Chicago Area Waterway System

Dredged Material Management Plan & Integrated Environmental Assessment

APPENDIX C: ENVIRONMENTAL ENGINEERING

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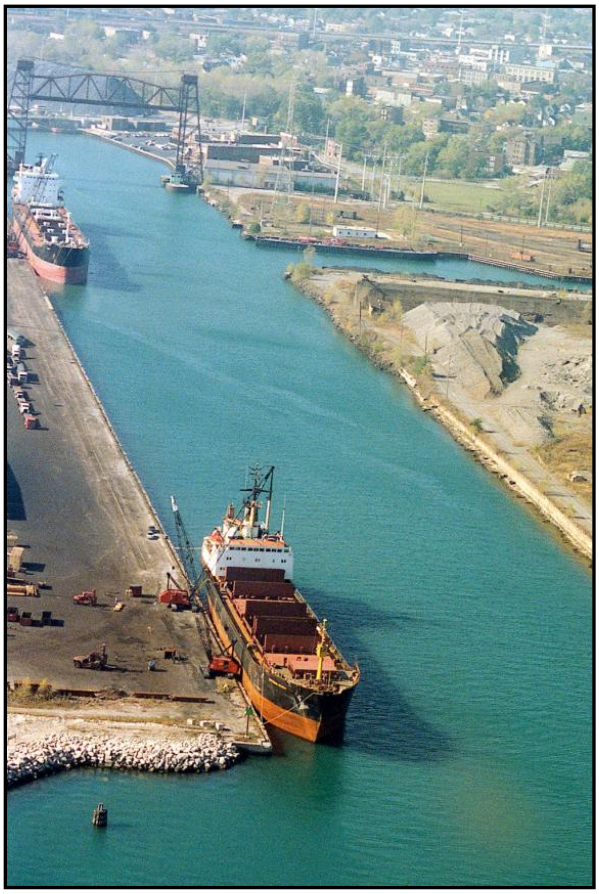

Prepared By:

Chicago District and Rock Island District

US Army Corps of Engineers®

June 2015

Chicago Area Waterway System (CAWS)
Dredged Material Management Plan (DMMP)

Appendix C: Environmental Engineering

This appendix includes the following documents:

A. Sediment Sampling and Analysis

1. Tier 1 evaluation for the Calumet Harbor and River sediment, dated November 2010.

2. Final sediment sampling and analysis report, dated December 2011, for sediment samples collected from Calumet Harbor.

3. Calumet Harbor Dredged Material Human Health Risk-Based Screening for Upland Beneficial Use Determination, dated January 2014.

4. Calumet-Sag sediment sampling and analysis summary, 22 January 2015.

B. Environmental Site Assessments for Dredged Material Disposal Facility site alternatives

1. Phase I Environmental Site Assessment (ESA), dated January 2014, for a proposed new Dredged Material Disposal Facility (DMDF) at Site 313R – property at 119th and Ridgeland in Alsip, Illinois (former Metropolitan Water Reclamation District (MWRD) of Greater Chicago biosolids drying area). (Note: The Subsurface Investigation Report for this site, dated Aug. 2014, contains an environmental addendum with results from a Phase II ESA. This report is located in Appendix D – Geotechnical Engineering).

2. Phase I ESA, dated May 2015, and No Further Remediation (NFR) letter, dated 08 Dec. 2005, for a proposed new DMDF at Site 329L-B – property at 12200 South Avenue O, Chicago, Illinois (former Republic Steel plant site).

3. Draft Phase I ESA, dated November 2014, and No Further Remediation (NFR) letter, dated Feb. 1999, for proposed new confined disposal facility at Site 330L – property at 11600 South Burley Avenue, Chicago, Illinois (former LTV Steel plant site).

CELRC-TS-DH

MEMORANDUM FOR CELRC-PM-PL (Brodzinsky)

SUBJECT: HTRW and non-HTRW Report for the Calumet Harbor and River, Illinois & Indiana Dredge Material Management Plan, 119th Street and Ridgeland Avenue Site, Alsip, Illinois

1. Enclosed is the Phase I Environmental Site Assessment for the 119th Street and Ridgeland Avenue site. This site is being considered as dredged material management facility for the Calumet Harbor and River Dredged Material Management Plan. The investigation was conducted during the feasibility phase of the project and is based on an existing information review, database research, historical topographic map and aerial photograph review, and a site visit. Results of the HTRW investigation are summarized in the Findings and Conclusion section of the report.

2. A list of unresolved issues, short-term actions, and future project recommendations are provided below:

    a. The majority of the project site is developed, with the exception of the easternmost portion of the site, which is currently partially vegetated. Developed portions of the site are paved and previously served as biosolids drying beds for the MWRDGC Stickney waste water treatment facility, otherwise known as the Ridgeland Avenue Solids Management Area (RASMA). Review of available biosolids quality data collected in October 2005 suggests that biosolids previously managed at the site contain metals and nutrients. Though biosolids placed between 1991 through 2005 were physically isolated from the site using a paved bed, the historical use of the site to dry biosolids may present a REC for the project site. Additional information should be obtained from MWRD to confirm the site use: site use history, site operating permit conditions, monitoring activities, and results of environmental studies and sampling conducted at the site are required to determine if soils at the site have been impacted by previous activities. Soil quality on site is unknown.

    b. The presence of the Nike C-51 Control Area within the project limits is a potential REC for the project. The 2003 CERCLA preliminary assessment conducted by Plexus for CELRL recommended locating and removing any remaining USTs and pursuing closure, if feasible, and conducting a property wide site investigation. Critical locations requiring further investigation associated with the C-51 Control Area included around the generator buildings, paint and oil shed, maintenance and spares building, fuel storage, the sewage treatment plant, the underground storage

buildings, and in drainage ditches, if feasible. Some of these locations are within the limits of Area D where excavation activities are required for construction of the dredged material management facility; however, it appears that a majority of the remaining RECs at the site are currently isolated by the paved drying beds. In February 2007, USACE-LRL determined that the 2003 PA recommendations were no longer tenable because of the extensive redevelopment at the C-51 Control Area, including the construction of the biosolids drying beds. USACE requested a No Defense Action Indicated (NDAI) for the property from IEPA in a letter dated February 2009. Because IEPA has not accepted or rejected the NDAI, it is unclear if additional investigations will be conducted at the project area as part of the FUDS program. Additional information has been requested from MWRD to determine if any USTs were encountered during construction of the biosolids drying beds. Because USTs may be present in the project area, and the 2003 PA identified several structures and associated RECs within Areas C and D, additional phase II investigations may be required to determine the quality of soils at the site and confirm/deny presence of USTs or other debris buried onsite within the limits of the project.

c. Review of information provided in the EDR database suggests that there are eighteen (18) Illinois BOL sites within the recommended search distance. Seven (7) of the BOL entries are due to current and past RCRA generator activities; there are no indications that the sites have received any violation notices and none appear in the RCRIS CORRACTS database. Two (2) of the BOL entries are due to LUST actions; NFA/NFR letters were issued for these sites and there is no indication that the sites continue to present a REC for the project site. Nine of the BOL entries are unknown; due to the unknown nature of the regulated activity, future HTRW activities should include a site visit, or drive-by inspection, to determine the status of EDR sites #B6, C8, C9, D11, 12, 14, 15, 16 and 17.

d. Review of historical topographic maps and aerial photographs suggests that historical site use and on site disposal activities are potential RECs. Biosolids drying began within the limits of the proposed project as early as 1976; the scope of the activity, environmental quality of the biosolids, material handling and any engineering controls implemented on-site, and impacts to the site are unknown between 1976 and 1991. In addition, the eastern portions of the site, and specifically within Area D (where extensive excavation will be required to create the facility), has been impacted by historic filling activities that began as early as the construction of the Calumet-Sag channel. Fill deposited from the Calumet-Sag channel accounts for approximately 1,685 cubic yards of material; however, the source and quality of fill placed after 1963 is unknown, but may contain materials from adjacent boat ramp

construction, MWRD on-site activities, demolition of Nike site, or fly dumping. Nike structures remain in Area D and will require demolition if Area D is included in the final recommended plan.

3. Questions regarding this investigation can be directed to Casey Pittman at (312) 846-5506.

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JAY A. SEMMLER, P.E.
Chief, Hydraulics & Environmental Engineering Section

Enclosure

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION
CALUMET HARBOR AND RIVER, ILLINOIS & INDIANA
DREDGE MATERIAL MANAGEMENT PLAN

119th Street and Ridgeland Avenue, Alsip, Illinois

Hydraulic and Environmental Engineering Section (TS-DH)
U.S. Army Corps of Engineers, Chicago District

January 2014

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW INVESTIGATION
119TH STREET AND RIDGELAND ROAD, ALSIP, ILLINOIS

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INTRODUCTION

The purpose of this report is to discuss the Phase I Environmental Site Assessment (ESA) for the 119th Street & Ridgeland Avenue site being considered for a future dredged material management facility as part of the Calumet Harbor and River Dredged Material Management Plan (DMMP). This report identifies Recognized Environmental Conditions (RECs) and presents appropriate measures to resolve the issues. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding potential impacts due to RECs associated with the project site are provided.

AUTHORITY

Engineer Regulation (ER) 1165-2-132, Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works projects, requires that a site investigation be conducted as early as possible to identify and evaluate potential HTRW problems. According to ER 1165-2-132, non-HTRW issues that do not comply with the federal, state, and local regulations should be discussed in the HTRW investigation along with HTRW issues. Therefore, HTRW and non-HTRW issues identified are discussed in this report.

The Phase I Environmental Site Assessment (ESA) presented in this report was conducted during the feasibility phase of the project. This report was performed at the level of detail required for a Reconnaissance Phase investigation and relies on existing information, observations made through database research, a site visit, and a historical aerial photograph and topographic map review. As stated in the ER 1165-2-132, an initial assessment as appropriate for a Reconnaissance Study should be conducted as a first priority for projects with no prior HTRW consideration. If the initial assessment indicates the potential for HTRW, testing, as warranted, and analysis similar to a Feasibility Study should be conducted prior to proceeding with the project design.

GUIDANCE

Supplemental guidance was provided by the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-05) prepared by the American Society for Testing of Materials (ASTM). The guidance defines a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of property; the goal of the process established by this practice is to identify Recognized Environmental Conditions (RECs) through a records review, site visit, interviews, and report preparation. This report followed many of the ASTM E 1527-05 guidelines but not to the same level of detail described by the ASTM E 1527-05 guidance.

Hazardous, Toxic, and Radioactive Waste

The objective of ER 1165-2-132 is to outline procedures to facilitate early identification and appropriate consideration of HTRW problems. This investigation, therefore, identifies potential

HTRW problems and discusses resolutions and/or provides recommendations regarding the HTRW problems identified.

Non-Hazardous, Toxic, and Radioactive Waste

According to ER 165-2-132, non-HTRW environmental issues that do not comply with federal, state and local regulations should be discussed in the HTRW investigation along with HTRW issues. For example, solid waste is a non-HTRW issue considered. Petroleum releases from Leaking Underground Storage Tanks (LUSTs) are not considered HTRW, but are regulated under the Illinois Administrative Code (IAC), Title 35, Part 731 - Underground Storage Tanks, Part 732 - Petroleum Underground Storage Tanks, and Part 742 - Tiered Approach to Corrective Action Objectives (TACO). These sites have the potential to impose environmental hazards. RECs identified during the investigation are discussed in this report, along with resolutions and/or recommendations for resolving the issue.

LAWS AND REGULATIONS

Federal

The definition of HTRW according to ER 1165-2-132, page 1, paragraph 4(a) is as follows: "Except for dredged material and sediments beneath navigable waters proposed for dredging, for purposes of this guidance, HTRW includes any material listed as a 'hazardous substance' under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq (CERCLA). (See 42 U.S.C. 9601(14).) Hazardous substances regulated under CERCLA include 'hazardous wastes' under Sec. 3001 of the Resource Conservation and Recovery Act, 42 U.S.C. 6921 et seq; 'hazardous substances' identified under Section 311 of the Clean Air Act, 33 U.S.C. 1321, 'toxic pollutants' designated under Section 307 of the Clean Water Act, 33 U.S.C. 1317, 'hazardous air pollutants' designated under Section 112 of the Clean Air Act, 42 U.S.C. 7412; and 'imminently hazardous chemical substances or mixtures' on which EPA has taken action under Section 7 of the Toxic Substance Control Act, 15 U.S.C. 2606; these do not include petroleum or natural gas unless already included in the above categories. (See 42 U.S.C. 9601(14).)"

As stated in the definition of hazardous substance in the Environmental Statutes, 1988 Edition, the term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance under the definition. Underground Storage Tanks (USTs) are federally regulated under 40 CFR Part 280, which includes technical standards and corrective action requirements for owner and operators of USTs.

State

The Illinois State regulations were examined to determine which regulations governed the state specific hazardous waste disposal, release, and cleanup requirements. Illinois regulates USTs under Illinois Administrative Code (IAC), Title 35, Subtitle G, Chapter I, Subchapter D, Part

731, Underground Storage Tanks and petroleum USTs under IAC Title 35, Subtitle G, Chapter I, Subchapter D, Part 732, Petroleum Underground Storage Tanks. The definition of a regulated substance under this regulation means any "hazardous substance" or "petroleum". Hazardous substance UST is defined as an UST system that contains a "hazardous substance" or any mixture of "hazardous substances" and "petroleum" which is not a petroleum UST system. Petroleum UST means any UST system that contains petroleum or a mixture of petroleum with minimal quantities of other regulated substances. Owners and operators of petroleum or hazardous substance UST systems must comply with the requirements of Part 731 except for USTs excluded under Section 731.110(b) and UST systems subject to RCRA corrective action requirements under 35 Ill. Adm. Code 724.200, 724.296, 725.296 or 725 Subpart G.

SITE DESCRIPTION

The proposed 119th Street and Ridgeland Avenue dredged material management facility is located at 119th Street and Ridgeland Avenue in Alsip, Illinois (see Figure 1). The site is located adjacent to the Calumet-Sag channel to the north, south of interstate 294, between Ridgeland Avenue to the west and Laramie Avenue to the east. Site boundaries are shown in Figure 2. The proposed site consists of 50-acrees of property owned by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). The site is located in Sections 28 and 29, Range 13 East, Township 37 North on the Palos Park 7.5' Series USGS Quadrangle Map. The majority of the site is developed, with the exception of the easternmost portion of the site, which is currently partially vegetated. Developed portions of the site are paved and previously served as biosolids drying beds for the MWRDGC Stickney waste water treatment facility, otherwise known as the Ridgeland Avenue Solids Management Area (RASMA). The Metropolitan Water Reclamation District has been a pioneer in developing beneficial ways to use the biosolids produced by the sewage treatment process. These biosolids, sometimes called sludge or residuals, are stabilized in large digestion tanks, dewatered with a centrifuge, air dried and aged on large outdoor drying beds. After the solids have been dried, they are hauled by truck or barge to various locations offsite for beneficial reuse. A portion of the previous biosolids drying bed area is currently being leased to Christy Webber landscaping company. A combination of single family residential, parks, commercial, and industrial development are within the site vicinity. The site is accessible from the west via an access road from Ridgeland Avenue or from the east through an access road from Plattner Drive.

