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0190100008
AMEREN IP-CHAMPAIGN
SR/TECH

September 23, 2010

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

Subject: **Revised Remedial Action Plan (RAP)**
Former Manufactured Gas Plant
Champaign, IL
State ID 0190100008

ORIGINAL

Dear Mr. Dunn:

On behalf of Ameren Illinois Utilities (Ameren), PSC Industrial Outsourcing, LP (PSC) is providing this revised remedial action plan (RAP) letter to address project modifications to the originally submitted RAP document dated December 2008, entitled *Remedial Action Plan – Former Manufactured Gas Plant, Champaign, Illinois – State ID 0190100008.*

The original RAP technology for soil and groundwater at this site identified soil excavation and disposal of the upper 10 feet and in-situ chemical oxidation deeper than 10 feet of impacted soil below ground surface (bgs). Based on field conditions encountered during the Phase 1 excavation activities, the original RAP technology has been modified to include deeper excavation of up to 22 to 28 feet bgs and limited use of chemical oxidation treatment within the property boundary.

During the Phase 1 excavation, the shallow (perched) groundwater that entered the excavation was easily managed by pumping once the excavation reached 10 feet bgs. Therefore, water could be controlled by pump and treat technologies at a rate that would keep the excavation bottom dry to allow for deeper soil excavation.

PSC and Environmental Operations, Inc. (EOI) are now excavating the soil to a depth that no longer shows any signs of visual impact and/or is at a depth that does not pose a safety risk to workers within the tent of a potential sidewall collapse (approximately 25 feet).

Confirmation floor samples are collected every 50 square feet on the excavation bottom. Sidewall samples will continue to be collected every 25 linear feet.

The following section identifies the original RAP (dated Dec 2008) language in italics and the new scope changes in bold text.

Remedial Actions – Page iv:

First Bullet, *Remediation through excavation and disposal of impacted soil exceeding ROs to a depth of 10 feet bgs;* **Remediation through excavation and disposal of impacted soil exceeding ROs to a depth to 22 to 28 feet bgs.**

Second Bullet, *In-situ chemical oxidation of impacted soils exceeding ROs at depths deeper than 10 feet bgs*; **In-situ chemical oxidation of impacted soils exceeding ROs may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

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Estimated Schedule,
March 2009 – Background air monitoring begins at remediation site; **June 2009 – Background air monitoring begins at remediation site**
March 2009 – Excavation begins at the remediation site; **June 2009 – Background air monitoring begins at the remediation site**
November 2009 – Excavation and site remediation is completed; **May 2011 – Excavation at remediation site is completed**
December 2009 – Begin post-remedial groundwater monitoring; **June 2011 – Begin post-remedial groundwater monitoring;**
February 2010 – RACR prepared and submitted to IEPA; **September 2011 – RACR prepared and submitted to IEPA**
January 2011 – Evaluation and submittal to IEPA of groundwater monitoring data; **July 2012 – Evaluation and submittal to IEPA of groundwater monitoring data;**
April 2011 – Comprehensive NFR letter received from IEPA; **December 2011 – Comprehensive NFR letter received from IEPA.**

Section 2 Remediation Objectives – Page 5, First Paragraph, Second Sentence:

The remedial approach for the Site will consist of soil excavation and disposal of all impacted soil that exceeds a Tier 1 RO within 10 feet bgs and in-situ chemical oxidation of impacted soil that exceeds a Tier 1 RO deeper that 10 feet bgs. **The remedial approach for the Site will consist of soil excavation and disposal of all impacted soil that exceeds a Tier 1 RO to a depth up 22 to 28 feet bgs and for the potential elimination of chemical oxidation treatment within the property boundary. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

Section 2.1 Soil Ingestion – Page 5, First Paragraph, Fourth Sentence:

To address this potential exposure pathway for the Site, all soil in the impacted area within the top 10 feet of ground surface will be excavated and disposed. Soil deeper than 10 feet will be treated in-situ with chemical oxidation. . **To address this potential exposure pathway for the Site, all soil in the impacted area within the upper 22 to 28 feet bgs will be excavated and disposed. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists on the excavation floor.**

Section 2.1 Soil Ingestion – Page 5, First Paragraph, Last Two Sentences:

Any soil impact greater than 10 feet bgs that remains in place and exceeds a project RO based on confirmation sampling results will be excluded through the use of an engineered barrier. That barrier will consist of at least 10 feet of clean soil from an off-site source. **Any soil impact greater than 22 to 28 feet bgs that remains in place and exceeds a project RO based on confirmation sampling results will be excluded through the use of an engineered barrier. That barrier will consist of at least 22 to 28 feet of clean soil from an off-site source.**

Section 2.2 Soil Inhalation – Page 5, First Paragraph, Fourth Sentence:

