

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 5

77 W. JACKSON BLVD

CHICAGO, IL 60604

08 APR 2013

**MEMORANDUM**

**SUBJECT:** Enforcement Action Memorandum – Determination of Threat to Public Health and or the Environment at the North Shore Gas North Plant MGP Site, Waukegan, Cook County, Illinois (Site ID #B5HQ).

**FROM:** Jaime Brown, OSC  
Emergency Response Section 3

**THRU:** Samuel Borries, Chief  
Emergency Response Branch 2

**TO:** Richard C. Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this Action Memorandum is to document the determination of an imminent and substantial threat to public health and the environment posed by the existence of uncontrolled hazardous substances in soils and groundwater at the former North Shore Gas North Plant MGP site (Site) located in Waukegan, Lake County, Illinois, and to document the approval of the proposed time-critical removal action described herein.

The proposed actions will mitigate Site conditions by removal and off-site disposal of the coal tar contaminated soils from Areas A, B and C, which were not addressed in the previous 1991 removal action at the Site. Area A-1 will combine a mixture of excavation and on site in-situ stabilization (ISS). The high levels of hazardous substances in surface and sub-surface soil at concentrations that exceed U.S. Environmental Protection Agency Removal Management Levels (RMLs) and the Illinois Environmental Protection Agency (Illinois EPA) Tiered Approach to Corrective Action Objectives (TACO), the Site's plans for future construction, and the potential industrial/commercial use of the property requires that this action be classified as a time-critical removal. A potentially responsible party (PRP) is prepared to conduct the time-critical removal action described in this Action Memorandum pursuant to an Administrative Order on Consent (AOC).

There are no nationally significant or precedent setting issues associated with the proposed response at this non-NPL site.

## **II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID: ILD984807990

RCRA ID: none

State ID: 0971900063

Category: Time-Critical

### **A. Site Description**

#### **1. Removal site evaluation**

Several site investigations have occurred at the Site since 1990. Below are relevant portions from the removal action work plan pertaining to site evaluation:

##### Site Assessment for Waukegan Tar Pit: Weston, 1990

*The team observed unrestricted access to a pit of free tar that was covered with water. The pit measured approximately 125 by 60 feet. One water sample and two tar samples were collected and analyzed. Laboratory results indicated volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) were present in the water and tar. The flash point for one of the tar samples (72°F) was below acceptable levels (<140°F) resulting in conditions that warranted an emergency removal action due to actual or potential exposure to hazardous substances and the threat of fire or explosion.*

##### Extent of Contamination Study: Waukegan Tar Pit Site: Barr Engineering Company (Barr); May 1991

*Barr conducted an Extent of Contamination study from February to March 1991 to laterally and vertically delineate the limits of the tar pit and to identify removal methods in response to the EPA preliminary assessment. Analytical results indicated elevated levels of VOCs, SVOCs, and metals. Most of the free tar was present within the limits of the tar pit. Tar was found in many of the other borings, but was present as a mixture of tar and sand mostly within the upper 10 feet of the soil.*

*The study was conducted to fulfill the requirements of a March 11, 1991 Removal Administrative Order by Consent (AOC) between the EPA and the Waukegan Tar Pit Site respondents, North Shore Gas Company, Elgin, Joliet, and Eastern Railway Company, and North Shore Sanitary District.*

##### CERCLA Preliminary Assessment Report: Waukegan Tar Pit; Illinois EPA, 1992

*A Preliminary Assessment Site Inspection was conducted from September through November 1990. Based on the inspection, the EPA recommended that the Waukegan Tar Pit be placed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list and be assigned a high priority status. Surface water and soil contamination were confirmed.*

Preliminary Site Investigation; North Plant Site; North Shore Gas Company, Waukegan, Illinois; Barr, January 1993

Barr conducted a preliminary Site Investigation (SI) to determine if there was a potential for environmental impact at the Former North Plant MGP. The preliminary SI concluded that chemicals associated with past MGP operations may be present in surface soils. No sampling was conducted as part of this event.

