na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na			na			na			na			na		na		na		na	
Orthophosphate	mg/L	---	na			na			na			na			na		na		na		na	
Total Organic Carbon	mg/L	---	na			na			na			na			na		na		na		na	
Chloride	mg/L	---	na			na			na			na			na		na		na		na	

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		Performance Standard	MW37-GW-1004 19-Oct-2004		MW37-GW-0405 13-Apr-2005		MW37-GW-1005 12-Oct-2005		MW37-GW-0406 12-Apr-2006		MW37-GW-1006 09-Oct-2006		MW37-GW-0407 18-Apr-2007		MW37-GW-1007 09-Oct-2007		MW37-GW-0408 16-Apr-2008	
VOCs	*Units*																	
Benzene	µg/L	5	70		40		19		8.83		2.07		1	U	7.89		1	U
Toluene	µg/L	1000	1.0	U	1.0	U	1.0	U	1	U	1.00	U	1	U	1.11		1	U
Ethylbenzene	µg/L	700	4.3		1.8		1.0	U	1	U	1.00	U	1	U	1	U	1	U
Xylenes, Total	µg/L	10000	4.3		2.0	J	2.0	U	3	U	3.00	U	3	U	3	U	3	U
PAHs																		
Acenaphthene	µg/L	914	18		23		24		20.6		19.6		16.8		25.3		13.8	
Acenaphthylene	µg/L	362	190		210		230		0.17	U	0.085	U	0.0944	U	0.085	U	0.085	U
Anthracene	µg/L	---	0.24		0.31		0.32		0.24		0.205		0.133	J	0.486		0.0716	J
Benzo(a)anthracene	µg/L	0.13	0.12	U	0.054	Ja	0.12	U	0.019	U	0.003	U	0.00333	U	0.003	U	0.003	U
Benzo(a)pyrene	µg/L	0.2	0.12	U	0.044	Ja	0.12	U	0.019	U	0.032	U	0.0356	U	0.032	U	0.032	U
Benzo(b)fluoranthene	µg/L	0.1	0.048	U	0.097		0.046	U	0.037	U	0.013	U	0.0144	U	0.013	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.19	U	0.079	Ja	0.19	U	0.032	U	0.009	U	0.01	U	0.009	U	0.009	U
Benzo(k)fluoranthene	µg/L	0.14	0.048	U	0.092		0.046	U	0.023	U	0.015	U	0.0167	U	0.015	U	0.015	U
Chrysene	µg/L	0.85	0.12	U	0.090	Ja	0.12	U	0.02	U	0.005	U	0.00556	U	0.005	U	0.005	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.29	U	0.090	Ja	0.28	U	0.033	U	0.01	U	0.0111	U	0.01	U	0.01	U
Fluoranthene	µg/L	---	0.15		0.22		0.18		0.182	J	0.133	J	0.0703	J	0.0418	J	0.01	U
Fluorene	µg/L	490	3.2		4.1		3.9		6.11		7.43		5.88		16.7		6.28	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.12	U	0.085	Ja	0.12	U	0.038	U	0.007	U	0.00778	U	0.007	U	0.007	U
Naphthalene	µg/L	1.1	1.2	U	0.45	Ja	1.2	U	0.438		0.385		0.44		0.534		0.297	
Phenanthrene	µg/L	294	1.4		1.6		1.5		1.62		1.27		0.741		1.93		0.442	
Pyrene	µg/L	---	0.24	U	0.24	U	0.23	U	0.036	U	0.339		0.202	J	0.457		0.019	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		0.0715	J	0.103	J	0.052	U	0.052	U
Inorganics																		
Cyanide, Total	mg/L	---	0.010	U	0.010	U	0.0032	B	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.074		0.073		0.070		0.07		na		na		na		na	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		0.10	U	0.10	U	0.1	U	na		na		na		na	
Nitrite	mg/L	---	na		0.020	U	0.0096	B	0.025	U	na		na		na		na	
Ammonia	mg/L	---	na		0.67		0.50		0.622	U	na		na		na		na	
Manganese, Dissolved	mg/L	---	0.062		0.069		0.068		0.0635		na		na		na		na	
Iron, Dissolved	mg/L	---	2.4		2.3		2.6		2.55		na		na		na		na	
Sulfate	mg/L	---	na		69		75		52.8		na		na		na		na	
Sulfide	mg/L	---	na		1.0	U	1.0	U	1	U	na		na		na		na	
Methane	µg/L	---	na		9.6		9.1		26	U	na		na		na		na	
Alkalinity, Total	mg/L	---	na		410		400		480		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		0.56		0.80		1	U	na		na		na		na	
Orthophosphate	mg/L	---	na		0.012	B	0.0090	B	0.1	U,M1	na		na		na		na	
Total Organic Carbon	mg/L	---	na		1.8		1.9		1.67		na		na		na		na	
Chloride	mg/L	---	na		na		na		61.7	M1	na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW37-GW-0409 22-Apr-2009		MW37-GW-1009 14-Oct-2009		MW37-GW-0110 14-Jan-2010		MW37-GW-0410 07-Apr-2010		MW37-GW-0710 07-Jul-2010		MW37-GW-1010 05-Oct-2010		MW37-GW-0411 11-Apr-2011	
VOCs	*Units*															
Benzene	µg/L	5	1	U	1	U	1.00	U	1.00	U	1.00	U	3.37		1.00	U
Toluene	µg/L	1000	1	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U
Ethylbenzene	µg/L	700	1	U	1	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U
Xylenes, Total	µg/L	10000	3	U	3	U	3.00	U	6.00	U	3.00	U	3.00	U	3.00	U
PAHs																
Acenaphthene	µg/L	914	4.41		9.39		9.49		10.4		8.52		10.3		10.1	
Acenaphthylene	µg/L	362	0.313		0.709		0.834		0.843		0.577		0.867		0.591	
Anthracene	µg/L	---	0.00826	J	0.0364	J	0.0259	J	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.00944	J	0.0134	J	0.0104	J	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.00850	U	0.016	U	0.0160	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.00990	U	0.0076	U	0.00760	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(ghi)perylene	µg/L	---	0.00550	U	0.0081	U	0.00810	U	0.100	U	0.100	U	0.100	U	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.00790	U	0.0077	U	0.00770	U	0.100	U	0.100	U	0.100	U	0.100	U
Chrysene	µg/L	0.85	0.00530	U	0.007	U	0.00700	U	0.100	U	0.100	U	0.100	U	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.00760	U	0.0081	U	0.00810	U	0.00810	U,MDL	0.00810	U,MDL	0.00810	U,MDL	0.0170	U,MDL
Fluoranthene	µg/L	---	0.0129	J	0.0285	J	0.0283	J	0.100	U	0.100	U	0.100	U	0.100	U
Fluorene	µg/L	490	0.876		1.9		1.82		2.09		1.53		1.87		1.81	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.00690	U	0.011	U	0.0110	U	0.100	U	0.100	U	0.100	U	0.100	U
Naphthalene	µg/L	1.1	0.00590	U	0.029	U	0.0290	U	0.100	U	0.100	U	0.100	U	0.112	
Phenanthrene	µg/L	294	0.0337	J	0.113		0.0554	J	0.100	U	0.100	U	0.100	U	0.100	U
Pyrene	µg/L	---	0.0134	J	0.0347	J	0.0546	J	0.100	U	0.100	U	0.100	U	0.100	U
1-Methylnaphthalene	µg/L	---	na		na				0.223		0.239		0.734		0.234	
2-Methylnaphthalene	µg/L	61.2	0.00708	J	0.031	U	0.0310	U	0.100	U	0.100	U	0.100	U	0.100	U
Inorganics																
Cyanide, Total	mg/L	---	na		na		na		na		na		na		na	
Cyanide, WAD	mg/L	0.2	na		na		0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U
Manganese, Total	mg/L	0.775	na		na		0.0619		0.0639		0.0718		0.0685		0.0696	
Natural Attenuation Parameters																
Nitrate	mg/L	---	na		na		na		0.10	U	na		0.10	U	0.10	U
Nitrite	mg/L	---	na		na		na		0.100	U	na		0.100	U	0.100	U
Ammonia	mg/L	---	na		na		na		0.627		na		0.560		0.698	
Manganese, Dissolved	mg/L	---	na		na		na		0.065		na		0.0621		0.0546	
Iron, Dissolved	mg/L	---	na		na		na		2.6		na		2.80		2.29	
Sulfate	mg/L	---	na		na		na		41.8		na		44.3		43.5	
Sulfide	mg/L	---	na		na		na				na		5.00	U	10	U
Methane	µg/L	---	na		na		na		48		na		46.3		15	
Alkalinity, Total	mg/L	---	na		na		na		470		na		433		424	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		1.00	U	na		1.00	U,M1	1.13	
Orthophosphate	mg/L	---	na		na		na		0.100	U	na		0.100	U	0.100	U
Total Organic Carbon	mg/L	---	na		na		na		1.00	U	na		1.00	U	na	
Chloride	mg/L	---	na		na		na		30.7		na		38.8		na	