To address this potential exposure pathway for the Site, all soil within the top 10 feet of ground surface will be excavated and disposed. Soil deeper than 10 feet will be treated in-situ with chemical oxidation. **To address this potential exposure pathway for the Site, all soil in the impacted area within the upper 22 to 28 feet bgs will be excavated and disposed and for the potential elimination of chemical oxidation treatment within the property boundary. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

Section 2.2 Soil Inhalation – Page 5, First Paragraph, Last Two Sentences:

Any soil impact greater than 10 feet bgs that remains in place and exceeds a project RO based on confirmation sampling results will be excluded through the use of an engineered barrier. That barrier will consist of at least 10 feet of clean soil from an off-site source. **Any soil impact greater than 22 to 28 feet bgs that remains in place and exceeds a project RO based on confirmation sampling results will be excluded through the use of an engineered barrier. That barrier will consist of at least 22 to 28 feet of clean soil from an off-site source.**

Section 2.4 Soil Component to Groundwater Ingestion – Page 6, First Paragraph, Fourth Sentence:

To address this potential exposure pathway for the remediation site, all soil within the top 10 feet of ground surface will be excavated and disposed. Soil deeper than 10 feet will be treated in-situ with chemical oxidation. **To address this potential exposure pathway for the Site, all soil in the impacted area within the upper 22 to 28 feet bgs will be excavated and disposed and for the potential elimination of chemical oxidation treatment within the property boundary. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

Section 2.5 Free Product (Source Material) – Page 6, First Paragraph, Second Sentence:

To address the potential source material, all source material within the top 10 feet will be excavated and disposed. If source material is present below ten feet, it will be excavated to the extent achievable. If source material remains after the maximum excavation depth is reached, in-situ chemical oxidation will be performed. **To address the potential source material at the Site, the soil will be excavated to the maximum extent achievable. If source material still remains, chemical oxidation may be utilized.**

Section 2.6 Groundwater Ingestion – Page 6, Second Paragraph, Second and Third Sentence:

The groundwater impact does not appear to extend beyond the area of soil impact. Through the soil removal and chemical oxidation actions to be performed in these areas, the source for the groundwater impact and the impacted groundwater will be reduced. **Through the additional soil (source) removal of up to 22 to 28 feet bgs, the source for the groundwater impact is greatly reduced.**

Section 3 Remediation Technologies Selected – Page 7, First Paragraph, First Sentence:

The remediation technology selected for addressing soil and groundwater impact is excavation and disposal within the top 10 feet and in-situ chemical oxidation in the deeper than 10 feet zone. **The remediation technology selected for addressing soil and groundwater impact is through excavation and disposal within the top 22 to 28 feet. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

Section 3 Remediation Technologies Selected – Page 7, Second Paragraph, Fourth Sentence:

The volume of material to be excavated is estimated to be approximately 32,000 cu yd. **The volume of material to be excavated is estimated to be approximately 136,000 tons.**

Section 3.1.5 Wastewater and other Liquids Management – Page 9, First Paragraph, Third Sentence:

Because the excavation is anticipated to range up to 10 ft bgs, some water may accumulate in the excavation. **Because the excavation is anticipated to range up to 28 feet bgs, water may accumulate in the excavation.**

Section 3.2 Impacted Soil Removal – Page 10, First Paragraph, First Sentence:

The remedial approach to address impacted soil above Tier 1 ROs within the top 10 feet bgs for all potential exposure pathways for all property use scenarios will be soil excavation and disposal. **The remedial approach to address impacted soil above Tier 1 ROs within the top 22 to 28 feet for all potential exposure pathways for all property use scenarios will be soil excavation and disposal.**

Section 3.3 In-Situ Chemical Oxidation – Page 11 First Paragraph, First Sentence:

The remedial approach to address impacted soil above Tier 1 ROs at depths deeper than 10 feet bgs for all potential exposure pathways for all property use scenarios will be in-situ chemical oxidation. **The remedial approach has changed based on field conditions encountered to include a deeper excavation of up to 28 feet bgs. This additional excavation quantity will remove most if not all the source/impacted material therefore not requiring chemical oxidation. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

Section 3.4 Addressing Impacted Groundwater Through Excavation – Page 11 First Paragraph, First Sentence:

Groundwater impact has been identified on the southern portion of the site. The remedial approach to address the groundwater impact will be through the removal of source area by soil excavation and in-situ treatment of the soil matrix using chemical oxidation. **The remedial approach to address the groundwater impact will be through the removal of source area by soil excavation up to 28 feet bgs. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists.**