Final Report and Supplemental Extent of Contamination Study, Docket No. V-W- '91-C-115, Waukegan Tar Pit Site; North Shore Gas Company, Barr, January 1994

In August 1992, Barr conducted a Supplemental Extent of Contamination Study at the Waukegan Tar Pit under Administrative Order, Docket Number V-W- '91-C-115, pursuant to Section 106 of CERCLA (Section 106 Order). The Waukegan Tar Pit was excavated on January 10, 1992 and covered with an HDPE cover.

Notable observations from the study include the following:

- Free tar within the pit ranged from 1 to 3.5 feet thick.
- An estimated 67,000 cubic yards of soil that contain tar remained in the vicinity of the tar pit extending to a depth of approximately 26 feet.

Free tar was identified in the northeast portion of the Site (Parcels 1 and 2) and on the property immediately east of the Site based on visual observation. Chlorinated compounds (including trichloroethene (TCE), 1,1,1-trichloroethane (TCA), 1,2-dichloroethene (DCE), 1,1-dichloroethane (DCA), and vinyl chloride) were detected in soil samples along Dahringer Road (i.e., borings B47, B47A, and B48A). The soil samples were collected below the water table between 8 and 16 feet below ground surface (bgs).

Site Investigation Report of the Waukegan Tar Pit and the North Shore Gas Company; Dames & Moore, September 1995

Dames & Moore was retained by the EJ&E Railroad and conducted an SI in September 1995. The SI included a geophysical survey to locate former MGP structures and the advancement of 16 soil borings to collect soil samples for visual characterization, lithology, and chemical analyses. Fifteen soil samples were collected and analyzed for VOCs and SVOCs. Tar was identified in the northeast, northwest, and central portions of the Site based on visual characterization and laboratory analyses. Samples indicated dense non-aqueous phase liquid (DNAPL) was present in borings centrally located on the Site.

Comprehensive Site Investigation, Former North Plant Manufactured Gas Plant Operational Area and Adjacent Property, Waukegan, Illinois; North Shore Gas Company; Burns & McDonnell, November 2005. (CSI Report, Burns & McDonnell 2005)

Burns & McDonnell conducted a source delineation SI in July and August 2002 and a comprehensive SI on Parcels 1 and 2 from July through September 2004. The objectives of the SI were to delineate the extent of previously identified tar and other contaminants and determine if there is a threat to human health and the environment.

*During the August 2002 SI, 61 soil borings and 16 test pits were advanced. During the 2004 SI, 27 soil borings, 54 soil probes, and 23 test pits were advanced. Fourteen of the soil borings were converted into groundwater monitoring well nests screened at varying depth intervals within the same unconfined water-bearing unit. Soil samples were analyzed for target compound list (TCL) VOCs, TCL SVOCs, priority pollutant metals, and total cyanide. Select samples were additionally analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) metals, synthetic precipitate leaching procedure (SPLP) metals, polychlorinated biphenyls (PCB), reactive cyanide, reactive sulfide, flashpoint, total petroleum hydrocarbons (TPH), and soil pH for waste characterization purposes. Groundwater samples were collected once from monitoring wells and samples were analyzed for TCL VOCs, TCL SVOCs, priority pollutant metals, and amenable cyanide.*

*Contaminant source material in the form of tar, tarry residue, or related sheen was identified based on visual observation and analytical results. Tar was identified on the surface in portions of the Site and in one groundwater monitoring well nest. Chlorinated VOCs, which are not associated with former MGP operations, were identified in the northeast portion of the Site and are believed to be associated with former industrial operations located north of the Site. Five areas of concern were identified as the following:*

- The northeast portion of the Site near the Waukegan Tar Pit.*
- The eastern and southeastern portions of the Site along the EJ&E railroad tracks.*
- The northwest portion of the Site, including the area of the former aboveground gas holder, tar wells, and generator house.*
- The center of the Site near the former purifying room, purifier house, aboveground tar tank, and coke bins.*
- The southwest portion of the Site north of a former tar pit structure.*

Pre-removal characterization activities completed during the weeks of April 23, June 18, June 25, and July 2, 2012 focused on a number of objectives. Among these objectives were:

- Refinement of the proposed excavation areas (Figure A-3);
- Verify subsurface observation and analytical data from previous investigations;
- Identify foundation structures and debris in the proposed excavation areas;
- Characterize phases of MGP impacts found and material for waste disposal;
- Assess dewatering conditions and the presence of non-aqueous phase liquid (NAPL); and
- Assess air quality conditions to prepare fugitive emission controls.