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Groundwater Analytical Results

		Performance Standard	MW37-GW-1011 25-Oct-2011		DV	MW37-GW-0412 10-Apr-2012		DV	MW37-GW-1012 09-Oct-2012		DV	MW37-GW-0413 09-Apr-2013		DV	MW37-GW-1013 22-Oct-2013		DV	MW41-GW-1002 31-Oct-2002		MW41-GW-0103 07-Jan-2003	
VOCs	*Units*																				
Benzene	µg/L	5	1.03			1.00	U		1.48			0.500	U		9.11			2	U	1.0	U
Toluene	µg/L	1000	1.00	U		1.00	U		1.00	U		1.00	U		1.00	U		2	U	1.0	U
Ethylbenzene	µg/L	700	1.00	U		1.00	U		1.00	U		1.00	U		1.00	U		2	U	1.0	U
Xylenes, Total	µg/L	10000	3.00	U		3.00	U		3.00	U		3.00	U		3.00	U		7	U	3.0	U
PAHs																					
Acenaphthene	µg/L	914	5.22		J-	12.4		J-	11.3	M1	J-	15.3			14.8			0.55	U	0.51	U
Acenaphthylene	µg/L	362	0.696			0.823			1.07			1.22			2.02			1.1	U	1.0	U
Anthracene	µg/L	---	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.055	U	0.051	U
Benzo(a)anthracene	µg/L	0.13	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Benzo(a)pyrene	µg/L	0.2	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Benzo(ghi)perylene	µg/L	---	0.100	U		0.100	U		0.100	U,M1	UJ	0.100	U	UJ	0.100	U	UJ	0.11	U	0.10	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Chrysene	µg/L	0.85	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170	U,MDL		0.0170	U,MDL		0.0267	J, M1	J-	0.0173	U	UJ	0.0173	U	UJ	0.11	U	0.10	U
Fluoranthene	µg/L	---	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Fluorene	µg/L	490	1.77			2.13			2.00			2.91			3.27			0.11	U	0.10	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U		0.100	U		0.100	U,M1	UJ	0.100	U	UJ	0.100	U	UJ	0.11	U	0.10	U
Naphthalene	µg/L	1.1	0.100	U		0.100	U		0.119			0.100	U		0.244			0.55	U	0.51	U
Phenanthrene	µg/L	294	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
Pyrene	µg/L	---	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		0.11	U	0.10	U
1-Methylnaphthalene	µg/L	---	0.623			0.126			0.345			0.164			2.48			na		na	
2-Methylnaphthalene	µg/L	61.2	0.100	U		0.100	U		0.100	U		0.100	U		0.100	U		na		na	
Inorganics																					
Cyanide, Total	mg/L	---	na			na			na			na			na			0.00592		0.00500	U
Cyanide, WAD	mg/L	0.2	0.0100	U		0.0100	U		0.0100	U		0.0100	U		0.0100	U		na		na	
Manganese, Total	mg/L	0.775	0.0654			0.0606			0.0715			0.0685			0.0716			0.229		0.0488	
Natural Attenuation Parameters																					
Nitrate	mg/L	---	0.10	U		0.10	U		0.100	U		0.100	U		na			na		na	
Nitrite	mg/L	---	0.100	U		0.10	U		0.100	U		0.100	U		na			na		na	
Ammonia	mg/L	---	0.647			0.623			0.579	M1		0.655			na			na		na	
Manganese, Dissolved	mg/L	---	0.0649			0.0709			0.0715			0.0656			na			0.0372		0.0323	
Iron, Dissolved	mg/L	---	2.88			3.08			3.16			3.130			na			0.985		1.4	
Sulfate	mg/L	---	42.1			44.4			45.1			40.3			na			na		na	
Sulfide	mg/L	---	10	U		10	U		10	U		11.1			na			na		na	
Methane	µg/L	---	17			42			41			29.7			na			na		na	
Alkalinity, Total	mg/L	---	444			414			444			459			na			na		na	
Total Kjeldahl Nitrogen	mg/L	---	1.00	U		1.00	U		1.00	U		1.00	U		na			na		na	
Orthophosphate	mg/L	---	0.100	U		0.100	U		0.100	U,M1		0.100	U		na			na		na	
Total Organic Carbon	mg/L	---	1.00			na			na			na			na			na		na	
Chloride	mg/L	---	na			na			na			na			na			na		na	

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Groundwater Analytical Results

