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BUILDING A BETTER WORLD

May 15, 2012

Ms. Diana Engeman
Remedial Project Manager
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, KS 66101

MWH #1011180.0102

RE: Amendment to the May 2006 Technical Impracticability Evaluation Report
Former Peoples Natural Gas Site
Dubuque, Iowa

Dear Ms. Engeman:

On behalf of MidAmerican Energy Company (MidAmerican), MWH has prepared this Amendment to the May 2006 Technical Impracticability (TI) Evaluation Report (TI Amendment) for the former Peoples Natural Gas (PNG) site located at 925 Kerper Boulevard in Dubuque, Iowa (Figure 1). This TI Amendment, which includes a description of data and information gathered following submittal of the May 2006 TI Evaluation Report, has been prepared in response to the United States Environmental Protection Agency's (EPA's) April 13, 2012 letter.

INTRODUCTION AND BACKGROUND

Purpose of Technical Impracticability Evaluation

The purpose of this TI Amendment is to describe data and information obtained following submittal of the May 2006 TI Evaluation Report, to document compliance with the existing site remediation goals is technically impracticable. Based on MWH's evaluation presented in the May 2006 TI Evaluation Report and this TI Amendment, the remediation goals cannot be achieved using available technologies at a reasonable cost and/or within a reasonable time frame. Although cost has a subordinate role in the TI decision, remedies may be determined to be technically impracticable if the cost of attaining Applicable or Relevant and Appropriate Requirements (ARARs) would be inordinately high (EPA, 1993). Multiple remediation efforts have been completed at the site, including soil removal, groundwater extraction and treatment, and ozone sparging with soil vapor extraction (SVE). The TI Evaluation Report provides supporting documentation demonstrating restoration of groundwater to numerical remediation goals is technically impracticable from an engineering perspective on a portion of the site. Compliance with remediation goals is primarily limited at the site by hydrogeologic,

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geochemical, and contaminant-related factors, including the presence of dense nonaqueous phase liquid (DNAPL).

Site Description and Ownership

In 2006, the City of Dubuque (City) completed its move from the on-site maintenance garage building to a new off-site facility. The City continues to use a portion of the building and yard for storage of seasonal items and other city equipment. The yard surrounding the building is currently used by the City for storage of various municipal supplies and equipment, as well as a training area by local law enforcement. Since July 2011, the City has leased the northeast addition of the building and a portion of the property located east of the building to Spahn and Rose Lumber Company (Spahn and Rose). Spahn and Rose uses the leased area for storage of construction materials, including asphalt shingles, lumber, and other similar materials.

When necessitated by heavy snowfall, the City also stores snow in the yard during winter months. The City maintains access to wells located within the property's perimeter fencing. The City is not actively searching for a new tenant for the property; however, the possibility of finding a new tenant for the entire property remains.

Recent Assessment

Since submittal of the May 2006 TI Evaluation Report, several rounds of additional site assessment and groundwater monitoring have been conducted at the site.

Groundwater Monitoring Program. Semiannual groundwater monitoring has continued at the PNG site since submittal of the May 2006 TI Evaluation Report. In 2007, the sampling and analysis of natural attenuation parameters was initiated at select monitoring wells during the semiannual monitoring events. Monitoring of natural attenuation parameters at select wells continues under the current monitoring program. Several monitoring wells were added to the active monitoring network in 2009 to aid in evaluation of increased concentrations of some constituents of concern in monitoring well P-112 following shutdown of the extraction and treatment system in 2003 and shutdown of the FDL Foods, Inc. (FDL) wells in 2000 (MWH, 2010a).

Further modifications to the monitoring network were made in 2011 when sampling was discontinued at several monitoring wells, which were formerly downgradient of the PNG site, but are now upgradient due to changes in groundwater flow direction; or where groundwater quality is adequately characterized by other monitoring wells (MWH, 2012). Several monitoring wells constructed of black steel riser pipe were abandoned in 2011 because they are not in the current monitoring program (W-13B, W-13C, W-15B, W-15C, W-22C, and W-22D) and are not anticipated to be used in the future, or they demonstrated significant corrosion during video

inspection of the well casings (W-20 and W-119) (MWH, 2011a; MWH, 2012). The groundwater analytical database is provided in Attachment A.

Additional Evaluation of the Western Extent of the TI Zone. In 2007, three soil borings, SB-AA, SB-BB, and SB-CC, were advanced into the silty sand aquifer west of Highway 61 and south of 11th Street to provide improved delineation of the western extent of the proposed TI zone. Monitoring well W-128 was installed adjacent to SB-BB with the well screen positioned in the silty sand aquifer and is included in the groundwater sampling network. (MWH, 2007; MWH, 2008).

Detected impacts to soil in soil borings SB-AA, SB-BB, and SB-CC; and groundwater in monitoring well W-128 indicate impact from the PNG site is present west of the highway corridor. The lower confining unit, which serves as a boundary between the silty sand aquifer and alluvial aquifer, was encountered in the three soil borings up to 1 foot thick below the silty sand aquifer. Groundwater flow from W-128 is southeast toward the site. Although the detections in soil are below the historic removal action goals, Remediation Goals (RGs) were exceeded for five of the analytes detected in groundwater: benzo(a)anthracene, benzo(b)fluoranthene, chrysene, benzo(k)fluoranthene, and benzo(a)pyrene. A summary of the recent assessment activities is illustrated in Figure 2.

Additional Evaluation of the Downgradient Extent of the TI Zone. Soil borings DP-1 through DP-8, water level monitoring points TP-101 and TP-102, and extraction well SE-3 were installed between Kerper Boulevard and the levee in 2011 to delineate the width of the impacted groundwater plume in the vicinity of monitoring well P-112, determine aquifer parameters for design of a hydraulic containment system, and assess the viability of direct discharge to the City's Water Pollution Control Plant (WPCP) through the sanitary sewer system (MWH, 2012). Exceedances of the RGs for groundwater were detected at DP-3, DP-6, and P-8 (Figure 2).

Potential Receptors

At the time the May 2006 TI Evaluation Report was completed, two of the FDL water wells had been abandoned and the remaining three FDL water wells were scheduled for abandonment as part of property redevelopment activities. Since that time, the remaining FDL water wells were abandoned in accordance with Iowa regulations (Brimeyer, 2012).

SITE GEOLOGY AND HYDROGEOLOGY

A revised topographic map of the upper surface of the lower confining unit (LCU), updated to include the soil boring data collected in 2007 and 2011, is presented in Figure 3. The LCU has limited downward migration of contaminants to the alluvial aquifer and appears to exist in all of the impacted and source areas of the site. The thickness of the LCU varies from 5.5 feet to less than 2 feet across the main portion of the site. Based on boring logs and results of aquifer tests

at the site, it appears the LCU may be absent in some areas along the highway corridor northwest (SB-27 and SB-29 area) and southwest (W-13 and W-113 area) of the site. Assuming the current groundwater flow direction persists, which is likely given the abandonment of the FDL wells, the LCU is also present in the downgradient direction between the site and Dove Harbor.

Groundwater Flow

Groundwater flow patterns in the water table, silty sand, and alluvial aquifers has been consistent with past observations following submittal of the May 2006 TI Evaluation Report. Since groundwater pumping from the FDL water wells and on-site extraction well SE-2 was terminated, groundwater flow in the silty sand aquifer has been mainly to the east-southeast, with occasional westerly components. The flow is bifurcated at times, which is likely the effect of flow to the river being diverted westerly by higher hydraulic head in the Mississippi River. Since shutdown of the extraction system and the FDL wells, the Mississippi River and Dove Harbor typically have a lower elevation than the groundwater in the silty sand wells nearest the levee, indicating it is a gaining stream in this area. During times of high river levels, groundwater flow is reversed over a portion of the site.

Semiannual water elevation data compiled since submittal of the May 2006 TI Evaluation Report is provided in Table 1. Groundwater flow maps for the 2011 monitoring events are illustrated in Figures 4 through 9.

FUTURE OPERATION OF THE GROUNDWATER EXTRACTION AND REMEDIATION SYSTEM

Operation of the groundwater extraction and treatment system was terminated in 2003 and the treatment system has been removed from the site. The system was originally designed based on a northerly groundwater flow direction; consequently, extraction well SE-2 is not located suitably to provide plume capture given the current groundwater flow direction. As a result, a new extraction well system and associated conveyance system is currently planned. MidAmerican is preparing a separate submittal to EPA detailing the planned groundwater extraction system, which is intended to minimize the potential for further migration of constituents of concern in the silty sand aquifer toward the Mississippi River. An updated discharge permit from the City will be required.

NATURE AND EXTENT OF GROUNDWATER CONTAMINATION

The nature and extent of groundwater impact is evaluated relative to the RGs established for the site (Table 2). As described in the Third Five-Year Review Report for the site (USEPA, 2010), the RG for naphthalene in groundwater is expected to be lowered in a planned Record of

Decision (ROD) amendment to reflect updated risk information for naphthalene. Contaminant plume maps for the 2011 monitoring events are illustrated in Figures 10 through 13.

Water Table. Monitoring wells D-7 and W-4 have been added to the monitoring network to monitor groundwater conditions between the site and the Mississippi River. Benzene, naphthalene, and various PAH concentrations have exceeded RGs at monitoring well D-7 (located in the Kerper Boulevard median), although naphthalene was below the reporting limit during the September 2011 sampling event. Monitoring well W-4, located between Kerper Boulevard and the Mississippi River, continues to be compliant with the RGs.

No significant impact was noted in the water table during installation of soil borings SB-AA, SB-BB, and SB-CC west of Highway 61 and south of 11th Street (MWH, 2007). Odors were noted during drilling at well SE-3 and the direct-push points between Kerper Boulevard and the levee in 2011 (MWH, 2012).

Silty Sand Aquifer. The distribution of benzene and naphthalene in the silty sand aquifer during the 2011 monitoring events is illustrated in Figures 10 and 11. The highest benzene and naphthalene concentrations in the silty sand aquifer during 2011 were detected at SS-6, located near the center of the site.

Concentrations appeared to stabilize in monitoring well P-112 during 2010 and decreased during the 2011 monitoring events. A graph of the benzene, toluene, ethylbenzene, and xylenes (BTEX) and naphthalene concentrations in groundwater over time in monitoring well P-112 is presented in Figure 14.

Alluvial Aquifer. Groundwater monitoring data from the alluvial aquifer wells continue to indicate groundwater quality has remained relatively stable and generally meets the RGs. Intermittent exceedances of the benzene RG have been detected in the alluvial aquifer; however, these exceedances appear to be related to corroded well casings at W-20 and W-21, where the damaged wells have since been abandoned. Figures 12 and 13 illustrate the benzene and naphthalene concentrations in the alluvial aquifer during the 2011 monitoring events.

Dense Nonaqueous Phase Liquids

The presence of DNAPL is one of the key factors necessitating the TI waiver at the site. A variety of information has been used to evaluate the extent of DNAPL at the site (i.e., direct measurement of DNAPL free product in wells, TarGOST™ data, and comparison of groundwater concentrations to single compound solubilities of PAH and BTEX compounds). DNAPL has been measured in monitoring points in two distinct areas of the site: in the Drain Sump and in monitoring wells located east and northeast of the City maintenance garage (MP-10D, SS-4, D-5, D-6, D-7; and several of the now abandoned wells associated with the ozone system). A

summary of DNAPL gauging data collected since submittal of the May 2006 TI Evaluation Report is provided in Table 3.

Groundwater concentrations at the sampling points were also compared to the single compound solubility of the PAH and BTEX constituents. Table 4 provides the solubilities of the constituents and the maximum concentrations at each sampling point prior to and since 2003 (when the groundwater extraction and treatment system was shut down). Figures 15 and 16 illustrate the maximum solubility distributions in silty sand aquifer samples collected since 2003 for BTEX and PAHs, respectively.

CONCEPTUAL SITE MODEL

A detailed conceptual site model was developed in the May 2006 TI Evaluation Report. Data collected since submittal of the May 2006 TI Evaluation Report has generally validated the conceptual site model.

Residual Source Materials and Release Mechanisms

The on-site, 10,000-gallon gasoline and diesel underground storage tanks (USTs) were filled in place with flowable concrete in August 2010; and the associated canopy, fuel pumps, and piping were removed (Seneca, 2010). A UST Closure Report was submitted to the Iowa Department of Natural Resources (IDNR). Confirmation soil and groundwater samples were collected; the groundwater sample exceeded the Tier 1 IDNR target level for the groundwater ingestion exposure pathway for waste oil, requiring the City to complete and submit a Tier 1 Report. The Tier 1 Report was submitted in December 2010 and was assigned a No Action Required status on December 16, 2010 by the IDNR.

DNAPL Migration

No indications of DNAPL were observed during installation of soil borings SB-AA, SB-BB, and SB-CC west of Highway 61 and south of 11th Street in 2007; or soil borings DP-4 and DP-5, and monitoring well SE-3 along Kerper Boulevard in 2011 (MWH, 2007; MWH, 2012). However, since submittal of the May 2006 TI Evaluation Report, DNAPL has been detected in water table wells D-3 and D-7; and silty sand aquifer monitoring wells SS-6, SS-7, D-5, and D-6.

Based on the TarGOST™ and LCU elevation data, it appears unlikely any significant DNAPL volume could accumulate at the base of the silty sand aquifer to flow along the upper surface of the LCU. In the unlikely event significant amounts of DNAPL did accumulate, it appears as if it would not flow beyond the Kerper Boulevard area due to the slope of the LCU (Figure 3). Lithologic logs for monitoring wells and soil borings east of Kerper Boulevard, advanced as part of the PNG assessment activities (including the 2011 activities), indicate only isolated visual or olfactory impact. Because of the separation of the Mississippi River from the silty sand aquifer

by the materials of the upper confining unit (UCU), the slope of the LCU, and the minimal impact in the fill between the site and the levee, it appears unlikely the site will directly impact the Mississippi River. However, the potential for groundwater discharge from the silty sand aquifer to the Mississippi River exists.

POTENTIAL REMEDIAL STRATEGIES

A wide range of remedial strategies were initially evaluated in the 1991 RI/FS (Barr, 1991a), and selected technologies were subsequently implemented at the site. Additional strategies were evaluated in the May 2006 TI Evaluation Report. Following submittal of the May 2006 TI Evaluation Report, further remedial strategy evaluation was conducted as highlighted below.

USEPA Technical Review

A technical review by EPA's Groundwater Technical Support Center (Burden, 2009; Engeman, 2009) indicated that, although a TI Waiver may be appropriate for the PNG site, particularly in light of the presence of DNAPL, monitored natural attenuation is insufficient to prevent plume migration in the vicinity of monitoring well P-112. The Technical Support Center concurred that pumping impacted groundwater from the silty sand aquifer for treatment is not feasible due to iron fouling; however, active measures may be appropriate for plume control.

Enhanced Biodegradation

Addition of an electron acceptor (sulfate) as a barrier application in the vicinity of monitoring well P-112 was evaluated as a means to enhance biodegradation of site COCs, thus decreasing COC concentrations upgradient of the Mississippi River (MWH, 2010b; MWH, 2011b). Given the uncertainty of establishing sulfate reducing conditions at the PNG site, a Stable Isotope Probing (SIP) Bio-Trap® study was conducted to investigate whether significantly increasing available sulfate would result in stimulation of sulfate-reducing bacterial populations.

Oxygen is the thermodynamically preferred electron acceptor by microbial populations (aerobic respiration); after oxygen is depleted, nitrate generally becomes the preferred electron acceptor (denitrification) (Wiedemeier, 1999). Low oxygen and nitrate concentrations, and elevated dissolved iron and sulfate concentrations suggest iron reducing conditions are the predominant terminal electron accepting process in the vicinity of monitoring well P-112 (Jurgens, 2009). The elevated dissolved iron concentration observed at monitoring well P-112 significantly increases both oxygen and nitrate demand, reducing the feasibility of using oxygen or nitrate to enhance COC biodegradation. In addition, reaction of oxygen or nitrate with dissolved iron would likely result in precipitation of iron oxyhydroxide compounds (Eckert, 2002; Vance, 2008), risking a long-term reduction in aquifer permeability.

Sulfate generally becomes the microbially preferred electron acceptor after oxygen, nitrate, and iron III have been depleted. Iron reducing conditions, presumed present in the vicinity of

monitoring well P-112, suggest iron III has not been depleted, and elevated sulfate concentrations suggest the absence of wide-spread sulfate-reducing conditions. However, iron reduction and sulfate reduction may occur simultaneously under conditions not limited by the presence of an electron donor (Chapelle, 2009). The contaminants of concern in the P-112 area should act as electron donors; therefore, electron donors are not anticipated to be a limiting factor. In addition, although sulfate reduction results in formation of magnesium carbonate and iron sulfate (Foght, 2008), formation of metal precipitates is expected to be significantly less than with addition of oxygen or nitrate. Because it does not involve the limitations associated with oxygen and nitrogen addition, sulfate addition was thought to be a more favorable alternative for enhanced COC biodegradation.

The SIP Bio-Trap® study employed test and control Bio-Trap® units from Microbial Insights, Inc. (Microbial Insights) of Rockford, Tennessee to evaluate sulfate-enhanced microbial degradation of both benzene and naphthalene in monitoring well P-112. Both units contained beads having a large surface area for microbial colonization, baited with known quantities of either ^{13}C-labeled benzene or naphthalene. The test unit was loaded with Electron Acceptor Solution [EAS™], a commercially available sulfate amendment from EOS Remediation, LLC, while the control unit contained no amendments to represent current aquifer conditions.

Reduced concentrations of ^{13}C-labeled benzene and naphthalene, microbial biomass uptake of ^{13}C, and elevated levels of ^{13}C dissolved inorganic carbon in both the EAS™-containing and control Bio-Trap® units suggested potential microbial degradation of benzene and naphthalene in the vicinity of monitoring well P-112, although naphthalene degradation was apparently at a lower rate than benzene degradation. The presence of iron- and sulfate-reducing bacteria suggested possible degradation by sulfate-reducing bacteria. Comparison of residual ^{13}C-labeled benzene and naphthalene concentrations and ^{13}C mineralization levels in the EAS™-containing and control Bio-Trap® units suggested only benzene degradation is enhanced by increased levels of available sulfate. Enhanced benzene degradation was further supported by higher levels of iron- and sulfate-reducing bacteria in the EAS™-containing Bio-Trap® unit. Lower microbial biomass update of ^{13}C and higher ^{13}C mineralization observed in the naphthalene Bio-Traps® as compared to the benzene Bio-Traps® suggested preferential microbial utilization of naphthalene as an energy source (electron acceptor) rather than as a carbon source for cell growth.

Based on the apparent preferential degradation of benzene prior to naphthalene, no further evaluation of EAS™ as a remedial option for the P-112 area was conducted. Because of the significant mass of contaminants remaining on site, there will be a continuing source of contaminant flux through the P-112 area, suggesting no significant degradation of naphthalene and other less preferred contaminants will occur due to the preferential utilization of benzene.

ALTERNATIVE REMEDIAL STRATEGY

Exposure Control

As stated in the September 16, 1991 ROD, institutional controls are required at the site to impose groundwater and land used restrictions. In addition, access to the site must be controlled with site fencing (USEPA, 1991). A Memorandum For Record of Property Restriction and an Iowa Real Estate Transfer - Groundwater Hazard Statement were recorded with the County Recorder, Dubuque County, Iowa on May 14, 1991 for both the site, owned by the City, and the Highway Corridor, owned by the Iowa Department of Transportation (IDOT). Although these documents restrict both excavations and disturbances at a depth of 6 feet or below, and installation of water supply or private wells at the site, they are generally unenforceable. In addition, the IAC will restrict future water well installation in the impacted groundwater plume. The property is also listed in the IDNR registry of abandoned or uncontrolled disposal sites. The City-owned portion of the site is currently fenced, and the IDOT portion is covered by U.S. Highway 61.

In addition to the existing exposure controls listed in the preceding paragraph, EPA intends to implement a uniform environmental covenant to limit exposure to residual soil contamination, address potential vapor intrusion, and prohibit installation of drinking water wells in the plume (EPA, 2010).

Although already aware of the site, the IDNR Water Supply Section, the City of Dubuque Water Department, and the Dubuque County Health Department will be formally notified of the area of contamination for consideration when reviewing new water well permit applications.

Source Control

Several excavations conducted over the course of remedial activities removed approximately 521,192 pounds of contaminant from the site (MWH, 2006). However, DNAPL remains beneath and east of the City maintenance garage, along the 30-inch diameter sanitary sewer force main, and in the Highway Corridor area. Since much of this material is inaccessible, further excavation would not eliminate source material from the site.

As discussed in the May 2006 TI Evaluation Report, the majority of residual source material remaining at the site will likely be contained by the site geology. If the DNAPL remaining east of the City maintenance garage were to migrate over time, site data suggests the LCU would limit downward migration of contaminants to the alluvial aquifer. Further lateral migration of DNAPL would likely be contained due to the slope of the LCU as the elevation climbs on the east side of Kerper Boulevard. The degree of both vertical and horizontal migration will be limited by the extent of DNAPL retention as residual material.

DNAPL detected in the Drain Sump is assumed to be accumulating from the lateral drainpipe installed under U.S. Highway 61. The impacted area is inaccessible due to the presence of the Highway; however the LCU appears to be present in the impacted area. No potential receptors have been identified near this portion of the site.

Currently, site wells are gauged semiannually for the presence of DNAPL. Semiannual gauging for free product will be continued to monitor the potential for DNAPL migration.

Dissolved Plume Control

A hydraulic containment system consisting of extraction wells will be installed between Kerper Boulevard and the levee to prevent downgradient plume migration. Analysis of data collected during November 2011 pilot testing indicates hydraulic control can be maintained by operation of three groundwater extraction wells, without installation of a cutoff wall. Groundwater sampling conducted during the pilot test confirmed the viability of direct discharge of extracted groundwater to the City's WPCP through the sanitary sewer system.

TECHNICAL IMPRACTICABILITY WAIVER REQUEST

ARARs to be Waived

MidAmerican requests the federal and state chemical-specific ARARs be waived within the proposed TI Zone. For compounds in Table 2 that do not have chemical-specific ARARs, the site-specific data and evaluation in this report support the determination that, within the TI Zone, it is also technically impracticable to achieve the remediation goal concentrations listed in Table 2. Implementation of environmental covenants will prevent potential exposure to impacted groundwater. Notification to permitting authorities will restrict further well installation in the potentially impacted areas. Subsurface geology will likely contain the majority of remaining source material at the site. Because of the separation of the harbor from the silty sand aquifer by the materials of the UCU, the upward slope of the LCU near the levee, and the minimal impact in the fill material between the site and the levee, it is unlikely the site will significantly impact the harbor. Physical and biological attenuation mechanisms are expected to achieve a stable groundwater plume, with ongoing contaminant mass destruction and eventual decreases in contaminant concentrations. Hydraulic containment of the silty sand aquifer plume downgradient of the site near the levee, ongoing groundwater monitoring, and monitoring of the presence/absence of DNAPL, will be conducted to ensure long-term protection of human health and the environment.

Proposed Extent of TI Zone

The horizontal extent over which the technical impracticability determination is requested (the TI zone) is illustrated in Figure 17. The vertical extent of the TI zone is from the shallowest occurrence of groundwater, including perched groundwater (approximately 15 feet below

ground surface), to the bottom of the LCU. The alluvial aquifer is not included in the proposed TI zone. Due to the presence of the remaining, dispersed source material (impacted soil, residual DNAPL, and DNAPL free product) remaining at depth below the water table after previous removal actions and the lack of accessibility to treat the residual source materials, it is deemed technically impracticable to attain the remediation goals (and other chemical-specific ARARs) within the TI zone reliably, logically, or feasibly within a reasonable time frame.

Basis For Extent of TI Zone

The extent of the proposed TI zone encompasses estimated areas of known DNAPL and residual soil contamination (based on boring log descriptions, monitoring well sampling observations and gauging, and TarGOST™ data), areas of potential DNAPL based on groundwater concentrations exceeding 1 percent of the single compound contaminant aqueous solubilities, and areas that are inaccessible to further active remedial alternatives.

SUMMARY AND CONCLUSIONS

MidAmerican proposes a technically practicable alternative remedial strategy that incorporates access restrictions, previous soil removal actions, and hydraulic containment of the downgradient silty sand aquifer plume to achieve the site groundwater chemical-specific ARARs/remediation goals outside the TI zone. The alternative remedial strategy is protective of human health and the environment. As part of the alternative remedial strategy, sampling will be conducted to monitor the hydraulic containment system. Semiannual gauging for free product will be continued to monitor the potential for DNAPL migration.

If you have any questions regarding the PNG site, please contact Jenny McIvor of MidAmerican at (712) 352-5434 or me at (515) 253-0830.

Sincerely,

Kevin G Armstrong

Kevin G. Armstrong, C.P.G.
Project Manager

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Enclosures:

References

Table 1 - Water Level Elevation Data
Table 2 - Remediation Goals
Table 3 - Recent DNAPL Thickness Measurements
Table 4 - Comparison of Maximum Groundwater Contaminant Concentrations and Aqueous Solubilities

Figure 1 - Site Location Map
Figure 2 - Recent Assessment Activities
Figure 3 - Topographic Map of the Lower Confining Unit
Figure 4 - Groundwater Flow Direction Map, Water Table Aquifer, April 26, 2011
Figure 5 - Groundwater Flow Direction Map, Silty Sand Aquifer, April 26, 2011
Figure 6 - Groundwater Flow Direction Map, Alluvial Aquifer, April 26, 2011
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Figure 8 - Groundwater Flow Direction Map, Silty Sand Aquifer, September 19, 2011
Figure 9 - Groundwater Flow Direction Map, Alluvial Aquifer, September 19, 2011
Figure 10 - Benzene and Naphthalene Concentrations in Silty Sand Aquifer, April 2011
Figure 11 - Benzene and Naphthalene Concentrations in Silty Sand Aquifer, September 2011
Figure 12 - Benzene and Naphthalene Concentrations in Alluvial Aquifer, April 2011
Figure 13 - Benzene and Naphthalene Concentrations in Alluvial Aquifer, September 2011
Figure 14 - P-112 Concentrations
Figure 15 - Extent of Groundwater BTEX Impacts in Relation to Contaminant Solubilities, Silty Sand Aquifer
Figure 16 - Extent of Groundwater PAH Impacts in Relation to Contaminant Solubilities, Silty Sand Aquifer
Figure 17 - Proposed Technical Impracticability Zone

Attachment A - Groundwater Analytical Database

cc: Jennifer McIvor, MidAmerican Energy Company
Dan Cook, Iowa Department of Natural Resources
Jim Rost, Iowa Department of Transportation
Barry Lindahl, City of Dubuque
Don Vogt, City of Dubuque

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TABLE 1

WATER LEVEL ELEVATION DATA
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Location	Reference Elevation (NAVD 1988)	Total Well Depth (feet btoc)	10-Jan-05	14-Mar-05	10-Oct-05	14-Mar-06	11-Sep-06	17-Apr-07	19-Sep-07	5-May-08	30-Sep-08	28-Apr-09	15-Sep-09	30-Mar-10	5-May-10	14-Sep-10	26-Apr-11	19-Sep-11
Water Table Wells																		
W-2	613.30	22.7	598.33	598.46	598.30	597.30	599.36	600.09	599.80	601.72	599.49	600.38	599.92	599.19	600.13	600.35	601.63	600.20
W-4	613.07	23.4	593.65	594.13	594.02	593.69	594.09	597.90	595.27	600.52	593.66	596.16	594.39	596.91	595.90	595.69	602.02	594.96
W-7	609.11	22.5	595.83	594.46	---	---	---	---	---	---	---	---	---	---	---	---	---	---
D-2	609.48	20.0	600.55	601.67	602.24	602.49	602.16	603.26	601.06	603.17	600.83	602.84	600.69	600.14	602.04	602.03	603.38	601.51
D-3	609.17	20.0	599.39	599.50	600.09	599.30	600.87	602.04	600.17	602.61	601.96	601.58	600.29	599.78	600.44	603.73	602.56	600.57
D-7	609.16	22.3	597.53	597.74	597.81	597.25	598.76	596.52	598.81	601.05	598.46	595.26	598.81	598.41	598.91	599.34	601.44	599.22
Silty Sand Aquifer Wells																		
SI-2	612.66	39.6	593.48	593.60	594.11	593.71	592.60	597.25	593.17	600.06	592.79	596.08	592.46	598.55	594.52	594.61	600.76	593.23
SE-2	608.90	32.5	593.51	593.62	594.21	593.70	592.65	597.32	593.20	599.93	592.80	596.08	592.47	598.42	594.87	594.68	600.42	593.22
Drain Sump	610.20	27.9	594.75	594.64	595.32	594.62	---	598.10	594.48	600.83	594.09	597.18	593.55	599.25	595.89	595.87	601.16	595.38
MP-10-D	612.12	36.8	597.82	597.72	597.38	597.06	596.74	596.83	595.34	599.67	599.24	596.31	596.08	598.89	598.81	598.87	599.71	599.27
P-110	612.64	33.5	593.67	593.63	594.12	593.76	592.61	597.18	593.25	599.99	592.90	596.06	592.55	598.42	594.62	594.73	600.65	593.26
P-112	612.15	38.8	593.45	593.58	594.19	593.73	592.57	597.13	593.10	600.17	592.64	596.08	592.33	598.61	594.39	594.53	601.84	593.07
W-113	610.36	34.8	---	---	594.00	593.79	592.51	597.05	593.18	599.85	592.82	596.01	592.39	598.36	594.61	594.74	600.60	593.19
W-117	612.93	35.0	593.51	593.66	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W-117R	612.91	35.7	---	---	594.09	593.79	592.68	597.22	593.29	600.10	592.86	592.23	592.52	598.56	594.59	594.63	601.01	593.23
W-118	607.23	28.5	---	595.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W-118R	607.85	29.0	---	---	594.10	593.81	592.75	595.38	593.37	599.93	593.14	596.02	592.70	598.34	594.79	594.94	600.51	593.36
W-119	612.60	35.0	593.70	593.82	594.42	593.95	592.90	597.34	593.45	600.15	593.00	596.34	592.67	597.62	594.71	594.94	600.53	593.44
W-120	613.64	38.0	593.69	593.82	594.40	593.96	592.94	597.31	594.54	599.99	593.04	596.33	592.74	598.56	594.80	594.78	600.22	593.49
W-121	611.24	32.9	593.92	594.04	594.49	594.19	593.13	597.33	593.74	600.05	593.38	596.37	593.01	599.07	595.06	595.19	600.35	593.72
W-122	612.49	38.1	593.64	593.72	594.38	593.94	592.92	597.38	592.38	599.79	592.97	596.34	592.69	598.40	594.72	594.97	599.78	593.43
W-126	610.01	30.0	---	---	593.98	593.53	592.76	596.75	593.29	599.69	593.03	595.98	592.46	598.46	594.81	594.92	600.03	593.37
W-127	607.83	26.0	---	---	593.93	593.72	593.43	596.94	593.59	598.80	593.78	596.21	592.75	598.17	595.71	595.48	599.61	593.87
W-128	608.10	24.8	---	---	---	---	---	---	593.45	---	592.26	592.22	592.73	598.07	595.00	595.20	599.69	593.40
SS-6	608.05	31.5	593.49	593.58	594.05	593.62	592.57	597.11	593.19	600.03	592.76	596.07	592.42	598.42	594.49	594.95	600.52	591.60
SS-7	608.73	33.2	593.52	593.61	594.12	593.78	593.43	597.13	593.33	600.05	592.95	596.68	592.50	598.45	594.58	594.74	600.42	593.12
SS-8	609.97	33.4	593.64	593.75	594.23	593.82	592.82	597.32	593.39	599.95	592.97	596.16	592.67	598.15	594.67	594.87	600.43	593.36
SS-9	606.45	28.0	593.43	592.59	593.75	593.70	592.56	596.90	593.24	599.45	593.02	595.90	592.59	597.98	594.69	594.63	600.17	593.30
SS-10	611.40	35.1	593.74	593.75	594.42	594.03	592.91	597.31	593.49	600.37	593.07	596.34	592.74	598.67	594.78	594.96	600.69	593.53
D-4	608.62	37.0	592.47	593.57	594.22	593.71	592.76	597.25	593.12	600.10	592.68	596.10	592.33	598.51	594.40	594.53	600.64	593.12
D-5	609.54	37.5	593.51	589.86	594.19	593.69	592.72	597.24	593.09	600.09	592.68	596.07	592.16	598.48	594.36	594.49	600.64	593.09
D-6	609.59	37.0	---	593.58	594.18	594.85	592.76	597.24	593.05	600.14	592.63	596.05	592.34	598.53	594.34	594.47	600.74	593.05
D-8	608.64	37.8	593.45	593.58	594.16	593.70	592.68	597.06	592.04	600.22	592.66	596.10	592.34	598.66	594.39	594.52	601.09	593.12

TABLE 1

WATER LEVEL ELEVATION DATA
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Location	Reference Elevation (NAVD 1988)	Total Well Depth (feet btoc)	10-Jan-05	14-Mar-05	10-Oct-05	14-Mar-06	11-Sep-06	17-Apr-07	19-Sep-07	5-May-08	30-Sep-08	28-Apr-09	15-Sep-09	30-Mar-10	5-May-10	14-Sep-10	26-Apr-11	19-Sep-11
Alluvial Aquifer Wells																		
AE-1	610.46	87.7	594.27	593.63	594.25	593.79	592.57	597.27	593.19	600.26	592.78	596.17	592.44	598.70	594.53	594.65	600.92	593.15
W-10	612.49	47.2	593.49	593.67	594.12	593.80	592.55	597.24	593.21	600.06	592.85	596.09	592.46	598.49	594.64	592.73	600.77	593.17
W-11	608.99	47.5	594.23	599.76	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W-13	609.46	48.0	593.54	593.69	594.08	593.85	592.63	597.16	593.26	599.97	592.88	596.08	592.52	598.41	594.68	594.78	600.71	593.28
W-13B	609.61	102.7	593.46	593.61	594.00	593.78	592.47	597.02	593.06	599.81	592.69	592.05	592.27	598.16	594.54	594.56	600.50	---
W-13C	609.52	186.6	593.60	593.77	594.12	593.90	592.54	598.21	592.30	600.95	593.14	595.92	592.67	597.41	596.29	596.12	601.24	---
W-15	612.69	53.0	593.63	593.78	594.38	594.01	592.78	597.33	597.34	600.43	592.90	596.34	592.67	598.83	594.67	594.77	600.85	593.26
W-15B	612.23	141.9	593.74	593.90	594.48	594.08	592.87	597.42	593.42	600.50	593.00	596.42	592.67	598.93	594.76	594.87	---	---
W-15C	612.80	262.5	593.82	594.30	594.58	594.20	592.97	596.53	593.55	600.62	593.12	596.54	592.80	599.06	594.85	594.98	601.36	---
W-18	612.44	50.9	593.53	593.70	594.19	593.86	592.63	597.23	593.24	600.10	592.88	596.13	592.51	598.54	594.65	594.75	600.73	593.22
W-20	611.92	51.0	593.37	593.49	594.14	593.80	592.47	597.10	593.02	600.30	592.56	596.05	592.19	598.73	594.29	594.43	601.18	592.09
W-21	607.03	50.0	---	593.65	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W-21R	607.64	49.5	---	---	594.12	593.80	592.60	597.08	593.24	600.00	592.89	596.09	592.49	598.37	594.63	595.36	600.49	593.19
W-22	613.95	69.0	593.68	590.10	594.42	594.04	592.84	597.35	593.40	600.40	592.98	596.37	592.64	598.92	594.75	594.86	600.92	593.32
W-22C	613.68	218.9	593.86	594.01	594.56	594.20	593.90	597.53	593.58	600.61	593.12	596.51	592.82	599.03	594.91	594.99	601.50	---
W-22D	614.08	276.4	593.79	593.94	594.55	594.17	592.96	597.49	593.53	600.54	593.30	596.50	592.78	599.03	594.90	594.97	601.13	---
W-23	609.75	73.0	593.44	593.60	594.18	593.75	592.53	597.15	593.13	600.30	592.66	596.14	592.34	598.82	594.41	594.53	601.01	592.97
W-24	612.18	76.5	592.44	589.85	594.23	593.79	592.62	597.17	593.08	600.35	592.60	596.15	592.31	598.77	594.40	594.51	601.20	593.07
W-25R	611.81	72.4	593.75	593.87	593.40	594.10	592.90	598.41	593.50	600.29	593.12	596.37	592.75	598.75	594.86	595.00	600.71	593.40
W-26	610.41	49.7	---	---	594.01	594.30	592.78	596.98	593.31	599.71	593.06	596.06	592.47	598.43	594.83	594.95	600.73	593.37
W-27	607.70	49.7	---	---	594.02	594.04	592.90	596.81	593.45	599.40	593.33	596.42	592.72	598.15	595.15	595.33	599.89	593.60
Mississippi River[a]	584.80	NA	593.2	593.4	594.2	593.5	591.9	597.7	592.6	601.8	592.0	596.5	592.0	600.1	593.6	593.7	603.9	592.3

Notes:

btoc = Below top of casing.
NA = Not applicable.
--- = Not gauged.
NAVD 1988 = North American Vertical Datum of 1988.
[a] River gage reading at station DBQI4 (corrected to NAVD 1988).