Site activities included advancing soil borings (3) and test pits (9) to delineate groundwater impacts. Test pit excavation did not include soil sampling because the PRP felt that visual confirmation and prior sample data would suffice for categorization. For the same reasoning groundwater sampling locations excluded known source areas.



## **2. Physical location**

The Site is located on vacant land at 849 Pershing Road, Waukegan, Lake County, Illinois. The geographical coordinates for the Site are Latitude 42.3737 north and Longitude -87.8246 west (see Figure 1). The Site is bounded to the north by Dahringer Road, on the west by Pershing Road, on the east by the Elgin, Joliet & Eastern Railroad, and to the south by property owned by A.L. Hansen Manufacturing Company. The Site is located about one-half mile west of Lake Michigan. The closest resident is west of the Amstutz expressway approximately 600 feet to the west of the northwest corner of the Site (see Figure 2). The closest industrial area is about 750 feet south of the Site (see Figure 2).

An Environmental Justice (EJ) analysis for the Site is contained in Attachment 1. Screening of the surrounding area used Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Site is in a census tract with a score of 5 (Attachment 1). Therefore, Region 5 does not consider the Site to be high-priority potential EJ area of concern.

## **3. Site characteristics**

The Site was formerly a manufactured gas plant (MGP) and produced gas using a coal carbonization process from 1912 to 1927. The MGP was converted into a carbureted water gas facility in 1927 and continued producing gas in this manner until it switched to oil gas manufacturing. Oil gas manufacturing began in 1951 and continued until 1953. The MGP also had propane air equipment on Site from 1940 through 1965 to meet peak energy demands. All Site operations ceased in 1965 and dismantling of the MGP occurred in stages between 1966 and 1968.

During plant demolition in the late 1960s, a relief holder rupture caused the release of a mixture of water and tar to the soil. In response, 25,000 tons of impacted soils were excavated from the Site in 1968. In 1991, the northeast corner of the Site, then referred to as the Waukegan Tar Pit Site, was the subject of a removal action conducted pursuant to an AOC (V-W-'91-C-115) issued to North Shore Gas Company. Activities included excavation of visual tar and installation of a high-density polyethylene (HDPE) liner over the excavated pit. Over time, water and sediment has accumulated above the HDPE liner. On July 23, 2007, EPA and North Shore Gas Company signed an Administrative Order on Consent, Docket No. V-W-07-C-877, for North Shore Gas Company to conduct a Remedial Investigation and Feasibility Study (RI/FS) on the North Plant Site.

#### **4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

Analytical results from historical samples in the proposed removal areas indicate the presence of elevated concentrations of polynuclear aromatic hydrocarbons (PAH) and VOCs in the DNAPL present in both the surface and subsurface. In particular, this past data indicates the presence of TCLP benzene concentrations exceeding 0.5 mg/l in addition to concentrations exceeding the 540 mg/kg RML. Depth to groundwater in the area varies from 2-5 feet below ground surface. Groundwater flows east towards Lake Michigan and organics contained in the DNAPL may leach into the groundwater and migrate to Lake Michigan. The total volume of impacted material in areas A, B and C is estimated to be 260,100 cubic yards.

#### **5. NPL status**

The Site is not on the National Priorities List (NPL). The Site is being addressed as a Superfund Alternative Site under an AOC, and the PRP is in the process of conducting an RI/FS.

#### **6. Maps, pictures and other graphic representations**

Figure A-1 Natural Resource Technology (NRT) Site Location Map, Figure A-2 NRT Site Layout Map, Figure A-3 NRT RAA Excavation Area Map, and Attachment I- Environmental Justice Analysis are included as attachments.

### **B. Other Actions to Date**

#### **1. Previous actions**

Previous actions at the Site included activities associated with plant decommissioning in 1968. Approximately 25,000 tons of tar was excavated from an area of approximately 300 feet by 10 feet. No other details regarding this rupture and excavation are available. A time-critical removal action was conducted by a PRP to remove free tar from the Waukegan Tar Pit in 1991 pursuant to an AOC.

Limited excavation activities occurred in 2003 with the removal of 1,700 tons of non-hazardous special waste.