		Performance Standard	MW41-GW-1003 20-Oct-2003		MW41-GW-0404 06-Apr-2004		MW41-GW-1004 19-Oct-2004		MW41-GW-0405 14-Apr-2005		MW41-GW-1005 13-Oct-2005		MW41-GW-0406 10-Apr-2006		MW41-GW-0410 07-Apr-2010		MW41-GW-0411 11-Apr-2011	
VOCs	*Units*																	
Benzene	µg/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.00	U	1.00	U
Toluene	µg/L	1000	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.00	U	1.00	U
Ethylbenzene	µg/L	700	1.0	U	1.0	U	1.0	U	1.0	U	0.53	J	1.0	U	1.00	U	1.00	U
Xylenes, Total	µg/L	10000	1.0	U	1.0	U	1.0	U	2.0	U	2.0	U	3.0	U	6.00	U	3.00	U
PAHs																		
Acenaphthene	µg/L	914	2.5	U	2.4	U*	2.6	U	2.3	U	2.5	U	0.13	U	0.100	U	0.100	U
Acenaphthylene	µg/L	362	1.3	U	1.2	U*	1.3	U	1.2	U	1.3	U	0.17	U	0.100	U	0.100	U
Anthracene	µg/L	---	0.050	U*	0.048	U	0.051	U	0.047	U	0.049	U	0.0093	U	0.100	U	0.100	U
Benzo(a)anthracene	µg/L	0.13	0.13	U	0.12	U	0.13	U	0.12	U	0.13	U	0.019	U	0.100	U	0.100	U
Benzo(a)pyrene	µg/L	0.2	0.13	U	0.12	U	0.13	U	0.12	U	0.13	U	0.019	U	0.100	U	0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.050	U	0.048	U	0.051	U	0.047	U	0.049	U	0.037	U	0.100	U	0.100	U
Benzo(ghi)perylene	µg/L	---	0.20	U	0.19	U	0.20	U	0.19	U	0.20	U	0.032	U	0.100	U	0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.050	U	0.048	U	0.051	U	0.047	U	0.049	U	0.023	U	0.100	U	0.100	U
Chrysene	µg/L	0.85	0.13	U	0.12	U	0.13	U	0.12	U	0.13	U	0.02	U	0.100	U	0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.30	U	0.29	U	0.31	U	0.28	U	0.29	U	0.033	U	0.0081	U,MDL	0.0170	U,MDL
Fluoranthene	µg/L	---	0.13	U	0.12	U	0.13	U	0.12	U	0.13	U	0.032	U	0.100	U	0.100	U
Fluorene	µg/L	490	0.25	U	0.24	U*	0.26	U	0.23	U	0.25	U	0.029	U	0.100	U	0.100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.13	U	0.12	U	0.13	U	0.12	U	0.13	U	0.038	U	0.100	U	0.100	U
Naphthalene	µg/L	1.1	1.3	U	1.2	U*	1.3	U	1.2	U	1.3	U	0.1	U	0.100	U	0.100	U
Phenanthrene	µg/L	294	0.099	U	0.095	U*	0.10	U	0.093	U	0.098	U	0.015	U	0.100	U	0.100	U
Pyrene	µg/L	---	0.25	U	0.24	U	0.26	U	0.23	U	0.25	U	0.036	U	0.100	U	0.100	U
1-Methylnaphthalene	µg/L	---	na		na		na		na		na		na		0.100	U	0.100	U
2-Methylnaphthalene	µg/L	61.2	na		na		na		na		na		na		0.100	U	0.100	U
Inorganics																		
Cyanide, Total	mg/L	---	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U	0.01	U	na		na	
Cyanide, WAD	mg/L	0.2	na		na		na		na		na		na		0.0100	U	0.0100	U
Manganese, Total	mg/L	0.775	0.045		0.027		0.053		0.032		0.046		0.08		0.0316		0.0428	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	0.028		0.027		0.027		0.027		0.026		0.0266		na		na	
Iron, Dissolved	mg/L	---	1.3		1.2		1.2		1.0		1.3		1.43		na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW41-GW-0412 10-Apr-2012		MW41-GW-0413 09-Apr-2013		MW55-GW-1005 13-Oct-2005		MW55-GW-0406 11-Apr-2006		MW55-GW-1006 11-Oct-2006		MW55-GW-0407 17-Apr-2007		MW55-GW-1007 10-Oct-2007		MW55-GW-0408 15-Apr-2008	
VOCs	*Units*																	
Benzene	µg/L	5	1.00	U	0.500	U	1.0	U	1	U	1	U	1	U	1	U	1	U,L1
Toluene	µg/L	1000	1.00	U	1.00	U	1.0	U	1	U	1	U	1	U	1	U	1	U,L1
Ethylbenzene	µg/L	700	1.00	U	1.00	U	1.0	U	1	U	1	U	1	U	1	U	1	U,L1
Xylenes, Total	µg/L	10000	3.00	U	3.00	U	2.0	U	3	U	3	U	3	U	3	U	3	U,L1
PAHs																		
Acenaphthene	µg/L	914	0.100	U	0.100	U	2.4	U	0.13	U	0.049	U	0.049	U	0.0557	U	0.049	U
Acenaphthylene	µg/L	362	0.100	U	0.100	U	1.2	U	0.17	U	0.085	U	0.085	U	0.0966	U	0.085	U
Anthracene	µg/L	---	0.100	U	0.100	U	0.047	U	0.0093	U	0.01	U	0.01	U	0.0114	U	0.01	U
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U	0.12	U	0.019	U	0.003	U	0.003	U	0.00341	U	0.003	U
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	0.12	U	0.019	U	0.032	U	0.032	U	0.0364	U	0.032	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	0.047	U	0.037	U	0.013	U	0.013	U	0.0148	U	0.013	U
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	0.19	U	0.032	U	0.009	U	0.009	U	0.0102	U	0.009	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	0.047	U	0.023	U	0.015	U	0.015	U	0.017	U	0.015	U
Chrysene	µg/L	0.85	0.100	U	0.100	U	0.12	U	0.02	U	0.005	U	0.005	U	0.00568	U	0.005	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170	U,MDL	0.0172	U	0.28	U	0.033	U	0.01	U	0.01	U	0.0114	U	0.01	U
Fluoranthene	µg/L	---	0.100	U	0.100	U	0.12	U	0.032	U	0.01	U	0.01	U	0.0114	U	0.01	U
Fluorene	µg/L	490	0.100	U	0.100	U	0.24	U	0.029	U	0.01	U	0.01	U	0.0114	U	0.01	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	0.12	U	0.038	U	0.007	U	0.007	U	0.00795	U	0.007	U
Naphthalene	µg/L	1.1	0.100	U	0.100	U	1.2	U	0.1	U	0.248		0.837		0.538		0.054	U
Phenanthrene	µg/L	294	0.100	U	0.100	U	0.094	U	0.015	U	0.0262	J	0.007	U	0.0757	J	0.007	U
Pyrene	µg/L	---	0.100	U	0.100	U	0.24	U	0.036	U	0.019	U	0.019	U	0.0504	J	0.019	U
1-Methylnaphthalene	µg/L	---	0.100	U	0.100	U	na		na		na		na		na		na	
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.100	U	na		na		0.052	U	0.1	J	0.0591	U	0.052	U
Inorganics																		
Cyanide, Total	mg/L	---	na		na		0.011		0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	na		na		na		na		na		na	
Manganese, Total	mg/L	0.775	0.193		0.204		0.046		0.0249		na		na		na		na	
Natural Attenuation Parameters																		
Nitrate	mg/L	---	na		na		na		na		na		na		na		na	
Nitrite	mg/L	---	na		na		na		na		na		na		na		na	
Ammonia	mg/L	---	na		na		na		na		na		na		na		na	
Manganese, Dissolved	mg/L	---	na		na		0.045		0.017		na		na		na		na	
Iron, Dissolved	mg/L	---	na		na		0.042	B	0.1	U	na		na		na		na	
Sulfate	mg/L	---	na		na		na		na		na		na		na		na	
Sulfide	mg/L	---	na		na		na		na		na		na		na		na	
Methane	µg/L	---	na		na		na		na		na		na		na		na	
Alkalinity, Total	mg/L	---	na		na		na		na		na		na		na		na	
Total Kjeldahl Nitrogen	mg/L	---	na		na		na		na		na		na		na		na	
Orthophosphate	mg/L	---	na		na		na		na		na		na		na		na	
Total Organic Carbon	mg/L	---	na		na		na		na		na		na		na		na	
Chloride	mg/L	---	na		na		na		na		na		na		na		na	

