



June 5, 2012

Greg Dunn
Voluntary Site Remediation Unit B
Remedial Project Management Section
Division of Remediation Management
1021 North Grand Ave East
P.O. Box 19276
Springfield, IL

**Subject: Shallow and Intermediate Monitoring Well Installations - Revised
AmerenIP Champaign MGP Site
State ID 0190100008**

Dear Mr. Dunn:

Ameren Illinois (Ameren) submitted a document to the IEPA entitled *Shallow and Intermediate Monitoring Well Installations* dated January 31, 2012, which was subsequently approved by the IEPA in a letter dated February 2, 2012 (Log No. 12-49820). The document proposed the installation of five shallow groundwater monitoring wells and one intermediate groundwater monitoring well at the Champaign MGP site. The proposed groundwater monitoring wells have not been installed due to unfavorable weather and site surface conditions. Further review of site data suggests that changes in the number and placement of wells may be necessary. Ameren hereby proposes the installation of *four* shallow groundwater monitoring wells and *three* intermediate groundwater monitoring wells within the site boundaries of the former MGP site located at 308 N. 5th Street. The four shallow monitoring wells (UMW-124, UMW-125, UMW-126, and UMW-127) will be installed to monitor the shallow groundwater elevations and to collect groundwater samples for chemical analysis. Three intermediate depth monitoring wells (UMW-301R, UMW-304R, and UMW-308) will be installed to monitor the intermediate depth groundwater elevation and to collect groundwater samples for chemical analysis. The proposed groundwater monitoring wells are being installed to replace the previously abandoned monitoring wells that existed within the Ameren property boundary prior to the 2009-2011 excavation activities. The replacement wells will be helpful in our efforts to evaluate potential changes to the hydrological conditions beneath the site as a result of recent excavation activities.

The proposed shallow wells UMW-124 and UMW-126 will be installed in the general location of the former on-site shallow wells UMW-115 and UMW-104, which were abandoned during excavation activities. Shallow well UMW-125 will be installed in the northwest corner of the site, and UMW-127 will be installed near the center of the site. Intermediate monitoring wells UMW-301R and UMW-304R will be installed as replacement wells for previously abandoned wells UMW-301 and UMW-304 that were removed during excavation activities. Intermediate monitoring well UMW-308 will be installed along the southern property boundary, northeast of intermediate well UMW-302. Figure 1 (attached) illustrates the locations of the proposed shallow and intermediate groundwater monitoring wells.

Our consultant, PSC, will utilize a truck mounted drill rig (CME-75) equipped with hollow stemmed 4.25-inch I.D. augers to advance four soil borings to approximately 15-feet below ground surface (bgs) and three soil boring to approximately 30-feet bgs. A Mud Rotary rig will be used to advance the intermediate depth borings from 30-feet bgs to 45-feet bgs.

PSC will not be collecting soil samples as the borings will be located in recently-placed clean backfill.

Shallow depth monitoring wells will be constructed using a 5-foot, two-inch diameter flush-threaded Schedule 40 PVC riser. A 10-foot (0.010-inch slotted) screen section will be initiated at 5 feet bgs and extend to 15 feet bgs. Each well will be completed with traffic rated, flush-mount well protectors. Clean silica sand (sand pack) material will be installed in the annular space between the borehole and the well screen. The sand pack will be installed to a depth of approximately two-feet above the top of the well screen. Bentonite chips will be placed in the annular space above the sand pack to a depth of approximately two feet bgs. The bentonite will be hydrated with water after placement. Premix concrete will be used to backfill the annular space above the bentonite seal to the ground surface.

The intermediate depth monitoring well will be constructed within the ground surface casing using a 35-foot long two-inch diameter flush-threaded Schedule 40 riser. A 10-foot (0.010-inch slotted) screen section will be initiated at 35 feet bgs and extend to 45 feet bgs. A 6-inch diameter threaded schedule 40 PVC protective casing will be installed in each of the intermediate depth boreholes. This protective surface casing is being installed to protect any potential soil impacts from below the excavation backfill to the intermediate depth groundwater zone. The casing will be grouted in-place from the ground surface to 30-feet bgs or immediately below the surface casings bottom. The well will be completed with a traffic rated, flush-mount well protector. Clean silica sand (sand pack) material will be installed in the annular space between the surface casing and well screen. The sand pack will be installed to a depth of approximately two-feet above the top of the well screen. Bentonite chips will be placed in the annular space above the sand pack to a depth of approximately two feet bgs. The bentonite will be hydrated with water after placement. Premix concrete will be used to backfill the annular space above the bentonite seal to the ground surface.

The proposed groundwater monitoring wells are scheduled for installation the week of June 18th, 2012. Approximately two weeks after monitoring well installation, the wells will be developed. Development will consist of purging the well of a minimum of five well casing volumes or until the field measurements of pH, specific conductivity, temperature, and dissolved oxygen stabilize. Once these monitoring wells have been developed, they will be included in the next quarterly groundwater sampling event for the site.

If you have any questions or require further information, please contact me.