Second Paragraph, First Sentence:
Feasibility of Implementation [740.450(c)(1)]: Soil excavation, in-situ chemical oxidation of source material, the use of institutional controls, and Tier 2 evaluations is an accepted remedial approach and is easily implemented. Achieving the remediation objectives through chemical oxidation treatment is easily verifiable through confirmation sampling. **Soil excavation, the use of institutional controls, and Tier 2 evaluations is an accepted remedial approach and is easily implemented.**

Section 4.1.1 Confirmation Soil Sampling - Soil Excavation and Disposal – Page 13 First Paragraph, Third Sentence:

From the floor of the excavation, at least one confirmation soil sample will be retained from the center of an area represented by a 25-foot by 25-foot spacing. **From the floor of the excavation, at least one confirmation soil sample will be retained from the center of an area represented by a 50-foot by 50-foot spacing.**

Section 4.3 Quality Assurance/Quality Control – Page 16
First Paragraph, Third Sentence:

Duplicate soil samples will be collected on a 1 in 20 basis and will be obtained from the same material as the primary sample. **The IEPA will collect split soil samples on a periodic basis during the remediation. Therefore, duplicate soil samples on a 1 in 20 basis are not necessary.**

Section 6 Engineered Barriers and Institutional Controls – Page 18
First Paragraph, Second Sentence:

Once remedial actions are complete, an engineered barrier will be constructed within the excavated areas that consists of 10 feet of clean material from an offsite source. **The remedial approach has changed based on field conditions encountered to include a deeper excavation of up to 28 feet bgs. Therefore, the engineered barrier will consist of up to 28 feet of clean fill material from an offsite source.**

Figures:

ES-3. **The excavation extent will cover the entire area within the remediation site boundary, with the exception of an approximately 10 foot to 15 foot wide strip around the perimeter. Excavation within the tent structure must stay approximately 10 feet from the tent walls to ensure the stability of the structure, which will ultimately result in the 10 foot or more strip of soil around the site perimeter that cannot be excavated.**

3-1: **The original five tent phases has been expanded to nine phases to cover the entire remediation site. After excavation began, it was determined that the excavation could not proceed as close to the tent wall as estimated in order to ensure the stability of the structure and the safety of the workers.**

3-2: **The extent of excavation will be extended to cover the entire remediation site, to include southern portions not originally estimated for removal.**

3-3: **The remedial approach has changed based on field conditions encountered to include a deeper excavation of 22 to 28 feet bgs. This additional excavation quantity will remove most if not all the source/impacted material therefore not requiring chemical oxidation. Chemical oxidation may be utilized if soil can no longer be safely excavated and visually impacted material still exists. Therefore, the estimated extent of in-situ chemical oxidation will be determined on a phase-by-phase basis.**

If you have any questions or require further information, please feel free to contact us at (618) 281-1575 or by e-mail at psazama@pscnow.com.

Sincerely yours;

PSC INDUSTRIAL OUTSOURCING, LP

Pete Sazama, P.G.
Project Manager

Enclosures: Revised Figure ES-3
Revised Figure 3-1
Revised Figure 3-2
Revised Figure 3-3

Cc: Mr. Brian Martin - Ameren

The appearance of some of the images

following this page is due to

Poor Quality Original Documents

and not the scanning or filming processes.