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Groundwater Analytical Results

		Performance Standard	MW55-GW-0410 08-Apr-2010		MW55-GW-1010 05-Oct-2010		MW55-GW-0411 12-Apr-2011		MW55-GW-1011 25-Oct-2011		MW55-GW-0412 11-Apr-2012		MW55-GW-1012 09-Oct-2012		MW55-GW-0413 10-Apr-2013		DV	MW55-GW-1013 22-Oct-2013		DV
VOCs	*Units*																			
Benzene	µg/L	5	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	0.500	U	UJ	0.500	U	
Toluene	µg/L	1000	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U	
Ethylbenzene	µg/L	700	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U		1.00	U	
Xylenes, Total	µg/L	10000	6.00	U	3.00	U	3.00	U	3.00	U	3.00	U	3.00	U	3.00	U		3.00	U	
PAHs																				
Acenaphthene	µg/L	914	0.100	U	0.202		0.422		0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Acenaphthylene	µg/L	362	0.100	U	0.100	U	0.608		0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Anthracene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Chrysene	µg/L	0.85	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Dibenzo(a,h)anthracene	µg/L	0.033	0.100	U	0.00810	U,MDL	0.170	U,MDL	0.0170	U,MDL	0.0170	U,MDL	0.0130	U,MDL	0.0173	U		0.0173	U	
Fluoranthene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Fluorene	µg/L	490	0.0380	J,MDL	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Naphthalene	µg/L	1.1	0.100	U	0.672		1.20		0.100	U	0.172		0.100	U	0.113		J+	0.100	U	
Phenanthrene	µg/L	294	0.100	U	0.100	U	0.195		0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Pyrene	µg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
1-Methylnaphthalene	µg/L	---	0.100	U	0.704		2.91	U	0.100	U	0.100	U	0.100	U	0.131		J+	0.100	U	
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		0.100	U	
Inorganics																				
Cyanide, Total	mg/L	---	na		na		na		na		na		na		na			na		
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U	0.0100	U		0.0100	U	
Manganese, Total	mg/L	0.775	0.0187		0.0100	U	0.0135		0.0103		0.0214		0.0128		0.0107			0.0100	U	
Natural Attenuation Parameters																				
Nitrate	mg/L	---	0.10	U	0.10	U	0.10	U	0.10	U	0.100	U	0.100	U	0.100	U		na		
Nitrite	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		na		
Ammonia	mg/L	---	1.43		1.41		1.49		1.44		1.48		1.41		1.54			na		
Manganese, Dissolved	mg/L	---	0.0184		0.0100	U	0.0129		0.0100	U	0.0130	R	0.0112		0.0100	U		na		
Iron, Dissolved	mg/L	---	0.380		0.234		0.127		0.100	U	0.103		0.108		0.100	U		na		
Sulfate	mg/L	---	89.5		36.2		89.6		86.7		90.3		94.8		87.2			na		
Sulfide	mg/L	---	5.00	U	5.00	U	16		10	U	10	U	10	U	10.0	U		na		
Methane	µg/L	---	26.0	U	26.0	U	1.5		2.1		1.9		3.1		2.58			na		
Alkalinity, Total	mg/L	---	432		402		393		390		385		375		410			na		
Total Kjeldahl Nitrogen	mg/L	---	1.77		1.54		1.83		1.92		1.58		1.70		1.79			na		
Orthophosphate	mg/L	---	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U	0.100	U		na		
Total Organic Carbon	mg/L	---	1.00	U	1.00	U	na		1.00	U	na		na		na			na		
Chloride	mg/L	---	2.00	U,RL1	2.00	U,RL1	na		na		na		na		na			na		