#### **2. Current actions**

In preparation of the upcoming removal activities NRT performed geotechnical borings, test pits, and other activities on behalf of North Shore Gas Company. In addition, NRT has conducted an ISS treatability study on the DNAPL present and delineated areas for ISS and excavation.

Currently, North Shore Gas Company is in the process of completing an RI/FS for the Site.

**C. State and Local Authorities' Roles**

**1. State and local actions to date**

Illinois EPA completed a CERCLA Preliminary Assessment at the Site in 1992 and a Site Inspection in 1995.

**2. Potential for continued State/local response**

Since July 2007, EPA has taken the lead on CERCLA response activities at the Site. EPA will continue working in consultation with Illinois EPA during the proposed removal and potential remedial activities associated with the Site.

**III. THREATS TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

Conditions at the Site may pose an imminent and substantial endangerment to public health or welfare, and the environment, based upon factors set forth in the National Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Section 300.415 (b)(2). These conditions include:

**Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.**

A potential exposure risk is present due to exposed MGP residual materials, including weathered tar at ground surface as documented in the EPA-approved Removal Action Work Plan. The proposed removal action areas include areas where TPH concentrations exceed the default value of 2,000 mg/kg for soil attenuation capacity pursuant to Illinois EPA's Tiered Approach to Corrective Action Objectives (TACO). TPH was assumed by the PRP to be representative of the primary constituents of concern including benzene, toluene, ethylbenzene, xylenes and total PAH.

Subsurface migration also presents a potential exposure to groundwater and Lake Michigan. The Burns & McDonnell CSI report (2005) identified that the following concentrations exceeded the EPA maximum contaminant levels (MCLs) in groundwater and Randolph & Associates Inc. report (1988) documents levels above the RML for benzene in soil:

Analyte	MCL	Highest Concentration (Groundwater)	RML	Highest Concentration (Soil)
Benzene	0.005 mg/L	1.3 mg/L	540 mg/kg	640 mg/kg
Ethylbenzene	0.175 mg/L	11 mg/L	2,700 mg/kg	160 mg/kg
Toluene	0.25 mg/L	1.1 mg/L	140,000 mg/kg	270 mg/kg
Total xylenes	3.33 mg/L	21 mg/L	8,100 mg/kg	250 mg/kg

Acute inhalation exposure to PAHs such as benzo(a) anthracene, benzo(b) fluoranthene, or benzo(a) pyrene may cause eye, skin, and respiratory tract irritation. Repeated exposures to benzo(a)pyrene may result in an allergic skin reaction, ingestion may result in irritation of the digestive tract. Long-term chronic exposure to these compounds may cause reproductive or fetal effects. These compounds are categorized as possible human carcinogens (Group 2A or 2B), with all shown to be mutagenic in laboratory experiments by EPA. Benzene is a known human carcinogen. Long-term exposure to high levels of this compound in the air can lead to leukemia and cancers of the blood-forming organs.

**Actual or potential contamination of drinking water supplies or sensitive ecosystems.**

Depth to groundwater in the area varies from 2-5 feet below ground surface. Groundwater flows east towards Lake Michigan and organics contained in the DNAPL may leach into the groundwater and migrate to Lake Michigan.

**High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.**

MGP residuals in soil were identified at the surface, containing elevated levels of contaminants exceeding the State's TACO cleanup levels and EPA RMLs. Trespassers may be exposed to contaminated soil in the surface through either dermal contact or inhalation. Benzene concentrations up to 640 mg/kg in soil have been documented which are above the 540 mg/kg RML for industrial soil. Typical security measures, including fencing, are currently employed to limit potential exposure.

**Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.**

Migration could occur as a result of wind action during dry periods posing a potential breathing hazard. Such wind action could also lead to deposition of materials in uncontaminated areas. Migration of contaminants in surface soil could also occur through surface water flow or groundwater flow during wet periods due to the high levels of PAHs and benzene found in some of the samples.