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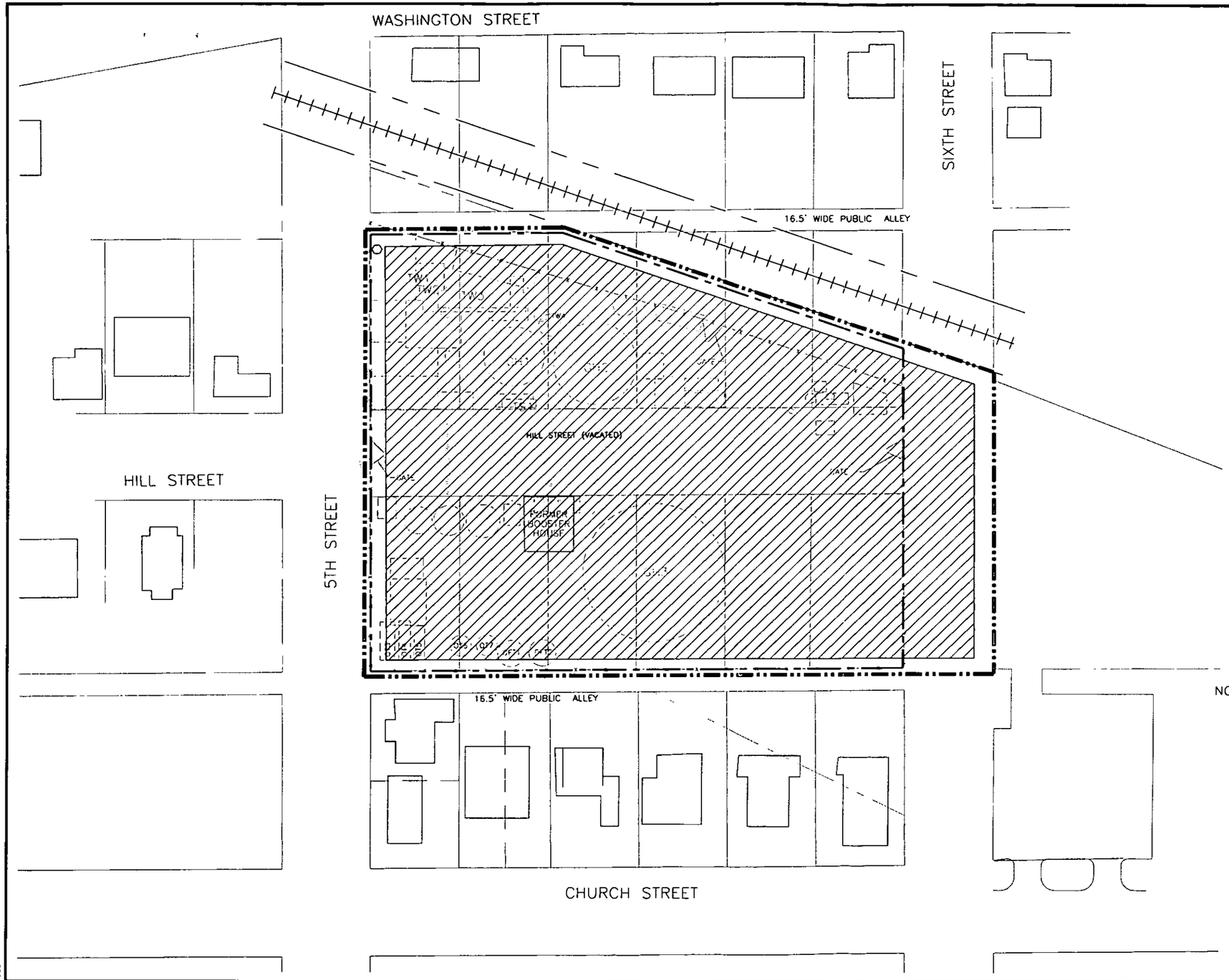

LEGEND

- HISTORICAL MANUFACTURED GAS PLANT STRUCTURES (APPROXIMATE)
- FORMER GAS PLANT PIPING (APPROXIMATE)
- EXISTING STRUCTURES (APPROXIMATE)
- CURRENT AMERENIP PROPERTY BOUNDARY
- REMEDIATION SITE BOUNDARY
- FENCE
- EXCAVATION EXTENTS – 0 TO 28 FOOT DEPTH

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 ARE 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.