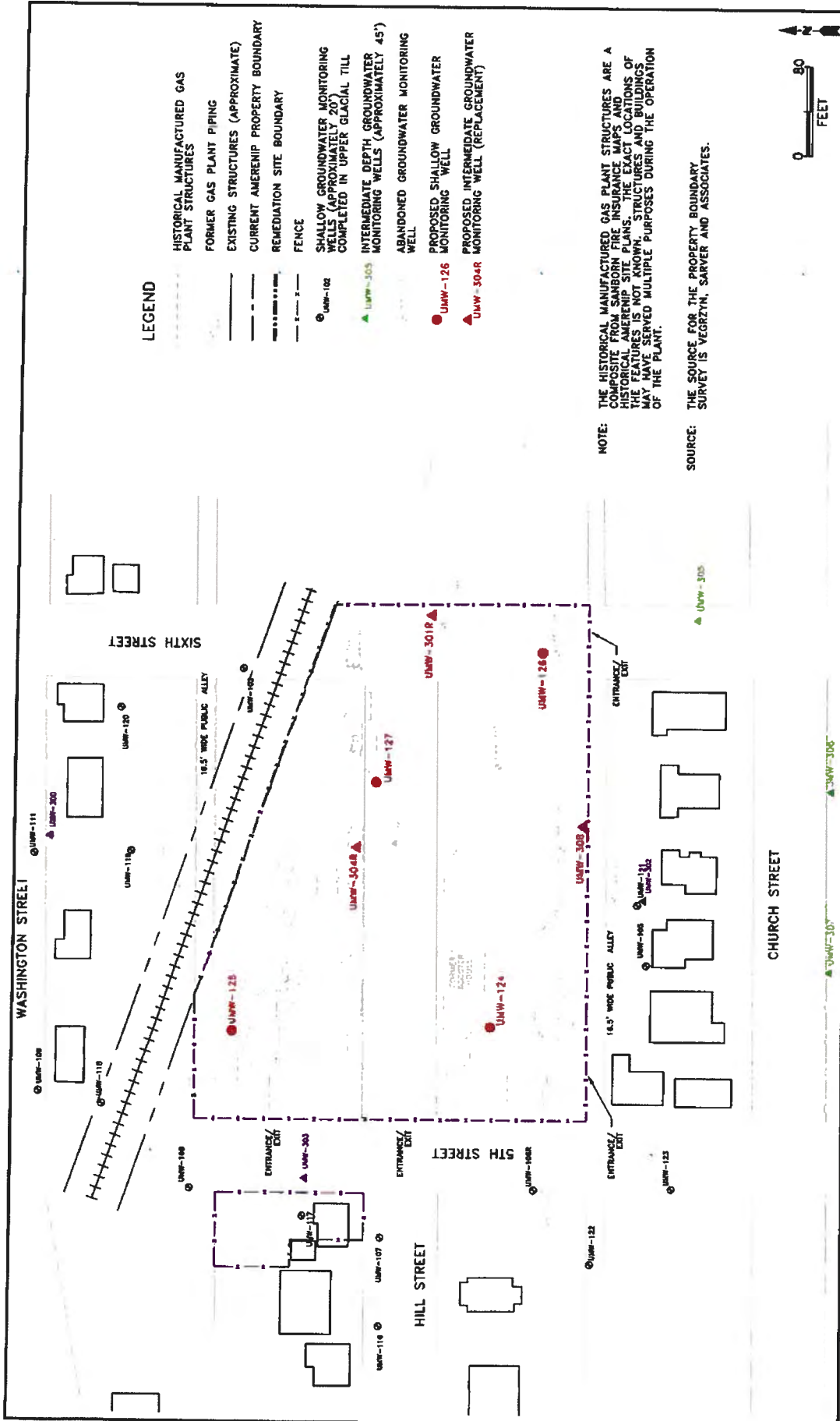
Sincerely,



Brian H. Martin, CHMM
Consulting Environmental Scientist
Environmental Services

Enclosures: Figure 1: Proposed Groundwater Monitoring Well Location Map

cc: Pete Sazama - PSC
File: WM 10.45



LEGEND

- UHW-102
 - ▲ UHW-305
 - UHW-126
 - ▲ UHW-304R
- HISTORICAL MANUFACTURED GAS PLANT STRUCTURES
 FORMER GAS PLANT PIPING
 EXISTING STRUCTURES (APPROXIMATE)
 CURRENT AMERENIP PROPERTY BOUNDARY
 REMEDIATION SITE BOUNDARY
 FENCE
 SHALLOW GROUNDWATER MONITORING WELLS (APPROXIMATELY 20' COMPLETED IN UPPER GLACIAL TILL)
 INTERMEDIATE DEPTH GROUNDWATER MONITORING WELLS (APPROXIMATELY 45')
 ABANDONED GROUNDWATER MONITORING WELL
 PROPOSED SHALLOW GROUNDWATER MONITORING WELL
 PROPOSED INTERMEDIATE GROUNDWATER MONITORING WELL (REPLACEMENT)

NOTE: THE HISTORICAL MANUFACTURED GAS PLANT STRUCTURES ARE A COMPOSITE FROM SANBORN FIRE INSURANCE MAPS AND HISTORICAL AMERENIP SITE PLANS. THE EXACT LOCATIONS OF THE FEATURES IS NOT KNOWN. STRUCTURES AND BUILDINGS MAY SERVED MULTIPLE PURPOSES DURING THE OPERATION OF THE PLANT.

SOURCE: THE SOURCE FOR THE PROPERTY BOUNDARY SURVEY IS VEGRZYN, SARVER AND ASSOCIATES.



	PROPOSED GROUNDWATER MONITORING WELLS SHALLOW AND INTERMEDIATE GROUNDWATER SYSTEM			PROJECT NO: 62403053 AMERENIP CHAMPAIGN, ILLINOIS	FIGURE 1
	DATE: 10/22/11	DRAWN BY:	CHECKED BY:	DATE:	MRC:

