Off-Site Investigation Work Plan
Former Manufactured Gas Plant
Champaign, Illinois

March 13, 2008

Prepared for:

AMERENIP

St. Louis, Missouri

PSC

Columbia, Illinois

Off-Site Investigation Work Plan
Former Manufactured Gas Plant
Champaign, Illinois

March 19, 2008

Prepared for:

AMERENIP
St. Louis, Missouri

PHILIP ENVIRONMENTAL SERVICES CORPORATION
210 West Sand Bank Road
Post Office Box 230
Columbia, Illinois 62236-0230

Project 62403053

TABLE OF CONTENTS

TABLE OF CONTENTS

Page

1 INTRODUCTION

Philip Environmental Services Corporation (PSC), a subsidiary of PSC Industrial Services Corporation, has been retained by AmerenIP to provide consulting services for the investigation of the former Champaign manufactured gas plant (MGP) site located at 308 North Fifth Street in Champaign, Illinois. The site has been entered into the Illinois Environmental Protection Agency (IEPA) Site Remediation Program (SRP) and been given State ID #0190100008. All site investigation activities will be performed in accordance with 35 Illinois Administrative Code (IAC) Section 740 – Site Remediation Program and 35 IAC Section 742 – Tiered Approach to Corrective Action Objectives (TACO).

The objective of the investigation activities described in this work plan is to collect data to determine the extent of potential off-site impacts from the Champaign MGP site. These investigation activities are designed to address all areas that may be potentially impacted due to former MGP site operations and to supplement previous data collected during investigations and remediation activities completed at the site. The data obtained from the off-site investigation will be utilized with the existing data for the evaluation of potential actions required to obtain a No Further Remediation (NFR) letter(s) for the associated properties from the IEPA.

2 SITE INFORMATION

This following sections present information relative to site setting and history obtained from previous investigations and historical documents.

2.1 Site Setting

The site is located within the city limits of Champaign, Illinois in Champaign County in the northeast quarter of the southwest quarter of Section 7, Township 19 North, Range 9 East of the Third Principal Meridian. The site address is 308 North Fifth Street (formerly 502 East Hill Street), Champaign, Illinois. The property is currently vacant, is secured by a chain-link fence, and is owned by AmerenIP. Figure 2-1 illustrates the approximate location of the site. The general area around the site consists of both residential and commercial properties. Figure 2-2 depicts the site boundaries and layout of adjacent properties. For the purposes of this plan, the "site" is reference to the AmerenIP – owned property that is primarily located within the fenced boundary.

A single active track railroad right-of-way (Norfolk-Southern) borders the site to the north and several residential properties are located north of the railroad right-of-way. Vacated Sixth Street right-of-way is adjacent to the east of the site; however, Sixth Street is abandoned between the railroad right-of-way and the alley south of the site. Other property east of the vacated Sixth Street right-of-way is commercial. Residential properties to the south are separated from the site by the chain link fence and an abandoned alley. North Fifth Street borders the site to the west and separates the site from residential properties west of Fifth Street. At one time, Hill Street approximately bisected the site in the east-west direction; but the street has been vacated and is now part of the site and is owned by AmerenIP.

2.2 Site History

The following limited information relative to MGP history is summarized from Sanborn Fire Insurance Maps (Sanborn Maps), Brown's Directory of American Gas Companies (Brown's Directories), AmerenIP files, and other historical documents. Historical information suggests that the original MGP at the site began operation circa 1869 and continued through approximately 1933. Records for the site prior to 1887 are extremely limited; however, the first edition of Brown's Directory (1887) indicates that the Champaign and Urbana Gas Light Co. was producing coal gas at the site. An 1887 Sanborn Map illustrates the facility layout and included a single gas holder, coal shed, retorts, lime house, two wells, and condensing, purifying, and meter rooms.

Between 1890 and 1907, approximate annual production grew from 6,000,000 cubic feet (c.f.) per year to approximately 30,000,000 c.f. per year. The 1907 Brown's Directory indicates that gas production was a combination of coal gas and oil gas, which continued through 1911. However, the 1902 Sanborn Map suggests that both coal gas and water gas processes were in operation by 1902. During the period 1907 to 1911, gas production increased from 30,000,000 c.f. per year to approximately 50,000,000 c.f. per year.

In the 1910 Brown's Directory, the gas holder capacity was identified as 120,000 c.f. This holder capacity is consistent with the approximate combined capacity of gas holders GH-1 and GH-2. The original construction date for these two gas holders is unknown; however, GH-1 was constructed prior to 1869 and Sanborn Maps for 1897 and 1902 indicate that gas holder GH-2 was constructed sometime during that five year period. The 1902 Sanborn Map indicates the capacity of GH-1 was 23,000 c.f. and the capacity of GH-2 was 49,000 c.f.

The 1909-1911 time frame was a period of change and expansion at the facility. A 1910 site layout drawing illustrates the plant facilities, which included both retorts and water gas sets, indicating another change in the gas making processes. This 1910 drawing also shows three tar wells, two oil storage tanks, and an ammonia storage tank. There are two gas holders shown (consistent with GH-1 and GH-2) plus a note that a third, two-lift 340,000 c.f., gas holder was located to the south across Hill Street (GH-3). The 1909 Sanborn Map indicates that a second lift had been added to holder GH-2, increasing the capacity to 100,699 c.f. The 1911 Brown's Directory indicates that gas holder capacity for the plant was 500,000 c.f., confirming the note on the 1910 drawing. The 1912 Brown's Directory also confirms the installation of water gas equipment during this time period. The 1902 and 1909 Sanborn Maps also confirm the presence of water gas equipment.

Brown's Directories between 1912 and 1918 indicate little change occurred at the plant other than a steady increase in production from approximately 50,000,000 c.f. to approximately 130,800,000 c.f. In 1915, the gas produced was approximately 60% water gas and 40% coal gas. The 1915 Sanborn Map shows the facility layout approximately the same as the 1910 site map and identifies gas holder capacities as follows: GH-1at 25,440 c.f., GH-2 at 100,700 c.f., and GH-3 at 150,000 c.f. The gas holder capacity for GH-3 conflicts with other site data and is believed to be an error by the Sanborn recorder.

Brown's Directories from 1919 through 1921 indicate total gas holder capacity was 500,000 c.f. In 1922, total capacity had decreased to 440,000 c.f. and by 1923 the capacity had increased to 600,000 c.f. These changes are consistent with: 1) the removal of GH-1 from service as a gas holder and eventual conversion to a tar well/separator; and 2) the addition of a third lift to holder GH-3, increasing capacity from 340,000 c.f. to 500,000 c.f. A November 2, 1922 site drawing and the 1922 Brown's Directory confirm these changes as well as the termination of coal gas operations and complete conversion of the facility to water gas production. In addition, this 1922 site drawing shows the relocation of purifiers from inside the building north of Hill Street to a location south of Hill Street and west of the largest gas holder (GH-3). The drawing also shows pipe sizes and location of inlets and outlets for holders GH-2 and GH-3 and distribution lines from the site. There are also seven oil tanks shown along the southwestern edge of the site. An AmerenIP file drawing indicates that conversion of GH-1 to a tar well/separator was completed in late 1924.

Brown's Directories from between 1918 and 1927 indicate that gas production increased during that period from approximately 130,800,000 c.f. to approximately 298,500,000 c.f. Site drawings from December 1926 and October 1927 illustrate only minor site changes, but indicate expansion of some process operations. There are only two oil tanks along the southwestern edge of the site and the "Gas Experiment Station of the University of Ill." is shown at the east end of the site north of the Hill St. right-of-way. The 1924 and 1929 Sanborn Maps are generally consistent with both the 1926 and 1927 site maps; however, the Sanborn Maps indicate that gas holder GH-3 had a capacity of 1,500,000 c.f. Although successive Sanborn Maps for 1941, 1949, 1951 and 1959 also indicate a capacity of 1,500,000 c.f., this is an obvious error in the 1926 map that carried throughout since the holder would have to be more than 200 feet tall and have eight or nine lifts for this capacity. Based on both Brown's Directory and IP drawings, gas holder GH-3 had a maximum capacity of approximately 500,000 c.f. and was a three-lift, on-slab above-grade water seal tank.

Brown's Directories for 1933 and 1934 indicate that production of gas on a regular basis was terminated in 1932 or 1933. The 1934 Brown's Directory indicates that natural gas was being purchased from Panhandle Illinois Pipe Line Co. of Kansas City, Mo. Based on the 1941 and 1949 Sanborn Maps, the plant was maintained in standby condition through at least 1949 and a circa 1953 photograph indicates that the plant was still standing. The photograph also shows several high-pressure gas cylinders on the eastern end of the site. These cylinders do not appear on any of the site maps or Sanborn Maps. The 1959 Sanborn Map indicates that all structures north of the Hill St. right-of way had been removed. Based on interviews with AmerenIP employees, demolition of the above ground on-site facilities, with the exception of the booster house, occurred between 1955 and 1960. The site remained vacant and unused from 1960 until the property was sold to American Legion Post 559 in 1979. AmerenIP repurchased the property from the American Legion in 1991 and the site has remained vacant since that time.

Copies of Sanborn Maps and additional information regarding the history of the site are included in the *Comprehensive Site Investigation Report for AmerenIP*

Champaign, Illinois Former Manufactured Gas Plant State ID 0190100008 dated December 2007 (CSIR).

3 PREVIOUS ACTIVITIES

Information obtained during previous site activities provides the basis for developing this scope of work. A summary of the previous activities is provided below.

3.1 Phase IA/IB Investigation

Warzyn conducted two phases of investigation during 1986. Phase IA consisted of a detailed site inspection and interviews, and Phase IB included soil gas sampling and geophysical exploration. Evidence of buried structures and MGP residuals were observed on the site. Phase IA/IB activities were used to direct Phase IC/ID RECON Investigation activities.

3.2 Phase IC/ID RECON® Investigation

Mathes conducted Phase IC/ID RECON® Investigation activities on-site and off-site in 1990 to evaluate the nature and extent of MGP impact in shallow soils and groundwater. Soil and groundwater samples were collected at 34 locations on-site and 37 locations off-site for headspace analysis using an on-site gas chromatograph (GC). The combined results of the on-site and off-site surveys indicated subsurface impacts from MGP related residuals over much of the site and also off-site primarily to the northeast, north, and west.

3.3 Phase II Site Investigation

Phase II site investigation activities began in November 1990, continued throughout 1991, and were completed in January 1992. Phase II activities, both on-site and off-site included completion of soil borings, installation of piezometers and monitoring wells, excavation of test pits, chemical analysis of soil and groundwater samples, aquifer characteristic tests, and ambient air monitoring. Thirty-four soil samples were collected for analysis from 28 boring locations. A groundwater monitoring program began during the Phase II activities and has been continued to the present. Phase II SI activities also included collection and analysis of five (5) surface soil samples, excavation and sampling of test pits, sampling and analysis of storm sewers, and residential air sampling and analysis.

The results of the Phase II SI confirmed the results of the Phase I assessments; however it did not fully define the degree and extent of MGP impacts. Impacts from MGP constituents were identified both on-site and off-site. Ameren conducted additional investigations at the site beginning in 2004 in order to complete the site investigation according to current Illinois regulations. The data from the Phase II SI as well as newly collected data were the basis for the December 2007 Comprehensive SIR.

3.4 Supplemental Site Investigation

A Supplemental Site Investigation was completed in March 1997 to further assess extent and impacts of off-site residuals east of the site and to characterize materials within the below grade gas holder (GH-1) with respect to planned source removal. SSI activities included geoprobe soil sampling along the Sixth Street right-of-way, test pit excavations near GH-1 and immediately west of Sixth Street, and sampling of liquids within GH-1. Impacts from MGP residuals were observed at several locations within the vacated Sixth Street right-of-way; however, neither a source nor a pathway for these residuals was identified. No obvious migration pathways were discovered during the SSI activities.

3.5 Interim Remedial Measures

Interim remedial measures were completed at the site between October 1997 and May 1998. The objective was the removal of source material from within grade gas holder (GH-1), tar wells and a tar separator, and an area of purifier waste. Source materials and residuals were treated on-site to render the materials non-hazardous. These impacted materials were subsequently excavated and shipped off-site for treatment at Illinova Resource Recovery's Baldwin Thermal Treatment (BTT) Facility. Approximately 1,500 tons of MGP impacted material were excavated and disposed of at BTT and an additional 100 cubic yards of concrete and rubble were disposed of at a landfill.

3.6 Comprehensive Site Investigation

A Comprehensive Site Investigation was completed during June through August 2004 to define the extent of MGP-related impacts on the AmerenIP property. The principal CSI activities completed during 2004 included excavation and sampling of test pits, logging and sampling of probeholes, and groundwater sampling. Nine test pits were excavated to investigate below grade MGP structures not addressed during the interim remedial measures and to evaluate potential off-site migration pathways to the north and east of the site. Evidence of MGP-related impact was observed in all test pits and six soil samples were collected for chemical analysis. Although heavily impacted material was identified in test pits in the north and east edges of the site, the relatively shallow depths suggested that they were not likely the pathways for off-site migration.

Twenty-seven probeholes were completed to depths ranging from twenty-four to thirty-two feet. Three probeholes were completed within the vacated Sixth Street right-of-way and seven probeholes were completed within the railroad right-of-way. The remaining seventeen probeholes were completed on the AmerenIP owned parcel. Evidence of MGP-related impact was noted at all probehole locations with the exception of two. Observed impacts tended to be both greater and deeper in the northern portion of the site, including the railroad right-of-way north of the site. Details of the investigation evaluation and Tier 1 RO exceedances are discussed in Section 5.

Fourteen monitoring wells were also sampled for chemical analysis. Water level measurements, total well depths, and presence of MGP-related impact were recorded. Benzene, toluene, ethylbenzene, and xylenes (BTEX) and polynuclear aromatic hydrocarbon (PAH) constituents were identified above detection limits in five samples. Soil and groundwater analytical figures and tables from the CSIR are included in Appendix B. Additional information is presented in the CSIR.

4 EXISTING CONDITIONS

The following sections provide a brief description of the existing conditions at the site. The existing conditions are categorized by potential areas of impact and by subsurface hydrogeology. Details of findings from the investigations performed at the site are presented in the CSIR.

4.1 Geological and Hydrological Setting

Champaign County, Illinois is situated within the Bloomington Ridge Plain in the Till Plains section of the Central Lowland Physiographic Province. The landscape is characterized by widely spaced continental glacial moraines with nearly featureless ground moraine plains. The geology beneath Champaign County can be summarized as 100 to 400 feet of Wisconsinan, Illinoian, and Kansan glacial drift deposited on Paleozoic bedrock which dips eastward and southward toward the Illinois Basin.

The major geologic units present at the site, in descending order, are the surficial fill layer, the weathered and unweathered till units of the Wedron Formation, Upper Glasford Formation, and the sand member of the Lower Glasford Formation. Below the Glasford formations are the Upper and Middle Banner formations, beneath which is the bedrock at an estimated depth of 290 beet bgs in the vicinity of the site.

Two groundwater systems are beneath the Champaign site have been monitored for groundwater flow direction and quality. The shallow groundwater system is in the surficial fill layer and uppermost till unit and is currently monitored by 14 wells. Groundwater in the shallow system beneath most of the study area generally flows in a north/northwest direction. In the south and southeast part of the site, groundwater flows to the south and southeast, respectively. Depth to the shallow groundwater system typically ranges from 3 to 10 feet bgs. .

The deepest groundwater system monitored at the site is a sand and gravel zone within the Lower Glasford Formation beginning at a depth of about 151 feet bgs to a depth greater than 177 feet bgs. The sand and gravel layers encountered in this zone were much thicker and laterally continuous than the silty sand and sand units encountered in the weathered and unweathered till units. The water levels for the three wells screened in this zone stabilized at depths of approximately 120 feet bgs. The regional gradient is to the west-southwest.

The three deep wells installed in the Lower Glasford Formation during the Phase II site investigation were plugged and abandoned in 1999. During the period between 1992 and 1998 when these wells were being monitored, no impacts were detected in groundwater. Since there is a downward gradient from the shallow groundwater unit to the deeper aquifer, these wells were plugged to prevent them from acting as a potential conduit from shallow impacted soils to the deeper unit.

4.2 Subsurface Impact

MGP-related impact was identified both on-and off-site during previous site activities; however additional investigation of this area is required to fully delineate the extent of impact.

4.2.1 Northern Property Line

The northern AmerenIP property line extends from Sixth Street just north of vacated Hill Street northeast along the railway to the alley, and continues west along the alley to Fifth Street. No MGP activities occurred north of the railroad tracks; however, impact appears to have migrated to that area. CSI test pit and boring activities focused on locating an environmental pathway from the site MGP operations to the north side of the railroad tracks.

4.2.2 Eastern Property Line and Former Gas Experiment Station

The eastern property line extends from the railway south down the center of Sixth Street to the abandoned alley. MGP-related impact was identified in a monitoring well located in the vacated Sixth Street right-of-way on the current eastern boundary of the AmerenIP property. Historical MGP activities did not occur in this area; however, the "Gas Experiment Station of the University of Illinois" was located near the northeast corner of the AmerenIP property and MGP impact appears to have migrated into the vacated Sixth Street right-of-way. In addition, a sixteen-inch diameter gas main is known to exist within the vacated Sixth Street right-of-way.

4.2.3 Vacated Hill Street Right-Of-Way

Although no actual MGP operating activities occurred in the Hill Street right-of-way, gas mains were located within the right-of-way and piping between various operations was buried under the street. Due to impacts identified during CSI activities in borings and test pits located within the right-of-way, Hill Street is identified as a recognized environmental condition that will be addressed.

4.2.4 Western Property Line

The western property line extends from the corner of Fifth Street and the alley located on the north side of Hill Street south to the corner of Fifth Street and the alley located on the south side of Hill Street. Soil borings collected during CSI activities indicated that the western edge of impact is bounded by two borings west of Fifth Street; however it is possible that that impacts likely extend under Fifth Street considering the close proximity of the borings to the corner of the site.

4.2.5 Southern Property Line

The southern property line extends from Fifth Street along the southern alley to the center of Sixth Street. MGP-related impact along the southern boundary of the site has been identified.

5 SITE INVESTIGATION PLAN

The scope of work for the site investigation activities will include drilling boreholes, the installation of monitoring wells, soil and groundwater sampling along the remediation site boundaries and off-site, and vapor intrusion sampling of residences in which MGP-related impact is determined to be present in the vicinity of a residential structure. Results of soil and groundwater samples from these locations are intended to provide a more clearly defined extent of impact off-site and will be used to supplement data from previous investigation activities completed at the site. Once the environmental impacts at the site are fully delineated, a Remedial Objectives Report (ROR) and a Remedial Action Plan will be developed.

This work plan anticipates that soil borings will be completed at nine locations on-site and 29 locations off-site. Table 5-1 presents boring locations, depths and the general rationale for each location. As data is obtained during the investigation activities, field engineering will be utilized to modify this work to better ensure that a complete delineation of off-site impacts is defined.

5.1 Site Preparation and Mobilization

Prior to performing any off-site activities, AmerenIP and/or its site representatives will obtain access from the appropriate property owners. In addition, AmerenIP will provide each owner and tenant with an explanation of the activities and purpose of the investigation on that tract.

Joint Utilitity Locating Information for Excavators (J.U.L.I.E.) will be contacted by PSC prior to the start of any intrusive field activities. All underground utilities will be marked by the respective company, both within the boundary of the site and within the off-site areas to be investigated. The PSC site engineer/geologist will stake approximate locations to be investigated. As site work progresses, some of these locations may be modified and additional locations may be included.

Excavation and drilling equipment will be mobilized to the site and a lay-down area will be established for storage of equipment and supplies. The former MGP booster house will be used as both an office and storage facility throughout the investigation activity. A temporary decontamination pad will be constructed at the site for cleaning drilling and sampling equipment. A poly-storage tank will be located adjacent to the decontamination pad for temporary storage of decontamination fluids and waste water. A roll-off box or one cubic yard landfill boxes will also be transported to the site for temporary storage of drill cuttings and other investigation generated solid waste.

All equipment will be inspected upon arrival at the site and will be decontaminated prior to any on-site use. Augers and sampling equipment will be cleaned with a pressure washer after completion of each borehole prior to moving to the next sample location. Sampling equipment will be rinsed with a clean water rinse after pressure washing.

5.2 On-Site Soil Boring and Sampling

Soil borings will be completed at nine locations on-site during the investigation. Figure 5-1 illustrates the approximate boring locations. In general, soil borings will be advanced to a depth of approximately 30 feet bgs or to a minimum of eight feet below visual/olfactory impact, using a truck-mounted hydraulic hammer probe rig with Macro-Core samplers. The final boring depth at each location will be determined in the field based on observations by the site engineer/geologist. The following criteria will be used to determine final depth:

- Refusal indicating buried structure, contact with impenetrable geologic unit, or limits of the equipment. If refusal is encountered within five feet of the ground surface, the boring location will be shifted a few feet and re-drilled.
- Termination in the unweathered till or sand units after eight feet with no apparent MGP impacts.

All borings will be continuously sampled using appropriate methods. The site engineer/geologist will log each sample and record information in a waterproof field note book. Soil type, recovery, observations relative to odors and impacts will be recorded. Soil samples will be classified in accordance with ASTM Standard D2488-90 (Standard Practice for Description and Identification of soils (Visual-Manual Procedure)). Each sample will be field screened for organic vapor concentrations using a photoionization detector (PID) and the results recorded in the field note book.

In general, a minimum of three soil samples will be collected from each boring for laboratory analyses. A surface soil sample will be collected from the interval from ground surface to three feet bgs at each location. A second sample will be collected from the three to ten foot bgs interval and a third from the interval below ten feet at each boring location. In addition, if MGP impacts are observed, at least one sample from the impacted interval will be collected. The impacted sample will be based on PID reading and odor and visual observations. If the observed most heavily impacted interval is not consistent with the highest PID reading, two samples may be collected, one representing each interval. The goal of this sampling rationale is to define the degree and extent of MGP impacts in both horizontal and vertical directions.

The surface soil samples (i.e. 0 to 3' bgs) will be analyzed for BTEX, PAHs, cyanide, metals, and organic carbon (F_{oc}) (10%) and pH. Non-impacted subsurface soils will be analyzed for BTEX, PAHs, cyanide, metals, F_{oc} (10%), and pH. Impacted subsurface soil samples will be analyzed for BTEX, PAHs, metals, and cyanide. Section 7 of this work plan presents the analytical methods to be used for this investigation and specific chemical constituents to be reported.

5.3 Off-site Soil Boring and Sampling

Soil borings will be completed at a minimum of 29 locations off-site. These locations are shown on Figure 5-1. The primary objective of these borings is to define the lateral and horizontal extent of MGP residuals identified in previous investigation activities. Based on previous observations, these borings will be at least 30 to 45 feet bgs (or to a minimum of eight feet below visual/olfactory impact) and will be drilled using the same methodology as described for the on-site borings in the previous section. Criteria for depth of termination will be the same as for the on-site borings.

Ten borings will be drilled north of the north railroad right-of-way, and eight will be drilled along the Fifth Street right-of-way west of the remediation site. Seven boreholes will be drilled along the south side of the alley to the south, and four will be drilled east of the Sixth Street right-of-way. Additional off-site borings may be added if necessary based on observations of the initial 29 borings. All borings will be logged and sampled following the same criteria described in Section 5.2 for the on-site borings. Should the planned borings identify that the extent has not been defined, the field engineer/geologist will continue the investigation in the appropriate direction. Criteria for soil sample analysis will be the same as for the on-site borings.

5.4 Evaluation of Groundwater Conditions

The groundwater evaluation will consist of evaluating the hydrogeologic conditions at the site and assessing the extent of groundwater impact associated with the former MGP operations. The evaluation of hydrogeologic conditions will include the installation of monitoring wells on-site and off-site, surveying of monitoring wells, and recording of groundwater level measurements. The assessment of the groundwater impact will include the purging of wells and collection of groundwater samples for the applicable constituents of concern.

5.4.1 Monitoring Well Installation

Based on field observations and analytical data from previous investigation activities, one additional monitoring well will be installed on-site, and nine additional monitoring wells will be installed off-site. The locations of the proposed monitoring wells are illustrated on Figure 5-2. The on-site well will be located within the vacated Hill Street area near the center of the remediation site, screened in the intermediate depth of 35-45 feet to encounter a suspected sand unit beneath the site. Off-site wells will consist of five wells installed to a depth of twenty feet bgs, and four wells installed to a depth of forty-five feet bgs. To prevent possible cross-contamination issues, the deeper wells will be outer-cased to a minimum depth of 30 feet bgs with 10-foot screens. Monitoring well locations, depths, and descriptions are listed on Table 5-2.

Well construction will be two-inch diameter PVC well screens and risers. The well screen slot size will be 0.010 inches. The annular space will be backfilled with sand pack to two feet above the top of the well screen. A minimum of a two-foot seal of bentonite will be placed above the sand pack. The remainder of the annular space will be backfilled with bentonite grout. Each monitoring well will be completed with a flushmount well vault.

5.4.2 Monitoring Well Development, Purging, and Groundwater Sampling

After well installation, each monitoring well will be developed using pump and surge methods to evacuate a minimum of five well volumes of water. Field parameters of pH, conductivity, turbidity, and temperature will be measured throughout the development process to ensure that groundwater conditions have stabilized. The quantity of water removed, the groundwater conditions, and the beginning and ending groundwater levels will be recorded on field data sheets.

Groundwater sampling activities will be initiated approximately two weeks after well installation and development has been completed. Water level measurements will be obtained from all wells using an electronic water level indicator and recorded in a field log-book. Each of the wells will be purged of a minimum of three well casing volumes of water. Each well will be outfitted with a dedicated bladder pump.

The procedures for well purging are in general accordance with USEPA Document 540/S-95/504 "Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, April 1996 (Low-Flow). The purging rate shall be performed at a rate of <0.5 Liters per minute (L/m). The water level of the well will be monitored during purging to avoid unacceptable drawdown and to prevent water cascading down the well screen. The rate shall be decreased appropriately to maintain a constant water level to within one foot (1') of drawdown or more than 10% below the top of the screened interval, once the pump has started. At a minimum, one well casing volume shall be purged prior to evaluating parameter stabilization, unless low yield dictates otherwise. Calculation data is provided on the Well Purging Data Form. A copy of the form is included in Appendix C.

Per the guideline, the purging criteria is based primarily on the stabilization of water quality parameters. Water quality measurements of temperature, pH, specific conductance, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity will be recorded during purging. All measurements will be obtained using a water quality instrument fitted with a flow-through cell connected to the discharge side of a pump. During purging, the flow-through cell will be inspected to insure no bubbles form on the wall. If extensive bubbles are observed, the connection to the pump should be inspected, and/or the pump flow rate should be adjusted to eliminate the bubbles. The well will be purged until indicator parameters have stabilized over three consecutive readings. If the well is pumped dry, samples can be collected as the well recharges.

Stabilization has been achieved after a minimum of three successive readings, in which pH is within +/- 0.1, conductivity is within +/- 3%, ORP is within +/- 10mvs, DO is within +/-10%, and turbidity is within +/-10%. Dissolved oxygen and turbidity usually are the last parameters to stabilize. Therefore, stabilization achievement for turbidity is also based on being <25 ntu's..

Groundwater samples will be collected from each monitoring well for laboratory analysis. Groundwater samples will be analyzed for BTEX, PAHs, cyanide and metals. Samples to be analyzed for BTEX will be collected first followed by PAHs, cyanide and metals. The bottles will be labeled and placed on ice in a cooler provided by the laboratory. Section 7 of this work plan presents detail relative to analytical methods to be used for this investigation.

5.4.3 Hydrogeologic Testing and Evaluation

Following the completion of wells, hydrogeologic testing will be performed to characterize the hydrogeologic conditions. The testing will include performing slug-testing on a minimum of three of the deeper monitoring wells for calculating site hydraulic conductivity. Static groundwater level measurements will be recorded and groundwater elevation contours will be generated to depict the groundwater flow conditions at the site.

Slug testing will consist of the instantaneous introduction or removal of a stainless-steel rod or a slug into and out of each monitoring well. The instantaneous change in water level and the subsequent return of the water level to static conditions is recorded. Groundwater levels will be monitored with an electronic water level indicator and a pressure transducer and data logger. Groundwater levels will be monitored for a minimum of 10 minutes and until groundwater levels have reached 90 percent of static conditions. Groundwater levels will not be monitored beyond 60 minutes. The recorded data will be evaluated using the Geraghty & Miller, Inc. model AQTESOLV™ to calculate a hydraulic conductivity at each well and the site.

5.5 Vapor Intrusion Sampling

An evaluation for the potential of vapor intrusion will be conducted on off-site properties associated with MGP-defined impact in either soil or groundwater media. The evaluation will consist of an initial property screening to evaluate for inhalation risk. Additional activities may be conducted based on the results of the screening.

5.5.1 Buildings Parameters

For each of the buildings within or adjacent to a potentially MGP- impacted area, sufficient information will be collected to complete Form 1 (Appendix A) for property screening purposes. Should access to the building not be available, the form will be completed based on the best available information and observation of the buildings.

