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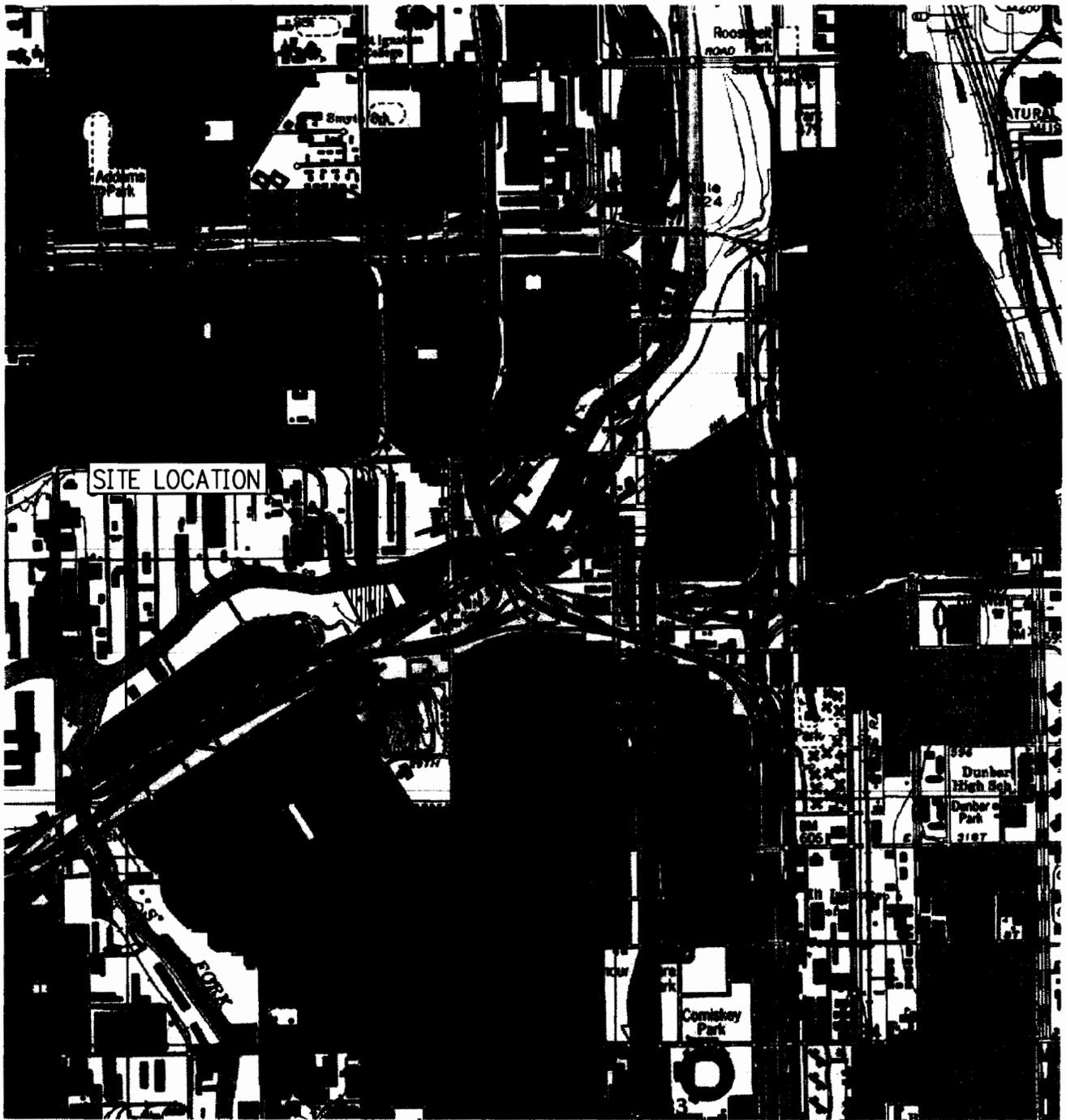
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APPROXIMATE SCALE IN FEET

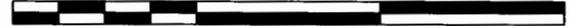


SITE LOCATION MAP  
FORMER HAWTHORNE STATION  
CHICAGO, ILLINOIS

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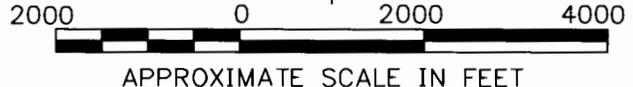
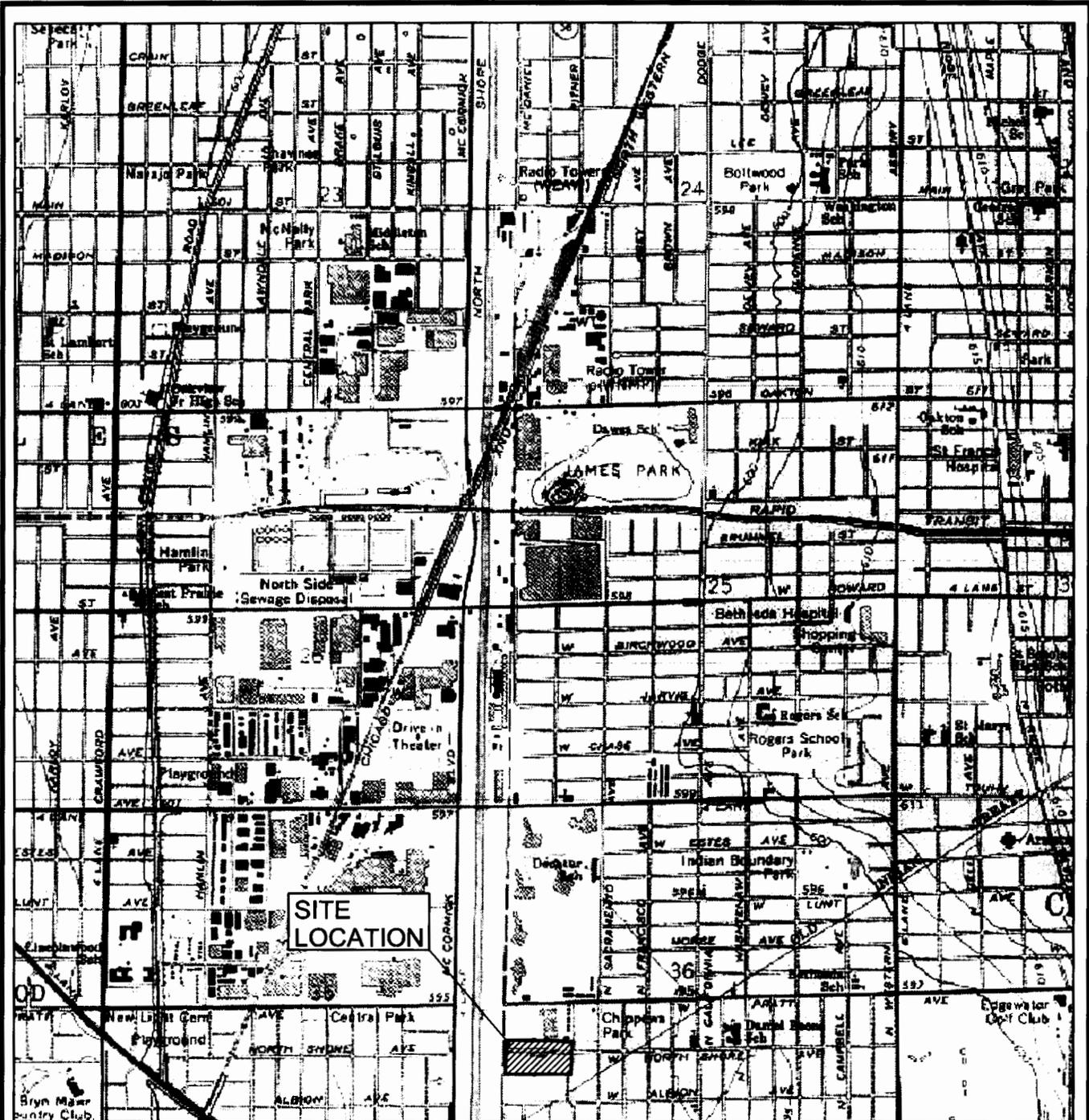
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APPROXIMATE SCALE IN FEET

	<p><b>THE PEOPLES GAS LIGHT AND COKE COMPANY CHICAGO, ILLINOIS</b></p>
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SITE LOCATION MAP  
FORMER HOUGH PLACE STATION SITE  
CHICAGO, ILLINOIS