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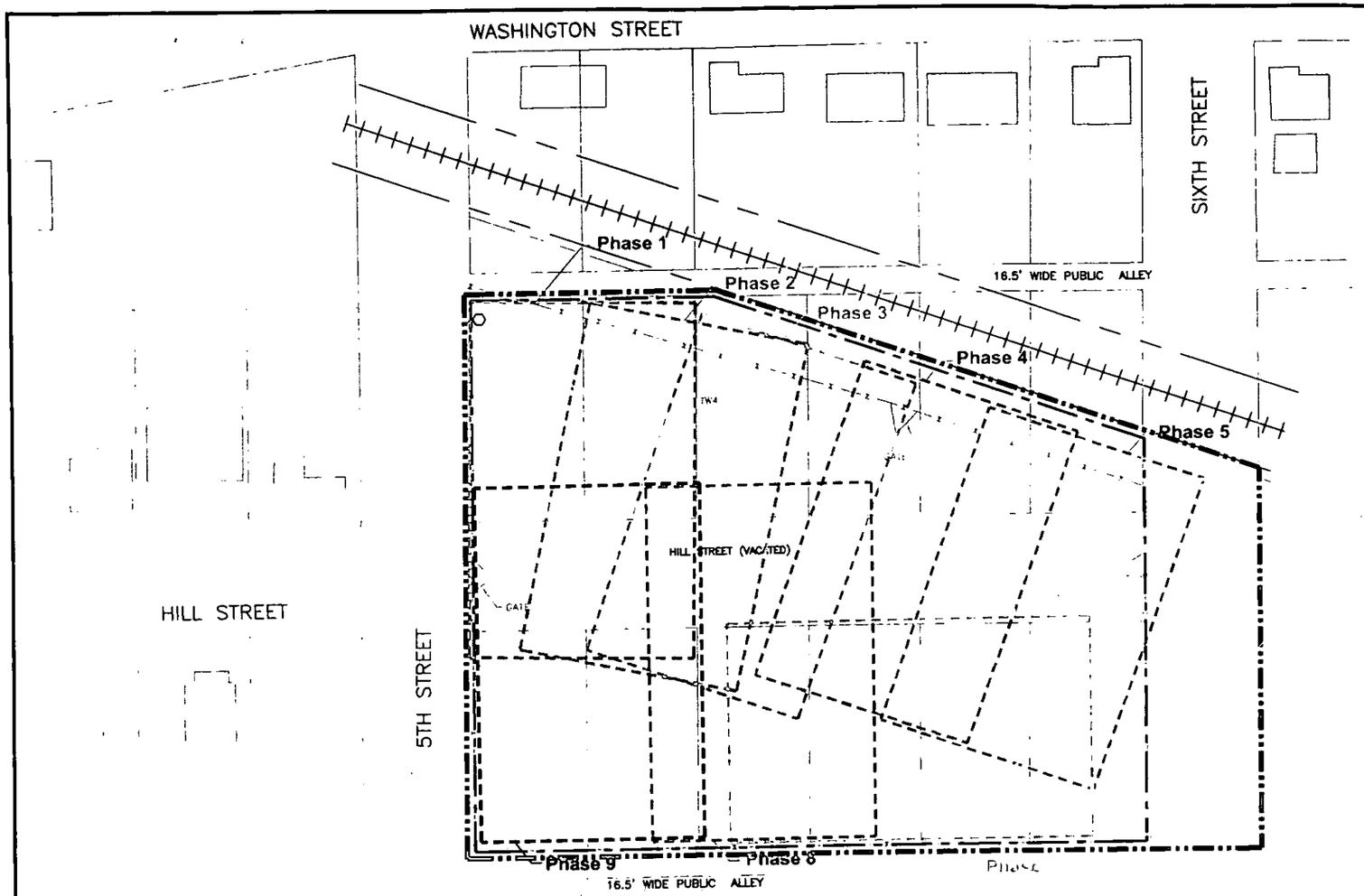
TITLE:
EXTENT OF PROPOSED SOIL REMOVAL ACTIVITIES

DWN: TMM	DES: PTS	PROJECT NO: 62403053	
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS	
DATE: 12/5/08	REV:	FIGURE ES-3	



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- FORMER GAS PLANT PIPING (APPROXIMATE)
- EXISTING STRUCTURES (APPROXIMATE)
- CURRENT AMERENIP PROPERTY BOUNDARY
- REMEDIATION SITE BOUNDARY
- FENCE
- PROPOSED TEMPORARY TENT STRUCTURE LOCATIONS

NOTE: 1. The historical manufactured gas plant structures are a composite from Sanborn Fire Insurance maps and historical Ameren site plans. The exact locations of the features are not known. Structures and buildings may have served multiple purposes during the operation of the plant.

2. Tier 1 RO exceedances are shown for On-Site only. Off-Site exceedances exist beyond the Site property boundary and are addressed individually with Off-Site RORs and RAPs.