5.5.2 Soil Geotechnical Parameters

The following soil geotechnical parameters will be collected using the following methods:

- Porosity – ASTM Method D854
- Moisture Content – ASTM Method D2216

A minimum of one soil sample will be collected from each of the following borings for geotechnical parameters: B-803, B-807, B-810, B-813, B-820, B-825, B-830 and B-834. The number of samples collected per boring will depend on the heterogeneity of the vertical strata with a minimum of one sample per boring from about 5- to 10-feet bgs. All samples will be collected above the capillary fringe. Water content of each sample will be reported for potential future use calculations.

5.5.3 Evaluation of data for Vapor Intrusion

Available data at the site will be used to estimate the potential risks due to VIP. The estimate will be calculated using the following site specific data:

- Representative groundwater concentrations,
- Soil moisture and porosity characteristics,
- Building characteristics, and
- Depth to groundwater.

The results of this off-site investigation will provide the data necessary to develop a vapor intrusion sampling approach. The vapor intrusion sampling event will be conducted as a follow up to the soil and groundwater sampling program.

6 CHAIN OF CUSTODY PROCEDURES

The site engineer/geologist is responsible for the care and security of soil and groundwater samples from the point of collection until they are transferred to the shipper or the laboratory. A sample is considered to be in custody if the sample is in the physical possession of the sampler or other designated person, or stored in a locked place.

An original chain-of-custody (COC) form will be filled out at the time of sampling. All information in the upper part of the COC must be filled in clearly and legibly. Every sample container must be accounted for on the COC. The signature blocks will be completed at the time of sample transfer.

Copies of the COC forms will be placed in the project file. The original COC form will accompany the samples during transportation to the carrier and upon arrival at the laboratory. A second copy of the COC form will be provided to PSC's laboratory QA/QC officer.

Any person accepting responsibility for the samples will sign and date the form on the date accepted. The courier service (if used), however, will only be designated on the COC form and no signature will be required. Custody seals will be utilized to identify possible tampering during the transportation process.

7 ANALYTICAL PROGRAM AND DATA HANDLING

As identified in Section 5, both soil and water samples will be collected during investigation activities for chemical analysis at an off-site laboratory. During sample collection, soil or water will be placed in laboratory provided containers and labeled according to matrix, sample location, date, and analytical method. Quality control (QC) samples, which will include trip blanks, field (rinsate) blanks, duplicates, and matrix spikes will be collected to assess the quality of the data resulting from the field sampling program.

Samples will be protected from breakage and shipped in coolers. Each cooler will be sealed with custody seals and covered with clear tape, so that any opening of the cooler during shipment will be indicated. Ice will be used to maintain a temperature of 4° C. A shipment method will be selected that will ensure delivery to the laboratory within 24 to 48 hours after collection. All soil and water samples will be shipped or delivered to Teklab, Inc. in Collinsville, Illinois. The laboratory will provide a data quality objective (DQO) level III data package upon completion of analysis.

7.1 Soil Sample Analytical

Soil samples will be collected from on-site and off-site soil borings (Sections 5.2 & 5.3). It is anticipated that in excess of one-hundred soil samples will be sent to the laboratory for analysis. Since analytical data are available from the Phase II investigation and a relatively large number of additional samples will be collected, complete analyses for all parameters will not be necessary as a site-specific constituent of concern (COC) list is presented in the Comprehensive Site Investigation Report. The total number of soil samples includes a minimum of three samples from most boring locations. In addition, at least one QA/QC sample will be collected for every twenty soil samples.

The analytical methods to be used will include the following:

- SW-846 Method 5035/8260B (BTEX)
- SW-846 Method 8270 SIMS (PAHs)
- SW-846 Method 9010 (total and amenable cyanide)
- SW- 846 Methods 6000 & 7000 series (chromium, lead, arsenic)
- SW-846 Method 9045C (pH)
- ASTM – D2974-87 (f_{oc})

Due to BTEX and PAHs being the primary drivers for remedial action at MGP sites, each soil sample will be analyzed for BTEX and PAH constituents. Analysis for cyanide, metals, f_{oc}, and pH will not be performed at all sample locations. Cyanide and metals will be performed on not less than 40% of samples and pH on not less than 10% in a manner to fully represent the overall site conditions. A minimum of six (6) f_{oc} samples will be collected from three interval depths in non-impacted areas to be averaged for site representation purposes. Soil samples analyzed for metals will include; arsenic, chromium, lead, and mercury.

7.2 Groundwater Sample Analytical

Groundwater samples will be collected from fourteen pre-existing monitoring wells and ten new wells. In addition, two duplicate samples will be collected for QA/QC purposes.

The analytical methods will include the following:

- SW-846 Method 8260 (BTEX)
- SW-846 Method 8270 SIMS (PAHs)
- SW-846 Method 9010 (total cyanide)
- SW-846 Methods 6000 & 7000 series (chromium, lead, arsenic)

8 DATA EVALUATION AND REPORT PREPARATION

Upon completion of the field activities and receipt of laboratory analytical results, PSC will perform an evaluation and comparison of results to the ROs outlined in 35 IAC Section 742 (TACO guidance). Analytical results will be compared to the Tier 1 ROs for the soil ingestion exposure pathway, the soil inhalation exposure pathway, the soil component of the groundwater ingestion pathway, and the groundwater ingestion exposure pathway. PSC will prepare a Site Investigation Report for each property parcel as outlined in 35 IAC Section 740.425/435. The report will provide the IEPA clearly defined delineation of the impacted area, which exceeds the Tier 1 ROs. Following IEPA review of the SIR, a Remedial Objectives Report (ROR) will be prepared in accordance with 35 IAC Section 740.445.

List of Tables

Table 5-1

RATIONALE OF PROPOSED BOREHOLE LOCATIONS

CHAMPAIGN, MGP
CHAMPAIGN, ILLINOIS

BORING NUMBER	APPROXIMATE DEPTH (Ft. bgs)	LOCATION	RATIONALE*
B-800	30	501 East Washington; along northern boundary of railroad right-of-way	Located between UTB-09 where no impact was identified, and UTB-11 where BTEX/PAH exceed Tier 1 ROs to define extent of off-site MGP impact to northwest; proposed location of monitoring well UMW 118
B-801	30	503 East Washington; along northern boundary of railroad right-of-way	Determine extent of off-site MGP impact north of remediation site boundaries; shallow groundwater flow is to north/northeast
B-802	30	505 East Washington; north of railroad right-of-way near center of plot	Determine extent of off-site MGP impact north of remediation site boundaries; shallow groundwater flow is to north/northeast
B-803	45	507 East Washington; north of railroad right-of-way near center of plot	Determine extent of off-site MGP impact north of remediation site boundaries; shallow groundwater flow is to north/northeast; proposed location of monitoring well cluster UMW-119/300
B-804	30	509 East Washington; north of railroad right-of-way near center of plot	Determine extent of off-site MGP impact north of remediation site boundaries
B-805	30	511 East Washington; north of railroad right-of-way n	Determine extent of off-site MGP impact north of remediation site boundaries; proposed location of monitoring well UMW-120
B-806	30	Intersection of 509, 511 East Washington, and the alley adjacent to northern railroad right-of-way	Located between UTB-01 where MGP-related impact was identified and UTB-02 where no impact was identified to determine extent of off-site impact to north
B-807	30	Northeast of remediation site; along east side of Sixth Street, north of railroad right-of-way	Located northeast of former "Gas Experiment Station"; Determine extent of off-site MGP impact northeast of remediation site boundaries
B-808	30	Northeast of remediation site; along northern boundary of railroad right-of-way	Located northeast of former "Gas Experiment Station"; Determine extent of off-site MGP impact northeast of remediation site boundaries
B-809	30	East of remediation site along southern boundary of railroad right-of-way	Determine aerial extent and depth of off-site MGP impact east of remediation site boundaries; proposed location of monitoring well UMW-301
B-810	45	East of remediation site between railway and alley	Determine aerial extent and depth of off-site MGP impact east of remediation site boundaries
B-811	30	East of remediation site, south of B-810	Determine extent of off-site MGP impact east of remediation site boundaries
B-812	30	East of remediation site; at corner of Sixth Street and alley	Determine extent of off-site MGP impact east of remediation site boundaries
B-813	30	In center of Sixth Street, just south of remediation site boundaries	Located south of UTB-04; no previous data was obtained from this area
B-814	30	Located within site boundaries in southeast corner	Located south of impacted B-510; to determine extent of impact in southeast corner of site
B-815	30	North central portion of property at 512 East Church near the alley	No previous data for this area; to determine if off-site impact is present along southeastern site boundary
B-816	30	Located along southern boundary within site boundaries	Located along southern boundary, between impacted boring B-510 and impacted well UMW-114

BORING NUMBER	APPROXIMATE DEPTH (Ft. bgs)	LOCATION	RATIONALE*
B-817	30	North central portion of property at 510 East Church	Determine extent of off-site MGP impact south of remediation site boundaries
B-818	30	Along southern site boundary near center of site	Located south of former gas holder structures and impacted UTB-21
B-819	45	South of remediation site near alley	Determine aerial extent and depth of off-site MGP impact south of remediation site boundaries; proposed location of monitoring well cluster UMW-121/302
B-820	30	South of site in north central portion of property at 506 East Church	Located between impacted B-512 and UTB-05
B-821	30	North central portion of property at 504 East Church	Located south of alley; south of former above ground fuel tanks
B-822	30	Southwest boundary of site along fence	Located in area of former above ground fuel tanks, between impacted B-512 and non-impacted B-513
B-823	30	Southwest corner of site	Located near former MGP structures; no previous data from this corner of site
B-824	30	Northwest corner of 502 East Church	Determine extent of off-site MGP impact southwest of remediation site boundaries
B-825	30	Southwest of site at corner of Fifth Street and alley	Determine extent of off-site MGP impact southwest of remediation site boundaries
B-826	30	Along Fifth Street near 411 East Hill	Located north of non-impacted UTB-06 to determine extent of impact west of site
B-827	30	Along western site boundary between alley and Hill Street	Located in area of former MGP structures; no previous data was collected in this area
B-828	30	Off-site at corner of Fifth Street and Hill Street on property at 411 East Hill	Determine extent of off-site impact to west of site
B-829	30	Within vacated Hill Street on western boundary	South of impacted B-501 near former MGP piping structures
B-830	30	Corner of Fifth Street and Hill Street on property at 412 East Hill	Located west of impacted B-501; to determine extent of off-site impact to west
B-831	45	East central boundary of 412 East Hill	Define extent of off-site impact to west of site; proposed location of monitoring well cluster UMW-117/303
B-832	30	Northeast corner of property at 412 East Hill	Located between non-impacted UTB-08 and impacted UTB-16
B-833	30	In northwest corner of site near fence	Location of former MGP structures; to determine extent of impact in northwest corner of site
B-834	30	Located along west side of Fifth Street at southern railroad boundary	Groundwater flow is to north/northwest; to determine extent of off-site impact northwest of site
B-835	30	Located along fence east of B-833	North of tar well removal area; adjacent to impacted B-503; to address IEPA comment
B-836	30	Northwest of site near 411 East Washington, south of railway	Determine extent of impact northwest of site
B-837	30	Northwest of site, in Washington Street along northern boundary of railroad right-of-way	Determine extent of impact northwest of site

* General objective of the rationale is to provide complete aerial coverage of the site.

Table 5-2

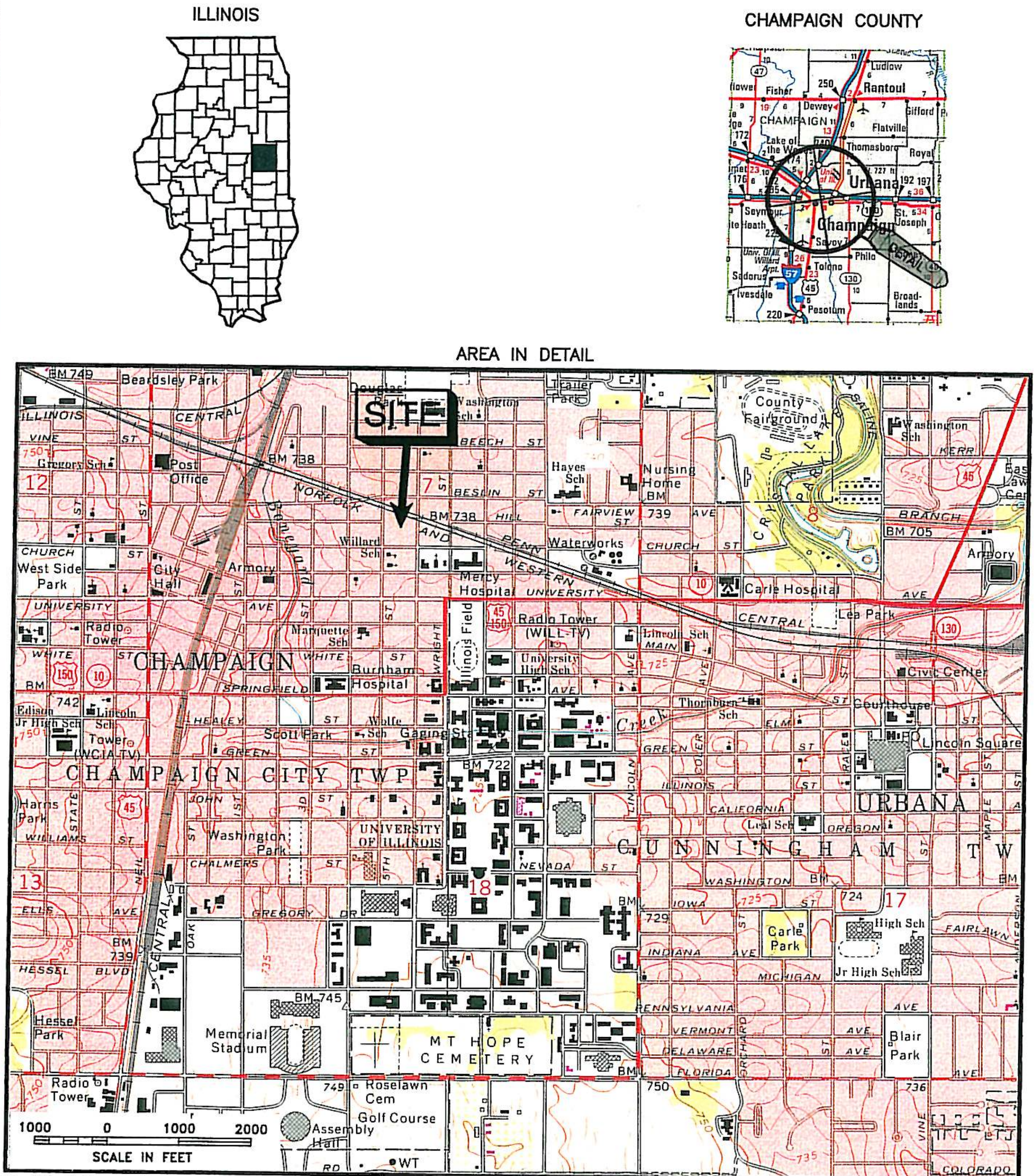
RATIONALE OF PROPOSED MONITORING WELL LOCATIONS

CHAMPAIGN FORMER MGP SITE
CHAMPAIGN, ILLINOIS

WELL NUMBER	APPROXIMATE DEPTH (Ft. bgs)	LOCATION	RATIONALE*
UMW-117	30	Formerly UPZ-103, located west of site in Fifth Street	Located in area of shallow groundwater impact identified during previous investigations
UMW-118	30	Off-site on property at 501 East Washington; north of railroad right-of-way	Located north of site to encounter shallow groundwater; estimated direction of groundwater flow is north/northwest
UMW-119	30	Off-site on property at 507 East Washington; north of railroad right-of-way	Located north of site to encounter shallow groundwater; estimated direction of groundwater flow is north/northwest
UMW-120	30	Off-site near center of property at 511 East Washington; north of railroad right-of-way	No wells currently in this plot; to determine extent of groundwater impact north of site
UMW-121	30	South of site in northwest portion of property at 508 East Church	Determine extent of groundwater impact south of site
UMW-300	45	North of site adjacent to UMW-119	Determine extent of intermediate groundwater impact north of site
UMW-301	45	Off-site east of abandoned well UMW-103	In area of soil impact; to determine determine extent of intermediate groundwater impact east of site
UMW-302	45	South of site adjacent to UMW-121	Determine extent of intermediate groundwater impact south of site
UMW-303	45	West of site adjacent to UMW-117	Located in an area of shallow groundwater contamination identified during previous investigations; determine extent of intermediate groundwater impact west of site
UMW-304	45	On-site, in vacated Hill Street near center of remediation site	Located in area of heaviest impact, adjacent to UMW-105; determine extent of intermediate groundwater impact on-site

* General objective of the rationale is to provide complete aerial coverage of the site.

List of Figures

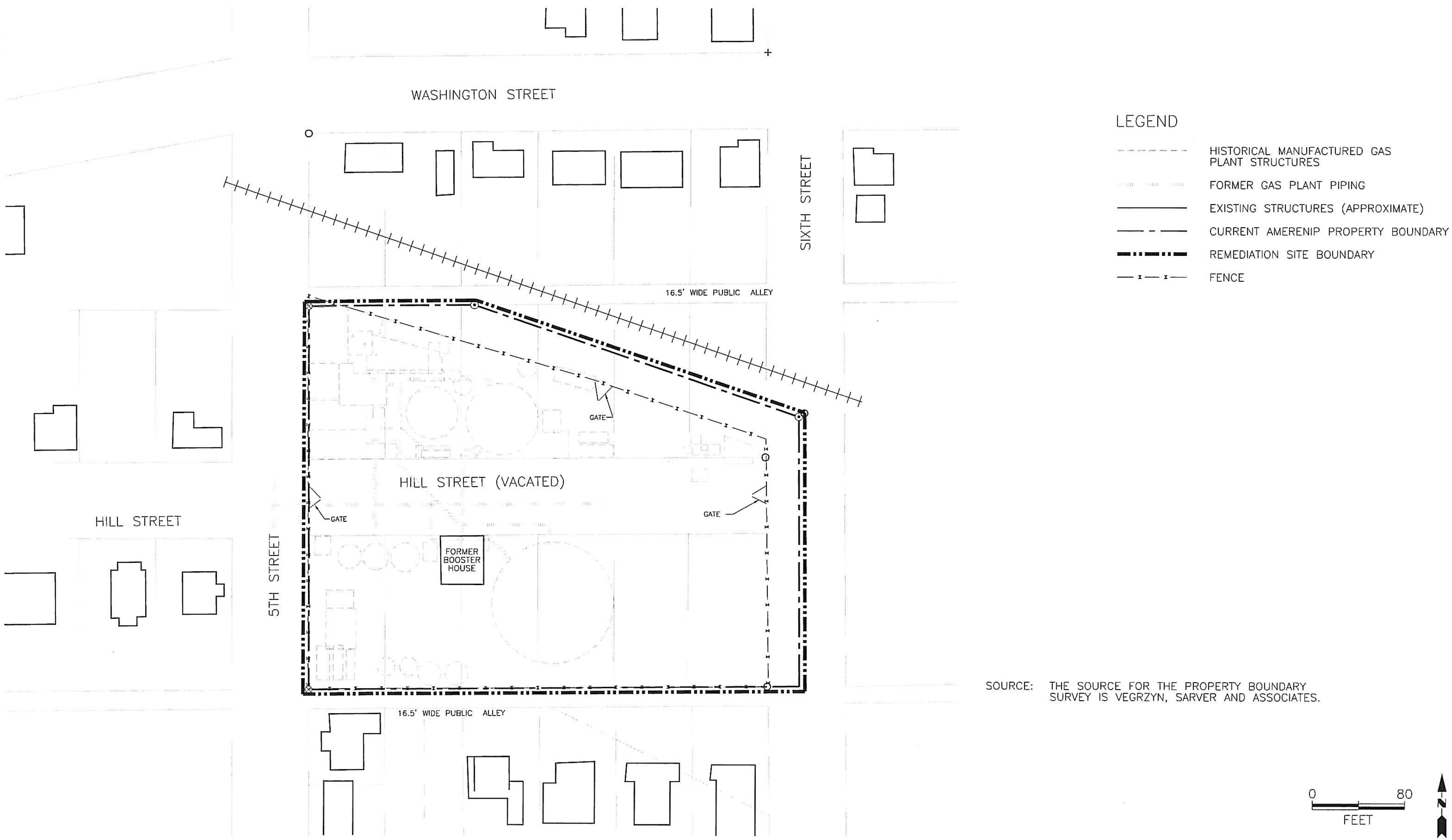


Modified from U.S. Geological Survey, Urbana, Illinois, quadrangle, Photorevised 1975.

SCALE IS VARIABLE N

PSC	TITLE: SITE LOCATION MAP	DWN: TMM	DES.: SPB	PROJECT NO.: 62400345 AMEREN IP CHAMPAIGN, ILLINOIS
		CHKD:	APPD:	
		DATE: 2/24/00	REV.: 0	FIGURE 2-1

COL 624\00345E-001

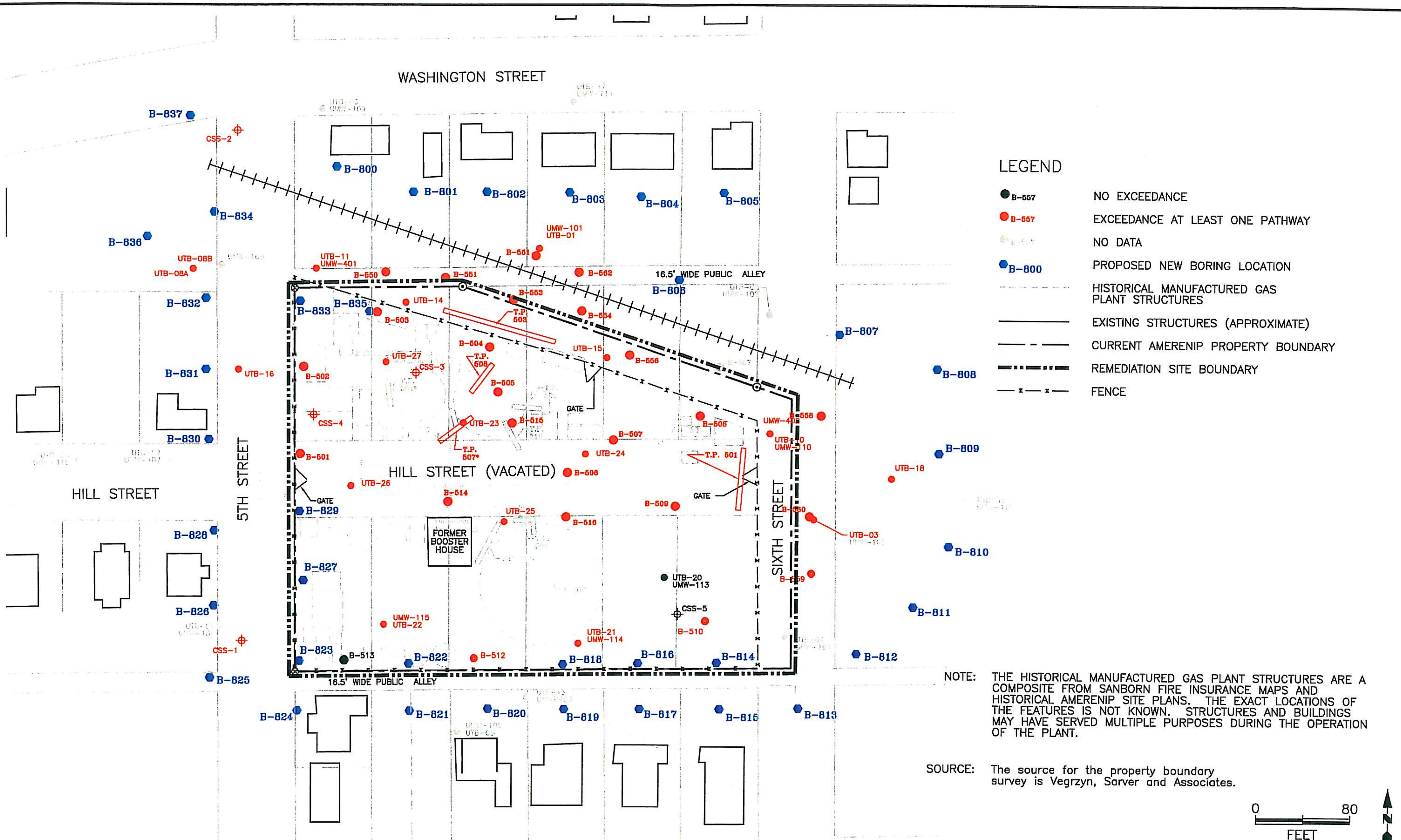


PSC

TITLE: SITE MAP

DWN: TMM	DES: MRC	PROJECT NO: 62402647 AMERENIP CHAMPAIGN, ILLINOIS
CHKD:	APPD:	
DATE: 2/4/08	REV:	FIGURE 2-2

COL. J:\624\02647B-033

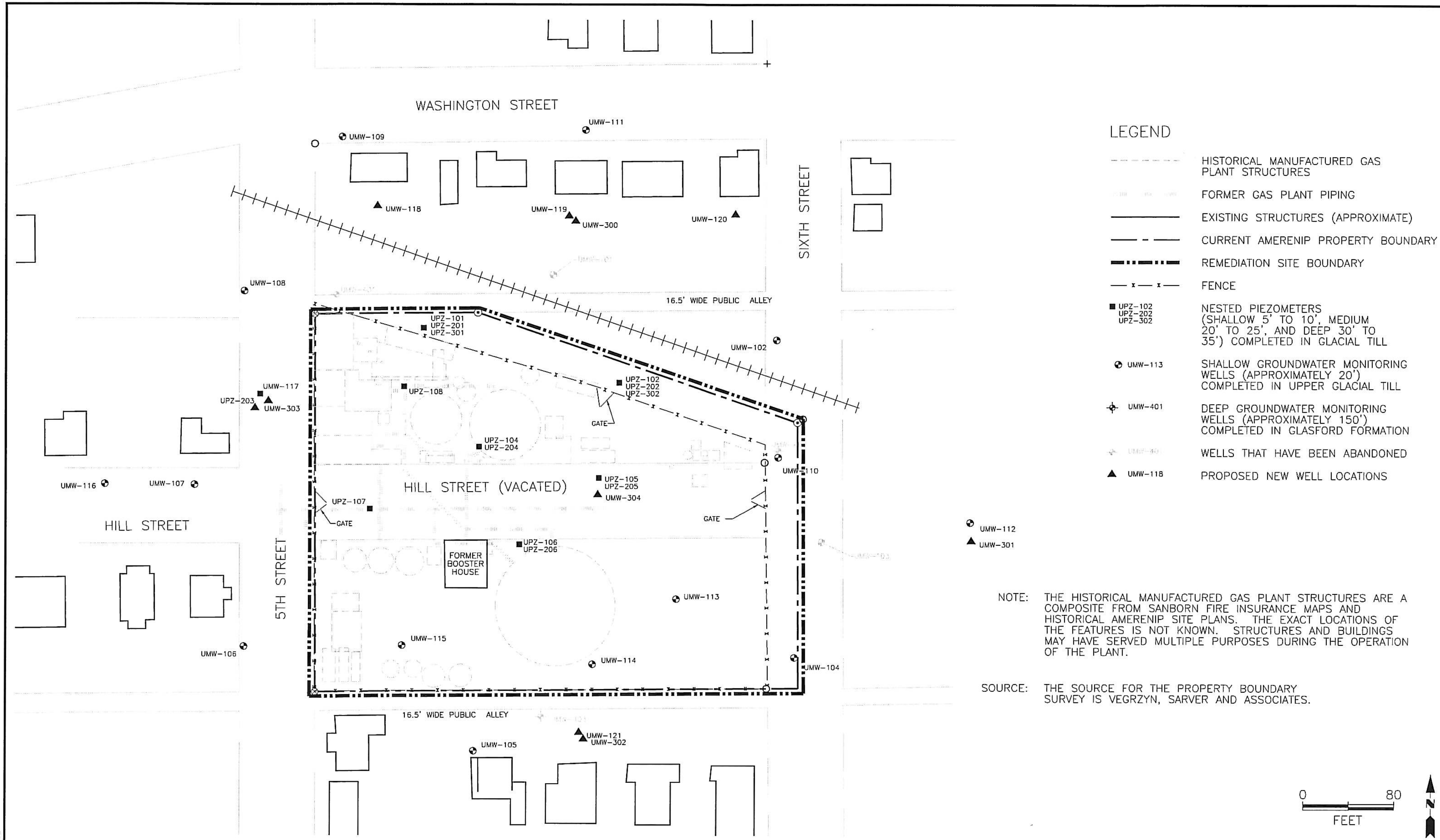


PSC

TITLE: PROPOSED BORING LOCATIONS

DWN: TMM	DES: JG	PROJECT NO: 62402647
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS
DATE: 2/4/08	REV:	FIGURE 5-1

COL. J:\624\02647A-040



COL. J:\624\02647B-032

PSC

TITLE: PROPOSED MONITORING WELL LOCATIONS

DWN: TMM	DES: MRC	PROJECT NO: 62402647	
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS	
DATE: 2/4/08	REV:	FIGURE 5-2	

APPENDIX A

Building Characteristics to be Determined Before Finalization of Work Plan

Form 1

Building Identification					
Ownership					
Age of Building					
Number of Floors (Yes/No)					
Number of Elevators (Yes/No)					
First Floor Footprint Dimensions (L x W in ft)					
Crawl Space Dimensions (L x W x H in ft)					
Basement Footprint Dimensions (L x W in ft)					
Basement Height (ft)					
Basement Height Above Ground Surface (ft)					
First Floor Height (ft)					
Basement Floor Type					
Thickness of Basement Walls (ft)					
Thickness of Slab (ft)					
Condition of Slab					
Vapor Barrier (Yes/No)					
Post-Tension Slab (Yes/No)					
Sump Characteristics					
HVAC Characteristics					
Information on Doors/Windows					
Locations of floor drains, sinks, toilets on lowest floor of building					
As-Built Drawings or Plans Reviewed (Yes/No)					
Exposure Characteristics:					
Building Activities-General					
First Floor Activities					
Basement Activities					
Number of Workers					
Work-week number of days					
Work-day number of hours					

Note: Add additional sheets for relevant comments/information; Locate all buildings on a site map.