SITE LOCATION MAP  
FORMER NORTH SHORE AVENUE STATION  
CHICAGO, ILLINOIS

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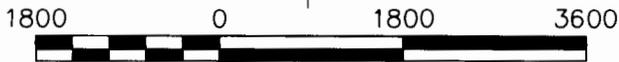
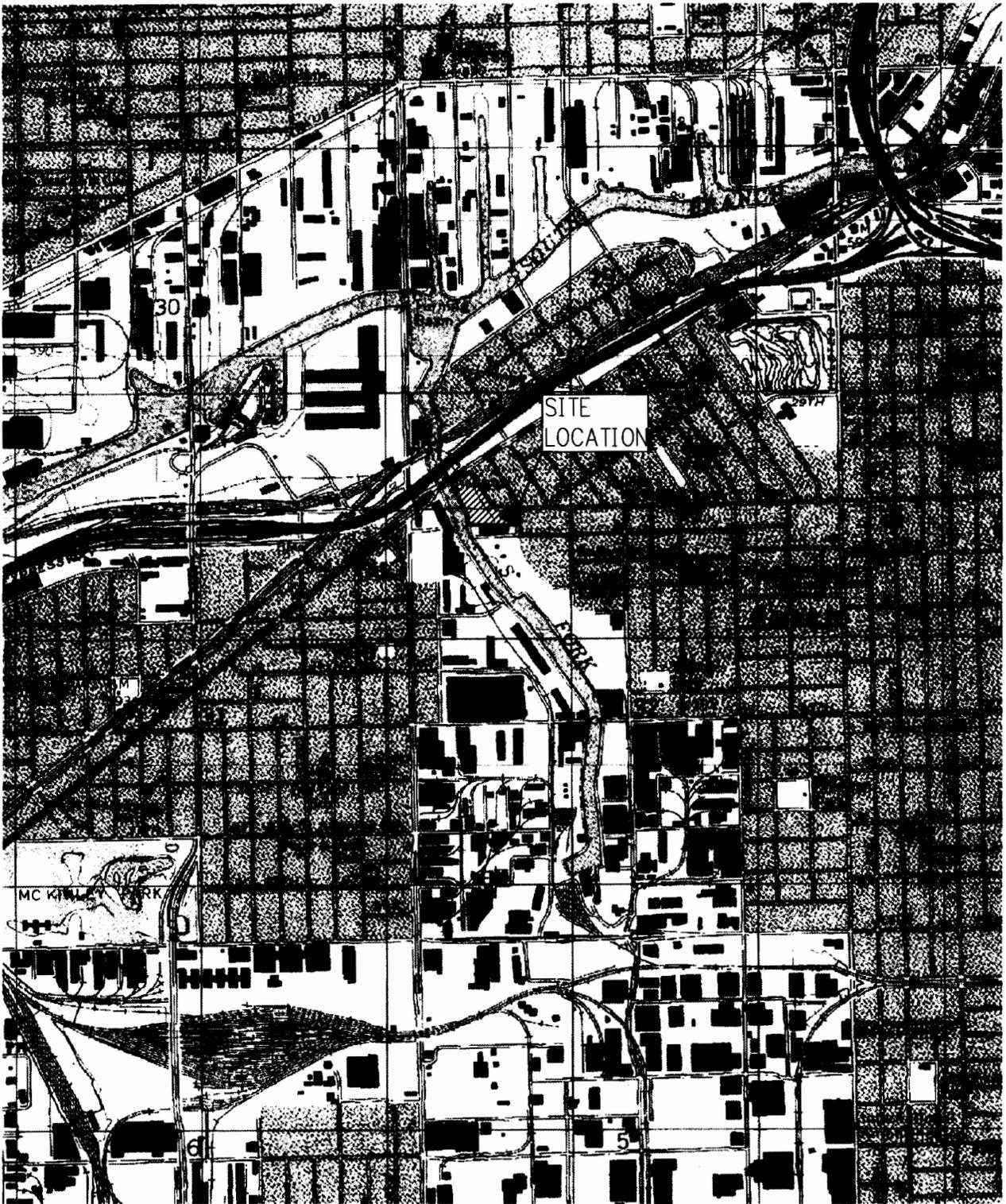
SCALE IN FEET



**THE PEOPLES GAS  
LIGHT AND COKE COMPANY  
CHICAGO, ILLINOIS**

SITE LOCATION MAP  
FORMER NORTH STATION  
CHICAGO, ILLINOIS

I:\PEOPLES GAS\SAS INITIATIVE ADMIN ORDER ON CONSENT\SITE LOCATION MAPS\PITNEY COURT SITE LOCATION



APPROXIMATE SCALE



SITE LOCATION  
FORMER PITNEY COURT SITE  
CHICAGO, ILLINOIS

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APPROXIMATE SCALE IN FEET



THE PEOPLES GAS  
LIGHT & COKE COMPANY  
CHICAGO, ILLINOIS

SITE LOCATION MAP  
FORMER SOUTH STATION  
CHICAGO, ILLINOIS

I:\PEOPLES\_GAS\INITIATIVE\ADMIN\_ORDER\_ON\_CONSENT\SITE\_LOCATION\_MAPS\THROOP\_SITE\_LOCATION

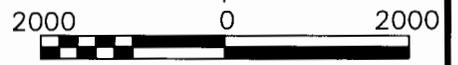


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APPROXIMATE SCALE IN FEET

	<p><b>THE PEOPLES GAS LIGHT &amp; COKE COMPANY CHICAGO, ILLINOIS</b></p>
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SITE LOCATION MAP  
FORMER THROOP STREET STATION  
CHICAGO, ILLINOIS

I:\PEOPLES GAS\SAS INITIATIVE\ADMIN ORDER ON CONSENT\SITE LOCATION MAPS\WILLOW SITE LOCATION



APPROXIMATE SCALE IN FEET



THE PEOPLES GAS  
LIGHT AND COKE COMPANY  
CHICAGO, ILLINOIS

SITE LOCATION MAP  
FORMER WILLOW STREET STATION  
CHICAGO, ILLINOIS

# APPENDIX 2

**SCOPE OF WORK  
FOR ENGINEERING EVALUATIONS/COST ANALYSIS AT ELEVEN  
PEOPLES GAS MANUFACTURED GAS PLANT SITES  
CHICAGO, ILLINOIS**

**I. PURPOSE:**

This Scope of Work (SOW) sets forth the requirements for the preparation of an Engineering Evaluation/Cost Analysis (EE/CA) which shall determine the extent of contamination and evaluate alternatives for conducting an action at each of eleven Peoples Gas Manufactured Gas Plant (MGP) Sites in Chicago, Cook County, Illinois. The eleven MGP Sites are:

1. 22<sup>nd</sup> Street Station, (the “22<sup>nd</sup> Street Station Site”) located at 2200 South Racine Avenue, Chicago, Illinois;
2. North Station (the “North Station Site”) located in the area bounded by North Crosby, West Division, and West Hobbie Streets and the North Branch Canal of the Chicago River system in Chicago, Illinois
3. Division Street Station (the “Division Street Station Site”) located at 1241 West Division Street, Chicago, Illinois
4. Crawford Station (the “Crawford Station Site”) located at 3500 South Pulaski Road, Chicago, Illinois
5. Hawthorne Avenue Station (the “Hawthorne Station Site”) is located on the northwest corner of the intersection of Marcey Street and Willow Street in Chicago, Illinois
6. Hough Place Station (the “Hough Place Station Site”) located at 2500 S. Corbett St., Chicago, Illinois
7. North Shore Avenue Station (the “North Shore Station Site”) located in the Rogers Park Township of Chicago, Illinois
8. Pitney Court Station (the “Pitney Court Station Site”) located at 3052 Pitney Court, Chicago, Illinois
9. South Station (the “South Station Site”) located near the intersection of Eleanor and Loomis Streets, Chicago, Illinois
10. Throop Street Station (the “Throop Street Station Site”) located at the intersection of South Throop Street, South Eleanor Street, and West 25th Street, Chicago, Illinois
11. Willow Street Station (the “Willow Street Station Site”) located west of the intersection of Willow Street and North Kingsbury Street in Chicago, Illinois

Each EE/CA shall fully evaluate the nature and extent of hazardous substances, pollutants or contaminants at and/or from the Site. Each EE/CA shall also assess the risk which these hazardous substances, pollutants or contaminants present for human health and the environment. Each EE Report shall provide sufficient data to develop and evaluate effective response alternatives. Each CA Report shall evaluate alternatives for addressing the impact to human health and the environment from hazardous substances, pollutants or contaminants at the Site.

The Respondent shall prepare and complete each EE/CA in compliance with the Settlement Agreement (AOC), this SOW, the Comprehensive Environmental Response, Compensation and

Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 C.F.R. Part 300) as amended and all requirements and consistent with USEPA guidance entitled, "Guidance on Conducting Non-Time critical Removal Actions Under CERCLA," EPA/540-R-93-057, Publication 9360.32, PB 93-963402, dated August 1993 (Guidance). Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing each EE/CA at the Peoples Gas MGP Sites, except as otherwise specified herein.

The objectives of the work required by this SOW are to:

- Determine the nature and extent of the release or threatened release of hazardous substances, pollutants, or contaminants at and from each Site. In performing this investigation, the Respondent shall gather sufficient data, samples, and other information to fully characterize the nature and extent of the contamination at each Site, to support the human health and ecological risk assessments, and to provide sufficient data for the identification and evaluation of remedial alternatives for each Site.
- Identify and evaluate alternatives for actions to protect human health and the environment by preventing, eliminating, controlling or mitigating the release or threatened release of hazardous substances, pollutants, or contaminants at and from each Site.