TABLE 2

REMEDIATION GOALS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Constituent	Remediation Level (µg/L)
Benzene	5[1]
Ethylbenzene	700[2]
Toluene	2,000[2]
Xylene	10,000[2]
Naphthalene	100[1]
Benzo(a)pyrene	0.2[2]
Benzo(a)anthracene	0.1[2]
Benzo(b)fluoranthene	0.2[2]
Benzo(k)fluoranthene	0.2[2]
Crysene	0.2[2]
Dibenz(a,h)anthracene	0.2[2]
Indenopyrene	0.4[2]

Notes:

µg/L = Microgram(s) per liter.

[1] USEPA, 2004. Updated Remediation Goals.

[2] USEPA, 1991. *Record of Decision, Peoples Natural Gas Co.* September 16, 1991.

TABLE 3

RECENT DNAPL THICKNESS MEASUREMENTS (feet)
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Location	Total Well Depth (feet)	Product Thickness 11-Sep-06	Product Thickness 17-Apr-07	Product Thickness 19-Sep-07	Product Thickness 05-May-08	Product Thickness 30-Sep-08	Product Thickness 28-Apr-09	Product Thickness 15-Sep-09	Product Thickness 30-Mar-10	Product Thickness 26-Apr-11	Product Thickness 19-Sep-11	Product Thickness 24-Apr-12
Water Table Wells												
W-2	22.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-4	23.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
D-1	20.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
D-2	21.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
D-3	21.0	ND	ND	ND	ND	ND	ND	ND	Trace	ND	ND	ND
D-7	22.8	ND	ND	ND	Trace	Trace	Trace	Trace	0.2	0.2	0.9	0.5
Silty Sand Aquifer Wells												
SI-2	36.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SE-2	29.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Drain Sump	27.9	0.5	0.3	0.2	0.8	0.3	0.1	0.3	0.2	0.3	0.3	0.3
MP-10-D	36.8	0.3	0.2	0.5	2.5	0.3	0.3	NG	ND	1.0	2.0	2.0
P-110	34.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P-112	39.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-113	39.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-117R	34.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-118R	28.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-119	35.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-120	38.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-121	32.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-122	38.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-126	30.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-127	26.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SS-4	33.0	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
SS-6	32.0	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND
SS-7	34.0	ND	ND	1.5	1.0	1.5	1.4	2.0	2.5	1.7	2.8	2.5
SS-8	32.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SS-9	29.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SS-10	33.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
D-4	37.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
D-5	38.8	ND	ND	1.5	1.7	ND	0.7	2.0	1.7	Trace	2.7	2.0
D-6	37.5	ND	ND	ND	ND	0.1	Trace	Trace	ND	Trace	ND	ND
D-8	38.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alluvial Aquifer Wells												
AE-1	89.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-10	47.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-13	47.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-15	53.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-18	50.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-20	51.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-21R	49.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-22	69.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-23	73.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-24	78.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-25R	72.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-26	50.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-27	50.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

-- = Not gauged.

ND = Not detected.

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	Remediation Goal	100 Percent Aqueous Solubility	10 Percent Aqueous Solubility	1 Percent Aqueous Solubility	SE-2 Pre-2003	SE-2 2003-11	SE-3 2011	Drain Sump Pre-2003	Drain Sump 2003-06	W-4 2003-11	W-13 Pre-2003
Volatile Organic Compounds (µg/L)											
Benzene	5	1,790,000	179,000	17,900	2,300	112	534	4,000	NS	<1	1
Ethylbenzene	700	187,000	18,700	1,870	2,300	78.9	333	320	NS	<1	1
Toluene	2,000	524,000	52,400	5,240	500	5.88	30.6	2,350	NS	<1	0.27 J
Xylene (total) (a)	10,000	146,000	14,600	1,460	1,300	43	247	710	NS	<6	0.79 J
Semivolatile Organic Compounds (µg/L)											
2-Methylnaphthalene	--	25,000	2,500	250	78	NA	57.8	120	NS	NA	<10
Dibenzofuran	--	4,220	422	42.2	11	NA	<50 RL1	28	NS	NA	<10
Acenaphthene	--	3,930	393	39.3	160	50.1	79.5	28	NS	2.75	<10
Acenaphthylene	--	16,100	1610	161	81	120	<8.7	110	NS	2.4	<10
Anthracene	--	70	7	0.7	2	0.664	1.3	6	NS	0.073	<10
Benzo(a)anthracene	0.1	14.0	1.4	0.14	<400	0.0151 J	<0.02	3	NS	0.032 Ja	<10
Benzo(a)pyrene	0.2	3.8	0.38	0.038	<400	<0.64	<0.008	<300	NS	0.028 Ja	<10
Benzo(b)fluoranthene	0.2	1.2	0.12	0.012	<400	<0.25	<0.028	<300	NS	<0.052	<10
Benzo(ghi)perylene	--	0.26	0.026	0.0026	<400	<0.99	<0.008	<300	NS	<0.21	<10
Benzo(k)fluoranthene	0.2	0.55	0.055	0.0055	<400	<0.25	<0.007	<300	NS	<0.052	<10
Chrysene	0.2	1.6	0.16	0.016	<400	0.0159 J	<0.008	2	NS	0.031 Ja	<10
Dibenzo(a,h)anthracene	0.2	2.49	0.249	0.0249	<400	0.0752 J	<0.01	<300	NS	<0.31*	<10
Fluoranthene	--	260	26	2.6	4	0.977	<0.01	11	NS	0.18	<10
Fluorene	--	2,230	223	22.3	24	23.6	36.6	29	NS	1.43	<10
Indeno(1,2,3-cd)pyrene (b)	0.4	0.53	0.053	0.0053	<400	<0.64	<0.006	<300	NS	<0.13	<10
Naphthalene	100	30,600	3,060	306	5,000	96.6 B	464	2,600	NS	0.161	<10
Phenanthrene	--	1,080	108	10.8	23	1.16	10.1	41	NS	0.15	<10
Pyrene	--	135	13.5	1.35	4	0.766	0.224	13	NS	0.12 Ja	<10

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	W-13 2003-11	W-15 Pre-2003	W-15 2003-11	W-18 Pre-2003	W-20 Pre-2003	W-20 2009-11	W-21 Pre-2003	W-21 2003-05	W-21R 2003-11	W-22 Pre-2003	W-22 2003-06	W-23 Pre-2003
Volatile Organic Compounds (µg/L)												
Benzene	<1	5.1	<1	<1.0	1.4	8.71	110	66	206	4	<2	5.4
Ethylbenzene	<1	3.5	<1	3.1	1	1.7	260	0.67 Ja	1.64	3.5	<2	8.5
Toluene	<1	1.9	<1	0.64 J	1	1.09	16	<2.0	<1.0	1.3	<2	2.1
Xylene (total) (a)	<6	4	<6	2.9	1	3.54	89	<7.0	<6.0	2.9	<7	5
Semivolatile Organic Compounds (µ												
2-Methylnaphthalene	NA	<10.0	NA	2.2 J	<10	NA	2.7 J	NA	NA	<10.0	NA	0.19
Dibenzofuran	NA	<10.0	NA	4 J	<10	NA	4.3 J	NA	NA	<10.0	NA	<10.0
Acenaphthene	0.234	0.59	<2.5	20	2 J	3.01	37	1.4	16.1	0.22	<2.6	0.27
Acenaphthylene	<1.3*	1.2	<1.3	<10	1.2 J	3.09	26	11	30.5	<10.0	<1.4	<10.0
Anthracene	<0.05*	0.15	0.084	2.1 J	<10	0.0904 J	<10	0.12	0.32	0.067	<0.10	0.02
Benzo(a)anthracene	0.020 Ja	0.029	0.059 Ja	<10	<10	0.043 J	<10	0.3	<0.13	0.1	<0.14	0.015
Benzo(a)pyrene	0.021 Ja	0.05	<0.13	<10	<10	0.0459 J	<10	0.43	<0.13	0.12	<0.14	0.031
Benzo(b)fluoranthene	<0.05	0.038	0.035 Ja	<10	<10	0.0588 J	<10	0.52	<0.049	0.15	<0.10	<10.0
Benzo(ghi)perylene	<0.20	0.043	<0.2	<10	<10	<0.00899	<10	0.47	<0.19	0.094	<0.21	0.026
Benzo(k)fluoranthene	<0.05	<10.0	<0.051	<10	<10	0.0431 J	<10	0.25	<0.049	0.055	<0.10	<10.0
Chrysene	0.0431 J	0.034	0.032 Ja	<10	<10	0.0666 J	<10	0.4	<0.13	0.16	<0.14	0.026
Dibenzo(a,h)anthracene	<0.30	<10.0	<0.30*	<10	<10	0.0535 J	<10	<0.30	<0.29*	<10.0	<0.32	<10.0
Fluoranthene	0.048 Ja	0.12	0.12 J	<10	<10	0.0805 J	0.029	0.78	0.133 J	0.32	<0.14	0.075
Fluorene	<0.25*	0.079	<0.25	4.2 J	<10	2.66 M1	0.048	0.29	6.1	0.1	<0.26	0.056
Indeno(1,2,3-cd)pyrene (b)	<0.13	0.091	<0.13	<10	<10	0.0788 J	<10	0.46	<0.13	0.19	<0.14	0.041
Naphthalene	0.117 B	11	<1.3	37	<10	0.916	1,300	0.15	0.438	6	<1.3	7
Phenanthrene	0.0292 J	0.27	0.076 Ja	2.1 J	<10	0.127	0.062	0.32	0.0589 J	0.36	<0.11	0.15
Pyrene	0.16 J	0.13	0.11 Ja	0.89 J	<10	0.075 J	0.023	0.6	0.102 J	0.3	<0.26	0.079

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	W-23 2003-06	W-24 Pre-2003	W-24 2003-11	W-25/25R Pre-2003	W-25/25R 2003-06	W-26 2003-06	W-27 2003-11	W-113 2003-11	W-117 Pre-2003	W-117 2003-05	W-117R 2005-11	W-118 Pre-2003
Volatile Organic Compounds (µg/L)												
Benzene	<2	<1.0	<1.0	3.8	<2	<1	<1.0	4.11	17	9.9	43 FM	1,200
Ethylbenzene	<2	<1.0	<1.0	2.4	<2	<1	<1.0	1.86	15	2.8	11.1	1,100
Toluene	<2	<1.0	<1.0	1.8	<2	<1	<1.0	<1.0	5.8	3.2	9.32	40
Xylene (total) (a)	<7	<1.0	<6.0	1.7	<7	<1	<6.0	<6.0	12	4.1	14.2	600
Semivolatile Organic Compounds (µ												
2-Methylnaphthalene	NA	<10	NA	<10	NA	NA	NA	NA	3	NA	NA	<10
Dibenzofuran	NA	<10	NA	<10	NA	NA	NA	NA	10	NA	NA	4
Acenaphthene	<2.5	<10	<0.025	<10	0.14	<0.25	<2.5	0.136 J	30	11	5.29	28
Acenaphthylene	<1.3	<10	<0.0989	<10	0.34	0.24 Ja*	<1.3	<0.0870	3	4.1	16.3	40
Anthracene	<0.10	<10	<0.0114	<10	<0.10	<0.050	<0.051	0.012 J	<10	0.22	0.075 J	<10
Benzo(a)anthracene	<0.13	<10	<0.020	0.014	<0.13	<0.13	<0.13	0.0199 J	<10	0.17	0.0506 J	<10
Benzo(a)pyrene	<0.13	<10	<0.00909	0.022	<0.13	<0.13	<0.13	0.017 Ja	<10	0.12	0.0686 J	<10
Benzo(b)fluoranthene	<0.10	<10	<0.0318	<10	<0.10	<0.050	<0.051	<0.0280	<10	0.040 Ja	0.0938 J	<10
Benzo(ghi)perylene	<0.20	<10	<0.00909	<10	<0.20	<0.20	<0.20	0.0199 J	1	<0.20	0.085 J	<10
Benzo(k)fluoranthene	<0.10	<10	<0.00795	<10	<0.10	<0.050	<0.051	<0.0150	<10	0.12	0.0586 J	<10
Chrysene	<0.13	<10	<0.00909	0.025	<0.13	<0.13	<0.13	0.0304 J	<10	0.12	0.0745 J	<10
Dibenzo(a,h)anthracene	<0.30	<10	<0.0114	<10	<0.30	<0.30	<0.30	0.01	1	<0.30	<0.29*	<10
Fluoranthene	<0.13	<10	<0.0114	0.12	<0.13	<0.13	<0.13	0.046 J	<10	0.26	0.0732 J	<10
Fluorene	<0.25	<10	<0.0182	<10	<0.25	<0.25	<0.25	<0.0160	2	1.4	3.06	8
Indeno(1,2,3-cd)pyrene (b)	<0.13	<10	<0.00682	0.043	<0.13	<0.13	<0.13	<0.0070	1	<0.13	0.0771 J	<10
Naphthalene	<0.13	<10	0.215 B	7	<1.3	1.0 Ja*	0.189 B	0.702	57	7.1	15	1,400
Phenanthrene	0.032 Ja	<10	0.0117 J	0.076	<0.10	<0.099	0.00956 J	0.030 Ja	2	0.48	0.308	5
Pyrene	<0.25	<10	<0.0193	0.058	<0.25	<0.25	<0.25	0.040 Ja	<10	0.21	<0.24	<10

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	W-118 2003-05	W-118R 2005-11	W-119 Pre-2003	W-119 2003-06	W-120 Pre-2003	W-120 2003-06	W-121 Pre-2003	W-121 2003-06	W-122 Pre-2003	W-122 2003-06	W-126 2003-06	W-127 2003-06
Volatile Organic Compounds (µg/L)												
Benzene	220 M	230	3,300	<1.0	400	<2.0	12	<2.0	3,000	<2.0	<1.0	<1.0
Ethylbenzene	6.8	61.4	2,000	<1.0	13	<2.0	23	<2.0	820	<2.0	<1.0	<1.0
Toluene	1.9	5.98	350	<1.0	1.3	<2.0	1.9	<2.0	33	<2.0	<1.0	<1.0
Xylene (total) (a)	15	22	1,700	<1.0	37	<7.0	21.9	<2.0	220	<7.0	<1.0	<1.0
Semivolatile Organic Compounds (µ												
2-Methylnaphthalene	NA	NA	41	NA	6 J	NA	<10.0	NA	14	NA	NA	NA
Dibenzofuran	NA	NA	10	NA	<10	NA	<10.0	NA	6	NA	NA	NA
Acenaphthene	12	15.8	110	1.3 Ja	8	<2.6	6	<2.7	73	0.84	<2.5	<2.5
Acenaphthylene	17	68	95	3.1	7	<1.3	4	<1.4	11	2.7	<1.3	<1.3
Anthracene	0.045 Ja	0.0568 J	3 J	0.29 Ja	<10	<0.10	<10.0	0.069	<10	0.12	0.027 Ja	<0.049
Benzo(a)anthracene	<0.14	<0.14	<10	<0.13	<10	<0.13	1.3 J	0.12	<10	0.055 Ja	<0.13	<0.13
Benzo(a)pyrene	<0.14	<0.14	<10	<0.13	<10	<0.13	0.89 J	0.18	<10	0.066 Ja	<0.13	<0.13
Benzo(b)fluoranthene	<0.1	<0.055	<10	<0.051	<10	<0.1	1.2 J	0.14	<10	0.055	<0.051	<0.049
Benzo(ghi)perylene	<0.22	<0.22	<10	<0.20	<10	<0.20	<10.0	<0.21 a	<10	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	<0.1	<0.055	<10	<0.051	<10	<0.10	<10.0	0.072	<10	0.027 Ja	<0.051	<0.049
Chrysene	<0.14	<0.14	<10	<0.13	<10	<0.29	1.0 J	0.17	<10	0.059 Ja	<0.13	<0.13
Dibenzo(a,h)anthracene	<0.33	<0.33	1.3 J	<0.30	<10	<0.31	<10.0	<0.32	<10	<0.30	<0.30	<0.29
Fluoranthene	0.068 Ja	0.069 Ja	<10	<0.13	<10	<0.13	2	0.71	<10	0.19	<0.13	<0.13
Fluorene	1.5	3.83	17	0.062 Ja	<10	<0.26	2	0.078 Ja	6	0.28	<0.25	<0.25
Indeno(1,2,3-cd)pyrene (b)	<0.14	<0.14	<10	<0.13	<10	<0.13	<10.0	0.10 Ja	<10	0.047 Ja	<0.13	<0.13
Naphthalene	110	49.6	3,000	<1.3	220	<1.3	29	0.65 Ja	590	<1.3	<1.3	<1.3
Phenanthrene	0.24	0.868	27	<0.1	0.32 J	<0.10	2	0.17	5	0.017 Ja	<0.10	<0.098
Pyrene	<0.27	0.051 Ja	<10	<0.25	<10	<0.26	2	0.61	<10	0.14 Ja	<0.25	<0.25

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	W-128 2007-11	P-110 Pre-2003	P-112 Pre-2003	P-112 2003-11	SS-2 Pre-2003	SS-3 Pre-2003	SS-4 Pre-2003	SS-6 2003-11	SS-7 2003-06	SS-8 2005-11	SS-9 2005-11	SS-10 2003-06
Volatile Organic Compounds (µg/L)												
Benzene	<1.0	<1.0	110	1,590	3,600	680	1,400	2,800	1,600	7.93	53.8	<1.0
Ethylbenzene	<1.0	<1.0	130	1,170	540	34	1,100	1,610	2,700	1.82	3.13	<1.0
Toluene	<1.0	<1.0	17	27	2,300	590	1,000	583	770	<1.0	4.84	<1.0
Xylene (total) (a)	<6.0	<1.0	76	734	1,900	370	1,400	1,860	3,200	<6.0	7.21	<1.0
Semivolatile Organic Compounds (µ												
2-Methylnaphthalene	NA	<10	4	NA	420	29	7,000	NA	NA	NA	NA	NA
Dibenzofuran	NA	<10	<10.0	NA	15	11	230	NA	NA	NA	NA	NA
Acenaphthene	5.27	2.7 J	2	120 MHA	190	34	3,300	90 Ja	130	1.96	35.8	<2.7
Acenaphthylene	<0.087	<10	<10.0	380	120	93	2,500	2600	3,400	47	5.88 M1	<1.4
Anthracene	0.405	<10	<10.0	0.432	6	12	1,700	97	28	0.185 J	0.033 Ja	0.020 Ja*
Benzo(a)anthracene	0.189	<10	<10.0	0.0100 J	<10	2	200	53	15	<0.13	<0.13	<0.14
Benzo(a)pyrene	0.197	<10	<10.0	<0.62	<10	<10	150	35	11	<0.13	<0.13	<0.14
Benzo(b)fluoranthene	0.292	<10	<10.0	<0.24	<10	<10	130	18	4.3	<0.051	<0.052	<0.053
Benzo(ghi)perylene	0.2	<10	<10.0	<0.95	<10	<10	34	9.9	3.3	<0.2	<0.21	<0.21
Benzo(k)fluoranthene	0.139 J	<10	<10.0	<0.24	<10	<10	50	9.7	2.9	<0.051	<0.052	<0.053
Chrysene	0.218	<10	<10.0	<0.62	<10	2	200	39	10	<0.13	<0.13	<0.14
Dibenzo(a,h)anthracene	0.0235 J	<10	<10.0	<1.4	<10	<10	14	2.7 J*	1.6 Ja	<0.31	<0.31	<0.32
Fluoranthene	1.53	<10	<10.0	0.22 Ja	6	5	1,500	190	49	0.0326 J	<0.13	0.064 Ja
Fluorene	0.772	<10	<10.0	91.7	36	27	2,600	248	57	1.12	0.834	<0.27
Indeno(1,2,3-cd)pyrene (b)	0.165	<10	<10.0	<0.62	<10	<10	42	13	3.5	<0.13	<0.13	<0.14
Naphthalene	1.09 B	<10	120	877	7,900	290	8,500	4,080 B	5,900	2.53 B	16.3	<1.4
Phenanthrene	0.653	<10	1.0 J	5.05	53	28	6,400	280	120	0.0732 J	0.43	0.10 Ja
Pyrene	2.35	<10	0.73 J	0.14	6	6	2,300	186	39	0.20 Ja	<0.26	<0.27

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	D-4 Pre-2003	D-4 2009-11	D-5 Pre-2003	D-5 2010-11	D-6 Pre-2003	D-6 2005-11	D-7 2001-11	D-8 Pre-2003	D-8 2009-11	M-1 Pre-2003	M-2 Pre-2003	R-1 Pre-2003
Volatile Organic Compounds (µg/L)												
Benzene	47 D	1,430	120 D	1,290	56	1,600	1,400	1,600	187	1,600	210	8.4
Ethylbenzene	19	1,010	89 D	850	61	948	250	948	32.2	948	360	<1.0
Toluene	3.6	432	42	432	25	159	600	432	8.22	600	40	0.47 J
Xylene (total) (a)	17	770	100	770	110	1,140	370	1,140	94	1,140	240	2.6
Semivolatile Organic Compounds (µ												
2-Methylnaphthalene	13	NA	140 D	NA	18	NA	550	110 D	NA	120 D	6.7 J	<10
Dibenzofuran	0.62 J	NA	6.2 J	NA	9.1 J	NA	41	5.8 J	NA	20	5.2 J	<10
Acenaphthene	6.1 J	137	44	111	52	690	136	6.5 J	20.4	130 D	53	6 J
Acenaphthylene	<10	176	4.4 J	163	14	4,300	133	1.4 J	26.1	690	28	2 J
Anthracene	1.1 J	2.9	5.2 J	8.35	15	290	318	2.5 J	3.6	23 DJ	12	<10
Benzo(a)anthracene	<10	<0.02	0.79 J	3.05	12	180	147	0.7 J	1.83	<10	9.4 J	<10
Benzo(a)pyrene	<10	<0.008	<10.0	3.4	14	110	125	<10	2.88	<10	7.6 J	<10
Benzo(b)fluoranthene	<10	<0.028	<10.0	2.11	14	55	39.4	<10	2.46	<10	7.6 J	<10
Benzo(ghi)perylene	<10	0.0186 J	<10.0	2.84	4.3 J	37	29.1	<10	1.25	<10	3.1 J	<10
Benzo(k)fluoranthene	<10	<0.007	<10.0	0.868	5.4 J	35	35.8	<10	1.06	<10	2.9 J	<10
Chrysene	<10	<0.008	0.64	2.53	12	120	435	0.55 J	2.18	<10	8.9 J	<10
Dibenzo(a,h)anthracene	<10	<0.01	<10.0	0.217	<10	20	6.85	<10	0.183	<10	<10	<10
Fluoranthene	<10	0.471	2.4 J	10.8	27	810	598	1.8 J	9.28	2.2 J	23	<10
Fluorene	2 J	56.4	17	52.3	28	350	306	350	17.2	810	19	1 J
Indeno(1,2,3-cd)pyrene (b)	<10	<0.006	<10.0	1.16	5.2 J	47	26.2	<10	1.0	<10	3.2 J	<10
Naphthalene	82	964 B	620 D	3,130 B	24	4,800	1,600	450 D	73.8	3,200 D	220 D	<10
Phenanthrene	3.3 J	21.5	20	34.6	32	1,200	1,350	1,200	14.1	4,800	5.6 J	1 J
Pyrene	<10	<0.017	3 J	7.59	32	450	268	2.5 J	23.3	6.2 J	31	<10

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	R-2 Pre-2003	R-3 Pre-2003	R-4 Pre-2003	R-5 Pre-2003	R-7 Pre-2003	R-8 Pre-2003	R-9 Pre-2003	R-10 Pre-2003	R-11 Pre-2003	R-12 Pre-2003	R-13 Pre-2003	R-16 Pre-2003
Volatile Organic Compounds (µg/L)												
Benzene	17	18	210	2.8	<1.0	350 D	1,000	32	360 D	1,000	1,800	77 D
Ethylbenzene	120	120	360	4.9	<1.0	380 D	1,200	11	1,100	1,200	47	99 D
Toluene	20	21	40	2	<1.0	260 D	570	0.94 J	320	570	1,100	21 D
Xylene (total) (a)	170	180	240	10	<1.0	1,900 D	1,000	15	970	1,000	910	130 D
Semivolatile Organic Compounds (µ												
2-Methylnaphthalene	2 J	86 D	<10	<10	<10	350 D	120 E	<10	370 D	5,900 D	800 D	30
Dibenzofuran	<10	7 J	2.4 J	2 J	<10	11	<10	0.98 J	10	310 D	59	18
Acenaphthene	13	61 D	53	11	<10	17	100 D	12	82	230 D	64	160 D
Acenaphthylene	3 J	7 DJ	6 J	4 J	<10	22	120 D	0.87 J	250 D	2,400 D	450 D	37
Anthracene	<10	6 DJ	<10	<10	<10	4.2 J	52	<10	21	750 D	110 D	18
Benzo(a)anthracene	<10	6 DJ	<10	<10	<10	1.1 J	3.4 J	<10	12	410 D	52	4 J
Benzo(a)pyrene	<10	1 J	<10	<10	<10	<10	<10	<10	10 J	300 D	38	1.8 J
Benzo(b)fluoranthene	<10	6 J	<10	<10	<10	1.2 J	<10	<10	8 J	270 D	40	2 J
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	4 J	110 D	13	<10
Benzo(k)fluoranthene	<10	2 J	<10	<10	<10	<10	<10	<10	3 J	120 D	15	0.99 J
Chrysene	<10	6 J	<10	<10	<10	1 J	<10	<10	10	320 D	48	3.3 J
Dibenzo(a,h)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	38	3.5 J	<10
Fluoranthene	<10	11	23	<10	<10	3.7 J	13	<10	19	870 D	110 D	18
Fluorene	<10	22 D	4 J	2 J	<10	17	2.4 J	2.4 J	61	1,100 D	160 D	55
Indeno(1,2,3-cd)pyrene (b)	<10	<10	<10	<10	<10	<10	32	<10	4 J	140 D	17	<10
Naphthalene	20	170 D	20	7 J	<10	6,900 D	2 J	18	1,700 D	17,000 D	1,200 D	300 D
Phenanthrene	<10	36 D	1.4 J	1 J	<10	14	3,100 D	1.5 J	75	2,400 D	380 D	51
Pyrene	<10	17	<10	<10	<10	5.9 J	23	<10	34	970 D	150 D	31

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	R-20 Pre-2003	R-23 Pre-2003	R-25 Pre-2003	SI-2 Pre-2003	ST-2 Pre-2003	TP-12 Pre-2003	TP-13 Pre-2003	TP-14 Pre-2003	TP-15 Pre-2003
Volatile Organic Compounds (µg/L)									
Benzene	210	110	1,000	5,600	180 D	1,100	320	18,000	780
Ethylbenzene	590	750	1,800	280	110 D	510	230	8,800	120
Toluene	65	52	390	2,600	6.2 D	1,900	1400	2,000	2,400
Xylene (total) (a)	940	680	1,500	1,900	96 D	1,300	NA	3,300	670
Semivolatile Organic Compounds (µ									
2-Methylnaphthalene	2,300 D	770 D	130 D	580	14	510	840	660	6
Dibenzofuran	85	17	14	27	5.1 J	16	30	30	8
Acenaphthene	550 D	160 D	140 D	170	48	78	34	42	160
Acenaphthylene	240 DJ	5.4 J	49	200	15	150	280	230	48
Anthracene	180 DJ	2.1 J	3.7 J	41	2.5 J	10	45	26	3
Benzo(a)anthracene	85	1.9 J	<10	18	1.8 J	1	23	13	<10
Benzo(a)pyrene	59	<10	<10	13	1.2 J	<600	17	9	<10
Benzo(b)fluoranthene	56	2.4 J	<10	12	1.5 J	<600	<10	6	<10
Benzo(ghi)perylene	18 J	<10	<10	1	<10	<600	9	4	<10
Benzo(k)fluoranthene	19 J	1.1 J	<10	2	<10	<600	<10	7	<10
Chrysene	78	2.3 J	0.38 J	17	1.9 J	1	26	13	<10
Dibenzo(a,h)anthracene	13 J	<10	<10	<10	<10	<600	<10	<800	<10
Fluoranthene	160	6.7 J	1.8 J	35	4.2 J	8	52	29	<10
Fluorene	280 DJ	42	31	85	9.4 J	31	59	55	18
Indeno(1,2,3-cd)pyrene (b)	21	<10	<10	1	<10	<600	8	4	<10
Naphthalene	4,400 D	4,100 D	3,700 D	3,800	71	2,100	1,800	3,400	2,300
Phenanthrene	670 D	52	24	190	14	47	180	94	15
Pyrene	250 DJ	9.5 J	2.6 J	68	5.1 J	10	75	32	1

TABLE 4

COMPARISON OF MAXIMUM GROUNDWATER CONTAMINANT CONCENTRATIONS AND AQUEOUS SOLUBILITIES
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE - DUBUQUE, IOWA

Compound	TP-16 Pre-2003	MP-10D Pre-2003	MP-15D Pre-2003	MP-50D Pre-2003	DP-1 2011	DP-2 2011	DP-3 2011	DP-6 2011	DP-7 2011	DP-8 2011
Volatile Organic Compounds (µg/L)										
Benzene	15,000	7,700	870	380	<1.00	<1.00	1.22	13.4	<1.00	<1.00
Ethylbenzene	1,200	3,400	44	14	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Toluene	6,800	3,500	580	140	<1.00	<1.00	<1.00	11.3	<1.00	<1.00
Xylene (total) (a)	3,300	3,600	260	NA	<3.00	<3.00	4.66	4.35	<3.00	<3.00
Semivolatile Organic Compounds (µ										
2-Methylnaphthalene	320	8,500	44	4	NA	NA	NA	NA	NA	NA
Dibenzofuran	19	320	2	<10	NA	NA	NA	NA	NA	NA
Acenaphthene	240	2,300	26	12	14.9	2.51	13.1	28.9	10.2	2.28
Acenaphthylene	57	1,700	8	3	0.591	<0.0870	30.9 M1	12.2	1.56	0.443
Anthracene	6	1,100	<10	<10	0.13 J	0.0598 J	1.79 M1	0.683	0.435	0.618
Benzo(a)anthracene	<10	530	<10	<10	0.0425 J	0.0731 J	0.726	0.0655 J	0.0743 J	0.178
Benzo(a)pyrene	<10	390	<10	<10	0.0568 J	0.0545 J	0.636	0.0325 J	0.0376 J	0.11 J
Benzo(b)fluoranthene	<10	340	<10	<10	0.0402 J	0.0866 J	0.629	<0.0280	0.0433 J	0.123
Benzo(ghi)perylene	<10	98	<10	<10	0.0227 J	0.0507 J	0.482	0.0164 J	0.0182 J	0.0669 J
Benzo(k)fluoranthene	<10	150	<10	<10	0.0172 J	0.037 J	0.239	<0.00700	0.0148 J	0.0433 J
Chrysene	<10	450	<10	<10	0.0767 J	0.093 J	0.453	0.113	0.124	0.276
Dibenzo(a,h)anthracene	<10	48	<10	<10	<0.0100	<0.0100	0.0578 J	<0.0100	<0.0100	0.0135 J
Fluoranthene	2	950	<10	<10	0.159 J	0.186 J	1.97 M1	0.309	0.317	0.553
Fluorene	42	1,800	2	<10	0.253	0.0767 J	3.79 M1	5.1	3.63	1.3
Indeno(1,2,3-cd)pyrene (b)	<10	140	<10	<10	0.0259 J	0.061 J	0.436	<0.00600	0.0116 J	0.0678 J
Naphthalene	6,900	23,000	380	38	0.239	<0.0460	5.63	1.37	1.71	2.98
Phenanthrene	31	3,000	2	<10	0.361	0.145	5.56	1.41	1.11	1.65
Pyrene	<10	1,600	<10	<10	0.234	0.162 J	2.52 M1	0.0691 J	0.34	0.627

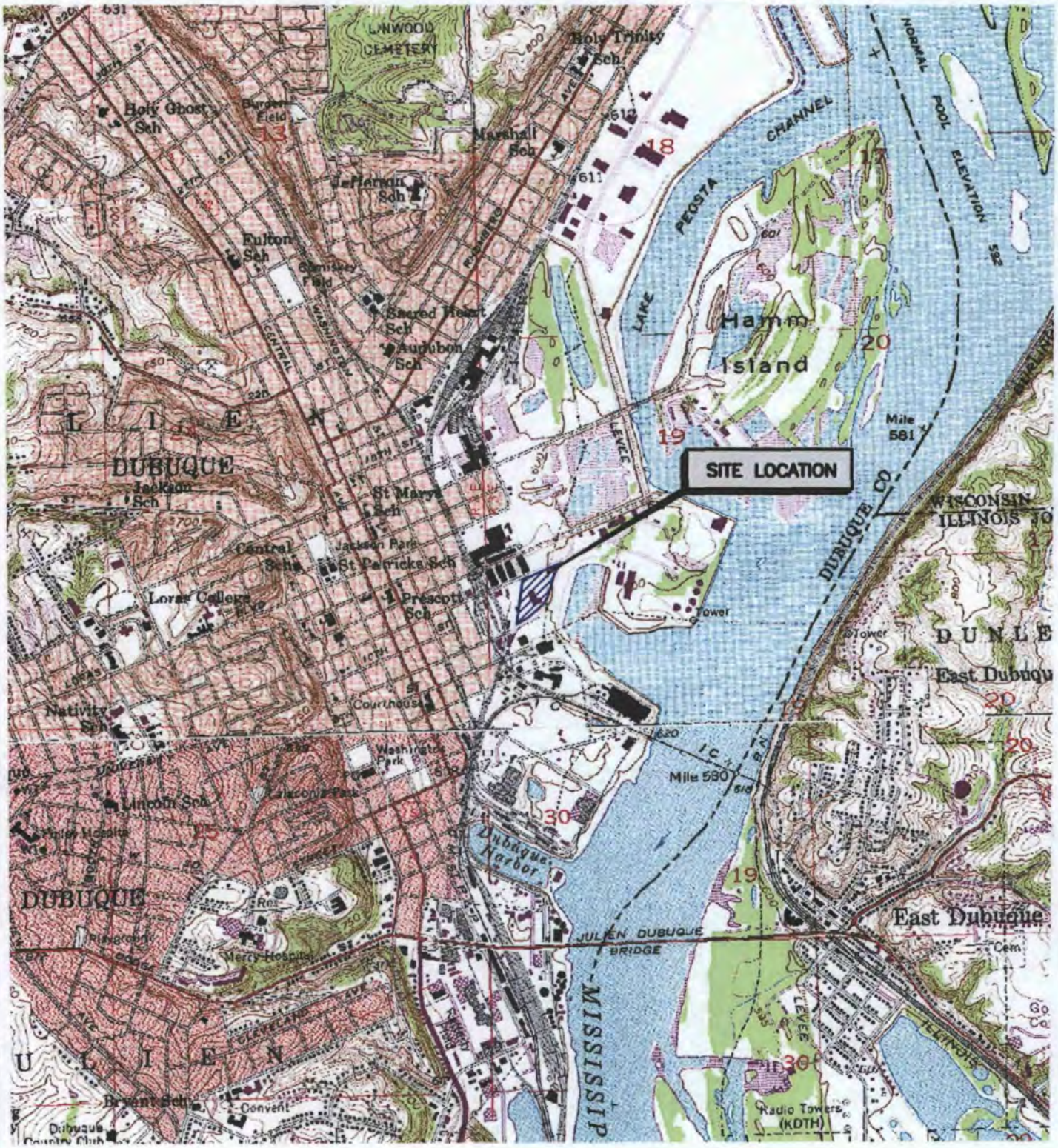
Notes:

1. Values shaded in blue exceed the 1 percent aqueous solubility value for the compound.
2. Values shaded in yellow exceed the 10 percent aqueous solubility value for the compound.
3. Values shaded in red exceed the 100 percent aqueous solubility value for the compound.
4. Data shown was collected through December 2011.