Iowa City, Iowa Former Manufactured Gas Plant Site
MidAmerican Energy Company

Groundwater Analytical Results

		Performance Standard	MW56-GW-1011 27-Jul-2011		MW56-GW-1011 24-Oct-2011		DV	MW56-GW-0412 10-Apr-2012		DV	MW56-GW-1012 09-Oct-2012		DV	MW56-GW-0413 09-Apr-2013		DV	MW56-GW-1013 22-Oct-2013		DV	MW57-GW-1011 27-Jul-2011	
VOCs	*Units*																				
Benzene	µg/L	5	1.00	U	1.00	U		1.00	U		1.00	U		0.500	U	UJ	0.500	U		1.00	U
Toluene	µg/L	1000	1.00	U	1.00	U		1.00	U		1.00	U		1.00	U	UJ	1.00	U		1.00	U
Ethylbenzene	µg/L	700	1.00	U	1.00	U		1.00	U		1.00	U		1.00	U	UJ	1.00	U		1.00	U
Xylenes, Total	µg/L	10000	3.00	U	3.00	U		3.00	U		3.00	U		3.00	U	UJ	3.00	U		3.00	U
PAHs																					
Acenaphthene	µg/L	914	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Acenaphthylene	µg/L	362	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Anthracene	µg/L	---	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Benzo(a)anthracene	µg/L	0.13	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Benzo(a)pyrene	µg/L	0.2	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Benzo(b)fluoranthene	µg/L	0.1	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Benzo(ghi)perylene	µg/L	---	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Benzo(k)fluoranthene	µg/L	0.14	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Chrysene	µg/L	0.85	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170	U,MDL	0.0170	U,MDL	UJ	0.0170	U,MDL	UJ	0.0130	U,MDL	UJ	0.0172	U		0.0173	U		0.0170	U,MDL
Fluoranthene	µg/L	---	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Fluorene	µg/L	490	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Naphthalene	µg/L	1.1	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.287	
Phenanthrene	µg/L	294	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
Pyrene	µg/L	---	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.100	U
1-Methylnaphthalene	µg/L	---	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.105	
2-Methylnaphthalene	µg/L	61.2	0.100	U	0.100	U	UJ	0.100	U	UJ	0.100	U	UJ	0.100	U		0.100	U		0.112	
Inorganics																					
Cyanide, Total	mg/L	---	na		na			na			na			na			na			na	
Cyanide, WAD	mg/L	0.2	0.0100	U	0.0100	U	UJ	0.0100	U		0.0100	U		0.0100	U		0.0100	U		0.0100	U
Manganese, Total	mg/L	0.775	0.130		0.123			0.0673		J+	0.0875			0.0792			0.0713			0.605	
Natural Attenuation Parameters																					
Nitrate	mg/L	---	na		na			0.100	U		0.100	U		0.100	U		na			na	
Nitrite	mg/L	---	na		na			0.100	U		0.100	U		0.100	U		na			na	
Ammonia	mg/L	---	na		na			1.1			1.04			1.13			na			na	
Manganese, Dissolved	mg/L	---	na		na			0.0821			0.0840			0.0764			na			na	
Iron, Dissolved	mg/L	---	na		na			1.4			1.70			1.670			na			na	
Sulfate	mg/L	---	na		na			66.9			67.4			60.5			na			na	
Sulfide	mg/L	---	na		na			10	U		10	U		10.0	U		na			na	
Methane	µg/L	---	na		na			11			10			9.84			na			na	
Alkalinity, Total	mg/L	---	na		na			370			370			410			na			na	
Total Kjeldahl Nitrogen	mg/L	---	na		na			1.33			1.22			1.11			na			na	
Orthophosphate	mg/L	---	na		na			0.100	U		0.100	U		0.100	U		na			na	
Total Organic Carbon	mg/L	---	na		na			na			na			na			na			na	
Chloride	mg/L	---	na		na			na			na			na			na			na	

Iowa City, Iowa Former Manufactured Gas Plant Site
MidAmerican Energy Company

Groundwater Analytical Results

		Performance Standard	MW57-GW-1011 24-Oct-2011	DV	MW57-GW-0412 10-Apr-2012	DV	MW57-GW-1012 09-Oct-2012	DV	MW57-GW-0413 09-Apr-2013	MW57-GW-1013 22-Oct-2013
VOCs	*Units*									
Benzene	µg/L	5	1.00 U		1.00 U		1.00 U		0.500 U	0.500 U
Toluene	µg/L	1000	1.00 U		1.00 U		1.00 U		1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.00 U		1.00 U		1.00 U		1.00 U	1.00 U
Xylenes, Total	µg/L	10000	3.00 U		3.00 U		3.00 U		3.00 U	3.00 U
PAHs										
Acenaphthene	µg/L	914	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Acenaphthylene	µg/L	362	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Anthracene	µg/L	---	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Benzo(a)anthracene	µg/L	0.13	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Benzo(a)pyrene	µg/L	0.2	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Benzo(b)fluoranthene	µg/L	0.1	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Benzo(ghi)perylene	µg/L	---	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Benzo(k)fluoranthene	µg/L	0.14	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Chrysene	µg/L	0.85	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Dibenzo(a,h)anthracene	µg/L	0.033	0.0170 U,MDL		0.0170 U,MDL	UJ	0.0130 U,MDL	UJ	0.0173 U	0.0173 U
Fluoranthene	µg/L	---	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Fluorene	µg/L	490	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Indeno(1,2,3-cd)pyrene	µg/L	0.1	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Naphthalene	µg/L	1.1	0.126		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Phenanthrene	µg/L	294	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Pyrene	µg/L	---	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
1-Methylnaphthalene	µg/L	---	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
2-Methylnaphthalene	µg/L	61.2	0.100 U		0.100 U	UJ	0.100 U	UJ	0.100 U	0.100 U
Inorganics										
Cyanide, Total	mg/L	---	na		na		na		na	na
Cyanide, WAD	mg/L	0.2	0.0100 U	UJ	0.0100 U		0.0100 U		0.0100 U	0.0100 U
Manganese, Total	mg/L	0.775	0.317		0.18		0.246		0.216	0.225
Natural Attenuation Parameters										
Nitrate	mg/L	---	na		0.1 U		0.100 U		0.100 U	na
Nitrite	mg/L	---	na		0.1 U		0.100 U		0.100 U	na
Ammonia	mg/L	---	na		1.5		1.40		1.55	na
Manganese, Dissolved	mg/L	---	na		0.228		0.198		0.195	na
Iron, Dissolved	mg/L	---	na		1.28		1.37		1.520	na
Sulfate	mg/L	---	na		120		132		120	na
Sulfide	mg/L	---	na		10 U		10 U		28.3	na
Methane	µg/L	---	na		10		11		12.8	na
Alkalinity, Total	mg/L	---	na		355		360		376	na
Total Kjeldahl Nitrogen	mg/L	---	na		1.78		1.79		1.72	na
Orthophosphate	mg/L	---	na		0.1 U		0.100 U		0.100 U	na
Total Organic Carbon	mg/L	---	na		na		na		na	na
Chloride	mg/L	---	na		na		na		na	na

Notes:
na = not analyzed.
ns = not sampled, insufficient water.
nc = RPD not calculated.
RPD = Relative Percent Difference.
mg/L = milligrams per liter.
µg/L = microgram per liter.