## **II. DOCUMENT REVIEW**

The Respondent shall submit all documents or deliverables required as part of this SOW to the U.S. EPA, with a copy to the Illinois Environmental Protection Agency (IEPA), for review and approval by U.S. EPA in accordance with Section VIII of the AOC. All documents will be submitted in accordance with the schedule established under Attachment A to this SOW.

## **III. TIMING OF EE/CAS**

There are a total of eleven different Sites addressed under this Settlement Agreement. For each Site, the Respondent will perform the tasks set forth in Section IV of the SOW. The schedule for the commencement and completion of each of the eleven EE/CA reports will be staggered with each Site having a different start and completion schedule. The schedule for the commencement of the EE/CA reports is set forth in Attachment A of this SOW.

## **IV. SCOPE:**

The Respondent shall complete the following tasks as part of the EE/CA for each Site in accordance with the schedule in Attachment A:

- Task 1: Project Scoping and EE/CA Planning Documents
- Task 2: Implementation of EE/CA Work Plan
- Task 3: EE Report
- Task 4: Treatability Study
- Task 5: CA Report
- Task 6: Progress Reports

Details regarding the aforementioned six tasks are specified below. It is expected that the Respondent will conduct each task (as appropriate) for each of the eleven MGP Sites. However, where a task may not be necessary for a specific site, or where a task and/or document may be applicable to more than one site, the Respondent may combine and/or eliminate tasks with the written approval of EPA.

## **TASK 1: PROJECT SCOPING AND EE/CA PLANNING DOCUMENTS**

### **1.1. Ongoing Work**

There is ongoing work at three Sites, specifically: the 22<sup>nd</sup> Street Station, Hough Place Station, and Pitney Court Station Sites. This work is being conducted by Respondent under a separate time-critical AOC. The need for any additional investigation work at a Site with ongoing work will be determined in the Site-Specific EE/CA Work Plan. The need for any additional response work in an area of ongoing work will be evaluated in the relevant CA Report.

### **1.2. Multi-Site EE/CA Documents**

The Respondent shall submit the Multi-Site EE/CA documents listed below. Prior to submittal of the Multi-Site EE/CA documents, the Respondent shall meet or confer with EPA to discuss the scope and likely content of each of the documents. The Respondent shall prepare the Multi-Site EE/CA planning documents to be consistent with applicable portions of the "Guidance for Conducting Non-Time Critical Removal Actions Under CERCLA," August, 1993.

The Multi-Site documents shall set forth general approaches and concepts with the intent of streamlining preparation of work plans and minimizing review times for future deliverables. An additional objective is to promote a consistent approach between the Sites, as appropriate. A Site-Specific Work Plan shall be prepared for each Site, based on site-specific conditions, but incorporating the Multi-Site documents by reference, modified as appropriate.

#### **1.2.1. Multi-Site Field Sampling Plan**

The Respondent shall prepare the Multi-Site Field Sampling Plan (FSP) portion of the EE/CA planning documents to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data meet Data Quality Objectives as established in the Multi-Site Quality Assurance Project Plan (QAPP) and FSP. All sampling and analyses performed shall conform to EPA direction, approval, and guidance regarding

sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. This document shall provide standard operating procedures (SOPs) for sampling activities. Site-Specific Work Plans will include supplemental SOPs if necessary, based on site specific conditions.

To the extent appropriate, the Multi-Site FSP will incorporate elements of dynamic field activities. Each Site-Specific Work Plan shall incorporate the elements of dynamic field activities set forth in the Multi-Site FSP, to the extent appropriate, based on site specific conditions. Dynamic field activities will be used to streamline Site activities with real-time data and real-time decisions in accordance with site specific QA/QC requirements. This approach, sometimes called the Triad approach, involves systematic planning, a dynamic work plan strategy, and real time field measurements. Dynamic field activities will be conducted consistent with OSWER No. 9200.1-40, *Using Dynamic Field Activities for On-Site Decision Making: A Guide for Project Managers*.

### **1.2.2. Multi-Site Quality Assurance Project Plan (QAPP)**

The Respondent shall prepare a Multi-Site QAPP that covers sample analysis and data handling for samples collected during the EE/CA, based on the AOC and guidance provided by EPA. The Respondent shall prepare the QAPP in accordance with "EPA Requirements of Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-02/009, December 2002). The QAPP may include Field-Based Analytical Methods, if appropriate and scientifically defensible.

The Respondent shall demonstrate, in advance to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media sampled within detection and quantification limits consistent with both QA/QC procedures and data quality objectives (DQO) approved in the QAPP. Site-specific DQOs for each Site will be detailed in the Site-Specific Work Plan. The laboratory must have and follow an approved QA program. If a laboratory not in the Contract Laboratory Program is selected, methods consistent with CLP methods that would be used at the Sites for the purposes proposed and QA/QC procedures approved by EPA shall be used. The Respondent shall only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA.

Upon request by EPA, the Respondent shall have its laboratory analyze samples submitted by EPA for quality assurance monitoring. The Respondent shall provide EPA with the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis. The Respondent shall also ensure the provision of analytical tracking information

consistent with OSWER Directive No. 9240.0-2B, *Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites*.

The Respondent shall participate in a pre-QAPP meeting or conference call with EPA. The purpose of this meeting or conference call is to discuss QAPP requirements and obtain any clarification needed to prepare the Multi-Site QAPP.

### **1.2.3. Generalized Conceptual Site Model**

The Respondent shall prepare a generalized Conceptual Site Model (CSM) that is applicable to former MGP Sites. The generalized CSM shall show potential contaminant sources, fate and transport routes, and exposures pathways for MGP Sites. Site-specific information will be used to refine the generalized CSM to tailor it for each Site. Evaluation of each site-specific CSM will be done in an iterative fashion, starting with the EE planning documents and continuing through completion of the CA.

### **1.2.4. Multi-Site Health and Safety Plan**

The Respondent shall prepare a Multi-Site Health and Safety Plan (HSP). Each Site-Specific Work Plan shall be based on the Multi-Site HSP, modified as necessary to reflect site-specific conditions. The HSP shall conform to the Respondent's health and safety program and comply with the Occupational Safety and Health Administration (OSHA) regulations and protocols outlined in 29 C.F.R. Part 1910. The HSP shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). The HSP shall include the 11 elements described in the RI/FS Guidance such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and Site control. EPA does not "approve" the Respondent's HSP, but rather EPA reviews it to ensure that all the necessary elements are included, and that the plan provides for the protection of human health and the environment, and after that review provides comments as may be necessary and appropriate. The safety plan must, at a minimum, follow the EPA's guidance document *Standard Operating Safety Guides* (Publication 9285.1-03, PB92-963414, June 1992).

## **1.3. Site-Specific EE/CA Planning**

### **1.3.1. Collect and Analyze Existing Data**

Before planning the EE/CA activities, the Respondent shall thoroughly compile and review all existing data for the Site. Existing Site data includes presently available data relating to the varieties and quantities of hazardous substances, pollutants and contaminants at the Site, past disposal practices, the results of previous sampling activities, conditions remaining after any previous response actions, and U.S. EPA's air photo analysis of the Site (if available).

### **1.3.2. Conduct Site Visit**

The Respondent shall visit the Site during the project scoping phase to develop a better understanding of the Site, and focus on the sources and the areas of contamination, as well as potential exposure pathways and receptors at the Site. During the Site visit, the Respondent shall observe, to the extent possible, the site's physiography, hydrology, geology, and demographics, as well as natural resource, ecological and cultural features. The Respondent shall coordinate this visit with the U.S. EPA Remedial Project Manager (RPM).

#### **1.4. Site-Specific EE/CA Work Plans**

For each Site the Respondent shall submit a Site-Specific Work Plan that addresses all data acquisition activities. The objective of this EE/CA support sampling is to determine the extent of contamination at each Site. The plan shall contain a description of equipment specifications, required analyses, sample types, and sample locations and frequency. As needed, the plan shall address specific hydrologic, hydrogeologic, and air transport characterization methods including, but not limited to, geologic mapping, geophysics, field screening, drilling and well installation, flow determination, and soil/water/sediment/sludge sampling to determine extent of contamination.

The Site-Specific Work Plan shall incorporate by reference the Multi-Site EE/CA Documents, modified as appropriate for site-specific concerns, and include a detailed description of the tasks the Respondent shall perform, the information needed for each task, a detailed description of the information the Respondent shall produce during and at the conclusion of each task, and a description of the work products that the Respondent shall submit to EPA including the deliverables set forth in this SOW; a schedule for each of the required activities; and a project management plan including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, requirements for submittal of electronic data, data format and backup data management, unless otherwise covered by the Multi-Site EE/CA documents).