PROJECT DESCRIPTION

Material dredged from the Calumet Harbor and River navigation project is currently being placed in the Chicago Area Confined Disposal Facility (CDF); however, this facility is nearing capacity, and future material placement is limited. In accordance with engineering regulation (ER) 1105-2-100, Planning Guidance Notebook, Appendix E, all Federal navigational maintenance projects must demonstrate there is sufficient dredged material placement capacity for a minimum of twenty (20) years. If the preliminary assessment determines there is not sufficient capacity, a DMMP must be prepared to identify the specific measures necessary to manage the volume of material likely to be dredged over a twenty year period. Development of

the DMMP for Calumet Harbor and River suggests consideration of an upland dredged material management facility for dredged material at the site located at the 119th Street and Ridgeland Avenue.

A draft conceptual site layout for the proposed facility is shown in Figure 3. The conceptual plan indicates that the existing pavement would be sealed in Areas A, B, and C and would be used to form the bottom of the dredged material management facility, with a water tight steel sheet pile wall or concrete t-wall installed on the outside perimeter to form the vertical walls of the facility. The facility also includes construction of multiple crane pads and dock space along the Calumet-Sag channel, construction of decant structures, modification of existing decant structures, construction of effluent discharge pipes and/or effluent filter cells, and an access road along a portion of the facility in Area D. Because Area D is not currently developed, preliminary design suggests creation of a two-foot clay liner and pavement to create the bottom of the facility in this area; this activity requires significant preparation and excavation activity on this portion of the site and may preclude it from being part of the final recommended plan. Site clearing, removal of trees and vegetation, and grading the site would be required in Area D. Water management features have not been identified in the draft conceptual dredged material management plan, but may include construction of trenches and/or conduits for water management and potential water treatment. The sources of water that would need to be managed within the facility include the water associated with the dredged material and water from precipitation and storm water runoff. After the facility has been filled to its capacity, and all the material has been sufficiently dewatered and consolidated, the final cap will be constructed and stabilized. The cap will be designed to minimize infiltration and disturbance of the dredged material.

GENERAL METHODS

The following sections contain information requested and gathered in accordance with ER 1165-2-132 for this assessment. The information was obtained from the following sources:

- Existing information review
- Database research
- Historical topographic map review
- Historical aerial photograph review
- Site visit

This information was used to determine if construction of the dredged material management facility at the 119th Street and Ridgeland Avenue will have an impact on any HTRW occurrences that may exist in the surrounding areas, and if HTRW problems will have an impact on the implementation of the project. The information gathered from the above list of sources is detailed in the following sections.

EXISTING INFORMATION REVIEW

Water Quality

The Calumet-Sag Channel is currently classified by the State of Illinois as a Secondary Contact and Indigenous Aquatic Life Use Waterway. The Secondary Contact and Indigenous Aquatic Life Standards currently apply to portions of the Chicago, Calumet, and Lower Des Plaines rivers that were altered in various stages during the mid 1800s into the mid 1900s to promote commercial navigation and eliminate untreated sewage from flowing into Lake Michigan. These waters remain impacted by hydromodification, alteration in flow, and storm-water and wastewater discharges from the urban development in the Chicago area. In the early 1970s, when standards were first developed, it was believed that these waters could not meet the interim goals of the Clean Water Act. Since the adoption of the Secondary Contact and Indigenous Aquatic Life Standards in the 1970s, water quality has improved, which has generated consideration for revising the applicable uses and standards for these waterways. Two Use Attainability Analyses (UAA) were conducted: one on the lower Des Plaines River and one on the Chicago Area Waterway System. The main purpose of the UAAs was to determine the potential of these waters with respect to the aquatic life and human contact goals of the Clean Water Act. Using the two UAAs and other information, Illinois EPA filed a proposal with the Illinois Pollution Control Board to revise the uses and water quality standards for these waters in October 2007. Some aspects of this rulemaking are still pending (IEPA 2014).

The Secondary Contact and Indigenous Aquatic Life Standards (35 Ill. Adm. Code 302, Subpart D) are intended to protect limited uses of waters not suited for general use activities but are nonetheless suited for secondary contact uses and capable of supporting indigenous aquatic life, limited only by the physical configuration of the body of water, characteristics, and origin of the water, and the presence of contaminants in amounts that do not exceed the water quality standards. Aquatic life use assessments in streams are typically based on the interpretation of biological information, physiochemical water data, and physical habitat information. Secondary contact use assessment is based on fecal coliform bacteria data. Fish consumption use assessment is based on water body-specific fish tissue data and resulting fish-consumption advisories issued by the Fish Contaminant Monitoring Program (FCMP).

The Calumet-Sag Channel is listed as an impaired stream in the Draft Integrated Water Quality Report and 303(d) list (IEPA 2014) due to inability to achieve the applicable water quality standards. The Calumet Sag channel has been assessed for fish consumption and indigenous aquatic life and does not support these uses. In addition, it has not been assessed for secondary contact use. The potential causes for aquatic life and fish consumption impairments include elevated levels of mercury, PCBs, iron, and total dissolved solids, and low dissolved oxygen concentrations in the surface water caused by atmospheric deposition of toxics, combined sewer overflows, sediment resuspension, urban runoff/storm sewers, and other unknown sources.

Geology & Soil Quality

The topography of the Calumet Region and study area is flat. The general lack of definition in the drainage basins in the area was caused by Pleistocene glacial action. Bedrock formations

underlying the area are overlain with deposits of heterogeneous unconsolidated glacial till, consisting of silt, clay, sand, and gravel, up to four hundred feet in depth. Four thousand feet of sedimentary bedrock, ranging in age from Cambrian to Silurian age, underlie the area. The physical site data report included in the Environmental Data Resources (EDR) report (Attachment 1) suggests the underlying bedrock is Silurian aged Niagaran series Dolomites. Middle aged Silurian rocks are predominantly carbonates with chert zones and minor shale beds. Surface soils are identified as "urban land" with silt loam, fine sandy loam, fine sand, and loam in the general site area.

Four lysimeters were installed at the site when the existing biosolids drying beds and other structures were constructed in 1991 (see Attachment 2 for as-builts of the biosolids drying beds). Documentation obtained from the MWRD through the internet (http://www.mwrd.org) suggests that three additional lysimeters were installed in May 2005 when previously installed lysimeters failed to yield sample. Data collected from the lysimeters (typically used to assess the quality of soil pore water at a site) reported to IEPA was obtained from the period 2005 through 2012. Table 1 includes a summary of lysimeter results for the period October through December 2005. Table 1 also includes a summary of lysimeter results from July through September 2012 and may more accurately reflect current site conditions. Results are compared to the State of Illinois General Resource Class II groundwater quality standards (equivalent to the Tiered Approach to Corrective Action Objectives (TACO) Residential Soil Component of the Groundwater Ingestion Exposure Route Value – Class II). In general, results suggest that the soil pore water does not meet the Class II groundwater quality standards and exceeds the TACO Class II groundwater ingestion exposure route values. Concentrations of total dissolved solids (TDS), chloride, sulfate, and mercury exceed the Class II TACO and groundwater standards.

Biosolids were reported on the RASMA site and removed from the site during the month of October 2005. According to monitoring reports obtained, additional biosolids placement and/or removal was not conducted at the RASMA after October 2005 thought 2012. Biosolids quality reported to IEPA for October 2005 is summarized in Table 2. Biosolids contain metals and nutrients; however, the concentrations of metals in the biosolids are well below the ceiling pollutant limits for land application (40 CFR 503). Though biosolids placed at the site from the period 1991 through 2005 were physically isolated from the site using a paved bed, the historical use of the site to dry biosolids may present a REC for the project site. As discussed in below paragraphs, historical aerial photographs and topographic maps suggests that the site was used to dry biosolids prior to construction of the existing drying beds in 1991; it is unclear if biosolids were isolated at the site prior to 1991. Further information is required to determine the scope, scale and potential project and environmental impacts associated with previous biosolids handling activities at the site including: the site use history, previous biosolids handling activities, and the quality of biosolids managed at the site. The soil quality at the site is largely unknown. Further information on the site history has been requested from the land owner, the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), but information had not been received as of the date of this report. Additional phase II investigations may be required to determine to determine the quality of soils at the site.

Groundwater

The northeastern region of Illinois relies on four main aquifer systems as a supply of industrial, residential, and municipal water. These aquifer systems include: 1) the sand and gravel deposits of the Pleistocene glacial drift; 2) the Silurian age dolomite formations; 3) the Cambrian-Ordovician aquifer consisting of sandstone from the Ironton-Galesville and the Glenwood-St. Peter Sandstone; and 4) the Mount Simon Aquifer, consisting of the lower Eau Claire Formations Sandstones (Suter, et al., 1959). Shallow wells of the region tap into groundwater found in the sands and gravels of the glacial deposits that tend to be discontinuous and not widespread. The glacial deposits and the underlying shallow Silurian dolomite aquifers are connected hydrologically. The glacial and Silurian aquifers are separated over most of the region from the Cambrian Ordovician aquifers by the relatively impermeable Maquoketa Formation consisting mainly of shale. Wells designed to tap the sandstone aquifers of the Cambrian-Ordovician and the Mount Simon aquifers are typically 800-1500 feet below ground surface (bgs) (Visocky, 1985). The population within the Chicago area relies on municipal water provided by the City of Chicago, using Lake Michigan as its source. The municipality of Alsip prohibits the use of groundwater for drinking water purposes through ordinance (Attachment 3).

The Calumet region of northwestern Indiana and northeastern Illinois is one of the most industrialized areas of the United States. Current and historical industries in the region and various filling activities (with slag, dredged material, and other industrial wastes) and the subsequent chemical runoff from these sources have resulted in the degradation of surface and groundwater resources in the region. Shallow groundwater in the industrialized Calumet region of south Chicago is heavily polluted with many contaminants (Kelly and Roadcap, 1994; Duwelius et al., 1995). Contaminants include heavy metals, organic compounds (VOCs and methane), and inorganic ions (Cl-, SO4 2-, sodium (Na+)). Ground water in contact with slag and other steel industry wastes may have high pH and elevated concentrations of metals, cyanide, and volatile and semi-volatile compounds. Slag is composed of a number of waste constituents, primarily metal oxides. If other steel industry wastes were co-disposed of with the slag, these materials may contain cyanide, volatile, and semi-volatile organic compounds (Kay et al, 1997).

Multiple wells are located within one mile of the project area (see Figure 4). Review of the entries suggest wells were developed for monitoring purposes, are older, or were developed for engineering investigations. EDR Well #5 is located within the project area and appears to be associated with U.S. Army Nike site C-51. It is unclear if this well remains on site. The private well was drilled in 1954 into the bedrock aquifer and is assumed to have provided a source of drinking water for the site in the mid 1950s through mid 1960s. Two additional wells (EDR #6 and EDR #11) are included in the IL WELLS database also associated with Nike site C-51. The location of EDR #6 is south of the Calumet-Sag Channel; it appears that the location of the well may be incorrect in the database. All the Nike buildings associated with the launch and control areas were located north of the Calumet-Sag Channel (see below paragraph for a description of the Nike site). EDR Well #11 is noted as an engineering point drilled 32 feet by the Corps of Engineers on a farm (named the Calumet-Sag Channel). There is no date on the drilling activity, but the entry suggests that it was conducted for an engineering test, likely prior to construction of

the Calumet-Sag Channel. These investigations appear to have been conducted along the Calumet-Sag channel throughout the area.

EDR has developed an information system to provide data on the general direction of groundwater flow. EDR has reviewed reports submitted by environmental professional to regulatory agencies at selected sites and has extracted the date of the report, groundwater flow direction determined hydrogeologically, and the depth to the water table. Information obtained from this data system suggests that ½ mile to 1 mile north of the project site the groundwater flow direction is to the east. However, this may not reflect conditions at the project site. The groundwater flow direction on-site is unknown.

Wetlands

As data stewards, the United States Fish and Wildlife Service (FWS) is the principle Federal agency that provides wetland information to the public and other agencies. In 1986, the Emergency Wetlands Resources Act mandated that the FWS complete the mapping and digitizing of the Nation's wetlands. The result of this effort is the Wetlands Geospatial Data Layer. This data layer houses all of the Service digital geospatial wetlands data, and forms the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (NSDI). The National Spatial Data Infrastructure (NSDI) is a way of enhancing the accessibility, communication, and use of geospatial data to support a wide variety of decisions at all levels of society. Review of information available online using the FWS wetland mapper suggests that there is one wetland within the project area (eastern portion of Area D) classified as PEMC, or freshwater emergent wetland, with a freshwater pond (see Figure 5). The EDR report confirms the location of the wetland (see Figure 8). However, the actual site conditions and wetland presence should be confirmed by a wetland specialist.

Nike FUDS/FUSRAP Program

Nike missiles provided the last line of defense for the U.S. population and its industrial centers against advancing technology in air warfare during the "cold war". The U.S. Army built the first Nike missile batteries in 1953. Approximately 13 former Nike sites existed in the Chicago land area. One of them, former NIKE Site C-51, is located within the project area. A Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) preliminary site assessment (PA) for Nike Site C-51 was conducted by Plexus Scientific Corporation for U.S. Army Corps of Engineers, Louisville District (LRL) in April 2003. The purpose of the investigation was to collect information concerning conditions at the former Nike Site C-51 Launch and Control Areas sufficient to assess the threat posed to human health and the environment and determine the potential for a site investigation (SI). The information summarized below was obtained from the LRL preliminary site assessment.

Nike Site C-51 Control and Launch Areas were located on a 148.32-acre tract of land leased from MWRDGC (formerly the Metropolitan Sanitary District of Greater Chicago). The Control Area is located at 6200 West 199th Street, Alsip, Illinois on the property of the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Ridgeland Avenue Solids Management Area (6200 West 119th Street, Alsip, Illinois). The Launch Area is located on the

property of an Illinois Department of Transportation (IDOT) road maintenance facility (11801 S. Ridgeland Avenue, Worth, Illinois) and is outside the limits of the proposed facility (see Figure 6). Acquisition of the land occurred between 1954 and 1956, and the lease with the Sanitary District was terminated on March 20, 1964.

The C-51 Launch Area has been owned by IDOT since 1965; IDOT uses the site for vehicle maintenance. The IDOT facility includes a garage, mechanics shop, fuel station with two diesel fuel USTs, road salt storage dome, open storage of construction debris and excavated soils, and other support buildings. All of the Nike structures at the Launch Area have been demolished with the exception of the missile assembly building. It is unknown if USTs associated within the Launch Area were removed.

The C-51 Control Area is on the property of MWRDGC and within the site limits of the proposed facility. A portion of the Control Area is within the existing biosolids management area, which includes a treatment facility and biosolids drying beds (Areas A, B, and C). The remainder of the Control Area to the east, bisected from the rest of the Control Area by a ditch that drained to the Calumet-Sag Channel, is undeveloped and overgrown with vegetation (Area D). With the exception of two concrete radar towers, all of the Control Area structures have been demolished; demolition occurred sometime between 1962 and 1968. The PA suggests that MWRDGC demolished the Control Area, but no records of the demolition activity were located. It is unknown if underground storage tanks (USTs) associated with the Nike facility were removed from the Control Area during demolition or construction of the biosolids drying beds. Geotechnical borings completed during the construction of the Biosolids Processing Area at the former Control Area were advanced to depths up to 40 feet. Groundwater and bedrock were not encountered in the borings. Soils were described as black to gray silt underlain by fill and clayey silt to silt. Below this is clayey and silty sand.

The Control Area contained the ground-based radar and computer systems. The systems were designed to detect and track incoming enemy aircraft and to guide the missiles to its target. An overlay of the C-51 Control Area features on a 1994 orthophoto quadrangle is presented in Figure 7. It appears that most of the administration buildings and the sewage treatment plant were located in Areas A, B, and C; the generator building, control van pad, and radar equipment were located in Area D. The following RECs associated with the C-51 Control Area were identified in the PA:

- Administration Buildings: USTs containing heating oil may have been associated with these buildings.
- Mess Hall: USTs containing heating oil may have been associated with these buildings.
- Paint and Oil Shed: buildings were used to store small amounts of paints, thinners, and solvents. Small quantities of stored materials may have been spilled in the vicinity of the shed.
- Generator Building: environmental concerns associated with the generator building relate to the storage of fuel for the generators (ASTs or USTs in the vicinity of the generator) and the possible use of polychlorinated biphenyls (PCBs) in the transformers at the building.

- Sewage Treatment Plant and sand filter bed: materials most likely to have been disposed of via septic systems include paints and general domestic cleaning products.
- Motor Pool: Some sites had motor pool buildings for vehicle maintenance. As no site-specific drawings were available, the location of the motor pool at C-51 is unknown.
- Maintenance and Spares Trailer: Portable test equipment, spare components, and parts were stored in this trailer. As no site-specific drawings were available, the location of the maintenance and spares trailer at C-51 is unknown.

The 2003 PA recommended locating and removing any remaining USTs and pursuing closure, if feasible, and conducting a property wide site investigation. Critical locations requiring further investigation associated with the C-51 Control Area included around the generator buildings, paint and oil shed, maintenance and spares building, fuel storage, the sewage treatment plant, the underground storage buildings, and in drainage ditches, if feasible. Some of these locations are within the limits of Area D where excavation activities are required for construction of the dredged material management facility; however, it appears that a majority of the remaining RECs at the site are currently isolated by the paved drying beds. In February 2007, USACE-LRL determined that the 2003 PA recommendations were no longer tenable because of the extensive redevelopment at the C-51 Control Area, including the construction of the biosolids drying beds (with unknown lining), and requested a No Defense Action Indicated (NDAI) for the property from IEPA in a letter dated February 2009. No IEPA response is indicated. It is unclear if additional investigations will be conducted at the project area as part of the FUDS program.

The presence of the Nike C-51 Control Area within the project limits is a potential REC for the project. Additional information should be requested from MWRD to determine if any USTs were encountered during construction of the biosolids drying beds. Because USTs may be present in the project area, and the 2003 PA identified several structures and associated RECs within Areas C and D, additional phase II investigations may be required to determine the quality of soils at the site and confirm/deny presence of USTs within the excavation limits of the project.

DATABASE SEARCH

A search of available environmental records was conducted utilizing Environmental Database Resources, Inc. (EDR). EDR searched Federal and state databases using the minimum search distances issued in the ASTM E 1527-05 guidelines. The comprehensive EDR database report is provided as Attachment 1. Table 3 notes the recommended ASTM search distances for Federal and State databases. Table 4 provides a summary of regulated sites found within the recommended search distance. EDR sites referenced in the below discussion are shown in Figure 8.

CERCLIS

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) contains data on any potential hazardous waste site that has been reported by states, municipalities, private companies, or private persons pursuant to the Comprehensive

Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLIS database indicates the stages of evaluation and remediation that have been completed for any given site. The CERCLIS database includes the National Priority List (NPL), which identifies over 1,200 sites for priority cleanup under the Superfund program, and the CERCLIS-No Further Remedial Action Planned (NFRAP) list. The EDR report notes that CERCLIS-NFRAP sites are archived sites that have been removed from the inventory of CERCLIS sites. Archived status indicates that, to the best of USEPA's knowledge, the assessment at the site has been completed, and the USEPA has determined no further steps will be taken to list this site on the NPL, unless information indicates this decision was not appropriate, or other considerations require a recommendation for listing at a later time. The decision to place the site on the CERCIS-NFRAP list does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

The EDR database search located no NPL, CERCLIS, or CERCLIS-NFRAP sites within the recommended search distance.

RCRIS

The Resource, Conservation, and Recovery Information System (RCRIS) lists sites which generate, transport, store, and/or dispose of hazardous waste defined by the Resource, Conservation, and Recovery Act (RCRA). The RCRIS database includes RCRA Corrective Action Reports (CORRACTS), which identify hazardous waste handlers with RCRA corrective action activity; RCRA treatment, storage, or disposal facilities (TSDFs), RCRA conditionally exempt small quantity generators (CESQGs), RCRA small quantity generators (SQGs), and RCRA large quantity generators (LQGs).

The EDR database search located one RCRA large quantity generator (LQG) within the search distance. No RCRA non-CORRACTS, TSDFs, or CORRACT sites were identified within the search distance. Nufarm Americas (EDR #A1), a manufacturer of pesticides and other agricultural chemicals, is a RCRA LQG. This site was also included on the US AIRS database. The facility appears to be in compliance with regulatory programs and no RCRA violations have been issued against the facility.

ERNS

The Emergency Response Notification System (ERNS) database lists information on reported releases of oil and hazardous substances. The database search yielded no ERNS reports on the subject property.

SSU

The State Sites Unit Listing (SSU) is the State and Tribal equivalent to the CERCLIS and NPL; the State Response Action Program database identifies the status of all sites under the responsibility of the IEPAs SSU. These sites may or may not have already been listed on the Federal CERCLIS list. The database search located no SSUs within the search distance.

SWF/LF

The IEPA records the Solid Waste Facilities/Landfill sites (SWF/LF), Special Waste landfills, Northeastern Illinois Planning Commission (NIPC) inventory of active and inactive solid waste disposal sites, and CCDD landfills in the State of Illinois. These sites may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. The database search located one (1) NIPC sites within the search distance. There is no information on the NIPC site identified by the EDR report, but the site appears to be located within the boundaries of the proposed facility (EDR Site #3 – Cal-Sag Site). The identification of the landfill supports review of historical maps conducted, which indicate disposal activities at the site in Area D as well as biosolids drying operations onsite as early as 1976. Historical map review is discussed in other areas of this report. Historical site filling and disposal activities are a potential REC for the proposed project. Since the scope and scale of the disposal activities are unknown, further assessment should be conducted at the site to determine if the project will be impacted by the presence of this REC. Additional information should be requested from MWRD to determine the site use history.

UST/LUST

The Illinois State Fire Marshall maintains a listing of registered USTs, as required by RCRA Subtitle I. The IEPA maintains a listing of LUST reports. The database search located two LUSTs but no UST facilities within the recommended search distance. EDR #E18 (Hayes Realty) and #F20 (Griffith Laboratories) have both received NFA/NFR letters. According to the IEPA, an NFR letter, issued by the IEPA, Bureau of Land (BOL), under the LUST program (35 IAC 732) signifies that no further corrective action is required in response to a LUST release. Consequently, there is little potential for RECs resulting from these sites.

SRP

The Site Remediation Program (SRP) database lists all voluntary remediation projects administered through the pre-notice site clean-up program (1989 to 1995) and the site remediation program (1996 to present). The database search located no SRP sites within the search distance.

FUDS

The Formerly Used Defense Sites (FUDS) database lists properties formerly owned by, leased to, or otherwise possessed by the U.S. and under the jurisdiction of the Secretary of Defense that have been identified for environmental restoration. The program is administered and managed by USACE, and the EDR report indicates that FUDS sites are properties where USACE is actively working or will take necessary cleanup actions. The database search located no FUDS site within the search area. As discussed in other sections of this report, Nike Site C-51 Control Area is located within the project area and is a potential REC for the project.

BOL

The EDR report includes a listing of sites in the IEPAs Bureau of Land (BOL) database that includes information from the Bureau's cleanup programs, Brownfields, LUSTS, and SRP sites. The data are cross-linked with all online database system applications from IEPA-BOL and USEPA FRS database. There are eighteen BOL sites within the search distance. Each of the sites was investigated through online IEPA and USEPA database search engines to determine the nature of the entry. Seven of the BOL entries are due to current and past RCRA generator activities (EDR Site # A2, 4, 5, B7, 10, 13, and 19). There are no indications that the sites have received any violation notices and none appear in the RCRIS CORRACTS database. Two of the BOL entries (EDR #E18 and F20) are due to LUST actions discussed in the above paragraph UST/LUST. NFA/NFR letters were issued for these sites and there is no indication that the sites continue to present a REC for the project site. Nine of the BOL entries are unknown: EDR site # B6 – WTAQ, EDR Site # C8 – Kocsis Brothers, EDR Site # C9 – Pennant Foods, EDR Site # D11 – Anchor Elevator, EDR Site # 12 – Windy City Waste, EDR Site #14 – WMC, Inc., EDR Site # 15 – J&J Carbide and Tool, EDR Site # 16 – Manheim Metro Chicago, EDR Site # 17 – no name (12160 S. Central). Additional internet search did not reveal the nature of the entry or the history of site activities. Due to the unknown nature of the regulated activity, future HTRW activities should include a site visit, or drive-by inspection, to determine the status of EDR sites #B6, C8, C9, D11, 12, 14, 15, 16 and 17.

Others

The EDR report provides a list of the government records searched, the sources for the records, and the dates showing whether or not the records are current. In addition to the databases described above, many other databases were searched to help identify available environmental records associated with the project site. These other databases include Federal Superfund (CERCLA) Liens, National Priority List Deletions, Engineering control sites, Brownfields sites, Superfund (CERCLA) Consent Decrees, Records of Decision (RODs) for CERCLA sites, Toxic Chemical Release Inventory System (TRIS), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) / Toxic Substances Control Act (TSCA) Tracking System (FTTS), Polychlorinated Biphenyl (PCB) Activity Database System (PADS), and Material Licensing Tracking System (MLTS); which is a database maintained by the Nuclear Regulatory Commission of sites possessing radioactive materials, oil and gas pipelines, electric transmission lines, sensitive receptors, flood zone data, the national wetlands inventory, etc.

Orphans

The EDR radius report includes a list of "orphan" sites, or sites that are listed in government databases but were not able to be mapped due to inadequate address information. A review of the addresses of the orphan sites was conducted and site location verified using online maps. Three of the orphan sites were located within one (1) mile of the project area. See Table 5 for a summary of information obtained from the database search and additional investigation conducted online. These sites do not appear to present a REC for the proposed project.

HISTORICAL TOPOGRAPHIC MAP REVIEW

Indications of potential RECs can be determined by identifying the past land use and topographic changes at the project area and surrounding areas. Identifying industrial and residential structures, observing any evidence of dumping or fill activities, and excavation activities, through the review of historical topographic maps, can help to determine indications of potential HTRW issues. Historical topographic maps for the project sites are included in Attachment 4.

Historical topographic maps were reviewed from the period of 1901 to 1997. The 1901 topographic map indicates limited development in the areas surrounding the project site. Several waterways, including the Des Plaines River, and extensive floodplains of the waterways, are present in the project area; in addition the Wabash railroad lies to the east and the Chicago Terminal Transfer railroad to the northeast. The 1928 topographic map indicates the Calumet-Sag channel was constructed between 1901 and 1928, south of the project area. A fill area is present in Area D, north of the Calumet-Sag channel. A ditch bisects Areas C and D, an undeveloped roadway is present to the north of the project site, and additional fill placement is located on northern portions of the project site. Between 1953 and 1963, toll road 30/41/294 is constructed north of the project area and the Nike structures and roadways are located on the project site (Control Area) and to the west (Launch Area). Additional fill activity is noted north of the Calumet-Sag channel just south of the Nike Control Area within footprint of Area D. A short roadway bisects north-south through Area A. There are no changes in the site topography until 1980, when a large developed area appears in Area A. It is unclear what the development is, but is within the limits of the existing RASMA site. This area, along with most of the proposed area, is shown as open water in 1993 topographic maps, likely due to the biosolids drying operation facility constructed in 1991. Nike structures and facilities are removed in the 1993 topographic map with the exception of a roadway north of the Calumet-Sag channel (and south of the project area) that provide access to the site from Ridgeland Avenue, and an additional undeveloped roadway providing access to Area D from the south and east. A boat ramp is constructed east of the project area between 1980 and 1993. Additional fill placement is noted in the southeast quadrant of Area D. The nature of source of this fill activity is unknown, but suspected as side cast material from construction of the boat ramp. There are no changes in site topography between 1993 and 1997.

Additional investigation into the nature of fill activity conducted at the site confirms that fill was placed on the project site for the construction and maintenance of the Calumet-Sag channel until 1963. See Attachment 5 for results of the Spoil Bank survey conducted by the Sanitary District in 1963. Approximately 21,240 cubic yards of fill consisting of soil and boulders was deposited north of the Calumet-Sag channel in the project area. It is unknown whether the spoils are the only material placed on the site; further investigation should be completed to confirm the nature of fill materials on the undeveloped portion of the property.

HISTORICAL AERIAL PHOTOGRAPH REVIEW

Indications of potential RECs can be determined by identifying the past land use and site activities at the project area and surrounding areas. Identifying industrial and residential areas,

observing any evidence of dumping or excavation activities, and locating extensive areas that lack vegetation through review of historical aerial photographs can help to determine indications of potential HTRW issues. Historical aerial photographs are included in Attachment 6.

Historical aerial photographs were reviewed for the period 1938 to 2012 for Areas A, B, and C. These historical photographs indicate that the site was not developed in 1938. There appears to be an access road through portions of the site, potential agriculture, and an area of side cast fill material adjacent to the Calumet-Sag channel on southern portions of the site. A potential drainage ditch appears north of the site with side cast fill material present on northern portions of the proposed site. Fill locations are consistent with information obtained from the Spoil Survey conducted in 1963. Between 1951 and 1967, the northern drainage ditch is adjacent to construction of the 294 expressway. In addition, the Nike facilities are present in the control area. A roadway is present along the north bank of the Calumet-Sag channel, likely to provide access between the Nike control and launch areas. The northern bank of the Calumet-Sag channel appears sparsely vegetated. Central vegetated portions of the proposed site have changed from agricultural to denser vegetation (trees) with the exception of northern portions of the site, which are disturbed in the area of the drainage ditch. Between 1967 and 1978, the Nike structures are removed and the western and central portions of the site appear to contain a bermed area containing earthen materials, presumed biosolids from drying operations. Much of the site appears to have been cleared of vegetation in Areas A and B, with portions of Area C remaining undisturbed. An access road from the east appears to lead to the disturbed portions of the site. Between 1978 and 1988, the previous access road north of the Calumet-Sag channel is widened and extends further east into Area D. Areas A, B, and C, and the western section of Area D are being used for biosolids drying. An additional access road is present on the northern side of the drying beds that extends from the IDOT facility west of the proposed site east into Area D. Between 1988 and 1994, the biosolids drying process appears to have changed. There are fewer individual cells in Areas A, B, and C (presumably with construction of the paved drying beds in 1991), with what appears to be a more dense concentration of biosolids on western portions of the site. In 1999, more dense biosolids are located on eastern portions of the site. And in 2005, only the eastern section of the site contains biosolids. From 2006 through 2012, the site does not appear to contain any biosolids. In 2012, small amounts of debris are located in central portions if the site (presumed to be landscaping materials – area leased to Christy Webber landscaping for this operation).

Because the historical aerial photographs do not adequately cover the project area to the east (Area D), additional aerial photographs, with LRL annotations, were also used for this review. Available LRL aerial photographs are included as Attachment 7 and LRL observations are noted below. In 1951 the site of the Control Area is an agricultural tract. Levees and/or possible side cast spoil piles, which parallel the Calumet-Sag channel, are the only topographic relief in the immediate area. Between 1955 and 1958, construction of the Nike Control site has been completed. The Nike Control Area is situated on the northern shore of the Calumet-Sag channel and is divided by a drainage ditch. Between 1962 and 1968, the Control Area has been razed. All buildings and structures, with the exception of two radar towers and a small number of building walls, have been removed. Scattered debris and rubble is dispersed among the building pads and roadways. Three pits not previously observed within this facility are also present. *These pits are situated adjacent to the "footprints" of former site buildings within Area C.*

Evidence of disposal activity is observed east of the Control Area's fence line, *on northeastern portions of Area D*. Earthen materials, debris, and 5 or 6 large, unidentifiable objects have been deposited into this low-lying area. Between 1968 and 1973 the pits in the Control Area have been filled and the disposal site located east of the Control Area (*Area D*) is nearly overgrown by vegetation and does not appear to have been used in the recent past. Between 1973 and 1976 biosolids drying operations begin, and in 1980, the drying beds have been fused into a single unit. East of the drainage ditch (*Area D*) large amounts of various-toned earthen materials are being dumped and graded. This activity extends to the former disposal site, which has been nearly filled. Grading and filling activities are most pronounced in the vicinity of the western radar tower, which has been transformed into a large, level field surrounded by an earthen berm. In 1986 the biosolids drying operations have been established near the two radar towers. Further east, commercial operations have encroached upon the site of the old excavation/disposal site. The excavation, which has essentially been filled by 1986, is bordered by a semi truck trailer parking lot on the north. No significant change is noted in the vicinity of the biosolids management operation between 1988 and 1998; with the exception of additional fill deposited on eastern portions of the project site and biosolids management operations are no longer being conducted in *Area D*.

Review of historical topographic maps and aerial photographs suggests that historical site use and on-site disposal activities are potential RECs. Biosolids drying began within the limits of the proposed project as early as 1976; the scope of the activity, environmental quality of the biosolids, material handling and any engineering controls implemented on-site, and impacts to the site are unknown between 1976 and 1991. In addition, the eastern portions of the site, and specifically within Area D (where extensive excavation will be required to create the facility), has been impacted by historic filling activities that began as early as the construction of the Calumet-Sag channel. Fill deposited from the Calumet-Sag channel accounts for approximately 1,685 cubic yards of material; however, the source and quality of fill placed after 1963 is unknown, but may contain materials from adjacent boat ramp construction, MWRD on-site activities, or demolition of Nike site. Nike structures remain in Area D and will require demolition if Area D is included in the final recommended plan.

SITE VISIT

Members of the Chicago District project delivery team visited the project site on November 1, 2013. The purpose of the visit was to view the site conditions. Notes and photographs of the site visit are included in Attachment 6. USACE arrived at the west end of the RASMA Site to meet with MWRD representatives. The site visit continued on foot to see the various existing features of the former drying beds. The main portion of the site is covered with concrete (Photo 1), with cells that each funnel to their own drains (Photo 2). The drains reportedly flow into the same interceptor pipe that goes to a water treatment facility. The concrete appeared to be in moderate condition, with a few cracks with vegetation (Photo 1). The two western cells were unoccupied while the eastern cells are being used by a landscaping company, leased for use each year. The landscaping company was actively hauling organic materials, sorting and stockpiling it onsite, materials presumably for reuse as topsoil (Photo 3).

The south side of the site was bound by an asphalt road actively used by the landscaping company and in good condition (Photo 4). No significant cracks were documented. South of the asphalt road, the site drops approximately 30-40 ft into the Calumet-Sag Channel. The drop-off slope is more significant toward the western portion of the site (Photo 5) while the eastern portion of the slope was more benched. The slope was heavily vegetated with mature trees and appeared to be stable. A ditch is located north and east of the concrete drying beds. The ditch was approximately 10 feet below the concrete surface and is about 6 ft wide (Photo 7). East of the ditch (Area D), the site is generally covered with hills, mature trees, and some open fields. An especially tall hill is located on the easternmost end of the site, which is about 40 ft tall (Photo 8). Additionally, there are two former radar towers from the Nike Missile Site that used to be at the site in the 1950's and 60's (Photo 9). These towers are around 30 feet tall. The hills appeared to consist of various fill material, with many stones sticking up from the ground.

Near the southeast portion of the site, a large interceptor pipe was present and reportedly runs parallel to the site (Photo 10). Additional utilities were noted in the northern area where there appeared to be an old detention pond with a dilapidated drain and apparent shutoff valve (Photo 11).

FINDINGS AND CONCLUSIONS

This Phase I Environmental Site Assessment was performed to determine if the 119th Street & Ridgeland Avenue site being considered for disposition of dredged material as part of the Calumet Harbor and River Dredged Material Management Plan (DMMP) will have an impact on any RECs that may exist in the surrounding areas, and if RECs will have an impact on the implementation of the projects. According to ER 1165-2-132, non-HTRW environmental issues that do not comply with federal, state, and local regulations should be discussed in the HTRW evaluation along with HTRW issues.

Existing information available for review suggests that the Calumet-Sag Channel is currently classified by the State of Illinois as a Secondary Contact and Indigenous Aquatic Life Use Waterway. The Secondary Contact and Indigenous Aquatic Life Standards (35 Ill. Adm. Code 302, Subpart D) are intended to protect limited uses of waters not suited for general use activities but are nonetheless suited for secondary contact uses and capable of supporting indigenous aquatic life, limited only by the physical configuration of the body of water, characteristics, and origin of the water, and the presence of contaminants in amounts that do not exceed the water quality standards. The Calumet-Sag Channel is listed as an impaired stream in the Draft Integrated Water Quality Report and 303(d) list (IEPA 2014) due to inability to achieve the applicable water quality standards.

Existing information available for review suggests that the topography of the Calumet Region and study area is flat. The general lack of definition in the drainage basins in the area was caused by Pleistocene glacial action. Bedrock formations underlying the area are overlain with deposits of heterogeneous unconsolidated glacial till, consisting of silt, clay, sand, and gravel, up to 400 ft in depth. 4,000 feet of sedimentary bedrock, ranging in age from Cambrian to Silurian age, underlie the area.

Review of existing information suggests that surface soils are identified as “urban land” with silt loam, fine sandy loam, fine sand, and loam in the general site area. The majority of the site is developed, with the exception of the easternmost portion of the site, which is currently partially vegetated. Developed portions of the site are paved and previously served as biosolids drying beds for the MWRDGC Stickney waste water treatment facility, otherwise known as the Ridgeland Avenue Solids Management Area (RASMA). Review of available biosolids quality data collected in October 2005 suggests that biosolids previously managed at the site contain elevated concentrations of metals and nutrients. Though biosolids placed between 1991 through 2005 were physically isolated from the site using a paved bed, the historical use of the site to dry biosolids may present a REC for the project site. Additional information should be obtained from MWRD to confirm the site use: site use history, site operating permit conditions, monitoring activities, and results of environmental studies and sampling conducted at the site are required to determine if soils at the site have been impacted by previous activities. Soil quality onsite is unknown.

Review of existing information collected from on site lysimeters suggests that the soil pore water does not meet the Class II groundwater quality standards and exceeds the TACO Class II groundwater ingestion exposure route values for total dissolved solids (TDS), chloride, sulfate, and mercury. The municipality of Alsip prohibits the use of groundwater for drinking water purposes through ordinance.

Review of existing information suggests that there is one wetland within the project area in the eastern portion of Area D classified as PEMC, or freshwater emergent wetland, with a freshwater pond. Actual site conditions and wetland presence should be confirmed by a wetland specialist.

The presence of the Nike C-51 Control Area within the project limits is a potential REC for the project. The 2003 PA recommended locating and removing any remaining USTs and pursuing closure, if feasible, and conducting a property wide site investigation. Critical locations requiring further investigation associated with the C-51 Control Area included around the generator buildings, paint and oil shed, maintenance and spares building, fuel storage, the sewage treatment plant, the underground storage buildings, and in drainage ditches, if feasible. Some of these locations are within the limits of Area D where excavation activities are required for construction of the dredged material management facility; however, it appears that a majority of the remaining RECs at the site are currently isolated by the paved drying beds. In February 2007, USACE-LRL determined that the 2003 PA recommendations were no longer tenable because of the extensive redevelopment at the C-51 Control Area, including the construction of the biosolids drying beds. USACE requested a No Defense Action Indicated (NDAI) for the property from IEPA in a letter dated February 2009. Because IEPA has not accepted or rejected the NDAI, it is unclear if additional investigations will be conducted at the project area as part of the FUDS program. Additional information has been requested from MWRD to determine if any USTs were encountered during construction of the biosolids drying beds. Because USTs may be present in the project area, and the 2003 PA identified several structures and associated RECs within Areas C and D, additional phase II investigations may be required to determine the quality of soils at the site and confirm/deny presence of USTs or other debris within the limits of the project.

Review of information provided in the EDR database search suggests that there is one (1) regulated RCRA large quantity generator (LQG) within the recommended search distance. Nufarm Americas (located 1/8 to ¼ mile north of the project site) manufactures pesticides and other agricultural chemicals. This site was also included on the US AIRS database. The facility appears to be in compliance with regulatory programs and no RCRA violations have been issued against the facility.

Review of information provided in the EDR database suggests that there are two (2) LUSTs within the recommended search distance. Hayes Realty and Griffith Laboratories have both received NFA/NFR letters. According to the IEPA, an NFR letter, issued by the IEPA, Bureau of Land (BOL), under the LUST program (35 IAC 732) signifies that no further corrective action is required in response to a LUST release. Consequently, there is little potential for RECs resulting from these sites.

Review of information provided in the EDR database suggests that there is one (1) NIPC waste disposal site within the recommended search distance. The site appears to be located within the boundaries of the proposed dredged material management facility. Identification of the waste disposal site supports review of historical maps conducted, which indicate fill disposal for construction and maintenance of the Calumet-Sag Channel until 1963, disposal activities at the site in Area D post-1963, and biosolids drying operations onsite as early as 1976. Historical site filling and disposal activities are a potential REC for the proposed project. Additional information should be requested from MWRD to determine the site use history; phase II investigations may be required to determine the quality of soils at the site if construction in Area D is included in the final recommended plan.

Review of information provided in the EDR database suggests that there are eighteen (18) Illinois BOL sites within the recommended search distance. Seven (7) of the BOL entries are due to current and past RCRA generator activities; there are no indications that the sites have received any violation notices and none appear in the RCRIS CORRACTS database. Two (2) of the BOL entries are due to LUST actions; NFA/NFR letters were issued for these sites and there is no indication that the sites continue to present a REC for the project site. Nine of the BOL entries are unknown; due to the unknown nature of the regulated activity, future HTRW activities should include a site visit, or drive-by inspection, to determine the status of EDR sites #B6, C8, C9, D11, 12, 14, 15, 16 and 17.

Review of historical topographic maps and aerial photographs suggests that historical site use and on-site disposal activities are potential RECs. Biosolids drying began within the limits of the proposed project as early as 1976; the scope of the activity, environmental quality of the biosolids, material handling and any engineering controls implemented on-site, and impacts to the site are unknown between 1976 and 1991. In addition, the eastern portions of the site, and specifically within Area D (where extensive excavation will be required to create the facility), has been impacted by historic filling activities that began as early as the construction of the Calumet-Sag channel. Fill deposited from the Calumet-Sag channel accounts for approximately 1,685 cubic yards of material; however, the source and quality of fill placed after 1963 is unknown, but may contain materials from adjacent boat ramp construction, MWRD on-site

activities, demolition of Nike site, or fly dumping. Nike structures remain in Area D and will require demolition if Area D is included in the final recommended plan.

Members of the Chicago District project delivery team visited the project site on November 1, 2013. The main portion of the project site is covered with concrete with cells that each funnel to their own drains. The concrete appeared to be in moderate condition, with a few cracks with vegetation. The two western cells were unoccupied while the eastern cells are being used by a landscaping company, leased for use each year. The landscaping company was actively hauling organic materials, sorting and stockpiling it onsite, materials presumably for reuse as topsoil. The south side of the site was bound by an asphalt road actively used by the landscaping company and in good condition. South of the asphalt road, the site drops approximately 30-40 ft into the Calumet-Sag Channel. The drop-off slope is more significant toward the western portion of the site while the eastern portion of the slope was more benched. The slope was heavily vegetated with mature trees and appeared to be stable. A ditch is located north and east of the concrete drying beds. The ditch was approximately 10 feet below the concrete surface and is about 6 ft wide. East of the ditch in Area D, the site is generally covered with hills, mature trees, and some open fields. An especially tall hill is located on the easternmost end of the site, which is about 40 ft tall. Additionally, there are two former radar towers from the Nike Missile Site that used to be at the site. These towers are around 30 feet tall. The hills appeared to consist of various fill material, with many stones sticking up from the ground.

No HTRW investigation can completely eliminate uncertainty regarding the potential for HTRW associated with a project area. Performance of the investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for HTRW in connection with a project area, and this practice recognizes time and cost constraints.

REFERENCES

40 CFR 503. Code of Federal Regulations, Title 40: Protection of Environment, Part 503—Standards for the Use or Disposal of Sewage Sludge.

American Society for Testing of Materials. Publication E 1527-00. Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process.

Duwelius, R.F., R.T. Kay, and S.T. Prinos, 1995. Ground-Water Quality in the Calumet Region of Northwestern Indiana and northeastern Illinois, June 1993. U.S. Geological Survey, Urbana, IL, Water-Resources Investigations Report 95-4244, 179 p.

Illinois Draft Integrated Water Quality Report and Section 303(d) List - 2014. Illinois Environmental Protection Agency Bureau of Water, Springfield, Illinois. (DRAFT).