(a) The total xylene solubility value is value calculated for m-xylene.
(b) EPA Aquatic Fate Process Data for Organic Priority Pollutants
E = Estimated concentration; value exceeds linear calibration range.
D = Compound identified at a secondary dilution factor.
J = Estimated concentration below the reporting limit.
Solubilities given are calculated for 25 degrees Celsius.

NS = Not sampled.
NA = Not analyzed.
µg/L = Micrograms per liter.
< = Analyte not detected at or above reporting limit.
a = Concentration is below the reporting limit.

Plot Date: 11/16/04



MAP SOURCE:
U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES
DUBUQUE NORTH, IOWA–WISCONSIN–ILLINOIS (1956, PHOTOREVISED 1972)
DUBUQUE SOUTH, IOWA–ILLINOIS (1955, PHOTOREVISED 1972)

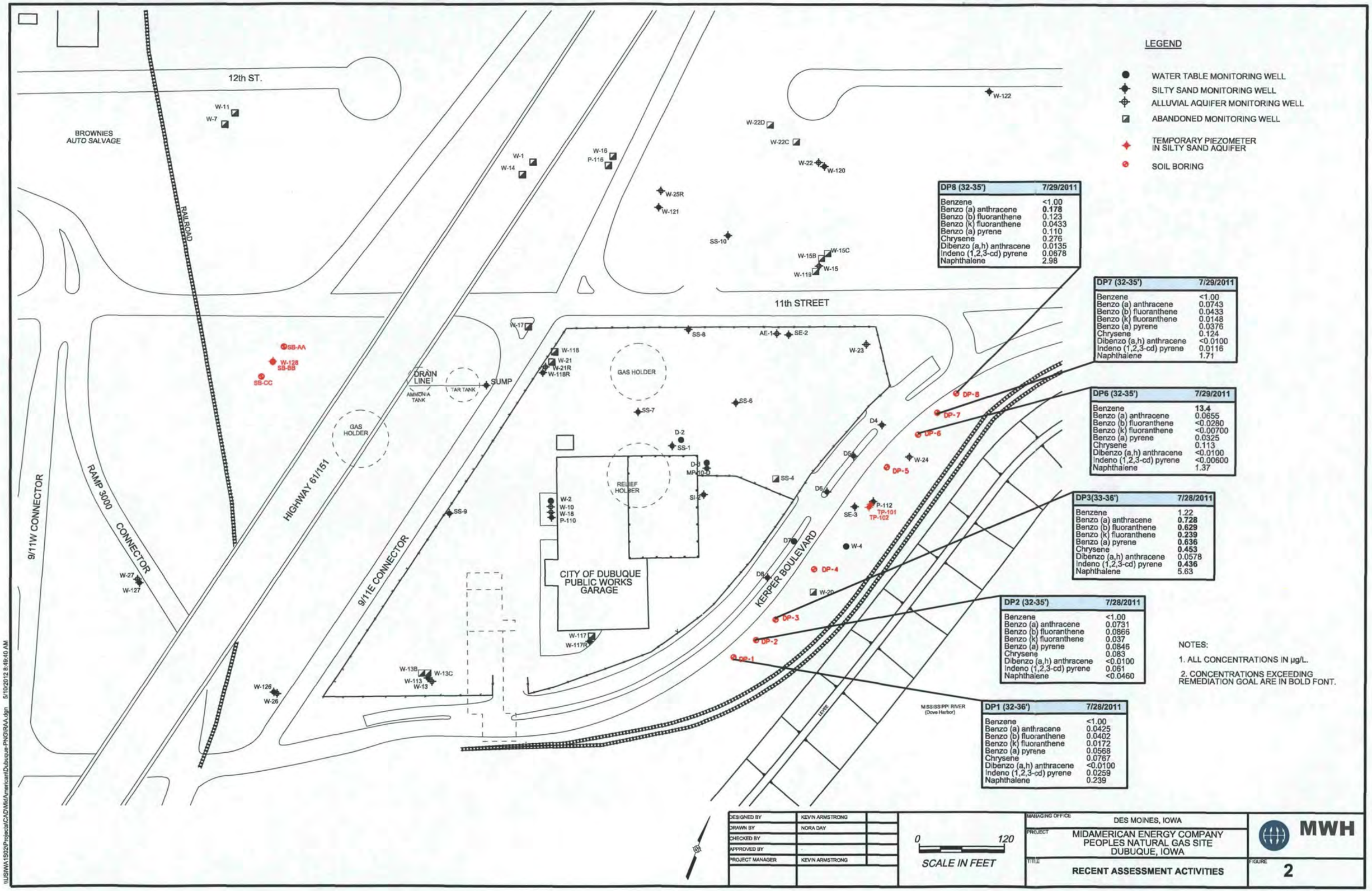
SITE LOCATION:
TOWNSHIP 89N, RANGE 2E, SECTION 19,
DUBUQUE COUNTY, IOWA

QUADRANGLE LOCATION

0 1000 2000
SCALE IN FEET

P:\CAD\MIDAMERICAN\DUBUQUE-PNG\SLM

MWH DES MOINES IOWA	MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA	SITE LOCATION MAP	FIGURE 1



LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- TEMPORARY PIEZOMETER IN SILTY SAND AQUIFER
- SOIL BORING

DP8 (32-35')	7/29/2011
Benzene	<1.00
Benzo (a) anthracene	**0.178**
Benzo (b) fluoranthene	0.123
Benzo (k) fluoranthene	0.0433
Benzo (a) pyrene	0.110
Chrysene	0.276
Dibenzo (a,h) anthracene	0.0135
Indeno (1,2,3-cd) pyrene	0.0678
Naphthalene	2.98

DP7 (32-35')	7/29/2011
Benzene	<1.00
Benzo (a) anthracene	0.0743
Benzo (b) fluoranthene	0.0433
Benzo (k) fluoranthene	0.0148
Benzo (a) pyrene	0.0376
Chrysene	0.124
Dibenzo (a,h) anthracene	<0.0100
Indeno (1,2,3-cd) pyrene	0.0116
Naphthalene	1.71

DP6 (32-35')	7/29/2011
Benzene	**13.4**
Benzo (a) anthracene	0.0655
Benzo (b) fluoranthene	<0.0280
Benzo (k) fluoranthene	<0.00700
Benzo (a) pyrene	0.0325
Chrysene	0.113
Dibenzo (a,h) anthracene	<0.0100
Indeno (1,2,3-cd) pyrene	<0.00600
Naphthalene	1.37

DP3(33-36')	7/28/2011
Benzene	1.22
Benzo (a) anthracene	**0.728**
Benzo (b) fluoranthene	**0.629**
Benzo (k) fluoranthene	**0.239**
Benzo (a) pyrene	**0.636**
Chrysene	**0.453**
Dibenzo (a,h) anthracene	0.0578
Indeno (1,2,3-cd) pyrene	**0.436**
Naphthalene	5.63

DP2 (32-35')	7/28/2011
Benzene	<1.00
Benzo (a) anthracene	0.0731
Benzo (b) fluoranthene	0.0866
Benzo (k) fluoranthene	0.037
Benzo (a) pyrene	0.0846
Chrysene	0.083
Dibenzo (a,h) anthracene	<0.0100
Indeno (1,2,3-cd) pyrene	0.061
Naphthalene	<0.0460

DP1 (32-36')	7/28/2011
Benzene	<1.00
Benzo (a) anthracene	0.0425
Benzo (b) fluoranthene	0.0402
Benzo (k) fluoranthene	0.0172
Benzo (a) pyrene	0.0568
Chrysene	0.0767
Dibenzo (a,h) anthracene	<0.0100
Indeno (1,2,3-cd) pyrene	0.0259
Naphthalene	0.239

NOTES:

1. ALL CONCENTRATIONS IN µg/L.

2. CONCENTRATIONS EXCEEDING REMEDIATION GOAL ARE IN BOLD FONT.

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

0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA

PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: **RECENT ASSESSMENT ACTIVITIES**

MWH

FIGURE: **2**

\\USRWA1502\Projects\CAD\Mid\AmericanDubuque-PNG\RAA.dgn 5/10/2012 8:48:40 AM

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

0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA
TITLE: **TOPOGRAPHIC SURFACE OF THE LOWER CONFINING UNIT**
FIGURE: 3

MWH

\\US\WA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\TCZ.dgn 4/25/2012 2:17:10 PM

12th ST.

BROWNIES AUTO SALVAGE

RAILROAD

11th STREET

W-11
W-7
W-1
W-14
W-16
P-116
W-25R
W-121
W-22D
W-22C
W-22
W-120
W-122
SS-10
W-15B
W-15C
W-119
W-15
W-17
W-128
W-118
W-21
W-21R
W-118R
DRAIN LINE
SUMP
AMMONIA TANK
TAR TANK
GAS HOLDER
SS-8
AE-1
SE-2
W-23
SS-2
SS-6
SS-7
SS-3
D4
D5
W-24
(603.38)
D-2
603.0
(602.56)
D-3
SS-4
602.5
RELIEF HOLDER
SI-2
P-112
SE-3
(601.63)
W-2
W-10
W-18
P-110
SS-9
D7
(602.02)
W-4
(601.44)
602.0
601.5
D8
W-20
KERPER BOULEVARD
CITY OF DUBUQUE PUBLIC WORKS GARAGE
W-117R
W-13B
W-13C
W-113
W-13
W-126
W-26
W-27
W-127
RAMP 3000 CONNECTOR
HIGHWAY 61/151
9/11E CONNECTOR
MISSISSIPPI RIVER (Dove Harbor)
(603.9)
JULIE

LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- (601.44) GROUNDWATER ELEVATION (FT ASL)
- * GROUNDWATER ELEVATION NOT USED IN CONTOURING
- GROUNDWATER ELEVATION CONTOUR (FT ASL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA
TITLE: GROUNDWATER FLOW DIRECTION MAP WATER TABLE AQUIFER APRIL 26, 2011

MWH

FIGURE 4

\\US\WA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\gl\dm-wta-0411.dgn 5/3/2012 5:50:25 PM

12th ST.

BROWNIES AUTO SALVAGE

RAILROAD

W-11
W-7

W-1
W-14

W-16
P-116

W-122
(599.78)

W-22D

W-22C

W-22
(600.22)
W-120

600.0

W-25R
W-121
(600.35)

600.5

(600.69)
SS-10

W-15B
W-15C
W-15
W-19
(600.53)

11th STREET

W-17

(600.43)
SS-8

AE-1
SE-2
(600.42)

W-23

W-128
(599.69)

W-118
W-21
W-21R
W-118R
(600.51*)

DRAIN LINE
AMMONIA TANK
TAR TANK
(601.76*)
SUMP

GAS HOLDER

SS-7
(600.42)

SS-6
(600.52)

D4
(600.64)

601.0

D-2
SS-1

D5
(600.64)

W-24

D-3
MP-10-D
(599.71*)

SS-4

(600.74)
D6

602.0

RELIEF HOLDER

SS-5
(600.76)

P-112
TR-101
102
(601.84)

GAS HOLDER

(600.17)
SS-9

W-2
W-10
W-18
P-110
(600.65)

HIGHWAY 61/151

RAMP 3000 CONNECTOR

9/11E CONNECTOR

CITY OF DUBUQUE PUBLIC WORKS GARAGE

D7

W-4

603.0

KERPER BOULEVARD

D8
(601.09)

W-20

W-27
W-127
(599.61)

W-11
W-11R
(601.01)

W-13B
W-13C
W-113
W-13

(600.03)
W-126
W-26

600.5
(600.60)

600.0

601.0

MISSISSIPPI RIVER
(Dove Harbor)
(603.9)

LOWER

LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- (600.76) GROUNDWATER ELEVATION (FT ASL)
- * GROUNDWATER ELEVATION NOT USED IN CONTOURING
- GROUNDWATER ELEVATION CONTOUR (FT ASL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

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

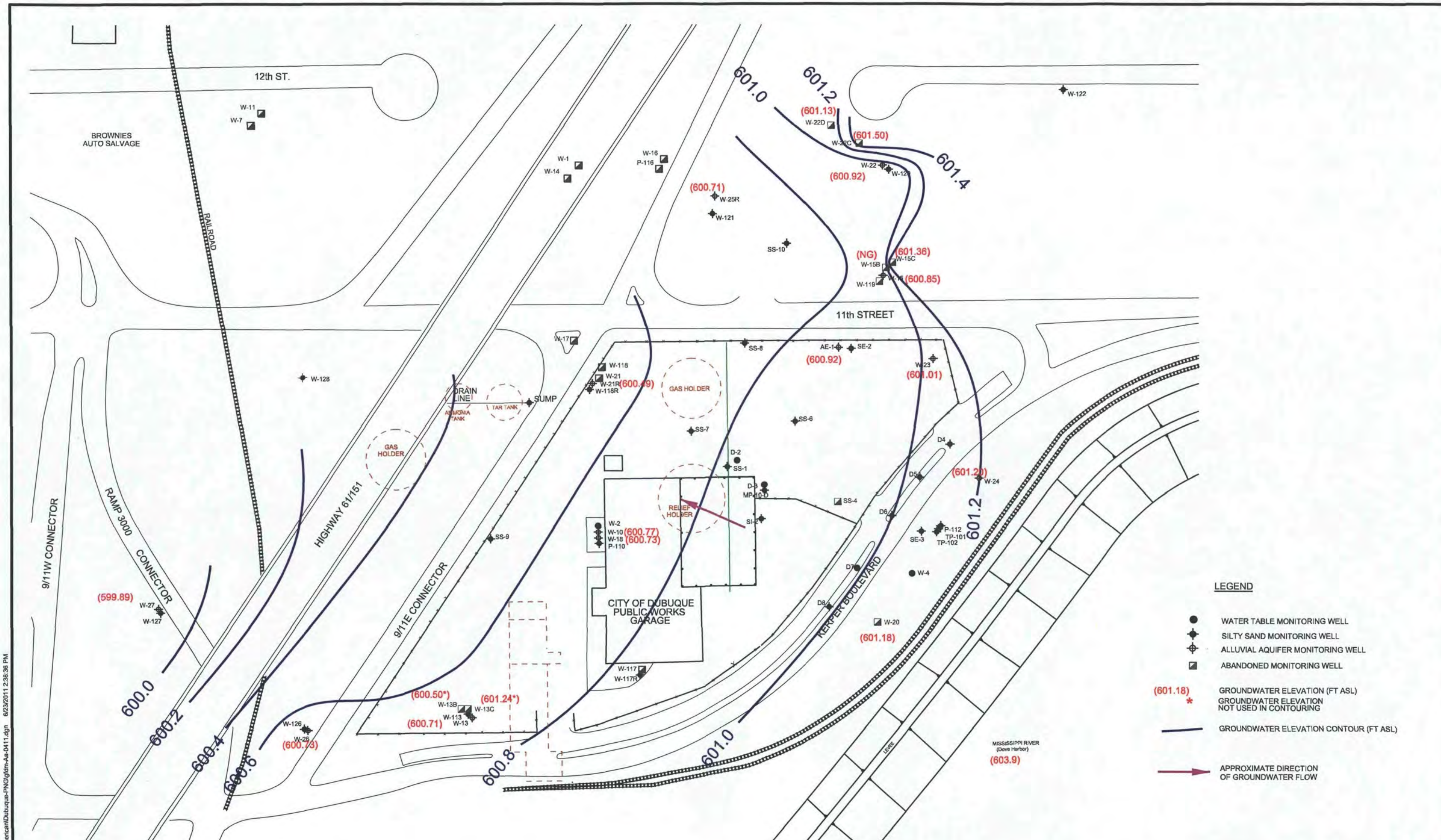
0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA
TITLE: GROUNDWATER FLOW DIRECTION MAP
SILTY SAND AQUIFER
APRIL 26, 2011

MWH

FIGURE 5

\\US1WA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\gfdm-ssa-0411.dgn 5/3/2012 5:54:05 PM


12th ST.
BROWNIES AUTO SALVAGE
RAILROAD
11th STREET
HIGHWAY 61/151
9/11E CONNECTOR
9/11W CONNECTOR
RAMP 3000 CONNECTOR
KERPER BOULEVARD
CITY OF DUBUQUE PUBLIC WORKS GARAGE
GAS HOLDER
RELIEF HOLDER
DRAIN LINE
TAR TANK
SUMP
LEVEE
MISSISSIPPI RIVER (Dove Harbor)
(603.9)
601.0
601.2
601.4
600.0
600.2
600.4
600.6
600.8
(601.13)
(601.50)
(600.92)
(600.71)
(NG)
(601.36)
(600.85)
(601.01)
(600.49)
(601.20)
(600.77)
(600.73)
(601.18)
(599.89)
(600.50*)
(601.24*)
LEGEND
WATER TABLE MONITORING WELL
SILTY SAND MONITORING WELL
ALLUVIAL AQUIFER MONITORING WELL
ABANDONED MONITORING WELL
(601.18) GROUNDWATER ELEVATION (FT ASL)
* GROUNDWATER ELEVATION NOT USED IN CONTOURING
GROUNDWATER ELEVATION CONTOUR (FT ASL)
APPROXIMATE DIRECTION OF GROUNDWATER FLOW
0 120
SCALE IN FEET

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

MANAGING OFFICE: DES MOINES, IOWA

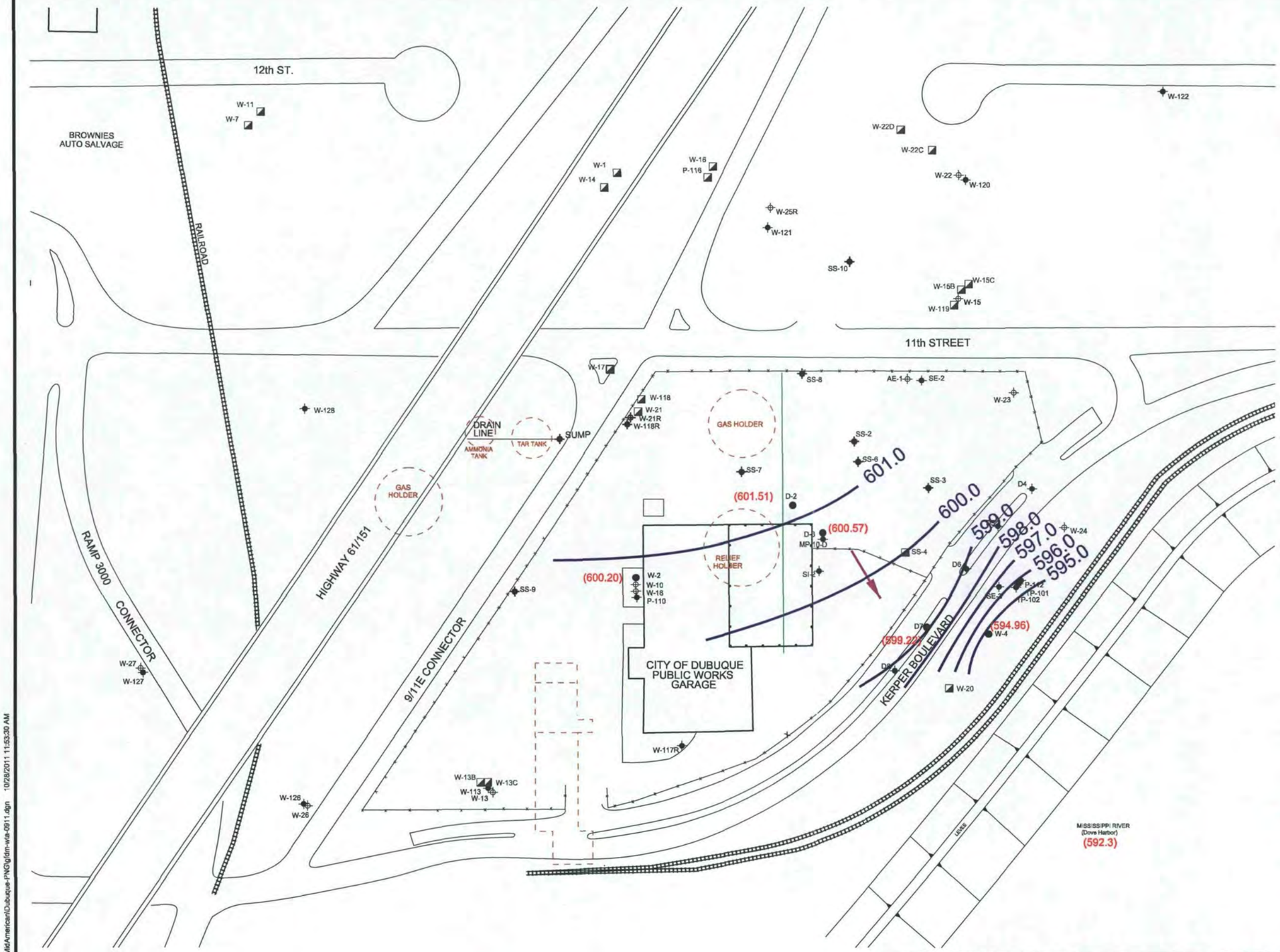
PROJECT: MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA

TITLE: **GROUNDWATER FLOW DIRECTION MAP ALLUVIAL AQUIFER APRIL 26, 2011**

FIGURE 6

MWH

\\USWA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\gfdm-Aa-0411.dgn 6/23/2011 2:38:36 PM



LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- (601.51) GROUNDWATER ELEVATION (FT ASL)
- * GROUNDWATER ELEVATION NOT USED IN CONTOURING
- GROUNDWATER ELEVATION CONTOUR (FT ASL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA

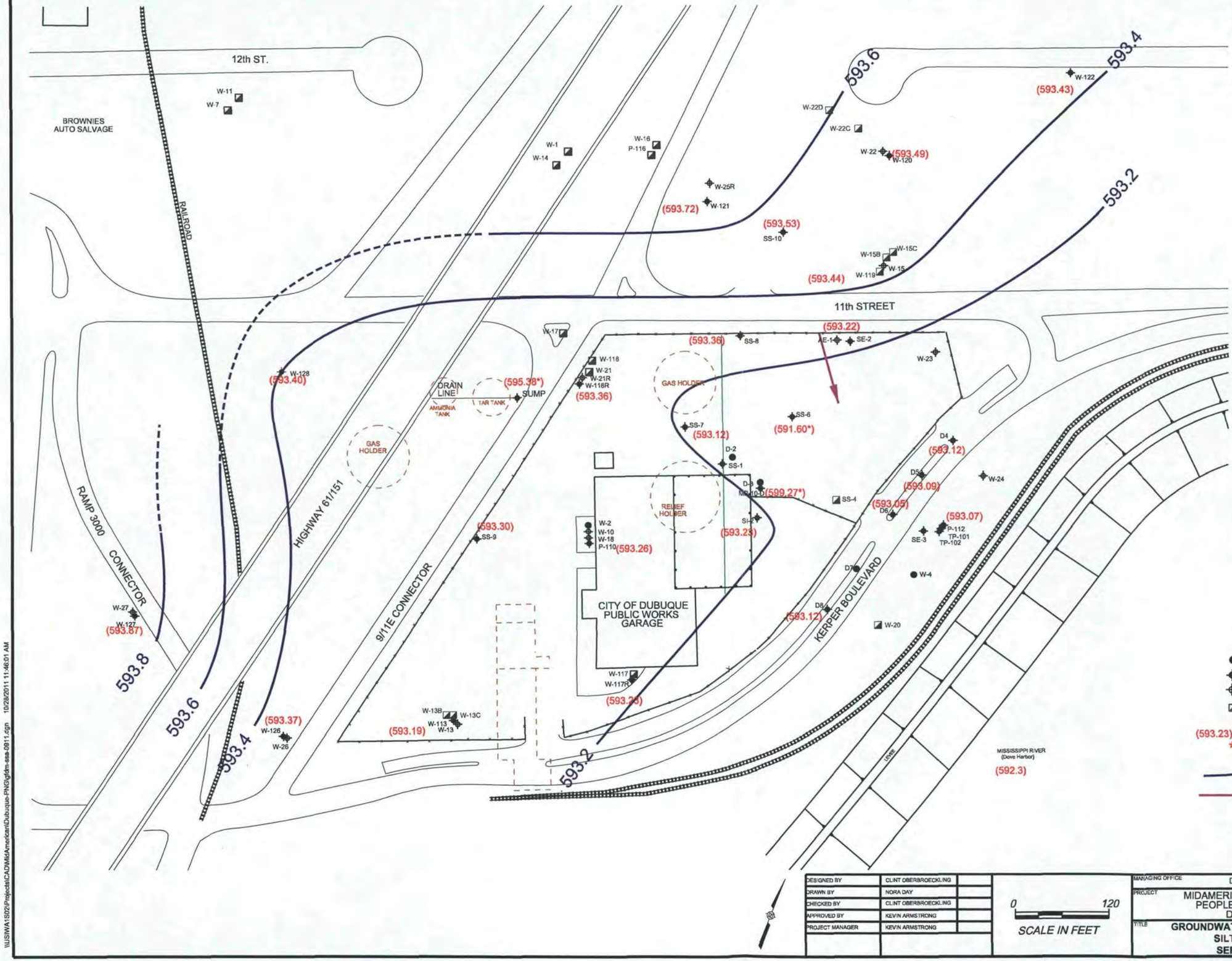
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: **GROUNDWATER FLOW DIRECTION MAP**
WATER TABLE AQUIFER
SEPTEMBER 19, 2011

MWH

FIGURE 7

\\USIWA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\gl\dm-wta-0911.dgn 10/28/2011 11:53:30 AM



DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

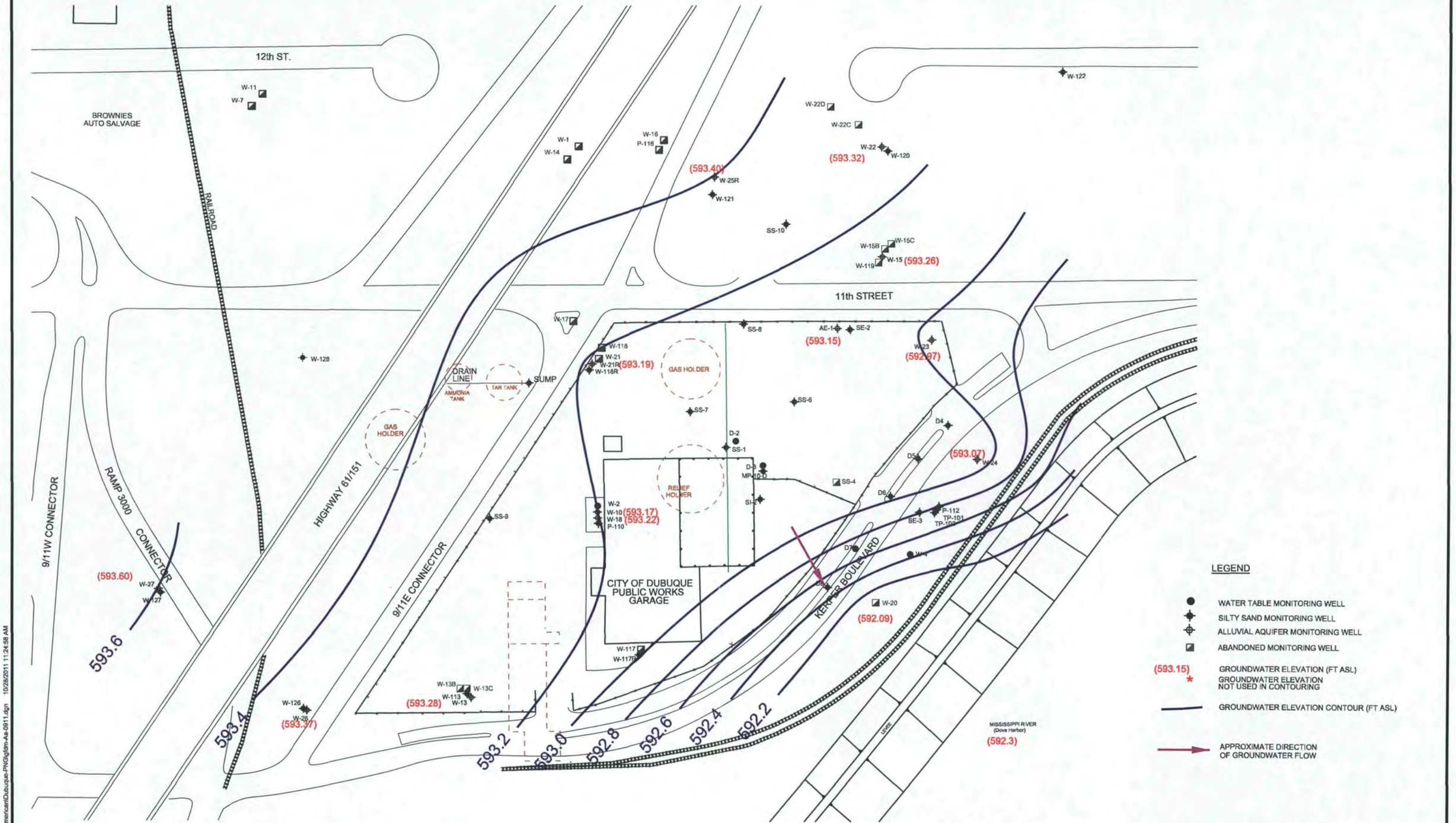
0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA
TITLE: GROUNDWATER FLOW DIRECTION MAP
SILTY SAND AQUIFER
SEPTEMBER 19, 2011

MWH

FIGURE 8

\\JUSIWA1SD2\Projects\CAD\MidAmerican\Dubuque\n-PNG\gf\m-ssa-0911.dgn 10/28/2011 11:46:01 AM



DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

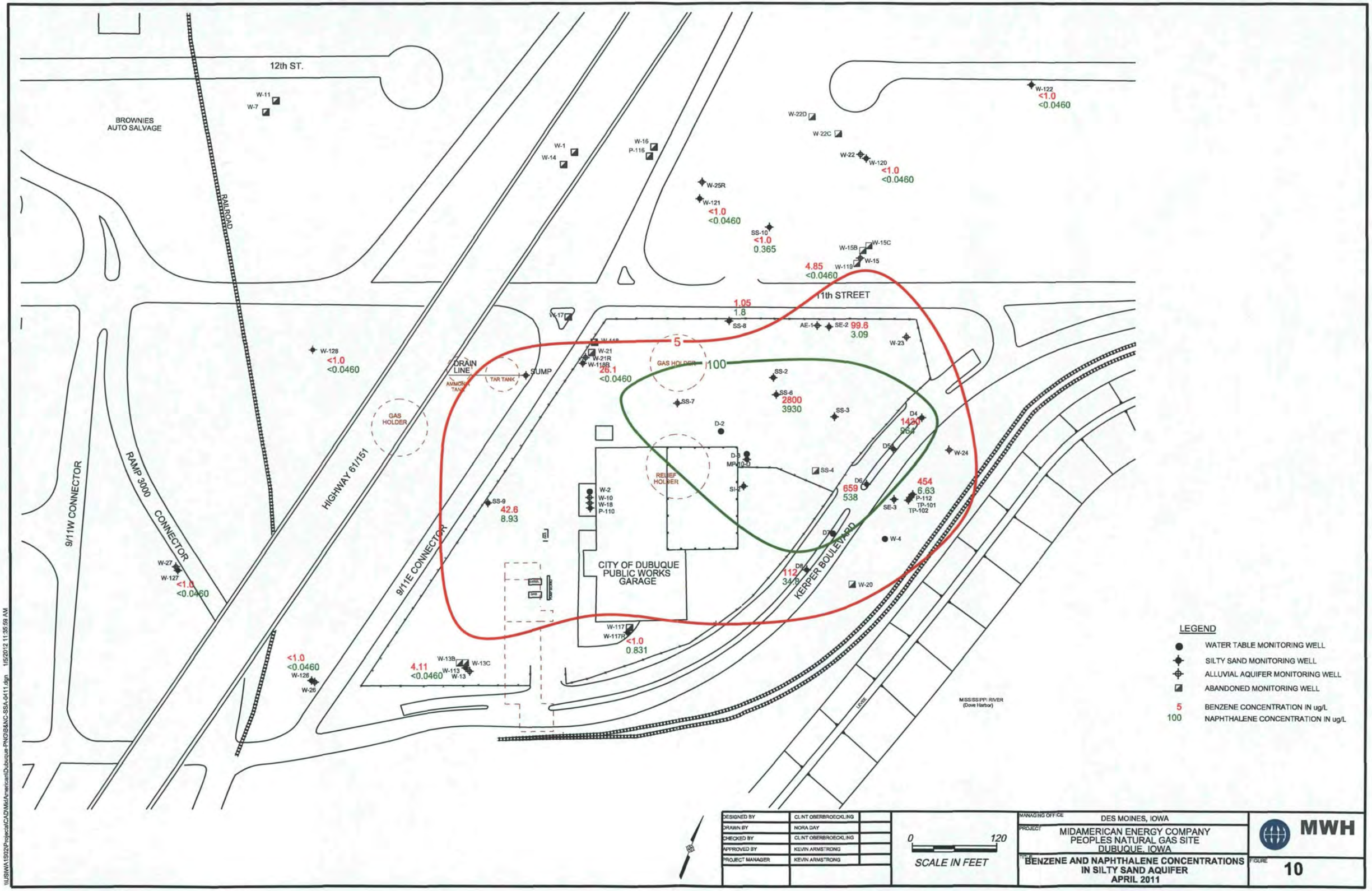
0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA
TITLE: **GROUNDWATER FLOW DIRECTION MAP ALLUVIAL AQUIFER SEPTEMBER 19, 2011**

MWH

FIGURE: **9**

\\US1WA1S02\Projects\CAD\MidAmerican\Dubuque\Dubuque-PNG\gf0m-Aa-0811.dgn 10/28/2011 11:24:58 AM



LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- 5 BENZENE CONCENTRATION IN ug/L
- 100 NAPHTHALENE CONCENTRATION IN ug/L

DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA

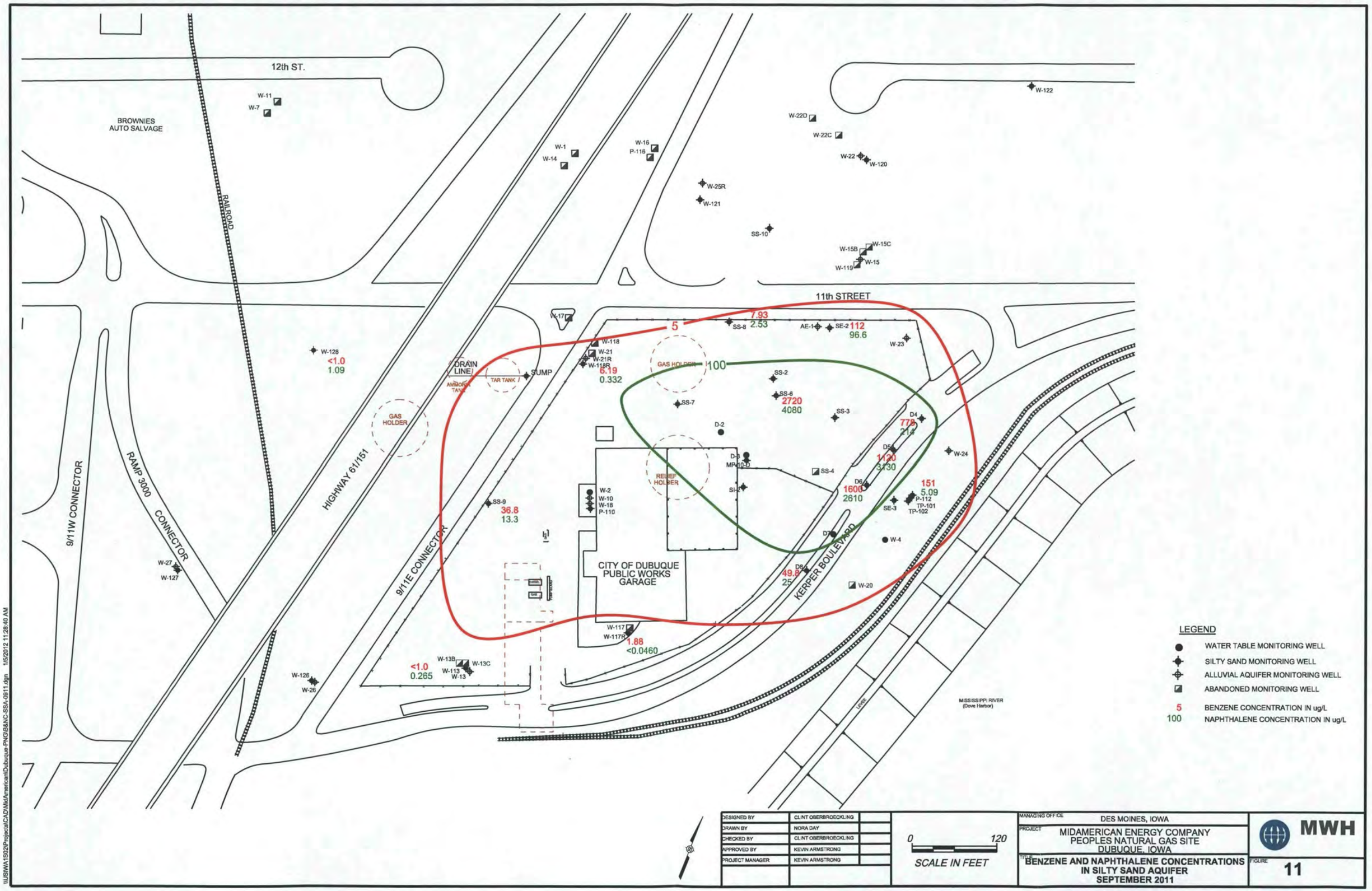
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: BENZENE AND NAPHTHALENE CONCENTRATIONS IN SILTY SAND AQUIFER APRIL 2011

MWH

FIGURE 10

\\JSIWA15902\Projects\CADM\d\American\Dubuque-PNG\B&NC-SSA-0411.dgn 1/5/2012 11:35:59 AM



LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- 5 BENZENE CONCENTRATION IN ug/L
- 100 NAPHTHALENE CONCENTRATION IN ug/L

DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

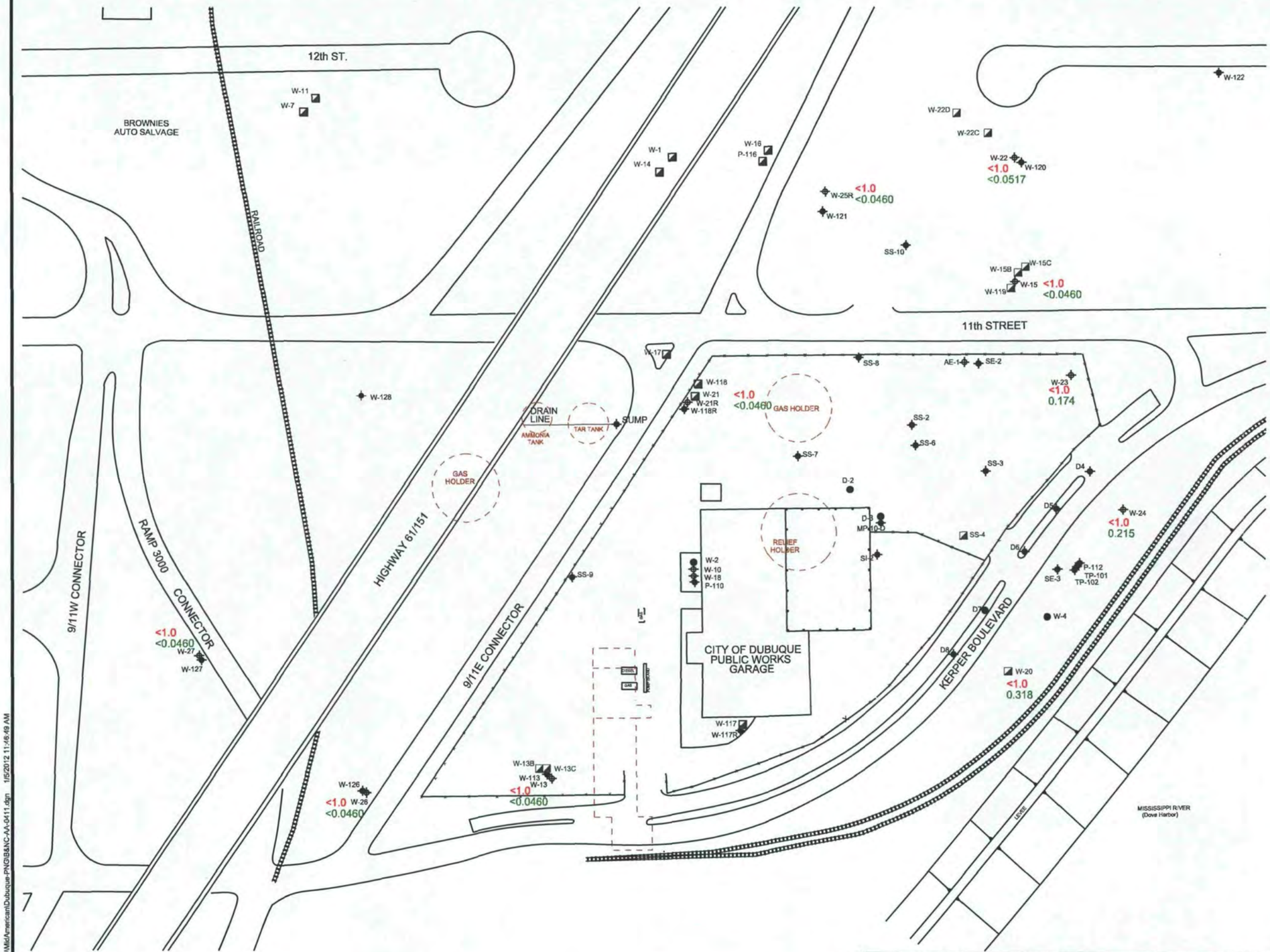
0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA
TITLE: BENZENE AND NAPHTHALENE CONCENTRATIONS IN SILTY SAND AQUIFER SEPTEMBER 2011

MWH

FIGURE 11

\\USIWA1502\Projects\CAD\Mid\American\Dubuque-PNG\B&NC-SSA-0911.dgn 1/5/2012 11:28:40 AM



LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- ABANDONED MONITORING WELL
- 5 BENZENE CONCENTRATION IN ug/L
- 100 NAPHTHALENE CONCENTRATION IN ug/L
- * CONCENTRATIONS LESS THAN CONTOUR LIMITS

DESIGNED BY	CLINT OBERBROECKLING
DRAWN BY	NORA DAY
CHECKED BY	CLINT OBERBROECKLING
APPROVED BY	KEVIN ARMSTRONG
PROJECT MANAGER	KEVIN ARMSTRONG

0 120
SCALE IN FEET

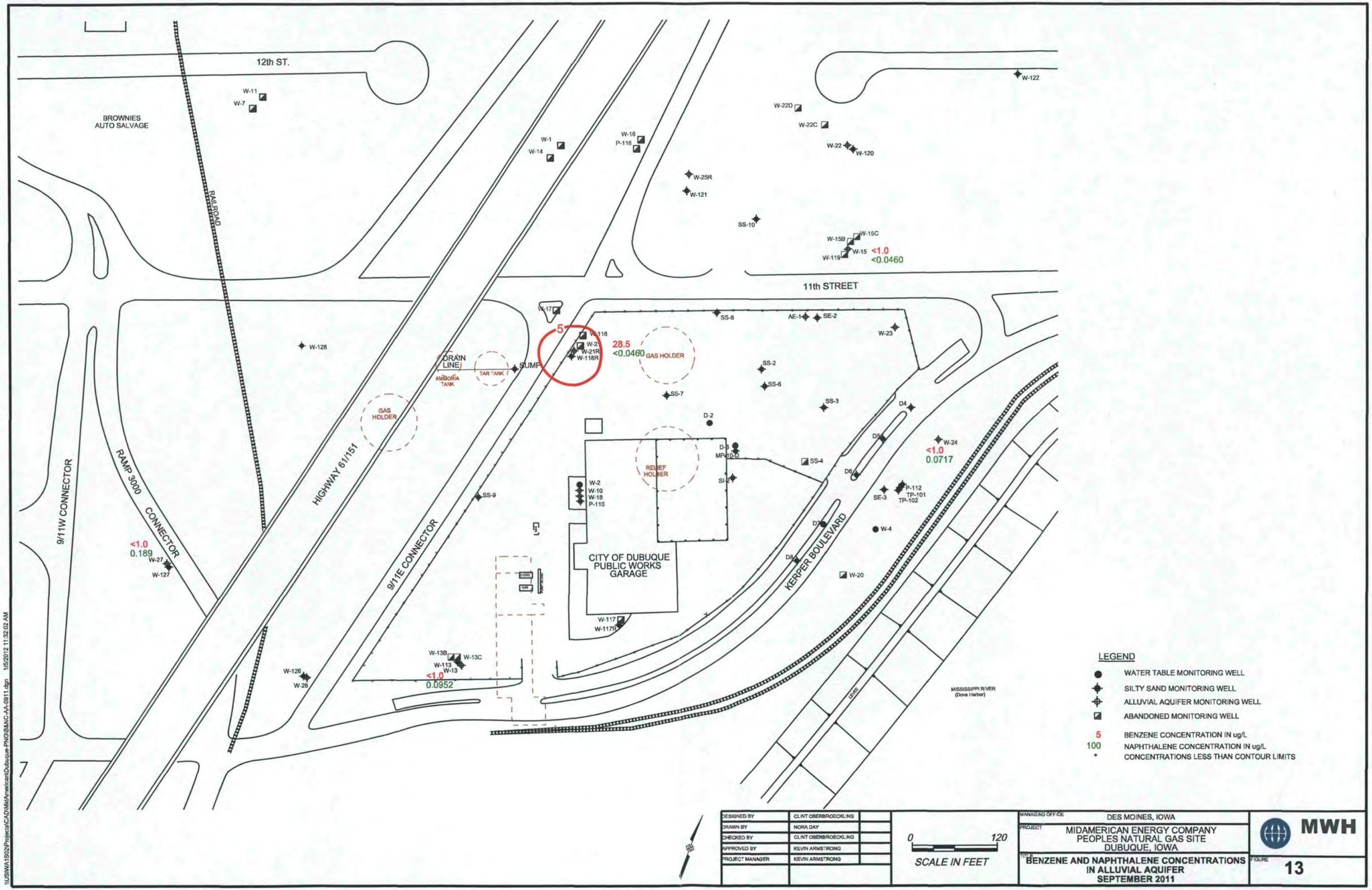
MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: BENZENE AND NAPHTHALENE CONCENTRATIONS IN ALLUVIAL AQUIFER APRIL 2011

MWH

FIGURE 12

\\US1WA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\B&NC-AA-0411.dgn 1/5/2012 11:46:49 AM



DESIGNED BY	CLINT OBERBROECKLING	
DRAWN BY	NORA DAY	
CHECKED BY	CLINT OBERBROECKLING	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	

0 120
SCALE IN FEET

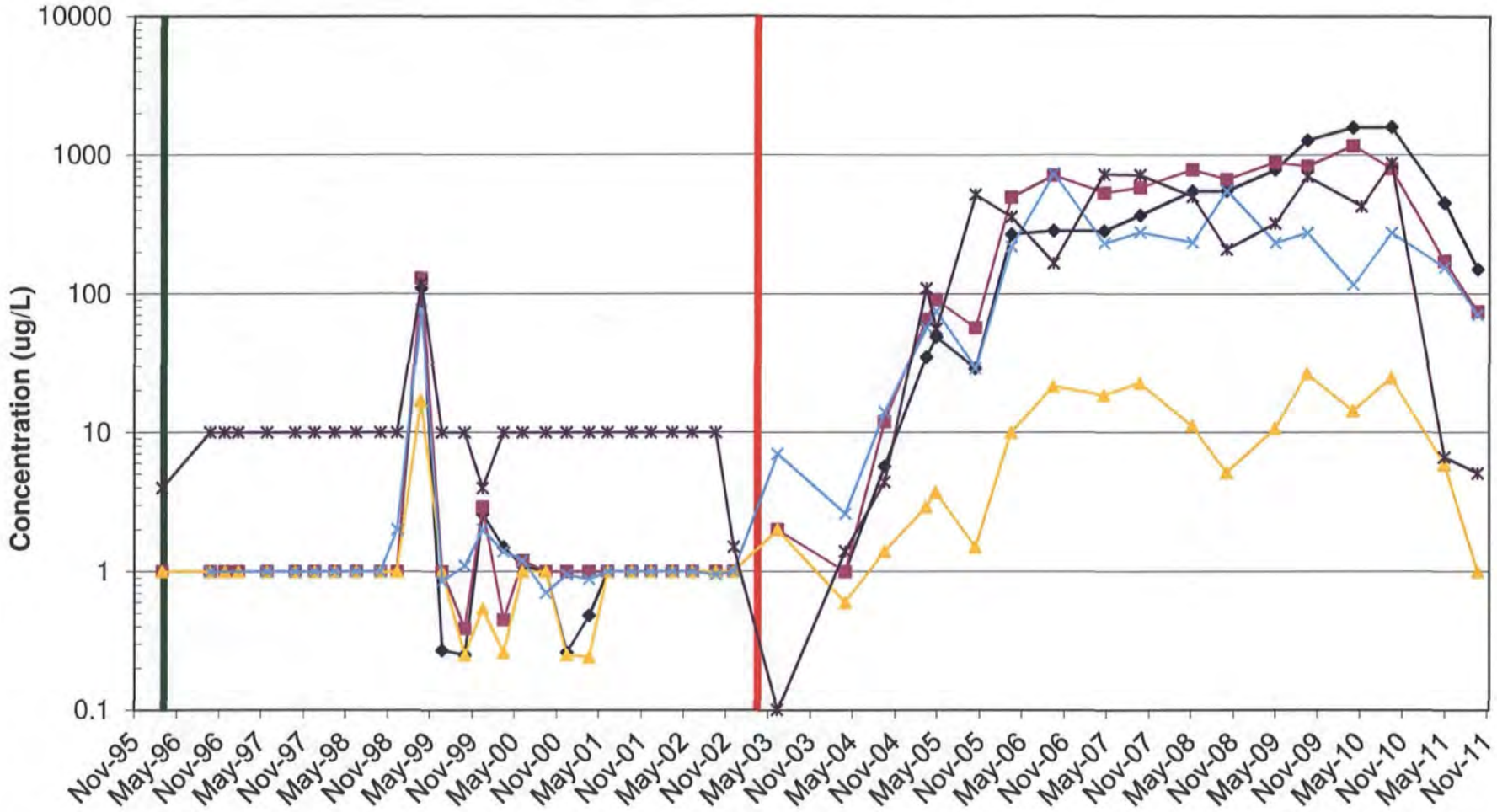
MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: BENZENE AND NAPHTHALENE CONCENTRATIONS IN ALLUVIAL AQUIFER SEPTEMBER 2011

MWH

FIGURE 13

\\USIWA1S022\Projects\CAD\Mid\AmericanDubuque-PNG\B&NC-AA-0911.dgn 1/5/2012 11:32:02 AM



DESIGNED BY	MWH	
DRAWN BY	K. ARMSTRONG	
CHECKED BY	C. OBERBROECKLING	
APPROVED BY	K. ARMSTRONG	
PROJECT MANAGER	K. ARMSTRONG	

MANAGING OFFICE: DES MOINES, IOWA

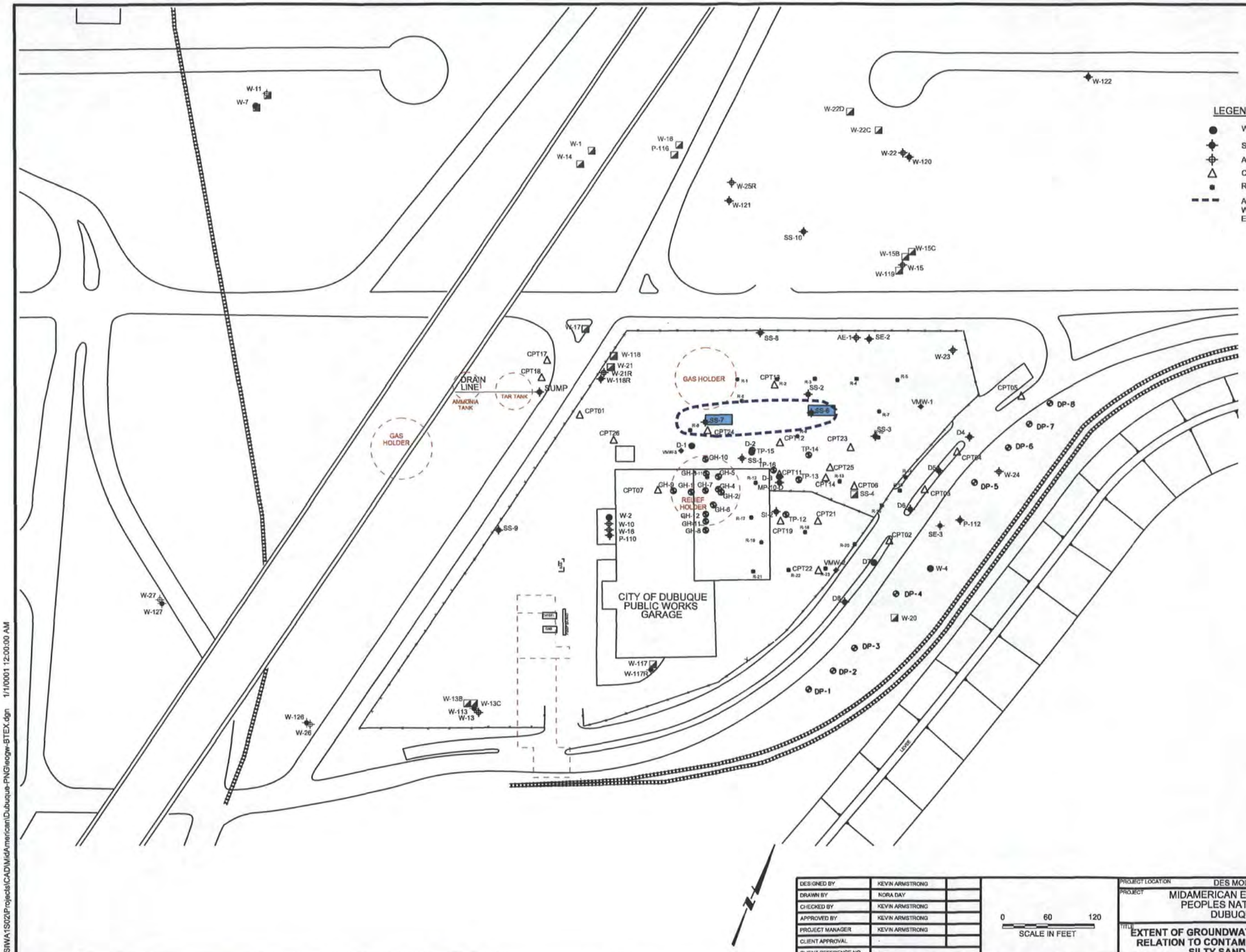
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: **P-112 CONCENTRATIONS**

MWH

FIGURE 14 REVISION 1

FILE NAME



DESIGNED BY	KEVIN ARMSTRONG	
DRAWN BY	NORA DAY	
CHECKED BY	KEVIN ARMSTRONG	
APPROVED BY	KEVIN ARMSTRONG	
PROJECT MANAGER	KEVIN ARMSTRONG	
CLIENT APPROVAL	-	
CLIENT REFERENCE NO.	-	

0 60 120
SCALE IN FEET

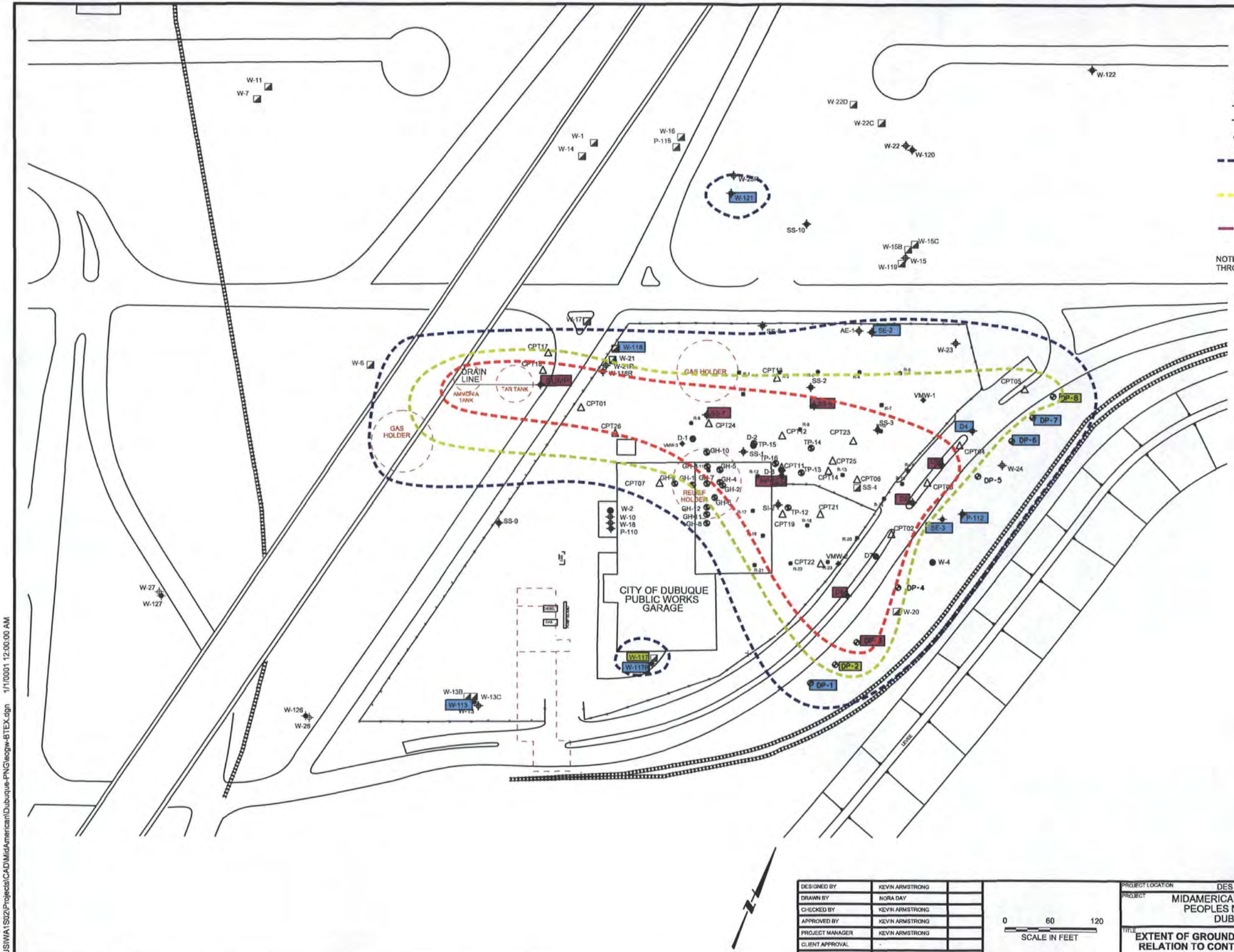
PROJECT LOCATION: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

TITLE: **EXTENT OF GROUNDWATER BTEX IMPACTS IN RELATION TO CONTAMINANT SOLUBILITIES SILTY SAND AQUIFER**

MWH

FIGURE: **15**

\\USIWA1S02\Projects\CAD\MidAmerican\Dubuque-PNG\eogw-BTEX.dgn 1/1/0001 12:00:00 AM



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LEGEND

- WATER TABLE MONITORING WELL
- SILTY SAND MONITORING WELL
- ALLUVIAL AQUIFER MONITORING WELL
- *ABANDONED MONITORING WELL*
- TECHNICAL IMPRACTICABILITY ZONE

12th ST.
11th STREET
BROWNIES AUTO SALVAGE
RAILROAD
HIGHWAY 61/151
9/11W CONNECTOR
RAMP 3000 CONNECTOR
9/11E CONNECTOR
KERPER BOULEVARD
DRAIN LINE
AMMONIA TANK
TAR TANK
SUMP
GAS HOLDER
RELIEF HOLDER
CITY OF DUBUQUE PUBLIC WORKS GARAGE
LEVEE
MISSISSIPPI RIVER (Dove Harbor)

W-11, W-7, W-1, W-14, W-16, P-116, W-25R, W-121, W-122, W-22D, W-22C, W-22, W-120, SS-10, W-15B, W-15C, W-119, W-15, W-17, SS-8, AE-1, SE-2, W-23, W-118, W-21, W-21R, W-118R, SS-7, SS-6, D-2, SS-1, D-3, MP-10-D, SI-2, SS-4, D4, D5, D6, W-24, P-112, SE-3, D7, D8, W-4, W-20, W-2, W-10, W-18, P-110, SS-9, W-117, W-117R, W-13B, W-13C, W-113, W-13, W-126, W-26, W-27, W-127

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

0 120
SCALE IN FEET

MANAGING OFFICE: DES MOINES, IOWA
PROJECT: MIDAMERICAN ENERGY COMPANY PEOPLES NATURAL GAS SITE DUBUQUE, IOWA
TITLE: **PROPOSED TECHNICAL IMPRACTICABILITY ZONE**

MWH

FIGURE 17

$$$$date$$$$
$$$$$$$$$$$$$$$$$$$$directory\filename\$$$$$$$$$$$$$$$$$$

ATTACHMENT A

SE-3 GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	1997 Permit Limits Average	1997 Permit Limits Maximum	Remediation Goal	Sample Location: / Screened Unit: / Depth BTOC (feet): / Sample Date: SE-3 Silty Sand 10/19/2011	SE-3 Silty Sand 11/28/11 18:00	SE-3 Silty Sand 11/29/11 12:45	SE-3 Silty Sand 11/29/11 12:50	SE-3 Silty Sand 12/1/11 12:55	SE-3 Silty Sand 12/2/11 12:55	
Benzene	µg/L	2,000	5,000	5	311	329	354	443	528	534	
Toluene	µg/L	600	1,500	2,000	4.21	<10.0	12.3	22.1	30.6	28.4	
Ethylbenzene	µg/L	200	500	700	273	260	256	320	333	326	
Xylenes	µg/L	600	1,500	10,000	247	41.5	73.1	117	144	142	
2-Methylnaphthalene	µg/L	2,000	5,000	–	na	10.1	14.4	46.8	56.2	57.8	
Acenaphthene	µg/L	400	1,000	–	79.5	73.4	61.0	72.5	76.4	70.1	
Acenaphthylene	µg/L	400	1,000	–	<0.870	<0.870	<0.870	<0.870	<8.70	<8.70	
Anthracene	µg/L	2,000	5,000	–	0.831	0.805	0.814	0.984	1.03	1.3	
Benzo(a)anthracene	µg/L	19	47	0.1	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	
Benzo(a)pyrene	µg/L	20	48	0.2	<0.00800	<0.00800	<0.00800	<0.00800	<0.00800	<0.00800	
Benzo(b)fluoranthene	µg/L	19	47	0.2	<0.0280	<0.0280	<0.0280	<0.0280	<0.0280	<0.0280	
Benzo(g,h,i)perylene	µg/L	400	1,000	–	<0.00800	<0.00800	<0.00800	<0.00800	<0.00800	<0.00800	
Benzo(k)fluoranthene	µg/L	19	47	0.2	<0.00700	<0.00700	<0.00700	<0.00700	<0.00700	<0.00700	
Chrysene	µg/L	19	47	0.2	<0.00800	<0.00800	<0.00800	<0.00800	<0.00800	<0.00800	
Dibenzo(a,h)anthracene	µg/L	45	65	0.2	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	
Fluoranthene	µg/L	400	1,000	–	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	
Fluorene	µg/L	200	500	–	35.9	32.9	27.5	32.5	36.6	36	
Indeno(1,2,3cd)pyrene	µg/L	45	65	0.4	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	
Naphthalene	µg/L	2,000	5,000	100	21.3	71.6	183	359	464	454	
Phenanthrene	µg/L	400	1,000	–	9.14	9.28	8.06	9.72	10.1	9.31	
Pyrene	µg/L	400	1,000	–	0.224	<0.0170	<0.0170	<0.0170	<0.0170	<0.0170	
Dibenzofuran	µg/L	400	1,000	–	na	na	na	na	na	<50.0	RL1
Total PAHs	µg/L	6,000	15,000	–	147	198	295	522	644	629	
2,4-Dinitrotoluene	µg/L	400	1,000	–	na	na	na	na	na	<50.0	RL1
2,6-Dinitrotoluene	µg/L	400	1,000	–	na	na	na	na	na	<50.0	RL1
Nitrobenzene	µg/L	2,000	5,000	–	na	na	na	na	na	<50.0	RL1

SE-3 GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

		1997 Permit Limits		Sample Location: / Screened Unit: / Depth BTOC (feet): / Sample Date: / Remediation Goal	SE-3 Silty Sand 10/19/2011	SE-3 Silty Sand 11/28/11 18:00	SE-3 Silty Sand 11/29/11 12:45	SE-3 Silty Sand 11/29/11 12:50	SE-3 Silty Sand 12/1/11 12:55	SE-3 Silty Sand 12/2/11 12:55	
Analyte	**Units**	**Average**	**Maximum**								
2,4-Dimethylphenol	µg/L	2,000	5,000	--	na	na	na	na	na	<50.0	RL1
2,4-Dinitrophenol	µg/L	400	1,000	--	na	na	na	na	na	<100	RL1
4,6-Dinitro-2-methylphenol	µg/L	400	1,000	--	na	na	na	na	na	<50.0	RL1
2-Nitrophenol	µg/L	400	1,000	--	na	na	na	na	na	<50.0	RL1
4-Nitrophenol	µg/L	400	1,000	--	na	na	na	na	na	<50.0	RL1
Phenol	µg/L	2,000	5,000	--	na	na	na	na	na	<50.0	RL1
Total Phenolic Compounds	µg/L	4,000	10,000	--	na	na	na	na	na	ND	
Chromium, Total	mg/L	--	--	--	na	na	na	na	na	<0.0200	
Copper, Total	mg/L	--	--	--	na	na	na	na	na	<0.0200	
Iron, Total	mg/L	--	--	--	na	na	na	na	na	68.8	
Lead, Total	mg/L	400	1,000	--	na	na	na	na	na	<0.100	
Manganese, Total	mg/L	--	--	--	na	na	na	na	na	4.21	
Nickel, Total	mg/L	--	--	--	na	na	na	na	na	<0.0500	
Zinc, Total	mg/L	1,000	2,500	--	na	na	na	na	na	<0.100	IE
Cyanide, Total	mg/L	500	1,250	--	na	na	na	na	na	0.848	pH<12
TPH as Gasoline	mg/L	--	--	--	na	na	na	na	na	5.45	
Hardness, Total	mg/L	--	--	--	na	na	na	na	na	1920	pH>2
Cyanide (amenable)	mg/L	500	1,250	--	na	na	na	na	na	0.039	pH<12
pH	s.u.	--	--	--	6.49	6.31	6.50	6.37	6.09	6.80	

Notes:
-- = Remediation Goal or Permit Limit not established.
BTOC = Below top of casing.
na = Not analyzed.
ND = Not Detected.
s.u. = Standard Units.
RL1 = Reporting limit raised due to sample matrix effects.
IE = Elevated reporting limit du to interelement interference.
pH<12 = Sample received at pH<12. It was adjusted correctly prior to analysis.
pH>2 = Sample received at pH>2. It was adjusted correctly prior to analysis.
µg/l = Microgram(s) per liter.
mg/L = Milligram(s) per liter.