The Site-Specific Work Plan shall include any appropriate site-specific modifications to the Multi-Site RI Documents, and include: DQOs; number and types of sampling locations; analytical, physical and/or biological tests; a site-specific CSM; any site-specific risk assessment considerations; a description of the Site management strategy developed by the Respondent and EPA during scoping; and data needs for fully characterizing the nature and extent of the contamination at the Site, evaluating risks and developing and evaluating removal alternatives. The Site-Specific Work Plan shall reflect coordination with treatability study requirements, if any. In addition, the Site-Specific EE/CA Work Plan shall include the following:

##### **1.4.1. Site Background**

A brief summary of the Site location, general Site physiography, hydrology and geology shall be included. A description of the data already available shall be included which will highlight the areas of known contamination and the levels detected. A summary of any previous response work shall be included. Tables shall be included to display the minimum and

maximum levels of detected contaminants across the Site. Appropriate figures shall also be provided.

#### **1.4.2. Data Gap Description**

The Respondent shall make an analysis of the currently available data to determine the areas of the Site which require additional data in order to define the extent of contamination for purposes of implementing a removal action. A description of the number, types, and locations of additional samples to be collected shall be included in this section of the sampling plan.

Descriptions of the following activities shall also be included, as necessary:

- **Conduct Site Reconnaissance.** The Respondent shall conduct:
  - Site surveys including property, boundary, utility rights-of-way, and topographic information
  - Land Survey
  - Topographic Mapping
  - Field Screening
  
- **Conduct Geological Investigations (Soils and Sediments).** The Respondent shall conduct geological investigations to determine the extent of hazardous substances, pollutants or contaminants in surface soils, subsurface soils and sediments at the Site. As part of this geological investigation Respondents shall:
  - Collect Surface Soil Samples
  - Collect Subsurface Soil Samples
  - Perform Soil Boring and Permeability Sampling
  - Collect Sediments Samples
  - Survey Soil Gases
  - Test Pit
  - Identify real-world horizontal, vertical, and elevation coordinates for all samples and site features in accordance with U.S. EPA Region 5 electronic data requirements
  
- **Air Investigations.** The Respondent shall conduct air investigations to determine the extent of atmospheric hazardous substances, pollutants or contaminants at and from the Site, which shall include:
  - Collect Air Samples
  - Establish Air Monitoring Station
  
- **Hydrogeological Investigations (Ground Water).** The Respondent shall conduct hydrogeological investigations of ground water to determine the horizontal and vertical distribution of hazardous substances, pollutants or contaminants in the groundwater and the extent, fate and transport of any groundwater plumes containing hazardous substances, pollutants or contaminants. The hydrogeological investigation shall include:

- Install Well Systems
  - Collect Samples from Upgradient, Downgradient, Private and Municipal wells
  - Collect Samples During Drilling (e.g., HydroPunch or Equivalent)
  - Conduct Tidal Influence Study
  - Perform Hydraulic Tests (such as Pump Tests, Slug Tests and Grain Size Analyses)
  - Measure Ground-Water Elevations and determine horizontal and vertical sample locations in accordance with U.S. EPA Region 5 electronic data requirements
  - Modeling
  - Determine the direction of regional and local groundwater flow
  - Identify the local uses of groundwater including the number, location, depth and use of nearby private and municipal wells
- Conduct Hydrogeological Investigations (Surface Water). The Respondent shall conduct hydrogeological investigations to determine the nature and extent of contamination of surface water from the Site. The hydrogeological investigation shall include:
    - Collect Samples
    - Measure Surface-Water Elevation
- Conduct Waste Investigation. The Respondent shall characterize the waste materials at the Site. Respondent shall conduct the following activities as part of these waste investigations.
    - Collect Samples (Gas, Liquid, Solid)
    - Dispose of Derived Waste (Gas, Liquid, Solid)
- Conduct Geophysical Investigation. The Respondent shall conduct geophysical investigations to delineate waste depths, thicknesses and volume; the elevations of the underlying natural soil layer and the extent of cover over fill areas including the following, as appropriate:
    - Surface Geophysical Activity
    - Magnetometer
    - Electromagnetic
    - Ground-Penetrating Radar
    - Seismic Refraction
    - Resistivity
    - Site Meteorology
    - Cone Penetrometer Survey
    - Remote Sensor Survey
    - Radiological Investigation
    - Test Pits, trenches and soil borings
- Conduct Ecological Investigation. The Respondent shall conduct ecological investigations to assess the impact to aquatic and terrestrial ecosystems from the disposal,

release and migration of hazardous substances, pollutants or contaminants at the Site including:

- Wetland and Habitat Delineation
  - Wildlife Observations
  - Community Characterization
  - Endangered Species Identification
  - Biota Sampling and Population Studies
- Dispose of Investigation-Derived Waste. The Respondent shall characterize and dispose of investigation-derived wastes in accordance with local, state, and federal regulations as specified in the FSP (see the Fact Sheet, *Guide to Management of Investigation-Derived Wastes*, 9345.3-03FS (January 1992)).

#### **1.4.3. Evaluate and Document the Need for Treatability Studies.**

If the Respondent or U.S. EPA identify actions that involve treatment, the Respondent shall include treatability studies as outlined in Task 4 of this SOW unless the Respondent satisfactorily demonstrates to U.S. EPA that such studies are not needed. When treatability studies are needed, the Respondent shall plan initial treatability testing activities (such as research and study design) to occur concurrently with Site characterization activities.

#### **1.4.4. Sampling Procedures**

The Respondent shall include a description of the depths of sampling, parameters to be analyzed, equipment to be used, decontamination procedures to be followed, sample quality assurance, data quality objectives and sample management procedures to be utilized in the field.

#### **1.4.5. Schedule**

The general schedule for the conduct of an EE/CA is provided in Attachment A to this SOW. The Respondent may include a revised, site-specific schedule which identifies timing for initiation and completion of all tasks to be completed as part of the EE/CA Support Sampling Plan.

### **TASK 2: IMPLEMENTATION OF EE/CA WORK PLAN**

The Respondent shall conduct the EE/CA activity according to the approved Site-Specific Work Plan and schedule. The Respondent shall coordinate activities with U.S. EPA's RPM. The Respondent shall provide the RPM with all laboratory data.

A separate EE report will be prepared for each Site. The EE shall be completed in accordance with the following requirements:

### **3.1 Executive Summary**

The Executive Summary shall provide a general overview of the contents of the EE. It shall contain a brief discussion of the Site and the current and/or potential threat posed by conditions at the Site. It shall also identify the scope and objectives of the action and the alternatives.

### **3.2 Site Characterization**

The EE shall summarize available data on the physical, demographic, and other characteristics of the Site and the surrounding areas. Specific topics which shall be addressed in the site characterization are detailed below. The site characterization shall concentrate on those characteristics necessary to evaluate and select an appropriate remedy.

#### **3.2.1 Site Description and Background**

The site description includes current and historical information. The following types of information shall be included, where available and as appropriate, to the site-specific conditions and the scope of the removal action.

- Site Location and Physical Setting
- Present and Past Facility Operations
- Geology/Hydrology/Hydraulics
- Surrounding Land Use and Populations
- Sensitive Ecosystems
- Meteorology

#### **3.2.2 Previous Response Actions**

The site characterization section shall also describe any previous response actions at the site. Previous information, if relevant, shall be organized as follows:

- The scope and objectives of the previous response action
- The amount of time spent on the previous response action
- The nature and extent of hazardous substances, pollutants, or contaminants treated or controlled during the previous response action
- The technologies used and/or treatment levels used for the previous response action.
- For any on-going action, the scope and duration of such action

### **3.2.3 Source, Nature and Extent of Contamination**

This section shall summarize the extent of contamination at the Site, including the location(s) of the hazardous substance(s), pollutant(s), or contaminant(s); the quantity, volume, size or magnitude of the contamination; and the physical and chemical attributes of the hazardous pollutant(s) or contaminant(s).

### **3.2.4 Analytical Data**

This section shall present the available data. The EE data shall also be presented electronically according to U.S. EPA Region 5 format requirements.

## **3.3 Risk Evaluation**

### **3.3.1 Baseline Human Health Risk Assessment**

As an attachment to the EE Report, the Respondent shall submit a Baseline Human Health Risk Assessment Report. The Respondent shall conduct the baseline risk assessment to determine whether site contaminants pose a current or potential risk to human health and the environment in the absence of any action. The major components of the Baseline Risk Assessment include contaminant identification, exposure assessment, toxicity assessment, and human health and ecological risk characterization.

Respondent shall conduct a baseline human health risk assessment that focuses on actual and potential risks to persons coming into contact with on-site hazardous substances, pollutants or contaminants as well as risks to the nearby residential, recreational and industrial worker populations from exposure to hazardous substances, pollutants or contaminants in groundwater, soils, sediments, surface water, air, and ingestion of contaminated organisms in nearby, impacted ecosystems. The human health risk assessment shall define central tendency and reasonable maximum estimates of exposure for current land use conditions and reasonable future land use conditions. The human health risk assessment shall use data from the Site and nearby areas to identify the contaminants of concern (COC), provide an estimate of how and to what extent human receptors might be exposed to these COCs, and provide an assessment of the health effects associated with these COCs. The human health risk assessment shall project the potential risk of health problems occurring if no cleanup action is taken at the Site and/or nearby areas, and establish target action levels for COCs (carcinogenic and non-carcinogenic).