#### **IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature of the known and suspected hazardous substances on Site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

##### **A. Proposed Actions**

##### **1. Proposed action description**

The PRP shall implement the EPA approved Removal Action Work Plan for North Plant MGP Site (Revision 2), dated September 21, 2012. The main components of the work plan include the following provisions which require compliance:

- a) Preliminary activities such as site security and controls
- b) Site Preparation, including clearing and grubbing
- c) Targeted excavation within defined removal action areas A, B, and C (see Figure A-3)
- d) Transportation and off-site disposal of excavated material from areas A,B and C
- e) In Situ Solidification/Stabilization construction and operations in area A-1 (see figure A-3). ISS solidified material will remain on-site until future land use requires removal and disposal
- f) Backfilling with clean fill
- g) Compliance with State and Local Requirements
- h) Construction Quality Assurance Measures such as
  - o Air Monitoring
  - o Fugitive Emissions Management Plan
  - o Health and Safety Plan
  - o Sampling and Analysis Plan
  - o ISS Construction Quality Assurance Plan
- i) Schedule for Completion
- j) Submission of Completion Report

The removal action will be conducted in a manner not inconsistent with the NCP. The PRP will also initiate planning for provision of post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP.

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in NCP Section 300.415(b)(2), and the response actions proposed herein are consistent with any long-term remedial actions which may be required. The proposed removal of hazardous substances, pollutants and contaminants that pose a substantial

threat of release is expected to minimize substantial requirements for post-removal Site controls.

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

**2. Contribution to remedial performance:**

The proposed action will not impede future actions based on available information.

**3. Engineering Evaluation/Cost Analysis (EE/CA)**

This section is not applicable.

**4. Applicable or relevant and appropriate requirements (ARARs)**

All applicable, relevant, and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable considering the exigencies of the circumstances.

Federal  
RCRA Subtitle C

State  
TACO

**5. Project Schedule**

This project is expected to be completed in 18 months.

**B. Estimated Costs**

This information is not available because this is an Enforcement Action Memorandum.

**VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Given the Site conditions, the nature of the hazardous substances and pollutants or contaminants documented on Site, and the potential exposure pathways to nearby populations described in Sections II, III and IV above, actual or threatened release of hazardous substances and pollutants or contaminants from the Site, failing to take or delaying action may present an imminent and substantial endangerment to public health, welfare or the environment, increasing the potential that hazardous substances will be released, thereby threatening the adjacent population and the environment.



## Enforcement Addendum

### Figures:

- A-1; Site Location Map
- A-2; Site Layout Map
- A-3; Excavation Area Map

### Attachments:

1. Environmental Justice Analysis
2. Administrative Record Index

cc: S. Fielding, EPA 5202 G (email: Fielding.Sherry/DC/USEPA/US)  
V. Darby, U.S. DOI, **w/o Enf. Addendum**  
(email: Valencia\_Darby@ios.doi.gov)  
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(email: lindy\_nelson@ios.doi.gov)  
B. Everetts, Illinois EPA, **w/o Enf. Addendum**



**BCC PAGE HAS BEEN REDACTED**

**NOT RELEVANT TO SELECTION OF**

**REMOVAL ACTION**

**ENFORCEMENT CONFIDENTIAL**

**FOIA EXEMPT**

**NOT SUBJECT TO DISCOVERY**

**ENFORCEMENT ADDENDUM**

**NORTH PLANT SITE**

**WAUKEGAN, ILLINOIS**

**HAS BEEN REDACTED**

**ONE PAGE**

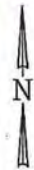
**ENFORCEMENT SENSITIVE**

**NOT APPLICABLE TO DISCOVERY**

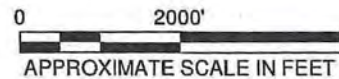
**NOT RELEVANT TO SELECTION OF REMOVAL ACTION**

**FIGURE A-1**

**SITE LOCATION MAP  
NORTH PLANT MGP SITE  
WAUKEGAN, ILLINOIS**



SOURCE NOTE:  
 THIS DRAWING WAS DEVELOPED FROM THE FOLLOWING  
 BURNS-McDONNELL DIGITAL FILE:  
 FIGURE 1 SITE LOCATION.DWG