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: D-7 / Screened Unit: Water Table / Depth BTOC (feet): 22.3 / Sample Date: 06-Jun-01	D-7 Water Table 22.3 20-Sep-01	D-7 Water Table 22.3 29-Apr-09	D-7 Water Table 22.3 15-Sep-09	D-7 Water Table 22.3 31-Mar-10	D-7 Water Table 22.3 06-May-10	D-7 Water Table 22.3 20-Sep-11
Benzene	µg/L	5	970	1400	726	638	638	na	582
Toluene	µg/L	2,000	390	600	318	240	247	na	225
Ethylbenzene	µg/L	700	140	250	142	126	109	na	115
Xylenes	µg/L	10,000	150	370	236	232	231	na	174
2-Methylnaphthalene	µg/L	--	460	550	na	na	na	na	na
Dibenzofuran	µg/L	--	41	39	na	na	na	na	na
Acenaphthene	µg/L	--	130	92	43.9	136	0.337 U	61.8	48.7
Acenaphthylene	µg/L	--	93	69	38.3	133	1.33 U	0.435 U	5.93
Anthracene	µg/L	--	40	47	16.2	177	318	13.8	27
Benzo(a)anthracene	µg/L	0.1	16	18	5.34	71.6	147	31.7	8.51
Benzo(a)pyrene	µg/L	0.2	9.7	12	7.44	53.8	125	38.7	7.1
Benzo(b)fluoranthene	µg/L	0.2	6.8 J	14	6.54	39.4	0.429 U	0.140 U	6.75
Benzo(g,h,i)perylene	µg/L	--	4.2 J	10 U	4.47	29.1	0.122 U	15.8	3.29
Benzo(k)fluoranthene	µg/L	0.2	8.2 J	5.1 J	2.20	24	35.8	0.0350 U	1.95
Chrysene	µg/L	0.2	14	17	4.15	80.5	435	18.7	9.58
Dibenzo(a,h)anthracene	µg/L	0.2	1.4 J	10 U	0.936	6.85	0.0510 U	0.0100 U	0.635
Fluoranthene	µg/L	--	38	42	19.7	337	598	112	39.4
Fluorene	µg/L	--	82	81	55.9	306	0.816 U	70.5	57.9
Indeno(1,2,3cd)pyrene	µg/L	0.4	4.6 J	4.8 J	4.08	26.2	0.0306 U	14.2	3.38
Naphthalene	µg/L	100	1600	1600	105	1460	R	939	0.0523 U
Phenanthrene	µg/L	--	160	200	27.5	710	1350	107	78.3
Pyrene	µg/L	--	55	54	17	177	268	11.8	34.3

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-4 / Screened Unit: Water Table / Depth BTOC (feet): 23.4 / Sample Date: 11-Oct-05	W-4 Water Table 23.4 15-Mar-06	W-4 Water Table 23.4 12-Sep-06	W-4 Water Table 23.4 18-Apr-07	W-4 Water Table 23.4 20-Sep-07	W-4 Water Table 23.4 6-May-08	W-4 Water Table 23.4 1-Oct-08
Benzene	µg/L	5	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	1.0 U	1.0 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	1.1 Ja	2.6 U	1.06	0.298	0.526	0.263	2.75
Acenaphthylene	µg/L	--	2.4	0.77 Ja	0.0850 U	0.0850 U	0.0850 U	0.0850 U	0.0967 U
Anthracene	µg/L	--	0.073	0.052 Ua	0.0103 J	0.0100 U	0.0100 U	0.0100 U	0.0378 J
Benzo(a)anthracene	µg/L	0.1	0.032 Ja	0.13 U	0.00300 U	0.00300 U	0.00300 U	0.00300 U	0.00556 U
Benzo(a)pyrene	µg/L	0.2	0.028 Ja	0.13 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.00889 U
Benzo(b)fluoranthene	µg/L	0.2	0.049 U	0.052 U	0.0130 U	0.0130 U	0.0130 U	0.0130 U	0.0311 U
Benzo(g,h,i)perylene	µg/L	--	0.19 U	0.21 U	0.00900 U	0.00900 U	0.00900 U	0.00900 U	0.00889 U
Benzo(k)fluoranthene	µg/L	0.2	0.049 U	0.052 U	0.0150 U	0.0150 U	0.0150 U	0.0150 U	0.00778 U
Chrysene	µg/L	0.2	0.031 Ja	0.13 U	0.00500 U	0.00500 U	0.0197 J	0.00500 U	0.00889 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.29 U	0.31 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0111 U
Fluoranthene	µg/L	--	0.18	0.13 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0111 U
Fluorene	µg/L	--	0.11 Ja	0.056 Ja	0.0100 U	0.0653 J	0.31	0.18 J	1.43
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.13 U	0.13 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00667 U
Naphthalene	µg/L	100	1.3 U	1.3 U	0.0540 U	0.0567 J,B	0.0540 U	0.0540 U	0.0511 U
Phenanthrene	µg/L	--	0.15	0.10 Ua	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00556 U
Pyrene	µg/L	--	0.12 Ja	0.26 U	0.0190 U	0.0190 U	0.0190 U	0.0190 U	0.0284 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-4 / Screened Unit: Water Table / Depth BTOC (feet): 23.4 / Sample Date: 29-Apr-09	W-4 / Water Table / 23.4 / 16-Sep-09	W-4 / Water Table / 23.4 / 31-Mar-10	W-4 / Water Table / 23.4 / 6-May-10	W-4 / Water Table / 23.4 / 14-Sep-10	W-4 / Water Table / 23.4 / 27-Apr-11	W-4 / Water Table / 23.4 / 20-Sep-11
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	na	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.00 U	1.00 U	1.00 U	na	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.00 U	1.00 U	1.00 U	na	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	3.00 U	3.00 U	6.00 U	na	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	0.631	1.39	0.570	0.332	0.558	0.528	0.991
Acenaphthylene	µg/L	--	0.0978 U	0.0870 U	0.0870 U	0.0989 U	0.291	0.0870 U	0.346
Anthracene	µg/L	--	0.0112 U	0.0189 J	0.0100 U	0.0114 U	0.0100 U	0.0100 U	0.0126 J
Benzo(a)anthracene	µg/L	0.1	0.00562 U	0.00651 J	0.00500 U	0.00568 U	0.00500 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2	0.00899 U	0.00800 U	0.00800 U	0.00909 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0315 U	0.0280 U	0.0280 U	0.0318 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00899 U	0.00800 U	0.00800 U	0.00909 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00787 U	0.00700 U	0.00700 U	0.00795 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00899 U	0.00800 U	0.00800 U	0.00909 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0112 U	0.0100 U	0.0100 U	0.0114 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.0112 U	0.0100 U	0.0100 U	0.0114 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.0180 U	0.764	0.0160 U	0.0182 U	0.0160 U	0.0265 J	0.242
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00674 U	0.00600 U	0.00600 U	0.00682 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	0.0517 U	0.153	R	0.0737 J	0.161	0.0460 U	0.0795 J, B
Phenanthrene	µg/L	--	0.00562 U	0.0505 J	0.00500 U	0.00568 U	0.00500 U	0.00500 U	<0.00500
Pyrene	µg/L	--	0.0191 U	0.0170 U	0.0170 U	0.0193 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: D-4 Screened Unit: Silty Sand Depth BTOC (feet): 37.0 Sample Date: 29-Apr-09	D-4 Silty Sand 37.0 15-Sep-09	D-4 Silty Sand 37.0 31-Mar-10	D-4 Silty Sand 37.0 06-May-10	D-4 Silty Sand 37.0 15-Sep-10	D-4 Silty Sand 37.0 27-Apr-11	D-4 Silty Sand 37.0 20-Sep-11
Benzene	µg/L	5	458.0	413	222	na	440	**1430**	**778**
Toluene	µg/L	2,000	13.5	10.0 U	5.00 U	na	6.97	26.5	19.3
Ethylbenzene	µg/L	700	484	321	99.8	na	349	**1010**	673
Xylenes	µg/L	10,000	176.0	137	30.0 U	na	119	500	203
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	59.9	40.4	39.4	71.9	85.4	94.5	137
Acenaphthylene	µg/L	--	56.4	0.870 U	51.1	0.870 U	95	0.0870 U	176
Anthracene	µg/L	--	1.57	0.746	1.68	1.51	2.52	2.25	2.9
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.0186 J	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.0100 U	0.471	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	47.8	36.1	21.7	39	39.6	13	56.4
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	214	107	R	320	30.2	**964 B**	**214 B**
Phenanthrene	µg/L	--	15.1	9.91	9.52	12	17.6	17.9	21.5
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: D-5 Screened Unit: Silty Sand Depth BTOC (feet): 37.5 Sample Date: 31-Mar-10	D-5 Silty Sand 37.5 06-May-10	D-5 Silty Sand 37.5 20-Sep-11	D-6 Silty Sand 37.0 21-Mar-01	D-6 Silty Sand 37.0 06-Jun-01	D-6 Silty Sand 37.0 20-Sep-01	D-6 Silty Sand 37.0 11-Dec-01	D-6 Silty Sand 37.0 13-Mar-02
Benzene	µg/L	5	**1290**	na	**1120**	52	48	80	20	13
Toluene	µg/L	2,000	432	na	192	17	7.9	12	2.3	3.8
Ethylbenzene	µg/L	700	**850**	na	571	59	38	37	6.4	15
Xylenes	µg/L	10,000	770	na	468	56	34	32	16	28
2-Methylnaphthalene	µg/L	--	na	na	na	93	47	48	16	18
Dibenzofuran	µg/L	--	na	na	na	12	6.2 J	5.3 J	4.2 4	3.6 J
Acenaphthene	µg/L	--	111	97.1	104	68	41	36	32	30
Acenaphthylene	µg/L	--	1.74 U	0.870 U	163	11	4.8 J	3.5 J	2.4 J	8.4 J
Anthracene	µg/L	--	5.89	6.01	8.35	5.2 J	5.5 J	4.8 J	3.2 J	6.6 J
Benzo(a)anthracene	µg/L	0.1	3.05	2.19	**2.25**	10 U	10 U	10 U	10 U	2.9 J
Benzo(a)pyrene	µg/L	0.2	3.40	0.00800 U	**2.35**	10 U	10 U	10 U	10 U	2.4 J
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	**2.11**	10 U	10 U	10 U	10 U	2.4 J
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	2.84	1.23	10 U	10 U	10 U	10 U	0.82 J
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	**0.868**	10 U	10 U	10 U	10 U	0.88 J
Chrysene	µg/L	0.2	0.00800 U	1.06	**2.53**	10 U	10 U	10 U	10 U	2.1 J
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	**0.217**	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	10.6	10.8	8.22	1.8 J	2.3 J	2.6 J	2.2 J	8.9 J
Fluorene	µg/L	--	52.3	49.5	50.1	28	16	13	12	14
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.777	**1.16**	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	R	2280	**3130 B**	620	220	160	22	24
Phenanthrene	µg/L	--	34.6	25	30.8	28	23	19	15	14
Pyrene	µg/L	--	0.0170 U	0.0170 U	7.58	2 J	2.2 J	2.6 J	2.4 J	11

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
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Analyte	Units	Remediation Goal	D-6 Silty Sand 37.0 07-Jun-02	D-6 Silty Sand 37.0 18-Sep-02	D-6 Silty Sand 37.0 27-Apr-05	D-6 Silty Sand 37.0 11-Oct-05	D-6 Silty Sand 37.0 15-Mar-06	D-6 Silty Sand 37.0 12-Sep-06	D-6 Silty Sand 37.0 18-Apr-07	D-6 Silty Sand 37.0 09-Sep-07
Sample Location:			D-6	D-6	D-6	D-6	D-6	D-6	D-6	D-6
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Sample Date:			07-Jun-02	18-Sep-02	27-Apr-05	11-Oct-05	15-Mar-06	12-Sep-06	18-Apr-07	09-Sep-07
Benzene	µg/L	5	56	97	610	990	670	638	556	1220
Toluene	µg/L	2,000	13	25	87	120	33	24.4	22.3	159
Ethylbenzene	µg/L	700	61	83	620	730	620	635	582	795
Xylenes	µg/L	10,000	65	110	640	600	340	253	222	564
2-Methylnaphthalene	µg/L	--	14	8.7 J	na	na	na	na	na	na
Dibenzofuran	µg/L	--	6.6 J	9.1 J	na	na	na	na	na	na
Acenaphthene	µg/L	--	53	53	690	88	110	170	226	143
Acenaphthylene	µg/L	--	12	14	4300	1300	1400	46.4	0.0850 U	0.0850 U
Anthracene	µg/L	--	13	15	290	20	20	52.2	54.6	19.4
Benzo(a)anthracene	µg/L	0.1	7.9 J	12	180	8.3	9.6	21.9	22.9	8
Benzo(a)pyrene	µg/L	0.2	6.1 J	14	110	5.2	5.8	22	20.9	9.36
Benzo(b)fluoranthene	µg/L	0.2	6.5 j	14	55	2.7	3.1	17.6	16.6	5.74
Benzo(g,h,i)perylene	µg/L	--	2.0 J	4.3 J	37	1.8 Ja	2.1	8.07	7.98	6.81
Benzo(k)fluoranthene	µg/L	0.2	2.5 J	5.4 J	35	1.1	1.3	7.07	7.24	2.83
Chrysene	µg/L	0.2	7.4 J	12	120	5.5	6.2	24.8	18.6	8.74
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	20	0.87 J	0.88 J	1.95	1.73	1.07
Fluoranthene	µg/L	--	20	27	810	42	44	75.2	106	29.1
Fluorene	µg/L	--	21	28	350	35	34	149	149	142
Indeno(1,2,3cd)pyrene	µg/L	0.4	2.4 J	5.2 J	47	2.2	2.7	9.41	10	5.07
Naphthalene	µg/L	100	12	4.6	4800	1200	800	583	712	854
Phenanthrene	µg/L	--	11	32	1200	74	77	170	181	86.3
Pyrene	µg/L	--	28	32	450	21	24	317	320	27

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
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Analyte	Units	Remediation Goal	Sample Location: D-6 / Screened Unit: Silty Sand / Depth BTOC (feet): 37.0 / Sample Date: 06-May-08	D-6 Silty Sand 37.0 15-Sep-09	D-6 Silty Sand 37.0 31-Mar-10	D-6 Silty Sand 37.0 06-May-10	D-6 Silty Sand 37.0 16-Sep-10	D-6 Silty Sand 37.0 28-Apr-11	D-6 Silty Sand 37.0 20-Sep-11	D-8 Silty Sand 37.8 29-Apr-09
Benzene	µg/L	5	1030	966	1470	NS	1060	659	1600	187
Toluene	µg/L	2,000	25.8	49.2	49.6	NS	44.8	39.5	219	8.22
Ethylbenzene	µg/L	700	948	870	700 C9	NS	737	424	709	32.2
Xylenes	µg/L	10,000	253	1140	345 C9	NS	356	230	713	94.0
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	194	213	186	148	3.67	151	228	13.1
Acenaphthylene	µg/L	--	0.0850 U	4.35 U	1.35 U	1.74 U	13.9	0.0870 U	225	14.2
Anthracene	µg/L	--	37.9	33.6	29.7	14.8	0.0654 J	22.1	48.5	3.60
Benzo(a)anthracene	µg/L	0.1	18.5	13.4	14.5	4.83	0.00500 U	8.5	15.8	1.83
Benzo(a)pyrene	µg/L	0.2	18.2	12.4	13.4	4.9	0.00800 U	6.6	13.8	2.88
Benzo(b)fluoranthene	µg/L	0.2	12.8	7.56	0.0433 U	0.0280 U	0.0280 U	4.88	13	2.46
Benzo(g,h,i)perylene	µg/L	--	10	7.3	0.0124 U	2.38	0.00800 U	4.08	7.26	1.25
Benzo(k)fluoranthene	µg/L	0.2	6.44	4.54	0.0108 U	0.00700 U	0.00700 U	2.31	3.32	1.06
Chrysene	µg/L	0.2	17.7	10.1	0.124 U	2.47	0.00800 U	11.3	16.2	2.18
Dibenzo(a,h)anthracene	µg/L	0.2	1.95	1.56	0.140 J	0.0100 U	0.0100 U	0.336	1.15	0.183
Fluoranthene	µg/L	--	73.4	58.4	42.2	16	0.0100 U	20.1	61.1	9.28
Fluorene	µg/L	--	207	207	103	88.8	2.41	42.7	140	17.2
Indeno(1,2,3cd)pyrene	µg/L	0.4	9.59	6.91	0.00928 U	1.98	0.00600 U	3.95	7.31	1.00
Naphthalene	µg/L	100	591	659	R	616	10.2	538	2610 B	56.1
Phenanthrene	µg/L	--	158	153	120	53.2	0.226	71.2	163	14.1
Pyrene	µg/L	--	52.6	43.8	0.0263 U	2.95	0.0170 U	1.82	50.3	23.3

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
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Analyte	Units	Remediation Goal	D-8 Silty Sand 37.8 15-Sep-09	D-8 Silty Sand 37.8 31-Mar-10	D-8 Silty Sand 37.8 06-May-10	D-8 Silty Sand 37.8 15-Sep-10	D-8 Silty Sand 37.8 27-Apr-11	D-8 Silty Sand 37.8 20-Sep-11	P-112 Silty Sand 38.8 29-Feb-96	P-112 Silty Sand 38.8 24-Sep-96
Benzene	µg/L	5	103	103	na	79.3	112	**49.8**	1	1 U
Toluene	µg/L	2,000	3.14	3.24	na	2.67	5.15	3.93	1 U	1 U
Ethylbenzene	µg/L	700	24.1	18.8 C9	na	15.4	25.2	20.7	1	1 U
Xylenes	µg/L	10,000	35.8	28.7 C9	na	23.7	49.3	34.4	na	1 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	10 U	10 U
Dibenzofuran	µg/L	--	na	na	na	na	na	na	10 U	10 U
Acenaphthene	µg/L	--	9.34	9.45	9.55	7.03	12.8	20.4	10 U	10 U
Acenaphthylene	µg/L	--	10.9	26.1	0.0870 U	0.0870 U	0.0870 U	22.2	10 U	10 U
Anthracene	µg/L	--	1.04	1.83	0.445	0.85	0.834	1.94	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	0.159	0.625	0.179	0.136	0.0407 J	**0.302**	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.131 J	0.00800 U	0.00800 U	0.0399 J	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	0.509	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	10 U	10 U
Chrysene	µg/L	0.2	0.301	0.967	0.00800 U	0.185	0.0582 J	**0.221**	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.138	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	10 U	10 U
Fluoranthene	µg/L	--	1.37	2.77	0.0100 U	1.03	0.576	2.5	10 U	10 U
Fluorene	µg/L	--	10.6	6.75	0.0160 U	6.27	3.21	13.2	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	10 U	10 U
Naphthalene	µg/L	100	69.6	R	56.1	73.8	34.8 B	25 B	4	10 U
Phenanthrene	µg/L	--	2.91	5.19	2.94	2.43	1.79	3.59	10 U	10 U
Pyrene	µg/L	--	0.563	0.017 U	0.0170 U	0.404	0.0170 U	1.38	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
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Analyte	Units	Remediation Goal	Sample Location:	P-112	P-112	P-112	P-112	P-112	P-112	P-112	P-112	P-112
			Screened Unit:	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
			Depth BTOC (feet):	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
			Sample Date:	26-Nov-96	23-Jan-97	28-May-97	25-Sep-97	19-Dec-97	17-Mar-98	16-Jun-98	29-Sep-98	10-Dec-98
Benzene	µg/L	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	2,000		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	700		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000		na	na	1 U	1 U	1 U	1 U	1 U	1 U	2
2-Methylnaphthalene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	P-112 Silty Sand 38.8 24-Mar-99	P-112 Silty Sand 38.8 23-Jun-99	P-112 Silty Sand 38.8 28-Sep-99	P-112 Silty Sand 38.8 15-Dec-99	P-112 Silty Sand 38.8 15-Mar-00	P-112 Silty Sand 38.8 06-Jun-00	P-112 Silty Sand 38.8 14-Sep-00	P-112 Silty Sand 38.8 13-Dec-00	P-112 Silty Sand 38.8 20-Mar-01
Sample Location:			P-112	P-112	P-112	P-112	P-112	P-112	P-112	P-112	P-112
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
Sample Date:			24-Mar-99	23-Jun-99	28-Sep-99	15-Dec-99	15-Mar-00	06-Jun-00	14-Sep-00	13-Dec-00	20-Mar-01
Benzene	µg/L	5	110	0.27	0.25	2.6	1.5	1.1	1 U	0.26 J	0.48 J
Toluene	µg/L	2,000	17	1 U	0.25	0.54	0.26	1 U	1 U	0.25 J	0.24 J
Ethylbenzene	µg/L	700	130	1 U	0.39	2.9	0.45	1.2	1 U	1 U	1 U
Xylenes	µg/L	10,000	76	0.85	1.1	2	1.4	1.2	0.7 J	0.95 J	0.88 J
2-Methylnaphthalene	µg/L	--	4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	µg/L	--	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	120	10 U	10 U	4	10 U	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	P-112 Silty Sand 38.8 07-Jun-01	P-112 Silty Sand 38.8 19-Sep-01	P-112 Silty Sand 38.8 11-Dec-01	P-112 Silty Sand 38.8 13-Mar-02	P-112 Silty Sand 38.8 07-Jun-02	P-112 Silty Sand 38.8 18-Sep-02	P-112 Silty Sand 38.8 04-Dec-02	P-112 Silty Sand 38.8 10-Jun-03	P-112 Silty Sand 38.8 30-Mar-04
Benzene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1.0 U
Toluene	µg/L	2,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	0.61 Ja
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1.0 U
Xylenes	µg/L	10,000	1 U	1 U	1 U	1 U	1 U	0.95 J	1 P	7 U	2.6
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	na	na
Dibenzofuran	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	na	na
Acenaphthene	µg/L	--	0.84 J	0.59 J	1.0 J	0.93 J	0.69 J	1.1 J	1.1J	0.54	1.3 Ja
Acenaphthylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	4.4
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.053 Ua
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.14 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.14 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.053 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.21 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.053 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.14 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.32 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.12	0.14 U
Fluorene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.26 Ua
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.14 U
Naphthalene	µg/L	100	10 U	10 U	10 U	10 U	10 U	10 U	1.5	0.1 U	1.4 Ua
Phenanthrene	µg/L	--	10 U	10 U	1.0 J	10 U	10 U	10 U	10 U	0.2	0.031 Ja
Pyrene	µg/L	--	10 U	10 U	0.73 J	10 U	10 U	10 U	10 U	0.14	0.26 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	P-112 Silty Sand 38.8 15-Sep-04	P-112 Silty Sand 38.8 14-Mar-05	P-112 Silty Sand 38.8 25-Apr-05	P-112 Silty Sand 38.8 11-Oct-05	P-112 Silty Sand 38.8 15-Mar-06	P-112 Silty Sand 38.8 12-Sep-06	P-112 Silty Sand 38.8 18-Apr-07	P-112 Silty Sand 38.8 20-Sep-07	P-112 Silty Sand 38.8 06-May-08
Benzene	µg/L	5	5.7	35	49	29	270	286	285	369 M1	551
Toluene	µg/L	2,000	1.4	2.9	3.7	1.5	10 U	21.6	18.6	22.8 M1	11.2 L1
Ethylbenzene	µg/L	700	12	66	91	57	500	715	536	585	789
Xylenes	µg/L	10,000	14	57	75	29	220	734	232	279 M1	236 L1
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	1.7 Ja	5.6	2.0 Ja	18	11	32.4	54.3	55.4	84.7
Acenaphthylene	µg/L	--	13	100	50	380	270	0.0850 U	0.0944 U	0.0850 U	0.0850 U
Anthracene	µg/L	--	0.049 U	0.050 U	0.050 U	0.24 U	0.051 U	0.0113	0.0721 J	0.136 J	0.217
Benzo(a)anthracene	µg/L	0.1	0.13 U	0.13 U	0.13 U	0.62 U	0.13 U	0.00558	0.00333 U	0.00300 U	0.0100 J
Benzo(a)pyrene	µg/L	0.2	0.13 U	0.13 U	0.13 U	0.62 U	0.13 U	0.0130 U	0.0356 U	0.0320 U	0.0320 U
Benzo(b)fluoranthene	µg/L	0.2	0.049 U	0.050 U	0.050 Ua	0.24 U	0.051 U	0.0150 U	0.0144 U	0.0130 U	0.0130 U
Benzo(g,h,i)perylene	µg/L	--	0.19 U	0.20 U	0.20 U	0.95 U	0.20 U	0.0320 U	0.0100 U	0.00900 U	0.00900 U
Benzo(k)fluoranthene	µg/L	0.2	0.049 U	0.050 U	0.050 U	0.24 U	0.051 U	0.00900 U	0.0167 U	0.0150 U	0.0150 U
Chrysene	µg/L	0.2	0.13 U	0.13 U	0.13 U	0.62 U	0.13 U	0.0338 J	0.00556 U	0.00500 U	0.00500 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.29 U	0.30 U	0.3 U	1.4 U	0.30 U*	0.0100 U	0.0111 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.13 U	0.13 U	0.13 U	0.22 Ja	0.13 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.051 Ja	0.25 U	0.25 U	1.8	1.2	10.1	20.3	33.5	64.2
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.13 U	0.13 U	0.13 U	0.62 U	0.13 U	0.00700 U	0.00778 U	0.007	0.00700 U
Naphthalene	µg/L	100	4.4	110	56	520	360	167	727 B	719	506
Phenanthrene	µg/L	--	0.018 Ja	0.099 U	0.099 Ua	0.48 U	0.10 U	0.544	2.4	1.65	2.95
Pyrene	µg/L	--	0.24 U	0.25 U	0.25 Ua	1.2 U	0.25 U	0.0190 U	0.0211 U	0.0190 U	0.0248 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: P-112 Screened Unit: Silty Sand Depth BTOC (feet): 38.8 Sample Date: 01-Oct-08	P-112 Silty Sand 38.8 29-Apr-09	P-112 Silty Sand 38.8 16-Sep-09	P-112 Silty Sand 38.8 31-Mar-10	P-112 Silty Sand 38.8 06-May-10	P-112 Silty Sand 38.8 14-Sep-10	P-112 Silty Sand 38.8 28-Apr-11	P-112 Silty Sand 38.8 20-Sep-11
Benzene	µg/L	5	554	786	1280	1580	na	1590	454	151
Toluene	µg/L	2,000	5.15	10.7	26.7	14.4	na	24.8	5.89	1.0 U
Ethylbenzene	µg/L	700	671	890	831	1170	na	798	173	74.6
Xylenes	µg/L	10,000	556	235	277	117	na	276	155	70.9
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	79.4	80.6	101	109	120 MHA	113	41.4	50.2
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	1.74 U	0.870 U	0.435 U	0.0870 U	56.8
Anthracene	µg/L	--	0.125 J	0.160 J	0.265	0.0100 U	0.192	0.432	0.126 J	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/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
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.198	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	8.06	11.5	91.7	53	54 MHA	41.6	4.64	15.3
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	211	324	703	R	429 MHA	877	6.63	5.09 B
Phenanthrene	µg/L	--	2.17	2.63	3.52	0.100 U	0.00500 U,M1	5.05	1.39	0.00500 U
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: SE-2 Screened Unit: Silty Sand Depth BTOC (feet): 32.5 Sample Date: 25-May-94	SE-2 Silty Sand 32.5 29-Feb-96	SE-2 Silty Sand 32.5 25-Sep-96	SE-2 Silty Sand 32.5 26-Nov-96	SE-2 Silty Sand 32.5 23-Jan-97	SE-2 Silty Sand 32.5 30-May-97	SE-2 Silty Sand 32.5 30-Sep-97	SE-2 Silty Sand 32.5 19-Dec-97
Benzene	µg/L	5	660	2300	1500	960	950	1200	510	940
Toluene	µg/L	2,000	290	500	370	240	240	350	140	310
Ethylbenzene	µg/L	700	1600	2300	890	570	690	830	360	690
Xylenes	µg/L	10,000	1300	na	710	450	530	620	300	560
2-Methylnaphthalene	µg/L	--	78	400 U	72	51	74	64	37	73
Dibenzofuran	µg/L	--	200 U	400 U	8	150 U	9	100 U	100 U	10
Acenaphthene	µg/L	--	96	160	59	53	55	62	42	59
Acenaphthylene	µg/L	--	37	81	38	35	35	40	28	40
Anthracene	µg/L	--	200 U	400 U	1	150 U	1	100 U	100 U	1
Benzo(a)anthracene	µg/L	0.1	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Benzo(a)pyrene	µg/L	0.2	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Benzo(g,h,i)perylene	µg/L	--	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Chrysene	µg/L	0.2	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Fluoranthene	µg/L	--	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Fluorene	µg/L	--	200 U	400 U	13	150 U	13	100 U	100 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U
Naphthalene	µg/L	100	2000	5000	1200	1300	1100	900	690	910
Phenanthrene	µg/L	--	13	400 U	12	150 U	13	12	100 U	12
Pyrene	µg/L	--	200 U	400 U	10 U	150 U	10 U	100 U	100 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	SE-2 Silty Sand 32.5 17-Mar-98	SE-2 Silty Sand 32.5 16-Jun-98	SE-2 Silty Sand 32.5 29-Sep-98	SE-2 Silty Sand 32.5 25-Jun-99	SE-2 Silty Sand 32.5 28-Sep-99	SE-2 Silty Sand 32.5 15-Dec-99	SE-2 Silty Sand 32.5 15-Mar-00	SE-2 Silty Sand 32.5 06-Jun-00
Sample Location:			SE-2	SE-2	SE-2	SE-2	SE-2	SE-2	SE-2	SE-2
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
Sample Date:			17-Mar-98	16-Jun-98	29-Sep-98	25-Jun-99	28-Sep-99	15-Dec-99	15-Mar-00	06-Jun-00
Benzene	µg/L	5	1000	840	260	210	1200	1400	890	580
Toluene	µg/L	2,000	250	190	10 U	130	150	140	170	160
Ethylbenzene	µg/L	700	620	470	420	1400	940	890	660	460
Xylenes	µg/L	10,000	540	480	260	730	560	590	500	390
2-Methylnaphthalene	µg/L	--	62	33	11	50	17	6	34	na
Dibenzofuran	µg/L	--	8	150 U	5	10	10	11	9	na
Acenaphthene	µg/L	--	49	58	58	130	65	67	62	na
Acenaphthylene	µg/L	--	35	34	15	18	62	57	37	na
Anthracene	µg/L	--	1	150 U	10 U	2	10 U	2	10 U	na
Benzo(a)anthracene	µg/L	0.1	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Benzo(a)pyrene	µg/L	0.2	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Benzo(b)fluoranthene	µg/L	0.2	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Benzo(g,h,i)perylene	µg/L	--	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Benzo(k)fluoranthene	µg/L	0.2	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Chrysene	µg/L	0.2	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Fluoranthene	µg/L	--	10 U	150 U	10 U	10 U	10 U	4	10 U	na
Fluorene	µg/L	--	14	150 U	8	20	17	24	18	na
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	150 U	10 U	10 U	10 U	10 U	10 U	na
Naphthalene	µg/L	100	1200	840	620	1900	1700	1500	1200	na
Phenanthrene	µg/L	--	10	150 U	6	15	15	23	13	na
Pyrene	µg/L	--	10 U	150 U	10 U	10 U	10 U	4	10 U	na