Illinois Administrative Code, Title 35. Environmental Regulations for the State of Illinois**.**

Kay, R.T., Greeman, T.K., Duwelius, R.F., King, R.B., Nazimek, J.E., and Petrovski, D.M., "Characterization of Fill Deposits in the Calumet Region of Northwestern Indiana and Northeastern Illinois," U.S. Geological Survey, Water-Resources Investigations Report 96-4126, 1997.

Kelly, W.R., and G.S. Roadcap, 1994. Shallow ground-water chemistry in the Lake Calumet area, Chicago, Illinois. In Proceedings of the National Symposium on Water Quality, American Water Resources Association, pp. 253-262.

Suter et al., 1959, Preliminary Report on Ground Water Resources of the Chicago Region, Illinois, ISGS.

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USACE, Chicago District, "Final Environmental Impact Statement, Chicago Area Confined Disposal Facility and Maintenance Dredging in Cook County, Illinois," May 1982.

Visocky, 1985, Geology, Hydrology, and Water Quality of the Cambrian and Ordovician Systems in Northern Illinois.

Figures

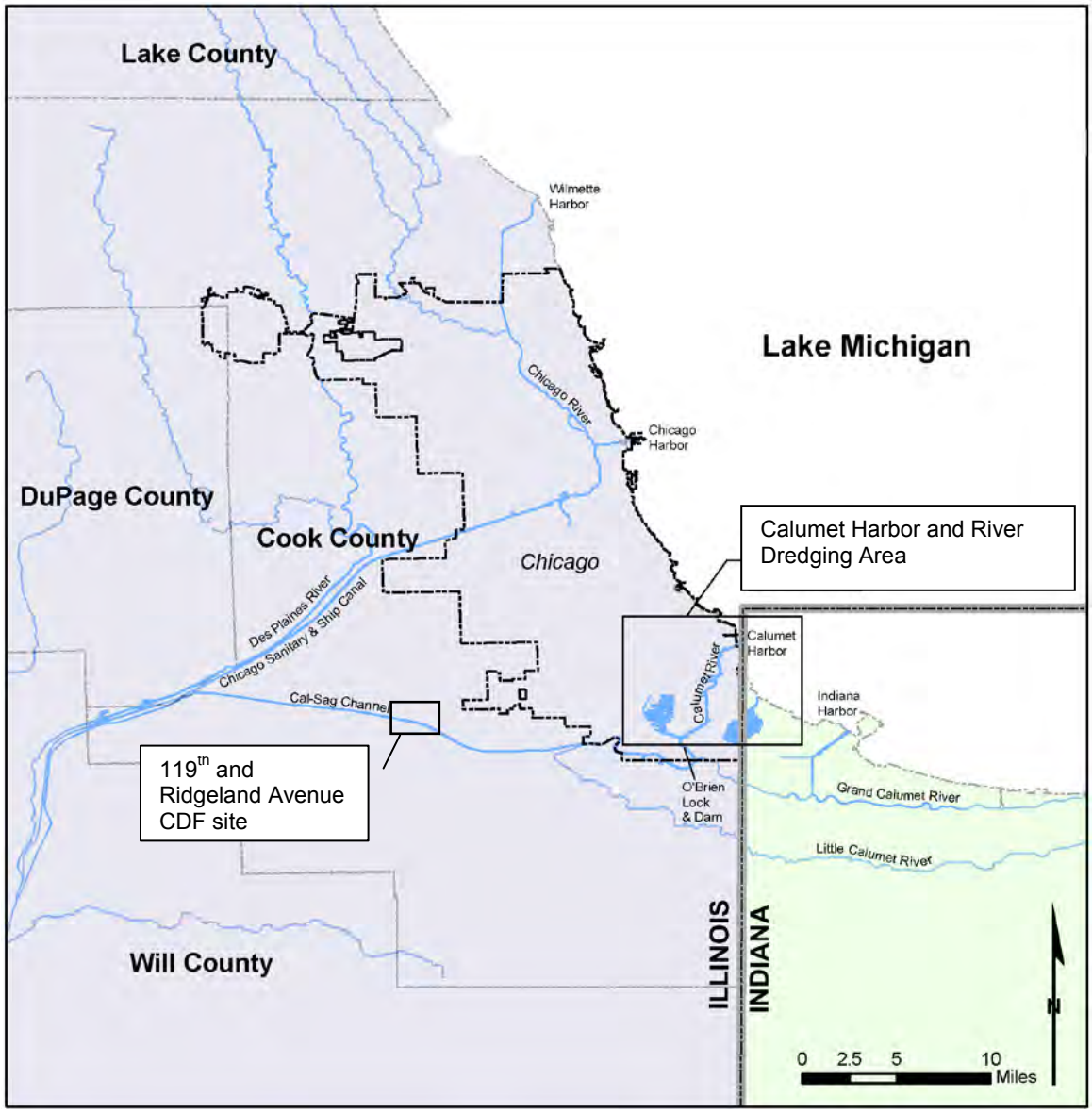


Figure 1 – Project Vicinity Map

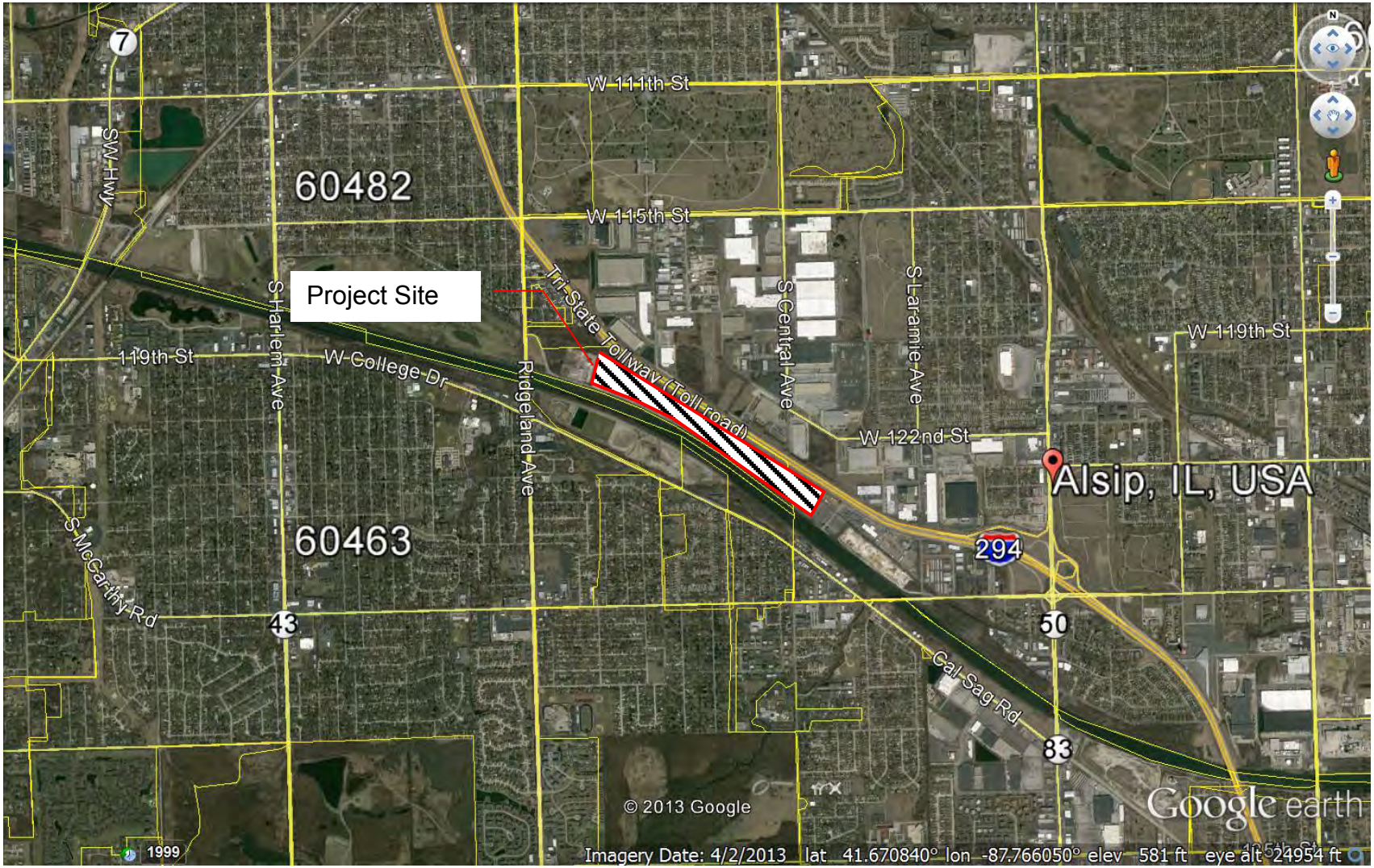
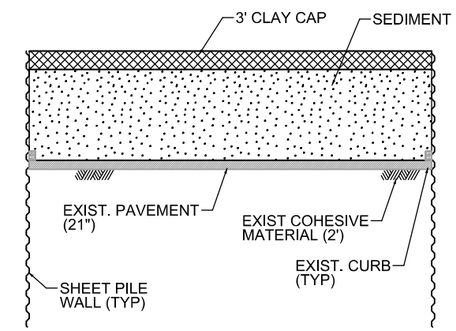


Figure 2 – Project Site Boundary Map

FACILITY STORAGE CAPACITY			
STORAGE AREA	AREA (AC)	CAPACITY (CY)	SEDIMENT ELEVATION
AREA A	10.1	233,100	593 TO 607.3
AREA B	12.8	233,650	595 TO 606.3
AREA C	10.5	233,500	595 TO 608.8
AREA D	12.6	201,100*	595 TO 604.9
TOTAL	46	700,250	

* NOT INCLUDED IN TOTAL CAPACITY



TYPICAL CELL SECTION FOR AREA A, B, C & D

AREA A WALL HEIGHT = 17.3'
AREA B WALL HEIGHT = 14.3'
AREA C WALL HEIGHT = 16.8'
AREA D WALL HEIGHT = 12.9'

LEGEND

- SEDIMENT PLACEMENT CELL CAP WITH 3' CLAY, 6" TOPSOIL AND SEEDING
- DOCK
- CRANE PAD
- EXISTING DECANT STRUCTURE
- SS_X — EXISTING RCP DRAIN PIPE
- W_X — EXISTING 48" WATERMAIN
- S S — PROPOSED EFFLUENT PIPE
- FILTER CELL
- SITE ACCESS ROUTE
- PROPOSED DECANT STRUCTURE

N

0 500' 1000'

NOTES:

1. DEMOLISH EXISTING RADAR TOWERS, SHEDS, AND GRAVEL ROADS ON AREA D.
2. TREE REMOVAL OVER 75% OF AREA D. REMOVE TREES AS NECESSARY TO ACCOMMODATE DOCKS AND CLEARANCE FOR CRANE ARM.
3. THIS CONCEPTUAL PLAN ASSUMES NO PHYSICAL BARRIER BETWEEN CELL AREAS.
4. AN EXISTING DRAINAGE DITCH FLOWS WEST TO EAST ALONG THE NORTH PERIMETER OF THE SITE AND TURNS SOUTH BETWEEN AREA C & D, ULTIMATELY DISCHARGING INTO THE CAL SAG CHANNEL.

U.S. Army Corps of Engineers Chicago District

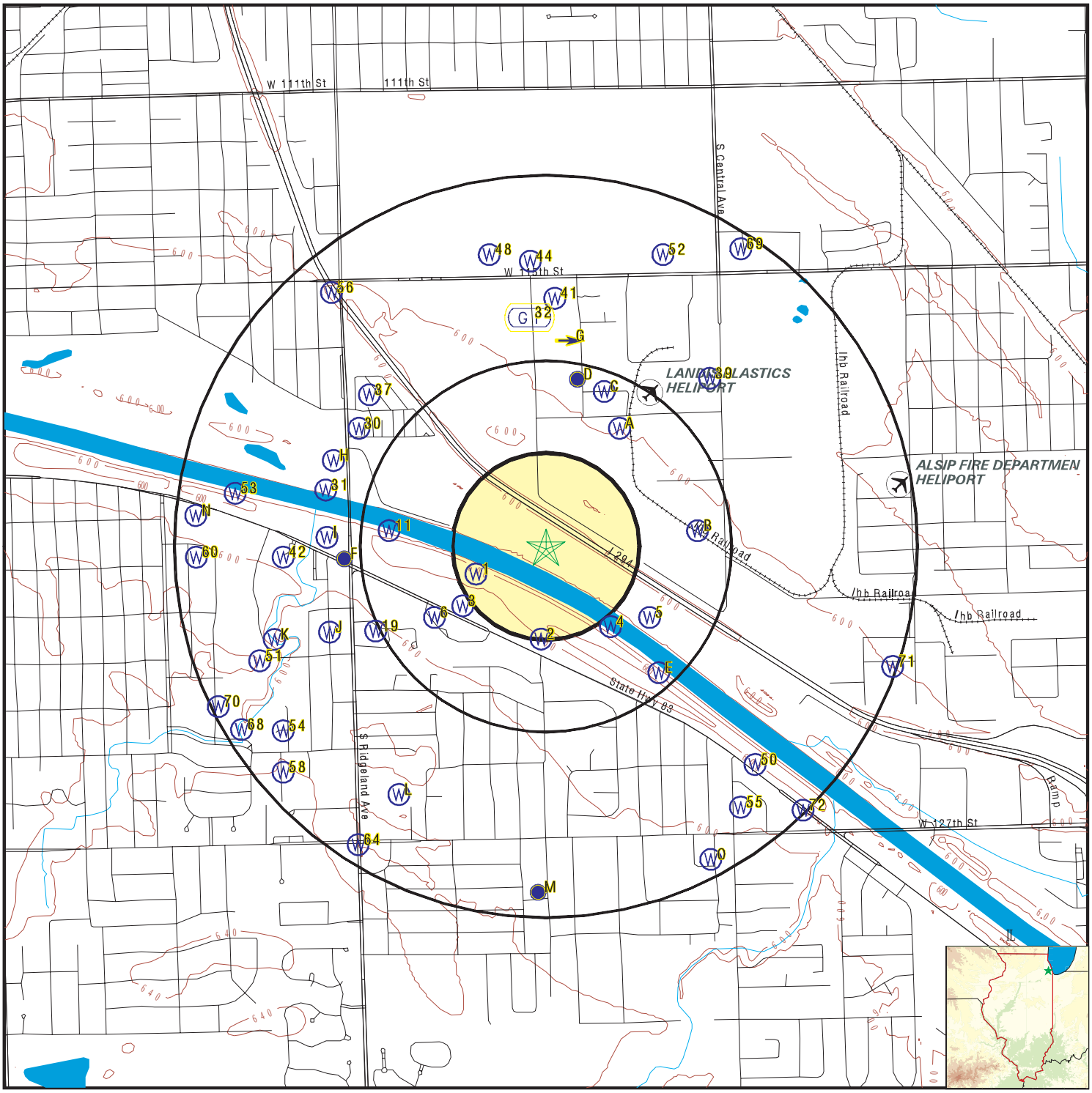
CALUMET HARBOR & RIVER
DREDGED MATERIAL MANAGEMENT PLAN

REGIONAL SEDIMENT MANAGEMENT FACILITY
CONCEPTUAL SITE LAYOUT
119TH ST. & RIDGELAND AVE.
ALSIP, ILLINOIS

SCALE:	DATE:	DRAWING CODE:
1" = 500'	6/21/2013	CDF-CONCEPT-MWRD.DGN

Figure 3 - Preliminary Facility Layout

Figure 4 - **PHYSICAL SETTING SOURCE MAP - 3660046.2s**



County Boundary
Major Roads
Contour Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data