APPENDIX B

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	CHTP-04 3/12/1997	UMW-101 12/17/1990	UMW-101 1/24/1992	UMW-101 2/15/1996	UMW-102 12/17/1990	UMW-102 1/24/1992	UMW-102 1/7/1993	UMW-102 2/13/1996	UMW-102 5/7/1996	UMW-102 8/6/96	UMW-102 11/4/1996	UMW-102 2/3/1997	UMW-102 5/7/1997	UMW-102 8/4/1997	UMW-102 11/3/1997	UMW-102 2/2/1998
BTEX Constituents																		
Benzene	(ug/l)	5	10	1100	14000	2060	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
Ethylbenzene	(ug/l)	1000	<1.0	790	430000	1440	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
Toluene	(ug/l)	700	3	470	61000	820	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
Xylene (total)	(ug/l)	10000	-----	850	590000	1510	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
PNA Constituents																		
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Naphthalene	(ug/l)	140	-----	-----	-----	-----	-----	-----	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal Constituents																		
Arsenic	(mg/l)	0.05	<0.0020	0.058	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	0.018	1.8	-----	-----	0.18	0.28	0.13	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cadmium	(mg/l)	0.005	<0.0020	<1.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	0.86	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	0.008	0.79	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	0.07	-----	-----	0.02	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iron	(mg/l)	5.0	1.8	1200	-----	-----	5.6	-----	13	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead	(mg/l)	0.0075	0.0067	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	20	-----	-----	2	5.8	7.4	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mercury	(mg/l)	0.002	0.11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	<0.00005	1.2	-----	-----	0.02	0.12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	<0.006	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	0.15	2.8	-----	-----	0.1	0.48	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
Exceeds the Class 1 Groundwater Standard

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-102 5/4/1998	UMW-102 8/5/1998	UMW-102 11/10/1998	UMW-102 3/22/1999	UMW-102 6/16/1999	UMW-102 9/14/1999	UMW-102 12/9/1999	UMW-102 3/2/2000	UMW-102 6/15/2000	UMW-102 9/26/2000	UMW-102 12/27/2000	UMW-102 3/8/2001	UMW-102 6/25/2001	UMW-102 9/6/2001
BTEX Constituents																
Benzene	(ug/l)	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	(ug/l)	1000	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	700	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Xylene (total)	(ug/l)	10000	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PNA Constituents																
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Naphthalene	(ug/l)	140	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<6.0	<10	<10	<10	<10	<10	<10	<10
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal Constituents																
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	-----	-----	-----	-----	0.075	-----	-----	-----	-----	-----	-----	-----
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	-----	<0.002	-----	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	<0.030	-----	-----	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iron	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	-----	<0.0002	-----	-----	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	-----	<0.0002	-----	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	<0.10	-----	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-102 12/6/2001	UMW-102 3/6/2002	UMW-102 6/4/2002	UMW-102 9/4/2002	UMW-102 12/5/2002	UMW-102 3/12/2003	UMW-102 6/12/2003	UMW-102 9/23/2003	UMW-102 12/2/2003	UMW-102 3/2/2004	UMW-102 5/25/2004	UMW-102 12/6/2004	UMW-102 7/26/2004	UMW-103 12/16/1990	UMW-103 1/24/1992	UMW-103 1/7/2003	UMW-103 2/13/1996
BTEX Constituents																			
Benzene	(ug/l)	5	<2.0	<2.0	<2.0	<2.0	<2.0	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	120	88	130	12
Ethylbenzene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0	5.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	440	250	290	151
Toluene	(ug/l)	700	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	22	13	17	<5.0
Xylene (total)	(ug/l)	10000	<5.0	<5.0	<5.0	<5.0	<5.0	4.1	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	400	-----	150	87.7
PNA Constituents																			
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<1.50	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.09	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.12	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.45	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.18	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.90	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----
Naphthalene	(ug/l)	140	<10	<10	<10	<10	<10	18.1	<10	<10	<10	<10	<10	<10	<3.00	-----	-----	-----	-----
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.60	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----
Metal Constituents																			
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.019	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.36	0.22	0.17	-----
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.06	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.067	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.35	0.27	0.39	-----
Iron	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	58	1.6	3.1	-----
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.054	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.9	1.6	1.3	-----
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.08	-----	-----	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.25	0.035	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
[shaded] Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-103 5/8/1996	UMW-103 8/6/1996	UMW-104 12/16/1990	UMW-104 1/6/1993	UMW-104 2/13/1996	UMW-104 12/9/1999	UMW-104 7/26/2004	UMW-105 12/16/1990	UMW-105 1/21/1992	UMW-105 1/5/1993	UMW-105 2/13/1996	UMW-105 12/9/1999	UMW-105 7/26/2004	UMW-106 12/16/1990	UMW-106 1/21/1992	UMW-106 1/8/1993	UMW-106 2/12/1996	UMW-106 12/8/1999	UMW-106 7/26/2004	UMW-107 12/16/1990	UMW-107 1/23/1992
BTEX Constituents																							
Benzene	(ug/l)	5	26.4	82.2	<5.0	<5.0	<1.0	<2.0	<2.0	<5.0	<5.0	<5.0	<1.0	<2.0	<2.0	<5.0	<5.0	<5.0	<1.0	<2.0	<2.0	36000	4800
Ethylbenzene	(ug/l)	1000	173	550	<5.0	<5.0	<1.0	<2.0	<5.0	<5.0	<5.0	<5.0	<1.0	<2.0	<5.0	<5.0	<5.0	<5.0	<1.0	<2.0	<5.0	56	60
Toluene	(ug/l)	700	5.7	<50.0	<5.0	<5.0	<1.0	<2.0	<5.0	<5.0	<5.0	<5.0	<1.0	<2.0	<5.0	<5.0	<5.0	<5.0	<1.0	<2.0	<5.0	27	30
Xylene (total)	(ug/l)	10000	85.2	410	<5.0	<5.0	-----	<5.0	<5.0	<5.0	-----	<5.0	-----	<5.0	<5.0	<5.0	-----	<5.0	-----	<5.0	<5.0	80	-----
PNA Constituents																							
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----	-----	<3.00	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	<1.50	-----	-----	-----	-----	-----	<1.50	-----	-----	-----	-----	-----	<1.50	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	<0.09	-----	-----	-----	-----	-----	<0.09	-----	-----	-----	-----	-----	<0.09	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	<0.12	-----	-----	-----	-----	-----	<0.12	-----	-----	-----	-----	-----	<0.12	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	<0.15	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	<0.15	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	<0.45	-----	-----	-----	-----	-----	<0.45	-----	-----	-----	-----	-----	<0.45	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	<0.18	-----	-----	-----	-----	-----	<0.18	-----	-----	-----	-----	-----	<0.18	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	<0.90	-----	-----	-----	-----	-----	<0.90	-----	-----	-----	-----	-----	<0.90	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----
Naphthalene	(ug/l)	140	-----	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----	-----	<3.00	-----	-----
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	<0.60	-----	-----	-----	-----	-----	<0.60	-----	-----	-----	-----	-----	<0.60	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	<0.30	-----	-----
Metal Constituents																							
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	0.088	0.17	-----	0.142	-----	0.12	0.059	0.072	-----	0.052	-----	0.14	0.06	0.063	-----	0.051	-----	0.27	0.32
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	<.002	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	<.030	-----	-----	-----	-----	-----	<.030	-----	-----	-----	-----	-----	<.030	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	0.03	0.01	-----	-----	-----	0.1	0.06	0.06	-----	-----	-----	0.22	0.29	0.11	-----	-----	-----	0.97	1.1
Iron	(mg/l)	5.0	-----	-----	0.37	0.027	-----	-----	-----	0.63	0.054	0.028	-----	-----	-----	0.64	0.15	0.09	-----	-----	-----	2.1	0.45
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	<.002	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	0.37	0.19	-----	-----	-----	0.12	-----	0.028	-----	-----	-----	0.067	0.36	0.037	-----	-----	-----	0.19	0.66
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	<.0002	-----	0.00097	-----	-----	-----	<.0002	-----	0.00052	-----
Nickel	(mg/l)	0.1	-----	-----	0.013	-----	-----	-----	-----	0.014	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.013	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	<.010	-----	-----	-----	-----	-----	<.010	-----	-----	-----	-----	-----	<.010	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	0.073	0.082	-----	-----	-----	0.087	0.045	-----	-----	-----	-----	0.069	0.09	-----	-----	-----	-----	0.087	0.042

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107	UMW-107
			2/14/1996	5/8/1996	8/6/1996	11/4/1996	2/4/1997	5/7/1997	8/5/1997	11/4/1997	2/2/1998	5/4/1998	8/6/1998	11/10/1998	3/25/1999	6/16/1999	9/14/1999	12/8/1999	3/2/2000	6/15/2000	9/26/2000	12/27/2000	3/8/2001
BTEX Constituents																							
Benzene	(ug/l)	5	3860	3150	1630	1710	2820	2050	2460	3430	2910	2130	2260	4110	2320	1220	1480	3160	1810	652	4840	2040	329
Ethylbenzene	(ug/l)	1000	74.6	61.4	<50.0	54.6	79.5	67.3	79.8	131	106	72.8	60.7	146	66.2	<100	47	136	80.8	115	236	89.5	<125
Toluene	(ug/l)	700	16.2	12.9	<50.0	11	<125	14.2	15.4	22.7	19.6	<50.0	<50.0	<50.0	<50.0	<100	<20.0	<50.0	<20.0	15.4	<125	11.5	<125
Xylene (total)	(ug/l)	10000	114	93.8	53.5	98.3	114	114	111	193	160	164	120	220	134	144	77.2	209	87.1	178	370	166	68
PNA Constituents																							
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Naphthalene	(ug/l)	140	-----	-----	-----	-----	75.3	90.6	92	130	75.5	85	<5.0	239	<250	30	265	164	152	212	702	207	38.1
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal Constituents																							
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.214	-----	-----	-----	-----	-----
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.030	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iron	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.0002	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.010	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-107 6/25/2001	UMW-107 9/6/2001	UMW-107 12/6/2001	UMW-107 3/6/2002	UMW-107 6/4/2002	UMW-107 9/4/2002	UMW-107 12/5/2002	UMW-107 3/12/2003	UMW-107 6/12/2003	UMW-107 9/23/2003	UMW-107 12/3/2003	UMW-107 3/2/2004	UMW-107 5/25/2004	UMW-107 7/26/2004	UMW-107 12/7/2004	UMW-108 12/17/1990	UMW-108 1/21/1992	UMW-108 1/7/1993	UMW-108 2/12/1996	UMW-108 5/7/1996	UMW-108 8/6/1996
BTEX Constituents																							
Benzene	(ug/l)	5	1170	3440	2110	800	704	2290	2190	2000	678	356	452	986	694	760	416	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ethylbenzene	(ug/l)	1000	58.9	127	70	52.9	41.9	110	98	150	34	<125	<125	<50	18	<250	<125	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	700	7.6	<125	<125	5.4	5	<200	<200	<500	<125	<125	<125	<50	<50	<250	<125	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Xylene (total)	(ug/l)	10000	134	173	120	119	103	170	150	290	74	75	62	57	59.4	77	49	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PNA Constituents																							
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<1.50	-----	-----	-----	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.09	-----	-----	-----	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.12	-----	-----	-----	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.45	-----	-----	-----	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.18	-----	-----	-----	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.90	-----	-----	-----	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----
Naphthalene	(ug/l)	140	70.4	172	167	35.2	86.6	123	181	174	80.1	35.9	39.3	83.7	52.4	87.7	59.7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.60	-----	-----	-----	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----
Metal Constituents																							
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.23	0.26	-----	-----	-----	-----
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.08	0.07	-----	-----	-----	-----
Iron	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	7.2	0.054	-----	-----	-----	-----
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.89	1.6	-----	-----	-----	-----
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.021	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.13	0.046	-----	-----	-----	-----
																			-----	-----	-----	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
(shaded) Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-108 11/4/1996	UMW-108 2/3/1997	UMW-108 5/7/1997	UMW-108 8/4/1997	UMW-108 11/3/1997	UMW-108 3/25/1999	UMW-108 6/16/1999	UMW-108 9/14/1999	UMW-108 12/9/1999	UMW-108 3/2/2000	UMW-108 9/26/2000	UMW-108 12/27/2000	UMW-108 6/15/2000	UMW-108 3/8/2001	UMW-108 6/25/2001	UMW-108 9/6/2001	UMW-108 12/6/2001	UMW-108 3/6/2002	UMW-108 6/4/2002	UMW-108 9/4/2002	UMW-108 12/5/2002
BTEX Constituents																							
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	700	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Xylene (total)	(ug/l)	10000	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<4.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PNA Constituents																							
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Naphthalene	(ug/l)	140	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
				-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal Constituents				-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	-----	-----	-----	-----	-----	-----	0.203	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	<.030	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iron	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	-----	-----	-----	0.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	-----	-----	-----	<.0002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	<.010	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
			-----																				

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-108 3/12/2003	UMW-108 6/12/2003	UMW-108 9/23/2003	UMW-108 12/2/2003	UMW-108 3/2/2004	UMW-108 5/25/2004	UMW-108 12/6/2004	UMW-108 7/26/2004	UMW-109 1/21/1992	UMW-109 1/5/1993	UMW-109 2/14/1996	UMW-109 3/25/1999	UMW-109 6/16/1999	UMW-109 9/14/1999	UMW-109 12/9/1999	UMW-109 3/2/2000	UMW-109 6/15/2000	UMW-109 7/26/2004	UMW-110 12/16/1990	UMW-110 1/25/1992	UMW-110 1/6/1993
BTEX Constituents																							
Benzene	(ug/l)	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**83**	**120**	**53**
Ethylbenzene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	150	210	210
Toluene	(ug/l)	700	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	8	<5.0
Xylene (total)	(ug/l)	10000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	120	-----	180
PNA Constituents																							
Acenaphthene	(ug/l)	420	-----	-----	-----	-----	-----	-----	-----	<3.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	<3.00	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	<1.50	-----	-----	-----	-----	-----	-----	-----	-----	-----	<1.50	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	-----	-----	-----	-----	-----	<0.09	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.09	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	-----	-----	-----	-----	-----	<0.12	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.12	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.15	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	-----	-----	-----	-----	-----	<0.45	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.45	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	-----	-----	-----	-----	-----	<0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.18	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	<0.90	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.90	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----
Naphthalene	(ug/l)	140	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<3.00	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<6.0	<5.0	<5.0	<3.00	-----	-----	-----
Phenanthrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	<0.60	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.60	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	<0.30	-----	-----	-----
			-----	-----	-----	-----	-----	-----	-----		-----	-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
Metal Constituents			-----	-----	-----	-----	-----	-----	-----		-----	-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
Arsenic	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	-----	-----	-----	-----	-----	-----	-----	0.13	0.16	-----	-----	-----	-----	0.141	-----	-----	-----	0.18	0.12	0.12
Cadmium	(mg/l)	0.005	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.03	-----	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	0.16	0.05	-----	-----	-----	-----	-----	-----	-----	-----	**0.86**	**0.62**	**1**
Iron	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	0.11	0.035	-----	-----	-----	-----	-----	-----	-----	-----	1.5	0.77	1.5
Lead	(mg/l)	0.0075	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.019	-----	-----	-----	-----	-----	-----	-----	-----	**3.7**	**4.4**	**4.5**
Mercury	(mg/l)	0.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.0002	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<.010	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	-----	-----	-----	-----	-----	0.096	0.028	-----	-----	-----	-----	-----	-----	-----	-----	0.093	0.05	0.021

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
[shaded] Exceeds the Class 1 Groundwater S

TABLE 2-8
GROUNDWATER RESULTS BTEX, PAHs and METALS
COMPARISON TO CLASS 1 GROUNDWATER STANDARDS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	CLASS I GROUNDWATER STANDARD	UMW-110 2/15/1996	UMW-110 12/9/1999	UMW-110 7/26/2004	UMW-111 12/17/1990	UMW-111 1/21/1992	UMW-111 1/5/1993	UMW-111 2/14/1996	UMW-111A 9/14/1999	UMW-111A 12/9/1999	UMW-111A 6/15/2000	UMW-111A 9/26/2000	UMW-111A 12/27/2000	UMW-111A 3/8/2001	UMW-111A 6/25/2001	UMW-111A 9/6/2001	UMW-111A 12/6/2001	UMW-111A 3/6/2002	UMW-111A 6/4/2002	UMW-111A 9/4/2002
BTEX Constituents																					
Benzene	(ug/l)	5	27.1	13.4	15.6	<5.0	<5.0	<5.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	(ug/l)	1000	50.7	71.2	2.3	<5.0	<5.0	<5.0	<1.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	700	2.5	2.2	67.5	7	<5.0	<5.0	<1.0	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Xylene (total)	(ug/l)	10000	-----	50.9	37.3	<5.0	-----	<5.0	-----	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PNA Constituents																					
Acenaphthene	(ug/l)	420	-----	-----	87.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Acenaphthylene	(ug/l)	210	-----	-----	92.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Anthracene	(ug/l)	2100	-----	-----	15.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)anthracene	(ug/l)	1.3	-----	-----	0.33	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(a)pyrene	(ug/l)	0.2	-----	-----	<0.12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(b)fluoranthene	(ug/l)	0.18	-----	-----	<0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(ghi)perylene	(ug/l)	---	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Benzo(k)fluoranthene	(ug/l)	0.17	-----	-----	<0.15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chrysene	(ug/l)	1.5	-----	-----	<0.45	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dibenzo(a,h)anthracene	(ug/l)	0.3	-----	-----	<0.18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluoranthene	(ug/l)	280	-----	-----	12.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fluorene	(ug/l)	280	-----	-----	7.66	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indeno(1,2,3-cd)pyrene	(ug/l)	0.43	-----	-----	<0.30	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Naphthalene	(ug/l)	140	-----	-----	24.6	-----	<5.0	<5.0	<1.0	<5.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Phenanthrene	(ug/l)	210	-----	-----	26.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pyrene	(ug/l)	210	-----	-----	5.25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
			-----	-----								-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal Constituents			-----	-----								-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Arsenic	(mg/l)	0.05	-----	-----	-----	0.015	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Barium	(mg/l)	2.0	-----	0.106	-----	0.36	0.099	0.14	-----	-----	0.116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cadmium	(mg/l)	0.005	-----	<.002	-----	-----	-----	-----	-----	-----	<.002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chromium	(mg/l)	0.1	-----	<.030	-----	0.11	-----	-----	-----	-----	<.030	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Copper	(mg/l)	0.65	-----	-----	-----	0.068	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cyanide	(mg/l)	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iron	(mg/l)	5.0	-----	-----	-----	93	0.023	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Lead	(mg/l)	0.0075	-----	<.002	-----	0.083	-----	-----	-----	-----	0.005	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Manganese	(mg/l)	0.15	-----	-----	-----	1.7	0.046	0.06	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mercury	(mg/l)	0.002	-----	<.0002	-----	0.0022	-----	-----	-----	-----	<.0002	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nickel	(mg/l)	0.1	-----	-----	-----	0.12	0.017	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Silver	(mg/l)	0.05	-----	<.010	-----	-----	-----	-----	-----	-----	<.010	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Zinc	(mg/l)	5.0	-----	-----	-----	0.28	0.059	0.036	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
[shaded] Exceeds the Class 1 Groundwater S

TABLE 2-9
GROUNDWATER BTEX AND PAH RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	Groundwater ROs (Class I)	UNITS	UMW-102 7/26/2004	UMW-102 6/14/2007	UMW-102 9/21/2007	UMW-104 7/26/2004	UMW-105 7/26/2004	UMW-106 7/26/2004	UMW-107 3/2/2004	UMW-107 5/25/2004	UMW-107 7/26/2004	UMW-107B 7/26/2004	UMW-107 12/7/2004	UMW-107 3/15/2005	UMW-107 6/9/2005	UMW-107 9/27/2005	UMW-107 12/27/2005	UMW-107B 12/27/2005
Benzene	5	(ug/L)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	986	694	760	786	416	589	549	344	859	998
Ethylbenzene	700	(ug/L)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<50.0	18	<250	<250	<125	36	27.8	17.1	46.5	45.8
Toluene	1,000	(ug/L)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<50.0	<50	<250	<250	<125	4	<25.0	2.6	5.4	5.7
Xylene (total)	10,000	(ug/L)	<5.0	<5.0	<5.0	1.4	<5.0	<5.0	57	59.4	77	52	49	64.1	49.2	32.1	54.4	54.6
Acenaphthene	420	(ug/L)	<3.00	---	---	<3.00	<3.00	<3.00	<5.0	<5.0	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00
Acenaphthylene	210	(ug/L)	<1.50	---	---	<1.50	<1.50	<1.50	47	<5.0	<1.50	<1.50	<1.50	<7.50	44.5	<1.50	<1.50	<1.50
Anthracene	2100	(ug/L)	<0.30	---	---	<0.30	<0.30	<0.30	<5.0	<5.0	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Benzo(a)anthracene	0.13	(ug/L)	<0.09	---	---	<0.09	<0.09	<0.09	<0.10	<0.10	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
Benzo(a)pyrene	0.20	(ug/L)	<0.12	---	---	<0.12	<0.12	<0.12	<0.20	<0.20	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Benzo(b)fluoranthene	0.18	(ug/L)	<0.15	---	---	<0.15	<0.15	<0.15	<0.18	<0.18	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Benzo(ghi)perylene	----	(ug/L)	<0.30	---	---	<0.30	<0.30	<0.30	<0.50	<0.50	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Benzo(k)fluoranthene	0.17	(ug/L)	<0.15	---	---	<0.15	<0.15	<0.15	<0.17	<0.17	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Chrysene	1.5	(ug/L)	<0.45	---	---	<0.45	<0.45	<0.45	<0.80	<0.80	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
Dibenzo(a,h)anthracene	0.30	(ug/L)	<0.18	---	---	<0.18	<0.18	<0.18	<0.30	<0.30	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Fluoranthene	280	(ug/L)	<0.90	---	---	<0.90	<0.90	<0.90	<2.0	<2.0	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90
Fluorene	280	(ug/L)	<0.30	---	---	<0.30	<0.30	<0.30	<1.0	<1.0	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Indeno(1,2,3-cd)pyrene	0.43	(ug/L)	<0.30	---	---	<0.30	<0.30	<0.30	<0.40	<0.40	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Naphthalene	140	(ug/L)	<3.00	---	---	<3.00	<3.00	<3.00	83.7	52.4	87.7	147	59.7	53.2	59.4	58	130	140
Phenanthrene	210	(ug/L)	<0.60	---	---	<0.60	<0.60	<0.60	<5.0	<5.0	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
Pyrene	210	(ug/L)	<0.30	---	---	<0.30	<0.30	<0.30	<2.0	<2.0	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
(shaded) Exceeds the Class 1 Groundwater Standard

TABLE 2-9
GROUNDWATER BTEX AND PAH RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	Groundwater ROs (Class I)	UNITS	UMW-107 3/30/2006	UMW-107 6/22/2006	UMW-107 9/19/2006	UMW-107 12/13/2006	UMW-107 6/14/2007	UMW-107 9/21/2007	UMW-108 7/26/2004	UMW-108B 7/26/2004	UMW-108 6/14/2007	UMW-108 9/21/2007	UMW-109 7/26/2004	UMW-110 7/26/2004	UMW-111 7/26/2004	UMW-111 6/14/2007	UMW-111 9/21/2007
Benzene	5	(ug/L)	231	289	1280	812	798	1020	<2.0	<2.0	<2.0	<2.0	<2.0	15.6	<2.0	<2.0	<2.0
Ethylbenzene	700	(ug/L)	18.6	18.2	69.1	44.1	32.0	55.7	<5.0	<5.0	<5.0	<5.0	<5.0	67.5	<5.0	<5.0	<5.0
Toluene	1,000	(ug/L)	<5.0	2.4	11.0	7.1	<50	<50	<5.0	<5.0	<5.0	<5.0	<5.0	2.3	<5.0	<5.0	<5.0
Xylene (total)	10,000	(ug/L)	28.6	30.7	81.2	55.2	43.0	71.5	<5.0	<5.0	<5.0	<5.0	<5.0	37.3	<5.0	<5.0	<5.0
Acenaphthene	420	(ug/L)	<3.00	<3.00	<3.00	<0.10	<1.0	<5.0	<3.00	<3.00	---	---	<3.00	87.6	<3.00	---	---
Acenaphthylene	210	(ug/L)	<1.50	<1.50	5.38	0.2	<1.0	0.19	<1.50	<1.50	---	---	<1.50	92.6	<1.50	---	---
Anthracene	2100	(ug/L)	<0.30	<0.30	<0.30	0.14	<1.0	0.13	<0.30	<0.30	---	---	<0.30	15.1	<0.30	---	---
Benzo(a)anthracene	0.13	(ug/L)	<0.09	<0.09	<0.09	<0.10	<0.10	<0.13	<0.09	0.19	---	---	<0.09	0.33	<0.09	---	---
Benzo(a)pyrene	0.20	(ug/L)	<0.12	<0.12	<0.12	<0.10	<0.10	<0.20	<0.12	0.29	---	---	<0.12	<0.12	<0.12	---	---
Benzo(b)fluoranthene	0.18	(ug/L)	<0.15	<0.15	<0.15	<0.10	<0.10	<0.18	<0.15	<0.15	---	---	<0.15	<0.15	<0.15	---	---
Benzo(ghi)perylene	----	(ug/L)	<0.30	<0.30	<0.30	<0.10	1.1	<0.50	<0.30	<0.30	---	---	<0.30	<0.30	<0.30	---	---
Benzo(k)fluoranthene	0.17	(ug/L)	<0.15	<0.15	<0.15	<0.10	<1.0	<0.17	<0.15	<0.15	---	---	<0.15	<0.15	<0.15	---	---
Chrysene	1.5	(ug/L)	<0.45	<0.45	<0.45	<0.10	<1.0	<0.15	<0.45	<0.45	---	---	<0.45	<0.45	<0.45	---	---
Dibenzo(a,h)anthracene	0.30	(ug/L)	<0.18	<0.18	<0.18	<0.10	<1.0	<0.30	<0.18	<0.18	---	---	<0.18	<0.18	<0.18	---	---
Fluoranthene	280	(ug/L)	<0.90	<0.90	<0.90	<0.10	<1.0	<2.0	<0.90	<0.90	---	---	<0.90	12.1	<0.90	---	---
Fluorene	280	(ug/L)	<0.30	<0.30	<0.30	<0.10	<1.0	<1.0	<0.30	<0.30	---	---	<0.30	7.66	<0.30	---	---
Indeno(1,2,3-cd)pyrene	0.43	(ug/L)	<0.30	<0.30	<0.30	<0.10	<1.0	<0.43	<0.30	<0.30	---	---	<0.30	<0.30	<0.30	---	---
Naphthalene	140	(ug/L)	57.8	-----	180	47.7	170	194	<3.00	<3.00	---	---	<3.00	24.6	<3.00	---	---
Phenanthrene	210	(ug/L)	<0.60	<0.60	<0.60	<0.10	<1.0	<0.10	<0.60	<0.60	---	---	<0.60	26.7	<0.60	---	---
Pyrene	210	(ug/L)	<0.30	<0.30	<0.30	<0.10	<1.0	<2.0	<0.30	<0.30	---	---	<0.30	5.25	<0.30	---	---

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
(shaded) Exceeds the Class 1 Groundwater Standard