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	SE-2 Silty Sand 32.5 15-Sep-00	SE-2 Silty Sand 32.5 15-Dec-00	SE-2 Silty Sand 32.5 21-Mar-01	SE-2 Silty Sand 32.5 07-Jun-01	SE-2 Silty Sand 32.5 20-Sep-01	SE-2 Silty Sand 32.5 11-Dec-01	SE-2 Silty Sand 32.5 14-Mar-02	SE-2 Silty Sand 32.5 05-Jun-02
Sample Location:			SE-2	SE-2	SE-2	SE-2	SE-2	SE-2	SE-2	SE-2
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
Sample Date:			15-Sep-00	15-Dec-00	21-Mar-01	07-Jun-01	20-Sep-01	11-Dec-01	14-Mar-02	05-Jun-02
Benzene	µg/L	5	400	5.3	150	150	130	200	ns	39
Toluene	µg/L	2,000	140	1.6	38	45	28	24	ns	9.4
Ethylbenzene	µg/L	700	300	1.7	37	65	90	120	ns	11
Xylenes	µg/L	10,000	240	3.7	110	110	89	120	ns	37
2-Methylnaphthalene	µg/L	--	40	4 J	9.6 J	16	6.6 J	19	ns	10 U
Dibenzofuran	µg/L	--	8 J	4 J	3.1 J	3.2 J	3.1 J	4.1 J	ns	0.99 J
Acenaphthene	µg/L	--	45	23	18	23	20	27	ns	3.8 J
Acenaphthylene	µg/L	--	24	3 J	5.2 J	6.5 J	5.7 J	13	ns	0.58 J
Anthracene	µg/L	--	1 J	10 U	10 U	0.75 J	10 U	0.76 J	ns	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Fluorene	µg/L	--	13	8 J	6.5 J	7.1 J	6.3 J	7.4 J	ns	3.5 J
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U
Naphthalene	µg/L	100	630	10 U	40	59	60	320	ns	10 U
Phenanthrene	µg/L	--	11	5 J	3.6 J	3.8 J	3.3 J	4.4 J	ns	1.6 J
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	ns	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	SE-2 Silty Sand 32.5 18-Sep-02	SE-2 Silty Sand 32.5 05-Dec-02	SE-2 Silty Sand 32.5 11-Oct-05	SE-2 Silty Sand 32.5 15-Mar-06	SE-2 Silty Sand 32.5 12-Sep-06	SE-2 Silty Sand 32.5 17-Apr-07	SE-2 Silty Sand 32.5 19-Sep-07	SE-2 Silty Sand 32.5 05-May-08
Benzene	µg/L	5	88	160	23	22	34.1	15.9	24.3	21.1
Toluene	µg/L	2,000	8.7	8.8	1.0 U	1.0 U	1.64	1.00 U	1.27	1.00 U
Ethylbenzene	µg/L	700	23	44	26	8.7	35.5	2.35	27.6	6.62
Xylenes	µg/L	10,000	54	59	10	4.5	23.2	3.00 U	32	11.2
2-Methylnaphthalene	µg/L	--	10 U	15	na	na	na	na	na	na
Dibenzofuran	µg/L	--	2.1 J	3.3J	na	na	na	na	na	na
Acenaphthene	µg/L	--	5.8 J	20	41	35	39.1	25.8	33.5	26.2
Acenaphthylene	µg/L	--	1.5 J	9.0J	120	61	9.99	0.100 U	0.0850 U	0.0850 U
Anthracene	µg/L	--	10 U	10 U	0.43	0.19 Ja	0.355	0.664	0.099 J	0.162 J
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	0.13 U	0.64 U	0.00300 U	0.00353 U	0.0151 J	0.00300 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	0.13 U	0.64 U	0.0320 U	0.0376 U	0.0320 U	0.0320 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	0.051 U	0.25 U	0.0130 U	0.0153 U	0.0130 U	0.0130 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	0.20 U	0.99 U	0.00900 U	0.0106 U	0.00900 U	0.00900 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	0.051 U	0.25 U	0.0150 U	0.0176 U	0.0150 U	0.0150 U
Chrysene	µg/L	0.2	10 U	10 U	0.13 U	0.64 U	0.00500 U	0.00588 U	0.00500 U	0.00500 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	0.30 U	1.5 U*	0.0100 U	0.0118 U	0.0782 J	0.0100 U
Fluoranthene	µg/L	--	10 U	10 U	0.92	0.64 U	0.68	0.0118 U	0.536	0.412
Fluorene	µg/L	--	10 U	5.8J	3.9	2.5	9.01	7.08	12.7	13.5
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	0.13 U	0.64 U	0.00700 U	0.00824 U	0.00700 U	0.00700 U
Naphthalene	µg/L	100	10 U	260	1.3 U	6.4 U	4.91	0.41 B	6.43	9.21
Phenanthrene	µg/L	--	2.4 J	3.2J	0.73	0.22 Ja	1.16	0.00824 U	0.00700 U	0.00700 U
Pyrene	µg/L	--	10 U	10 U	0.45 M	1.2 U	0.0774 J	0.766	0.479	0.171 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: SE-2 / Screened Unit: Silty Sand / Depth BTOC (feet): 32.5 / Sample Date: 30-Sep-08	SE-2 / Silty Sand / 32.5 / 28-Apr-09	SE-2 / Silty Sand / 32.5 / 15-Sep-09	SE-2 / Silty Sand / 32.5 / 30-Mar-10	SE-2 / Silty Sand / 32.5 / 05-May-10	SE-2 / Silty Sand / 32.5 / 15-Sep-10	SE-2 / Silty Sand / 32.5 / 27-Apr-11	SE-2 / Silty Sand / 32.5 / 19-Sep-11
Benzene	µg/L	5	31.6	20.8	45	30.1	na	22.1	99.6	**112**
Toluene	µg/L	2,000	1.00 U	1.00 U	3.63	1.00 U	na	1.17	1	5.88
Ethylbenzene	µg/L	700	13	5.41	73.4	3.58	na	6.12	20.7	78.9
Xylenes	µg/L	10,000	9.2	3.00 U	41.5	6 U	na	9.26	16.9	43
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	33.8	27.2	50.1	35.1	29.5	38.1	14.6	21.2
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U	6.05	6.15	4.18
Anthracene	µg/L	--	0.186 J	0.130 J	0.312	0.0100 U	0.0454 J	0.0100 U	0.0100 U	0.265
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.0159 J	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/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
Fluoranthene	µg/L	--	0.657	0.505	0.0100 U	0.0100 U	0.0100 U	0.977	0.296	0.619
Fluorene	µg/L	--	14.4	12.2	23.6	9.26	3.77	10.8	1.89	6.35
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	1.27	0.277	26.6	R	0.0460 U	1.11	3.09 B	96.6 B
Phenanthrene	µg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.386	0.298	<0.0170 U	0.0170 U	0.0170 U	0.143 J	0.0170 U	0.324

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: SS-6 Screened Unit: Silty Sand Depth BTOC (feet): 31.5 Sample Date: 11-Jan-05	SS-6 Silty Sand 31.5 14-Mar-05	SS-6 Silty Sand 31.5 10-Oct-05	SS-6 Silty Sand 31.5 14-Mar-06	SS-6 Silty Sand 31.5 11-Sep-06	SS-6 Silty Sand 31.5 17-Apr-07	SS-6 Silty Sand 31.5 19-Sep-07	SS-6 Silty Sand 31.5 05-May-08
Benzene	µg/L	5	2000	2000	2700	2300	2130	1670	1540	1660
Toluene	µg/L	2,000	380	350	490	500	431	446	380	471
Ethylbenzene	µg/L	700	670	390	670	620	635	747	909	1080
Xylenes	µg/L	10,000	1200	960	100 U	1400	1250	1390	1750	1570
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	130 U	90 Ja	120 U	24 U	40.6	86.3	32.6	25.3
Acenaphthylene	µg/L	--	2600	1900	2000	1600	315	393	378	294
Anthracene	µg/L	--	37 *	77	97	28	33.3	42.3	31.2	12.3
Benzo(a)anthracene	µg/L	0.1	16	43	53	13	11.7	17.6	17.4	5.76
Benzo(a)pyrene	µg/L	0.2	10	28	35	8.2	11.3	15.9	17.2	6.11
Benzo(b)fluoranthene	µg/L	0.2	5.6	18	17	4.5	8.66	12.9	8.47	4.36
Benzo(g,h,i)perylene	µg/L	--	10 U	9.6 Ja	9.9	2.4	3.66	5.77	9.15	2.87
Benzo(k)fluoranthene	µg/L	0.2	3.4	9.7	7.3	1.8 M	4.32	5.31	5.43	2.39
Chrysene	µg/L	0.2	12	34	39	9.7	11.7	16.6	16	5.39
Dibenzo(a,h)anthracene	µg/L	0.2	16 U	29 U	14 U	2.7 J*	1	1.45	1.57	0.652
Fluoranthene	µg/L	--	53	170	190	46	33.1	71.1	42	17.1
Fluorene	µg/L	--	69	130	140	60	152	185	248	156
Indeno(1,2,3cd)pyrene	µg/L	0.4	3.8 Ja	10 Ja	13	3.1	4.56	7.34	7.45	2.94
Naphthalene	µg/L	100	3100	2100	2200	1600	1390	1950 B	1760	1740
Phenanthrene	µg/L	--	120 H	280	270	87	81.8	111	112	56.7
Pyrene	µg/L	--	19 M	110	130	33 M	136	186	34.5	11.8

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	SS-6 Silty Sand 31.5 30-Sep-08	SS-6 Silty Sand 31.5 15-Sep-09	SS-6 Silty Sand 31.5 31-Mar-10	SS-6 Silty Sand 31.5 06-May-10	SS-6 Silty Sand 31.5 15-Sep-10	SS-6 Silty Sand 31.5 27-Apr-11	SS-6 Silty Sand 31.5 20-Sep-11	SS-8 Silty Sand 33.4 11-Jan-05
Benzene	µg/L	5	1880	1560	1750	na	1710	2800	**2720**	1.6
Toluene	µg/L	2,000	392	453	451	na	521	504	583	1.0 U
Ethylbenzene	µg/L	700	586	919	1120	na	928	1610	**1480**	1.0 U
Xylenes	µg/L	10,000	1290	1470	1670	na	1560	1790	1860	1.0 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	37	18.4	72.9	0.110 U	50.1	47.7	33.9	0.59 Ja
Acenaphthylene	µg/L	--	433	209	634	647	611	495	752	47
Anthracene	µg/L	--	21.1	4.23	32.8	46.2	48.6	18.1	54.8	.0.051 U*
Benzo(a)anthracene	µg/L	0.1	10.8	0.471	12.7	18.4	16.4	4.96	**19.1**	0.13 U
Benzo(a)pyrene	µg/L	0.2	10.4	0.475	11.3	16.6	13.7	3.83	**17.3**	0.13 U
Benzo(b)fluoranthene	µg/L	0.2	7.03	0.324	0.0566 U	0.0280 U	9.03	2.63	**12**	0.051 U
Benzo(g,h,i)perylene	µg/L	--	5.52	0.205	0.0162 U	4.73	7.36	2.18	8.55	0.20 U
Benzo(k)fluoranthene	µg/L	0.2	4.27	0.159	0.0141 U	0.00700 U	0.00700 U	1.34	6.85 J	0.051 U
Chrysene	µg/L	0.2	9.96	0.527	13.3	9.39	19.6	6.06	**20.6**	0.13 U
Dibenzo(a,h)anthracene	µg/L	0.2	1.01	0.0377 J	0.0202 U	0.0100 U	1.29	0.227	0.0100 U	0.31 U
Fluoranthene	µg/L	--	35.2	2.91	0.101 U	52	48.8	11.7	61.1	0.13 U
Fluorene	µg/L	--	143	98.6	179	222	158	67	201	0.26 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	4.84	0.18	3.77	5.29	6.61	2.07	**7.92**	0.13 U
Naphthalene	µg/L	100	1670	1720	R	2800	2750	3930 B	**4080 B**	0.66 Ja
Phenanthrene	µg/L	--	80	25.5	97.8	131	139	65.4	170	0.039 Ja
Pyrene	µg/L	--	22.1	1.74	16.9	7.8	22.9	1.51	49.3	0.20 Ja

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: SS-8 Screened Unit: Silty Sand Depth BTOC (feet): 33.4 Sample Date: 14-Mar-05	SS-8 Silty Sand 33.4 10-Oct-05	SS-8 Silty Sand 33.4 14-Mar-06	SS-8 Silty Sand 33.4 11-Sep-06	SS-8 Silty Sand 33.4 17-Apr-07	SS-8 Silty Sand 33.4 19-Sep-07	SS-8 Silty Sand 33.4 05-May-08	SS-8 Silty Sand 33.4 30-Sep-08
Benzene	µg/L	5	1.6	1.1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	1.0 U	1.0 U	1.0 U	3.0 U	3.0 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	0.50 Ja	2.5 U	0.48 Ja	0.701	0.107 J	0.0490 U	0.181 J	0.484
Acenaphthylene	µg/L	--	38	47	18	0.0850 U	0.0850 U	0.0850 U	0.0850 U	0.0870 U
Anthracene	µg/L	--	0.050 U	0.049 U	0.050 U	0.185 J	0.0100 U	0.0100 U	0.0100 U	0.0145 J
Benzo(a)anthracene	µg/L	0.1	0.13 U	0.13 U	0.13 U	0.00300 U	0.00300 U	0.0149 J	0.00300 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.13 U	0.13 U	0.13 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.050 U	0.049 U	0.050 Ua	0.0130 U	0.0130 U	0.0130 U	0.0130 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.20 U	0.20 U	0.20 U	0.00900 U	0.00900 U	0.00900 U	0.0323 J	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.050 U	0.049 U	0.050 U	0.0150 U	0.0150 U	0.0150 U	0.0150 U	0.00700 U
Chrysene	µg/L	0.2	0.13 U	0.13 U	0.13 U	0.00500 U	0.00500 U	0.0368 J	0.0148 J	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.30 U	0.29 U	0.30 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.13 U	0.13 U	0.13 U	0.0100 U	0.0288 J	0.0326 J	0.0153 J	0.0100 U
Fluorene	µg/L	--	0.25 U	0.25 U	0.25 U	0.647	0.0100 U	0.868	0.777	1.12
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.13 U	0.13 U	0.13 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00600 U
Naphthalene	µg/L	100	0.36 Ja	1.3 U	0.31 Ja	0.0551 J	0.165 B	0.0540 U	0.0857 J	0.0460 U
Phenanthrene	µg/L	--	0.099 Ua	0.098 U	0.099 U	0.0151 J	0.00700 U	0.0732 J	0.00700 U	0.00500 U
Pyrene	µg/L	--	0.25 U	0.25 U	0.25 U	0.0303 J	0.0556 J	0.0408 J	0.0190 U	0.022 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	SS-8 Silty Sand 33.4 28-Apr-09	SS-8 Silty Sand 33.4 15-Sep-09	SS-8 Silty Sand 33.4 30-Mar-10	SS-8 Silty Sand 33.4 15-Sep-10	SS-8 Silty Sand 33.4 27-Apr-11	SS-8 Silty Sand 33.4 20-Sep-11	SS-9 Silty Sand 28.0 11-Jan-05	SS-9 Silty Sand 28.0 14-Mar-05
Sample Location:			SS-8	SS-8	SS-8	SS-8	SS-8	SS-8	SS-9	SS-9
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			33.4	33.4	33.4	33.4	33.4	33.4	28.0	28.0
Sample Date:			28-Apr-09	15-Sep-09	30-Mar-10	15-Sep-10	27-Apr-11	20-Sep-11	11-Jan-05	14-Mar-05
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.05	7.93	29.0	24
Toluene	µg/L	2,000	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.5	2.1
Ethylbenzene	µg/L	700	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.82	1.2	1
Xylenes	µg/L	10,000	3.00 U	3.00 U	6.00 U	3.00 U	3.00 U	3.00 U	3.0	1.6
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	0.0220 U	0.0220 U	0.0220 U	0.0220 U	0.642	1.96	4	5
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U	4.1	2.2 M
Anthracene	µg/L	--	0.0100 U	0.0126 J	0.0100 U	0.0100 U	0.0151 J	0.0286 J	0.015 Ja*	0.048 Ua
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00658 J	0.00500 U	0.00500 U	0.0200 U	0.0200 U	0.13 U	0.12 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.0154 J	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.13 U	0.12 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.052 U	0.048 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.21 U	0.19 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.052 U	0.048 U
Chrysene	µg/L	0.2	0.00800 U	0.00891 J	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.13 U	0.12 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.31 U	0.29 U
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.13 U	0.12 U
Fluorene	µg/L	--	0.0160 U	0.0160 U	0.0160 U	0.84	0.0160 U	0.0160 U	0.084 Ja	0.14 Ja
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.13 U	0.12 U
Naphthalene	µg/L	100	0.0460 U	0.0460 U	R	0.0460 U	1.8 B	2.53 B	6.8	6.2
Phenanthrene	µg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.17	0.19
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0234 J	0.26 U	0.24 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location:	SS-9	SS-9	SS-9	SS-9	SS-9	SS-9	SS-9	SS-9
			Screened Unit:	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
			Depth BTOC (feet):	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
			Sample Date:	10-Oct-05	15-Mar-06	11-Sep-06	17-Apr-07	19-Sep-07	06-May-08	30-Sep-08	28-Apr-09
Benzene	µg/L	5		29	30	32.8	33.8	25.1	51.1	31.2	49.5
Toluene	µg/L	2,000		2.6	2.5	2.57	2.59	2.38	4.33	1.34 L5	4.28
Ethylbenzene	µg/L	700		1.3	1.1	1.11	1.33	1.29	3.13	1.56	1.57
Xylenes	µg/L	10,000		3.6	3.5	3.84	4.32	5.64	7	3.03	4.65
2-Methylnaphthalene	µg/L	--		na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--		na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--		10	8.9	10.5	13.4	14.8	9.18	18.1	19.2
Acenaphthylene	µg/L	--		3.3 M	0.83 Ja	0.0850 U	0.0850 U	0.0850 U	1.82	3.18	0.0870 U
Anthracene	µg/L	--		0.033 Ja	0.049 Ua	0.0162 J	0.0156 J	0.0100 U	0.0102 J	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1		0.13 U	0.13 U	0.00300 U	0.00300 U	0.00300 U	0.00300 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2		0.13 U	0.13 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2		0.049 U	0.049 U	0.0130 U	0.0130 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--		0.20 U	0.20 U	0.00900 U	0.00900 U	0.00900 U	0.00900 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2		0.049 U	0.049 U	0.0150 U	0.0150 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2		0.13 U	0.13 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2		0.29 U	0.29 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--		0.064 Ja	0.13 U	0.0100 U	0.0318 J	0.0308 J	0.0365 J	0.025 J	0.0100 U
Fluorene	µg/L	--		0.21 Ja	0.088 Ja	0.205	0.322	0.298	0.366	0.637	0.582
Indeno(1,2,3cd)pyrene	µg/L	0.4		0.13 U	0.13 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100		7.6	3.1	6.88	10.5 B	9.88	13.3	6.32	14.1
Phenanthrene	µg/L	--		0.28	0.12	0.15	0.214	0.213	0.277	0.208	0.00500 U
Pyrene	µg/L	--		0.045 Ja	0.25 U	0.0533 J	0.0844 J	0.0222 J	0.0248 J	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: SS-9 / Screened Unit: Silty Sand / Depth BTOC (feet): 28.0 / Sample Date: 15-Sep-09	SS-9 Silty Sand 28.0 30-Mar-10	SS-9 Silty Sand 28.0 05-May-10	SS-9 Silty Sand 28.0 15-Sep-10	SS-9 Silty Sand 28.0 27-Apr-11	SS-9 Silty Sand 28.0 19-Sep-11
Benzene	µg/L	5	53.8	49.5	na	44.6	42.6	**36.8**
Toluene	µg/L	2,000	4.84	3.11	na	3.55	3.44	3.46
Ethylbenzene	µg/L	700	2.43	1.75	na	1.67	2.08	1.87
Xylenes	µg/L	10,000	7.21	6.00 U	na	6.00	5.6	5.82
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na
Acenaphthene	µg/L	--	19.9	27.6	26.5	27.7	11.8	35.8
Acenaphthylene	µg/L	--	0.0870 U	5.88 M1	0.0870 U	0.0870 U	1.7	0.0870 U
Anthracene	µg/L	--	0.0136 J	0.0100 U	0.0100 U	0.0211 J	0.0309 J	0.0296 J
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	).00800 U M	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0237 J	0.0100 U
Fluorene	µg/L	--	0.704	0.794	0.0160 U	0.834	0.179 J	0.647
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	16.3	R	8.27	11.5	8.93 B	13.3 B
Phenanthrene	µg/L	--	0.271	0.000500 U	0.16	0.269	0.43	0.315
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-113 / Screened Unit: Silty Sand / Depth BTOC (feet): 34.8 / Sample Date: 10-Oct-05	W-113 Silty Sand 34.8 14-Mar-06	W-113 Silty Sand 34.8 11-Sep-06	W-113 Silty Sand 34.8 17-Apr-07	W-113 Silty Sand 34.8 19-Sep-07	W-113 Silty Sand 34.8 05-May-08	W-113 Silty Sand 34.8 30-Sep-08	W-113 Silty Sand 34.8 28-Apr-09	W-113 Silty Sand 34.8 15-Sep-09
Benzene	µg/L	5	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	1.0 U	1.0 U	15.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	2.5 U	2.4 U*	0.0490 U	0.0490 U	0.0490 U	0.0490 U	0.0331 J	0.0702 J	0.136 J
Acenaphthylene	µg/L	--	1.3 U	1.2 U*	0.0850 U	0.0850 U	0.0850 U	0.0850 U	0.0870 U	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.050 U	0.048 Ua*	0.0100 J	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.13 U	0.12 U	0.0101 J	0.00300 U	0.0199 J	0.00903 J	0.00500 U	0.0102 J	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.13 U	0.017 Ja	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.050 U	0.048 U	0.0130 U	0.0130 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.20 U	0.19 U	0.00900 U	0.00900 U	0.0199 J	0.00900 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.050 U	0.048 U	0.0150 U	0.0150 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.13 U	0.12 U	0.01 J	0.00500 U	0.0304 J	0.0270 J	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.30 U	0.29 U	0.0100 U	0.0100 U	0.01	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.13 U	0.045 Ja	0.0100 U	0.0100 U	0.0157 J	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.25 U	0.24 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0160 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.13 U	0.12 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	1.3 U	1.2 U*	0.0540 U	0.197	0.0540 U	0.702	0.0460 U	0.0460 U	0.0460 U
Phenanthrene	µg/L	--	0.099 U	0.030 Ja	0.0197 J	0.00700 U	0.00700 U	0.00700 U	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.25 U	0.040 Ja	0.0213 J	0.0325 J	0.0232 J	0.0190 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-113 Silty Sand 34.8 30-Mar-10	W-113 Silty Sand 34.8 15-Sep-10	W-113 Silty Sand 34.8 27-Apr-11	W-113 Silty Sand 34.8 19-Sep-11	W-117 Silty Sand 35.0 26-May-94	W-117 Silty Sand 35.0 26-May-94	W-117 Silty Sand 35.0 29-Feb-96	W-117 Silty Sand 35.0 24-Sep-96	W-117 Silty Sand 35.0 26-Nov-96
Sample Location:			W-113	W-113	W-113	W-113	W-117	W-117	W-117	W-117	W-117
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			34.8	34.8	34.8	34.8	35.0	35.0	35.0	35.0	35.0
Sample Date:			30-Mar-10	15-Sep-10	27-Apr-11	19-Sep-11	26-May-94	26-May-94	29-Feb-96	24-Sep-96	26-Nov-96
Benzene	µg/L	5	1.00 U	1.2	4.11	1.00 U	5.7	5.2	11	12	8.6
Toluene	µg/L	2,000	1.00 U	1.00 U	1.00 U	1.00 U	1.4	1.1	2	2.8	1.9
Ethylbenzene	µg/L	700	1.00 U	1.00 U	1.86	1.28	1.0 U	1.0 U	3.8	1.7	1 U
Xylenes	µg/L	10,000	6.00 U	3.00 U	3.00 U	3.00 U	2.1	1.0 U	na	4.1	na
2-Methylnaphthalene	µg/L	--	na	na	na	na	10 U	10 U	2	3	2
Dibenzofuran	µg/L	--	na	na	na	na	10 U	10 U	2	2	2
Acenaphthene	µg/L	--	0.0220 U	0.0861 J	0.0220 U	0.0282 J	1	1	4	5	5
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.8	0.8	10 U	10 U	1
Anthracene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.012 J	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00696 J	0.0200 U	0.0200 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	10 U	10 U	10 U	1	10 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	0.00800 U	0.0175 J	0.00800 U	0.00800 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	10 U	10 U	10 U	1	10 U
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.046 J	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	0.0160 U	0.0160 U	0.0160 U	0.0160 U	10 U	10 U	10 U	10 U	1
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	10 U	10 U	10 U	1	10 U
Naphthalene	µg/L	100	R	0.129	0.0460 U	0.265 B	9	8	28	28	22
Phenanthrene	µg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0318 J	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-117 Screened Unit: Silty Sand Depth BTOC (feet): 35.0 Sample Date: 23-Jan-97	W-117 Silty Sand 35.0 29-May-97	W-117 Silty Sand 35.0 30-Sep-97	W-117 Silty Sand 35.0 17-Dec-97	W-117 Silty Sand 35.0 17-Mar-98	W-117 Silty Sand 35.0 16-Jun-98	W-117 Silty Sand 35.0 29-Sep-98	W-117 Silty Sand 35.0 10-Dec-98	W-117 Silty Sand 35.0 24-Mar-99
Benzene	µg/L	5	8.9	7.5	11	9.7	9.5	13	14	12	10
Toluene	µg/L	2,000	2.2	1.9	2.5	2.2	2	2.9	4.2	2	1.2
Ethylbenzene	µg/L	700	1.3	1.2	1.8	1.7	1.6	1.9	3.1	2	1.4
Xylenes	µg/L	10,000	na	2.2	3.7	3.3	2.4	3.6	5.1	3	1.9
2-Methylnaphthalene	µg/L	--	1	1	3	2	1	2	3	10 U	10 U
Dibenzofuran	µg/L	--	2	2	3	3	3	3	4	10 U	2
Acenaphthene	µg/L	--	4	5	8	7	7	6	11	10 U	6
Acenaphthylene	µg/L	--	10 U	10 U	1	1	1	1	3	10 U	10 U
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	1	1	2	2	1	2	2	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	18	21	38	26	21	29	48	37	20
Phenanthrene	µg/L	--	10 U	10 U	1	1	10 U	1	2	10 U	10 U
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-117 Silty Sand 35.0 23-Jun-99	W-117 Silty Sand 35.0 28-Sep-99	W-117 Silty Sand 35.0 15-Dec-99	W-117 Silty Sand 35.0 15-Mar-00	W-117 Silty Sand 35.0 06-Jun-00	W-117 Silty Sand 35.0 15-Sep-00	W-117 Silty Sand 35.0 14-Dec-00	W-117 Silty Sand 35.0 20-Mar-01	W-117 Silty Sand 35.0 07-Jun-01
Sample Location:			W-117	W-117	W-117	W-117	W-117	W-117	W-117	W-117	W-117
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Sample Date:			23-Jun-99	28-Sep-99	15-Dec-99	15-Mar-00	06-Jun-00	15-Sep-00	14-Dec-00	20-Mar-01	07-Jun-01
Benzene	µg/L	5	8.5	8.8	12	3.6	10	9.8	12	11	1.6
Toluene	µg/L	2,000	1.6	1.2	3.4	0.56	1 U	1.1	1.3	1	1 U
Ethylbenzene	µg/L	700	2	1.6	15	0.72	1.7	1.7	1.8	1.7	1 U
Xylenes	µg/L	10,000	2.6	2.4	12	1.4	2.3	2.4	3.1	2.5	1 U
2-Methylnaphthalene	µg/L	--	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--	5	4	4	2	2	2 J	2 J	2.2 J	1.0 J
Acenaphthene	µg/L	--	12	8	9	4	7	6 J	6 J	1.9 J	2.4 J
Acenaphthylene	µg/L	--	10 U	10 U	10 U	10 U	2	2 J	2 J	2.2 J	10 U
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	2	2	2	1	1	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	31	26	51	6	12	6 J	10 J	0.98 J	10 U
Phenanthrene	µg/L	--	2	10 U	2	10 U	0.9	10 U	10 U	10 U	10 U
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-117 Screened Unit: Silty Sand Depth BTOC (feet): 35.0 Sample Date: 20-Sep-01	W-117 Silty Sand 35.0 12-Dec-01	W-117 Silty Sand 35.0 14-Mar-02	W-117 Silty Sand 35.0 07-Jun-02	W-117 Silty Sand 35.0 18-Sep-02	W-117 Silty Sand 35.0 05-Dec-02	W-117 Silty Sand 35.0 09-Jun-03	W-117 Silty Sand 35.0 30-Mar-04	W-117 Silty Sand 35.0 15-Sep-04
Benzene	µg/L	5	17	16	1 U	11	13	2.6	9.9	1.7 H	8.7
Toluene	µg/L	2,000	5.8	4.2	2.7	3	2	0.77 J	2 U	1.0 U	3.2
Ethylbenzene	µg/L	700	3.9	4	5.6	3.1	3.7	0.74 J	2 U	1.0 U	2.8
Xylenes	µg/L	10,000	6.8	5.2	7.6	4.3	4.5	1.2	7 U	1.0 U	4.1
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	na	na	na
Dibenzofuran	µg/L	--	3.7 J	5 J	10 U	5.7 J	10	1.1J	na	na	na
Acenaphthene	µg/L	--	13	16	10 U	19	30	2.8J	11	3.7	1.5 Ja
Acenaphthylene	µg/L	--	10 U	1.9 J	10 U	10 U	2.5 J	1.7J	0.92	4.1	4
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.22	0.036 Ja	0.022 Ja
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	0.17	0.034 Ja	0.13 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.12	0.057 Ja	0.13 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.040 Ja	0.050 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.2 U	0.20 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.12	0.020 Ja	0.050 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.12	0.13 U	0.13 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.30 U	0.30 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.26	0.090 Ja	0.13 U
Fluorene	µg/L	--	1.6 J	2.3 J	10 U	2.5 J	4.6 J	10 U	1.4	0.31	0.13 Ja
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.13 U	0.13 U
Naphthalene	µg/L	100	57	33	1.2 J	27	32	6	3.9	7.1	7
Phenanthrene	µg/L	--	10 U	0.61 J	10 U	0.67 J	1.8 J	10 U	0.48	0.035 Ja	0.10 U
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.21	0.25 U	0.25 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-117 Silty Sand 35.0 14-Mar-05	W-117 Silty Sand 35.0 27-Apr-05	W-117R Silty Sand 35.7 11-Oct-05	W-117R Silty Sand 35.7 15-Mar-06	W-117R Silty Sand 35.7 12-Sep-06	W-117R Silty Sand 35.7 18-Apr-07	W-117R Silty Sand 35.7 20-Sep-07	W-117R Silty Sand 35.7 6-May-08	W-117R Silty Sand 35.7 1-Oct-08
Sample Location:			W-117	W-117	W-117R	W-117R	W-117R	W-117R	W-117R	W-117R	W-117R
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			35.0	35.0	35.7	35.7	35.7	35.7	35.7	35.7	35.7
Sample Date:			14-Mar-05	27-Apr-05	11-Oct-05	15-Mar-06	12-Sep-06	18-Apr-07	20-Sep-07	6-May-08	1-Oct-08
Benzene	µg/L	5	0.79	1.1	2.7	35	24.8	16.6	39.8	15.8	8.08
Toluene	µg/L	2,000	1.0 U	1.0 U	1.0 U	3.1	9	2.55	9.32	1.26	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.8	3.2	5.72	2.56	8.3	5.91	3.42
Xylenes	µg/L	10,000	1.0 U	1.0 U	1.0 U	3.4	10.2	4.36	14.2	6.6	6.09
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	1.2	1.0 Ja	1.2 Ja	2.4 U	3.04	3.93	4.49	3.41	4.33
Acenaphthylene	µg/L	--	3.8	2.3	15	15	4.95	7.51	11.5	6.44	16.3
Anthracene	µg/L	--	0.027	0.050 Ua	0.029 Ja	0.049 Ua	0.0407 J	0.0495 J	0.075 J	0.027 J	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.12 U	0.13 U	0.018 Ja	0.13 U	0.00341 U	0.00337 U	0.00300 U	0.00300 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.12 U	0.13 U	0.025 Ja	0.13 U	0.0148 U	0.0360 U	0.0320 U	0.0320 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.048 U	0.050 U	0.025 Ja	0.049 Ua	0.0170 U	0.0146 U	0.0130 U	0.0130 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.19 U	0.2 U	0.19 U	0.19 U	0.0364 U	0.0101 U	0.00900 U	0.00900 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.048 U	0.050 U	0.047 U	0.049 U	0.0102 U	0.0169 U	0.0150 U	0.0150 U	0.00700 U
Chrysene	µg/L	0.2	0.12 U	0.13 U	0.046 Ja	0.13 U	0.00568 U	0.00562 U	0.00500 U	0.00500 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.29 U	0.30 U	0.28 U	0.29 U*	0.0114 U	0.0112 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.12 U	0.13 U	0.068 Ja	0.13 U	0.0114 U	0.0112 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.083	0.079 Ja	1.2	1.1	1.52	2.23	2.82	1.7	3.06
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.12 U	0.13 U	0.12 U	0.13 U	0.00795 U	0.00787 U	0.00700 U	0.00700 U	0.00600 U
Naphthalene	µg/L	100	1.2 U	0.51 Ja	1.2 U	1.3 U	2.47	4.18 B	6.12	2.4	6.68
Phenanthrene	µg/L	--	0.096 U	0.052 Ja	0.12	0.11	0.13	0.152	0.296	0.204	0.308
Pyrene	µg/L	--	0.24 U	0.25 U	0.23 U	0.24 U	0.0216 U	0.0213 U	0.0190 U	0.0190 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-117R Silty Sand 35.7 29-Apr-09	W-117R Silty Sand 35.7 16-Sep-09	W-117R Silty Sand 35.7 31-Mar-10	W-117R Silty Sand 35.7 6-May-10	W-117R Silty Sand 35.7 16-Sep-10	W-117R Silty Sand 35.7 28-Apr-11	W-117R Silty Sand 35.7 20-Sep-11	W-118 Silty Sand 28.5 25-Sep-96
Benzene	µg/L	5	3.43	43 FM	27.1	na	31.5	1.00 U	1.88	1200
Toluene	µg/L	2,000	1.00 U	5.1 FM	1.00 U	na	1.6	1.00 U	1.00 U	40
Ethylbenzene	µg/L	700	6.28	8.1 FM	4.91	na	11.1	2.72	1.00 U	40U
Xylenes	µg/L	10,000	3.00 U	15.0 U FM	6.00 U	na	9.97	12.6	3.00 U	600
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	200 U
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	200 U
Acenaphthene	µg/L	--	2.93	0.135 J	5.29	3.6	0.164 J	4.89 RL1	3.04	26
Acenaphthylene	µg/L	--	9.31	0.0870 U	13.6	16.1	0.0870 U	10.5 RL1	9.46	32
Anthracene	µg/L	--	0.0419 J	0.0276 J	0.0100 U	0.0100 U	0.0100 U	0.108 RL1, J	0.0602 J	200 U
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.0506 J	0.00500 U	0.00500 U	0.00500 U	0.0400 U, RL1	0.0200 U	200 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.0866 J	0.00800 U	0.00800 U	0.00800 U	0.0160 U, RL1	0.00800 U	200 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0938 J	0.0280 U	0.0280 U	0.0280 U	0.0560 U, RL1	0.0280 U	200 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.085 J	0.00800 U	0.00800 U	0.00800 U	0.0160 U, RL1	0.00800 U	200 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.0586 J	0.00700 U	0.00700 U	0.00700 U	0.0140 U, RL1	0.00700 U	200 U
Chrysene	µg/L	0.2	0.00800 U	0.0745 J	0.00800 U	0.00800 U	0.00800 U	0.0204 RL1, J	0.00800 U	200 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0200 U, RL1	0.0100 U	200 U
Fluoranthene	µg/L	--	0.0100 U	0.0732 J	0.0100 U	0.0100 U	0.0100 U	0.0318 RL1, J	0.0100 U	200 U
Fluorene	µg/L	--	1.76	0.0579 J	1.52	1.61	0.0160 U	0.0320 U, RL1	1.43	200 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.0771 J	0.00600 U	0.00600 U	0.00600 U	0.0120 U, RL1	0.00600 U	200 U
Naphthalene	µg/L	100	0.528	0.151	R	15	0.0460 U	0.831 RL1	0.0460 U	1400
Phenanthrene	µg/L	--	0.188	0.0784 J	0.00500 U	0.155	0.00500 U	0.0867 RL1, J	0.178	200 U
Pyrene	µg/L	--	0.0170 U	0.107 J	0.0170 U	0.0170 U	0.0335 J	0.0340 U, RL1	0.0170 U	200 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-118 Screened Unit: Silty Sand Depth BTOC (feet): 28.5 Sample Date: 26-Nov-96	W-118 Silty Sand 28.5 22-Jan-97	W-118 Silty Sand 28.5 29-May-97	W-118 Silty Sand 28.5 25-Sep-97	W-118 Silty Sand 28.5 18-Dec-97	W-118 Silty Sand 28.5 17-Mar-98	W-118 Silty Sand 28.5 16-Jun-98	W-118 Silty Sand 28.5 29-Sep-98	W-118 Silty Sand 28.5 10-Dec-98
Benzene	µg/L	5	960	250	1 U	120	44	27	22	18	10
Toluene	µg/L	2,000	21	10 U	1 U	9.8	2.5U	1 U	2.1	3	1
Ethylbenzene	µg/L	700	1100	360	1 U	400	93	45	66	23	8
Xylenes	µg/L	10,000	na	na	1 U	156	3.4	1 U	7.9	5.9	2
2-Methylnaphthalene	µg/L	--	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--	400 U	3	4	3	1	1	1	10 U	10 U
Acenaphthene	µg/L	--	400 U	17	10 U	28	12	9	11	7	10 U
Acenaphthylene	µg/L	--	40	23	20 U	22	8	6	7	4	10 U
Anthracene	µg/L	--	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	400 U	6	20 U	8	3	10 U	3	2	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	1400	340	120	270	3	10 U	4	5	10 U
Phenanthrene	µg/L	--	400 U	3	5	5	3	2	2	1	10 U
Pyrene	µg/L	--	400 U	10 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-118 Screened Unit: Silty Sand Depth BTOC (feet): 28.5 Sample Date: 23-Mar-99	W-118 Silty Sand 28.5 23-Jun-99	W-118 Silty Sand 28.5 28-Sep-99	W-118 Silty Sand 28.5 15-Dec-99	W-118 Silty Sand 28.5 15-Mar-00	W-118 Silty Sand 28.5 06-Jun-00	W-118 Silty Sand 28.5 14-Sep-00	W-118 Silty Sand 28.5 14-Dec-00	W-118 Silty Sand 28.5 21-Mar-01
Benzene	µg/L	5	13	3.2	3.6	71	6.1	20	35	16	10
Toluene	µg/L	2,000	0.58	0.29	0.72	14	1	1.5	3.1	1.2	0.71 J
Ethylbenzene	µg/L	700	2.9	3.2	5.8	50	1.9	42	87	10	1.8
Xylenes	µg/L	10,000	1 U	0.73	1.8	30	2.7	10	25	6	2.6
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Dibenzofuran	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Acenaphthene	µg/L	--	3	6	5	8	7	5	9 J	11	6.2 J
Acenaphthylene	µg/L	--	2	3	3	6	2	2	3 J	4 J	4.3 J
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Fluorene	µg/L	--	10 U	2	2	2	2	1	2 J	2 J	2.5 J
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U
Naphthalene	µg/L	100	10 U	10 U	3	62	2	3	14 J	4 J	11 U
Phenanthrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	1.5 J
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	11 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-118 Screened Unit: Silty Sand Depth BTOC (feet): 28.5 Sample Date: 07-Jun-01	W-118 Silty Sand 28.5 20-Sep-01	W-118 Silty Sand 28.5 12-Dec-01	W-118 Silty Sand 28.5 14-Mar-02	W-118 Silty Sand 28.5 04-Jun-02	W-118 Silty Sand 28.5 18-Sep-02	W-118 Silty Sand 28.5 04-Dec-02	W-118 Silty Sand 28.5 09-Jun-03	W-118 Silty Sand 28.5 30-Mar-04
Benzene	µg/L	5	79	43	100	240	130	260	350	61	220 M
Toluene	µg/L	2,000	2 U	1.5	1.8	4.1 J	25 U	2.4	2	2 U	1.6
Ethylbenzene	µg/L	700	54	2.7	0.92 J	25 U	25 U	1 U	2.3	2 U	4.4
Xylenes	µg/L	10,000	18	7.9	4.4	25 U	25 U	4	3.3	7 U	12
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	na	na
Dibenzofuran	µg/L	--	0.62 J	10 U	10 U	10 U	10 U	0.44 J	0.50 J	na	na
Acenaphthene	µg/L	--	17	8.7 J	17	13	5.5 J	12	17	8.2	12
Acenaphthylene	µg/L	--	7.1 J	3.1 J	4.9 J	3.5 J	1.6 J	2.8 J	4.1J	1.1	6.5 U
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.045 Ja
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.13 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.13 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.050 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.20 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.050 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.13 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.30 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.068 Ja
Fluorene	µg/L	--	3.1 J	1.4 J	3.7 J	2.3 J	0.98 J	1.9 J	2.8 J	1.2	1.5
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.13 U
Naphthalene	µg/L	100	30	1.4 J	1.1 J	10 U	6.1 J	10 U	1.3	0.56	25
Phenanthrene	µg/L	--	1.8 J	10 U	1.6 J	10 U	10 U	10 U	0.70 J	0.24	0.12
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.1 U	0.25 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-118 Screened Unit: Silty Sand Depth BTOC (feet): 28.5 Sample Date: 14-Sep-04	W-118 Silty Sand 28.5 15-Mar-05	W-118R Silty Sand 29.0 02-May-05	W-118R Silty Sand 29.0 10-Oct-05	W-118R Silty Sand 29.0 14-Mar-06	W-118R Silty Sand 29.0 11-Sep-06	W-118R Silty Sand 29.0 17-Apr-07	W-118R Silty Sand 29.0 19-Sep-07	W-118R Silty Sand 29.0 05-May-08
Benzene	µg/L	5	170	89	170	190	120	71.3	72. 7 M1	21.7	97.5
Toluene	µg/L	2,000	1.9	1.9	0.82 Ja	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	6.8	5.8	0.95 J	1.2	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	15	13	1.5	3.2	1.0 U	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	2.7 Ua	2.6 U	9.8	9.7	4.5	2.9	3.43	4.18	9.45
Acenaphthylene	µg/L	--	15	17	68	56	19	3.34	3.56	5.46	10.4
Anthracene	µg/L	--	0.055 U	0.051 U	0.035 Ja	0.055 U	0.049 U	0.0100 U	0.0100 U	0.0100 U	0.0262 J
Benzo(a)anthracene	µg/L	0.1	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.00300 U	0.00300 U	0.00300 U	0.00300 U
Benzo(a)pyrene	µg/L	0.2	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U
Benzo(b)fluoranthene	µg/L	0.2	0.055 U	0.051 U	0.047 Ua	0.055 U	0.049 U	0.0130 U	0.0130 U	0.0130 U	0.0130 U
Benzo(g,h,i)perylene	µg/L	--	0.22 U	0.20 U	0.19 U	0.22 U	0.20 U	0.00900 U	0.00900 U	0.00900 U	0.00900 U
Benzo(k)fluoranthene	µg/L	0.2	0.055 U	0.051 U	0.047 U	0.055 U	0.049 U	0.0150 U	0.0150 U	0.0150 U	0.0150 U
Chrysene	µg/L	0.2	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.33 U	0.31 U	0.28 U	0.33 U	0.29 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.14 U	0.13 U	0.069 Ja	0.14 U	0.13 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.14 Ja	0.14	0.65	0.58	0.19 Ja	0.998	0.755	1.35	3.03
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Naphthalene	µg/L	100	110	110	1.2 J	1.4 U	1.3 U	0.193	0.398	0.21	1.07
Phenanthrene	µg/L	--	0.069 Ja	0.053	0.28	0.19	0.064 Ja	0.0988 J	0.0824 J	0.13	0.153
Pyrene	µg/L	--	0.27 U	0.26 U	0.051 Ja	0.27 U	0.25 U	0.0190 U	0.0190 U	0.0190 U	0.0190 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-118R Silty Sand 29.0 30-Sep-08	W-118R Silty Sand 29.0 28-Apr-09	W-118R Silty Sand 29.0 15-Sep-09	W-118R Silty Sand 29.0 30-Mar-10	W-118R Silty Sand 29.0 05-May-10	W-118R Silty Sand 29.0 15-Sep-10	W-118R Silty Sand 29.0 27-Apr-11	W-118R Silty Sand 29.0 19-Sep-11	W-128 Silty Sand 24.8 10-Jul-07
Benzene	µg/L	5	165	137	230	1.00 U	na	220	26.1	**6.19**	1.00 U
Toluene	µg/L	2,000	1.00 U	1.00 U	5.98	1.00 U	na	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.00 U	4.96	61.4	1.00 U	na	1.27	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	3.00 U	3.00 U	22	6.00 U	na	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	10.6	3.78	7.83	0.0220 U	14.1	15.8	8.61	0.0220 U	4.16
Acenaphthylene	µg/L	--	15.6	7.75	17.8	0.0870 U	27.2	24.7	5.42	4.57	0.0850 U
Anthracene	µg/L	--	0.0417 J	0.0155 J	0.0107 J	0.0100 U	0.0100 U	0.0568 J	0.0258 J	0.0100 U	0.405
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U	0.189
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.197
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.292
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.114
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.139 J
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.218
Dibenzo(a,h)anthracene	µg/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	0.0100 U
Fluoranthene	µg/L	--	0.0495 J	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	1.53
Fluorene	µg/L	--	3.44	1.41	3.83	0.364	1.01	3.51	0.59	1.06	0.685
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.165
Naphthalene	µg/L	100	0.805	0.0460 U	49.6	R	0.0460 U	0.0460 U	0.0460 U	0.332 B	0.354
Phenanthrene	µg/L	--	0.199	0.0856 J	0.222	0.00500 U	0.435	0.868	0.0566 J	0.00500 U	0.329
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	2.35

