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BUILDING A BETTER WORLD

August 31, 2011

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

MWH #1011180.0102

RE: Groundwater Monitoring Plan
Peoples Natural Gas Site
Dubuque, Iowa

Dear Ms. Engeman:

As we have discussed, MidAmerican Energy Company (MidAmerican) is proposing modifications to the groundwater monitoring program at the former Peoples Natural Gas site in Dubuque, Iowa. The proposed modifications are requested to tailor the monitoring program to current groundwater conditions at the site. It is suggested sampling be discontinued at selected monitoring well locations which were formerly downgradient of the site, but are now upgradient due to changes in groundwater flow direction; or where groundwater quality is adequately characterized by other monitoring wells. Semiannual groundwater monitoring will continue to be conducted in accordance with the September 2004 Quality Assurance Project Plan for the site, as modified by this letter.

Proposed Well Abandonments

Nine of the existing site monitoring wells constructed of black steel riser pipe (SE-2, W-119, W-120, W-121, AE-1, W-20, W-22, W-23, and W-24) were video inspected to assess well conditions; two similarly constructed monitoring wells were previously abandoned and shown to have holes corroded through the black steel casing, creating a conduit for shallow contamination to migrate to deeper zones. MidAmerican conducted video inspections of these nine monitoring wells in July 2011. Each of the nine wells exhibited some degree of corrosion; therefore, abandonment of these wells is recommended to be completed within the next five years. Monitoring wells W-20 and W-119 are recommended for abandonment during 2011 as a result of corrosion and holes observed during the video well inspections; replacement of these wells is not proposed at this time.

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Future Groundwater Monitoring

Groundwater samples will be collected at selected site monitoring wells on a semiannual basis. The proposed monitoring network consists of water table aquifer monitoring wells W-4 and D-7; silty sand aquifer wells SE-2, W-117R, W-118R, P-112, D-4, D-6, D-8, SS-6, SS-9, SS-10, W-113, and W-128; and alluvial aquifer wells W-15, W-21R, W-13, W-24 and W-27.

If dense nonaqueous phase liquid (DNAPL) is encountered during gauging activities, samples will not be collected from the affected well due to the likelihood of entraining DNAPL into the sample volume; therefore, yielding a sample which is not characteristic of dissolved-phase concentrations.

Table 1 summarizes the wells selected for monitoring and the rationale for modifications from the previous program. The proposed monitoring well locations are illustrated in Figure 1. All existing and accessible monitoring wells will be gauged for groundwater elevation, product thickness, and total depth during each semiannual groundwater monitoring event. Semiannual sampling was most recently conducted during the week of April 25, 2011. The next semiannual monitoring event is scheduled for the week of September 19, 2011. Future semiannual groundwater monitoring events are proposed for March and September of each year. During these events, monitoring wells within the sampling network will be sampled for the analytical parameters listed in Table 2. Your review and approval or comment on this proposed monitoring program is requested prior to the September 2011 monitoring event to allow this revised plan to be implemented at that time.

If you have any questions regarding the site, please contact Kevin Dodson of MidAmerican or me.

Sincerely,

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

/trw:vas
Enclosures
cc: Kevin Dodson, MidAmerican Energy Company

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TABLE 1

RATIONALE FOR MODIFICATION OF GROUNDWATER SAMPLING NETWORK
PEOPLE'S NATURAL GAS SITE
DUBUQUE, IOWA

Well	Zone Monitored and Rationale for Modification of Sampling Network
Monitoring Wells Retained in Proposed Sampling Network:	
W-4	• Water table aquifer monitoring well.
D-7	• Water table aquifer monitoring well.
SE-2	• Silty sand aquifer monitoring well.
W-117R	• Silty sand aquifer monitoring well.
W-118R	• Silty sand aquifer monitoring well.
P-112	• Silty sand aquifer monitoring well.
D-4	• Silty sand aquifer monitoring well.
D-6	• Silty sand aquifer monitoring well.
D-8	• Silty sand aquifer monitoring well.
SS-6	• Silty sand aquifer monitoring well.
SS-9	• Silty sand aquifer monitoring well.
SS-10	• Silty sand aquifer monitoring well.
W-113	• Silty sand aquifer monitoring well.
W-128	• Silty sand aquifer monitoring well.
W-15	• Alluvial aquifer monitoring well.
W-21R	• Alluvial aquifer monitoring well.
W-13	• Alluvial aquifer monitoring well.
W-24	• Alluvial aquifer monitoring well.
W-27	• Alluvial aquifer monitoring well.
Monitoring Wells Removed from Sampling Network:	
D-5	• Silty sand aquifer monitoring well. • Adequate coverage provided by D-4 and D-6.
W-119	• Silty sand aquifer monitoring well. • Recent well inspections suggest need for abandonment. • Below remediation goals in recent samples; currently upgradient of site. • Adequate coverage provided by SS-10.
W-120	• Silty sand aquifer monitoring well. • No detections above remediation goals; currently upgradient of site.
W-121	• Silty sand aquifer monitoring well. • Generally below remediation goals; currently upgradient of site. • Adequate coverage provided downgradient by SS-10.
W-122	• Silty sand aquifer monitoring well. • No detections above remediation goals; currently upgradient of site.
W-126	• Silty sand aquifer monitoring well. • No detections above remediation goals.
W-127	• Silty sand aquifer monitoring well. • No detections above remediation goals.
SS-7	• Silty sand aquifer monitoring well. • Monitoring well consistently contains product. • Area is sufficiently characterized by SS-6.

TABLE 1

RATIONALE FOR MODIFICATION OF GROUNDWATER SAMPLING NETWORK
PEOPLE'S NATURAL GAS SITE
DUBUQUE, IOWA

Well	Zone Monitored and Rationale for Modification of Sampling Network
Monitoring Wells Removed from Sampling Network (continued):	
SS-8	• Silty sand aquifer monitoring well. • Adequate coverage provided by SS-10.
W-20	• Alluvial aquifer monitoring well. • Recent well inspections suggest need for abandonment.
W-22	• Alluvial aquifer monitoring well. • No detections above remediation goals; currently upgradient of site.
W-23	• Alluvial aquifer monitoring well. • Adequate coverage provided by W-15 and W-24.
W-25R	• Alluvial aquifer monitoring well. • No detections above remediation goals; currently upgradient of site.
W-26	• Alluvial aquifer monitoring well. • No detections above remediation goals.
W-27	• Alluvial aquifer monitoring well. • No detections above remediation goals.