Laboratory Qualifiers
* = Batch QC exceeds upper or lower control limits.
B = Analyte was detected in the associated Method Blank.
B1= Analyte was detected in the associated Method Blank. Analyte concentration in the sample is greater than 10x the concentration found in the Method Blank.
C9 = Calibration Verification recovery was outside the method control limits for this analyte. The LCS for this analyte met CCV acceptance criteria, and was used to validate the batch.
CN5 = Sample found to contain Sulfide. The sulfide was treated and removed prior to distillation.
ET = Matrix interference in sample is causing an endpoint timeout.
H = Sample analysis performed past method-specified holding time.
H2 = Initial analysis within holding time. Reanalysis verification was past holding time.
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Ja = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L1 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was outside control limits.
M1 = The MS and/or MSD were outside control limits.
MDL = Results calculated/entered to the method detection limit (MDL).
MHA = Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.
P2 = Sample adjusted to method prescribed pH range prior to analysis.
R = Sample duplicate RPD exceeded the laboratory control limit.
RL1 = Reporting limit raised due to sample matrix effects.
S3 = Post digestion spike is out of acceptance limits for this analyte.
U = Indicates the analyte was analyzed for but not detected.
U* = Indicates the analyte was analyzed for but not detected. Batch QC exceeds the upper or lower control limits.
Ua = Analyte was not detected at or above the stated limit. Concentration is below the method reporting limit.
Z6 = Surrogate recovery was outside control limits.
ZX = Due to sample matrix effects, the surrogate recovery was outside the control limits.

Data Validation (DV) Qualifiers
B = The analyte was found in an associated blank, as well as in the sample at a concentration greater than 5 times (or 10 times for common laboratory contaminants) that detected in an associated blank.
J = The analyte was positively identified; the quantitation is an estimation.
J+ = The analyte was positively identified; the quantitation is an estimation with a potential high bias.
J- = The analyte was positively identified; the quantitation is an estimation with a potential low bias.
UB = The analyte is considered not detected; the concentration in the sample was less than 5 times (or 10 times for common laboratory contaminants) that detected in an associated blank.
UJ = The analyte was analyzed for, but not detected. Due to a QC deficiency identified during data validation, the value reported may not accurately reflect the sample quantitation limit.
Data collected as part of the Remedial Action qualified in accordance with the January 2009 Quality Assurance Project Plan.

ATTACHMENT 3

Sediment Sampling Results

TABLE 4-1

RALSTON CREEK - SEDIMENT ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE – IOWA CITY, IOWA

	Units	Performance Standard	RC04 RC04-RS 9/17/2002 0-0.5 feet		RC04 RC-04-RS DUP 9/17/2002 0-0.5 feet		RC04 RCO4-SD-0410 4/8/2010 0-0.5 feet		RC04 RC04-SD-1010 10/5/2010 0-0.5 feet		RC04 DP01-SD-1010 10/5/2010 0-0.5 feet		RC04 RC04-SD-1111 11/11/2011 0-0.5 feet		DV
Polynuclear Aromatic Hydrocarbons (PAHs)															
Acenaphthene	mg/kg	---	0.021		<0.2	U	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1	
Acenaphthylene	mg/kg	---	<0.04	U	<0.39	U	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Anthracene	mg/kg	0.845	0.0071		<0.04	U	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Benzo(a)anthracene	mg/kg	1.050	0.013	J	0.052	J	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Benzo(a)pyrene	mg/kg	1.450	0.059	J	0.08		<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Benzo(b)fluoranthene	mg/kg	---	0.068		0.087		<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	0.179	RL1,M1	J+,J-,J
Benzo(ghi)perylene	mg/kg	---	0.029		0.037	J	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Benzo(k)fluoranthene	mg/kg	---	0.011	J	0.029	J	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1	UJ
Chrysene	mg/kg	1.290	<0.0041	U	0.066		<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Dibenzo(a,h)anthracene	mg/kg	---	0.017		<0.12	U	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1	UJ
Fluoranthene	mg/kg	2.230	0.041	J	0.21		<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	0.291	RL1,M1	J+,J-,J
Fluorene	mg/kg	0.536	<0.018	U	<0.180	U	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	
Indeno(1,2,3-cd)pyrene	mg/kg	---	0.015		0.014	J	<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Naphthalene	mg/kg	0.561	0.20		<0.59	U	**11.3**	RL1	0.259	RL1	0.161	RL1	<0.171	U,RL1	
Phenathrene	mg/kg	1.170	0.056		0.14		<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	<0.171	U,RL1,M1	UJ
Pyrene	mg/kg	1.520	0.059		0.14		<0.353	U,RL1	<0.117	U,RL1	<0.117	U,RL1	0.227	RL1,M1	J+,J-,J
2-Methylnaphthalene	mg/kg	---	na		na		0.363	RL1	0.363	RL1	0.363	RL1	<0.171	U,RL1	
Total PAHs	mg/kg	22.8	0.435		0.687		11.300		0.259		0.161		0.518		

TABLE 4-1

RALSTON CREEK - SEDIMENT ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE – IOWA CITY, IOWA

	Units	Performance Standard	RC04 DP01-SD-1111 11/11/2011 0-0.5 feet		RC04 RC04-SD-1112 11/8/2012 0-0.5 feet		RC04 RC04-SD-1013 10/24/2013 0-0.5 feet		DV	RC05 RC05-RS 9/17/2002 0-0.5 feet		RC05 RC05-SD-0410 4/8/2010 0-0.5 feet		DV	RC05 DP01-SD-0410 4/8/2010 0-0.5 feet	
Polynuclear Aromatic Hydrocarbons (PAHs)																
Acenaphthene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.93		<0.128	U,RL1,M1		<0.135	U,RL1
Acenaphthylene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		<0.43	U	<0.128	U,RL1		<0.135	U,RL1
Anthracene	mg/kg	0.845	<0.586	U,RL1,M1	<0.516	U,RL1	<0.130	U		0.10		<0.128	U,RL1		<0.135	U,RL1
Benzo(a)anthracene	mg/kg	1.050	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.18		<0.128	U,RL1		0.221	RL1
Benzo(a)pyrene	mg/kg	1.450	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.19		<0.128	U,RL1		0.222	RL1
Benzo(b)fluoranthene	mg/kg	---	<0.586	U,RL1,M1	<0.516	U,RL1	<0.130	U		0.25		<0.128	U,RL1		0.271	RL1
Benzo(ghi)perylene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.055	J	<0.128	U,RL1		0.152	RL1
Benzo(k)fluoranthene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.088		<0.128	U,RL1		<0.135	U,RL1
Chrysene	mg/kg	1.290	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.11		<0.128	U,RL1		0.196	RL1
Dibenzo(a,h)anthracene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		<0.13	U	<0.128	U,RL1		<0.135	U,RL1
Fluoranthene	mg/kg	2.230	<0.586	U,RL1,M1	<0.516	U,RL1	<0.130	U		0.35		0.176	RL1,M1	J+	0.544	RL1
Fluorene	mg/kg	0.536	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.20		<0.128	U,RL1		<0.135	U,RL1
Indeno(1,2,3-cd)pyrene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.10		<0.128	U,RL1		<0.135	U,RL1
Naphthalene	mg/kg	0.561	<0.586	U,RL1	<0.516	U,RL1	0.421		J,J+	**0.74**		0.403	RL1,L1, M1	J-	0.233	RL1,L1
Phenathrene	mg/kg	1.170	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		0.40		<0.128	U,RL1		0.236	RL1
Pyrene	mg/kg	1.520	<0.586	U,RL1,M1	<0.516	U,RL1	<0.130	U		0.38		0.136	RL1		0.407	RL1
2-Methylnaphthalene	mg/kg	---	<0.586	U,RL1	<0.516	U,RL1	<0.130	U		na		<0.128	U,RL1		<0.135	U,RL1
Total PAHs	mg/kg	22.8	0.000		0.000		0.421			2.650		0.715			2.059	