TABLE 2-9
GROUNDWATER BTEX AND PAH RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	Groundwater ROs (Class I)	UNITS	UMW-112 7/26/2004	UMW-112 6/14/2007	UMW-112 9/21/2007	UMW-113 7/26/2004	UMW-114 3/2/2004	UMW-114 5/25/2004	UMW-114 7/26/2004	UMW-114 12/7/2004	UMW-114 3/15/2005	UMW-114B 3/15/2005	UMW-114 6/9/2005	UMW-114 9/27/2005	UMW-114 12/27/2005	UMW-114 3/30/2006	UMW-114 6/22/2006	UMW-114 9/19/2006
Benzene	5	(ug/L)	<2.0	<2.0	<2.0	5.7	754	760	628	796	736	726	867	1130	939	875	936	938
Ethylbenzene	700	(ug/L)	<5.0	<5.0	<5.0	1.0	1040	1230	868	1130	1250	1240	1260	1370	1150	1220	1140	1220
Toluene	1,000	(ug/L)	<5.0	<5.0	<5.0	<5.0	<250	153	120	164	164	163	152	190	133	123	131	150
Xylene (total)	10,000	(ug/L)	<5.0	<5.0	<5.0	4.8	481	861	425	848	899	920	932	1010	891	958	1020	924
Acenaphthene	420	(ug/L)	<3.00	---	---	33.9	260	167	214	43.6	115	101	222	208	236	99.1	159	111
Acenaphthylene	210	(ug/L)	<1.50	---	---	70.7	840	737	552	432	<1.50	<1.50	<7.5	<1.50	<150	<1.50	868	<15.0
Anthracene	2100	(ug/L)	<0.30	---	---	<0.30	<50.6	<5.0	1.04	0.62	<0.30	<0.30	<0.30	0.82	<0.30	<0.30	1.8	<0.30
Benzo(a)anthracene	0.13	(ug/L)	<0.09	---	---	<0.09	0.77	0.33	<0.09	0.17	<0.09	0.2	<0.09	<0.09	1.11	0.41	0.91	0.2
Benzo(a)pyrene	0.20	(ug/L)	<0.12	---	---	<0.12	0.68	0.34	<0.12	<0.12	<0.12	0.14	<0.12	<0.12	1.07	0.27	0.97	<0.12
Benzo(b)fluoranthene	0.18	(ug/L)	<0.15	---	---	<0.15	<0.18	0.17	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.49	<0.15	0.3	<0.15
Benzo(ghi)perylene	----	(ug/L)	<0.30	---	---	<0.30	<0.51	<0.50	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.44	<0.30	0.68	<0.30
Benzo(k)fluoranthene	0.17	(ug/L)	<0.15	---	---	<0.15	<0.17	<0.17	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Chrysene	1.5	(ug/L)	<0.45	---	---	<0.45	<0.81	<0.80	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	1.22	<0.45	0.93	<0.45
Dibenzo(a,h)anthracene	0.30	(ug/L)	<0.18	---	---	<0.18	<0.30	<0.30	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Fluoranthene	280	(ug/L)	<0.90	---	---	<0.90	<20.2	<2.0	0.99	1.22	<0.90	0.94	1.07	1.09	4.66	1.81	3.38	<0.90
Fluorene	280	(ug/L)	<0.30	---	---	2.36	43.1	41.5	20.6	29.9	62.8	48.4	64.1	44.4	68.6	49.4	42.8	<0.30
Indeno(1,2,3-cd)pyrene	0.43	(ug/L)	<0.30	---	---	<0.30	<0.40	<0.40	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.31	<0.30	0.3	<0.30
Naphthalene	140	(ug/L)	<3.00	---	---	580	4480	3660	3650	3510	5580	4550	5120	11500	5980	6000	-----	7880
Phenanthrene	210	(ug/L)	<0.60	---	---	5990	<50.6	8.98	7.48	9.68	11.6	11	10.2	9.87	12.8	11.3	14	11.1
Pyrene	210	(ug/L)	<0.30	---	---	6020	<20.2	<2.0	0.64	0.69	0.4	0.66	0.65	0.4	2.29	1.36	2.74	0.55

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
(shaded) Exceeds the Class 1 Groundwater Standard

TABLE 2-9
GROUNDWATER BTEX AND PAH RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	Groundwater ROs (Class I)	UNITS	UMW-114 12/13/2006	UMW-114B 12/13/2006	UMW-114 6/14/2007	UMW-114 9/21/2007	UMW-115 7/26/2004	UMW-115 6/14/2007	UMW-115 9/21/2007	UMW-116 7/26/2004	UMW-116 6/14/2007	UMW-116 6/14/2007	UMW-116 9/21/2007
Benzene	5	(ug/L)	1080	1130	1150	1120	12.9	9	12.3	<2.0	<2.0	<2.0	<2.0
Ethylbenzene	700	(ug/L)	1110	1170	1160	1060	1.2	<5.0	1.8	<5.0	<5.0	<5.0	<5.0
Toluene	1,000	(ug/L)	170	150	170	130	<5.0	<5.0	1.2	<5.0	<5.0	<5.0	<5.0
Xylene (total)	10,000	(ug/L)	1020	984	963	861	<5.0	<5.0	1.3	<5.0	<5.0	<5.0	<5.0
Acenaphthene	420	(ug/L)	122	140	85.9	86	13.5	-----	-----	<3.00	-----	-----	-----
Acenaphthylene	210	(ug/L)	20.9	22	21.3	19.7	26.4	-----	-----	<1.50	-----	-----	-----
Anthracene	2100	(ug/L)	1.4	1.17	1.6	1.3	<0.30	-----	-----	<0.30	-----	-----	-----
Benzo(a)anthracene	0.13	(ug/L)	0.23	0.16	<0.50	0.25	<0.09	-----	-----	<0.09	-----	-----	-----
Benzo(a)pyrene	0.20	(ug/L)	0.11	<0.10	<0.50	0.13	<0.12	-----	-----	<0.12	-----	-----	-----
Benzo(b)fluoranthene	0.18	(ug/L)	<0.10	<0.10	<0.50	<0.18	<0.15	-----	-----	<0.15	-----	-----	-----
Benzo(ghi)perylene	----	(ug/L)	<0.10	<0.10	<0.50	<0.50	<0.30	-----	-----	<0.30	-----	-----	-----
Benzo(k)fluoranthene	0.17	(ug/L)	<0.10	<0.10	<0.50	<0.17	<0.15	-----	-----	<0.15	-----	-----	-----
Chrysene	1.5	(ug/L)	0.12	<0.10	<0.50	0.17	<0.45	-----	-----	<0.45	-----	-----	-----
Dibenzo(a,h)anthracene	0.30	(ug/L)	<0.140	<0.10	<0.50	<0.30	<0.18	-----	-----	<0.18	-----	-----	-----
Fluoranthene	280	(ug/L)	0.76	0.56	0.7	0.85	<0.90	-----	-----	<0.90	-----	-----	-----
Fluorene	280	(ug/L)	15.6	17.4	18.1	17.8	8.46	-----	-----	<0.30	-----	-----	-----
Indeno(1,2,3-cd)pyrene	0.43	(ug/L)	<0.10	<0.10	<0.50	<0.43	<0.30	-----	-----	<0.30	-----	-----	-----
Naphthalene	140	(ug/L)	5260	5980	6440	5560	<3.00	-----	-----	<3.00	-----	-----	-----
Phenanthrene	210	(ug/L)	5.51	5.84	6	6.18	<0.60	-----	-----	<0.60	-----	-----	-----
Pyrene	210	(ug/L)	1.03	0.83	0.95	1.4	<0.30	-----	-----	<0.30	-----	-----	-----

Notes:
ug/l - micrograms per liter
<2.0 - not detected at the detection limit noted
(shaded) Exceeds the Class 1 Groundwater Standard

TABLE 5-1
TIER I REMEDIAL OBJECTIVES
BTEX AND PAHs

CONSTITUENT	Ingestion Residential	Ingestion Commercial	Ingestion Construction	Inhalation Residential	Inhalation Commercial	Inhalation Construction	Soil Component to Groundwater (Class I)	MSA Background Metropolitan Areas	UNITS
Benzene	12,000	100,000	2,300,000	800	1,600	2,200	30	--	(ug/kg)
Ethylbenzene	7,800,000	200,000,000	20,000,000	400,000	4,000,000	58,000	13,000	--	(ug/kg)
Toluene	16,000,000	410,000,000	410,000,000	650,000	650,000	42,000	12,000	--	(ug/kg)
Xylene (total)	16,000,000	410,000,000	41,000,000	410,000	320,000	5,600	150,000	--	(ug/kg)
Acenaphthene	4,700,000	120,000,000	120,000,000	-----	-----	-----	570,000	130	(ug/kg)
Acenaphthylene	-----	-----	-----	-----	-----	-----	-----	70	(ug/kg)
Anthracene	23,000,000	610,000,000	610,000,000	-----	-----	-----	12,000,000	400	(ug/kg)
Benzo(a)anthracene	900	8,000	170,000	-----	-----	-----	2,000	1800	(ug/kg)
Benzo(a)pyrene	90	800	17,000	-----	-----	-----	8,000	2100	(ug/kg)
Benzo(b)fluoranthene	900	8,000	170,000	-----	-----	-----	5,000	2100	(ug/kg)
Benzo(ghi)perylene	-----	-----	-----	-----	-----	-----	-----	1700	(ug/kg)
Benzo(k)fluoranthene	9,000	78,000	1,700,000	-----	-----	-----	49,000	1700	(ug/kg)
Chrysene	88,000	780,000	17,000,000	-----	-----	-----	160,000	2700	(ug/kg)
Dibenzo(a,h)anthracene	90	800	17,000	-----	-----	-----	2,000	420	(ug/kg)
Fluoranthene	3,100,000	82,000,000	82,000,000	-----	-----	-----	4,300,000	4100	(ug/kg)
Fluorene	3,100,000	82,000,000	82,000,000	-----	-----	-----	560,000	180	(ug/kg)
Indeno(1,2,3-cd)pyrene	900	8,000	170,000	-----	-----	-----	14,000	1600	(ug/kg)
Naphthalene	1,600,000	41,000,000	4,100,000	170,000	270,000	1,800	12,000	200	(ug/kg)
Phenanthrene	-----	-----	-----	-----	-----	-----	-----	2500	(ug/kg)
Pyrene	2,300,000	61,000,000	61,000,000	-----	-----	-----	4,200,000	3000	(ug/kg)

Notes:
- ug/kg Micrograms per kilogram
- (1) Provisional remediation objective provided by IEPA
- ---- No remediation objective has been established by the IEPA for this constituent for this exposure route

TABLE 5-2
TIER I REMEDIAL OBJECTIVES
VOCs

	Soil							
	Ingestion			*Inhalation*			Soil Component to Groundwater	
CONSTITUENT	Residential	Commercial	Construction	Residential	Commercial	Construction	(Class I)	UNITS
1,1,1-Trichloroethane	---	---	---	1,200,000	1,200,000	1,200,000	2,000	(ug/kg)
1,1,2,2-Tetrachloroethane	2,300,000	61,000,000	6,100,000	1,000,000	1,000,000	1,000,000	2,000	(ug/kg)
1,1,2-Trichloroethane	310,000	8,200,000	8,200,000	1,800,000	1,800,000	1,800,000	20	(ug/kg)
1,1-Dichloroethane	7,800,000	200,000,000	200,000,000	1,300,000	1,700,000	130,000	23,000	(ug/kg)
1,1-Dichloroethylene	700,000	18,000,000	1,800,000	1,500,000	1,500,000	300,000	60	(ug/kg)
1,2-Dichloroethane	7,000	63,000	1,400,000	400	700	990	20	(ug/kg)
1,2-Dichloropropane	9,000	84,000	1,800,000	15,000	23,000	500	30	(ug/kg)
2-Hexanone	---	---	---	---	---	---	---	(ug/kg)
Acetone	7,800,000	200,000,000	200,000,000	100,000,000	100,000,000	10,000,000	16,000	(ug/kg)
Bromodichloromethane	10,000	92,000	2,000,000	3,000,000	3,000,000	3,000,000	600	(ug/kg)
Bromoform	81,000	720,000	16,000,000	53,000	100,000	140,000	800	(ug/kg)
Carbon Disulfide	7,800,000	200,000,000	20,000,000	720,000	720,000	9,000	32,000	(ug/kg)
Carbon tetrachloride	5,000	44,000	410,000	300	640	900	70	(ug/kg)
Chlorobenzene	1,600,000	41,000,000	4,100,000	130,000	210,000	1,300	1,000	(ug/kg)
Chloroethane	---	---	---	---	---	---	---	(ug/kg)
Chloroform	100,000	940,000	2,000,000	300	540	760	600	(ug/kg)
cis-1,2-Dichloroethylene	780,000	20,000,000	20,000,000	1,200,000	1,200,000	1,200,000	400	(ug/kg)
cis-1,3-Dichloropropene	6,400	57,000	1,200,000	1,100	2,100	390	4	(ug/kg)
Dibromochloromethane	1,600,000	41,000,000	41,000,000	1,300,000	1,300,000	1,300,000	400	(ug/kg)
Diesel fuel no. 2								(mg/kg)
Ethene, 1,2-dichloro-, (E)-	1,600,000	41,000,000	41,000,000	3,100,000	3,100,000	3,100,000	700	(ug/kg)
Gasoline								(mg/kg)
Methyl bromide	110,000	2,900,000	1,000,000	10,000	15,000	3,900	200	(ug/kg)
Methyl chloride (Chloromethane)	---	---	---	---	---	---	---	(ug/kg)
Methyl ethyl ketone	47,000,000	1,000,000,000	410,000,000	140,000,000	22,000,000	140,000	17,000	(ug/kg)
Methyl isobutyl ketone (MIBK)	---	---	---	---	---	---	---	(ug/kg)
Methyl tert-butyl ether	780,000	20,000,000	140,000	8,800,000	8,800,000	140,000	320	(ug/kg)
Methylene chloride	85,000	760,000	12,000,000	13,000	24,000	34,000	20	(ug/kg)
Styrene	16,000,000	410,000,000	41,000,000	1,500,000	1,500,000	430,000	4,000	(ug/kg)
Tetrachloroethylene	12,000	110,000	2,400,000	11,000	1,500,000	430,000	60	(ug/kg)
trans-1,3-Dichloropropene	6,400	57,000	1,200,000	1,100	2,100	390	4	(ug/kg)
Trichloroethylene	58,000	520,000	1,200,000	5,000	8,900	12,000	60	(ug/kg)
Triphenylene	---			---			---	(mg/kg)
Vinyl chloride	300	7,900	170,000	30	1,100	1,100	10	(ug/kg)

Notes:
- ug/kg — Micrograms per kilogram
- (1) — Provisional remediation objective provided by IEPA
- ----- — No remediation objective has been established by the IEPA for this constitiuent for this exposure route

TABLE 5-3
TIER 1 REMEDIAL OBJECTIVES
SVOCs

CONSTITUENT	Ingestion Residential	Ingestion Commercial	Ingestion Construction	Inhalation Residential	Inhalation Commercial	Inhalation Construction	Soil Component to Groundwater (Class I)	MSA Background Metropolitan Areas	UNITS/DEPTH
1,2,4-Trichlorobenzene	780	20,000	35	3,200	3,200	920	5		(mg/kg)
2,4,5-Trichlorophenol	7,800	200,000	200,000	---	---	---	270		(mg/kg)
2,4,6-Trichlorophenol	58	520	11,000	200	390	540	0.2		(mg/kg)
2,4-Dichlorophenol	230	6,100	610	---	---	---	1		(mg/kg)
2,4-Dimethylphenol	1,600	41,000	41,000	---	---	---	9		(mg/kg)
2,4-Dinitrophenol	160	4,100	410	---	---	---	0.2		(mg/kg)
2,4-Dinitrotoluene	0.9	---	---	---	---	---	0.0008		(mg/kg)
2,6-Dinitrotoluene	0.9	8.4	180.0	---	---	---	0.0007		(mg/kg)
2-Chloronaphthalene	6,300	160,000	160,000	---	---	---	240		(mg/kg)
2-Chlorophenol	390	10,000	10,000	53,000	53,000	53,000	4		(mg/kg)
2-Methylnaphthalene	2,300	61,000	61,000	---	---	---	29	0.14	(mg/kg)
3,3-Dichlorobenzidine	1	13	280	---	---	---	0.007		(mg/kg)
4,6-Dinitro-o-cresol	---	---	---	---	---	---	---		(mg/kg)
4-Bromophenyl phenyl ether	---	---	---	---	---	---	---		(mg/kg)
4-Chlorophenyl phenyl ether	---	---	---	---	---	---	---		(mg/kg)
Bis(2-chloroethoxy)methane	---	---	---	---	---	---	---		(mg/kg)
Bis(2-chloroethyl)ether	0.6	5.0	75.0	0.2	0.5	0.7	0.0004		(mg/kg)
Bis(2-chloroisopropyl)ether	3,100	82,000	8,200	1,300	1,300	1,300	2.4		(mg/kg)
Bis(2-ethylhexyl)phthalate (BEHP)	46	410	4,100	31,000	31,000	31,000	3,600		(mg/kg)
Butyl benzyl phthalate	16,000	410,000	410,000	930	930	930	930		(mg/kg)
Carbazole	32	290	6,200	---	---	---	0.60		(mg/kg)
Dibenzofuran	310	8,200	820	---	---	---	15		(mg/kg)
Diethyl phthalate	63,000	1,000,000	1,000,000	2,000	2,000	2,000	470		(mg/kg)
Dimethyl phthalate	---	---	---	---	---	---	---		(mg/kg)
Di-n-butyl phthalate	7,800	200,000	200,000	2,300	2,300	2,300	0.0004		(mg/kg)
Di-n-octyl phthalate	1,600	41,000	4,100	10,000	10,000	10,000	10,000		(mg/kg)
Hexachlorobenzene	0.4	4.0	78.0	1	1.8	2.6	2		(mg/kg)
Hexachlorobutadiene	16	410	41	1,000	1,000	180	2.9		(mg/kg)
Hexachlorocyclopentadiene	550	14,000	14,000	10	16	1.1	400		(mg/kg)
Hexachloroethane	78	2,000	2,000	---	---	---	0.5		(mg/kg)
Isophorone	15,600	410,000	410,000	4,600	4,600	4,600	8		(mg/kg)
m & p-Cresol(s)	---	---	---	---	---	---	---		(mg/kg)
m-Dichlorobenzene	---	---	---	---	---	---	---		(mg/kg)
m-Nitroaniline	---	---	---	---	---	---	---		(mg/kg)
Nitrobenzene	39	1,000	1,000	92	140	9.4	0.1		(mg/kg)
N-Nitrosodiphenylamine	130	1,200	25,000	---	---	---	1		(mg/kg)
N-Nitrosodipropylamine	---	---	---	---	---	---	---		(mg/kg)
o-Cresol	3,900	100,000	100,000	---	---	---	15		(mg/kg)
o-Dichlorobenzene	7,000	180,000	560	560	18,000	310	17		(mg/kg)
o-Nitroaniline	---	---	---	---	---	---	---		(mg/kg)
o-Nitrophenol	---	---	---	---	---	---	---		(mg/kg)
p-Chloroaniline	310	8,200	---	---	820	---	0.7		(mg/kg)
p-Chloro-m-cresol	---	---	---	---	---	---	---		(mg/kg)
PCP	3	24	52	---	---	---	0.03		(mg/kg)
p-Dichlorobenzene	---	---	17,000	11,000	---	340	2		(mg/kg)
Phenol	47,000	1,000,000	120,000	---	---	---	100		(mg/kg)
p-Nitroaniline	---	---	---	---	---	---	---		(mg/kg)
p-Nitrophenol	---	---	---	---	---	---	---		(mg/kg)

Notes:
mg/kg — Milligrams per kilogram
(1) — Provisional remediation objective provided by IEPA
----- — No remediation objective has been established by the IEPA for this constitiuent for this exposure route

S:\Shared\MGP\IP\Job Files\Champaign\62402647 Site Investigation\CSI Report\Sec. 5 Chemical Analytical Results\Tables 5-1 to 5-4 Tier 1 ROs

TABLE 5-4
TIER 1 REMEDIAL OBJECTIVES
METALS AND CYANIDE

CONSTITUENT	Ingestion Residential	Ingestion Commercial	Ingestion Construction	Inhalation Residential	Inhalation Commercial	Inhalation Construction	Soil Component to Groundwater (Class I)*	MSA Background Metropolitan Areas	UNITS/DEPTH
Arsenic	13.0	13.0	61.0	750	1,200	25,000	30	13	(mg/kg)
Barium	5,500	140,000	14,000	690,000	910,000	870,000	1,800	110	(mg/kg)
Cadmium	78	2,000	200	1,800	2,800	59,000	59	0.6	(mg/kg)
Chromium	230	6,100	4,100	270	420	690	32	16.2	(mg/kg)
COD	---	---	---	---	---	---	---	---	(mg/kg)
Copper	2,900	82,000	8,200	---	---	---	330,000	20	(mg/kg)
Cyanide	1,600	41,000	4,100	---	---	---	40	0.51	(mg/kg)
Iron	---	---	---	---	---	---	---	15,900	(mg/kg)
Lead	400	800	700	---	---	---	107	36	(mg/kg)
Manganese	1,600	41,000	4,100	69,000	91,000	8,700	---	636	(mg/kg)
Mercury	23	610	61	10	16	0.10	6.4	0.06	(mg/kg)
Nickel	1,600	41,000	4,100	13,000	21,000	440,000	700	18	(mg/kg)
Selenium	390	10,000	1,000	---	---	---	3.3	0.48	(mg/kg)
Silver	390	10,000	1,000	---	---	---	39	0.55	(mg/kg)
Zinc	23,000	610,000	61,000	---	---	---	16,000	95	(mg/kg)

Notes:
mg/kg Milligrams per kilogram
(1) Provisional remediation objective provided by IEPA
----- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
* Based on an average pH of 7.50 for the site

TABLE 5-5
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	B-501 B-501-2 7/13/2004 1'-2'	B-502 B-502-3 7/13/2004 2'-3'	B-503 B-503-3 7/13/2004 2'-3'	B-504 B-504-3 7/13/2004 2'-3'	B-505 B-505-3 7/14/2004 2'-3'	B-506 B-506-3 7/22/2004 2'-3'	B-507 B-507-1 7/21/2004 0-1'	B-508 B-508-3 7/19/2004 2'-3'	B-509 B-509-3 7/21/2004 2'-3'	B-510 B-510-2 7/12/2004 1'-2'	B-512 B-512-3 7/12/2004 2'-3'
Benzene	(ug/kg)	1.9	3.4	13900	87.7	47.7	3820	5	28.2	14.2	31.2	8.3
Ethylbenzene	(ug/kg)	<1.1	2.1	4240	32.1	149	1390	1.1	1.8	4	2.2	1.3
Toluene	(ug/kg)	<1.1	5.5	6280	38.3	31.3	3320	3.9	7.1	11.2	7.6	4.9
Xylene (total)	(ug/kg)	<1.1	6.5	9920	65.3	139	5480	3.2	6.3	11.2	8.1	3.8
Acenaphthene	(ug/kg)	<12	<29	<44000	610	6900	1300	110	390	<120	<2300	330
Acenaphthylene	(ug/kg)	78	34	<49000	150	70000	18000	1000	5400	1200	<2500	1230
Anthracene	(ug/kg)	41	<29	51000	460	15000	4500	510	1700	330	<2200	1740
Benzo(a)anthracene	(ug/kg)	270	110	69000	250	45000	18000	950	5900	1500	2900	2870
Benzo(a)pyrene	(ug/kg)	360	160	67000	190	140000	49000	2000	23000	3300	3200	2940
Benzo(b)fluoranthene	(ug/kg)	490	230	76000	210	120000	56000	1700	19000	3500	4500	4310
Benzo(ghi)perylene	(ug/kg)	210	120	<41000	64	38000	17000	650	7400	1600	<2200	1340
Benzo(k)fluoranthene	(ug/kg)	190	84	<36000	86	33000	16000	530	4500	1000	<1800	1500
Chrysene	(ug/kg)	320	120	62000	240	47000	23000	1100	8100	2000	3600	3230
Dibenzo(a,h)anthracene	(ug/kg)	61	<29	<36000	25	13000	5200	170	1800	410	<1900	430
Fluoranthene	(ug/kg)	440	110	120000	680	37000	18000	1500	8200	2000	3700	7830
Fluorene	(ug/kg)	<12	<29	<43000	430	9900	2800	250	750	120	<2200	1070
Indeno(1,2,3-cd)pyrene	(ug/kg)	240	84	<39000	81	41000	17000	610	6300	1400	<2000	1620
Naphthalene	(ug/kg)	33	120	71000	6800	21000	11000	600	1200	290	<2700	580
Phenanthrene	(ug/kg)	170	78	130000	1100	18000	10000	1800	2900	820	2000	5990
Pyrene	(ug/kg)	440	140	110000	520	96000	30000	2300	16000	3100	5800	6020

Notes:
- ug/kg Micrograms per kilogram
- (1) Provisional remediation objective provided by IEPA
- ----- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 Not detected at the level identified
- [shaded] Analytical result exceeds one or more Tier 1 RO.

S:\Shared\MGP\IP\Job Files\Champaign\62402647 Site Investigation\CSI Report\Sec. 5 Chemical Analytical Results\
Table 5-5 Tier 1 BTEX & PAH 0-3 ft. (3-3-06)

TABLE 5-5
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	B-513 B-513-2 7/12/2004 1'-2'	B-514 B-514-3 7/22/2004 2'-3'	B-515 B-515-2 7/16/2004 1'-2'	B-516 B-516-3 7/22/2004 2'-3'	B-550 B-550-3 7/20/2004 2'-3'	B-551 B-551-3 7/15/2004 2'-3'	B-553 B-553-3 7/14/2004 2'-3'	B-554 B-554-3 7/15/2004 2'-3'	B-556 B-556-3 7/20/2004 2'-3'	B-557 B-557-1 7/20/2004 0-1'	B-558 B-558-2 7/19/2004 1'-2'
Benzene	(ug/kg)	7.6	32.6	4.3	5.1	5.8	972	195	180	10.3	5.3	2.3
Ethylbenzene	(ug/kg)	<1.1	17.4	21.3	5.4	13.6	282	200	256	11.5	2.1	4.5
Toluene	(ug/kg)	3.2	10.3	3	4.5	3.8	244	370	211	26.2	3.6	7.2
Xylene (total)	(ug/kg)	1.8	25.4	26.4	6.5	25.9	276	456	624	41.6	5.2	11.8
Acenaphthene	(ug/kg)	52	<1900	1100	<1800	<12000	3700	8500	<3000	1400	170	<450
Acenaphthylene	(ug/kg)	100	2600	1900	40000	<13000	14000	26000	9200	5900	880	<500
Anthracene	(ug/kg)	220	2400	1000	9700	<11000	20000	8400	<2800	4400	620	<420
Benzo(a)anthracene	(ug/kg)	800	4600	2200	42000	<9400	52000	10000	<2400	6400	3600	450
Benzo(a)pyrene	(ug/kg)	820	5900	4000	120000	<8600	68000	55000	8500	18000	5200	500
Benzo(b)fluoranthene	(ug/kg)	1300	7600	4400	130000	<8800	83000	50000	8200	13000	6000	610
Benzo(ghi)perylene	(ug/kg)	310	3800	1300	50000	<11000	28000	26000	8500	6100	2700	<420
Benzo(k)fluoranthene	(ug/kg)	490	2700	1300	36000	<9300	25000	12000	<2400	3700	1900	<360
Chrysene	(ug/kg)	930	4900	2800	62000	<9900	51000	18000	4300	7900	3800	450
Dibenzo(a,h)anthracene	(ug/kg)	120	<1500	350	14000	<9500	9000	5000	<2500	1500	720	<370
Fluoranthene	(ug/kg)	1700	6300	3300	27000	19000	93000	17000	4600	9200	6300	690
Fluorene	(ug/kg)	51	1900	720	4000	12000	7100	7800	<2900	3900	110	<440
Indeno(1,2,3-cd)pyrene	(ug/kg)	400	3400	1200	47000	<10000	33000	21000	4400	5300	2500	<400
Naphthalene	(ug/kg)	52	<2200	1800	10000	<14000	8400	2200	<3500	5300	980	<530
Phenanthrene	(ug/kg)	840	6500	3300	8700	14000	47000	9400	3300	9900	2800	<380
Pyrene	(ug/kg)	1300	8500	5700	67000	21000	76000	27000	8500	18000	6000	650

Notes:
- ug/kg Micrograms per kilogram
- (1) Provisional remediation objective provided by IEPA
- ----- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 Not detected at the level identified
- (shaded) Analytical result exceeds one or more Tier 1 RO.