Respondent shall conduct the human health risk assessment in accordance with U.S. EPA guidance including, at a minimum: "Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part A)," Interim Final (EPA-540-1-89-002)," OSWER Directive 9285.7-01A; December 1, 1989; and "Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part D, Standardized Planning,

Reporting, and Review of Superfund Risk Assessments),” Interim, (EPA 540-R-97-033), OSWER 9285.7-01D, January, 1998 or subsequently issued guidance.

Respondent shall also conduct the human health risk assessment in accordance with the following additional guidance found in the following ISAPI OSWER directives:

- 1) “Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities,” OSWER Directive 9200.4-27; August, 1998,
- 2) “Implementation of the Risk Assessment Guidance for Superfund (RAGS) Volume I - Human Health Evaluation Manual, (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments) (Interim),” OSWER Directive 9285.7-01D-1; December 17, 1997,
- 3) “Soil Screening Guidance: Technical Background Document,” OSWER Directive 9355.4-17A; May 1, 1996 and “Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, OSWER Directive 9355.4; March 24, 2001,
- 4) “Soil Screening Guidance: User’s Guide,” Publication 9355.4-23; April, 1996,
- 5) “Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities,” OSWER Directive 9355.4-12; July 14, 1994,
- 6) “Guidance Manual for the Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children,” Publication 9285.7-15-1; February, 1994, and associated, clarifying Short Sheets on IEUBK Model inputs, including but not limited to OSWER 9285.7-32 through 34, as listed on the OSWER lead internet site at [www.epa.gov/superfund/programs/lead/prods.htm](http://www.epa.gov/superfund/programs/lead/prods.htm),
- 7) “Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children,” Version 0.99D, NTIS PB94-501517, 1994 or “Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children,” Windows© version, 2001,
- 8) “Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual: (Part B, Development of Risk-based Preliminary Remediation Goals),” Interim, OSWER Directive 9285.7-01B; December, 1991,
- 9) “Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors,” OSWER Directive 9285.6-03; March 25, 1991, and
- 10) “Exposure Factors Handbook,” Volumes I, II, and III; August 1997 (EPA/600/P-95/002Fa,b,c).

Respondent shall also comply with the guidance on assessing human health risk associated with adult exposures to lead in soil as found in the following document: "Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil," December, 1996. This document may be downloaded from the Internet at the following address: [www.epa.gov/superfund/programs/lead/prods.htm](http://www.epa.gov/superfund/programs/lead/prods.htm).

Respondent shall also comply with the "Superfund Lead- Contaminated Residential Sites Handbook," December 2002 by the U.S. EPA Lead Sites Workgroup.

Additional applicable or relevant guidance may be used only if approved by U.S. EPA.

Respondent shall prepare the Human Health Risk Assessment Report according to the guidelines outlined below:

- Hazard Identification (sources). The Respondent shall review available information on the hazardous substances present at the site and identify the major contaminants of concern.
- Dose-Response Assessment. The Respondent shall select contaminants of concern based on their intrinsic toxicological properties.
- Conceptual Exposure/Pathway Analysis. The Respondent shall identify and analyze critical exposure pathways (e.g., drinking water). The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.
- Characterization of Site and Potential Receptors. The Respondent shall identify and characterize human populations in the exposure pathways.
- Exposure Assessment. The exposure assessment will identify the magnitude of actual or potential human exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the Respondent shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the site.
- Risk Characterization. During risk characterization, Respondent shall compare chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the site are affecting or could potentially affect human health.
- Identification of Limitations/Uncertainties. The Respondent shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.
- Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the Respondent shall develop a conceptual model of the site.

### **3.3.2 Baseline Ecological Risk Assessment**

As an attachment to the EE Report, the Respondent shall submit a Baseline Ecological Risk Assessment Report. In the Ecological Risk Assessment Report, the Respondent shall evaluate and assess the risk to the environment posed by site contaminants. Respondent shall prepare the Ecological Risk Assessment Report in accordance with U.S. EPA guidance including, at a minimum: "Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments, (EPA-540-R-97-006, June 1997), OSWER Directive 9285.7-25 and shall follow the guidelines outlined below:

- Hazard Identification (sources). The Respondent shall review available information on the hazardous substances present at the site and identify the major contaminants of concern.
- Dose-Response Assessment. The Respondent must select contaminants of concern based on their intrinsic toxicological properties.
- Conceptual Exposure/Pathway Analysis. Critical exposure pathways (e.g., surface water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.
- Characterization of Site and Potential Receptors. The Respondent shall identify and characterize environmental exposure pathways.
- Selection of Chemicals, Indicator Species, and End Points. In preparing the assessment, the Respondent will select representative chemicals, indicator species (species that are especially sensitive to environmental contaminants), and end points on which to concentrate.
- Exposure Assessment. In the exposure assessment, Respondent must identify the magnitude of actual or environmental exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the Respondent shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the site.
- Toxicity Assessment/Ecological Effects Assessment. The toxicity and ecological effects assessment will address the types of adverse environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects, and the related uncertainties for contaminant toxicity (e.g., weight of evidence for a chemical's carcinogenicity).
- Risk Characterization. During risk characterization, Respondent shall compare chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the site are affecting or could potentially affect the environment.

- Identification of Limitations/Uncertainties. The Respondent shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.
- Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the Respondent shall develop a conceptual model of the site.

### **3.4 Current and Future Land Uses and Reuse Assessment**

As an Attachment to the EE Report, Respondent shall submit a Memorandum that evaluates the current and reasonably anticipated future land uses at the Site. The Memorandum shall identify: 1) past uses at the site including title and lien information; 2) current uses of the Site and neighboring areas; 3) the owner's plans for the Site following cleanup and any prospective purchasers; 4) applicable zoning laws and ordinance; 5) current zoning; 6) applicable local area land use plans, master plans and how they affect the site; 7) existing local restrictions on property; 8) property boundaries; 9) groundwater use determinations, wellhead protection areas, recharge areas and other areas identified in the state's Comprehensive Ground Water Protection Program; 10) Flood plains, wetland, or endangered or threatened species; and 11) utility rights of way.

If U.S. EPA, in its sole discretion, determines that a Reuse Assessment is necessary, Respondent will perform the Reuse Assessment in accordance with U.S. EPA guidance, including, but not limited to: "Reuse Assessments: A Tool To Implement The Superfund Land Use Directive, OSWER 9355.7-06P, June 4, 2001 upon request of U.S. EPA. The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for the Site.

### **TASK 4: TREATABILITY STUDIES**

If U.S. EPA determines that treatability testing is necessary, the Respondent shall conduct treatability studies as described in this Task 4 of this SOW. In addition, if applicable, the Respondent shall use the testing results and operating conditions in the detailed design of the selected remedial technology. The Respondent shall perform the following activities.

#### **4.1 Determine Candidate Technologies and the Need for Testing**

The Respondent shall submit a Candidate Technologies and Testing Needs Technical Memorandum that identifies candidate technologies for a treatability studies program no later than at the time of submittal of the draft EE Report. The list of candidate technologies shall cover the range of technologies required for alternatives analysis. The Respondent shall determine and refine the specific data requirements for the testing program during Site characterization and the development and screening of remedial alternatives.

#### **4.1.1 Conduct Literature Survey and Determine the Need for Treatability Testing**

Within the Candidate Technologies and Testing Needs Technical Memorandum, the Respondent shall conduct a literature survey to gather information on the performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. Respondent shall conduct treatability studies except where Respondent can demonstrate to U.S. EPA's satisfaction that they are not needed.

#### **4.2 Treatability Testing and Deliverables**

##### **4.2.1 Treatability Testing Work Plan and Sampling and Analysis Plan (SAP)**

If U.S. EPA determines that treatability testing is necessary, U.S. EPA will decide on the type of treatability testing to use (e.g., bench versus pilot). Within 30 days of a request of U.S. EPA, the Respondent shall submit a Treatability Testing Work Plan and a SAP, or amendments to the original EE/CA Work Plan, FSP and QAPP that describes the Site's background, where the treatability testing is necessary, the technology to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The Respondent shall document the DQOs for treatability testing as well. If pilot scale treatability testing is to be performed, the Treatability Study Work Plan shall describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, operating conditions to be tested, a sampling plan to determine pilot plant performance, and a detailed health and safety plan. If testing is to be performed off-Site, the plans shall address all permitting requirements.

##### **4.2.2 Treatability Study Health and Safety Plan**

If the original Health and Safety Plan is not adequate for defining the activities to be performed during the treatability tests, the Respondent shall submit a separate or amended Health and Safety Plan. U.S. EPA and IEPA review, but do not "approve" the Treatability Study Health and Safety Plan.

##### **4.2.3 Treatability Study Evaluation Report**

Following the completion of the treatability testing, the Respondent shall analyze and interpret the testing results in a technical report. Respondent shall submit the treatability study report according to the schedule in the Treatability Study Work Plan. This report may be a part of the EE Report or submitted as a separate deliverable. The Treatability Study Evaluation Report shall evaluate each technology's effectiveness, implementability and cost, and actual results as compared with predicted results. The report shall also evaluate full scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

#### **TASK 5: COST ANALYSIS REPORT**

For each Site the Respondent shall conduct and present a detailed analysis of remedial alternatives to provide U.S. EPA with the information needed to select a Site remedy.