## SITE LOCATION MAP

FORMER NORTH PLANT  
 NORTH SHORE GAS COMPANY  
 849 PERSHING ROAD  
 WAUKEGAN, ILLINOIS

PROJECT NO.  
 2088/3

DRAWING NO.  
 2088-3-A01C

FIGURE NO.  
 1



NATURAL  
 RESOURCE  
 TECHNOLOGY



**FIGURE A-2**  
**SITE LAYOUT MAP**



- PARCEL LINE
- FORMER MGP BOUNDARY
- PONDING WATER (FORMER TAR PIT)
- WETLAND (2012 DELINEATION)
- TAR AT SURFACE
- WATER MAIN
- SANITARY SEWER
- SANITARY FORCE MAIN
- STORM SEWER
- OVERHEAD ELECTRIC
- GAS LINE
- CHAIN LINK FENCE
- MANHOLE
- ◆ GROUNDWATER MONITORING WELL
- BENCH MARK

**BENCH MARKS:**

NGS MONUMENT LOCATED AT BOWEN PARK AND DESIGNATED WK 105 ELEV. 667.00

BM #1 N-2079796.5643  
PK NAIL E-1122645.5923  
ELEV. 586.64

BM #2 N-2079751.1065  
PK NAIL E-1121608.3328  
ELEV. 587.82

BM #3 N-2078622.4791  
PK NAIL E-1121375.3421  
ELEV. 588.55



**SOURCE NOTES:**

1. THIS DRAWING WAS DEVELOPED FROM MCCLURE ENGINEERING & ASSOCIATES, INC. PLAN OF SURVEY, SHEET 1 OF 1, JOB NO. 02-19-076, DRAWING NAME 12076-DRISHING.DWG, DATED 06/27/2012.
2. AERIAL PHOTOGRAPHY IS FROM ARCOIS.COM (ING MAPS, COUNTRY OF US) © 2012 MICROSOFT CORPORATION.
3. COORDINATE SYSTEM IS NAD83, 8 STATE PLANE EAST, US FOOT.
4. ALL ELEVATIONS REFERENCE NAVD 83.

DRAWN BY:	NWD	DATE:	07/27/12
CHECKED BY:	AMM	DATE:	07/27/12
APPROVED BY:	GRL	DATE:	08/14/12
DRAWING NO.:		2088-3 802C	
REFERENCE: SEE INFO BLOCK			

**SITE LAYOUT**

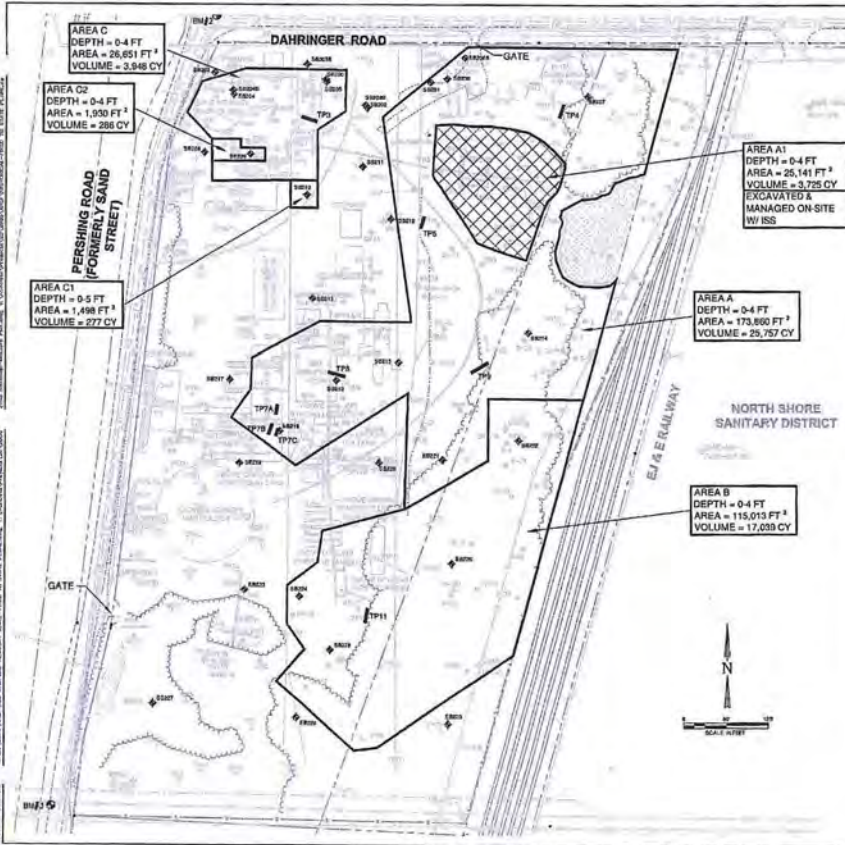
REMOVAL ACTION WORK PLAN  
FORMER NORTH PLANT  
NORTH SHORE GAS COMPANY  
WAUKEGAN, ILLINOIS