TABLE 5-5
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	B-559 B-559-3 7/19/2004 2'-3'	B-560 B-560-3 7/16/2004 2'-3'	B-561 B-561-1 7/15/2004 0-1'	B-562 B-562-1 7/15/2004 0-1'	CSS-1 12/18/1990 0-6"	CSS-2 12/18/1990 0-6"	CSS-3 12/18/1990 0-6"	CSS-4 12/18/1990 0-6"	CSS-5 12/19/1990 0-6"	TP-503 TP-503-3 7/8/2004 3'	TP-504 TP-504-3 7/8/2004 3'
Benzene	(ug/kg)	0.7	61.9	4.6	8.7	---	---	---	---	---	14500	10500
Ethylbenzene	(ug/kg)	<1.0	2.3	3.2	3.7	---	---	---	---	---	45600	74000
Toluene	(ug/kg)	<1.0	12.6	4.4	8.6	<310	<310	<310	410	<310	1430	3870
Xylene (total)	(ug/kg)	2	6.7	8.6	9.9	<310	<310	<310	660	<310	42400	91700
Acenaphthene	(ug/kg)	<24	180	<320	76	<5	63	5200	470	<5	150000	15000
Acenaphthylene	(ug/kg)	<24	8400	1000	510	<8	320	1900	3300	<8	130000	28000
Anthracene	(ug/kg)	<24	1300	570	260	59	870	1000	2200	9	90000	14000
Benzo(a)anthracene	(ug/kg)	140	8600	2300	1400	450	3700	3600	9700	99	40000	9600
Benzo(a)pyrene	(ug/kg)	190	36000	4100	2300	390	2900	2800	10000	39	37000	10000
Benzo(b)fluoranthene	(ug/kg)	270	27000	5500	3700	770	3500	4400	13000	150	21000	4800
Benzo(ghi)perylene	(ug/kg)	110	13000	2100	540	400	1900	6300	9900	100	11000	2800
Benzo(k)fluoranthene	(ug/kg)	88	7900	2000	1400	390	1200	1600	4200	140	13000	2500
Chrysene	(ug/kg)	150	11000	3400	1700	480	2900	3200	8100	160	48000	11000
Dibenzo(a,h)anthracene	(ug/kg)	42	4200	610	180	69	580	530	2600	17	8500	2100
Fluoranthene	(ug/kg)	190	11000	4700	2400	820	4700	3300	9900	240	220000	50000
Fluorene	(ug/kg)	<24	980	340	93	44	360	300	400	<0.6	130000	22000
Indeno(1,2,3-cd)pyrene	(ug/kg)	110	12000	2200	640	410	2000	2900	9900	130	11000	2700
Naphthalene	(ug/kg)	37	1900	450	230	<5	110	330	470	<5	590000	83000
Phenanthrene	(ug/kg)	67	3000	2100	860	390	3100	2200	3700	83	340000	72000
Pyrene	(ug/kg)	170	32000	4200	2200	570	4700	5300	15000	250	120000	32000

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO.

TABLE 5-6
TIER 1 COMPARISON VOC RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	B-503 B-503-3 7/13/2004 2'-3'	B-510 B-510-2 7/12/2004 1'-2'	B-514 B-514-3 7/22/2004 2'-3'	B-550 B-550-3 7/20/2004 2'-3'	B-554 B-554-3 7/15/2004 2'-3'	B-558 B-558-2 7/19/2004 1'-2'
1,1,1-Trichloroethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
1,1,2,2-Tetrachloroethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
1,1,2-Trichloroethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
1,1-Dichloroethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
1,1-Dichloroethylene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
1,2-Dichloroethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
1,2-Dichloropropane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
2-Hexanone	(ug/kg)	<1730	<12.2	<11.8	<15.5	<360	<14.0
Acetone	(ug/kg)	<1730	38	126	212	<360	91.6
Bromodichloromethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Bromoform	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Carbon Disulfide	(ug/kg)	<520	<3.6	10.9	11.1	<108	<4.2
Carbon tetrachloride	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Chlorobenzene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Chloroethane	(ug/kg)	<347	<2.4	<2.4	<3.1	<72.0	<2.8
Chloroform	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
cis-1,2-Dichloroethylene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
cis-1,3-Dichloropropene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Dibromochloromethane	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Ethene, 1,2-dichloro-, (E)-	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Methyl bromide	(ug/kg)	<347	<2.4	<2.4	<3.1	<72.0	<2.8
Methyl chloride (Chloromethane)	(ug/kg)	<347	<2.4	<2.4	<3.1	<72.0	<2.8
Methyl ethyl ketone	(ug/kg)	<1730	<12.2	<11.8	30	720	<14.0
Methyl isobutyl ketone (MIBK)	(ug/kg)	<1730	<12.2	<11.8	<15.5	<360	<14.0
Methyl tert-butyl ether	(ug/kg)	<86.6	<0.6	<0.6	<0.8	<18.0	<0.7
Methylene chloride	(ug/kg)	<173	<1.2	1.6	<1.6	<36.0	1.5
Styrene	(ug/kg)	<173	<1.2	3.2	<1.6	<36.0	<1.4
Tetrachloroethylene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
trans-1,3-Dichloropropene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Trichloroethylene	(ug/kg)	<173	<1.2	<1.2	<1.6	<36.0	<1.4
Vinyl chloride	(ug/kg)	<86.6	<0.6	<0.6	<0.8	<18.0	<0.7

Notes:
- ug/kg Micrograms per kilogram
- (1) Provisional remediation objective provided by IEPA
- ----- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 Not detected at the level identified
- [shaded] Analytical result exceeds one or more Tier 1 RO

TABLE 5-7
SURFACE SOIL SVOC RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS/DEPTH	B-503 B-503-3 7/13/2004 2'-3'	B-510 B-510-2 7/12/2004 1'-2'	B-514 B-514-3 7/22/2004 2'-3'	B-550 B-550-3 7/20/2004 2'-3'	B-554 B-554-3 7/15/2004 2'-3'	B-558 B-558-2 7/19/2004 1'-2'
1,2,4-Trichlorobenzene	(mg/kg)	<50.3	<2.62	<2.12	<13.1	<3.43	<0.515
2,4,5-Trichlorophenol	(mg/kg)	<35.9	<1.87	<1.52	<9.37	<2.45	<0.368
2,4,6-Trichlorophenol	(mg/kg)	<47.7	<2.48	<2.01	<12.4	<3.25	<0.488
2,4-Dichlorophenol	(mg/kg)	<45.8	<2.38	<1.93	<11.9	<3.12	<0.469
2,4-Dimethylphenol	(mg/kg)	<48.0	<2.50	<2.03	<12.5	<3.27	<0.492
2,4-Dinitrophenol	(mg/kg)	<40.5	<2.11	<1.71	<10.6	<2.76	<0.414
2,4-Dinitrotoluene	(mg/kg)	<39.3	<2.05	<1.66	<10.3	<2.68	<0.403
2,6-Dinitrotoluene	(mg/kg)	<40.9	<2.13	<1.72	<10.7	<2.78	<0.418
2-Chloronaphthalene	(mg/kg)	<45.4	<2.36	<1.91	<11.8	<3.09	<0.465
2-Chlorophenol	(mg/kg)	<48.0	<2.50	<2.03	<12.5	<3.27	<0.492
2-Methylnaphthalene	(mg/kg)	<45.0	<2.30	<1.90	<12.0	<3.10	<0.460
3,3-Dichlorobenzidine	(mg/kg)	<32.5	<1.69	<1.37	<8.48	<2.22	<0.333
4,6-Dinitro-o-cresol	(mg/kg)	<40.9	<2.13	<1.72	<10.7	<2.78	<0.418
4-Bromophenyl phenyl ether	(mg/kg)	<34.8	<1.81	<1.47	<9.07	<2.37	<0.356
4-Chlorophenyl phenyl ether	(mg/kg)	<37.4	<1.95	<1.58	<9.76	<2.55	<0.383
Bis(2-chloroethoxy)methane	(mg/kg)	<44.3	<2.30	<1.87	<11.5	<3.02	<0.453
Bis(2-chloroethyl)ether	(mg/kg)	<53.7	<2.80	<2.27	<14.0	<3.66	<0.550
Bis(2-chloroisopropyl)ether	(mg/kg)	<43.1	<2.24	<1.82	<11.2	<2.94	<0.441
Bis(2-ethylhexyl)phthalate (BEHP)	(mg/kg)	<44.0	<2.30	<1.90	<12.0	<3.00	<0.450
Butyl benzyl phthalate	(mg/kg)	<38.2	<1.99	<1.61	<9.96	<2.60	<0.391
Carbazole	(mg/kg)	<46.0	<2.40	<2.00	<12.0	<3.10	<0.470
Dibenzofuran	(mg/kg)	<48.0	<2.50	<2.00	<12.0	<3.20	<0.490
Diethyl phthalate	(mg/kg)	<36.3	<1.89	<1.53	<9.47	<2.47	<0.372
Dimethyl phthalate	(mg/kg)	<34.4	<1.79	<1.45	<8.98	<2.35	<0.352
Di-n-butyl phthalate	(mg/kg)	<39.0	<2.03	<1.64	<10.2	<2.66	<0.399
Di-n-octyl phthalate	(mg/kg)	<39.3	<2.05	<1.66	<10.3	<2.68	<0.403
Hexachlorobenzene	(mg/kg)	<37.1	<1.93	<1.56	<9.67	<2.53	<0.379
Hexachlorobutadiene	(mg/kg)	<58.6	<3.05	<2.47	<15.3	<4.00	<0.600
Hexachlorocyclopentadiene	(mg/kg)	<38.6	<2.01	<1.63	<10.1	<2.63	<0.395
Hexachloroethane	(mg/kg)	<63.2	<3.29	<2.67	<16.5	<4.31	<0.647
Isophorone	(mg/kg)	<44.6	<2.32	<1.88	<11.6	<3.04	<0.457
m & p-Cresol(s)	(mg/kg)	<47.7	<2.48	<2.01	<12.4	<3.25	<0.488
m-Dichlorobenzene	(mg/kg)	<63.5	<3.31	<2.68	<16.6	<4.33	<0.651
m-Nitroaniline	(mg/kg)	<31.0	<1.61	<1.31	<8.09	<2.11	<0.318
Nitrobenzene	(mg/kg)	<47.3	<2.46	<1.99	<12.3	<3.22	<0.484
N-Nitrosodiphenylamine	(mg/kg)	<34.8	<1.81	<1.47	<9.07	<2.37	<0.356
N-Nitrosodipropylamine	(mg/kg)	<41.6	<2.17	<1.76	<10.8	<2.84	<0.426
o-Cresol	(mg/kg)	<44.6	<2.32	<1.88	<11.6	<3.04	<0.457
o-Dichlorobenzene	(mg/kg)	<60.1	<3.13	<2.54	<15.7	<4.10	<0.616
o-Nitroaniline	(mg/kg)	<34.4	<1.79	<1.45	<8.98	<2.35	<0.352
o-Nitrophenol	(mg/kg)	<42.4	<2.21	<1.79	<11.0	<2.89	<0.434
p-Chloroaniline	(mg/kg)	<45.8	<2.38	<1.93	<11.9	<3.12	<0.469
p-Chloro-m-cresol	(mg/kg)	<41.6	<2.17	<1.76	<10.8	<2.84	<0.426
PCP	(mg/kg)	<250	<13.0	<10.5	<65.1	<17.0	<2.56
p-Dichlorobenzene	(mg/kg)	<60.1	<3.13	<2.54	<15.7	<4.10	<0.616
Phenol	(mg/kg)	<43.9	<2.28	<1.85	<11.4	<2.99	<0.449
p-Nitroaniline	(mg/kg)	<34.4	<1.79	<1.45	<8.98	<2.35	<0.352
p-Nitrophenol	(mg/kg)	<37.1	<1.93	<1.56	<9.67	<2.53	<0.379

Notes:
- mg/kg — Milligrams per kilogram
- (1) — Provisional remediation objective provided by IEPA
- ---- — No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 — Not detected at the level identified
- (shaded) — Analytical result exceeds one or more Tier 1 RO

TABLE 5-8
TIER 1 COMPARISON - METALS and CYANIDE RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Tier 1 Remediation Objectives

CONSTITUENT	UNITS/DEPTH	B-501 B-501-2 7/13/2004 1'-2'	B-502 B-502-3 7/13/2004 2'-3'	B-503 B-503-3 7/13/2004 2'-3'	B-504 B-504-3 7/13/2004 2'-3'	B-505 B-505-3 7/14/2004 2'-3'	B-506 B-506-3 7/22/2004 2'-3'	B-507 B-507-1 7/21/2004 0-1'	B-508 B-508-3 7/19/2004 2'-3'	B-509 B-509-3 7/21/2004 2'-3'	B-510 B-510-2 7/12/2004 1'-2'	B-512 B-512-3 7/12/2004 2'-3'	B-513 B-513-2 7/12/2004 1'-2'
Arsenic	(mg/kg)	9.28	58.5	8.31	15.4	4.5	14.7	10.1	22.5	13	10.8	21.6	13.6
Barium	(mg/kg)	143	58.3	99.6	152	27.1	113	141	96.4	184	84.6	98	129
Cadmium	(mg/kg)	0.28	0.5	0.3	1.68	0.58	0.14	0.22	0.55	1.03	0.58	1.01	0.36
Chromium	(mg/kg)	19.6	8.81	18.1	13.6	12.6	15.7	16	13.2	18.3	16	26.7	22.4
COD	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Copper	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Cyanide	(mg/kg)	1.38	1.02	11.7	55.5	25.2	2.31	2.15	2.51	2.74	6.43	68.4	17
Iron	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Lead	(mg/kg)	58	21.7	202	221	552	177	60.8	49.8	164	128	158	470
Manganese	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Mercury	(mg/kg)	0.215	0.037	0.167	0.338	0.061	0.695	0.084	0.174	0.252	0.432	0.291	0.352
Nickel	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	(mg/kg)	**<4.00**	**<3.85**	**<4.00**	**<3.92**	**<4.00**	**<3.85**	**<3.85**	**<3.85**	**<4.00**	**<3.85**	**<3.92**	**<4.00**
Silver	(mg/kg)	<1.00	<0.96	<1.00	<0.98	<1.00	<0.96	<0.96	<0.96	<1.00	<0.96	<0.98	<1.00
Zinc	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

mg/kg	Milligrams per kilogram
-1	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
*	Based on an average pH of 7.50 for the site
(shaded)	Analytical result exceeds one or more Tier 1 RO
<0.05	Detection limit greater than RO due to dilution

TABLE 5-8
TIER 1 COMPARISON - METALS and CYANIDE RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Tier 1 Remediation Objectives

CONSTITUENT	UNITS/DEPTH	B-514 B-514-3 7/22/2004 2'-3'	B-515 B-515-2 7/16/2004 1'-2'	B-516 B-516-3 7/22/2004 2'-3'	B-550 B-550-3 7/20/2004 2'-3'	B-551 B-551-3 7/15/2004 2'-3'	B-553 B-553-3 7/14/2004 2'-3'	B-554 B-554-3 7/15/2004 2'-3'	B-556 B-556-3 7/20/2004 2'-3'	B-557 B-557-1 7/20/2004 0-1'	B-558 B-558-2 7/19/2004 1'-2'	B-559 B-559-3 7/19/2004 2'-3'	B-560 B-560-3 7/16/2004 2'-3'
Arsenic	(mg/kg)	11.3	11.5	28.7	11.6	10.7	<2.40	19.3	2.2	9.68	12.6	9.93	12.5
Barium	(mg/kg)	128	136	134	45.6	60.5	20.1	207	59.8	102	164	139	177
Cadmium	(mg/kg)	0.29	0.36	1.36	2.04	0.39	<0.19	0.97	0.13	0.59	0.64	0.15	1.38
Chromium	(mg/kg)	15.7	14	40.3	22.3	10.3	7.23	16.3	9.54	15.6	16.9	16	16.7
COD	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Copper	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Cyanide	(mg/kg)	16.6	3.68	41.6	9.82	3	1.81	3.01	2.98	1.01	1.37	0.46	2.47
Iron	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Lead	(mg/kg)	113	36.1	165	32.1	50.6	8.5	252	55.7	184	48.6	56.7	110
Manganese	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Mercury	(mg/kg)	4.2	0.091	0.491	0.076	0.281	0.005	0.076	0.075	0.133	0.082	0.058	0.21
Nickel	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	(mg/kg)	**<3.85**	**<3.77**	**<4.00**	**<4.00**	**<3.92**	**<3.85**	**<3.64**	**<3.85**	**<3.85**	**<3.92**	**<3.64**	**<3.85**
Silver	(mg/kg)	<0.96	<0.94	<1.00	<1.00	<0.98	<0.96	<0.91	<0.96	<0.96	<0.98	<0.91	<0.96
Zinc	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

mg/kg	Milligrams peMilligrams per kilogram
-1	Provisional reProvisional remediation objective provided by IEPA
-----	No remediatioNo remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected Not detected at the level identified
*	Based on an Based on an average pH of 7.50 for the site
(shaded)	Analytical resAnalytical result exceeds one or more Tier 1 RO
<0.05	Detection lim Detection limit greater than RO due to dilution

TABLE 5-8
TIER 1 COMPARISON - METALS and CYANIDE RESULTS FOR 0 TO 3 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Tier 1 Remediation Objectives

CONSTITUENT	UNITS/DEPTH	B-561	B-562	CSS-1	CSS-2	CSS-3	CSS-4	CSS-5	UTP-01	UTP-02	UTP-03	UTP-04	UTP-08	UTP-09
		B-561-1	B-562-1											
		7/15/2004	7/15/2004	12/18/1990	12/18/1990	12/18/1990	12/18/1990	12/19/1990	12/17/1991	12/17/1991	12/17/1991	12/17/1991	12/17/1991	12/17/1991
	UNITS/DEPTH	0-1'	0-1'	0-6"	0-6"	0-6"	0-6"	0-6"	1	1.25	1.42	1	1	0.83
Arsenic	(mg/kg)	37.2	31.7	6	5	3	5	5	6	9	9	15	4	21
Barium	(mg/kg)	135	212	93	89	82	69	91	100	110	99	61	120	120
Cadmium	(mg/kg)	1.59	2	1	<0.5	1	1	<0.5	1	1	1	1	<0.5	<0.5
Chromium	(mg/kg)	19.4	19.1	9	9	6	7	13	15	37	13	19	30	26
COD	(mg/kg)	---	---	52000	47000	47000	46000	23000	---	---	---	---	---	---
Copper	(mg/kg)	---	---	18	20	17	19	10	10	92	41	18	260	38
Cyanide	(mg/kg)	0.64	0.81	1	<0.25	7	2	<0.25	2	33	33	2900	620	3800
Iron	(mg/kg)	---	---	12000	12000	14000	12000	15000	13000	16000	9500	46000	100000	110000
Lead	(mg/kg)	358	390	130	59	80	200	20	18	130	47	300	11000	1800
Manganese	(mg/kg)	---	---	390	380	830	630	530	730	71	340	170	430	330
Mercury	(mg/kg)	0.344	0.227	0.14	<0.13	---	3	<0.4	<0.13	1	---	1	3	1
Nickel	(mg/kg)	---	---	13	12	12	10	14	15	8	11	8	12	10
Selenium	(mg/kg)	**<3.92**	**<4.00**	---	---	---	---	---	---	---	---	---	---	---
Silver	(mg/kg)	<0.98	<1.00	---	---	---	---	---	---	---	---	---	---	---
Zinc	(mg/kg)	---	---	110	74	74	95	47	41	64	89	46	230	110

Notes:

mg/kg	Milligrams peMilligrams per kilogram
-1	Provisional reProvisional remediation objective provided by IEPA
-----	No remediatioNo remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected Not detected at the level identified
*	Based on an Based on an average pH of 7.50 for the site
	Analytical resAnalytical result exceeds one or more Tier 1 RO
<0.05	Detection lim Detection limit greater than RO due to dilution

TABLE 5-9
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR 3 TO 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Soil		B-501	B-502	B-503	B-504	B-505	B-506	B-507	B-508	B-509	B-510	B-512	B-513	B-514	B-515	B-516	B-550	B-551
		B-501-8	B-502-7	B-503-10	B-504-7	B-505-6	B-506-7	B-507-8	B-508-9	B-509-8	B-510-5	B-512-8	B-513-8	B-514-8	B-515-7	B-516-5	B-550-9	B-551-10
	UNITS/	7/13/2004	7/13/2004	7/13/2004	7/13/2004	7/14/2004	7/22/2004	7/21/2004	7/19/2004	7/21/2004	7/12/2004	7/12/2004	7/12/2004	7/22/2004	7/16/2004	7/22/2004	7/20/2004	7/15/2004
CONSTITUENT	DEPTH	7'-8'	6'-7'	9'-10'	6'-7'	5'-6'	6'-7'	7'-8'	8'-9'	7'-8'	4'-5'	7'-8'	7'-8'	7'-8'	6'-7'	4'-5'	8'-9'	9'-10'
Benzene	(ug/kg)	183	10900	534	20800	14500	11200	3510	2080	4.6	4.3	<12.2	<10.1	3100	9030	656	610	1260
Ethylbenzene	(ug/kg)	41	5660	523	145000	79800	46200	22200	33100	3.8	<1.0	<24.4	36	23500	59100	4720	1260	13600
Toluene	(ug/kg)	<24.6	220	300	10900	3800	740	280	575	1.4	1.7	<24.4	<20.2	446	2450	289	55	69
Xylene (total)	(ug/kg)	41	11000	837	140000	69900	33700	16600	24300	12	1.3	<24.4	44	19800	40700	1480	623	5720
Acenaphthene	(ug/kg)	50	16000	1600	590000	540000	170000	53000	51000	9800	<31	0.3	1600	48000	270000	7500	5300	23000
Acenaphthylene	(ug/kg)	240	2700	320	71000	81000	12000	3600	5800	4700	150	<0.163	2000	8800	34000	5000	790	3000
Anthracene	(ug/kg)	180	12000	1400	300000	280000	71000	24000	22000	7200	67	0.15	2800	19000	100000	3800	2600	13000
Benzo(a)anthracene	(ug/kg)	180	8700	630	170000	140000	33000	9500	12000	9400	500	<0.120	1200	11000	65000	7200	1600	9600
Benzo(a)pyrene	(ug/kg)	270	4100	520	130000	140000	35000	12000	10000	8700	510	<0.110	950	13000	88000	16000	1800	12000
Benzo(b)fluoranthene	(ug/kg)	250	18000	630	110000	130000	29000	7900	7900	6800	710	<0.112	820	8900	66000	13000	1400	11000
Benzo(ghi)perylene	(ug/kg)	63	4000	110	<50000	31000	7200	2400	4500	2800	280	<0.138	420	2800	26000	5000	410	3500
Benzo(k)fluoranthene	(ug/kg)	97	5600	240	<43000	45000	7400	2300	3100	2500	220	<0.119	280	2600	25000	4200	410	4200
Chrysene	(ug/kg)	170	19000	650	150000	140000	33000	8800	11000	9000	590	<0.126	1100	11000	74000	8400	1600	10000
Dibenzo(a,h)anthracene	(ug/kg)	<30	1900	45	<44000	10000	2300	720	<3000	<620	74	<0.121	110	850	11000	1300	160	1000
Fluoranthene	(ug/kg)	340	17000	1800	320000	290000	78000	26000	23000	18000	650	<0.120	2100	24000	150000	7600	2600	20000
Fluorene	(ug/kg)	330	20000	1200	410000	400000	90000	35000	30000	13000	48	0.31	4200	36000	150000	5500	4400	15000
Indeno(1,2,3-cd)pyrene	(ug/kg)	64	4700	130	<47000	35000	6000	2300	3500	2400	230	<0.131	430	2700	27000	4500	370	3700
Naphthalene	(ug/kg)	<30	59000	16000	2000000	2300000	790000	170000	140000	<880	33	<0.173	<66	100000	510000	24000	2700	46000
Phenanthrene	(ug/kg)	38	50000	3500	1100000	920000	250000	77000	64000	37000	210	0.644	9300	72000	340000	12000	9600	41000
Pyrene	(ug/kg)	500	25000	1500	440000	400000	110000	37000	33000	25000	1000	0.15	3200	33000	190000	14000	3800	21000

Notes:
ug/kg Micrograms per kilogram
(1) Provisional remediation objective provided by IEPA
----- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12 Not detected at the level identified
[shaded] Analytical result exceeds one or more Tier 1 RO

Micrograms per
Provisional rem
No remediation
Not detected at
Analytical result

TABLE 5-9
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR 3 TO 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Soil CONSTITUENT	UNITS/ DEPTH	B-553 B-553-6 7/14/2004 5'-6'	B-554 B-554-10 7/15/2004 9'-10'	B-556 B-556-6 7/20/2004 5'-6'	B-557 B-557-10 7/20/2004 9'-10'	B-558 B-558-7 7/19/2004 6'-7'	B-559 B-559-8 7/19/2004 7'-8'	B-560 B-560-5 7/16/2004 4'-5'	B-561 B-561-10 7/15/2004 9'-10'	B-562 B-562-10 7/15/2004 9'-10'	TP-501 TP-501-7 7/8/2004 7'	TP-503A TP-503A-3.5 7/8/2004 3.5'	TP-507 TP-507-3.5 7/7/2004 3.5'	TP-508 TP-508-4 7/8/2004 4'	UTB-08B UTB-08-01 11/28/1990 4'-9'	UTB-08 UTB-08-02 11/28/1990 9'-13'	UTB-10 UTB-10-01 11/30/1990 9'-10'	UTB-11 UTB-11-01 12/3/1990 8'-13'
Benzene	(ug/kg)	4050	765	2770	7.1	52.5	<12.8	12	1250	286	438	12800	13200	6400	<310	<310	<310	7900
Ethylbenzene	(ug/kg)	20800	3910	19900	7.4	66	<25.6	1.9	1380	1590	30600	14600	64100	57000	<310	<310	3200	4300
Toluene	(ug/kg)	811	2700	<206	2	134	<25.6	3.9	110	726	<220	2560	3750	7340	<310	<310	<310	22000
Xylene (total)	(ug/kg)	19300	6120	12200	13.4	221	46	3.9	3540	1660	16600	14900	92600	76000	<310	<310	3100	20000
Acenaphthene	(ug/kg)	280000	77000	64000	320	8100	<150	380	9100	28000	18000	3000	55000	330000	<330	<330	16000	3500
Acenaphthylene	(ug/kg)	27000	7300	4200	130	2400	<160	6100	1600	3500	6800	780	57000	240000	<330	<330	5100	12000
Anthracene	(ug/kg)	170000	29000	28000	180	6800	<140	1200	4800	14000	8100	870	30000	110000	<330	<330	18000	14000
Benzo(a)anthracene	(ug/kg)	120000	13000	12000	140	3200	<120	7200	2500	6100	4700	1500	23000	64000	<330	<330	9900	8400
Benzo(a)pyrene	(ug/kg)	120000	14000	12000	160	3500	<110	25000	2000	6100	5200	2900	21000	50000	<330	<330	5500	4300
Benzo(b)fluoranthene	(ug/kg)	130000	13000	8700	130	2800	<110	20000	1400	4500	2300	1500	12000	56000	<330	<330	5000	8200
Benzo(ghi)perylene	(ug/kg)	29000	2200	5000	54	930	<140	6700	840	1600	1300	1300	7900	13000	<330	<330	2900	<1600
Benzo(k)fluoranthene	(ug/kg)	50000	4700	2400	39	820	<120	7500	590	1500	1600	750	6900	13000	<330	<330	1600	<1600
Chrysene	(ug/kg)	120000	14000	13000	140	3100	<130	9000	2400	6000	5700	1700	27000	66000	<330	<330	10000	7100
Dibenzo(a,h)anthracene	(ug/kg)	9700	790	1300	20	360	<120	1700	<570	<630	1200	<110	<93	9100	<330	<330	580	<1600
Fluoranthene	(ug/kg)	300000	32000	27000	330	7300	<120	7500	5000	14000	20000	2900	89000	300000	<330	<330	17000	18000
Fluorene	(ug/kg)	180000	42000	26000	200	8900	<140	550	6300	18000	13000	750	49000	210000	<330	<330	20000	14000
Indeno(1,2,3-cd)pyrene	(ug/kg)	34000	1900	4300	48	860	<130	6000	<620	1500	1500	1400	7200	14000	<330	<330	2900	<1600
Naphthalene	(ug/kg)	880000	1800	200000	14	<130	<180	2600	23000	39000	18000	9200	240000	710000	<330	<330	87000	100000
Phenanthrene	(ug/kg)	540000	91000	90000	1100	22000	<120	3200	14000	45000	32000	2900	140000	500000	<330	<330	56000	39000
Pyrene	(ug/kg)	340000	42000	40000	500	12000	<120	23000	7400	20000	14000	2700	63000	180000	<330	<330	32000	12000

Notes:
- ug/kg · kilogram
- (1) ediation objective provided by IEPA
- ----- objective has been established by the IEPA for this constitiuent for this exposure route
- <12 the level identified
- [shaded] exceeds one or more Tier 1 RO

Micrograms per kilogram
Provisional remediation objective
No remediation objective has be
Not detected at the level identifie
Analytical result exceeds one or

TABLE 5-9
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR 3 TO 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