TABLE 4-1

RALSTON CREEK - SEDIMENT ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE – IOWA CITY, IOWA

	Units	Performance Standard	RC05 RC05-SD-1010 10/5/2010 0-0.5 feet		RC05 RC05-SD-1111 11/11/2011 0-0.5 feet		DV	RC05 RC05-SD-1112 11/8/2012 0-0.5 feet		RC05 DP01-SD-1112 11/8/2012 0-0.5 feet		RC05 RC05-SD-1013 10/24/2013 0-0.5 feet		RC05 DP01-SD-1013 10/24/2013 0-0.5 feet	
Polynuclear Aromatic Hydrocarbons (PAHs)															
Acenaphthene	mg/kg	---	0.199	RL1,M1	<0.552	U,RL1		<0.580	U,RL1	0.663	RL1	<0.116	U	<0.116	U
Acenaphthylene	mg/kg	---	<0.117	U,RL1	<0.552	U,RL1		<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Anthracene	mg/kg	0.845	0.118	RL1,M1	0.593	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Benzo(a)anthracene	mg/kg	1.050	<0.117	U,RL1,M1	**1.60**	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Benzo(a)pyrene	mg/kg	1.450	<0.117	U,RL1,M1	1.20	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Benzo(b)fluoranthene	mg/kg	---	<0.117	U,RL1,M1	1.70	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Benzo(ghi)perylene	mg/kg	---	<0.117	U,RL1,M1	0.653	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Benzo(k)fluoranthene	mg/kg	---	<0.117	U,RL1	<0.552	U,RL1		<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Chrysene	mg/kg	1.290	<0.117	U,RL1	**1.38**	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Dibenzo(a,h)anthracene	mg/kg	---	<0.117	U,RL1	<0.552	U,RL1		<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Fluoranthene	mg/kg	2.230	0.125	RL1,M1	**3.14**	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Fluorene	mg/kg	0.536	<0.117	U,RL1,M1	<0.552	U,RL1		<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Indeno(1,2,3-cd)pyrene	mg/kg	---	<0.117	U,RL1,M1	0.572	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Naphthalene	mg/kg	0.561	**0.894**	RL1,M1	**1.57**	RL1	J+	**3.94**	RL1	**4.47**	RL1	0.204		0.277	
Phenathrene	mg/kg	1.170	0.39	RL1,M1	**2.37**	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Pyrene	mg/kg	1.520	<0.117	U,RL1	**2.26**	RL1	J+	<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
2-Methylnaphthalene	mg/kg	---	<0.117	U,RL1,M1	<0.552	U,RL1		<0.580	U,RL1	<0.560	U,RL1	<0.116	U	<0.116	U
Total PAHs	mg/kg	22.8	1.527		14.113			3.94		4.47		0.204		0.277	

TABLE 4-1

RALSTON CREEK - SEDIMENT ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
FORMER MANUFACTURED GAS PLANT SITE - IOWA CITY, IOWA

Notes:

< = Less than.
mg/kg = Milligram(s) per kilogram.
na = Constituent not analyzed.
Concentrations above Performance Standard in bold font.
PAH = Polynuclear aromatic hydrocarbon.

Laboratory Qualifiers

U = Compound not detected above reporting limit.
J = Estimated value below reporting limit.
L1 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was outside control limits.
M1 = The matrix spike (MS) and/or matrix spike duplicate (MSD) were outside control limits.
RL1 = Reporting limit raised due to sample matrix effects.

Data Validation (DV) Qualifiers

J = The analyte was positively identified; the quantitation is an estimation.
J+ = The analyte was positively identified; the quantitation is an estimation with a potential high bias.
J- = The analyte was positively identified; the quantitation is an estimation with a potential low bias.
UJ = The analyte was analyzed for, but not detected. Due to a quality control (QC) deficiency identified during data validation, the value reported may not accurately reflect the sample quantitation

Attachment 4

Groundwater Contaminants of Concern Trend Analysis Summary

TABLE 3-2

STATISTICAL SUMMARY
MIDAMERICAN ENERGY COMPANY]
FORMER MANUFACTURED GAS PLANT SITE - IOWA CITY, IOWA

		VOCs				PAHs													Inorganics	
		Benzene	Toluene	Ethylbenzene	Xylenes, total	Acenaphthene	Acenaphthylene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	2-Methylnaphthalene	Manganese	Cyanide
Performance Standard		**5**	**1000**	**700**	**10000**	**914**	**362**	**0.13**	**0.2**	**0.1**	**0.14**	**0.85**	**0.033**	**490**	**0.1**	**1.1**	**294.0**	**61.2**	**775**	**0.200**
Compliance Wells																				
MW-7	UCL	<1	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	<0.1	<0.1	<0.1	<0.1	<0.1	**8764**	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT
MW-29	UCL	<1	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	<0.1	<0.1	<0.1	<0.1	<0.1	134	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT
MW-33	UCL	<1	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	<0.1	<0.1	<0.1	<0.1	<0.1	426	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT
MW-35	UCL	<1	<1	<1	<3	0.149	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	0.077	<0.1	0.495	0.055	0.092	535	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**I90**	NT	NT	**I90**	NT
MW-41	UCL	<1	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	<0.1	<0.1	<0.1	<0.1	<0.1	181	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-56	UCL	<1	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	<0.1	<0.1	<0.1	<0.1	<0.1	115	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT
MW-57	UCL	<1	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.017	<0.1	<0.1	0.215	<0.1	<0.1	427	<0.01
	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT	NT	NT	NT
TI Zone Wells																				
MW-3	Trend	D90	NT	**I90**	NT	D90	**I90**	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT	D90	D90	**I90**
MW-12	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-13	Trend	D90	D90	D90	D90	D90	D90	D90	D90	NT	NT	D90	NT	D90	D90	D90	D90	D90	D90	NT
MW-16	Trend	NT	NT	NT	NT	NT	NT	NT	**I90**	**I90**	**I90**	**I90**	**I90**	D90	**I90**	NT	D90	D90	NT	NT
MW-18	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	**I90**	**I90**	NT	D90	NT
MW-19	Trend	D90	NT	NT	NT	D90	D90	NT	NT	NT	NT	NT	NT	D90	NT	D90	D90	D90	D90	NT
MW-20	Trend	**I90**	NT	NT	NT	D90	D90	D90	NT	NT	NT	NT	NT	D90	NT	NT	NT	NT	D90	NT
MW-23	Trend	NT	NT	NT	D90	D90	D90	NT	NT	NT	NT	NT	NT	D90	NT	D90	NT	NT	NT	NT
MW-25	Trend	**I90**	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT	NT	NT	D90	D90	NT
MW-31	Trend	**I90**	**I90**	**I90**	**I90**	NT	NT	NT	D90	D90	D90	D90	D90	NT	D90	NT	NT	**I90**	D90	NT
MW-36	Trend	**I90**	NT	NT	NT	**I90**	**I90**	D90	NT	D90	NT	D90	NT	NT	NT	NT	D90	NT	NT	NT
MW-37	Trend	**I90**	NT	NT	NT	**I90**	**I90**	**I90**	NT	NT	NT	NT	NT	**I90**	NY	**I90**	NT	NT	NT	NT
MW-55	Trend	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	D90	NT