**5.1. Site-Specific Alternatives Screening Technical Memorandum**

The Respondent shall prepare and submit a technical memorandum for this task. A Site-Specific Alternatives Screening Technical Memorandum shall be submitted in accordance with the Schedule in Exhibit A to this SOW. Comments on the Site-Specific Alternatives Screening shall be addressed in the draft CA.

The Site-Specific Alternatives Screening Technical Memorandum shall summarize the work performed and the results of each of the above tasks, and shall include an alternatives array summary. If required by U.S.EPA, the Respondent shall modify the alternatives array to assure that the array identifies a complete and appropriate range of viable alternatives to be considered in the detailed analysis. The Alternatives Screening Technical Memorandum shall document the methods, the rationale and the results of the alternatives screening process, and shall include:

**5.1.1. Action Objectives**

The Respondent shall develop site-specific Action Objectives (AOs). Based on the baseline human health and ecological risk assessments, the Respondent shall document the site-specific AOs which shall specify the contaminants and media of concern, potential exposure pathways and receptors, and contaminant level or range of levels (at particular locations for each exposure route) that are protective of human health and the environment. AOs shall be developed by considering the factors set forth in 40 C.F.R. § 300.430(e)(2)(i).

**5.1.2. Identify Areas or Volumes of Media**

In the Site-Specific Alternatives Screening Technical Memorandum, the Respondent shall identify areas or volumes of media to which response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The Respondent shall also take into account the chemical and physical characterization of the Site.

**5.1.3. Identify, Screen, and Document Remedial Technologies**

Based on the Preliminary Remedial Technology Screening Document, in the Site-Specific Alternatives Screening Technical Memorandum, the Respondent shall identify and evaluate applicable technologies and eliminate those that cannot be implemented at the Site. The Respondent shall evaluate process options on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The Respondent shall summarize and include the technology types and process options in the Site-Specific Alternatives Screening Technical Memorandum. Whenever

practicable, the alternatives shall also consider the CERCLA preference for treatment over conventional containment or land disposal approaches.

#### **5.1.4 Alternatives Analysis for Institutional Controls**

For any Alternatives that relies on Institutional Controls, Respondent shall include in the Alternatives Screening Technical Memorandum an evaluation of the following: 1) *Overall Protection of Human Health and the Environment* including what specific institutional control components will ensure that the alternative will remain protective and how these specific controls will meet remedial action objectives; 2) *Compliance with ARARs*; 3) *Long Term Effectiveness* including the adequacy and reliability of institutional controls and how long the institutional control must remain in place; 4) *Short Term Effectiveness* including the amount of time it will take to impose the Institutional Control; 5) *Implementability* including research and documentation that the proper entities (e.g., potentially responsible parties, state, local government entities, local landowners conservation organizations) are willing to enter into any necessary agreement or restrictive covenant with the proper entities and/or that laws governing the restriction exist or allow implementation of the institutional control; 6) *Cost* including the cost to implement, maintain, monitor and enforce the institutional control; 7) *State and Community acceptance* of the Institutional Control.

#### **5.1.5. Assemble and Document Alternatives**

The Respondent shall assemble the selected representative technologies into alternatives for each affected medium or operable unit. Together, all of the alternatives shall represent a range of treatment and containment combinations that shall address either the Site or the operable unit as a whole. The Respondent shall prepare a summary of the assembled alternatives and their related ARARs. If necessary, the Respondent shall conduct the screening of alternatives to assure that only the alternatives with the more favorable composite evaluation of all factors are retained for further analysis. As appropriate, the screening shall preserve the range of treatment and containment alternatives that was initially developed. The Respondent shall specify the reasons for eliminating alternatives during the preliminary screening process.

### **5.2 Cost Analysis Report**

The Respondent shall prepare and submit a CA Report to provide U.S. EPA the information needed to select a Site remedy. The CA report shall summarize the development and screening of the remedial alternatives and present the detailed analysis of remedial alternatives in which the alternatives shall be evaluated against the short- and long-term aspects of three broad criteria: effectiveness, implementability, and cost.

#### **5.2.1 Effectiveness**

The effectiveness of an alternative refers to its ability to meet the objective regarding the scope of the action. The "Effectiveness" discussion for each alternative shall evaluate the degree to

which the technology would mitigate threats to public health and the environment. Criteria to be considered include:

**5.2.1.1 Overall Protection of Public Health and the Environment:** How well each alternative protects public health and the environment shall be discussed in a consistent manner. Assessments conducted under other evaluation criteria, including long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs shall be included in the discussion. Any unacceptable short-term impacts shall be identified. The discussion shall focus on how each alternative achieves adequate protection and describe how the alternative will reduce, control, or eliminate risks at the Site through the use of treatment, engineering, or institutional controls.

**5.2.1.2 Compliance with ARARs and Other Criteria, Advisories, and Guidance:** The detailed analysis shall summarize which requirements are applicable or relevant and appropriate to an alternative and describe how the alternative meets those requirements. A summary table may be employed to list potential ARARs. In addition to ARARs, U.S. EPA may identify other Federal or State advisories, criteria, or guidance to be considered (TBC) for a particular release.

**5.2.1.3 Long-Term Effectiveness and Permanence:** This evaluation assesses the extent and effectiveness of the controls that may be required to manage risk posed by treatment residuals and/or untreated wastes at the site. The following components shall be considered for each alternative: magnitude of risk, and, adequacy and reliability of controls.

**5.2.1.4 Reduction of Toxicity, Mobility, or Volume Through Treatment:** U.S. EPA's policy of preference for treatment requires evaluation based upon the following subfactors for a particular alternative:

- The treatment process(es) employed and the material(s) it will treat
- The amount of the hazardous materials to be destroyed or treated
- The degree of reduction expected in toxicity, mobility, or volume
- The degree to which treatment will be irreversible
- The type and quantity of residuals that will remain after treatment
- Whether the alternative will satisfy the preference for treatment

**5.2.1.5 Short-Term Effectiveness:** The short-term effectiveness criterion addresses the effects of the alternative during implementation before the AOs have been met. Alternatives shall also be evaluated with respect to their effects on human health and the environment following implementation. The following factors shall be addressed as appropriate for each alternative:

- Protection of the Community

- Protection of the Workers
- Environmental Impacts
- Time Until AOs are Achieved

### **5.2.2 Implementability**

This section is an assessment of the implementability of each alternative in terms of the technical and administrative feasibility and the availability of the goods and services necessary for each alternative's full execution. The following factors shall be considered under this criterion.

5.2.2.1 Technical Feasibility: The degree of difficulty in constructing and operating the technology; the reliability of the technology, the availability of necessary services and materials; the scheduling aspects of implementing the alternatives during and after implementation; the potential impacts on the local community during construction operation; and the environmental conditions with respect to set-up and construction and operation shall be described. Potential future actions shall also be discussed. The ability to monitor the effectiveness of the alternatives may also be described.

5.2.2.2 Administrative Feasibility: The administrative feasibility factor evaluates those activities needed to coordinate with other offices and agencies. The administrative feasibility of each alternative shall be evaluated, including the need for off-site permits, adherence to applicable nonenvironmental laws, and concerns of other regulatory agencies. Factors that shall be considered include, but are not limited to, the following: statutory limits, permits and waivers.

5.2.2.3 Availability of Services and Materials: The CA must determine if off-site treatment, storage, and disposal capacity, equipment, personnel, services and materials, and other resources necessary to implement an alternative shall be available in time to maintain the schedule.

5.2.2.4 State and Community Acceptance: U.S. EPA shall consider and address State and community acceptance of an alternative.

### **5.2.3 Cost**

Each alternative shall be evaluated to determine its projected costs. The evaluation should compare each alternative's capital and operation and maintenance costs. The present worth of alternatives should be calculated.

5.2.3.1 Direct Capital Costs: Costs for construction, materials, land, transportation, analysis of samples, treatment shall be presented.

5.2.3.2 Indirect Capital Costs: Cost for design, legal fees, permits shall be presented.

5.2.3.3 Long-Term Operation and Maintenance Costs: Costs for maintenance and long-term monitoring shall be presented.

#### **5.2.4 Comparative Analysis of Action Alternatives**

Once action alternatives have been described and individually assessed against the evaluation criteria described in Section 5, above, a comparative analysis shall be conducted to evaluate the relative performance of each alternative in relation to each of the criteria.