PROJECT NO.  
2088-3

FIGURE NO.  
2

**FIGURE A-3**  
**EXCAVATION AREA MAP**



	FENCE
	PARCEL LINE
	RAILROAD TRACKS
	HISTORICAL STRUCTURES
	WATER MAIN
	SANITARY SEWER
	SANITARY FORCE MAIN
	STORM SEWER
	OVERHEAD ELECTRIC
	GAS LINE
	EDGE OF TREES & BRUSH
	PONDERED WATER (FORMER TAR PIT)
	WETLAND (2012 DELINEATION)
	TAR AT SURFACE
	MANHOLE
	SOIL BORING LOCATION INSTALLED BY DAMES & MOORE
	SOIL BORING LOCATION INSTALLED BY BARR
	SOIL BORING LOCATION INSTALLED BY BURNS & MCDONNELL
	SOIL PROBE LOCATION INSTALLED BY BURNS & MCDONNELL
	GROUNDWATER MONITORING WELL
	TEST PIT LOCATION
	HISTORIC DITCH LOCATION
	PROPOSED REMOVAL AREAS
	SOIL BORING LOCATION INSTALLED BY NRT APRIL/JUNE/JULY 2012
	TEST PIT LOCATION INSTALLED BY NRT APRIL 2012
	BENCH MARK



- SOURCE NOTES:**
1. THIS DRAWING WAS DEVELOPED FROM MCCLUNE ENGINEERING & ASSOCIATES, INC. PLAT OF SURVEY, SHEET 1 OF 1, JOB NO. 80-13-12-076. DRAWING NAME: 10707-FRESHING-DWG, DATE: 02/27/12.
  2. THIS DRAWING WAS DEVELOPED FROM THE FOLLOWING BURNS-MCDONNELL DIGITAL FILES DATED 12-6-09. HISTORICAL DITCH, ALL SHOWN IN RED. ALL SCALE FROM PHOTOGRAPHY.
  3. THE HISTORIC DITCH WAS APPROXIMATED FROM THE 1988 & 1984 AERIAL PHOTOGRAPHY.
  4. COORDINATE SYSTEM IS NAD83, & STATE PLANE EAST, US FOOT.

DRAWN BY: NWD CHECKED BY: AMM APPROVED BY: GRC DRAWING NO: 208B-3-818 REFERENCE: SEE INFO BLOCK	DATE: 07/20/12 DATE: 07/20/12 DATE: 08/14/12
<b>REMOVAL ACTION AREA EXTENTS-EXCAVATION</b> REMOVAL ACTION WORK PLAN FORMER NORTH PLANT NORTH SHORE GAS COMPANY WAUKEGAN, ILLINOIS	
PROJECT NO.	208B3
FIGURE NO.	6