Soil		UTB-14	UTB-15	UTB-16	UTB-18	UTB-20	UTB-21	UTB-22	UTB-23	UTB-24	UTB-25	UTB-26	UTB-27
		UTB-14-01	UTB-15-S01	UTB-16-01	UTB-18-01	UTB-20-S01	UTB-21-S01	UTB-22-S01	UTB-23-S01	UTB-24-S01	UTB-25-S01	UTB-26-S01	UTB-27-S01
	UNITS/	12/5/1990	12/13/1991	12/6/1990	12/7/1990	12/11/1991	12/12/1991	12/12/1991	12/14/1991	12/15/1991	12/14/1991	12/15/1991	12/16/1991
CONSTITUENT	DEPTH	4'-5'	9'-11'	8'-10'	4.5'-5'	7'-8'	3'-8'	6'-8'	6'-8'	6'-8'	9'-11'	6'-8'	6'-8
Benzene	(ug/kg)	<310	**360**	5600	<310	<310	<3100	<310	56000	<3100	2700	580	12000
Ethylbenzene	(ug/kg)	<310	1800	20000	<310	<310	20000	<310	82000	8200	9500	20000	7400
Toluene	(ug/kg)	<310	<310	7200	<310	<310	8800	<310	54000	<3100	4000	<310	22000
Xylene (total)	(ug/kg)	330	1700	60000	<310	<310	<3100	<310	100000	5600	12000	2300	35000
Acenaphthene	(ug/kg)	38000	32000	110000	<490	120	46000	<100	390000	100000	53000	17000	29000
Acenaphthylene	(ug/kg)	<19000	3300	<39000	<490	160	1300	<160	<4000	35000	13000	<1600	11000
Anthracene	(ug/kg)	34000	15000	67000	<490	<0.7	18000	<14	230000	42000	37000	8100	34000
Benzo(a)anthracene	(ug/kg)	24000	8700	48000	<490	66	17000	<86	160000	29000	13000	4300	21000
Benzo(a)pyrene	(ug/kg)	20000	7400	28000	<490	<7.7	12000	<150	250000	640000	6800	4300	14000
Benzo(b)fluoranthene	(ug/kg)	22000	7300	28000	<490	<1	12000	<20	180000	15000	5200	4500	13000
Benzo(ghi)perylene	(ug/kg)	<19000	4800	<39000	<490	<4.7	10000	<94	160000	17000	5600	12000	11000
Benzo(k)fluoranthene	(ug/kg)	<19000	2300	<39000	<490	<0.4	<80	<8	170000	3600	2000	3400	4800
Chrysene	(ug/kg)	26000	9000	44000	<490	<1	11000	<20	250000	18000	8100	4100	17000
Dibenzo(a,h)anthracene	(ug/kg)	<19000	1100	59000	<490	<2.8	<560	<56	<1400	4900	1300	<560	2300
Fluoranthene	(ug/kg)	46000	16000	120000	<490	100	23000	<14	360000	68000	51000	9500	48000
Fluorene	(ug/kg)	38000	18000	100000	<490	<0.6	22000	690	370000	57000	38000	8800	35000
Indeno(1,2,3-cd)pyrene	(ug/kg)	<19000	5100	<39000	<490	<1	8500	<20	50000	17000	5400	3400	15000
Naphthalene	(ug/kg)	22000	120000	590000	<490	<5	190000	<100	2600000	490000	380000	45000	95000
Phenanthrene	(ug/kg)	96000	54000	230000	<490	<5	64000	1500	1000000	56000	68000	27000	110000
Pyrene	(ug/kg)	48000	23000	100000	<490	140	41000	<50	630000	110000	34000	17000	59000

Notes: ug/kg
(1) provided by IEPA
----- en established by the IEPA for this constitiuent for this exposure route
<12 d
nore Tier 1 RO

TABLE 5-10

TIER 1 COMPARISON VOC RESULTS 3 TO 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS

AMERENIP

CONSTITUENT	UNITS	B-504 B-504-7 7/13/2004 6'-7'	B-508 B-508-9 7/19/2004 8'-9'	B-509 B-509-8 7/21/2004 7'-8'	B-559 B-559-8 7/19/2004 7'-8'	B-561 B-561-10 7/15/2004 9'-10'
1,1,1-Trichloroethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
1,1,2,2-Tetrachloroethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
1,1,2-Trichloroethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
1,1-Dichloroethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
1,1-Dichloroethylene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
1,2-Dichloroethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
1,2-Dichloropropane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
2-Hexanone	(ug/kg)	<8830	<1040	<10.3	<256	<841
Acetone	(ug/kg)	<8830	2500	31	460	<841
Bromodichloromethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Bromoform	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Carbon Disulfide	(ug/kg)	<2650	<312	<3.1	<76.7	<252
Carbon tetrachloride	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Chlorobenzene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Chloroethane	(ug/kg)	<1770	<208	<2.1	<51.1	<168
Chloroform	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
cis-1,2-Dichloroethylene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
cis-1,3-Dichloropropene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Dibromochloromethane	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Ethene, 1,2-dichloro-, (E)-	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Methyl bromide	(ug/kg)	<1770	<208	<2.1	<51.1	<168
Methyl chloride	(ug/kg)	<1770	<208	<2.1	<51.1	<168
Methyl ethyl ketone	(ug/kg)	<8830	<1040	<10.3	460	<841
Methyl isobutyl ketone (MIBK)	(ug/kg)	<8830	<1040	<10.3	<256	<841
Methyl tert-butyl ether	(ug/kg)	<441	<52.0	<0.5	<12.8	<42.1
Methylene chloride	(ug/kg)	<883	200	<1.0	<25.6	<84.1
Styrene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Tetrachloroethylene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
trans-1,3-Dichloropropene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Trichloroethylene	(ug/kg)	<883	<104	<1.0	<25.6	<84.1
Vinyl chloride	(ug/kg)	<441	<52.0	<0.5	<12.8	<42.1

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-11
TIER 1 COMPARISON SVOC RESULTS FOR 3 TO 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	B-504 B-504-7 7/13/2004 6'-7'	B-508 B-508-9 7/19/2004 8'-9'	B-509 B-509-8 7/21/2004 7'-8'	B-559 B-559-8 7/19/2004 7'-8'	B-561 B-561-10 7/15/2004 9'-10'
1,2,4-Trichlorobenzene	<60.7	<4.22	<0.856	<0.170	<0.795
2,4,5-Trichlorophenol	<43.3	<3.02	<0.611	<0.122	<0.568
2,4,6-Trichlorophenol	<57.5	<4.00	<0.811	<0.161	<0.753
2,4-Dichlorophenol	<55.2	<3.84	<0.778	<0.155	<0.723
2,4-Dimethylphenol	<58.0	<4.00	<0.820	<0.160	<0.760
2,4-Dinitrophenol	<48.8	<3.40	<0.688	<0.137	<0.640
2,4-Dinitrotoluene	<47.4	<3.30	<0.669	<0.133	<0.622
2,6-Dinitrotoluene	<49.3	<3.43	<0.695	<0.138	<0.646
2-Chloronaphthalene	<54.7	<3.81	<0.772	<0.153	<0.717
2-Chlorophenol	<57.9	<4.03	<0.817	<0.162	<0.759
2-Methylnaphthalene	1200	76	<0.770	<0.150	<6.70
3,3-Dichlorobenzidine	<39.2	<2.73	<0.553	<0.110	<0.514
4,6-Dinitro-o-cresol	<49.3	<3.43	<0.695	<0.138	<0.646
4-Bromophenyl phenyl ether	<42.0	<2.92	<0.592	<0.118	<0.550
4-Chlorophenyl phenyl ether	<45.2	<3.14	<0.637	<0.127	<0.592
Bis(2-chloroethoxy)methane	<53.4	<3.72	<0.753	<0.150	<0.700
Bis(2-chloroethyl)ether	<64.8	<4.51	<0.914	<0.182	<0.849
Bis(2-chloroisopropyl)ether	<52.0	<3.62	<0.733	<0.146	<0.682
Bis(2-ethylhexyl)phthalate (BEHP)	<53.4	<3.72	<0.753	0.43	1.71
Butyl benzyl phthalate	<46.1	<3.21	<0.650	<0.129	<0.604
Carbazole	<56.0	<3.90	<0.780	<0.160	<0.730
Dibenzofuran	69	4.1	1.6	<0.160	<0.770
Diethyl phthalate	<43.8	<3.05	<0.618	<0.123	<0.574
Dimethyl phthalate	<41.5	<2.89	<0.585	<0.116	<0.544
Di-n-butyl phthalate	<47.0	<3.27	<0.663	<0.132	<0.616
Di-n-octyl phthalate	<47.4	<3.30	<0.669	<0.133	<0.622
Hexachlorobenzene	<44.7	<3.11	<0.630	<0.125	<0.586
Hexachlorobutadiene	<70.7	<4.92	<0.997	<0.198	<0.927
Hexachlorocyclopentadiene	<46.5	<3.24	<0.656	<0.130	<0.610
Hexachloroethane	<76.2	<5.30	<1.07	<0.214	<0.999
Isophorone	<53.8	<3.75	<0.759	<0.151	<0.706
m & p-Cresol(s)	<57.5	<4.00	<0.811	<0.161	<0.753
m-Dichlorobenzene	<76.6	<5.33	<1.08	<0.215	<1.00
m-Nitroaniline	<37.4	<2.60	<0.528	<0.105	<0.490
Nitrobenzene	<57.0	<3.97	<0.804	<0.160	<0.747
N-Nitrosodiphenylamine	<42.0	<2.92	<0.592	<0.118	<0.550
N-Nitrosodipropylamine	<50.2	<3.49	<0.708	<0.141	<0.658
o-Cresol	<54.0	<3.80	<0.760	<0.150	<0.710
o-Dichlorobenzene	<72.5	<5.05	<1.02	<0.203	<0.951
o-Nitroaniline	<41.5	<2.89	<0.585	<0.116	<0.544
o-Nitrophenol	<51.1	<3.56	<0.721	<0.143	<0.670
p-Chloroaniline	<55.2	<3.84	<0.778	<0.155	<0.723
p-Chloro-m-cresol	<50.2	<3.49	<0.708	<0.141	<0.658
PCP	<301	<21.0	<4.25	<0.844	<3.95
p-Dichlorobenzene	<72.5	<5.05	<1.02	<0.203	<0.951
Phenol	<53.0	<3.70	<0.750	<0.150	<0.690
p-Nitroaniline	<41.5	<2.89	<0.585	<0.116	<0.544
p-Nitrophenol	<44.7	<3.11	<0.630	<0.125	<0.586

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-12
TIER 1 COMPARISON - RCRA METALS AND CYANIDE RESULTS FOR 3 TO 10 FT
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	B-504 B-504-7 7/13/2004 6'-7'	B-508 B-508-9 7/19/2004 8'-9'	B-509 B-509-8 7/21/2004 7'-8'	B-559 B-559-8 7/19/2004 7'-8'	B-561 B-561-10 7/15/2004 9'-10'	UTB-08B UTB-08B-01 11/28/1990 4'-9'	UTB-08B UTB-08B-02 11/28/1990 9'-13'	UTB-10 UTB-10-02 11/30/1990 9'-10'	UTB-15 UTB-15-S01 12/13/1991 9'-11'
Arsenic	<2.31	13	12.7	14.5	15.2	---	---	---	---
Barium	63.8	126	117	226	55.2	---	---	---	---
Cadmium	0.31	<0.19	0.1	0.54	0.45	---	---	---	---
Chromium	14.7	21.9	16.8	23.5	15.3	---	---	---	---
Cyanide	---	---	---	---	---	<0.25	<0.25	<0.25	0.35
Lead	16.4	17.9	13.8	18.7	14.1	---	---	---	---
Mercury	0.026	0.036	0.028	0.049	0.018	---	---	---	---
Selenium	**<3.70**	**<3.85**	**<3.92**	**<4.00**	**<3.85**	---	---	---	---
Silver	<0.93	<0.96	<0.98	<1.00	<0.96	---	---	---	---

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO
<0.05	Detection limit greater than RO due to dilution

TABLE 5-12
TIER 1 COMPARISON - RCRA METALS AND CYANIDE RESULTS FOR 3 TO 10 FT
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UTB-20 UTB-20-S01 12/11/1991 7'-8'	UTB-21 UTB-21-S01 12/12/1991 3'-8'	UTB-22 UTB-22-S01 12/12/1991 6'-8'	UTB-23 UTB-23-S01 12/14/1991 6'-8'	UTB-24 UTB 24-S01 12/15/1991 6'-8'	UTB-25 UTB-25-S01 12/14/1991 9'-11'	UTB-26 UTB-26-S02 12/15/1991 6'-8'	UTB-27 UTB-27-S01 12/16/1991 6'-8'
Arsenic	---	---	---	---	---	---	---	---
Barium	---	---	---	---	---	---	---	---
Cadmium	---	---	---	---	---	---	---	---
Chromium	---	---	---	---	---	---	---	---
Cyanide	2	5	<0.25	14	11	1	<0.25	5
Lead	---	---	---	---	---	---	---	---
Mercury	---	---	---	---	---	---	---	---
Selenium	---	---	---	---	---	---	---	---
Silver	---	---	---	---	---	---	---	---

Notes:

Notes:	ug/kg	Micrograms per kilogram
	(1)	Provisional remediation objective provided by IEPA
	-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
	<12	Not detected at the level identified
	(shaded)	Analytical result exceeds one or more Tier 1 RO
	<0.05	Detection limit greater than RO due to dilution

S:\Shared\MGP\IP\Job Files\Champaign\62402647 Site Investigation\CSI Report\Sec. 5 Chemical Analytical Results\Table 5-12 Tier 1 Metals & Cyanide 3-10ft (3-3-06)

TABLE 5-13
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS/	B-501	B-501	B-502	B-502	B-503	B-503	B-504	B-504	B-504	B-505	B-505	B-505	B-506
		B-501-15	B-501-24	B-502-12	B-502-24	B-503-11	B-503-19	B-504-14	B-504-21	B-504-28	B-505-11	B-505-22	B-505-28	B-506-17
		7/13/2004	7/13/2004	7/13/2004	7/21/2004	7/13/2004	7/13/2004	7/13/2004	7/14/2004	7/14/2004	7/14/2004	7/14/2004	7/14/2004	7/22/2004
CONSTITUENT	DEPTH	14'-15'	23'-24'	11'-12'	23'-24'	10'-11'	18'-19'	13'-14'	20'-21'	27'-28'	10'-11'	21'-22'	27'-28'	16'-17'
Benzene	(ug/kg)	16400	1.6	30300	423	223	3000	15100	33100	9.1	5040	1.6	3	444000
Ethylbenzene	(ug/kg)	2420	<0.7	25300	<19.2	372	<106	28500	1100	2	17700	1.5	2.3	122000
Toluene	(ug/kg)	6900	1.6	108000	<19.2	120	835	8240	8760	3.7	720	4.3	2.5	676000
Xylene (total)	(ug/kg)	16900	2	226000	<19.2	458	<106	24000	3460	3.4	11200	4.2	4	549000
Acenaphthene	(ug/kg)	39000	<130	36000	<11	<42	5400	49000	22000	13	13000	<11	20	55000
Acenaphthylene	(ug/kg)	58000	<140	50000	<11	<42	47000	20000	150000	14	14000	12	30	390000
Anthracene	(ug/kg)	130000	<120	64000	<11	<42	12000	34000	110000	22	11000	<11	37	160000
Benzo(a)anthracene	(ug/kg)	67000	<100	54000	<11	<42	31000	17000	59000	19	7500	<11	29	79000
Benzo(a)pyrene	(ug/kg)	68000	<96	48000	<11	<42	82000	16000	66000	19	7000	<11	25	92000
Benzo(b)fluoranthene	(ug/kg)	72000	<99	56000	<11	<42	88000	12000	50000	15	5400	<11	20	73000
Benzo(ghi)perylene	(ug/kg)	22000	<120	13000	<11	<42	23000	4900	15000	<11	<3500	<11	<11	18000
Benzo(k)fluoranthene	(ug/kg)	21000	<100	17000	<11	<42	25000	4000	16000	<11	<3000	<11	<11	22000
Chrysene	(ug/kg)	64000	<110	56000	<11	<42	34000	16000	62000	21	6700	<11	26	72000
Dibenzo(a,h)anthracene	(ug/kg)	7300	<110	5500	<11	<42	5800	1400	4600	<11	<3100	<11	<11	5600
Fluoranthene	(ug/kg)	160000	<100	140000	<11	<42	37000	36000	120000	33	12000	<11	51	170000
Fluorene	(ug/kg)	120000	<120	120000	<11	<42	13000	48000	120000	22	15000	<11	44	200000
Indeno(1,2,3-cd)pyrene	(ug/kg)	24000	<120	17000	<11	<42	21000	4700	15000	<11	<3400	<11	<11	17000
Naphthalene	(ug/kg)	920000	<150	680000	26	<42	7700	230000	330000	160	110000	160	180	2200000
Phenanthrene	(ug/kg)	350000	<110	270000	<11	<42	18000	120000	320000	72	39000	20	130	610000
Pyrene	(ug/kg)	160000	<110	110000	<11	<42	60000	54000	190000	51	20000	11	78	240000

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-13
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT		B-506	B-507	B-507	B-508	B-508	B-509	B-509	B-510	B-510	B-512	B-512	B-513
		B-506-28	B-507-19	B-507-28	B-508-11	B-508-28	B-509-18	B-509-28	B-510-12	B-510-28	B-512-11	B-512-24	B-513-12
	UNITS/	7/22/2004	7/21/2004	7/21/2004	7/19/2004	7/19/2004	7/21/2004	7/21/2004	7/12/2004	7/12/2004	7/12/2004	7/12/2004	7/12/2004
CONSTITUENT	DEPTH	27'-28'	18'-19'	27'-28'	10'-11'	27'-28'	17'-18'	27'-28'	11'-12'	27'-28'	10'-11'	23'-24'	11'-12'
Benzene	(ug/kg)	2.3	659000	6.1	2580	1.4	6250	0.7	1.3	1	0.9	1.2	1.8
Ethylbenzene	(ug/kg)	1.3	141000	3.4	37100	1	11400	<0.8	<0.8	<0.8	<0.9	<0.8	1.5
Toluene	(ug/kg)	3.6	1540000	14.3	220	1.7	550	2	1.8	1.2	1.1	1.2	3.7
Xylene (total)	(ug/kg)	4	1300000	9.1	19000	1.7	6630	2.7	1	1.4	1.8	1.2	3.5
Acenaphthene	(ug/kg)	<130	120000		48000	<11	86	22	<10	<10	180	<10	<130
Acenaphthylene	(ug/kg)	<140	700000		8100	<11	260	110	<10	10	<58	<10	<140
Anthracene	(ug/kg)	<120	410000		24000	<11	91	98	<10	<10	83	<10	<120
Benzo(a)anthracene	(ug/kg)	<100	260000		13000	<11	66	72	<10	<10	<58	<10	<110
Benzo(a)pyrene	(ug/kg)	<96	240000		13000	<11	74	79	<10	<10	<58	<10	<97
Benzo(b)fluoranthene	(ug/kg)	<98	170000		11000	<11	53	58	<10	<10	<58	<10	<99
Benzo(ghi)perylene	(ug/kg)	<120	80000		4900	<11	36	39	<10	<10	<58	<10	<120
Benzo(k)fluoranthene	(ug/kg)	<100	70000		3300	<11	16	17	<10	<10	<58	<10	<100
Chrysene	(ug/kg)	<110	240000		12000	<11	66	72	<10	<10	<58	<10	<110
Dibenzo(a,h)anthracene	(ug/kg)	<110	<15000		<2500	<11	<11	<11	<10	<10	<58	<10	<110
Fluoranthene	(ug/kg)	<100	480000		27000	<11	120	140	<10	<10	66	<10	<110
Fluorene	(ug/kg)	<120	550000		35000	<11	110	90	<10	<10	164	<10	<130
Indeno(1,2,3-cd)pyrene	(ug/kg)	<120	64000		4300	<11	27	28	<10	<10	<58	<10	<120
Naphthalene	(ug/kg)	<150	4600000		190000	30	7900	470	<10	<10	104	<10	<150
Phenanthrene	(ug/kg)	<110	940000		78000	19	300	310	<10	<10	317	<10	<110
Pyrene	(ug/kg)	<110	710000		39000	<11	190	220	<10	<10	87	<10	<110

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-13
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS/	B-513	B-514	B-514	B-515	B-515	B-516	B-516	B-550	B-550	B-550	B-551	B-551	B-553
		B-513-24	B-514-17	B-514-28	B-515-19	B-515-32	B-516-14	B-516-24	B-550-11	B-550-16	B-550-28	B-551-16	B-551-28	B-553-15
		7/12/2004	7/22/2004	7/22/2004	7/16/2004	7/16/2004	7/22/2004	7/22/2004	7/20/2004	7/20/2004	7/20/2004	7/15/2004	7/15/2004	7/14/2004
CONSTITUENT	DEPTH	23'-24'	16'-17'	27'-28'	18'-19'	31'-32'	13'-14'	23'-24'	10'-11'	15'-16'	27'-28'	15'-16'	27'-28'	14'-15'
Benzene	(ug/kg)	1	333000	0.8	29300	2	5450	0.7	1240	5810	1.1	14.8	2.6	3030
Ethylbenzene	(ug/kg)	<0.8	797000	0.9	5730	1.4	11400	<0.8	4020	1440	<0.8	42	3.3	10100
Toluene	(ug/kg)	1	266000	1.4	35100	2.2	1180	1.1	150	798	1.8	73.6	3.4	16100
Xylene (total)	(ug/kg)	1	721000	1.8	27600	2.4	25300	1.5	1930	1430	1.4	128	5.6	37300
Acenaphthene	(ug/kg)	<31	1500000	<11	3000	<120	1900	<11	36000	50	<11	13	38	16000
Acenaphthylene	(ug/kg)	<31	400000	<11	26000	<140	2800	<11	4700	20	<11	80	<11	36000
Anthracene	(ug/kg)	<31	600000	<11	11000	<120	6000	<11	18000	54	<11	21	37	78000
Benzo(a)anthracene	(ug/kg)	<31	250000	<11	5800	<100	3000	<11	6700	40	<11	27	32	51000
Benzo(a)pyrene	(ug/kg)	<31	290000	<11	6500	<93	3600	<11	7500	34	<11	23	29	53000
Benzo(b)fluoranthene	(ug/kg)	<31	200000	<11	4500	<95	2500	<11	4900	32	<11	20	27	56000
Benzo(ghi)perylene	(ug/kg)	<31	100000	<11	2100	<120	1200	<11	2000	11	<11	<11	13	12000
Benzo(k)fluoranthene	(ug/kg)	<31	59000	<11	1600	<100	850	<11	1400	<11	<11	<11	<11	20000
Chrysene	(ug/kg)	<31	260000	<11	5900	<110	2800	<11	6500	40	<11	26	31	47000
Dibenzo(a,h)anthracene	(ug/kg)	<31	26000	<11	570	<100	400	<11	610	<11	<11	<11	<11	4000
Fluoranthene	(ug/kg)	<31	660000	<11	13000	<100	7300	<11	16000	77	<11	40	58	130000
Fluorene	(ug/kg)	<31	840000	<11	16000	<120	6800	<11	24000	50	<11	19	36	65000
Indeno(1,2,3-cd)pyrene	(ug/kg)	<31	84000	<11	1900	<110	1100	<11	1800	<11	<11	<11	<11	14000
Naphthalene	(ug/kg)	<31	7700000	85	86000	<150	130000	57	35000	260	61	1500	82	520000
Phenanthrene	(ug/kg)	<31	2400000	<11	38000	<100	18000	18	49000	170	21	66	120	220000
Pyrene	(ug/kg)	<31	1000000	<11	20000	<100	9500	12	20000	100	<11	58	76	140000

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-13
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT CONSTITUENT	UNITS/ DEPTH	B-553 B-553-24 7/14/2004 23'-24'	B-553 B-553-32 7/14/2004 31'-32'	B-554 B-554-18 7/15/2004 17'-18'	B-554 B-554-32 7/15/2004 31'-32'	B-556 B-556-20 7/20/2004 19'-20'	B-556 B-556-28 7/20/2004 27'-28'	B-557 B-557-12 7/20/2004 11'-12'	B-557 B-557-24 7/20/2004 23'-24'	B-558 B-558-12 7/19/2004 11'-12'	B-558 B-558-18 7/19/2004 17'-18'	B-558 B-558-28 7/19/2004 27'-28'	B-559 B-559-19 7/19/2004 18'-19'	B-559 B-559-28 7/19/2004 27'-28'
Benzene	(ug/kg)	97300	3.5	5620	3.7	3350	2.1	30.8	0.9	9.5	90.5	1.6	1.4	0.9
Ethylbenzene	(ug/kg)	32900	1.5	9020	4.8	4510	2.3	1030	<0.9	5	20.9	1	0.8	<0.7
Toluene	(ug/kg)	164000	4.5	7780	9.5	10400	5	9.9	1.1	2.5	71.3	2.2	2.1	1.3
Xylene (total)	(ug/kg)	155000	3.6	13000	17.8	13900	4.6	532	1.2	52.1	82.1	2.8	2.2	1.3
Acenaphthene	(ug/kg)	100000	<130	99000	<11	12000	<120	6200	23	820	42	12	<11	25
Acenaphthylene	(ug/kg)	660000	<140	230000	<11	52000	<140	1500	<11	320	400	<10	<11	29
Anthracene	(ug/kg)	370000	<120	170000	<11	28000	<120	4200	23	190	19	<10	<11	<11
Benzo(a)anthracene	(ug/kg)	190000	<100	78000	<11	13000	<100	2300	17	140	17	<10	<11	<11
Benzo(a)pyrene	(ug/kg)	190000	<95	86000	<11	17000	<93	1900	14	130	15	<10	<11	<11
Benzo(b)fluoranthene	(ug/kg)	150000	<97	74000	<11	11000	<96	1600	12	100	<11	<10	<11	<11
Benzo(ghi)perylene	(ug/kg)	58000	<120	13000	<11	3000	<120	500	<11	47	<11	<10	<11	<11
Benzo(k)fluoranthene	(ug/kg)	49000	<100	26000	<11	3300	<100	450	<11	32	<11	<10	<11	<11
Chrysene	(ug/kg)	200000	<110	79000	<11	14000	<110	2100	16	140	17	<10	<11	<11
Dibenzo(a,h)anthracene	(ug/kg)	17000	<100	<5100	<11	960	<100	<240	<11	15	<11	<10	<11	<11
Fluoranthene	(ug/kg)	420000	<100	170000	<11	30000	<100	4200	27	430	29	15	<11	<11
Fluorene	(ug/kg)	560000	<120	240000	<11	31000	<120	5300	20	320	62	<10	<11	<11
Indeno(1,2,3-cd)pyrene	(ug/kg)	52000	<110	14000	<11	2800	<110	410	<11	39	<11	<10	<11	<11
Naphthalene	(ug/kg)	2600000	<150	1100000	57	240000	<150	450	53	28	2500	31	13	16
Phenanthrene	(ug/kg)	980000	<110	590000	25	90000	<100	12000	70	2100	69	33	<11	<11
Pyrene	(ug/kg)	590000	<110	240000	11	47000	<100	6400	40	630	44	22	<11	<11

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-13
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS/	B-560	B-560	B-560	B-561	B-561	B-561	B-562	B-562	UTB-01	UTB-01	UTB-03	UTB-03	UTB-10
CONSTITUENT		B-560-13	B-560-20	B-560-28	B-561-13	B-561-19	B-561-32	B-562-14	B-562-28	UTB-01-01	UTB-01-02	UTB-03-01	UTB-03-02	UTB-10-02
		7/16/2004	7/16/2004	7/16/2004	7/15/2004	7/15/2004	7/15/2004	7/15/2004	7/15/2004	12/4/1990	12/4/1990	11/29/1990	11/29/1990	11/28/1990
	DEPTH	12'-13'	19'-20'	27'-28'	12'-13'	18'-19'	31'-32'	13'-14'	27'-28'	21'-23'	27'-28'	11'-3.5'	18.5'-23.5'	14'-19'
Benzene	(ug/kg)	86.8	10.4	2.3	204	3.3	1.5	6260	2	680	<310	<310	<310	<310
Ethylbenzene	(ug/kg)	18600	2.1	2.2	1600	3.9	<0.8	58500	1.1	5600	<310	<310	<310	<310
Toluene	(ug/kg)	150	6.1	2.8	<86.6	2.8	1.7	499	4.1	1200	<310	450	<310	<310
Xylene (total)	(ug/kg)	19100	4.5	3.9	2060	5.6	1.7	54300	3.6	6300	<310	<310	<310	<310
Acenaphthene	(ug/kg)	72000	14	65	27000	20	<11	93000	14	78000	<330	940	<330	<330
Acenaphthylene	(ug/kg)	6300	<11	11	3300	<11	<11	12000	<11	34000	<330	390	<330	<330
Anthracene	(ug/kg)	37000	14	65	11000	16	<11	52000	<11	56000	<330	<330	<330	<330
Benzo(a)anthracene	(ug/kg)	17000	19	68	5300	12	<11	26000	<11	30000	<330	<330	<330	<330
Benzo(a)pyrene	(ug/kg)	22000	18	55	5500	<11	<11	22000	<11	24000	<330	<330	<330	<330
Benzo(b)fluoranthene	(ug/kg)	16000	15	51	3900	<11	<11	18000	<11	20000	<330	<330	<330	<330
Benzo(ghi)perylene	(ug/kg)	4800	<11	24	1500	<11	<11	6200	<11	<19000	<330	<330	<330	<330
Benzo(k)fluoranthene	(ug/kg)	5100	<11	12	1200	<11	<11	6000	<11	<19000	<330	<6600	<330	<330
Chrysene	(ug/kg)	18000	19	48	5900	13	<11	26000	<11	34000	<330	<330	<330	<330
Dibenzo(a,h)anthracene	(ug/kg)	1300	<11	<11	430	<11	<11	<3000	<11	<19000	<330	<330	<330	<330
Fluoranthene	(ug/kg)	41000	29	91	9400	20	<11	54000	12	60000	<330	<330	<330	<330
Fluorene	(ug/kg)	44000	<11	59	15000	18	<11	66000	<11	70000	<330	530	<330	<330
Indeno(1,2,3-cd)pyrene	(ug/kg)	4400	<11	16	1300	<11	<11	5200	<11	<19000	<330	<330	<330	<330
Naphthalene	(ug/kg)	290000	57	200	29000	110	<11	320000	41	320000	<330	<330	<330	<330
Phenanthrene	(ug/kg)	120000	50	200	37000	51	<11	170000	37	160000	<330	1200	<330	<330
Pyrene	(ug/kg)	63000	44	140	14000	29	<11	78000	19	74000	<330	<330	<330	<330