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

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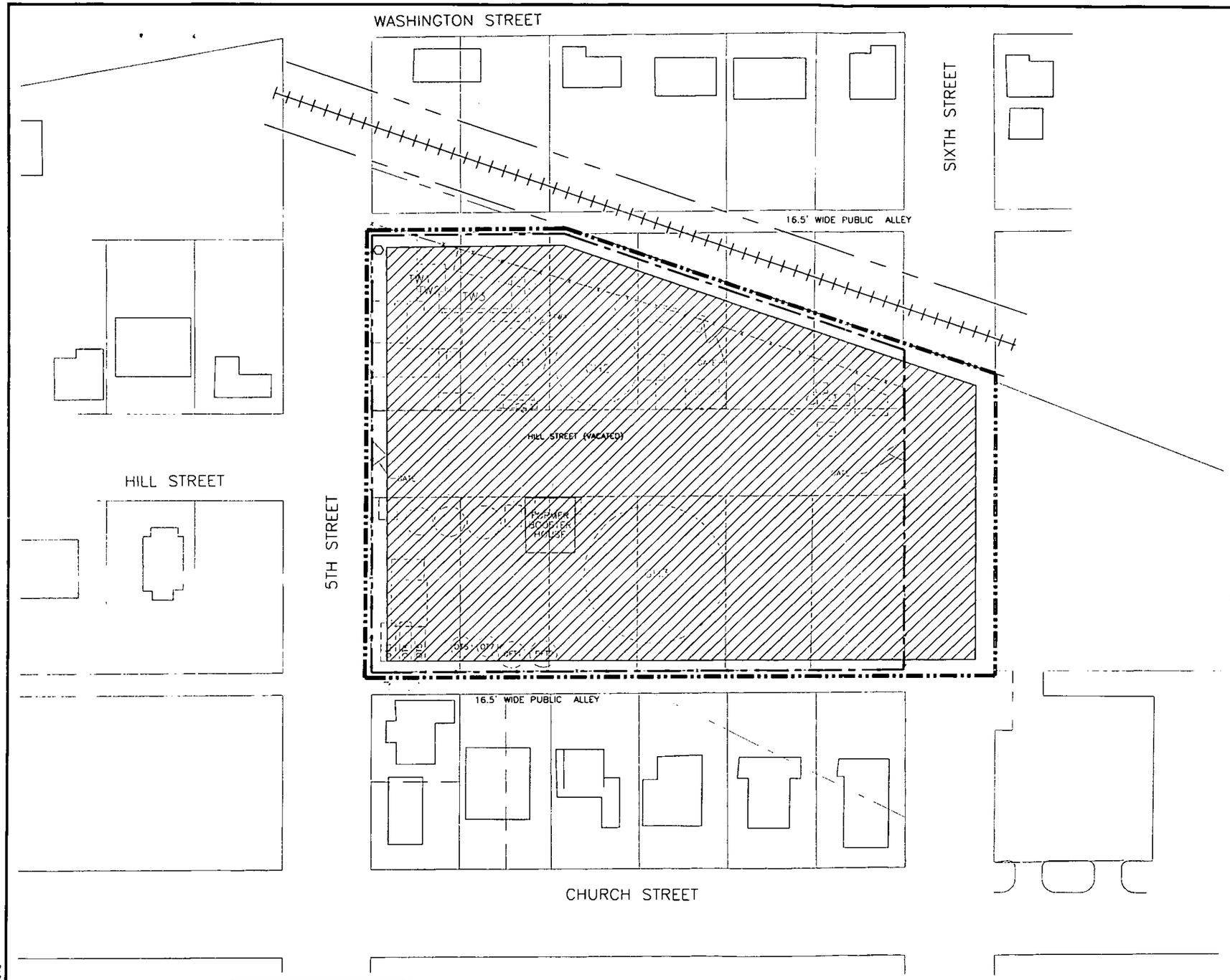
PSC

TITLE: PROPOSED TEMPORARY TENT STRUCTURE LOCATIONS

DWN: TMM	DES: PTS	PROJECT NO: 62403053	
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS	
DATE: 12/5/08	REV:	FIGURE 3-1	



LEGEND

- HISTORICAL MANUFACTURED GAS PLANT STRUCTURES (APPROXIMATE)
- FORMER GAS PLANT PIPING (APPROXIMATE)
- EXISTING STRUCTURES (APPROXIMATE)
- CURRENT AMERENIP PROPERTY BOUNDARY
- REMEDIATION SITE BOUNDARY
- FENCE
- EXCAVATION EXTENTS – 0 TO 28 FOOT DEPTH

NOTE: 1. The historical manufactured gas plant structures are a composite from Sanborn Fire Insurance maps and historical Ameren site plans. The exact locations of the features are not known. Structures and buildings may have served multiple purposes during the operation of the plant.

2. Tier 1 RO exceedances are shown for On-Site only. Off-Site exceedances exist beyond the Site property boundary and are addressed individually with Off-Site RORs and RAPs.