N

SITE NAME: 119th Street and Ridgeland Avenue	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 119th Street and Ridgeland Avenue Alsip IL 60803	CONTACT: Richard Saichek INQUIRY #: 3660046.2s
LAT/LONG: 41.6726 / 87.7679	DATE: July 10, 2013 11:17 am

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U.S. Fish and Wildlife Service

National Wetlands Inventory

Calumet River and Harbor DMMP

Jan 2, 2014

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

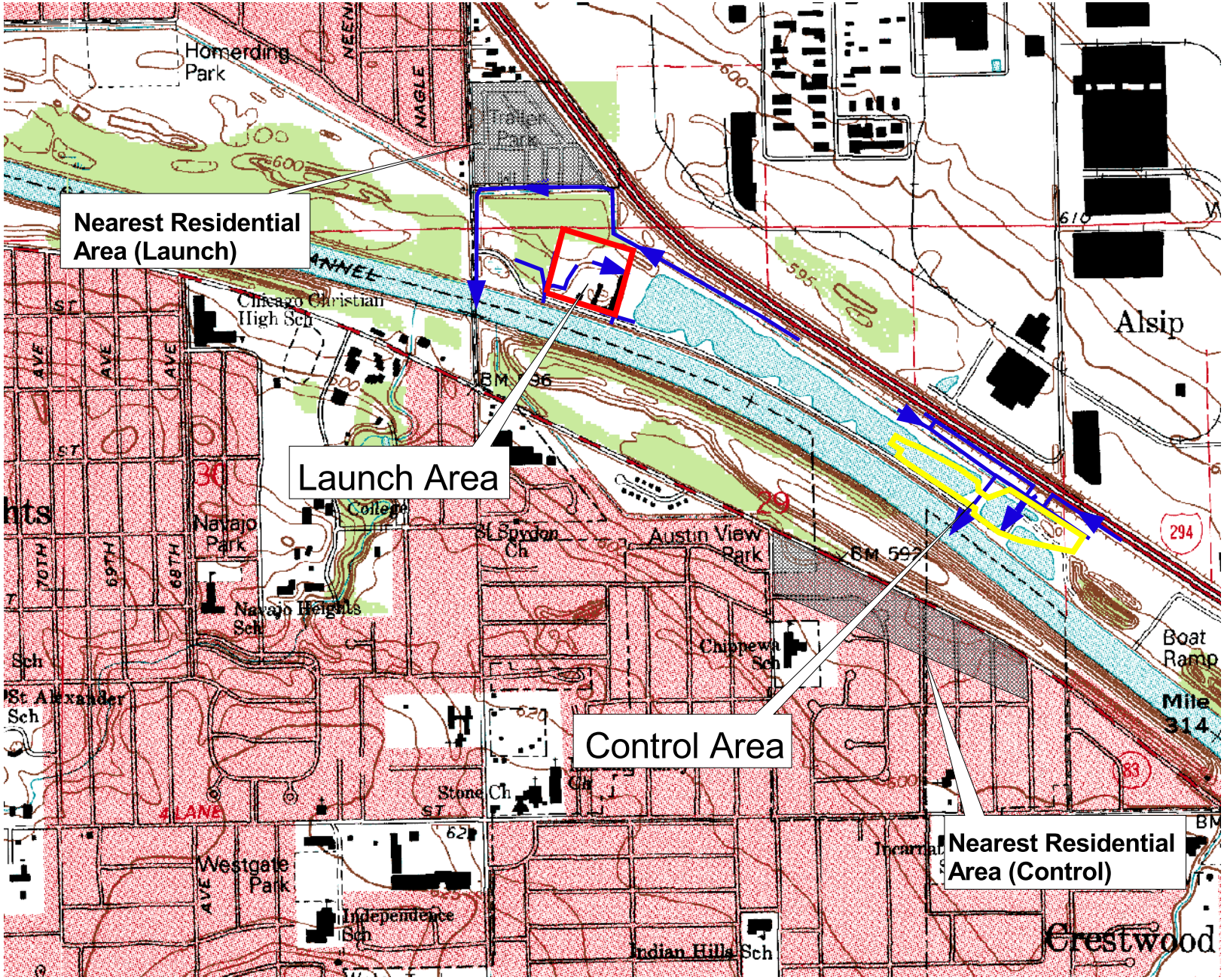
Riparian Status

- Digital Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Figure 5 - FWS Wetland Map



Source: USGS 7.5 Minute Quadrangle, Maps of Illinois, Scale 1:24,000; Palos Park, 1993.

1000 0 1000 2000 3000 4000 Feet

Figure 1-1
Site Location

Former Nike Missile Site C-51
Preliminary Assessment

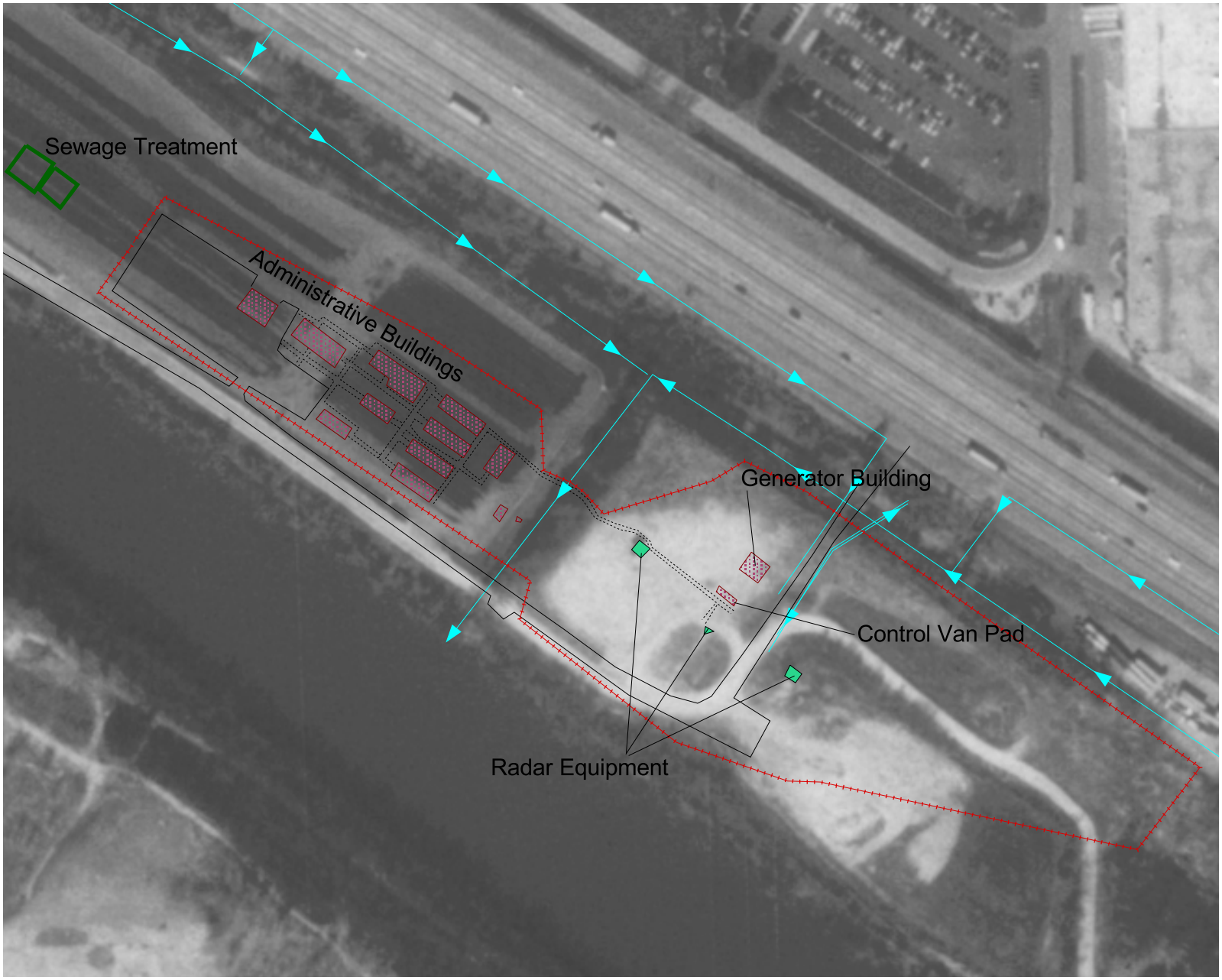
Alsip Illinois

U.S. Army Corps of Engineers, Louisville District
Louisville, Kentucky

PLEXUS

Project No. 0032-006 | File No. 0032006 c51.apr

Figure 6 - Nike C-51 Launch and Control Area Location



Legend

- Buildings
- Fence
- Radar Equipment
- Roads
- Surface Drainage
- Sewage Treatment Plant
- Walkways

Source: Aerial Photograph (CAPS, April 29, 1958, USGS, March 25, 1994).

300 0 300 600 Feet

Figure 2-2
Control Area Overlay

Former Nike Missile Site C-51
Preliminary Assessment

Alsip Illinois

U.S. Army Corps of Engineers, Louisville District
Louisville, Kentucky

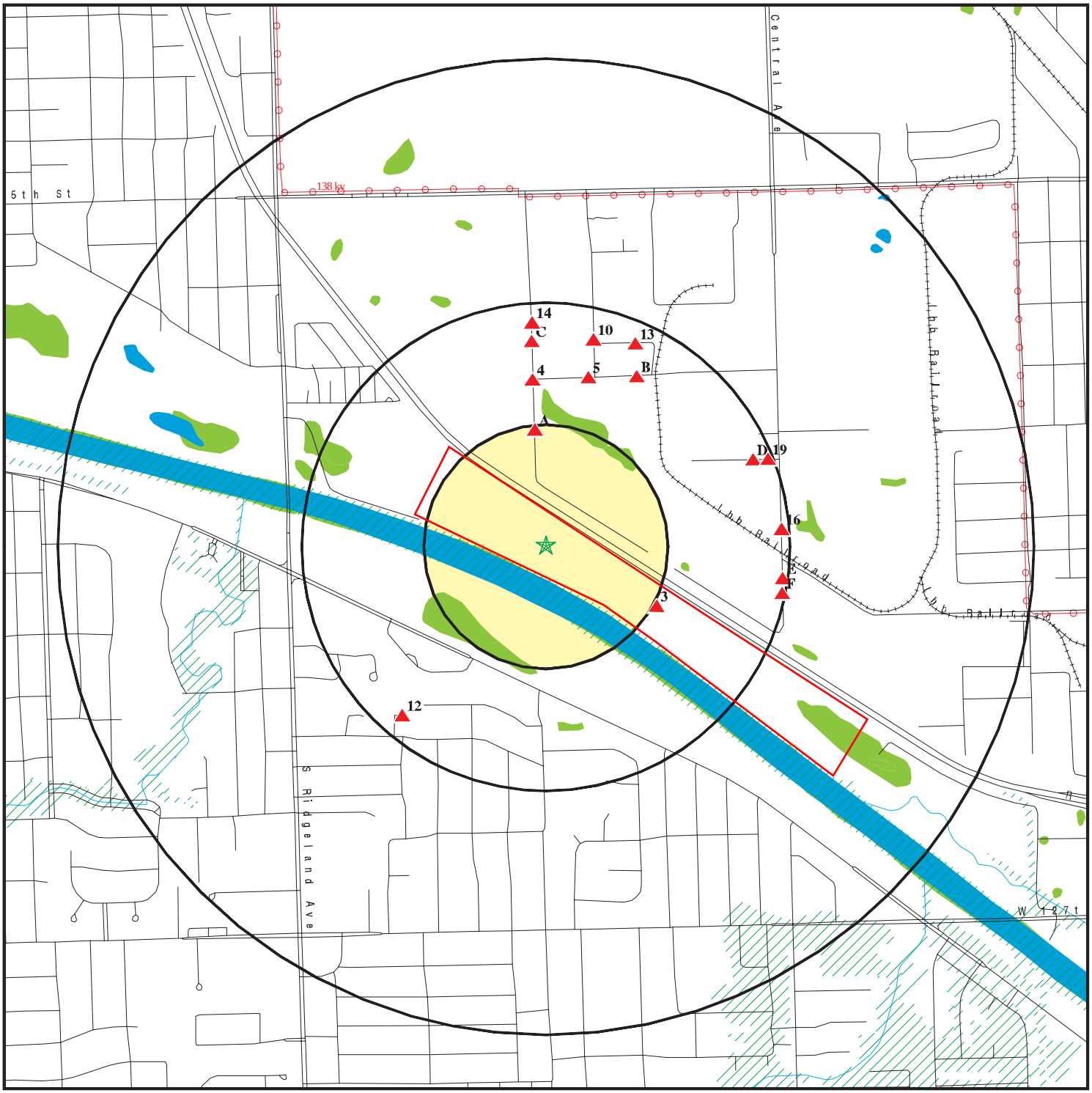
PLEXUS

Project No. 0032-006 File No. radius.apr

Figure 7 - Nike C-51 Control Area Overlay

Figure 8 - EDR Radius Search Map

OVERVIEW MAP - 3660046.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

0 1/4 1/2 1 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 119th Street and Ridgeland Avenue	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 119th Street and Ridgeland Avenue Alsip IL 60803	CONTACT: Richard Saichek INQUIRY #: 3660046.2s
LAT/LONG: 41.6726 / 87.7679	DATE: July 10, 2013 11:15 am