Notes:

ug/kg	Micrograms per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-13
TIER 1 COMPARISON - BTEX AND PAH RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

		UTB-11	UTB-14	UTB-15	UTB-16	UTB-18	UTB-20	UTB-21	UTB-22	UTB-23	UTB-24	UTB-25	UTB-26	UTB-27
CONSTITUENT		UTB-11-02	UTB-14-02	UTB-15-S02	UTB-16-02	UTB-18-02	UTB-20-S01	UTB-21-S02	UTB-22-S02	UTB-23-S02	UTB-24-S02	UTB-25-S02	UTB-26-S02	UTB-27-S02
	UNITS/	12/3/1990	12/6/1990	12/13/1991	12/6/1990	12/7/1990	12/11/1991	12/12/1991	12/12/1991	12/14/1991	12/15/1991	12/14/1991	12/15/1991	12/16/1991
CONSTITUENT	DEPTH	21'-22'	32'-33'	33'-35'	16.5'-18'	17'-18'	17'-18'	20'-23'	20'-23'	26'-28'	21'-23'	26'-28'	21'-23'	21'-23'
Benzene	(ug/kg)	<310	<310	<310	<310	<310	<310	<310	<310	730	610	<310	<310	2600
Ethylbenzene	(ug/kg)	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310
Toluene	(ug/kg)	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310
Xylene (total)	(ug/kg)	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310	<310
Acenaphthene	(ug/kg)	<330	<330	2700	<330	<490	<5	130	<5	28	84	34	<5	<11
Acenaphthylene	(ug/kg)	<330	<330	<8	<330	<490	<8	<8	<8	<8	47	<8	<8	18
Anthracene	(ug/kg)	<330	<330	120	<330	<490	<0.7	<0.7	<0.7	16	74	23	2	<1.4
Benzo(a)anthracene	(ug/kg)	<330	<330	110	<330	<490	<43	<4.3	<4.3	35	100	<4.3	<4.3	<29
Benzo(a)pyrene	(ug/kg)	<330	<330	290	<330	520	<7.7	<7.7	<7.7	120	200	270	<7.7	<20
Benzo(b)fluoranthene	(ug/kg)	<330	<330	<1	<330	850	<1	<1	<1	<1	<1	<1	<1	<1.9
Benzo(ghi)perylene	(ug/kg)	<330	<330	65	<330	<490	<4.7	<4.7	<4.7	<4.7	150	47	<4.7	<9.3
Benzo(k)fluoranthene	(ug/kg)	<330	<330	<0.4	<330	<490	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.9
Chrysene	(ug/kg)	<330	<330	170	<330	430	<1	<1	<1	<35	73	<1	22	8
Dibenzo(a,h)anthracene	(ug/kg)	<330	<330	<2.8	<330	<490	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	<5.7
Fluoranthene	(ug/kg)	<330	<330	500	<330	400	<0.7	<0.7	<0.7	160	340	220	<0.7	<1.4
Fluorene	(ug/kg)	<330	<330	170	<330	<490	<0.6	<0.6	<0.6	<0.6	89	590	<0.6	10
Indeno(1,2,3-cd)pyrene	(ug/kg)	<330	<330	55	<330	<490	<1	<1	<1	<1	63	<1	<1	<1.9
Naphthalene	(ug/kg)	<330	<330	1300	<330	<490	<5	70	<330	130	460	350	15	91
Phenanthrene	(ug/kg)	<330	<330	390	<330	<490	14	47	140	77	270	97	22	30
Pyrene	(ug/kg)	<330	<330	400	<330	350	<2.5	<2.5	<2.5	110	350	190	220	180

Notes:
- ug/kg — Micrograms per kilogram
- (1) — Provisional remediation objective provided by IEPA
- ----- — No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 — Not detected at the level identified
- (shaded) — Analytical result exceeds one or more Tier 1 RO

TABLE 5-14
TIER 1 COMPARISON VOC RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	B-501 B-501-24 7/13/2004 23'-24'	B-505 B-505-11 7/14/2004 10'-11'	B-506 B-506-28 7/22/2004 27'-28'	B-507 B-507-19 7/21/2004 18'-19'	B-513 B-513-12 7/12/2004 11'-12'	B-515 B-515-32 7/16/2004 31'-32'	B-553 B-553-32 7/14/2004 31'-32'	B-556 B-556-28 7/20/2004 27'-28'	B-557 B-557-12 7/20/2004 11'-12'	B-562 B-562-14 7/15/2004 13'-14'
1,1,1-Trichloroethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
1,1,2,2-Tetrachloroethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
1,1,2-Trichloroethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
1,1-Dichloroethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
1,1-Dichloroethylene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
1,2-Dichloroethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
1,2-Dichloropropane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
2-Hexanone	<7.4	<2110	<9.2	<10400	<8.1	<7.2	<7.3	<7.8	<18.0	<1660
Acetone	8.3	<2110	57.5	20000	19	32	37.1	31	67	<1660
Bromodichloromethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Bromoform	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Carbon Disulfide	<2.2	<633	<2.8	<3130	<2.4	<2.2	<2.2	<2.3	<5.4	<499
Carbon tetrachloride	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Chlorobenzene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Chloroethane	<1.5	<422	<1.8	<2090	<1.6	<1.4	<1.4	<1.6	<3.6	<333
Chloroform	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
cis-1,2-Dichloroethylene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
cis-1,3-Dichloropropene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Dibromochloromethane	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Ethene, 1,2-dichloro-, (E)-	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Methyl bromide	<1.5	<422	<1.8	<2090	<1.6	<1.4	<1.4	<1.6	<3.6	<333
Methyl chloride	<1.5	<422	<1.8	<2090	<1.6	<1.4	<1.4	<1.6	<3.6	<333
Methyl ethyl ketone	<7.4	<2110	<9.2	<10400	<8.1	<7.2	<7.3	<7.8	<18.0	<1660
Methyl isobutyl ketone (MIBK)	<7.4	<2110	<9.2	<10400	<8.1	<7.2	<7.3	<7.8	<18.0	<1660
Methyl tert-butyl ether	<0.4	<105	<0.5	<522	<0.4	<0.4	<0.4	<0.4	<0.9	<83.1
Methylene chloride	<0.7	<211	1.6	1300	1	<0.7	0.8	1.1	<1.8	<166
Styrene	<0.7	<211	<0.9	938000	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Tetrachloroethylene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
trans-1,3-Dichloropropene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Trichloroethylene	<0.7	<211	<0.9	<1040	<0.8	<0.7	<0.7	<0.8	<1.8	<166
Vinyl chloride	<0.4	<105	<0.5	<522	<0.4	<0.4	<0.4	<0.4	<0.9	<83.1

Notes:

Notes:	ug/kg	Micrograms per kilogram
	(1)	Provisional remediation objective provided by IEPA
	-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
	<12	Not detected at the level identified
	(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-15
TIER 1 COMPARISON SVOC RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	Tier 1 Remediation Objectives Soil *Ingestion* Residential	Commercial	Construction	*Inhalation* Residential	Commercial	Construction	Soil Component to Groundwater (Class I)	UNITS/DEPTH	B-501 B501-15 (14-15) 7/13/2004 15	B-501 B-501-24 (23-24) 7/13/2004 23'-24'	B-505 B-505-11 (10-11) 7/14/2004 10'-11'	B-506 B-506-28 (27-28) 7/22/2004 27'-28'	B-507 B-507-19 (18-19) 7/21/2004 18'-19'	B-513 B-513-12 (11-12) 7/12/2004 11'-12'
1,2,4-Trichlorobenzene	780	20,000	35	3,200	3,200	920	5	(mg/kg)	---	<0.148	<4.29	<0.147	<20.6	<0.148
2,4,5-Trichlorophenol	7,800	200,000	200,000	---	---	---	270	(mg/kg)	---	<0.105	<3.07	<0.105	<14.7	<0.106
2,4,6-Trichlorophenol	58	520	11,000	200	390	540	0.2	(mg/kg)	---	<0.140	<4.07	<0.139	<19.5	<0.140
2,4-Dichlorophenol	230	6,100	610	---	---	---	1	(mg/kg)	---	<0.134	<3.91	<0.134	<18.8	<0.135
2,4-Dimethylphenol	1,600	41,000	41,000	---	---	---	9	(mg/kg)	---	<0.140	<4.10	<0.140	<20.0	<0.140
2,4-Dinitrophenol	160	4,100	410	---	---	---	0.2	(mg/kg)	---	<0.119	<3.45	<0.118	<16.6	<0.119
2,4-Dinitrotoluene	0.9	---	---	---	---	---	0.0008	(mg/kg)	---	<0.115	<3.36	<0.115	<16.1	<0.116
2,6-Dinitrotoluene	0.9	8.4	180.0	---	---	---	0.0007	(mg/kg)	---	<0.120	<3.49	<0.120	<16.7	<0.120
2-Chloronaphthalene	6,300	160,000	160,000	---	---	---	240	(mg/kg)	---	<0.133	<3.87	<0.133	<18.6	<0.134
2-Chlorophenol	390	10,000	10,000	53,000	53,000	53,000	4	(mg/kg)	---	<0.141	<4.10	<0.141	<19.7	<0.141
2-Methylnaphthalene	2,300	61,000	61,000	---	---	---	29	(mg/kg)	---	<0.130	8	<0.130	1400	<0.130
3,3-Dichlorobenzidine	1	13	280	---	---	---	0.007	(mg/kg)	---	<0.095	<2.78	<0.095	<13.3	<0.096
4,6-Dinitro-o-cresol	---	---	---	---	---	---	---	(mg/kg)	---	<0.120	<3.49	<0.120	<16.7	<0.120
4-Bromophenyl phenyl ether	---	---	---	---	---	---	---	(mg/kg)	---	<0.102	<2.97	<0.102	<14.3	<0.102
4-Chlorophenyl phenyl ether	---	---	---	---	---	---	---	(mg/kg)	---	<0.110	<3.20	<0.110	<15.3	<0.110
Bis(2-chloroethoxy)methane	---	---	---	---	---	---	---	(mg/kg)	---	<0.130	<3.78	<0.129	<18.1	<0.130
Bis(2-chloroethyl)ether	0.6	5.0	75.0	0.2	0.5	0.7	0.0004	(mg/kg)	---	<0.157	<4.58	<0.157	<22.0	<0.158
Bis(2-chloroisopropyl)ether	3,100	82,000	8,200	1,300	1,300	1,300	2.4	(mg/kg)	---	<0.126	<3.68	<0.126	<17.7	<0.127
Bis(2-ethylhexyl)phthalate (BEHP)	46	410	4,100	31,000	31,000	31,000	3,600	(mg/kg)	---	0.836	<3.78	<0.129	<18.1	<0.130
Butyl benzyl phthalate	410,000	410,000	410,000	930	930	930	930	(mg/kg)	---	<0.112	<3.26	<0.112	<15.7	<0.112
Carbazole	32	290	6,200	---	---	---	1	(mg/kg)	---	<0.140	<3.90	<0.140	<19.0	<0.140
Dibenzofuran	310	8,200	820	---	---	---	15	(mg/kg)	---	<0.140	<4.10	<0.140	860	<0.140
Diethyl phthalate	63,000	1,000,000	1,000,000	2,000	2,000	2,000	470	(mg/kg)	---	<0.106	<3.10	<0.106	<14.9	<0.107
Dimethyl phthalate	---	---	---	---	---	---	---	(mg/kg)	---	<0.101	<2.94	<0.101	<14.1	<0.101
Di-n-butyl phthalate	7,800	200,000	200,000	2,300	2,300	2,300	0.0004	(mg/kg)	---	<0.114	<3.32	<0.114	<16.0	<0.115
Di-n-octyl phthalate	1,600	41,000	4,100	10,000	10,000	10,000	10,000	(mg/kg)	---	<0.115	<3.36	<0.115	<16.1	<0.116
Hexachlorobenzene	0.4	4.0	78.0	1	1.8	2.6	2	(mg/kg)	---	<0.109	<3.16	<0.108	<15.2	<0.109
Hexachlorobutadiene	16	410	41	1,000	1,000	180	2.9	(mg/kg)	---	<0.172	<5.00	<0.172	<24.0	<0.173
Hexachlorocyclopentadiene	550	14,000	14,000	10	16	1.1	400	(mg/kg)	---	<0.113	<3.29	<0.113	<15.8	<0.114
Hexachloroethane	78	2,000	2,000	---	---	---	0.5	(mg/kg)	---	<0.185	<5.39	<0.185	<25.9	<0.186
Isophorone	15,600	410,000	410,000	4,600	4,600	4,600	8	(mg/kg)	---	<0.131	<3.81	<0.131	<18.3	<0.131
m & p-Cresol(s)	---	---	---	---	---	---	---	(mg/kg)	---	<0.140	<4.07	<0.139	<19.5	<0.140
m-Dichlorobenzene	---	---	---	---	---	---	---	(mg/kg)	---	<0.186	<5.42	<0.186	<26.0	<0.187
m-Nitroaniline	---	---	---	---	---	---	---	(mg/kg)	---	<0.091	<2.65	<0.091	<12.7	<0.091
Nitrobenzene	39	1,000	1,000	92	140	9.4	0.1	(mg/kg)	---	<0.139	<4.03	<0.138	<19.4	<0.139
N-Nitrosodiphenylamine	130	1,200	25,000	---	---	---	---	(mg/kg)	---	<0.102	<2.97	<0.102	<14.3	<0.102
N-Nitrosodipropylamine	---	---	---	---	---	---	---	(mg/kg)	---	<0.122	<3.55	<0.122	<17.1	<0.122
o-Cresol	3,900	100,000	100,000	---	---	---	15	(mg/kg)	---	<0.130	<3.80	<0.130	<18.0	<0.130
o-Dichlorobenzene	7,000	180,000	560	560	18,000	310	17	(mg/kg)	---	<0.176	<5.13	<0.176	<24.6	<0.177
o-Nitroaniline	---	---	---	---	---	---	---	(mg/kg)	---	<0.101	<2.94	<0.101	<14.1	<0.101
o-Nitrophenol	---	---	---	---	---	---	---	(mg/kg)	---	<0.124	<3.62	<0.124	<17.4	<0.125
p-Chloroaniline	310	8,200	---	---	820	---	0.7	(mg/kg)	---	<0.134	<3.91	<0.134	<18.8	<0.135
p-Chloro-m-cresol	---	---	---	---	---	---	---	(mg/kg)	---	<0.122	<3.55	<0.122	<17.1	<0.122
PCP	3	24	52	---	---	---	0.03	(mg/kg)	---	<0.732	<21.3	<0.730	<102	<0.735
p-Dichlorobenzene	---	---	17,000	11,000	---	340	2	(mg/kg)	---	<0.176	<5.13	<0.176	<24.6	<0.177
Phenol	47,000	1,000,000	120,000	---	---	---	100	(mg/kg)	---	<0.130	<3.70	<0.130	<18.0	<0.130
p-Nitroaniline	---	---	---	---	---	---	---	(mg/kg)	---	<0.101	<2.94	<0.101	<14.1	<0.101
p-Nitrophenol	---	---	---	---	---	---	---	(mg/kg)	---	<0.109	<3.16	<0.108	<15.2	<0.109

Notes:
- mg/kg Milligrams per kilogram
- (1) Provisional remediation objective provided by IEPA
- ---- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 Not detected at the level identified
- (shaded) Analytical result exceeds one or more Tier 1 RO

- ug/kg Micrograms per kilogram

- (1) Provisional remediation objective provided by IEPA
- ---- No remediation objective has been established by the IEPA for this constitiuent for this exposure route
- <12 Not detected at the level identified
- (shaded) Analytical result exceeds one or more Tier 1 RO

TABLE 5-15
TIER 1 COMPARISON SVOC RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	Tier 1 Remediation Objectives Soil *Ingestion* Residential	Commercial	Construction	*Inhalation* Residential	Commercial	Construction	Soil Component to Groundwater (Class I)	UNITS/DEPTH	B-515 B-515-32 (31-32) 7/16/2004 31'-32'	B-553 B-553-32 (31-32) 7/14/2004 31'-32'	B-556 B-556-28 (27-28) 7/20/2004 27'-28'	B-557 B-557-12 (11-12) 7/20/2004 11'-12'	B-562 B-562-14 (13-14) 7/15/2004 13'-14'
1,2,4-Trichlorobenzene	780	20,000	35	3,200	3,200	920	5	(mg/kg)	<0.142	<0.145	<0.143	<0.329	<4.13
2,4,5-Trichlorophenol	7,800	200,000	200,000	---	---	---	270	(mg/kg)	<0.101	<0.104	<0.102	<0.235	<2.95
2,4,6-Trichlorophenol	58	520	11,000	200	390	540	0.2	(mg/kg)	<0.134	<0.137	<0.135	<0.311	<3.91
2,4-Dichlorophenol	230	6,100	610	---	---	---	1	(mg/kg)	<0.129	<0.132	<0.130	<0.299	<3.75
2,4-Dimethylphenol	1,600	41,000	41,000	---	---	---	9	(mg/kg)	<0.140	<0.140	<0.140	<0.310	<3.90
2,4-Dinitrophenol	160	4,100	410	---	---	---	0.2	(mg/kg)	<0.114	<0.117	<0.115	<0.264	<3.32
2,4-Dinitrotoluene	0.9	---	---	---	---	---	0.0008	(mg/kg)	<0.111	<0.113	<0.112	<0.257	<3.23
2,6-Dinitrotoluene	0.9	8.4	180.0	---	---	---	0.0007	(mg/kg)	<0.115	<0.118	<0.116	<0.267	<3.35
2-Chloronaphthalene	6,300	160,000	160,000	---	---	---	240	(mg/kg)	<0.128	<0.131	<0.129	<0.296	<3.72
2-Chlorophenol	390	10,000	10,000	53,000	53,000	53,000	4	(mg/kg)	<0.135	<0.138	<0.136	<0.314	<3.94
2-Methylnaphthalene	2,300	61,000	61,000	---	---	---	29	(mg/kg)	<0.130	<0.130	<0.130	<0.290	190
3,3-Dichlorobenzidine	1	13	280	---	---	---	0.007	(mg/kg)	<0.092	<0.094	<0.092	<0.212	<2.67
4,6-Dinitro-o-cresol	---	---	---	---	---	---	---	(mg/kg)	<0.115	<0.118	<0.116	<0.267	<3.35
4-Bromophenyl phenyl ether	---	---	---	---	---	---	---	(mg/kg)	<0.098	<0.100	<0.099	<0.227	<2.85
4-Chlorophenyl phenyl ether	---	---	---	---	---	---	---	(mg/kg)	<0.106	<0.108	<0.106	<0.245	<3.07
Bis(2-chloroethoxy)methane	---	---	---	---	---	---	---	(mg/kg)	<0.125	<0.128	<0.125	<0.289	<3.63
Bis(2-chloroethyl)ether	0.6	5.0	75.0	0.2	0.5	0.7	0.0004	(mg/kg)	<0.151	<0.155	<0.152	<0.351	<4.41
Bis(2-chloroisopropyl)ether	3,100	82,000	8,200	1,300	1,300	1,300	2.4	(mg/kg)	<0.122	<0.124	<0.122	<0.282	<3.54
Bis(2-ethylhexyl)phthalate (BEHP)	46	410	4,100	31,000	31,000	31,000	3,600	(mg/kg)	0.667	0.3	0.25	<0.289	<3.63
Butyl benzyl phthalate	410,000	410,000	410,000	930	930	930	930	(mg/kg)	<0.108	<0.110	<0.108	<0.250	<3.13
Carbazole	32	290	6,200	---	---	---	1	(mg/kg)	<0.130	<0.130	<0.130	<0.300	<3.80
Dibenzofuran	310	8,200	820	---	---	---	15	(mg/kg)	<0.130	<0.140	<0.140	0.54	6.8
Diethyl phthalate	63,000	1,000,000	1,000,000	2,000	2,000	2,000	470	(mg/kg)	<0.102	<0.105	<0.103	<0.237	<2.98
Dimethyl phthalate	---	---	---	---	---	---	---	(mg/kg)	<0.097	<0.099	<0.098	<0.225	<2.82
Di-n-butyl phthalate	7,800	200,000	200,000	2,300	2,300	2,300	0.0004	(mg/kg)	<0.110	<0.112	<0.110	<0.254	<3.20
Di-n-octyl phthalate	1,600	41,000	4,100	10,000	10,000	10,000	10,000	(mg/kg)	<0.111	<0.113	<0.112	<0.257	<3.23
Hexachlorobenzene	0.4	4.0	78.0	1	1.8	2.6	2	(mg/kg)	<0.105	<0.107	<0.105	<0.242	<3.04
Hexachlorobutadiene	16	410	41	1,000	1,000	180	2.9	(mg/kg)	<0.165	<0.169	<0.166	<0.383	<4.81
Hexachlorocyclopentadiene	550	14,000	14,000	10	16	1.1	400	(mg/kg)	<0.109	<0.111	<0.109	<0.252	<3.17
Hexachloroethane	78	2,000	2,000	---	---	---	0.5	(mg/kg)	<0.178	<0.182	<0.179	<0.413	<5.18
Isophorone	15,600	410,000	410,000	4,600	4,600	4,600	8	(mg/kg)	<0.126	<0.129	<0.127	<0.292	<3.66
m & p-Cresol(s)	---	---	---	---	---	---	---	(mg/kg)	<0.134	<0.137	<0.135	<0.311	<3.91
m-Dichlorobenzene	---	---	---	---	---	---	---	(mg/kg)	<0.179	<0.183	<0.180	<0.415	<5.21
m-Nitroaniline	---	---	---	---	---	---	---	(mg/kg)	<0.088	<0.089	<0.088	<0.203	<2.54
Nitrobenzene	39	1,000	1,000	92	140	9.4	0.1	(mg/kg)	<0.133	<0.136	<0.134	<0.309	<3.88
N-Nitrosodiphenylamine	130	1,200	25,000	---	---	---	---	(mg/kg)	<0.098	<0.100	<0.099	<0.227	<2.85
N-Nitrosodipropylamine	---	---	---	---	---	---	---	(mg/kg)	<0.117	<0.120	<0.118	<0.272	<3.41
o-Cresol	3,900	100,000	100,000	---	---	---	15	(mg/kg)	<0.130	<0.130	<0.130	<0.290	<3.70
o-Dichlorobenzene	7,000	180,000	560	560	18,000	310	17	(mg/kg)	<0.170	<0.173	<0.171	<0.393	<4.93
o-Nitroaniline	---	---	---	---	---	---	---	(mg/kg)	<0.097	<0.099	<0.098	<0.225	<2.82
o-Nitrophenol	---	---	---	---	---	---	---	(mg/kg)	<0.119	<0.122	<0.120	<0.277	<3.48
p-Chloroaniline	310	8,200	---	---	820	---	0.7	(mg/kg)	<0.129	<0.132	<0.130	<0.299	<3.75
p-Chloro-m-cresol	---	---	---	---	---	---	---	(mg/kg)	<0.117	<0.120	<0.118	<0.272	<3.41
PCP	3	24	52	---	---	---	0.03	(mg/kg)	<0.704	<0.720	<0.708	<1.63	<20.5
p-Dichlorobenzene	---	---	17,000	11,000	---	340	2	(mg/kg)	<0.170	<0.173	<0.171	<0.393	<4.93
Phenol	47,000	1,000,000	120,000	---	---	---	100	(mg/kg)	<0.120	<0.130	<0.120	<0.290	<3.60
p-Nitroaniline	---	---	---	---	---	---	---	(mg/kg)	<0.097	<0.099	<0.098	<0.225	<2.82
p-Nitrophenol	---	---	---	---	---	---	---	(mg/kg)	<0.105	<0.107	<0.105	<0.242	<3.04

Notes:

mg/kg	Milligrams per kilogram
(1)	Provisional remediation objective provided by IEPA
----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO

TABLE 5-16
TIER 1 COMPARISON - RCRA METALS AND CYANIDE RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS/DEPTH	B-501 B-501-24 7/13/2004 23'-24'	B-502 B-502-12 7/13/2004 11'-12'	B-505 B-505-11 7/14/2004 10'-11'	B-506 B-506-28 7/22/2004 27'-28'	B-507 B-507-19 7/21/2004 18'-19'	B-513 B-513-12 7/12/2004 11'-12'	B-515 B-515-32 7/16/2004 31-'32'	B-553 B-553-32 7/14/2004 31'-32'	B-556 B-556-28 7/20/2004 27'-28'	B-557 B-557-12 7/20/2004 11'-12'	B-562 B-562-14 7/15/2004 13'-14'	UTB-01 UTB-01-01 12/4/1990 21'-23'
Arsenic	(mg/kg)	3.46	7.47	10.1	4.57	<2.36	4.07	7.64	5.46	3.69	12.4	<2.50	---
Barium	(mg/kg)	14.7	52	77.2	20.1	4.88	33.1	13.3	14.6	17.2	109	18.8	---
Cadmium	(mg/kg)	0.1	0.17	0.16	<0.20	<0.19	<0.20	0.23	<0.20	<0.19	<0.20	<0.20	---
Chromium	(mg/kg)	13.6	11.8	22.3	11.5	2.49	18.2	9.04	10.1	11.4	23.3	7.18	---
Cyanide	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---	
Lead	(mg/kg)	8.07	12.3	14.9	9.98	3.2	10.9	8.93	8.62	9.94	19.1	7.92	---
Mercury	(mg/kg)	0.009	0.05	0.043	0.008	<0.012	0.006	0.007	0.009	0.008	0.009	0.007	---
Selenium	(mg/kg)	**<3.77**	**<3.85**	**<3.85**	**<4.00**	**<3.77**	**<4.00**	**<3.85**	**<4.00**	**<3.77**	**<4.00**	**<4.00**	---
Silver	(mg/kg)	<0.94	<0.96	<0.96	<1.00	<0.94	<1.00	<0.96	<1.00	<0.94	<1.00	<1.00	---

Notes:

mg/kg	Milligrams per kilogram
(1)	Provisional remediation objective provided by IEPA
-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
<12	Not detected at the level identified
(shaded)	Analytical result exceeds one or more Tier 1 RO
<0.05	Detection limit greater than RO due to dilution

TABLE 5-16
TIER 1 COMPARISON - RCRA METALS AND CYANIDE RESULTS FOR GREATER THAN 10 FT DEPTH
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS/DEPTH	UTB-03 UTB-0301 11/29/1990 11'-13'	UTB-03 UTB-03-02 11/29/1990 18.5'-23.5'	UTB-10 UTB-10-02 11/30/1990 14'-19'	UTB-15 UTB-15-S02 12/13/1991 33'-35'	UTB-20 UTB-20-S02 12/11/1991 17'-18'	UTB-21 UTB-21-S02 12/12/1991 20'-23'	UTB-22 UTB-22-S02 12/12/1991 20'-23'	UTB-23 UTB-23-S02 12/14/1991 26'-28'	UTB-24 UTB-24-S02 12/15/1991 21'-23'	UTB-25 UTB-25-S02 12/14/1991 26'-28'	UTB-26 UTB-26-S02 12/15/1991 21'-23'
Arsenic	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Barium	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Cadmium	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Chromium	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Cyanide	(mg/kg)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Lead	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Mercury	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Selenium	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---
Silver	(mg/kg)	---	---	---	---	---	---	---	---	---	---	---

Notes:		
	mg/kg	Milligrams per kilogram
	(1)	Provisional remediation objective provided by IEPA
	-----	No remediation objective has been established by the IEPA for this constitiuent for this exposure route
	<12	Not detected at the level identified
	(shaded)	Analytical result exceeds one or more Tier 1 RO
	<0.05	Detection limit greater than RO due to dilution

TABLE 5-17
ALL SOIL TPH RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	B-504 B-504-3 (2-3) 7/13/2004 3'	B-510 B-510-2 (1-2) 7/12/2004 2'	TP-503 TP-503 (3') 7/8/2004 3'	TP-504 TP-504 (3') 7/8/2004 3'	B-505 B-505-6 (5-6) 7/14/2004 6'	B-512 B-512-8 (7-8) 8'	B-513 B-513-8 (7-8) 7/12/2004 8'
Diesel	(mg/kg)	6720	50.9	21300	5410	25600	830	884
Kerosene	(mg/kg)	<663	<6.57	<1270	<227	<993	<62.3	<144
Mineral spirits	(mg/kg)	<663	<6.57	<1270	<227	<993	<62.3	<144
n-Butyl alcohol	(mg/kg)	---	<6.6	---	---	---		---
TPH (as motor oil)	(mg/kg)	13200	97.9	3430	1280	5510	75	<144
Total TPH	(mg/kg)	19920	148.8	24730	6690	31110	905	884