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

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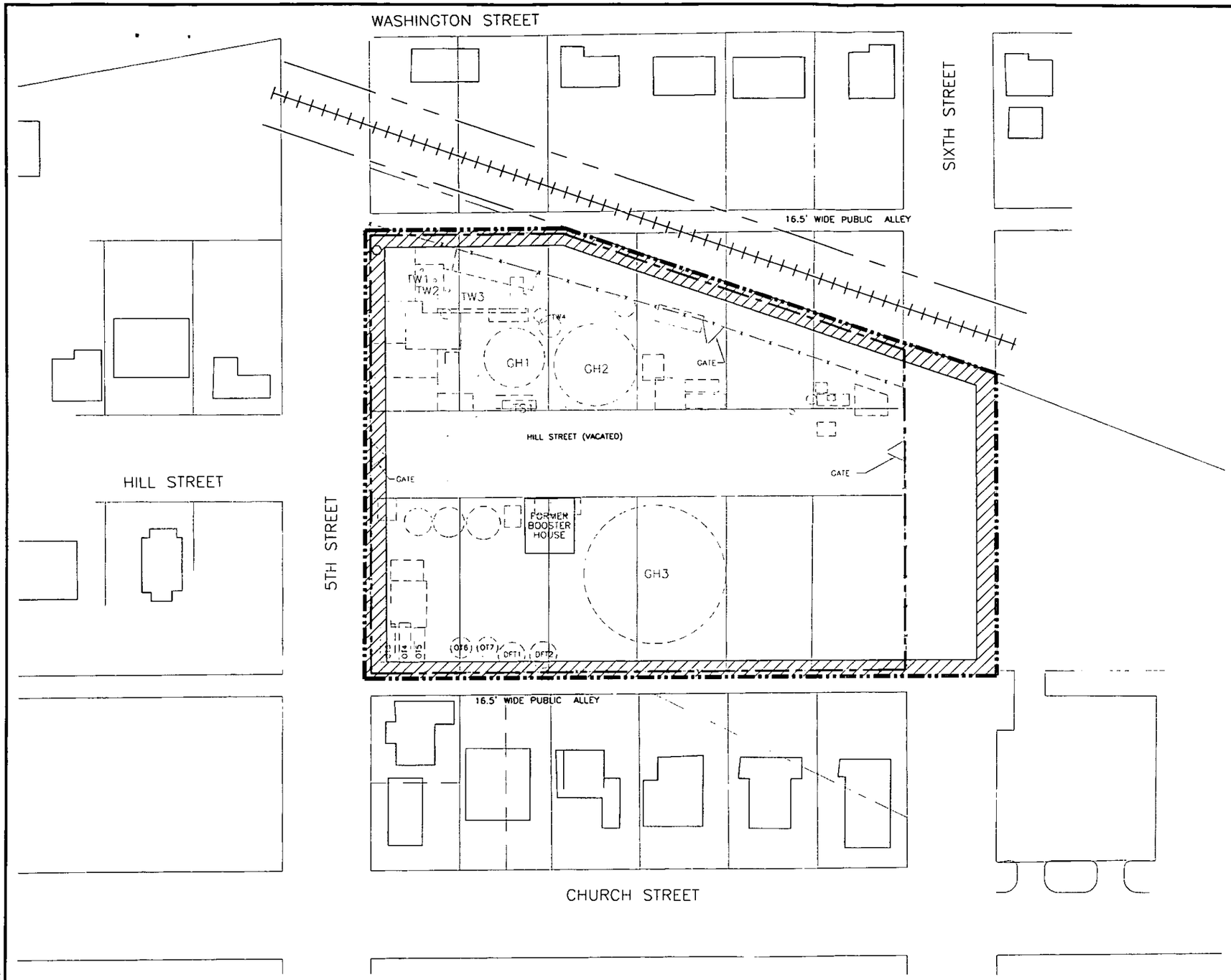
PSC

TITLE:
EXTENT OF PROPOSED SOIL REMOVAL ACTIVITIES

DWN: TMM	DES: PTS	PROJECT NO: 62403053 AMERENIP CHAMPAIGN, ILLINOIS	
CHKD:	APPD:		
DATE: 12/5/08	REV:	FIGURE 3-2	



LEGEND

- HISTORICAL MANUFACTURED GAS PLANT STRUCTURES (APPROXIMATE)
- FORMER GAS PLANT PIPING (APPROXIMATE)
- EXISTING STRUCTURES (APPROXIMATE)
- CURRENT AMERENIP PROPERTY BOUNDARY
- REMEDIATION SITE BOUNDARY
- FENCE
- EXCAVATION EXTENTS – 0 TO 28 FOOT DEPTH

NOTE: 1. The historical manufactured gas plant structures are a composite from Sanborn Fire Insurance maps and historical Ameren site plans. The exact locations of the features are not known. Structures and buildings may have served multiple purposes during the operation of the plant.

2. Tier 1 RO exceedances are shown for On-Site only. Off-Site exceedances exist beyond the Site property boundary and are addressed individually with Off-Site RORs and RAPs.

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

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PSC

TITLE:
IN-SITU CHEMICAL OXIDATION EXTENT OF TREATMENT

DWN: TMM	DES: PTS	PROJECT NO: 62403053	
CHKD:	APPD:	AMERENIP CHAMPAIGN, ILLINOIS	
DATE: 09/5/10	REV:	FIGURE 3-3	

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Ameren IP-Champaign

Illinois Environmental Protection Agency
Bureau of Land
Remedial Project Management Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

FOR ILLINOIS EPA USE: SRP Tech
LOG NO. _____

Site Remediation Program Form (DRM-2)
(To Be Submitted with all Plans and Reports)

I. Site Identification:

Site Name: Champaign Former Manufactured Gas Plant Site
Street Address : 308 N. Fifth Street P.O. Box: _____
City: Champaign State: IL Zip: 61820 Phone: _____
Illinois Inventory I. D. Number: 0190100008 IEMA Incident Number: _____

II. Remediation Applicant:

Applicant's Name: Brian Martin Company: Ameren
Street Address: 1901 Chouteau Avenue P.O. Box: 66149
City: St. Louis State: MO ZIP Code: 63166-6149 Phone: 314-554-2233

I hereby request that the Illinois EPA review and evaluate the attached project documents in accordance with the terms and conditions of the Environmental Protection Act (415 ILCS 5), implementing regulations, and the review and evaluation services agreement.