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-128 / Screened Unit: Silty Sand / Depth BTOC (feet): 24.8 / Sample Date: 20-Sep-07	W-128 / Silty Sand / 24.8 / 05-May-08	W-128 / Silty Sand / 24.8 / 01-Oct-08	W-128 / Silty Sand / 24.8 / 28-Apr-09	W-128 / Silty Sand / 24.8 / 16-Sep-09	W-128 / Silty Sand / 24.8 / 30-Mar-10	W-128 / Silty Sand / 24.8 / 15-Sep-10	W-128 / Silty Sand / 24.8 / 27-Apr-11
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.00 U	1.00 U	1.00 U, L5	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	µg/L	10,000	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	6.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	5.25	4.19	5.27	3.91	4.01	3.24	2.08	1.72
Acenaphthylene	µg/L	--	0.0850 U	0.0850 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.128 J	0.0764 J	0.0754 J	0.0936 J	0.0579 J	0.0291 J	0.0559 J	0.0462 J
Benzo(a)anthracene	µg/L	0.1	0.124 J	0.0553 J	0.0536 J	0.112 J	0.0698 J	0.0374 J	0.0547 J	0.0546 J
Benzo(a)pyrene	µg/L	0.2	0.147 J	0.120 J	0.088 J	0.169 J	0.0807 J	0.00800 U	0.00800 U	0.0417 J
Benzo(b)fluoranthene	µg/L	0.2	0.239	0.0130 U	0.0280 U	0.238	0.0929 J	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.2	0.0877 J	0.00800 U	0.117	0.112	0.00800 U	0.00800 U	0.0479 J
Benzo(k)fluoranthene	µg/L	0.2	0.116 J	0.0150 U	0.00700 U	0.0510 J	0.0375 J	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.218	0.162	0.164	0.205	0.0657 J	0.00800 U	0.0982 J	0.0831 J
Dibenzo(a,h)anthracene	µg/L	0.2	0.0235 J	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.63	0.334	0.306	0.375	0.17 J	0.0537 J	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.772	0.551	0.67	0.0160 U	0.452	0.0160 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.144	0.0696 J	0.00600 U	0.119	0.0612 J	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	0.627	0.0540 U	0.0460 U	0.0460 U	0.225	R	0.0460 U	0.0460 U
Phenanthrene	µg/L	--	0.653	0.113	0.0734 J	0.0879 J	0.0511 J	0.00500 U	0.00500 U	0.03 J
Pyrene	µg/L	--	1.31	0.485	0.481	0.221	0.11 J	0.0170 U	0.0170 U	0.0915 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-128 Screened Unit: Silty Sand Depth BTOC (feet): 24.8 Sample Date: 19-Sep-11
Benzene	µg/L	5	1.00 U
Toluene	µg/L	2,000	1.00 U
Ethylbenzene	µg/L	700	1.00 U
Xylenes	µg/L	10,000	3.00 U
2-Methylnaphthalene	µg/L	--	na
Dibenzofuran	µg/L	--	na
Acenaphthene	µg/L	--	2.44
Acenaphthylene	µg/L	--	<0.0870
Anthracene	µg/L	--	<0.0100
Benzo(a)anthracene	µg/L	0.1	0.0306 J
Benzo(a)pyrene	µg/L	0.2	<0.00800
Benzo(b)fluoranthene	µg/L	0.2	<0.0280
Benzo(g,h,i)perylene	µg/L	--	<0.00800
Benzo(k)fluoranthene	µg/L	0.2	<0.00700
Chrysene	µg/L	0.2	<0.00800
Dibenzo(a,h)anthracene	µg/L	0.2	<0.0100
Fluoranthene	µg/L	--	<0.0100
Fluorene	µg/L	--	<0.0160
Indeno(1,2,3cd)pyrene	µg/L	0.4	<0.00600
Naphthalene	µg/L	100	1.09 B
Phenanthrene	µg/L	--	<0.00500
Pyrene	µg/L	--	0.128 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-13 / Screened Unit: Alluvial / Depth BTOC (feet): 48.0 / Sample Date: 10-Oct-05	W-13 Alluvial 48.0 14-Mar-06	W-13 Alluvial 48.0 11-Sep-06	W-13 Alluvial 48.0 17-Apr-07	W-13 Alluvial 48.0 19-Sep-07	W-13 Alluvial 48.0 05-May-08	W-13 Alluvial 48.0 30-Sep-08	W-13 Alluvial 48.0 28-Apr-09	W-13 Alluvial 48.0 15-Sep-09
Benzene	µg/L	5	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U, L5	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	1.0 U	1.0 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	2.4 U	2.5 U*	0.0490 U	0.0544 U	0.0490 U	0.0490 U	0.0220 U	0.0220 U	0.0220 U
Acenaphthylene	µg/L	--	1.2 U	1.3 U*	0.0850 U	0.0944 U	0.0850 U	0.0850 U	0.0870 U	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.048 U	0.050 U*	0.0100 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.020 Ja	0.13 U	0.015 J	0.00333 U	0.00300 U	0.00300 U	0.00500 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.021 Ja	0.13 U	0.0320 U	0.0356 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.048 U	0.050 U	0.0130 U	0.0144 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.19 U	0.20 U	0.00900 U	0.0100 U	0.00900 U	0.00900 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.048 U	0.050 U	0.0150 U	0.0167 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.12 U	0.13 U	0.0431 J	0.00556 U	0.00500 U	0.00500 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.29 U	0.30 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.048 Ja	0.13 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.24 U	0.25 U*	0.0100 U	0.0111 U	0.0100 U	0.0100 U	0.0160 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.12 U	0.13 U	0.00700 U	0.00778 U	0.00700 U	0.00700 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	1.2 U	1.3 U*	0.0540 U	0.117 B	0.0540 U	0.0540 U	0.0460 U	0.0460 U	0.0589 J
Phenanthrene	µg/L	--	0.096 U	0.099 Ua	0.0292 J	0.0115 J	0.00700 U	0.00700 U	0.0137 J	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.048 Ja	0.25 U	0.16 J	0.0211 U	0.0190 U	0.0190 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-13 Alluvial 48.0 30-Mar-10	W-13 Alluvial 48.0 05-May-10	W-13 Alluvial 48.0 15-Sep-10	W-13 Alluvial 48.0 27-Apr-11	W-13 Alluvial 48.0 19-Sep-11	W-15 Alluvial 53.0 24-Sep-96	W-15 Alluvial 53.0 24-Sep-96	W-15 Alluvial 53.0 26-Nov-96	W-15 Alluvial 53.0 22-Jan-97
Benzene	µg/L	5	1.00 U	na	1.00 U	1.00 U	1.00 U	1 U	1 U	1 U	1 U
Toluene	µg/L	2,000	1.00 U	na	1.00 U	1.00 U	1.00 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	700	1.00 U	na	1.00 U	1.00 U	1.00 U	1 U	1 U	1.3	1 U
Xylenes	µg/L	10,000	6.00 U	na	3.00 U	3.00 U	3.00 U	1 U	1 U	na	na
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--	na	na	na	na	na	10 U	10 U	10 U	10 U
Acenaphthene	µg/L	--	0.234	0.0220 U	0.0220 U	0.0220 U	0.0220 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	0.0160 U	0.0160 U	0.0160 U	0.0160 U	0.0160 U	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	R	0.0460 U	0.0645 J	0.0460 U	0.0952 J, B	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location:	W-15	W-15	W-15	W-15	W-15	W-15	W-15	W-15	W-15
			Screened Unit:	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
			Depth BTOC (feet):	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
			Sample Date:	29-May-97	25-Sep-97	19-Dec-97	17-Mar-98	16-Jun-98	29-Sep-98	09-Dec-98	23-Mar-99	23-Jun-99
Benzene	µg/L	5		2.5	1 U	1 U	1 U	1 U	na	1 U	1 U	1 U
Toluene	µg/L	2,000		1 U	1 U	1 U	1 U	1 U	na	1 U	1 U	1 U
Ethylbenzene	µg/L	700		1.3	1 U	1 U	1 U	1 U	na	1 U	1 U	1 U
Xylenes	µg/L	10,000		3.9	1.1	1.8	1 U	1	na	3	1.1	1 U
2-Methylnaphthalene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100		11	2	5	10 U	10 U	5	10 U	10 U	10 U
Phenanthrene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-15 Alluvial 53.0 28-Sep-99	W-15 Alluvial 53.0 15-Dec-99	W-15 Alluvial 53.0 15-Mar-00	W-15 Alluvial 53.0 06-Jun-00	W-15 Alluvial 53.0 14-Sep-00	W-15 Alluvial 53.0 14-Dec-00	W-15 Alluvial 53.0 20-Mar-01	W-15 Alluvial 53.0 06-Jun-01	W-15 Alluvial 53.0 19-Sep-01
Sample Location:			W-15	W-15	W-15	W-15	W-15	W-15	W-15	W-15	W-15
Screened Unit:			Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Depth BTOC (feet):			53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
Sample Date:			28-Sep-99	15-Dec-99	15-Mar-00	06-Jun-00	14-Sep-00	14-Dec-00	20-Mar-01	06-Jun-01	19-Sep-01
Benzene	µg/L	5	1 U	4.1	3	5.1	1 U	1 U	0.2 J	1 U	1 U
Toluene	µg/L	2,000	1 U	0.56	1.9	1.4	1 U	0.17 J	0.24 J	1 U	1 U
Ethylbenzene	µg/L	700	1 U	2.4	2.8	3.5	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	1 U	1.5	4	2.8	1 U	0.45 J	0.69 J	1 U	1 U
2-Methylnaphthalene	µg/L	--	10 U	10 U	2.0 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--	10 U	10 U	na	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	µg/L	--	10 U	10 U	0.59	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	--	10 U	10 U	1.2	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	--	10 U	10 U	0.15	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	0.029	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	0.05	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	0.038	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	0.043	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	0.10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	10 U	10 U	0.034	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	0.20 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	10 U	10 U	0.12	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	10 U	10 U	0.079	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	0.091	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	10 U	5	2.5	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--	10 U	10 U	0.27	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--	10 U	10 U	0.13	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-15 / Screened Unit: Alluvial / Depth BTOC (feet): 53.0 / Sample Date: 11-Dec-01	W-15 Alluvial 53.0 13-Mar-02	W-15 Alluvial 53.0 05-Jun-02	W-15 Alluvial 53.0 18-Sep-02	W-15 Alluvial 53.0 04-Dec-02	W-15 Alluvial 53.0 10-Jun-03	W-15 Alluvial 53.0 30-Mar-04	W-15 Alluvial 53.0 15-Sep-04	W-15 Alluvial 53.0 15-Mar-05
Benzene	µg/L	5	1 U	1 U	1 U	1 U	0.59	2 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	2,000	0.23 J	1 U	1 U	1 U	1 U	2 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	0.96 J	1.2	1 U	1 U	1 U	2 U	1.0 U	1.0 U	1.0 U
Xylenes	µg/L	10,000	0.41 J	1 U	1 U	1 U	1 U	7 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	na	na	na	na
Dibenzofuran	µg/L	--	10 U	10 U	10 U	10 U	10 U	na	na	na	na
Acenaphthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	2.4 U	2.4 U	2.4 U
Acenaphthylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	1.2 U	1.2 U	1.3 U
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	0.048 U	0.048 U	0.049 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	0.1 U	0.12 U	0.12 U	0.13 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	0.1 U	0.12 U	0.12 U	0.13 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	0.1 U	0.048 U	0.048 U	0.049 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	0.19 U	0.19 U	0.19 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	0.1 U	0.048 U	0.048 U	0.049 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	0.1 U	0.12 U	0.12 U	0.13 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	0.1 U	0.29 U	0.29 U	0.29 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	0.12 U	0.12 U	0.13 U
Fluorene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	0.24 U	0.24 U	0.24 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	0.1 U	0.12 U	0.12 U	0.13 U
Naphthalene	µg/L	100	1 J	4.6 J	10 U	2.2 J	10	0.1 U	1.2 U	1.2 U	1.3 U
Phenanthrene	µg/L	--	0.3 J	0.3 J	10 U	10 U	10 U	0.1 U	0.096 U	0.095 U	0.097 Ua
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	0.1 U	0.24 U	0.24 U	0.24 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-15 / Screened Unit: Alluvial / Depth BTOC (feet): 53.0 / Sample Date: 11-Oct-05	W-15 Alluvial 53.0 15-Mar-06	W-15 Alluvial 53.0 12-Sep-06	W-15 Alluvial 53.0 18-Apr-07	W-15 Alluvial 53.0 20-Sep-07	W-15 Alluvial 53.0 06-May-08	W-15 Alluvial 53.0 01-Oct-08	W-15 Alluvial 53.0 28-Apr-09	W-15 Alluvial 53.0 16-Sep-09
Benzene	µg/L	5	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.0 U	1.0 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	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	1.0 U	1.0 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	2.4 U	2.5 U	0.0557 U	0.0544 U	0.0490 U	0.0490 U	0.0220 U	0.0220 U	0.0220 U
Acenaphthylene	µg/L	--	1.2 U	1.3 U	0.0966 U	0.0944 U	0.0850 U	0.0850 U	0.0870 U	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.084	0.051 U	0.0114 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.059 Ja	0.13 U	0.00341 U	0.00333 U	0.00300 U	0.00300 U	0.00500 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.12 U	0.13 U	0.0364 U	0.0356 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.035 Ja	0.051 U	0.0148 U	0.0144 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.19 U	0.20 U	0.0102 U	0.0100 U	0.00900 U	0.00900 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.048 U	0.051 U	0.0170 U	0.0167 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.032 Ja	0.13 U	0.00568 U	0.00556 U	0.00500 U	0.00500 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.29 U	0.30 U*	0.0114 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.12 J	0.13 U	0.0114 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.24 U	0.25 U	0.0114 U	0.0111 U	0.0100 U	0.0100 U	0.0160 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.12 U	0.13 U	0.00795 U	0.00778 U	0.00700 U	0.00700 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	1.2 U	1.3 U	0.0614 U	0.0600 U	0.0540 U	0.0540 U	0.0460 U	0.0460 U	0.0460 U
Phenanthrene	µg/L	--	0.076 Ja	0.10 U	0.00795 U	0.00778 U	0.00700 U	0.00700 U	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.11 Ja	0.25 U	0.0216 U	0.0211 U	0.0190 U	0.0190 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-15 / Screened Unit: Alluvial / Depth BTOC (feet): 53.0 / Sample Date: 31-Mar-10	W-15 Alluvial 53.0 15-Sep-10	W-15 Alluvial 53.0 27-Apr-11	W-15 Alluvial 53.0 20-Sep-11	W-20 Alluvial 51.0 29-Apr-09	W-20 Alluvial 51.0 16-Sep-09	W-20 Alluvial 51.0 31-Mar-10	W-20 Alluvial 51.0 05-May-10	W-20 Alluvial 51.0 14-Sep-10
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	8.71	1.00 U	na	1.00 U
Toluene	µg/L	2,000	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.09	1.00 U	na	1.00 U
Ethylbenzene	µg/L	700	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.7	1.00 U	na	1.00 U
Xylenes	µg/L	10,000	6.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.54	6.00 U	na	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na		na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na		na	na	na	na	na
Acenaphthene	µg/L	--	0.0220 U	0.0220 U	0.0220 U	0.0220 U	0.253	3.01	0.407	2.43	1.91
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0978 U	3.09	0.0870 U	2.18	1.48
Anthracene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0220 J	0.0691 J	0.0567 J	0.0447 J	0.0584 J
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.0200 U	0.0200 U	0.00562 U	0.0249 J	0.0216 J	0.00500 U	0.0123 J
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.0315 U	0.00889 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.00787 U	0.0311 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00899 U	0.00899 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00899 U	0.00778 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00899 U	0.0174 J	0.00800 U	0.00800 U	0.0376 J
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0112 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0374 J	0.0805 J	0.0187 J	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.0160 U	0.0160 U	0.0160 U	0.0160 U	0.223	2.66 M1	0.503	1.41	1.11
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00674 U	0.00667 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	R	0.0460 U	0.0460 U	0.0460 U	0.0517 U	0.916	R	0.183 J	0.13
Phenanthrene	µg/L	--	0.00500 U	0.0379 J	0.00500 U	0.00500 U	0.00562 U	0.127	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0191 U	0.075 J	0.0170 U	0.0170 U	0.0255 J

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-20 Alluvial 51.0 27-Apr-11	W-21 Alluvial 50.0 26-Nov-96	W-21 Alluvial 50.0 22-Jan-97	W-21 Alluvial 50.0 29-May-97	W-21 Alluvial 50.0 25-Sep-97	W-21 Alluvial 50.0 18-Dec-97	W-21 Alluvial 50.0 18-Dec-97	W-21 Alluvial 50.0 17-Mar-98	W-21 Alluvial 50.0 16-Jun-98
Sample Location:			W-20	W-21	W-21	W-21	W-21	W-21	W-21	W-21	W-21
Screened Unit:			Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Depth BTOC (feet):			51.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Sample Date:			27-Apr-11	26-Nov-96	22-Jan-97	29-May-97	25-Sep-97	18-Dec-97	18-Dec-97	17-Mar-98	16-Jun-98
Benzene	µg/L	5	1.00 U	67	1 U	71	2.3	1 U	na	1 U	1 U
Toluene	µg/L	2,000	1.00 U	20 U	1 U	10 U	1 U	1 U	na	1 U	1 U
Ethylbenzene	µg/L	700	1.00 U	81	1.2	260	6.2	1 U	na	1 U	1 U
Xylenes	µg/L	10,000	3.00 U	na	na	89	3.2	1 U	na	1 U	1 U
2-Methylnaphthalene	µg/L	--	na	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	--	na	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	µg/L	--	2.72	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	--	0.0870 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	--	0.0904 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	0.043 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	0.0459 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	0.0588 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	0.0431 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	0.0666 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0533 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	0.0693 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	--	0.53	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.0788 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	0.318 B	10 U	10 U	10 U	2	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--	0.0889 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	--	0.0170 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-21 / Screened Unit: Alluvial / Depth BTOC (feet): 50.0 / Sample Date: 29-Sep-98	W-21 Alluvial 50.0 10-Dec-98	W-21 Alluvial 50.0 23-Mar-99	W-21 Alluvial 50.0 23-Jun-99	W-21 Alluvial 50.0 28-Sep-99	W-21 Alluvial 50.0 15-Dec-99	W-21 Alluvial 50.0 15-Mar-00	W-21 Alluvial 50.0 06-Jun-00	W-21 Alluvial 50.0 14-Sep-00
Benzene	µg/L	5	2	3	2.3	3.9	0.48	0.91	0.56	4.7	1 U
Toluene	µg/L	2,000	1 U	1 U	1 U	1 U	1 U	0.36	0.48	1.5	1 U
Ethylbenzene	µg/L	700	1 U	0.5	1 U	6.1	1 U	1.4	0.42	2.9	1 U
Xylenes	µg/L	10,000	1 U	1 U	1 U	1.5	1 U	0.89	0.64	2.6	1 U
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	10 U	10 U
Dibenzofuran	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	na	10 U	10 U
Acenaphthene	µg/L	--	2	10 U	10 U	10 U	10 U	10 U	2.0 U	10 U	10 U
Acenaphthylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	10 U	10 U
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.20 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	0.20 U	10 U	10 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.029	10 U	10 U
Fluorene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.048	10 U	10 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	0.20 U	10 U	10 U
Naphthalene	µg/L	100	10 U	10 U	10 U	10 U	10 U	4	2.0 U	2	10 U
Phenanthrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.062	10 U	10 U
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	0.023	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-21 Alluvial 50.0 14-Dec-00	W-21 Alluvial 50.0 21-Mar-01	W-21 Alluvial 50.0 07-Jun-01	W-21 Alluvial 50.0 20-Sep-01	W-21 Alluvial 50.0 12-Dec-01	W-21 Alluvial 50.0 14-Mar-02	W-21 Alluvial 50.0 07-Jun-02	W-21 Alluvial 50.0 18-Sep-02	W-21 Alluvial 50.0 05-Dec-02
Sample Location:			W-21	W-21	W-21	W-21	W-21	W-21	W-21	W-21	W-21
Screened Unit:			Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Depth BTOC (feet):			50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Sample Date:			14-Dec-00	21-Mar-01	07-Jun-01	20-Sep-01	12-Dec-01	14-Mar-02	07-Jun-02	18-Sep-02	05-Dec-02
Benzene	µg/L	5	1 U	0.18 J	1 U	1 U	110	42	35	3.7	3
Toluene	µg/L	2,000	0.3 J	0.29 J	1 U	1 U	16	6.6	5.5	0.39 J	0.45 J
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	57	37	16	2.5	3.4
Xylenes	µg/L	10,000	0.5 J	0.21 J	1 U	1 U	77	33	25	2.4	1.7
2-Methylnaphthalene	µg/L	--	10 U	10 U	10 U	10 U	10 U	2.7 J	10 U	10 U	10 U
Dibenzofuran	µg/L	--	10 U	10 U	10 U	10 U	10 U	4.3 J	1.6 J	0.53 J	4.1 J
Acenaphthene	µg/L	--	10 U	10 U	10 U	10 U	0.6 J	37	12	4.1 J	14
Acenaphthylene	µg/L	--	10 U	10 U	10 U	10 U	0.85 J	26	8.6 J	1.8 J	5.1 J
Anthracene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	0.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	1.2 J	10 U	10 U
Fluorene	µg/L	--	10 U	10 U	10 U	10 U	10 U	4.4 J	1.6 J	10 U	3.0 J
Indeno(1,2,3cd)pyrene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	100	10 U	10 U	10 U	10 U	270	1300	260	10 U	7
Phenanthrene	µg/L	--	10 U	0.37 J	10 U	10 U	0.25 J	10 U	0.81 J	10 U	10 U
Pyrene	µg/L	--	10 U	10 U	10 U	10 U	10 U	10 U	1.4 J	10 U	10 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-21 Alluvial 50.0 09-Jun-03	W-21 Alluvial 50.0 30-Mar-04	W-21 Alluvial 50.0 14-Sep-04	W-21 Alluvial 50.0 14-Mar-05	W-21R Alluvial 49.5 02-May-05	W-21R Alluvial 49.5 10-Oct-05	W-21R Alluvial 49.5 14-Mar-06	W-21R Alluvial 49.5 11-Sep-06	W-21R Alluvial 49.5 17-Apr-07
Benzene	µg/L	5	2 U	1.4	44	66	65	23	3.2	5.57	104
Toluene	µg/L	2,000	2 U	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	2 U	1.0 U	0.67 Ja	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	7 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	1.4	0.72 Ja	1.3Ja	0.92 Ja	12	7.2	3.7	1.69	7.79
Acenaphthylene	µg/L	--	0.28	1.2 Ja	11	3.1	30	12	4.9	0.0850 U	1.78
Anthracene	µg/L	--	0.12	0.055	0.034 Ja	0.026 Ja	0.32	0.31	0.25	0.306	0.288
Benzo(a)anthracene	µg/L	0.1	0.1	0.30	0.10 Ja	0.13	0.12 U	0.12 U	0.13 U	0.00300 U	0.00300 U
Benzo(a)pyrene	µg/L	0.2	0.14	0.43	0.12 J	0.16	0.12 U	0.12 U	0.13 U	0.0320 U	0.0320 U
Benzo(b)fluoranthene	µg/L	0.2	0.14	0.52	0.17	0.23	0.046 U	0.047 U	0.049 U	0.0130 U	0.0130 U
Benzo(g,h,i)perylene	µg/L	--	0.11	0.47	0.11 Ja	0.22	0.19 U	0.19 U	0.19 U	0.00900 U	0.00900 U
Benzo(k)fluoranthene	µg/L	0.2	0.15	0.25	0.079	0.11	0.046 U	0.047 U	0.049 U	0.0150 U	0.0150 U
Chrysene	µg/L	0.2	0.15	0.40	0.14	0.17 M	0.12 U	0.12 U	0.13 U	0.00500 U	0.00500 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.1 U	0.30 U	0.29 U	0.29 U	0.28 U	0.28 U	0.29 U*	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.36	0.78	0.29	0.36	0.12 U	0.12 U	0.13 U	0.0243 J	0.0100 U
Fluorene	µg/L	--	0.29	0.15 Ja	0.13 Ja	0.068 Ja	6.1	3.1	2.6	1.88	3.35
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.1	0.46	0.14	0.21	0.12 U	0.12 U	0.13 U	0.00700 U	0.00700 U
Naphthalene	µg/L	100	0.15	1.3 Ua	0.61 Ja	1.3 U	0.57 Ja	1.2 U	1.3 U	0.217	0.0540 U
Phenanthrene	µg/L	--	0.21	0.32	0.13	0.13	0.030 Ja	0.094 U	0.097 U	0.0445 J	0.00700 U
Pyrene	µg/L	--	0.27	0.60	0.20 Ja	0.28	0.23 U	0.24 U	0.24 U	0.102 J	0.0190 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-21R Screened Unit: Alluvial Depth BTOC (feet): 49.5 Sample Date: 19-Sep-07	W-21R Alluvial 49.5 05-May-08	W-21R Alluvial 49.5 30-Sep-08	W-21R Alluvial 49.5 28-Apr-09	W-21R Alluvial 49.5 15-Sep-09	W-21R Alluvial 49.5 30-Mar-10	W-21R Alluvial 49.5 05-May-10	W-21R Alluvial 49.5 15-Sep-10
Benzene	µg/L	5	2.41	34.2	2.17	67.0	1.00 U	206	na	2.84
Toluene	µg/L	2,000	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	na	1.00 U
Ethylbenzene	µg/L	700	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.64	na	1.00 U
Xylenes	µg/L	10,000	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	6.00 U	na	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	1.18	2.55	3.66	7.32	2.82	16.1	0.979	1.34
Acenaphthylene	µg/L	--	0.0850 U	1.00	0.568	1.27	0.952	30.5	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.124 J	0.117 J	0.149 J	0.14800 J	0.257	0.0100 U	0.0583 J	0.188 J
Benzo(a)anthracene	µg/L	0.1	0.00300 U	0.00300 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.0320 U	0.0320 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0130 U	0.0130 U	0.0280 U	0.02800 U	0.02800 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00900 U	0.00900 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.0150 U	0.0150 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00500 U	0.00500 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/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
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0398 J	0.0631 J	0.0526 J	0.0100 U	0.0100 U	0.104 J
Fluorene	µg/L	--	0.906	1.18	3.8	4.99	1.91	0.0160 U	0.724	1.14
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00700 U	0.00700 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	0.119	0.438	0.417	0.04600 U	0.166	R	0.0460 U	0.0460 U
Phenanthrene	µg/L	--	0.0589 J	0.0589 J	0.0547 J	0.00500 U	0.00666 J	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.0190 U	0.0190 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location:	W-21R	W-21R	W-24	W-24	W-24	W-24	W-24	W-24	W-24
			Screened Unit:	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
			Depth BTOC (feet):	49.5	49.5	76.5	76.5	76.5	76.5	76.5	76.5	76.5
			Sample Date:	27-Apr-11	19-Sep-11	29-Apr-09	16-Sep-09	31-Mar-10	06-May-10	14-Sep-10	27-Apr-11	20-Sep-11
Benzene	µg/L	5		1.00 U	**28.5**	1.00 U	1.00 U	1.00 U	na	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	na	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	na	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000		3.00 U	3.00 U	3.00 U	3.00 U	6.00 U	na	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--		na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--		na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--		0.2	0.0220 U	0.0250 U	0.0220 U	0.0220 U	0.0220 U	0.0244 U	0.0220 U	0.0220 U
Acenaphthylene	µg/L	--		0.0870 U	0.0870 U	0.0989 U	0.0870 U	0.0870 U	0.0870 U	0.0967 U	0.0870 U	0.0870 U
Anthracene	µg/L	--		0.0324 J	0.204	0.0114 U	0.0100 U	0.0100 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1		0.0200 U	0.0200 U	0.00568 U	0.00500 U	0.00500 U	0.00500 U	0.00556 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2		0.00800 U	0.00800 U	0.00909 U	0.00800 U	0.00800 U	0.00800 U	0.00889 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2		0.0280 U	0.0280 U	0.0318 U	0.0280 U	0.0280 U	0.0280 U	0.0311 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--		0.00800 U	0.00800 U	0.00909 U	0.00800 U	0.00800 U	0.00800 U	0.00889 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2		0.00700 U	0.00700 U	0.00795 U	0.00700 U	0.00700 U	0.00700 U	0.00778 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2		0.00800 U	0.00800 U	0.00909 U	0.00800 U	0.00800 U	0.00800 U	0.00889 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2		0.0100 U	0.0100 U	0.0114 U	0.0100 U	0.0100 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--		0.0100 U	0.133 J	0.0114 U	0.0100 U	0.0100 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U
Fluorene	µg/L	--		0.301	7.8	0.0182 U	0.0160 U	0.0160 U	0.0160 U	0.0178 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4		0.00600 U	0.00600 U	0.00682 U	0.00600 U	0.00600 U	0.00600 U	0.00667 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100		0.0460 U	0.0460 U	0.0523 U	0.120	R	0.0460 U	0.0511 U	0.215 B	0.0717 JB
Phenanthrene	µg/L	--		0.00500 U	0.00500 U	0.00568 U	0.0117 J	0.00500 U	0.00500 U	0.00556 U	0.00500 U	0.00500 U
Pyrene	µg/L	--		0.0170 U	0.0170 U	0.0193 U	0.0170 U	0.0170 U	0.0170 U	0.0189 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-27 / Screened Unit: Alluvial / Depth BTOC (feet): 49.7 / Sample Date: 10-Oct-05	W-27 Alluvial 49.7 14-Mar-06	W-27 Alluvial 49.7 12-Sep-06	W-27 Alluvial 49.7 17-Apr-07	W-27 Alluvial 49.7 19-Sep-07	W-27 Alluvial 49.7 05-May-08	W-27 Alluvial 49.7 01-Oct-08	W-27 Alluvial 49.7 28-Apr-09	W-27 Alluvial 49.7 16-Sep-09
Benzene	µg/L	5	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U, L5	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	1.0 U	1.0 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na	na	na	na	na
Acenaphthene	µg/L	--	2.5 U	2.5 U*	0.0490 U	0.0490 U	0.0490 U	0.0490 U	0.0220 U	0.0220 U	0.0220 U
Acenaphthylene	µg/L	--	1.3 U	1.3 U*	0.0850 U	0.0850 U	0.0850 U	0.0850 U	0.0870 U	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.051 U	0.049 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.13 U	0.13 U	0.00300 U	0.00300 U	0.00300 U	0.00300 U	0.00500 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.13 U	0.13 U	0.0320 U	0.0320 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.051 U	0.049 U	0.0130 U	0.0130 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.20 U	0.20 U	0.00900 U	0.00900 U	0.00900 U	0.00900 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.051 U	0.049 U	0.0150 U	0.0150 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.13 U	0.13 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.30 U	0.29 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.13 U	0.13 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.25 U	0.25 U*	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0160 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.13 U	0.13 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	1.3 U	1.3 U*	0.0540 U	0.0540 U	0.0540 U	0.0540 U	0.0460 U	0.0460 U	0.0874 J
Phenanthrene	µg/L	--	0.10 U	0.098 U	0.00956 J	0.00700 U	0.00700 U	0.00700 U	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.25 U	0.25 U	0.0190 U	0.0190 U	0.0190 U	0.0190 U	0.0170 U	0.0170 U	0.0170 U