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Tables

Table 1 - RASMA Lysimiter Data

		12-Oct-05			26-Oct-05			15-Nov-05			22-Nov-05			7-Dec-05	3rd Quarter 2012			Groundwater Quality Standards
Parameter	**Units**	**Biosolids removed, none placed**			**Biosolids removed, none placed**			**No biosolids placed or removed**			**No biosolids placed or removed**				**7/18/2012**	**8/1/2012**	**9/5/2012**	**Class II**
pH		7.8	7.8	7.9	7.4	7.6	7.7	7.5	7.6	7.9	7.3	7.5	7.7	7.8	8	8.1	8.1	6.5 - 9
EC	mS/m	393	231	175	420	198	183	379	225	174	381	239	204	208	279	286	273	ND
TDS	mg/L	3892	1664	1266	3700	1570	1446	3416	1480	1316	3414	1388	1396	1446	2710	2728	2290	1200
TD Organic Carbon	mg/L	6	9	3	5	9	4	4	7	2	4	7	2	3	7	10	9	ND
CL^-	mg/L	708	207	283	705	223	320	763	205	321	729	218	329	357	379	364	372	200
SO_4^{2-}	mg/L	794	215	219	785	187	237	802	185	256	785	180	235	1981	293	292	304	400
TKN	mg/L	1.8	35	2.1	3.4	35	1	2.2	34	0.66	1.6	39	1.3	0.88	37	40	36	ND
NH3-N	mg/L	0.86	33	1.7	2.1	26	0.47	0.96	31	<0.02	0.76	31	0.48	0.21	35	37	38	ND
NO2+NO3-N	mg/L	2.28	0.089	0.286	0.022	0.062	0.1	0.05	0.015	0.174	0.006	0.011	0.144	0.208	3.8	1.4	1.2	100
Total P	mg/L	0.11	0.08	0.08	<0.04	<0.04	<0.04	0.09	0.17	0.09	<0.04	<0.04	<0.08	0.11	< 0.1	< 0.1	< 0.1	ND
Alkalinity as CaCO3	mg/L	643	890	321	661	861	385	583	794	298	607	778	340	355	864	923	879	ND
Al	mg/L	<0.07	<0.07	<0.07	0.12	0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.14	<0.07	< 1	< 1	< 1	ND
Ca	mg/L	411	205	117	431	204	143	430	199	133	425	210	137	148	228	250	242	ND
Cd	mg/L	0.0026	0.002	0.002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	<0.0003	0.0006	<0.0003	< 0.001	< 0.001	< 0.001	0.05
Cr	mg/L	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0014	<0.0007	< 0.005	< 0.005	< 0.005	1
Cu	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.004	<0.002	< 0.005	< 0.005	< 0.005	0.65
Fe	mg/L	3.02	1.83	0.336	3.41	3.23	0.155	2.75	0.087	0.021	4.24	1.05	0.076	0.057	3	4	3	5
Hg	ug/L	<0.05	<0.05	<0.05	0.12	0.12	0.12	<0.05	0.05	<0.05	<0.05	<0.05	<0.10	0.06	< 0.2	< 0.2	< 0.2	0.01
K	mg/L	9	17	5	9	16	5	8	16	4	7	15	4	4	12	12	12	ND
Mg	mg/L	231	128	56.2	239	131	67.8	235	129	65	234	129	65.6	69.4	148	146	147	ND
Mn	mg/L	0.1127	0.1995	0.0878	0.1439	0.2334	0.0874	0.097	0.2018	0.0525	0.0969	0.2375	0.0778	0.0744	0.087	0.113	0.103	10
Na	mg/L	110	57	148	111	63	169	109	58	171	108	56	169	177	124	127	124	ND
Ni	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.004	<0.002	< 0.005	< 0.005	< 0.005	2
Pb	mg/L	<0.0009	0.002	<0.0009	<0.0009	<0.0009	0.001	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0018	<0.0009	< 0.02	< 0.02	< 0.02	0.1
Zn	mg/L	0.014	0.012	0.008	0.031	0.016	0.008	0.022	0.011	0.01	0.015	0.01	0.012	0.012	0.03	< 0.01	< 0.01	10

Table 2 - RASMA Biosolids Data

Constituent	Unit	Concentration	Ceiling Limits for Land Applied Biosolids. *40 CFR 503.13*
pH		6.7	
Total solids	%	61.3	
Total volatile solids	%	39	
TKN	mg/kg	23,248	
NH3-N	mg/kg	1,809	
Total P	mg/kg	25,428	
Al	mg/kg	20,582	
As	mg/kg	8	75
Ca	mg/kg	39,137	
Cd	mg/kg	6	85
Cr	mg/kg	292	
Cu	mg/kg	423	4300
Fe	mg/kg	19,100	
Hg	mg/kg	1.4	57
K	mg/kg	3,621	
Mg	mg/kg	17,945	
Mn	mg/kg	521	
Mo	mg/kg	17	75
Na	mg/kg	1,120	
Ni	mg/kg	64	420
Pb	mg/kg	153	840
Se	mg/kg	<0.7	100
Zn	mg/kg	927	7500

Table 3: Minimum Search Distance for Federal and State Database Searches

Database	Approximate Minimum Search Distance (miles)
Federal National Priorities List (NPL) Site List	1.0
Federal CERCLIS[1] List	0.5
Federal CERCLIS NFRAP[1] site list	0.5
Federal RCRA CORRACTS[1] Facilities List	1.0
Federal RCRA non-CORRACTS Treatment, Storage, or Disposal (TSD) Facilities List	0.5
Federal RCRA Generators List	Property and Adjoining Properties
Federal ERNS[1] List	Property Only
State Equivalent NPL	1.0
State Equivalent CERCLIS	0.5
State Landfill/Solid Waste Disposal Site Lists	0.5
State LUST Lists	0.5
State registered UST List	Property and Adjoining Properties

Table 4 –EDR Radius Search Results

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
RCRA-LQG US AIRS BOL	A1 A2	Nufarm Americas, Inc. Shore Enterprises	1/8 to ¼ mile north	RCRA – no violations. AIRS – pesticide and other agricultural chemical manufacturing – in compliance.	Unlikely facility activities will impact project implementation
IL NIPC	3	Cal-Sag Site	On-site	Unknown status – no additional information available	Review of historical maps suggests a long history of disposal activities at the site, including MWRD sludge drying (CDF Areas A, B, and C), and other fill and disposal activities (CDF Area D).
BOL	4	Kemtsu Kalmar	¼ to ½ mile north	BOL 0310035209 database indicates facility was a previous RCRA CESQG (2005).	Unlikely facility activities have impacted project area.
BOL	5	Uesco Industries, Inc.	¼ to ½ mile north	BOL 0310035095 database indicates facility was a previous RCRA CESQG (2000)	Unlikely facility activities have impacted project area.
BOL	B6	WTAQ	¼ to ½ mile north	BOL 0310035161 database indicates entry into system 1998, revised 2003. Reason for entry not clear.	Verify site status during future site visit.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
BOL	B7	Illinois Lotus Corp	¼ to ½ mile north	BOL 0310035165 database indicates facility was a previous RCRA CESQG (2000).	Unlikely facility activities have impacted project area.
NPDES BOL	C8	Kocsis Brothers Machine Co.	¼ to ½ mile north	NPDES ILR006095, minor discharger, expires April 2014. BOL 0310035202 – no additional information.	Verify site status during future site visit.
AIRS BOL	C9	Pennant Foods	¼ to ½ mile north	AIRS – latest discharge information submitted 2010. BOL 0310035239 – no additional information.	Verify site status during future site visit.
BOL	10	J&E Cutting Svc Inc.	¼ to ½ mile north	BOL 0310035031 database indicates facility was previous RCRA generator (2000).	Unlikely facility activities have impacted project area.
BOL	D11	Anchor Elevator	¼ to ½ mile north	BOL 0310035244 database provides no additional information.	Verify site status during future site visit.
BOL	12	Windy City Waste & Recycling	¼ to ½ mile southwest	BOL 0312370007 database provides no additional information.	Verify site status during future site visit.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
BOL	13	Pintas Cultured Marble Inc.	¼ to ½ mile north	BOL 0310035170 database indicates facility is previous RCRA SQG (2000). TRI reporter 2005.	Unlikely facility activities have impacted project area.
BOL	14	WMC Inc.	¼ to ½ mile north	BOL 0310035182 database provides no additional information.	Verify site status during future site visit.
BOL	15	J&J Carbide & Tool Inc.	¼ to ½ mile north	BOL 0310035194 database provides no additional information.	Verify site status during future site visit.
BOL	16	Manheim Metro Chicago	1/8 to ¼ mile northeast	BOL 0310035094 database provides no additional information.	Verify site status during future site visit.
SPILLS BOL	E17	No Name (12160 S Central)	1/8 to ¼ mile northeast	Spill incident 2001 by Hayes Beer Distributor. BOL 0310033013 database provides no additional information.	Verify site status during future site visit.
LUST BOL	E18	Hayes Realty	1/8 to ¼ mile northeast	LUST NFA/NFR letter dated 1/25/2008. BOL 0310035081 database indicates facility is NPDES discharger (non-major) and previous RCRA	Unlikely facility activities will impact project implementation.

Database	Map ID	Site Name	Proximity to Site	Status	Potential Impact
				SQG (2000).	
BOL	19	Presbitero Painting Co	¼ to ½ mile northeast	BOL 0310035187 database indicates facility was previous RCRA SQG (2002).	Unlikely facility activities have impacted project area.
LUST AIRS TIER2 BOL	F20 F21	Griffith Labs USA	1/8 to ¼ mile northeast	LUST NFA/NFR letter dated 2/16/1996. AIRS (031003ABT) – 2011 emissions: CO, CO2, SO2, PM2.5, NOX, VOM, PM10, methane, N2O). TIER2 – facility stores a variety of chemicals onsite. BOL 0310035011 database indicates facility is previous RCRA SQG (2010).	Unlikely LUST or facility activities have impacted project area.

Table 5: Orphan Site Search Results

Database	Site Name	Proximity to Site *(Address)*	Status
RCRA-SQG	BP Facility 87219	½ to 1 mile northeast	RCRA-SQG as of 2005. No violations. Low risk for REC.
BOL	Badger Pipeline	¼ to ½ mile southeast *(RTE 83 and Playfield, Crestwood, IL)*	BOL entry 0310605041. No clear indication of reason for entry. 1989. Physically and hydrologically disconnected from project area. Low risk for REC.
BOL	Bills Service Center	¼ to ½ mile southeast *(RTE 83 and Playfield, Crestwood, IL)*	BOL entry 0310605089. LUST activity at site (1998). Site is physically and hydrologically disconnected from project area. Low risk for REC.

Attachments

(Available upon request)

CELRC-TS-DH 15 May 2015

MEMORANDUM FOR CELRC-PM-PL-F (S. Brodzinsky)

SUBJECT: Phase I ESA / HTRW and non-HTRW Report for Chicago Area Waterway System Long-Term Strategy for Dredged Material Management – 12200 South Avenue O (329L-B), Chicago IL

1. Enclosed is the Phase I environmental site assessment (ESA) / hazardous, toxic, and radioactive waste (HTRW) and non-HTRW investigation performed for the former Republic Steel site located at 12200 South Avenue O (329L-B), Chicago IL. This property is being considered as a site for a future dredged material disposal facility (DMDF). The assessment presented in this report was conducted using the guidance described in ER 1165-2-132 for a project during the reconnaissance phase. The guidance recommends the assessment of existing and past land uses, potential impact of known HTRW sites from adjacent or nearby lands, observations made through a database research, such as a historical aerial photograph and topographic map review, and a site visit. Results of the assessment are summarized in the Findings and Conclusion section of the report.

2. A list summarizing unresolved issues, short-term actions, and future project recommendations is provided below:

   a. During the site visit, it was observed that site was open and unsecured, and there was evidence of illegal dumping in the vicinity. It did not appear that there had been widespread illegal dumping on the site itself, but there were two (2) areas where various discarded materials and a few discarded 55 gallon plastic drums were identified. In one area, a 55 gallon plastic drum was observed to be around a quarter full of oil, and some of the oil had spilled onto the ground. In a second area, a 55 gallon plastic drum was about a quarter full of an unknown white substance. There were other comparatively minor signs of waste materials on the site, such as scrap metal that had been compacted and a pile of stone material mixed with plastic tarps. As a result, the first recommendation is that at the earliest opportunity, the site should be surrounded by fencing and secured from the possibility of further contamination from illegal dumping. Next, it is recommended that the areas where the 55-gallon drums were identified during the site visit be evaluated, cleaned up, and remediated, if necessary.

   b. Table 4 of the enclosed assessment summarizes the RECs for further investigation. Although there are a number of RECs and environmental issues with the site, most of these conditions were taken into account

when the Illinois Environmental Protection Agency (EPA) issued the No Further Remediation (NFR) letter. As a consequence, the Illinois EPA recognized that contamination would remain in place subject to the terms and conditions specified in the NFR letter, i.e. property use restrictions, activity and use limitations, institutional controls, or engineering controls.

c. Documentation reviewed during the assessment indicates the Illinois EPA's issuance of the NFR letter was largely based on investigations, remediation work, and a subsequent report prepared by Carlson Environmental Inc. (Carlson) for the applicant to the Site Remediation Program (SRP) and property owner at the time, DM, LLC. One of primary reports Carlson provided to the Illinois EPA in order to receive the NFR letter was titled "Focused Site Investigation Remediation Objectives and Remedial Action Completion Report" (FSIR/ROR/RACR), dated 26 August 2004. Although the investigative and remedial work detailed in Carlson's report and the reviews by the Illinois EPA appear to be valid and responsible, it is in the best interest of the land owner and seller to highlight the incentives and beneficial features of the property. Furthermore, the NFR letter states that it is *prima facie* evidence (based on first impression, or accepted as correct until proved otherwise) that the site does not constitute a threat to human health and the environment for the specified RECs, so long as the site is utilized in accordance with the terms and conditions of the letter. The NFR letter also explains that the Illinois EPA could seek to void the letter, and it includes potential specific acts or omissions that could result in voidance.

d. Due to the above-mentioned factors, at a minimum, it is recommended that an additional site investigation (Phase II) be conducted to verify that the contaminant concentrations in the soil and groundwater are comparable to the concentrations identified as part of the investigative and remedial activities that formed the basis for the NFR letter, and the site does not constitute a threat to human health and the environment for the specified RECs, so long as the site is utilized in accordance with the terms and conditions of the letter. This investigation should also verify that there have not been any further environmental impacts to the site.

e. Table 4 identifies RECs for further investigation, soil/groundwater contaminants of concern (CoCs), and the matrix that was likely impacted by the contamination. It is recommended that an appropriate number of soil and groundwater samples be collected and analyzed for the relevant

COCs to evaluate and characterize the current site conditions. Statistical analyses will need to be conducted to determine the mean COC concentrations and upper 95 percent confidence limits of the mean values for comparison to the concentrations of COCs in the soil and groundwater that were utilized by the Illinois EPA as the basis for the NFR letter. A number of groundwater wells were identified during the site visit at various locations on the proposed project site, and several of these wells appeared to be in good condition and may be suitable for field groundwater measurements and sample collection. However, the specific details for this additional site investigation (Phase II) are beyond the scope of the current assessment.

f. In accordance with the current design for the DMDF, the facility should be isolated from the site using a compacted clay liner, and constructed over the site to minimize excavation and worker exposure to the existing site conditions. All construction activities need to be performed in accordance with the terms and conditions of the NFR letter. The NFR letter notes in Term 5 that “At a minimum, a safety plan should be developed to address possible worker exposure in the event that any future excavation and construction activities may occur within the contaminated soil.” Furthermore, in this same paragraph, it explains that “Soil excavated below in the areas shown on the attached site base map must be returned to the same depth from which it was excavated or properly managed or disposed in accordance with applicable state and federal regulations.”

3. No Phase I ESA / HTRW investigation can completely eliminate uncertainty regarding the potential for contamination associated with a project area. Performance of the investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for contamination in connection with a project area, and this practice recognizes time and cost constraints.