Remediation Applicant's Signature: Brian H Martin Date: 9/27/10

III. Contact Person:

Contact's Name: Pete Sazama
Company: PSC Industrial Outsourcing, LP
Street Address: 210 West Sand Bank Road
P.O. Box: _____
City: Columbia State: IL ZIP Code: 62236
Phone: 618-281-1575

Contact's Name: _____
Company: _____
Street Address: _____
P.O. Box: _____
City: _____ State: ___ ZIP Code: _____
Phone: _____

IV. Review & Evaluation Licensed Professional Engineer or Geologist ("RELPEG"), if applicable:

RELPEG's Name: _____ Company: _____
Street Address: _____ P.O. Box: _____
City: _____ State: ____ ZIP Code: _____ Phone: _____
Registration Number: _____ License Expiration Date: _____

All information submitted is available to the public except when specifically designated by the Remediation Applicant to be treated confidentially as a trade secret or secret process in accordance with the Illinois Compiled Statutes, Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines. The Illinois EPA is authorized to require this information under Sections 415 ILCS 5/58 - 58.12 of the Environmental Protection Act and regulations promulgated thereunder. Disclosure of this information is required as a condition of participation in the Site Remediation Program. Failure to do so may prevent this form from being processed and could result in your plan(s) or report(s) being rejected. This form has been approved by the Forms Management Center.

V. Project Documents Being Submitted:

Document Title: Revised Remedial Action Plan Date of Preparation of Plan or Report: 9/23/2010

Prepared by: PSC Industrial Outsourcing, LP Prepared for: Ameren

Type of Document Submitted:

- [ ] Site Investigation Report - Comprehensive
- [ ] Site Investigation Report - Focused
- [ ] Remediation Objectives Report-Tier 1or 2
- [ ] Remediation Objectives Report-Tier 3
- [x] Remedial Action Plan
- [ ] Remedial Action Completion Report
- [ ] Sampling Plan
- [ ] Health and Safety Plan
- [ ] Community Relations Plan
- [ ] Risk Assessment
- [ ] Contaminant Fate & Transport Modeling
- [ ] Other: _____

Document Title: _____ Date of Preparation of Plan or Report: _____

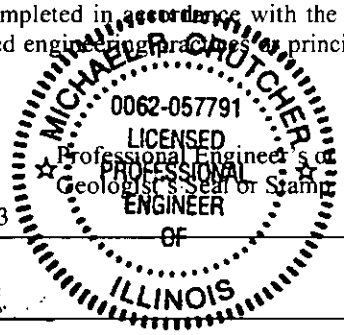
Prepared by: _____ Prepared for: _____

Type of Document Submitted:

- [ ] Site Investigation Report - Comprehensive
- [ ] Site Investigation Report - Focused
- [ ] Remediation Objectives Report-Tier 1or 2
- [ ] Remediation Objectives Report-Tier 3
- [ ] Remedial Action Plan
- [ ] Remedial Action Completion Report
- [ ] Sampling Plan
- [ ] Health and Safety Plan
- [ ] Community Relations Plan
- [ ] Risk Assessment
- [ ] Contaminant Fate & Transport Modeling
- [ ] Other: _____

VI. Professional Engineer's or Geologist's Seal or Stamp:

I attest that all site investigations or remedial activities that are the subject of this plan(s) or report(s) were performed under my direction, and this document and all attachments were prepared under my direction or reviewed by me, and to the best of my knowledge and belief, the work described in the plan and report has been designed or completed in accordance with the Illinois Environmental Protection Act (415 ILCS 5), 35 Ill. Adm. Code 740, and generally accepted engineering practices or principles of professional geology, and the information presented is accurate and complete.



Professional Engineer's or Geologist's Seal or Stamp

Engineer or Geologist Name: Michael Crutcher, P.E.

Company: PSC Industrial Outsourcing, LP Phone: 618-281-1583

Registration Number: 062.057791

Signature: _____ License Expiration Date: 11/30/2011

Note: The authority of a Licensed Professional Geologist to certify documents submitted to the Illinois Environmental Protection Agency for review and evaluation pursuant to Title XVII of the Environmental Protection Act is limited to Site Investigation Reports (415 ILCS 58.7(f), as amended by P.A. 92-0735, effective July 25, 2002). A Licensed Professional Geologist cannot certify Remediation Objectives Reports, Remedial Action Plans or Remedial Action Completion Reports.