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	Sample Location: W-27 / Screened Unit: Alluvial / Depth BTOC (feet): 49.7 / Sample Date: 30-Mar-10	W-27 Alluvial 49.7 06-May-10	W-27 Alluvial 49.7 15-Sep-10	W-27 Alluvial 49.7 27-Apr-11	W-27 Alluvial 49.7 19-Sep-11
Benzene	µg/L	5	1.00 U	na	1.00 U	1.00 U	1.00 U
Toluene	µg/L	2,000	1.00 U	na	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	700	1.00 U	na	1.00 U	1.00 U	1.00 U
Xylenes	µg/L	10,000	6.00 U	na	3.00 U	3.00 U	3.00 U
2-Methylnaphthalene	µg/L	--	na	na	na	na	na
Dibenzofuran	µg/L	--	na	na	na	na	na
Acenaphthene	µg/L	--	0.0220 U	0.0220 U	0.0220 U	0.0220 U	0.0220 U
Acenaphthylene	µg/L	--	0.0870 U	0.0870 U	0.0870 U	0.0870 U	0.0870 U
Anthracene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Benzo(a)anthracene	µg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.0200 U	0.0200 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	--	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	--	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	--	0.0160 U	0.0160 U	0.0160 U	0.0160 U	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	R	0.0460 U	0.0460 U	0.0460 U	0.189 B
Phenanthrene	µg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Pyrene	µg/L	--	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U

Notes:

-- = Remediation Goal not established.
BTOC = Below top of casing.
na = Not analyzed.
ns = Not sampled.
* = LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
a = Concentration is below the reporting limit.
B = Analyte was detected in the associated 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.
CIN = The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.
ET = Matrix interference in sample is causing an endpoint timeout.
FM = Elevated detection limits due to sample foaming.
H = Sample analysis performed past method-specified holding time.
J = Estimated concentration below the reporting limit.
L1 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was outside control limits.
L5 = Laboratory Control Sample was outside of acceptance Limits. The MS or MSD was used to validate the batch.
M1 = The MS and/or MSD were outside control limits.
MHA = Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.
N1 = See case narrative.
pH<12 = Sample received at pH<12. It was adjusted correctly prior to analysis.
pH>2 = Sample received at pH>2. It was adjusted correctly prior to analysis.
P-HS = The sample container contained headspace.
Q = Poor chromatographic match to standard.
R = Sample result rejected; not usable.
S3 = Post digestion spike is out of acceptance limits for this analyte.
U = Analyte not detected at or above reporting limit.
µg/l = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
ZX = Due to sample matrix effects, the surrogate recovery was outside the control limits.

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	P-112 Silty Sand 38.8 25-Apr-05	P-112 Silty Sand 38.8 11-Oct-05	P-112 Silty Sand 38.8 15-Mar-06	P-112 Silty Sand 38.8 12-Sep-06	P-112 Silty Sand 38.8 18-Apr-07	P-112 Silty Sand 38.8 20-Sep-07	P-112 Silty Sand 38.8 06-May-08	P-112 Silty Sand 38.8 01-Oct-08	P-112 Silty Sand 38.8 29-Apr-09	P-112 Silty Sand 38.8 16-Sep-09	P-112 Silty Sand 38.8 31-Mar-10	P-112 Silty Sand 38.8 06-May-10
Alkalinity, Total as CaCO3	mg/L	–	510	670	810	854	995	1090	1220	1200	1340	1290	1880	na
Ammonia(NH3+NH4),as N	mg/L	–	31	32	32	41.6	41.3	54.3	58.2	74.2	95.7	114	128	na
Chloride	mg/L	–	na	na	na	964 M1	na	na	na	na	na	na	na	na
Iron, Total	mg/L	–	na	95	120	122 MHA	137	101 MHA	65	94.7	78.8	68.8	64.6	na
Iron, Dissolved	mg/L	–	na	99	120	119 MHA	125	98.8 MHA	100	89.5	86.2	71.8	70	na
Manganese, Total	mg/L	–	na	5.5	6.2	6.07	6.24	5.33 MHA	9.62	5.17	4.29	4.06	3.76	na
Manganese, Dissolved	mg/L	–	na	na	6.6	5.97	5.87	5.21	5.08	4.91	4.60	4.2	4.04	na
Methane	µg/L	–	2400	2900	2800	11600	16200	4600 M7	4200	8530	16500	10600	7170	na
Nitrate as N (NO3-N)	mg/L	–	0.10 U	0.10 U	0.10 U	0.100 U M1	0.100 U	0.100 U M1	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	na
Nitrite as N (NO2-N)	mg/L	–	0.020 U	0.020 U	0.020 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	na
Nitrogen, Total Kjeldahl as N	mg/L	–	27	30	32	34.2 M1	43.1	50.4 M1	61.8	58.1	93.6	113 M1	130	na
Phosphate, Ortho as P	mg/L	–	0.027 B^	0.050 U	0.016 B	0.100 U	0.100 U	1.00 U RL1	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	na
Sulfate	mg/L	–	9.3	15	5.0 U	15.9		12.2 M7	88.7	140	76.3	81.9	165	na
Sulfide	mg/L	–	2.3	6.3	6.8	1	1.55 pH<12	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U pH<12	na
Total Organic Carbon	mg/L	–	12	18	18	16.6 M1	7.42 ET	7.22 ET, M1	7.66 ET	16.9 ET	26.7 ET	25.4	26.7 ET	na
Benzene	µg/L	5	49	29	270	286	285	369 M1	551	554	786	1280	1580	na
Toluene	µg/L	2,000	3.7	1.5	10 U	21.6	18.6	22.8 M1	11.2 L1	5.15	10.7	26.7	14.4	na
Ethylbenzene	µg/L	700	91	57	500	715	536	585	789	671	890	831	1170	na
Xylenes	µg/L	10,000	75	29	220	734	232	279 M1	236 L1	556	235	277	117	na
Acenaphthene	µg/L	–	2.0 Ja	18	11	32.4	54.3	55.4	84.7	79.4	80.6	101	109	120 MHA
Acenaphthylene	µg/L	–	50	380	270	0.0850 U	0.0944 U	0.0850 U	0.0850 U	0.0870 U	0.0870 U	0.0870 U	1.74 U	0.870 U,MHA
Anthracene	µg/L	–	0.050 U	0.24 U	0.051 U	0.0113	0.0721 J	0.136 J	0.217	0.125 J	0.160 J	0.265	0.0100 U	0.192
Benzo(a)anthracene	ug/L	0.1	0.13 U	0.62 U	0.13 U	0.00558	0.00333 U	0.00300 U	0.01 J	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.13 U	0.62 U	0.13 U	0.0320 U	0.0356 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.050 Ua	0.24 U	0.051 U	0.0130 U	0.0144 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	–	0.20 U	0.95 U	0.20 U	0.00900 U	0.0100 U	0.00900 U	0.00900 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.050 U	0.24 U	0.051 U	0.0150 U	0.0167 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.13 U	0.62 U	0.13 U	0.0338 J	0.00556 U	0.00500 U	0.00500 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.30 U	1.4 U	0.30 U*	0.0100 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	–	0.13 U	0.22 Ja	0.13 U	0.0100 U	0.0111 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.198	0.0100 U	0.0100 U
Fluorene	µg/L	–	0.25 U	1.8	1.2	10.1	20.3	33.5	64.2	8.06	11.5	91.7	53	54 MHA
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.13 U	0.62 U	0.13 U	0.00700 U	0.00778 U	0.007	0.00700 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	56	520	360	167	727 B	719	506	211	324	703	R	429 MHA
Phenanthrene	µg/L	–	0.099 Ua	0.48 U	0.10 U	0.544	2.4	1.65	2.95	2.17	2.63	3.52	0.100 U	0.00500 U,M1
Pyrene	µg/L	–	0.25 U	1.2 U	0.25 U	0.0190 U	0.0211 U	0.0190 U	0.0248 J	0.0170 U	0.0170 U	0.0170 U	0.0170 U	0.0170 U
TPH as Gasoline	mg/L	–	na	na	na	na	na	na	na	na	na	na	8.53	na
Diesel	µg/L	–	na	na	na	na	na	na	na	na	na	na	5340 N1,Q	na
Gasoline	µg/L	–	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*13000 B,N1,Q*	*na*
Motor Oil	µg/L	–	na	na	na	na	na	na	na	na	na	na	512 N1,Q	na
Total Extractable Hydrocarbons	µg/L	–	na	na	na	na	na	na	na	na	na	na	18900	na
BOD - 5 Day	mg/L	–	na	na	na	na	na	na	na	na	na	na	16.4	na
Chemical Oxygen Demand	mg/L	–	na	na	na	na	na	na	na	na	na	na	75.7 M1	na
Phosphorous, Total	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	1.75

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	P-112 Silty Sand 38.8 14-Sep-10	P-112 Silty Sand 38.8 28-Apr-11	P-112 Silty Sand 38.8 20-Sep-11	W-117 Silty Sand 35.0 27-Apr-05	W-117R Silty Sand 35.7 11-Oct-05	W-117R Silty Sand 35.7 15-Mar-06	W-117R Silty Sand 35.7 12-Sep-06	W-117R Silty Sand 35.7 18-Apr-07	W-117R Silty Sand 35.7 20-Sep-07	W-117R Silty Sand 35.7 6-May-08	W-117R Silty Sand 35.7 1-Oct-08	W-117R Silty Sand 35.7 29-Apr-09
Alkalinity, Total as CaCO3	mg/L	–	1490	1160	1030	650	590	640	590	673	639	621	615	572
Ammonia(NH3+NH4),as N	mg/L	–	127	83.8	76.4	77	38	23	25	27.3	28.7	17.5	32.9	30.6
Chloride	mg/L	–	1080	NA	na	na	na	na	2160	na	na	na	na	na
Iron, Total	mg/L	–	75.8	65	81	na	110	70	71.1	83.5 MHA	53.8	101	43.6	82.0
Iron, Dissolved	mg/L	–	59.1	62.7	65.1	na	43	46	46.2	64.0 MHA	46.9	63.1	42.4	88.2
Manganese, Total	mg/L	–	3.79	3.58	3.6	na	9.4	8.6	8.04	9.47	6.81	5.09	5.95	12.7
Manganese, Dissolved	mg/L	–	3.28	3.5	3.27	na	na	8.5	7.26	9.05 MHA	6.7	9.48	5.84	13.6
Methane	µg/L	–	6670	4300	2830	1000	200	140	530	748	273	154	529	578
Nitrate as N (NO3-N)	mg/L	–	0.10 U,H3,P2	0.10 U, P2	0.10 U	0.10 U	0.10 U	0.10 U	0.100 U	0.100 U	0.100 U	0.10 U	0.10 U	0.10 U P2
Nitrite as N (NO2-N)	mg/L	–	0.100 U,H3	0.100 U	0.100 U	0.020 U	0.020 U	0.020 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Nitrogen, Total Kjeldahl as N	mg/L	–	114	86.4	72.1	80	44	23	21.3	27 M1	29.2	31.5	33.4	34.1 M1
Phosphate, Ortho as P	mg/L	–	0.100 U,H3	0.100 U	0.100 U	0.015 B	0.050 U	0.016 B	0.100 U	0.108 M1	0.100 U	0.100 U	0.100 U	0.100 U
Sulfate	mg/L	–	108	20.5	49.8	230	280	270	284	346	396	347	347	581
Sulfide	mg/L	–	2.00 U,pH<12	2.00 U, pH<12	2.00 U, pH<12	6.5	7.9	6.6	1	1.76	2.00 U	2.00 U	2.00 U	2.00 U
Total Organic Carbon	mg/L	–	18.5 ET	6.65 ET	10.2 ET	7	15	14	8.88	2.93 ET, M1	2.86 ET	2.47 ET	7.79 ET	8.93 ET
Benzene	µg/L	5	1590	454	151	1.1	2.7	35	24.8	16.6	39.8	15.8	8.08	3.43
Toluene	µg/L	2,000	24.8	5.89	1.0 U	1.0 U	1.0 U	3.1	9	2.55	9.32	1.26	1.00 U	1.00 U
Ethylbenzene	µg/L	700	798	173	74.6	1.0 U	1.8	3.2	5.72	2.56	8.3	5.91	3.42	6.28
Xylenes	µg/L	10,000	276	155	70.9	1.0 U	1.0 U	3.4	10.2	4.36	14.2	6.60	6.09	3.00 U
Acenaphthene	µg/L	–	113	41.4	50.2	1.0 Ja	1.2 Ja	2.4 U	3.04	3.93	4.49	3.41	4.33	2.93
Acenaphthylene	µg/L	–	0.435 U	0.0870 U	56.8	2.3	15	15	4.95	7.51	11.5	6.44	16.3	9.31
Anthracene	µg/L	–	0.432	0.126 J	0.0100 U	0.050 Ua	0.029 Ja	0.049 Ua	0.0407 J	0.0495 J	0.075 J	0.0270 J	0.0100 U	0.0419 J
Benzo(a)anthracene	ug/L	0.1	0.00500 U	0.0200 U	0.0200 U	0.13 U	0.018 Ja	0.13 U	0.00341 U	0.00337 U	0.00300 U	0.00300 U	0.00500 U	0.00500 U
Benzo(a)pyrene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.13 U	0.025 Ja	0.13 U	0.0364 U	0.0360 U	0.0320 U	0.0320 U	0.00800 U	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	0.0280 U	0.0280 U	0.0280 U	0.050 U	0.025 Ja	0.049 Ua	0.0148 U	0.0146 U	0.0130 U	0.0130 U	0.0280 U	0.0280 U
Benzo(g,h,i)perylene	µg/L	–	0.00800 U	0.00800 U	0.00800 U	0.20 U	0.19 U	0.19 U	0.0102 U	0.0101 U	0.00900 U	0.00900 U	0.00800 U	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	0.00700 U	0.00700 U	0.00700 U	0.050 U	0.047 U	0.049 U	0.0170 U	0.0169 U	0.0150 U	0.0150 U	0.00700 U	0.00700 U
Chrysene	µg/L	0.2	0.00800 U	0.00800 U	0.00800 U	0.13 U	0.046 Ja	0.13 U	0.00568 U	0.00562 U	0.00500 U	0.00500 U	0.00800 U	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.30 U	0.28 U	0.29 U*	0.0114 U	0.0112 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluoranthene	µg/L	–	0.0100 U	0.0100 U	0.0100 U	0.13 U	0.068 Ja	0.13 U	0.0114 U	0.0112 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
Fluorene	µg/L	–	41.6	4.64	15.3	0.079 Ja	1.2	1.1	1.52	2.23	2.82	1.7	3.06	1.76
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.00600 U	0.00600 U	0.00600 U	0.13 U	0.12 U	0.13 U	0.00795 U	0.00787 U	0.00700 U	0.00700 U	0.00600 U	0.00600 U
Naphthalene	µg/L	100	877	6.63	5.09 B	0.51 Ja	1.2 U	1.3 U	2.47	4.18 B	6.12	2.4	6.68	0.528
Phenanthrene	µg/L	–	5.05	1.39	0.00500 U	0.052 Ja	0.12	0.11	0.13	0.152	0.296	0.204	0.308	0.188
Pyrene	µg/L	–	0.0170 U	0.0170 U	0.0170 U	0.25 U	0.23 U	0.24 U	0.0216 U	0.0213 U	0.0190 U	0.0190 U	0.0170 U	0.0170 U
TPH as Gasoline	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Diesel	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Gasoline	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Motor Oil	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Total Extractable Hydrocarbons	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
BOD - 5 Day	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Chemical Oxygen Demand	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Phosphorous, Total	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	W-117R Silty Sand 35.7 16-Sep-09	W-117R Silty Sand 35.7 31-Mar-10	W-117R Silty Sand 35.7 6-May-10	W-117R Silty Sand 35.7 16-Sep-10	W-117R Silty Sand 35.7 28-Apr-11	W-117R Silty Sand 35.7 20-Sep-11	D-6 Silty Sand 37.0 27-Apr-05	D-6 Silty Sand 37.0 11-Oct-05	D-6 Silty Sand 37.0 15-Mar-06	D-6 Silty Sand 37.0 12-Sep-06	D-6 Silty Sand 37.0 18-Apr-07	D-6 Silty Sand 37.0 09-Sep-07
Alkalinity, Total as CaCO3	mg/L	–	653	837	na	656	748	666 M1	1300	1200	1300	1490	1820	1500
Ammonia(NH3+NH4),as N	mg/L	–	47.7	39.7	na	40.3	82.2	47.8	110	120	130	193	165	147
Chloride	mg/L	–	na	na	na	2280	na	na	na	na	na	1390	na	na
Iron, Total	mg/L	–	45.6	42.1	na	40.4	35	48 MHA	na	64	66	68.2	31.0 pH >2	59.7
Iron, Dissolved	mg/L	–	43.6	42.7 S3	na	39.0	33.2	43.3	na	38	31	49	9.45	45.6
Manganese, Total	mg/L	–	6.62	6.50 MHA	na	5.95	5.85	6.47 MHA	na	5.3	8.3	8.85	4.04 pH>2	6.74
Manganese, Dissolved	mg/L	–	6.58	6.60 S3	na	5.82	5.84	6.28	na	na	7.2	7.7	3.54	6.28
Methane	µg/L	–	997	823	na	608	740	561	5100	2200	4000	7660	10900	5790
Nitrate as N (NO3-N)	mg/L	–	0.10 U	0.10 U,M1	na	0.10 U	0.10 U, P2	0.10 U	0.10 U	0.1	0.040 B	0.100 U	0.100 U	0.100 U
Nitrite as N (NO2-N)	mg/L	–	0.100 U	0.100 U	na	0.100 U	0.100 U	0.100 U	0.020 U	0.020 U	0.020 U	0.100 U	0.100 U	0.100 U
Nitrogen, Total Kjeldahl as N	mg/L	–	43.5	39.4 M1	na	37.1	86.9	46.5 M1	130	130	130	106	159	164
Phosphate, Ortho as P	mg/L	–	0.100 U	0.100 U	na	0.100 U	0.100 U	<0.100 M1	0.044 B	0.050 U	0.022 B	0.100 U	0.100 U	0.100 U
Sulfate	mg/L	–	357	286	na	366	308	400 M1	20	80	50	30.2	13.8	196
Sulfide	mg/L	–	2.00 U	2.00 U pH<12	na	2.00 U, pH<12	2.00 U, pH<12	2.00 U, pH<12	67	7.5	11	2.4	5.5 pH <12	2.0 U
Total Organic Carbon	mg/L	–	16.7 ET	12.4 ET	na	7.19 ET	2.84	5.2 ET	35	36	35	28	26.9 ET	30.3 ET
Benzene	µg/L	5	43 FM	27.1	na	31.5	1.00 U	1.88	610	990	670	638	556	1220
Toluene	µg/L	2,000	5.1 FM	1.00 U	na	1.6	1.00 U	1.00 U	87	120	33	24.4	22.3	159
Ethylbenzene	µg/L	700	8.1 FM	4.91	na	11.1	2.72	1.00 U	620	730	620	635	582	795
Xylenes	µg/L	10,000	15.0 U FM	6.00 U	na	9.97	12.6	3.00 U	640	600	340	253	222	564 MHA
Acenaphthene	µg/L	–	0.135 J	5.29	3.6	0.164 J	4.89 RL1	3.04	690	88	110	170	226	143
Acenaphthylene	µg/L	–	0.0870 U	13.6	16.1	0.0870 U	10.5 RL1	9.46	4300	1300	1400	46.4	0.0850 U	0.0850 U
Anthracene	µg/L	–	0.0276 J	0.0100 U	0.0100 U	0.0100 U	0.108 RL1, J	0.0602 J	290	20	20	52.2	54.6	19.4
Benzo(a)anthracene	ug/L	0.1	0.0506 J	0.00500 U	0.00500 U	0.00500 U	0.0400 U, RL1	0.0200 U	180	8.3	9.6	21.9	22.9	8.0
Benzo(a)pyrene	µg/L	0.2	0.0866 J	0.00800 U	0.00800 U	0.00800 U	0.0160 U, RL1	0.00800 U	110	5.2	5.8	22	20.9	9.36
Benzo(b)fluoranthene	µg/L	0.2	0.0938 J	0.0280 U	0.0280 U	0.0280 U	0.0560 U, RL1	0.0280 U	55	2.7	3.1	17.6	16.6	5.74
Benzo(g,h,i)perylene	µg/L	–	0.085 J	0.00800 U	0.00800 U	0.00800 U	0.0160 U, RL1	0.00800 U	37	1.8 Ja	2.1	8.07	7.98	6.81
Benzo(k)fluoranthene	µg/L	0.2	0.0586 J	0.00700 U	0.00700 U	0.00700 U	0.0140 U, RL1	0.00700 U	35	1.1	1.3	7.07	7.24	2.83
Chrysene	µg/L	0.2	0.0745 J	0.00800 U	0.00800 U	0.00800 U	0.0204 RL1, J	0.00800 U	120	5.5	6.2	24.8	18.6	8.74
Dibenzo(a,h)anthracene	µg/L	0.2	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0200 U, RL1	0.0100 U	20	0.87 Ja	0.88 Ja*	1.95	1.73	1.07
Fluoranthene	µg/L	–	0.0732 J	0.0100 U	0.0100 U	0.0100 U	0.0318 RL1, J	0.0100 U	810	42	44	75.2	106	29.1
Fluorene	µg/L	–	0.0579 J	1.52	1.61	0.0160 U	0.0320 U, RL1	1.43	350	35	34	149	149	142
Indeno(1,2,3cd)pyrene	µg/L	0.4	0.0771 J	0.00600 U	0.00600 U	0.00600 U	0.0120 U, RL1	0.00600 U	47	2.2	2.7	9.41	10	5.07
Naphthalene	µg/L	100	0.151	R	15	0.0460 U	0.831 RL1	0.0460 U	4800	1200	800	583	712 B	854
Phenanthrene	µg/L	–	0.0784 J	0.00500 U	0.155	0.00500 U	0.0867 RL1, J	0.178	1200	74	77	170	181	86.3
Pyrene	µg/L	–	0.107 J	0.0170 U	0.0170 U	0.0335 J	0.0340 U, RL1	0.0170 U	450	21	24	317	320	27
TPH as Gasoline	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Diesel	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Gasoline	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Motor Oil	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Total Extractable Hydrocarbons	µg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
BOD - 5 Day	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Chemical Oxygen Demand	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na
Phosphorous, Total	mg/L	–	na	na	na	na	na	na	na	na	na	na	na	na

GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Remediation Goal	D-6 Silty Sand 37.0 06-May-08	D-6 Silty Sand 37.0 15-Sep-09	D-6 Silty Sand 37.0 31-Mar-10	D-6 Silty Sand 37.0 06-May-10	D-6 Silty Sand 37.0 16-Sep-10	D-6 Silty Sand 37.0 28-Apr-11	D-6 Silty Sand 37.0 20-Sep-11	SS-8 Silty Sand 33.4 20-Sep-11
Sample Location:			D-6	D-6	D-6	D-6	D-6	D-6	D-6	SS-8
Screened Unit:			Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Silty Sand
Depth BTOC (feet):			37.0	37.0	37.0	37.0	37.0	37.0	37.0	33.4
Sample Date:			06-May-08	15-Sep-09	31-Mar-10	06-May-10	16-Sep-10	28-Apr-11	20-Sep-11	20-Sep-11
Alkalinity, Total as CaCO3	mg/L	–	1840	1720	1630	na	1660	1420	1190	588
Ammonia(NH3+NH4),as N	mg/L	–	204	210	194	na	199	198	118	21.6
Chloride	mg/L	–	na	na	na	na	1640	na	na	
Iron, Total	mg/L	–	15.4	44.7	30	na	29.1 pH>2	59	90.2	48.2
Iron, Dissolved	mg/L	–	15.2	22.7 pH>2	23.7	na	21.2	57.2	70.3	42.5
Manganese, Total	mg/L	–	9.62	8.9	5.53	na	6.74 pH>2	8.17	5.14	14.2
Manganese, Dissolved	mg/L	–	7.56	8.22 pH >2	6.25	na	6.08	8.17	4.89	13.7
Methane	µg/L	–	2390	12500	11500	na	8740	4200	7360	615
Nitrate as N (NO3-N)	mg/L	–	0.10 U	0.10 U	0.10 U	na	0.10 U	0.10 U, P2	0.10 U	0.10 U
Nitrite as N (NO2-N)	mg/L	–	0.100 U	0.100 U	0.100 U	na	0.100 U	0.100 U	0.100 U	0.100 U
Nitrogen, Total Kjeldahl as N	mg/L	–	186	205	193	na	180	203	113	21.4
Phosphate, Ortho as P	mg/L	–	0.100 U	0.100 U	0.100 U	na	0.199	0.100 U	0.100 U	0.100 U
Sulfate	mg/L	–	122	222	63	na	147	4.25	7.75	145
Sulfide	mg/L	–	2.0 U	3.84	2.0 U pH <12	na	2.00 U,pH<12	2.00 U, pH<12	2.00 U, pH<12	2.00 U, pH<12
Total Organic Carbon	mg/L	–	32.6 ET	39.3 ET	36.2 ET	na	21.4 ET	8.14 ET	13.1 ET	7.29 ET
Benzene	µg/L	5	1030	966	1470	na	1060	659	1600	7.93
Toluene	µg/L	2,000	25.8	49.2	49.6	na	44.8	39.5	219	1.00 U
Ethylbenzene	µg/L	700	948	870	882 C9	na	737	424	709	1.82
Xylenes	µg/L	10,000	253	1140	345 C9	na	356	230	713	3.00 U
Acenaphthene	µg/L	–	194	213	186	148	3.67	151	228	1.96
Acenaphthylene	µg/L	–	0.0850 U	4.35 U	1.35 U	1.74 U	13.9	0.0870 U	225	0.0870 U
Anthracene	µg/L	–	37.9	33.6	29.7	14.8	0.0654 J	22.1	48.5	0.0286 J
Benzo(a)anthracene	ug/L	0.1	18.5	13.4	14.5	4.83	0.00500 U	8.5	15.8	0.0200 U
Benzo(a)pyrene	µg/L	0.2	18.2	12.4	13.4	4.9	0.00800 U	6.6	13.8	0.00800 U
Benzo(b)fluoranthene	µg/L	0.2	12.8	7.56	0.0433 U	0.0280 U	0.0280 U	4.88	13	0.0280 U
Benzo(g,h,i)perylene	µg/L	–	10	7.3	0.0124 U	2.38	0.00800 U	4.08	7.26	0.00800 U
Benzo(k)fluoranthene	µg/L	0.2	6.44	4.54	0.0108 U	0.00700 U	0.00700 U	2.31	3.32	0.00700 U
Chrysene	µg/L	0.2	17.7	10.1	0.124 U	2.47	0.00800 U	11.3	16.2	0.00800 U
Dibenzo(a,h)anthracene	µg/L	0.2	1.95	1.56	0.140 J	0.0100 U	0.0100 U	0.336	1.15	0.0100 U
Fluoranthene	µg/L	–	73.4	58.4	42.2	16	0.0100 U	20.1	61.1	0.0100 U
Fluorene	µg/L	–	207	207	103	88.8	2.41	42.7	140	0.0160 U
Indeno(1,2,3cd)pyrene	µg/L	0.4	9.59	6.91	0.00928 U	1.98	0.00600 U	3.95	7.31	0.00600 U
Naphthalene	µg/L	100	591	659	R	616	10.2	538	2610 B	2.53 B
Phenanthrene	µg/L	–	158	153	120	53.2	0.226	71.2	163	0.00500 U
Pyrene	µg/L	–	52.6	43.8	0.0263 U	2.95	0.0170 U	1.82	50.3	0.0234 J
TPH as Gasoline	mg/L	–	na	na	10	na	na	na	na	na
Diesel	µg/L	–	na	na	15900 N1,Q	na	na	na	na	na
Gasoline	µg/L	–	na	na	22900 B,N1,Q	na	na	na	na	na
Motor Oil	µg/L	–	na	na	2460 N1,Q	na	na	na	na	na
Total Extractable Hydrocarbons	µg/L	–	na	na	41300	na	na	na	na	na
BOD - 5 Day	mg/L	–	na	na	30.3	na	na	na	na	na
Chemical Oxygen Demand	mg/L	–	na	na	102 M1	na	na	na	na	na
Phosphorous, Total	mg/L	–	na	na	102 M1	na	na	na	na	na