TABLE 2

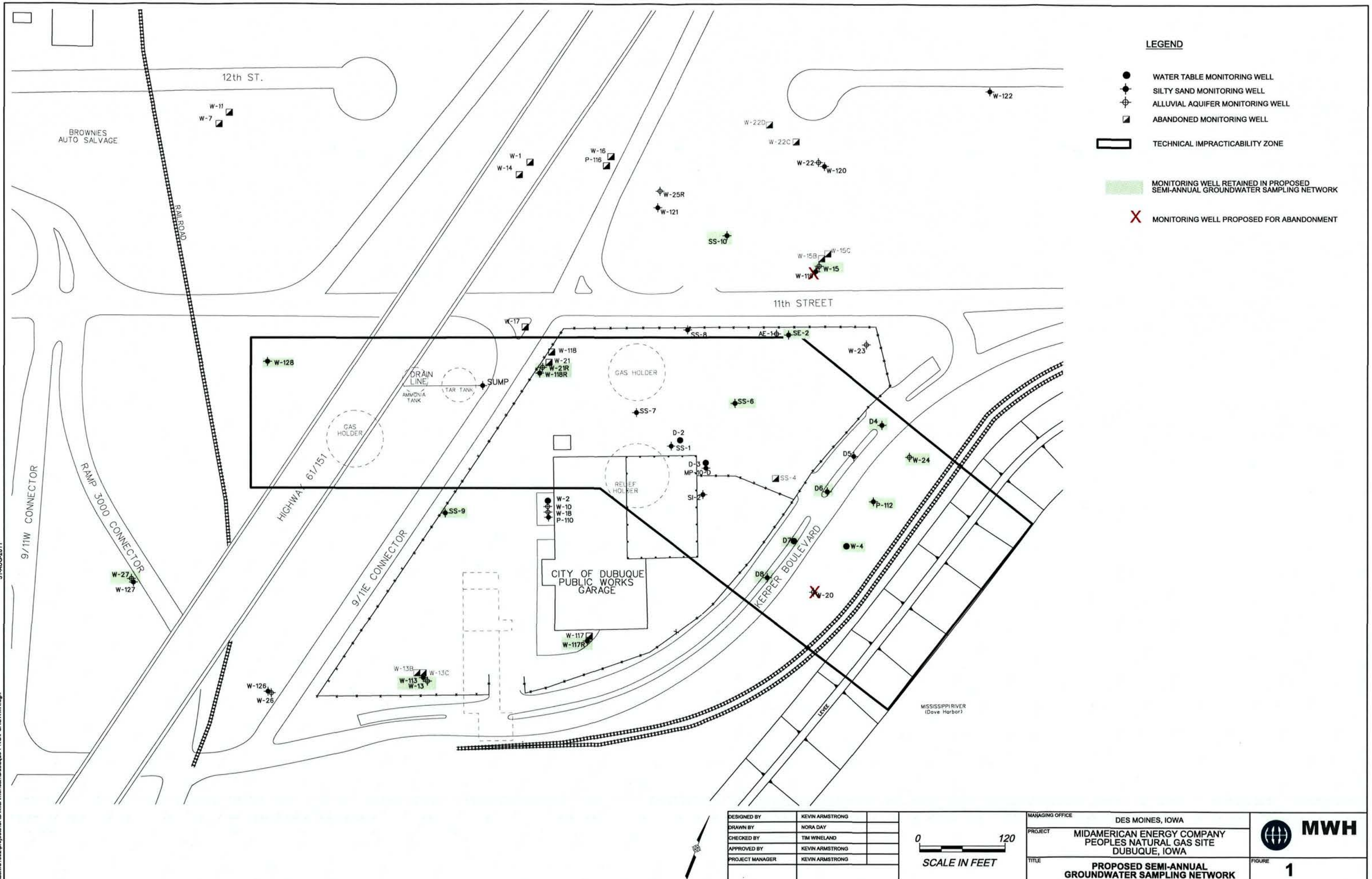
GROUNDWATER ANALITICAL PARAMETERS
PEOPLE'S NATURAL GAS SITE
DUBUQUE, IOWA

Well	COCs	MNA
W-4	X	
D-7	X	
SE-2	X	
W-117R	X	X
W-118R	X	
P-112	X	X
D-4	X	
D-6	X	X
D-8	X	
SS-6	X	
SS-9	X	
SS-10	X	X
W-113	X	
W-128	X	
W-15	X	
W-21R	X	
W-13	X	
W-24	X	
W-27	X	

Notes:

COCs = Constituents of concern parameters: benzene, toluene, ethylbenzene, xylenes, and polynuclear aromatic hydrocarbons.

MNA = Monitored natural attenuation parameters: total iron and manganese, dissolved iron and manganese, nitrite, nitrate, orthophosphate, alkalinity, sulfate, ammonia, total Kjeldahl nitrogen, total organic carbon, sulfide, and methane.


LEGEND
WATER TABLE MONITORING WELL
SILTY SAND MONITORING WELL
ALLUVIAL AQUIFER MONITORING WELL
ABANDONED MONITORING WELL
TECHNICAL IMPRACTICABILITY ZONE
MONITORING WELL RETAINED IN PROPOSED SEMI-ANNUAL GROUNDWATER SAMPLING NETWORK
MONITORING WELL PROPOSED FOR ABANDONMENT
12th ST.
11th STREET
BROWNIES AUTO SALVAGE
RAILROAD
HIGHWAY 61/151
9/11W CONNECTOR
RAMP 3000 CONNECTOR
9/11E CONNECTOR
KERPER BOULEVARD
LEVEE
MISSISSIPPI RIVER (Dove Harbor)
GAS HOLDER
GAS HOLDER
RELIEF HOLDER
DRAIN LINE
AMMONIA TANK
TAR TANK
SUMP
CITY OF DUBUQUE PUBLIC WORKS GARAGE
W-11
W-7
W-1
W-14
W-16
P-116
W-22D
W-22C
W-22
W-120
W-122
W-25R
W-121
SS-10
W-15C
W-15B
W-15
W-17
SS-8
AE-1
SE-2
W-23
W-118
W-21
W-21R
W-118R
W-128
SS-6
SS-7
D-2
SS-1
D-3
MP-10-D
SS-4
SI-2
D4
D5
D6
W-24
P-112
D7
W-4
D8
W-20
W-2
W-10
W-18
P-110
SS-9
W-27
W-127
W-117
W-117R
W-13B
W-13C
W-113
W-13
W-126
W-26
DESIGNED BY KEVIN ARMSTRONG
DRAWN BY NORA DAY
CHECKED BY TIM WINELAND
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 SEMI-ANNUAL GROUNDWATER SAMPLING NETWORK
FIGURE 1
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31-AUG-2011

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