CONSTITUENT	UNITS	B-516 B-516-5 (4-5') 7/22/2004 5'	B-551 B-551-10 (9-10) 7/15/2004 10'	B-558 B-558-7 (6-7') 7/19/2004 7'	TP-501 TP-501 (7') 7/8/2004 7'	TP-503A TP-503A (3.5') 7/8/2004 3.5'	TP-507 TP-507 (3.5') 7/7/2004 3.5'	TP-508 TP-508 (4') 7/8/2004 4'
Diesel	(mg/kg)	5410	699	946	1880	1210	9530	23500
Kerosene	(mg/kg)	<634	<68.0	<65.5	<155	<165	<414	<1070
Mineral spirits	(mg/kg)	<634	<68.0	<65.5	<155	<165	<414	<1070
n-Butyl alcohol	(mg/kg)	---	---	---	---	---	---	---
TPH (as motor oil)	(mg/kg)	<634	139	<65.5	305	235	2980	5130
Total TPH	(mg/kg)	5410	838	946	2185	1445	12510	28630

CONSTITUENT	UNITS	B-501 B-501-15 (14-15) 7/13/2004 15'	B-503 B-503-11 (10-11) 7/13/2004 11'	B-504 B-504-21 (20-21) 7/14/2004 21'	B-506 B-506-17 (16-17) 7/22/2004 17'	B-507 B-507-19 (18-19) 7/21/2004 19'	B-508 B-508-11 (10-11) 7/19/2004 11'	B-509 B-509-18 (17-18) 7/21/2004 18'
Diesel	(mg/kg)	1050	222	8550	12900	23200	1510	<5.44
Kerosene	(mg/kg)	<141	<6.78	<539	<554	<3620	<64.7	8.58
Mineral spirits	(mg/kg)	<141	<6.78	<539	<554	<3620	<64.7	<5.44
n-Butyl alcohol	(mg/kg)	---	---	---	---	15	---	---
TPH (as motor oil)	(mg/kg)	388	87	2490	<554	<3620	<64.7	<5.44
Total TPH	(mg/kg)	1438	309	11040	12900	23215	1510	8.58

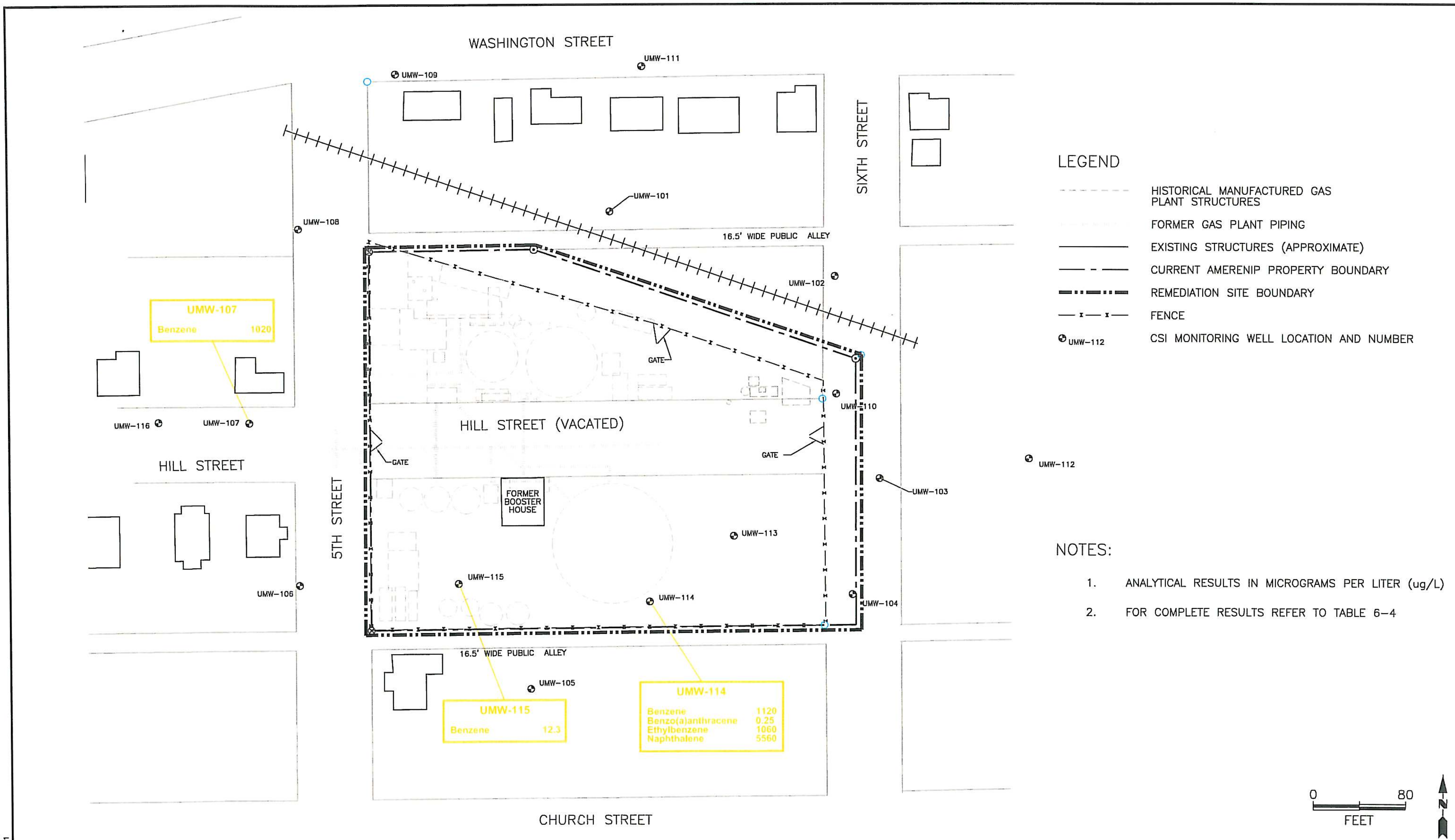
Notes:
mg/kg Milligrams per kilogram
<12 Not detected at the level identified
[shaded] Analytical result exceeds one or more Tier 1 RO
ND = TPH constituents not detected.

TABLE 5-17
ALL SOIL TPH RESULTS
CHAMPAIGN MGP SITE
CHAMPAIGN, ILLINOIS
AMERENIP

CONSTITUENT	UNITS	B-514 B-514-17 (16-17) 7/22/2004 17'	B-515 B515-19 (18-19) 7/16/2004 19'	B-550 B-550-11 (10-11) 7/20/2004 11'	B-553 B-553-24 (23-24) 7/14/2004 24'	B-554 B-554-18 (17-18) 7/15/2004 18'	B-556 B-556-20 (19-20) 7/20/2004 20'	B-557 B-557-12 (11-12) 7/20/2004 12'
Diesel	(mg/kg)	45900	811	1540	40400	5480	1010	467
Kerosene	(mg/kg)	<1690	<134	<63.9	<1320	<279	<56.8	<62.0
Mineral spirits	(mg/kg)	<1690	<134	<63.9	<1320	<279	<56.8	<62.0
n-Butyl alcohol	(mg/kg)	---	---	---	---	---	---	<6.1
TPH (as motor oil)	(mg/kg)	14800	<134	<63.9	8910	1190	<56.8	<62.0
Total TPH	(mg/kg)	60700	811	1540	49310	6670	1010	467

CONSTITUENT	UNITS	B-559 B-559-19 (18-19) 7/19/2004 19'	B-560 B-560-13 (12-13) 7/16/2004 13'	B-561 B561-10 (9-10) 7/15/2004 10'	B-562 B-562-14 (13-14) 7/15/2004 14'
Diesel	(mg/kg)	<5.44	2560	---	5190
Kerosene	(mg/kg)	<5.44	<174	---	<281
Mineral spirits	(mg/kg)	<5.44	<174	---	<281
n-Butyl alcohol	(mg/kg)	---	---	<6.1	<5.6
TPH (as motor oil)	(mg/kg)	<5.44	633	---	1030
Total TPH	(mg/kg)	ND	3193	ND	6220

Notes:
mg/kg Milligrams per kilogram
<12 Not detected at the level identified
(shaded) Analytical result exceeds one or more Tier 1 RO
ND = TPH constituents not detected.

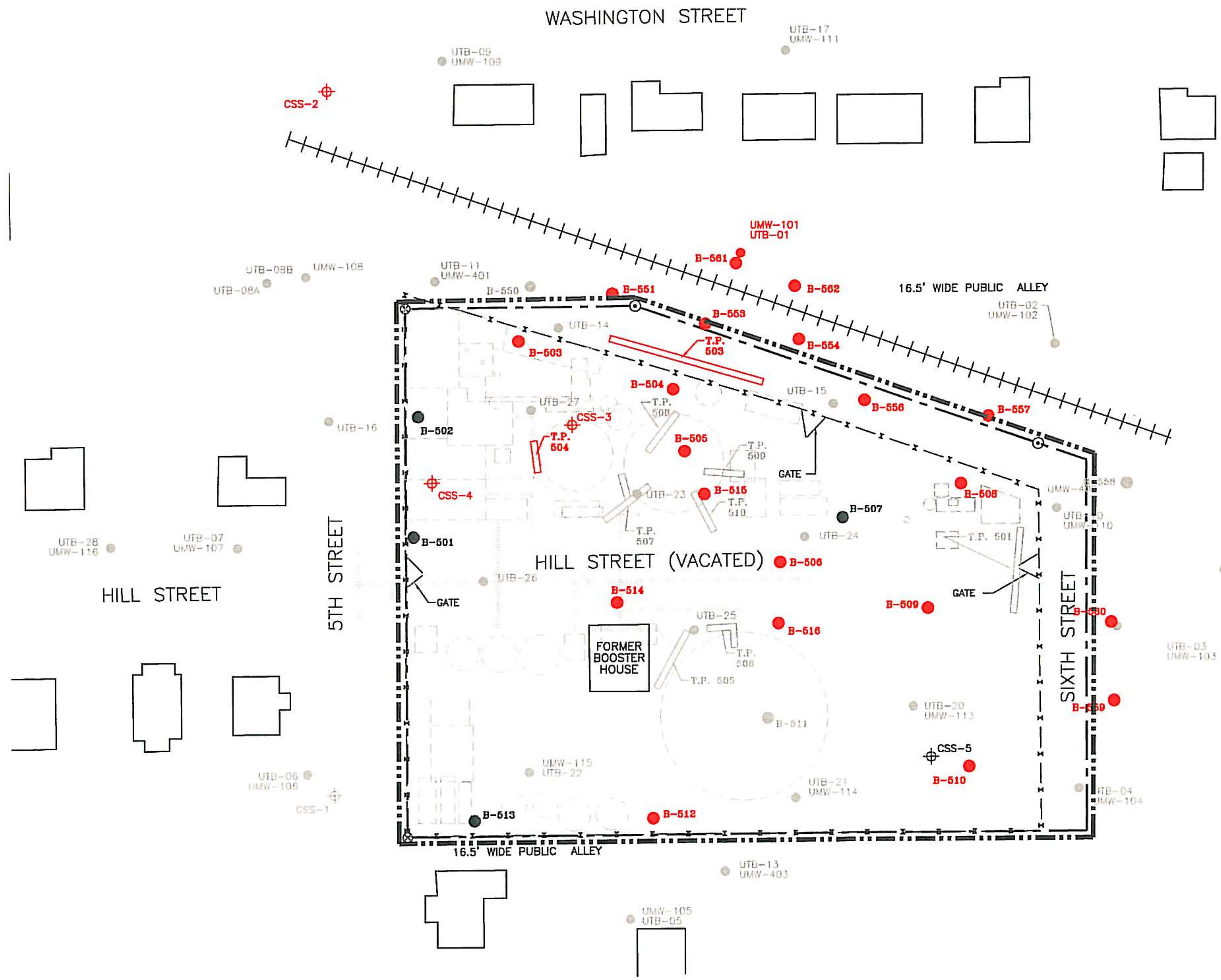


PSC

TITLE: GROUNDWATER INGESTION PATHWAY ABOVE TIER 1 REMEDIAL OBJECTIVES (2007 CSI)

DWN: TMM	DES: PTS	PROJECT NO: 62402647	AMERENIP CHAMPAIGN, ILLINOIS
CHKD:	APPD:		
DATE: 12/14/07	REV:	FIGURE 6-11	

COL. J:\624\02647B-031



LEGEND

B-557 (black dot)	NO EXCEEDANCE
B-557 (red dot)	EXCEEDANCE AT LEAST 1 PATHWAY
B-557 (grey dot)	NO DATA
- - - - - -	HISTORICAL MANUFACTURED GAS PLANT STRUCTURES
————	EXISTING STRUCTURES (APPROXIMATE)
— - —	CURRENT AMERENIP PROPERTY BOUNDARY
▬ · · ▬	REMEDIATION SITE BOUNDARY
—x—x—	FENCE

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 HAVE SERVED MULTIPLE PURPOSES DURING THE OPERATION OF THE PLANT.

SOURCE: The source for the property boundary survey is Vegrzyn, Sarver and Associates.

0 — 80 FEET

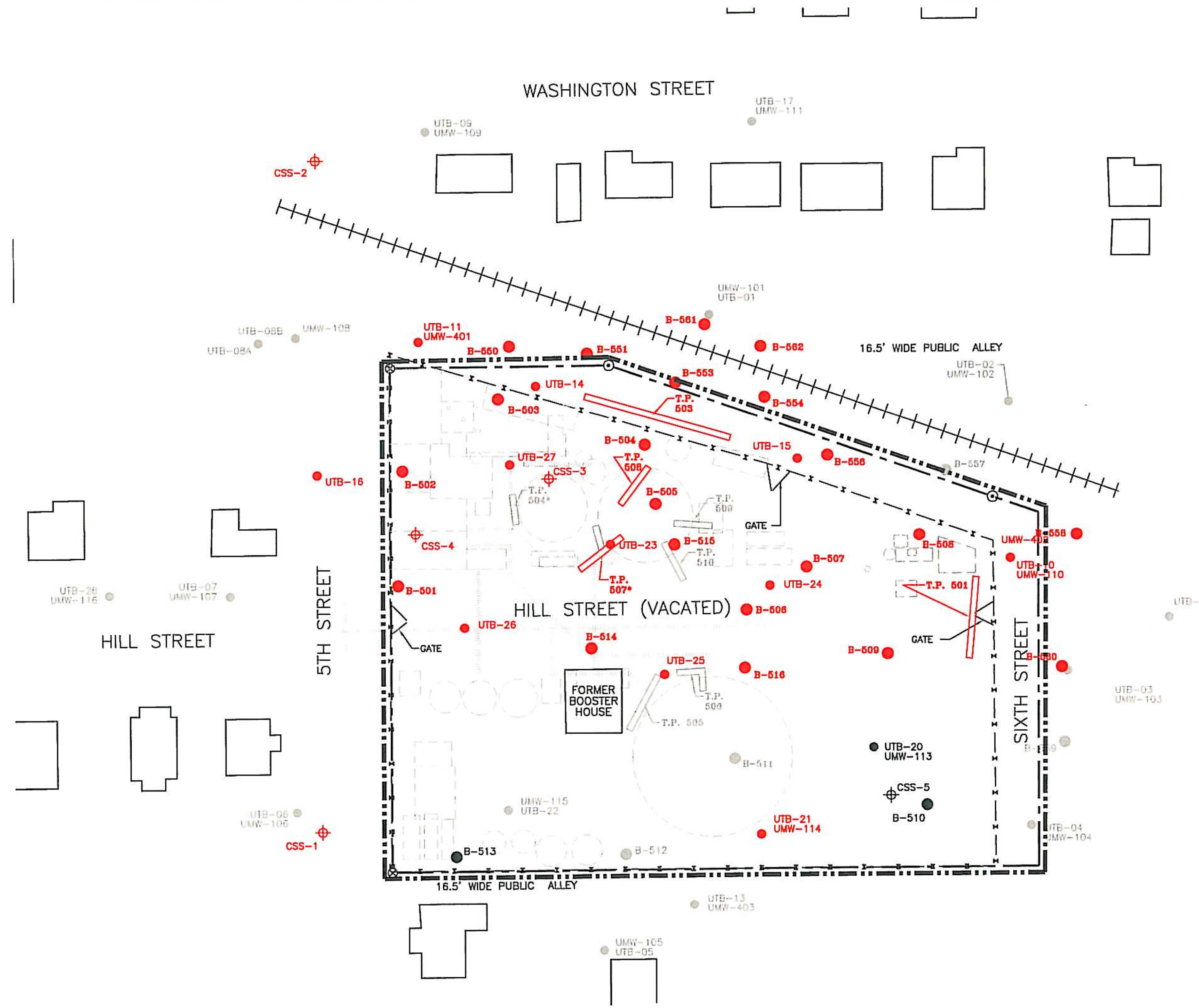
N

COL. J:\624\02647A-033

PSC

TITLE: EXCEEDANCE OF TIER 1 REMEDIATION OBJECTIVES FOR SOIL BTEX AND PAH COMPOUNDS 0-3 FOOT DEPTH INTERVAL

DWN: TMM	DES: JG	PROJECT NO: 62402647
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS
DATE: 12/14/07	REV:	FIGURE 7-1



LEGEND

- B-557 NO EXCEEDANCE
- B-557 EXCEEDANCE AT LEAST 1 PATHWAY
- B-557 NO DATA
- HISTORICAL MANUFACTURED GAS PLANT STRUCTURES
- EXISTING STRUCTURES (APPROXIMATE)
- CURRENT AMERENIP PROPERTY BOUNDARY
- REMEDIATION SITE BOUNDARY
- FENCE

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 HAVE SERVED MULTIPLE PURPOSES DURING THE OPERATION OF THE PLANT.

SOURCE: The source for the property boundary survey is Vegrzyn, Sarver and Associates.

0 80 FEET

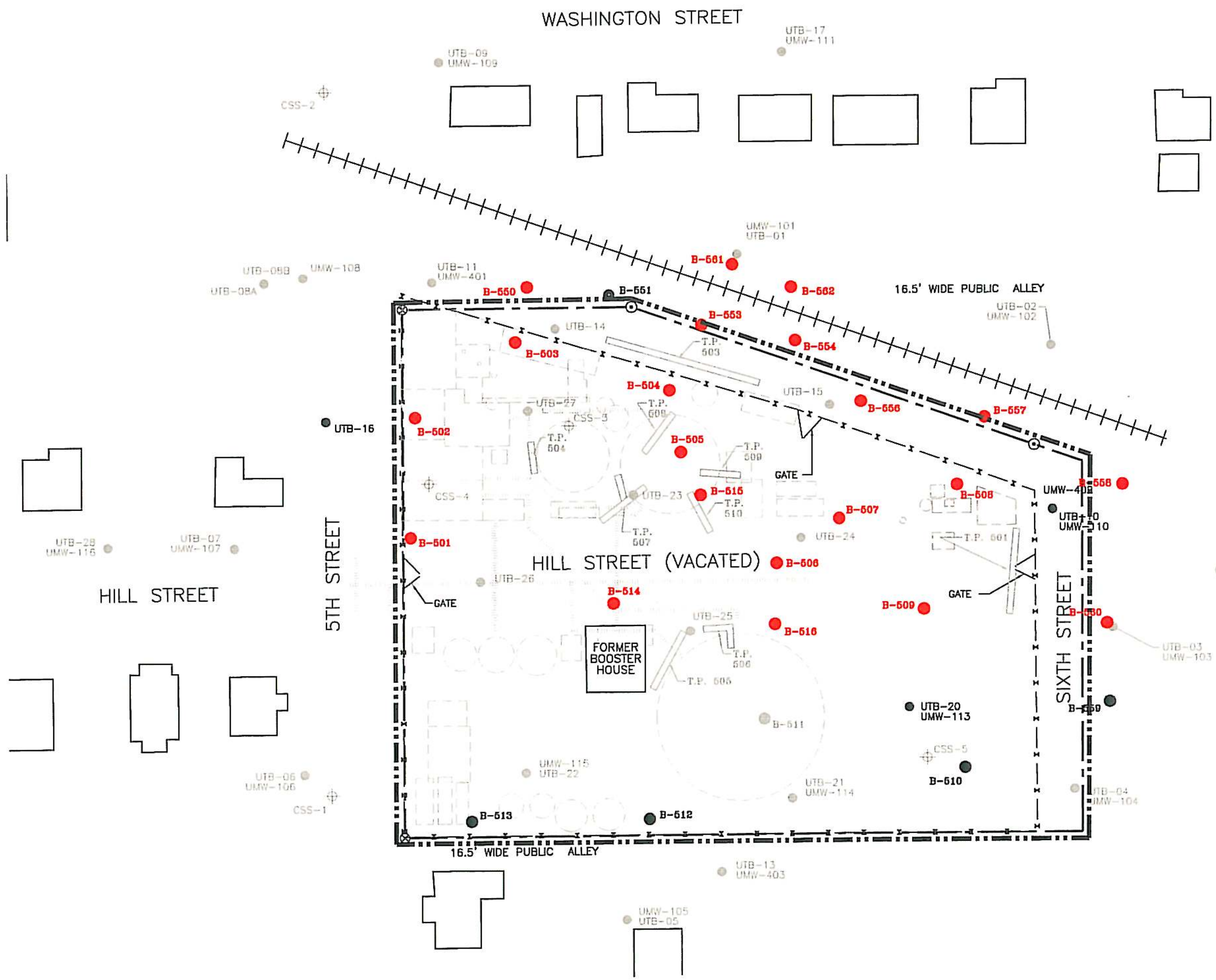
N

COL J:\624\02647A-034

PSC

TITLE: EXCEEDANCE OF TIER 1 REMEDIATION OBJECTIVES FOR SOIL
BTEX AND PAH COMPOUNDS
3-10 FOOT DEPTH INTERVAL

DWN: TMM	DES: JG	PROJECT NO: 62402647
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS
DATE: 12/14/07	REV:	FIGURE 7-2



LEGEND

B-557	NO EXCEEDANCE
B-557	EXCEEDANCE AT LEAST 1 PATHWAY
B-557	NO DATA
	HISTORICAL MANUFACTURED GAS PLANT STRUCTURES
	EXISTING STRUCTURES (APPROXIMATE)
	CURRENT AMERENIP PROPERTY BOUNDARY
	REMEDIATION SITE BOUNDARY
	FENCE

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 HAVE SERVED MULTIPLE PURPOSES DURING THE OPERATION OF THE PLANT.

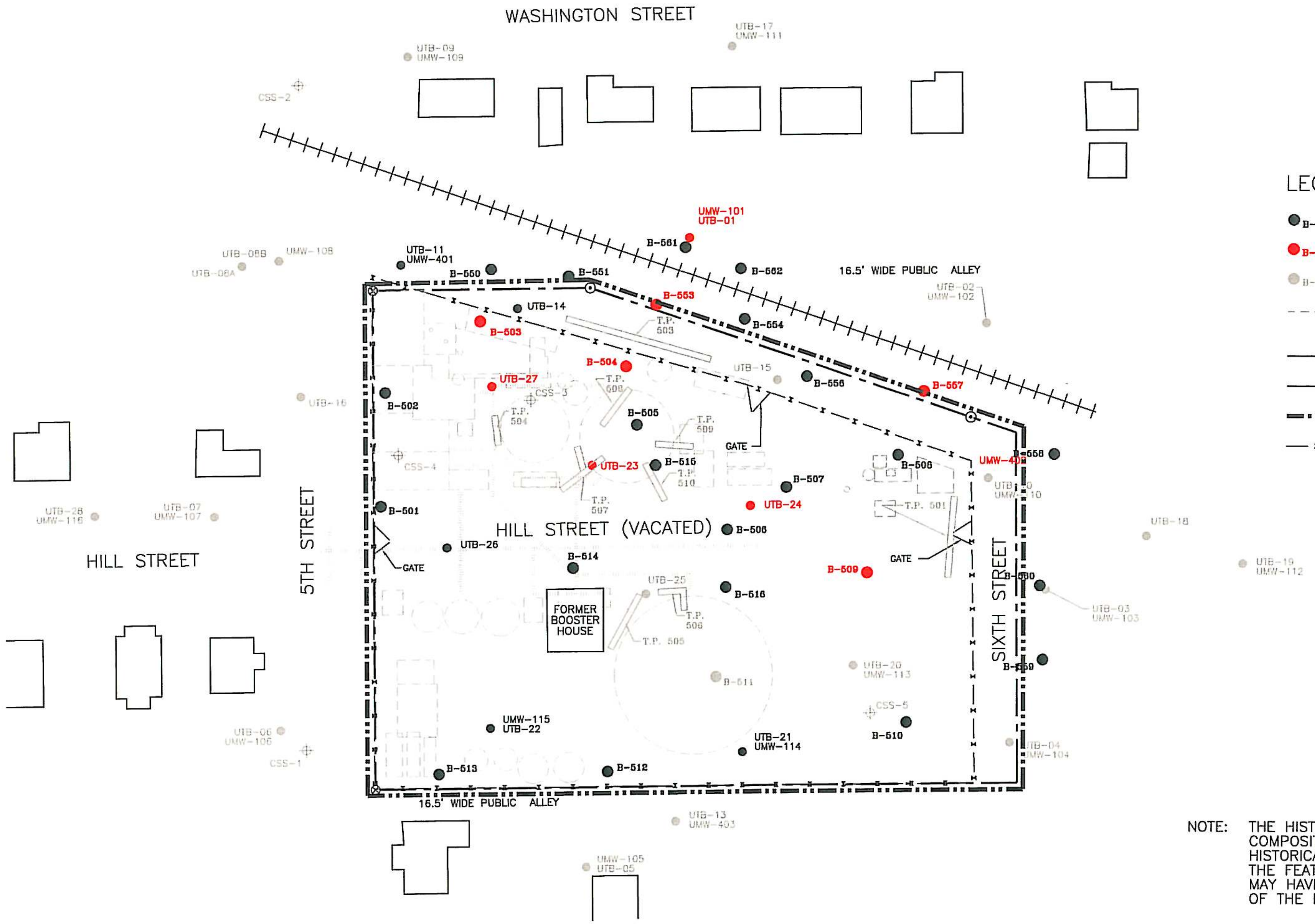
SOURCE: The source for the property boundary survey is Vegrzyn, Sarver and Associates.

COL J:\6240\2647A-035

PSC

TITLE: EXCEEDANCE OF TIER 1 REMEDIATION OBJECTIVES FOR SOIL BTEX AND PAH COMPOUNDS 10-20 FOOT DEPTH INTERVAL

DWN: TMM	DES: JG	PROJECT NO: 62402647
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS
DATE: 12/14/07	REV:	FIGURE 7-3



LEGEND

- B-557 NO EXCEEDANCE
- B-557 EXCEEDANCE AT LEAST 1 PATHWAY
- B-557 NO DATA
- HISTORICAL MANUFACTURED GAS PLANT STRUCTURES
- EXISTING STRUCTURES (APPROXIMATE)
- CURRENT AMERENIP PROPERTY BOUNDARY
- REMEDIATION SITE BOUNDARY
- FENCE

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 HAVE SERVED MULTIPLE PURPOSES DURING THE OPERATION OF THE PLANT.

SOURCE: The source for the property boundary survey is Vegrzyn, Sarver and Associates.

0 80
FEET

N

PSC

TITLE: EXCEEDANCE OF TIER 1 REMEDIATION OBJECTIVES FOR SOIL BTEX AND PAH COMPOUNDS GREATER THAN 20 FEET

DWN: TMM	DES: JG	PROJECT NO: 62402647
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS
DATE: 12/14/07	REV:	FIGURE 7-4

COL J:\624\02647A-036

APPENDIX C

PSC

Location / Well #: ____________

Project Name: ____________

Project Manager: ____________

Site: ____________

WELL PURGING DATA FORM

Date: ____________ Page ____ of ____

Project No.: ____________

Cost Code: ____________

Non-aqueous Phase Liquids Present (Describe): ____________

Methods of Purging: Low-Flow using dedicated bladder pump

Pump Manufacturer, Model: ____________

Purging Criteria: ***Stabilization of Indicator Parameters***

(Turbidity <25 NTU & within 10%, ORP w/in 10mV)

(DO w/in 10%, SC w/in 3%, pH w/in 0.1, Temp)

Instrument Manufacturer, Model: Hydrolab / Quanta-G; LaMotte / 2020 TurbidiMeter

Water Volume Calculation

Total Depth of the Well (feet): ____________

Initial Water Level: ____________

Height of Water Column (feet): ____________

☐ (2" well = 0.1632 gal/foot)

☐ (4" well = 0.6523 gal/foot)

Well Casing Volume: ____________ gallons

(# gal x 3.8 = L) ____________ **Liters**

Pump Intake Depth: ____________

Water Collection // Water Quality Data

Time	Discharge (Liter) Cumulative	Removal Rate (L/min)	WL During Purging	Temp (°C)	pH	Specific Conductance (ms/cm) ppm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
	-			-	-	-	-	-	-	Start Purging
	-	-	-	-	-	-	-	-	-	Collect Sample

Sampler: ____________