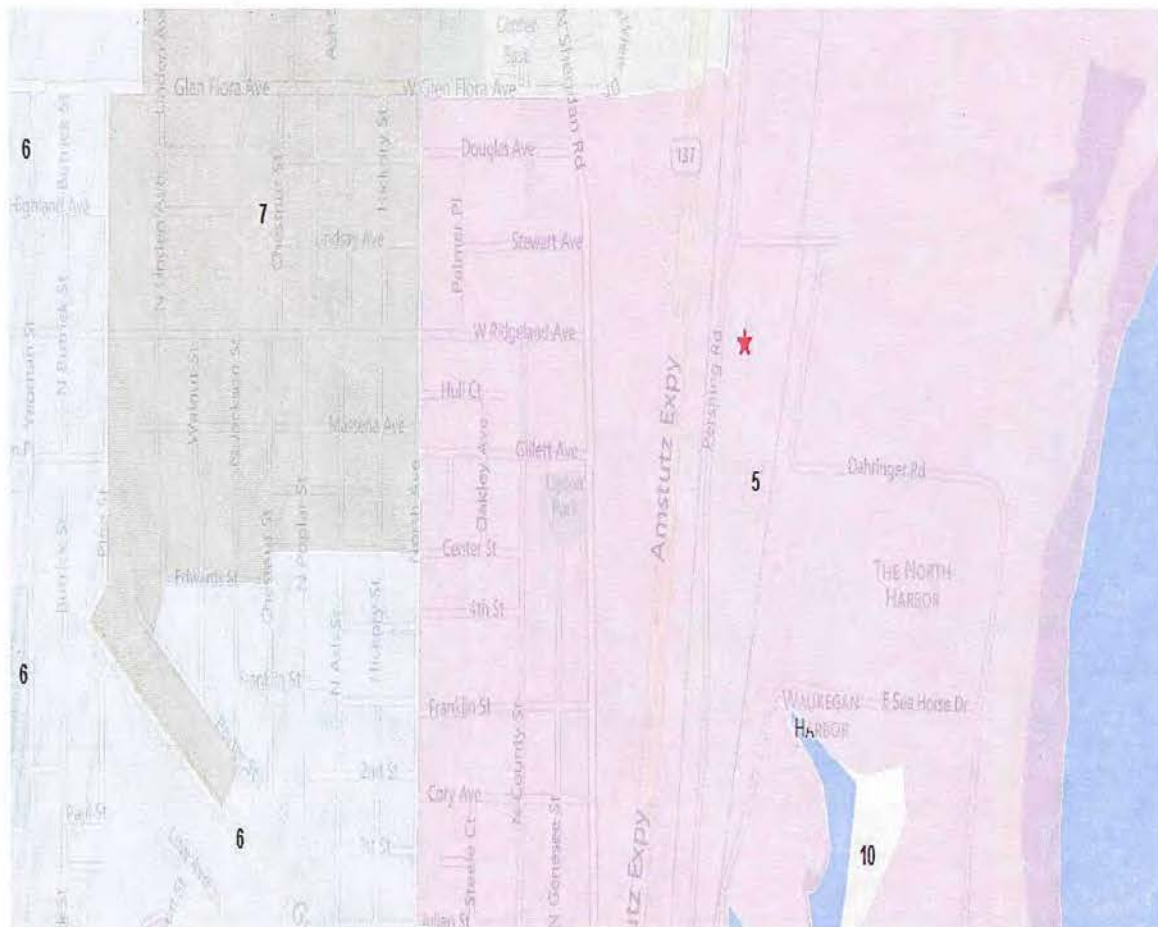


## ATTACHMENT 1

### Environmental Justice Analysis

The area surrounding the North Plant MGP Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ assist Tool (which applies the interim version of the national EJ strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The North Plant MGP Site is in a census tract with a score of 5. Therefore, Region 5 does not consider this to be a high-priority potential EJ area of concern.

**North Plant MGP Site Map Showing EJ SEAT Values For Surrounding Area**



**ATTACHMENT TWO**  
**US ENVIROMENTAL PROTECTION AGENCY**  
**REMOVAL ACTION**

**ADMINISTRATIVE RECORD**  
**FOR**  
**NORTH PLANT MGP SITE**  
**WAUKEGAN, LAKE COUNTY, ILLINOIS**

**ORIGINAL**  
**FEBRUARY 14, 2013**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	10/00/90	Weston-Major Programs Division	U.S. EPA	Report re: Site Assessment for Waukegan Tar Pit, Waukegan Illinois	16
2	11/23/90	O'Mara, M., U.S. EPA	Bowden, R., U.S. EPA	Action Memorandum: Removal Request for the Waukegan Tar Pit Site, Waukegan, Illinois	9
3	11/23/91	Weslock, J., Dynamac Corporation	Steadman, P., U.S. EPA	POLREPS re: Attached is the Following DRAFT POLREPS for the Waukegan Tar Pit Site: POLREP 1 -4.	9
4	09/21/12	Luke, G., Natural Resource Technology, Inc.	Brown, J., U.S. EPA	Letter re: Removal Action Work Plan Revision to Removal Action Work Plan Former North Plant MGP Site, Waukegan, Illinois North Shore Gas Company	395
5	00/00/00	Brown, J., U.S. EPA	Karl, R., U.S. EPA	Enforcement Action Memorandum: Determination of Threat to Public Health and or the Environment at the North Plant MGP Site <b>(PENDING)</b>	