Notes:

NT = No statistically significant trend at greater than or equal to 90-percent confidence level.
D90 = Decreasing trend at greater than or equal to 90-percent confidence level.
I90 = Increasing trend at greater than or equal to 90-percent confidence level.
All concentration units in micrograms per liter except for cyanide, which is in milligrams per liter.
Statistical summary based on samples collected through October 2013.
UCL = 95 Percent Upper Confidence Limit.
Calculated UCLs that exceed the respective Performance Standard and increasing trends are shown in red text.
PAHs - Polynuclear aromatic hydrocarbons.
TI = Technical Impracticability.
VOCs = Volatile organic compounds.

ATTACHMENT 5

Five-Year Review Inspection Form

Attachment 5
FIVE-YEAR REVIEW INSPECTION FORM

I. SITE INFORMATION

Site name: Iowa City FMGP	**Date of inspection:** July 7, 2014
Location: Iowa City, Iowa	**EPA ID:** IAD984591172
Agency, office, or company leading the five-year review: EPA-Region 7	**Weather/temperature:** Sunny and mid-80s

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☒ Other LNAPL recovery and air monitoring
- ☒ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** Kevin Armstrong (Name) Project Manager, MWH (Title) 7-7-14 (Date)

Interviewed ☒ at site ☐ at office ☐ by phone Phone no. 515-251-1023

Problems, suggestions; ☐ Report attached

2. **Other interviews** (optional) ☐ Report attached.

Bryan Clark, Owner, Iowa-Illinois Square apartments-granter access to building crawlspace and discussed on-going air monitoring in the building

Jennifer McIvor, Environmental Manager, MidAmerican Energy Company-manages remedial action activities for all actions except air monitoring in Iowa-Illinois Square

Ron Knoche, City Engineer, City of Iowa City-Engineering office oversees maintenance of Ralston Creek and directs Public Works to conduct needed maintenance.

Ben Clark, Senior Civil Engineer, City of Iowa City

III. DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**

☒ O&M manual	☐ Readily available	☒ Up to date	☐ N/A
☐ As-built drawings	☐ Readily available	☐ Up to date	☒ N/A
☐ Maintenance logs	☐ Readily available	☐ Up to date	☒ N/A

Remarks

2. **Site-Specific Health and Safety Plan** ☒ Readily available ☒ Up to date ☐ N/A
☐ Contingency plan/emergency response plan ☐ Readily available ☐ Up to date ☐ N/A
Remarks

3. **O&M and OSHA Training Records** ☒ Readily available ☒ Up to date ☐ N/A
Remarks

4. **Permits and Service Agreements**
☐ Air discharge permit ☐ Readily available ☐ Up to date ☒ N/A
☐ Effluent discharge ☐ Readily available ☐ Up to date ☒ N/A
☐ Waste disposal, POTW ☐ Readily available ☐ Up to date ☒ N/A
☐ Other permits ☐ Readily available ☐ Up to date ☒ N/A
Remarks

5. **Groundwater Monitoring Records** ☒ Readily available ☒ Up to date ☐ N/A
Remarks

IV. O&M COSTS

1. **O&M Organization**
☐ State in-house ☐ Contractor for State
☐ PRP in-house ☒ Contractor for PRP
☐ Federal Facility in-house ☐ Contractor for Federal Facility
☐ Other MidAmerican contracts with MWH for O&M work. Building owner contracts with Stanley Consultants for O&M work.

2. **O&M Cost Records**
☒ Readily available ☒ Up to date

3. **Unanticipated or Unusually High O&M Costs During Review Period**
Describe costs and reasons: See description in FYR Report.

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☐ Gates secured ☒ N/A
Remarks

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☒ N/A
Remarks

C. Institutional Controls (ICs)

1. **Implementation and Enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) self-reported

Frequency annually

Responsible party/agency City and owner of Iowa-Illinois Square

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☐ No ☒ N/A

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident

Remarks

2. **Land use changes on site** ☒ N/A

Remarks

3. **Land use changes off site** ☐ N/A

Remarks One adjacent property and one near-by property have changed from commercial uses to multi-family dwellings.

VI. GENERAL SITE CONDITIONS

A. Roads ☐ Applicable ☒ N/A

B. Other Site Conditions

Remarks Apartment building and surroundings in good condition. Creek liner exhibiting some missing tiles and creek banks have significant woody growth that the city has agreed to remove.

VII. LANDFILL COVERS ☐ Applicable ☒ N/A

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☒ N/A

B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A

C. Treatment System ☐ Applicable ☒ N/A

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition

☒ All required wells located ☐ Needs Maintenance ☐ N/A

Remarks

X. OTHER REMEDIES

A. LNAPL Recovery-Recovery occurs in designated monitoring wells and removal and replacement of absorbent socks has been observed in the past but was not observed during this inspection. Monitoring wells were observed to be in good condition.

B. Air Monitoring and Crawlspace Barrier and Passive Vent Inspection-Air monitoring occurs in the apartment crawlspace. Crawlspace liner and gravel cover were observed to be in good condition. Vents were not obstructed.

C. Creek Liner Inspection-Creek liner condition was reviewed with City Engineering staff and MidAmerican Energy manager and consultant. City was requested to remove woody growth from eastern bank of creek adjacent to site and consider more aggressive maintenance of the tile liner. Liner is missing in some areas, most notably along freeze-thaw line.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

All aspects of the remedy appear to be functioning as intended and designed.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

O&M appears to be effective except for maintenance of vegetation removal on the banks of Ralston Creek. The city engineering office has committed to improving control of vegetation on the creek bank near the site. They committed to investigating improved maintenance of the tile liner in the creek near the site.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

None