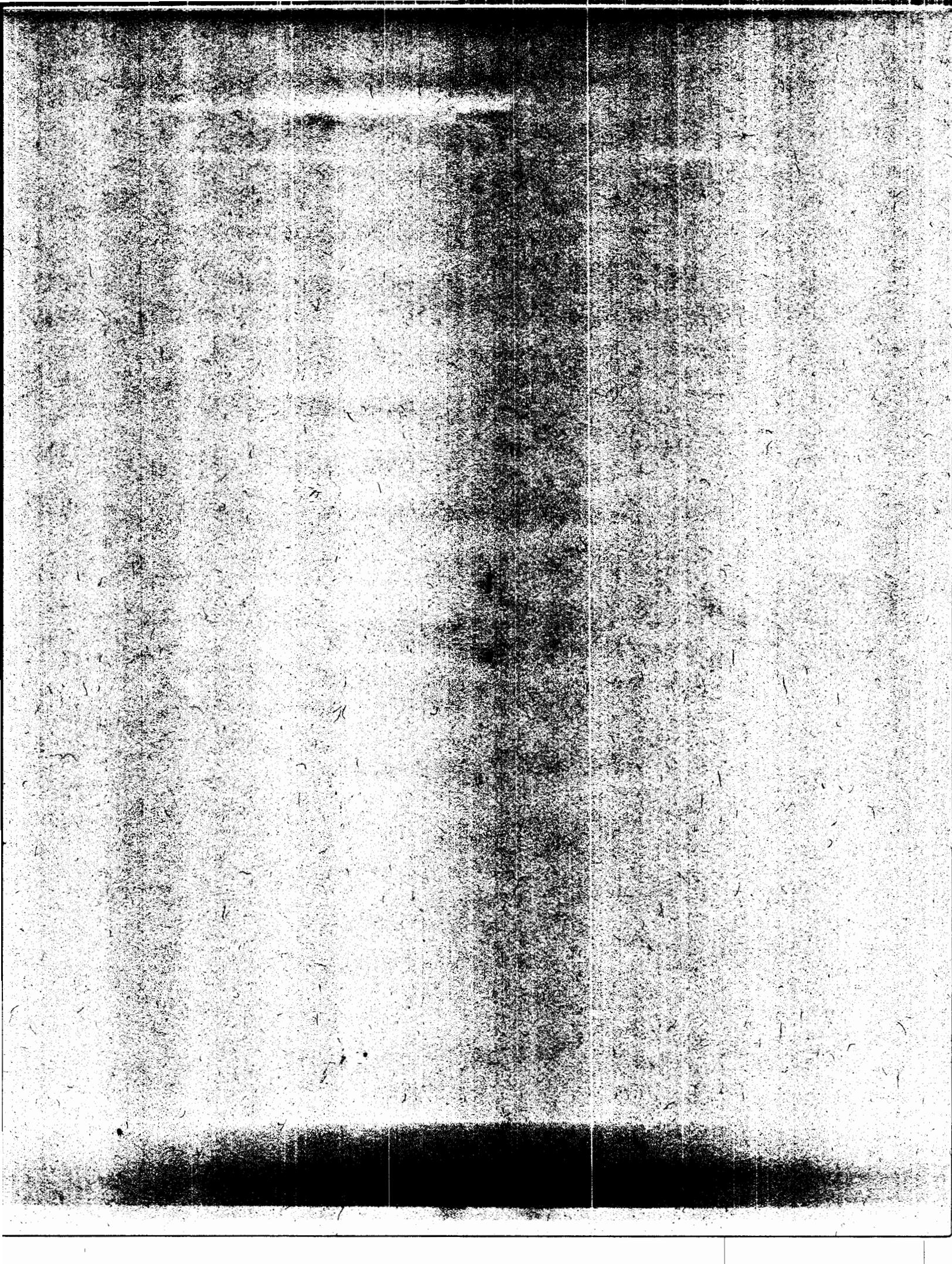
### **TASK 6: PROGRESS REPORTS**

#### **6.1 Site-Specific Monthly Progress Reports**

The Respondent shall submit site-specific monthly written progress reports to U.S.EPA and IEPA concerning actions undertaken pursuant to the AOC and this SOW, in accordance with the Schedule in Exhibit A to this SOW, unless otherwise directed in writing by the RPM. These reports shall include, but not be limited to, a description of all significant developments during the preceding period, including the specific work that was performed and any problems that were encountered; a paper and electronic copies (formatted according to EPA specifications) and summary of the analytical data that was received during the reporting period; and the developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and actual or planned resolutions of past or anticipated problems. The site-specific monthly progress reports will summarize the field activities conducted each month including, but not limited to drilling and sample locations, depths and descriptions; boring logs; sample collection logs; field notes; problems encountered; solutions to problems; a description of any modifications to the procedures outlined in the Work Plans, with justifications for the modifications; a summary of all data received during the reporting period and the analytical results; and upcoming field activities. In addition, the Respondent shall provide the RPM (or the entity designated by the RPM) with all laboratory data within the monthly progress reports and in no event later than 90 days after samples are shipped for analysis.

#### **6.2 Annual Progress Reports**

In accordance with the Schedule in Attachment A to this SOW, the Respondent shall submit Annual Progress Reports to U.S.EPA and IEPA. These reports shall address all of the eleven MGP Sites and shall summarize overall progress in completing the Work required by this AOC and SOW. The Annual Progress Reports are intended to be a concise summary of the progress of the Work, and will continue until termination of the AOC, unless otherwise directed in writing by U.S.EPA.



**ATTACHMENT A  
SCHEDULE FOR MAJOR DELIVERABLES**

**A. Project Start Dates**

The AOC and SOW establish requirements for an EE/CA at each of eleven MGP Sites located in Illinois. Each of the Sites has been, or will be, assigned a unique Project Start Date that triggers the site-specific EE/CA work for that Site. The following Project Start Dates have been established:

- Willow Street Station Site – 150 days after the effective date of the AOC
- South Station Site – 270 days after the effective date of the AOC
- Division Street Station Site – 390 days after the effective date of the AOC

No later than 1 year after the effective date of the AOC, U.S.EPA will propose project start dates for the remaining Sites by an evaluation of the Master Schedule as established under Sections C and D. The Project Start Dates and Site prioritization are subject to review through periodic evaluation of the Master Schedule.

**B. General Schedule**

The following general schedule shall apply to the EE/CA for each Site. The general schedule for a specific Site may be modified when: 1) a different schedule is approved by EPA in a Site-Specific Work Plan, Treatability Testing Work Plan, or other EPA approved document; or 2) the Respondent submits in writing a request for a site-specific extension or schedule modification, and EPA approves any such request.

<b>DELIVERABLE</b>	<b>DUE DATE</b>
TASK 1.2 – Multi-Site EE/CA documents, including QAPP, FSP, Generalized CSM, and HSP	Draft Multi-Site HSP and Generalized CSM due 60 days after the effective date of the AOC. Draft Multi-Site FSP and QAPP due 90 days after the effective date of the AOC. Final Multi-Site RI Documents due 45 days after EPA direction to modify pursuant to Section VIII of the AOC
TASK 1.4 – Site-Specific EE/CA Work Plan	Site-Specific EE/CA Work Plan for each Site due 90 days after its Project Start Date. Final Site-Specific Work Plan due 45 days after EPA direction to modify pursuant to Section VIII of the AOC.

<b>DELIVERABLE</b>	<b>DUE DATE</b>
TASK 3 - EE Report	Draft EE Report due one year following EPA approval of the EE/CA Work Plan, or on a schedule approved in the EE/CA Work Plan. Final EE Report due 45 days after receipt of EPA's direction to modify pursuant to Section VIII of the AOC.
TASK 4.1 - Candidate Technologies and Testing Needs Technical Memorandum	With the draft EE/CA Planning Documents (Task 4).
TASK 4.2.1 - Treatability Testing Work Plan and SAP or Amendments to the Original Site-Specific Work Plan.	Within 45 days of request of EPA. Final documents due 45 days after receipt of EPA's direction to modify pursuant to Section VIII of the AOC.
TASK 4.2.2 - Treatability Testing Health and Safety Plan or Amendment to the Original Health and Safety Plan	Within 30 days of request of EPA. Final document due thirty calendar days after receipt of EPA's direction to modify pursuant to Section VIII of the AOC.
TASK 4.2.3 - Treatability Study Evaluation Report	Draft due with the draft EE Report (Task 4), or as approved by EPA in the Treatability Testing Work Plan. Final Treatability Study Evaluation Report due 45 days after receipt of EPA's direction to modify pursuant to Section VIII of the AOC.
TASK 5.1 – Site-Specific Alternatives Screening Technical Memorandum	60 days after submittal of the draft EE Report.
TASK 5.2 - CA Report	CA Report due 45 days after receipt of EPA's comments on the Site-Specific Alternatives Screening Technical Memorandum. Final CA Report due 45 days after receipt of EPA's direction to modify pursuant to Section VIII of the AOC.
TASK 6.1 - Site-Specific Monthly Progress Reports	For each Site, on the 15 <sup>th</sup> day of each month or the first business day after the 15 <sup>th</sup> of the month commencing 90 days after the Project Start Date and continuing until EPA issues the Action Memorandum or other decision document for the Site.
TASK 6.2 – Annual Progress Reports	Due one year after the effective date of the AOC and every year thereafter.

<b>DELIVERABLE</b>	<b>DUE DATE</b>
Miscellaneous Documents	In accordance with the submittal date provided by RPM.

**C. Master Schedule**

In addition to the General Schedule for each EE/CA at each Site, the Respondent shall maintain a Master Schedule that includes the EE/CA activities for all of the eleven Sites. The first Master Schedule shall be submitted within thirty days of the effective date of the AOC. The Master Schedule shall be updated within fifteen days of EPA approval of a document or plan that provides a Site-specific modification to the General Schedule.

**D. Periodic Evaluation of the Master Schedule**

On a periodic basis, starting one year after the effective date of the AOC and every year thereafter, either the Respondent or EPA, or each of them, may submit an evaluation with modifications to the Master Schedule. These periodic evaluations may address such matters as the priorities between Sites (reflected in the Project Start Dates), minimizing the time between project start and remedial action, and whether the Master Schedule should allow parallel activities at two or more Sites. Each such evaluation shall be submitted to the other party in writing and shall state the reasons for any proposed changes. No modification will be made to the existing Master Schedule without EPA approval. Changes to the Project Start Dates and prioritization will be considered and may be approved by EPA. In evaluating changes to the Project Start Dates and/or prioritization, EPA will give primary weight to the relative risks of the Sites with emphasis on the potential risks associated with human exposure to pollutants and contaminants. Other factors to be considered include multi-site management issues, the need to efficiently allocate available resources, the need for interim responses to releases or potential releases of pollutants or contaminants, or other matters EPA deems appropriate. If EPA rejects or modifies a proposed modification to the Master Schedule submitted by Respondent, or if Respondent objects to a proposed modification to the Master Schedule submitted by EPA, Respondent may invoke the Dispute Resolution procedures contained in Section XV of the AOC.

## Case Conclusion Data Sheet

[Please click here for instructions for completing the form](#)

Program Contact: Timothy Prendiville  
Phone: 6-5122

ORC Attorney: Peter Felitti  
Phone: 6-5114

Status:  Draft  Final  Update

### CASE BACKGROUND

1. ICIS Enforcement Activity Number:
2. Regional Hearing Clerk Docket Number:
3. Program Docket Number:
4. Judicial Court Docket Number:
- \*5. Case Name (Add Defendants if other than case name) IN THE MATTER OF:  
Peoples Gas Manufactured Gas Plant Sites  
Additional Defendants :

### FACILITY INFORMATION

6. EPA Program Facility ID:
- \*7. Facility Name:

22nd Street Station (the "22nd Street Station Site") located at 2200 South Racine Avenue, Chicago, Illinois; North Station (the "North Station Site") located in the area bounded by North Crosby, West Division, and West Hobbie Streets and the North Branch Canal of the Chicago River system in Chicago, Illinois; Division Street Station (the "Division Street Station Site") located at 1241 West Division Street, Chicago, Illinois; Crawford Station (the "Crawford Station Site") located at 3500 South Pulaski Road, Chicago, Illinois; Hawthorne Avenue Station (the "Hawthorne Avenue Station Site") located on the northwest corner of the intersection of Marcey Street and Willow Street in Chicago, Illinois; Hough Place Station (the "Hough Place Station Site") located at 2500 S. Corbett St., Chicago, Illinois; North Shore Avenue Station (the "North Shore Avenue Station Site") located in the Rogers Park Township of Chicago, Illinois; Pitney Court Station (the "Pitney Court Station Site") located at 3052 Pitney Court, Chicago, Illinois; South Station (the "South Station Site") located near the intersection of Eleanor and Loomis Streets, Chicago, Illinois; Throop Street Station (the "Throop Street Station Site") located at the intersection of South Throop Street, South Eleanor Street, and West 25th Street, Chicago, Illinois; and Willow Street Station (the "Willow Street Station Site") located west of the intersection of Willow Street and North Kingsbury Street in Chicago, Illinois.

- \*8. Facility Street Address:  
City, State, Zipcode: chicago, IL  
County: Cook

- \*9. Primary 4-digit NAICS/SICCode:
10. Other 4-digit NAICS/SIC codes:

### STATUTES AND AUTHORIZING SECTION INFORMATION

- \*Media Program CERCLA
- \*11. Statute(s) and Section(s) Violated: CERCLA 107
- \*12. Authorizing Section for Administrative Actions: CERCLA 106

**\*Violation Type :**

**ACTION TYPE**

- \*13. Action Type: **Administrative compliance order (AOC/UAO/PPA)**
- 14a. ALJ Decision :
- 14b. EAB Appeal Date :
- 14c. EAB Decision Date :
- \*16. Administrative Compliance Order Date:
- \*16a. Notice of Determination Date:
  
- \*16b. Field Citation Date:
- 16c. Notice of Violation Date:

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- 17. Civil Judicial Referral Date:
- 18. Civil Judicial Complaint Filed :
- 19. Consent Decree Lodge Date:
- \*20. Consent Decree Entry Date:
  
- 21. Was this a multi-media action?  Yes  No
- 23. Was this action part of a geographic initiative:  Yes  No
- 24. Which (Check all that apply)?
- 24a. Priority/Sector
- 25. Was this Agency activity taken in response to Environmental Justice Concerns?  Yes  No
- 26. Is this a Small Business?  Yes  No
- 26a. Was this a self-disclosure?  Yes  No
- 27. Was Alternative Dispute Resolution used in this action?  Yes  No

**QUALITATIVE AND QUANTITATIVE INFORMATION**

\*28. Injunctive Relief/Compliance Activity: Include both actions completed prior to final settlement/order and actions to be taken by violator to return to compliance or meet additional requirements. Select responses from the following list. At least one action must be chosen:

\*29. Provide Description of Injunctive Relief/Compliance Activity:

***Peoples Gas will conduct an EE /CA at eleven sites in Chicago***

\*30. Cost of actions described in previous question (Actual cost data supplied by violator is preferred figure)

Physical actions: \$11,000,000 Non-Physical Actions:

31. Acres in Violation:

32. Quantitative environmental impact of injunctive relief/compliance actions described in previous questions:

**REDUCTIONS/ELIMINATIONS:**

*Pollutant/Land Use	*Amount	*Units/Acres (Express in annual amounts)	*Percent% (of pollutant reduced/removed)	*Media

- Emergency planning and preparedness
- Other SEP category (specify)

Does SEP address any of the Region 5 Environmental Priorities

- Toxics Reduction
- Brownfields Redevelopment
- Environmental justice
- Sediment cleanup
- Ozone air quality standards attainment
- Critical habitat protection and restoration

34. SEP Description:

35. Cost of SEP (Cost Calculated by the PROJECT Model is preferred):

36. Quantitative environmental impact of SEP; pollutants and/or chemicals and/or waste streams and amount of reductions/eliminations (e.g., emission/discharges):

Pollutant	Amount	Units	Percent % (of pollutant reduced/removed)	Media

PENALTY

37. Proposed Penalty:

38. Assessed Penalty:

39. If Shared Federal Share:

40. If Shared State or Local Share:

41. For multi-media actions: Federal amounts by Statute

Statute	Amount
CAA	
CERCLA	
CWA 402	
CWA 311	
CWA 404	
EPCRA 304/312/325	
EPCRA 313	
FIFRA	
RCRA	
RCRA/UST	
SDWA/UIC	
TSCA	

**COST RECOVERY (SUPERFUND ONLY)**

42. Amount of cost recovery award: State and/or Local government:  
Other:

**\*PLEASE ADD ADDITIONAL INFORMATION, INCLUDING SHORT CASE SUMMARY:**

This Settlement Agreement requires the Respondent to conduct an Engineering Evaluation and Cost Analysis ("EE/CA") of alternative response actions pursuant to 40 CFR Part 300.415(b)(4)(i), to address the environmental concerns in connection with each property located at various locations in Chicago, Cook County, Illinois. The eleven properties are: 22nd Street Station (the "22nd Street Station Site") located at 2200 South Racine Avenue, Chicago, Illinois; North Station (the "North Station Site") located in the area bounded by North Crosby, West Division, and West Hobbie Streets and the North Branch Canal of the Chicago River system in Chicago, Illinois; Division Street Station (the "Division Street Station Site") located at 1241 West Division Street, Chicago, Illinois; Crawford Station (the "Crawford Station Site") located at 3500 South Pulaski Road, Chicago, Illinois; Hawthorne Avenue Station (the "Hawthorne Avenue Station Site") located on the northwest corner of the intersection of Marcey Street and Willow Street in Chicago, Illinois; Hough Place Station (the "Hough Place Station Site") located at 2500 S. Corbett St., Chicago, Illinois; North Shore Avenue Station (the "North Shore Avenue Station Site") located in the Rogers Park Township of Chicago, Illinois; Pitney Court Station (the "Pitney Court Station Site") located at 3052 Pitney Court, Chicago, Illinois; South Station (the "South Station Site") located near the intersection of Eleanor and Loomis Streets, Chicago, Illinois; Throop Street Station (the "Throop Street Station Site") located at the intersection of South Throop Street, South Eleanor Street, and West 25th Street, Chicago, Illinois; and Willow Street Station (the "Willow Street Station Site") located west of the intersection of Willow Street and North Kingsbury Street in Chicago, Illinois.