4. Questions regarding this investigation can be directed to Richard Saichek at (312) 846-5507.

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JAY A. SEMMLER, P.E.
Chief, Hydraulics & Environmental Engineering Section

Enclosure

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HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND NON-HTRW INVESTIGATION CHICAGO AREA WATERWAY SYSTEM LONG-TERM STRATEGY FOR DREDGED MATERIAL MANAGEMENT

12200 South Avenue O (329L-B), Chicago, Illinois

Hydraulic and Environmental Engineering Section (TS-DH)
U.S. Army Corps of Engineers, Chicago District

May 2015

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)
AND NON-HTRW INVESTIGATION
12200 SOUTH AVENUE O (329L-B), CHICAGO, ILLINOIS

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Attachment 4: Carlson FSIR/ROR/RACR
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INTRODUCTION

The purpose of this report is to discuss the hazardous, toxic, and radioactive waste (HTRW) investigation performed for the Chicago Area Waterway System (CAWS) Long-Term Strategy for Dredged Material Management project, previously known as the Calumet Harbor and River, Illinois and Indiana Dredged Material Management Plan (DMMP) and Environmental Assessment. The property located at 12200 South Avenue O (329L-B) is being considered as a site for a future dredged material disposal facility (DMDF). This report has been prepared by the U.S. Army Corps of Engineers (USACE), Chicago District, from hereafter referred to as the Chicago District. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding potential impacts due to HTRW and non-HTRW issues associated with the project site are provided.

AUTHORITY

Engineer Regulation (ER) 1165-2-132, Hazardous, Toxic and Radioactive Waste (HTRW) Guidance for Civil Works Projects (1992), explains that it is USACE policy that the "Construction of Civil Works projects in HTRW-contaminated areas should be avoided where practicable. This can be accomplished by early identification of potential problems in reconnaissance, feasibility, and pre-construction, engineering, and design (PED) phases before any land acquisition begins." This same ER further explains that it is USACE policy that "The plan for and execution of each Civil Works project will routinely include a phased and documented review to provide for early identification of HTRW potential at Civil Works project sites."

The HTRW investigation presented in this report was conducted using the guidance described in ER 1165-2-132 for a project during the reconnaissance phase. This guidance recommends the assessment of existing and past land uses, potential impact of known HTRW sites from adjacent or nearby lands, observations made through a database research, such as a historical aerial photograph and topographic map review, and a site visit. According to ER 1165-2-132, "Due to the many potential adverse impacts of HTRW, an initial assessment will be conducted as early as practical during the reconnaissance phase and included with the reconnaissance report." The reconnaissance report is to document if it is determined that there is no suspected HTRW problem, or, conversely, if further HTRW study is warranted and the project site is still under consideration, the report should include any recommendation to conduct additional HTRW investigations during the feasibility phase.

For environmental assessments performed during the feasibility phase of a project, ER 1165-2-132 provides the following guidance: "HTRW assessments during the feasibility phase will determine the type and extent of HTRW contamination, if any, and how HTRW considerations will impact on the alternative project plans." In addition, the ER contains the following description of elements that are to be included in the feasibility phase of the investigation:

> "This phase should include a preliminary identification of potential source areas, contaminant release mechanisms, exposure routes, potentially exposed populations, as well as a determination of the non-numerical risk or potential adverse health effects for identified potential receptors. Investigation activities may include topographic setting, underlying geology, surface and groundwater flow, building and utility layouts, the condition of all structures above and below ground, and characterization of chemical constituents of HTRW contaminants. The level of detail should be sufficient to determine the extent of HTRW contaminants in relation to alternative Civil Works project features and adjacent lands potentially impacted by these features."

Hazardous, Toxic, and Radioactive Waste

ER 1165-2-132 provides guidance and outlines procedures to facilitate early identification and appropriate consideration of HTRW issues and problems. The current report aims to identify potential problems and discuss resolutions and/or provide recommendations regarding the problems that were identified.

Non-Hazardous, Toxic, and Radioactive Waste

In accordance with the definition of HTRW in ER 165-2-132, HTRW includes any material listed as a "hazardous substance" under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The term "hazardous substance" is defined in Title 42 of the U.S. Code, Section 9601, Paragraph 14 (42 U.S.C. §9601)(14).

ER 165-2-132 excludes dredged material and sediments beneath navigable waters proposed for dredging from HTRW. These materials only qualify as HTRW if they are within the boundaries of a site designated by the U.S. Environmental Protection Agency (USEPA) or a state for a response action (either a removal action or remedial action) under CERCLA, or if they are part of a National Priority List (NPL) site under CERCLA.

The definition of HTRW in ER 165-2-132 also refers to the petroleum exclusion from CERCLA liability. Specifically, 42 U.S.C. §9601(14) states the following:

> "The term "hazardous substance" means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C. 1321(b)(2)(A)], (B) any element, compound, mixture, solution or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S.C 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 U.S.C. 1317(a)], (E) any

> hazardous pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 U.S.C. 2606]. *The term does not include petroleum, including any crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).*"

In regards to the exemption of "petroleum" in the above-mentioned definition of hazardous substances, supplemental guidance is provided in the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment (ESA) Process (Designation: E1527-13) prepared by ASTM International, formerly known as the American Society for Testing and Materials (ASTM). This document explains that "The word *fraction* refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to the Standard Definitions of Petroleum Statistics," as published in the American Petroleum Institute Fifth (1995) Edition.

Underground Storage Tanks (USTs) are federally regulated under Title 40 of the Code of Federal Regulations (CFR), Part 280 (40 CFR 280), which includes technical standards and corrective action requirements for owner and operators of USTs.

Although USTs and other issues with petroleum products are not technically considered to be "HTRW" by ER 165-2-132, these problems have been included in this investigation. These concerns are included in ASTM E1527, and this standard use the following reasoning:

> "Petroleum products are included within the scope of this practice because they are of concern with respect to many parcels of commercial real estate and current custom and usage is to include inquiry into the presence of petroleum products when doing an environmental assessment of commercial real estate. Inclusion of petroleum products within the scope of this practice is not based upon the applicability, if any, of CERCLA to petroleum products."

GUIDANCE

ASTM E1527 was utilized as supplemental guidance for this report. The purpose of the ASTM standard is to define good commercial and customary practice in the U.S. for conducting an ESA of a parcel of commercial real estate with respect to the range of contaminants within the scope of CERCLA (42 U.S.C. §9601) and petroleum products. The goal of the process established by this practice is to identify "recognized environmental conditions" (RECs) through a records review, site visit, interviews, and

evaluation and report preparation. The term “recognized environmental conditions” is defined in ASTM E1527 as follows:

> “The term “recognized environmental conditions” means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimus conditions are not recognized environmental conditions.”

In addition, there are two (2) other related terms. The first is a “controlled recognized environmental condition,” (CREC) which is defined in ASTM E1527 as follows:

> “A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls.) (See Note 2.) A condition considered by the environmental professional to be a controlled environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report. (See Note 3.)”
>
> “Note 2 – For example, if a leaking underground storage tank has been cleaned up to a commercial use standard, but does not meet unrestricted residential cleanup criteria, this would be considered a controlled recognized environmental condition. The “control” is represented by the restriction that the property use remain commercial.”
>
> “Note 3 – A condition identified as a controlled recognized environmental condition does not imply that the environmental professional has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be, implemented.”

The second term is a “historical recognized environmental condition,” (HREC) which is defined in ASTM E1527 as follows:

> *“*A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to

the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition."

LAWS AND REGULATIONS

Federal

As discussed above, Federal guidance for appropriate consideration of HTRW problems and issues is provided in ER 1165-2-132, and the Federal regulations concerning USTs are provided in 40 CFR Part 280.

State

The applicable laws and regulations for the State of Illinois concerning hazardous waste are mainly provided in Title 35 of the Illinois Administrative Code (IAC), Subtitle G; Waste Disposal, Chapter I: Pollution Control Board, Subchapters b through h. In particular, the subchapter titles are as follows: Subchapter b; Permits, Subchapter c; Hazardous Waste Operating Requirements, Subchapter d; Underground Injection Control and Underground Storage Tank Programs, Subchapter e; Specific Hazardous Waste Management Standards, Subchapter f; Risk Based Cleanup Objectives, Subchapter g; Certifications, and Subchapter h; Illinois "Superfund" Program.

Subchapter d contains the UST regulations for the State of Illinois, and Subchapter f includes the State of Illinois regulations and default criteria for evaluating the risk to human health posed by environmental conditions and for the development of remediation objectives that achieve acceptable risk levels. In particular, these risk-based criteria established by the State of Illinois are provided in 35 IAC 742, Tiered Approach to Corrective Action Objectives (TACO). In 35 IAC 731.112 (Definitions) of the Illinois UST regulations, it defines several important terms: A "regulated substance" is defined as any "hazardous substance" or "petroleum." A "hazardous substance UST system" is a UST system that contains a "hazardous substance" or any mixture of "hazardous substances" and "petroleum" which is not a petroleum UST system. A petroleum UST is defined as a UST system that contains petroleum or a mixture of "petroleum" with de minimus quantities of other "regulated substances." All of these definitions were derived from the Federal UST regulations in 40 CFR 280.12. The UST

regulations are applicable to owners and operators of a UST system as defined in 35 IAC 731.112, except for USTs excluded under 35 IAC 731.110 (Applicability), subsection (b) or (c). The regulations in 35 IAC 734 apply to owners or operators of any UST system used to contain petroleum and for which a release is reported to the Illinois Emergency Management Agency (IEMA) in accordance with the Office of the State Fire Marshal (OSFM).

PROJECT DESCRIPTION

A map of the project vicinity is shown in Figure 1. Material dredged from the Calumet Harbor and River Federal navigation project has been placed in the Chicago Area Confined Disposal Facility (CDF) since 1984. This facility is located in the State of Illinois, on the southern side of the Calumet River, near the entrance channel between the Calumet River and Calumet Harbor in Lake Michigan. Due to the cumulative volume placed into the facility, future material placement is limited. In accordance with engineering regulation (ER) 1105-2-100, Planning Guidance Notebook, Appendix E, all Federal navigational maintenance projects must demonstrate there is sufficient dredged material placement capacity for a minimum of twenty (20) years. If the preliminary assessment (PA) determines there is not sufficient capacity, a DMMP must be prepared to identify the specific measures necessary to manage the volume of material likely to be dredged over a twenty (20) year period. Since the PA for the Chicago Area CDF determined that there was not sufficient capacity for a twenty (20)-year period, a DMMP and long-term strategy for the project is currently in preparation. As part of the DMMP, potential sites for a DMDF are being identified, and one of the sites under consideration is the site located at 12200 South Avenue O, Chicago, Illinois (Project Site Number 329L-B).

A tentative base plan has been prepared for the proposed DMDF site, and, according to this plan, the facility will have a capacity of approximately 680,000 cubic yards. The DMDF will be built in phases to allow material dredged from Calumet Harbor to be beneficial used in the construction. Berms will be constructed along the perimeter of the facility for a distance of approximately 4,000 linear feet. In order to prevent seepage, a low permeability clay liner will be constructed across the bottom of the DMDF, and this clay liner will also be constructed along the interior of the perimeter berms. The perimeter berms will be built in two stages, and each stage will increase the berm height by roughly eleven (11) feet, so the final height of the facility will be approximately twenty-two (22) feet. The dredged material from Calumet Harbor is proposed for beneficial use in construction of the perimeter berms and as part of the cover layer for the site.

The conceptual design for the DMDF includes several additional features for placement and management of the dredged material. A crane pad and sheet pile dock wall will be constructed along the Calumet River to support safe off-loading and rehandling operations. Decant structures will be constructed within the facility, and the bottom of the DMDF will sloped toward the decant structures to enhance drainage and water collection. Effluent discharge pipes, and possibly effluent filter cells to reduce total

suspended solids (TSS), will be constructed, and the current plan is to discharge the effluent to the existing sewer system for the completion of water treatment. After the facility has been filled, and all the material has been sufficiently dewatered and consolidated, a final cover will be constructed and stabilized to prevent erosion. The cover will be designed to minimize infiltration and disturbance of the dredged material.

SITE DESCRIPTION

The proposed site at 12200 South Avenue O (329L-B) is approximately located between E 122nd Street to the south and E118th Street to the north, west of Avenue O and east of Turning Basin No. 3 of the Calumet River, in Chicago, Illinois. The approximate project site boundary is shown in Figure 2, and the footprint for the DMDF will cover an area of approximately 40 acres. The site is located in Cook County, Township 37 North, Range 15 East, Section 19, on the Lake Calumet 7.5' Series U.S. Geological Survey (USGS) Quadrangle Map (Illinois State Geological Survey Public Land Survey System (http://isgs.illinois.edu/plss)).

The site proposed for the DMDF is only a small portion of a much larger parcel of property that was formerly owned and occupied by the Republic Steel Corporation. The Southeast Historical Society website (http://orion.neiu.edu/~reseller/sehsintro.htm) includes general information on the Republic Steel plant from author Rod Sellers, who was born in South Chicago and has created an informative history of the area and a virtual tour of Chicago's Southeast Side. The Republic Steel site is the twelfth stop on Mr. Seller's virtual tour (http://orion.neiu.edu/~reseller/setourp6.htm), and the tour contains the following historical information for the site, which is described as being located along the east bank of the Calumet River between 110th Street and 122nd Street:

> "Republic Steel began as an outgrowth of the Chicago Tack Co., and was built in 1876 in an area known as Grand Crossing. In 1901 they acquired a site at 118th Street and the Calumet River. This is where the first unit of two 50-ton open hearth furnaces and a 35-inch blooming mill were started. At the start of World War II, a completely integrated electric furnace, coke ovens, blooming and rolling mills were built on the site for the government and operated by Republic Steel. Following the war, the company purchased the operation from the Defense Department. Employment at Republic peaked at 6,335 in 1970. In 1977, two 225-ton Q-Bop (Quelle basic oxygen process) furnaces replaced four World War II vintage open hearths. This ended the making of steel by open hearths for Republic Steel. During the 1980's, the Chicago District Plant was the third largest plant of Republic's six districts. In December 1981, America's most energy efficient, environmentally advanced coke battery began operation. Sixty, six-meter high coke ovens replaced seventy-five, four-meter ovens which had operated since 1943. In 1984, Republic Steel merged with J&L Steel to form LTV Steel, a wholly owned subsidiary of the LTV Corporation, a Dallas based conglomerate which is also involved in energy, aerospace, and defense."

The Electronic Encyclopedia of Chicago (http://www.encyclopedia.chicagohistory.org/pages/2824.html) provides the following information on the site for the time period after the purchase of Republic Steel by the LTV Corporation:

> "Republic was purchased by Texas-based steel conglomerate LTV Corp. in 1984. The proliferation of inexpensive imported steel around that time however, hurt the entire American steel industry, and LTV declared reorganization bankruptcy in 1986, one of several bankruptcies it endured through the 1980s and 1990s. While some of Republic's operations continued in Southeastern Chicago for a time, a successive wave of additional LTV bankruptcies over the next 15 years prompted the closing of all of its mills and refineries by the early 2000s."

The Real Estate Office for the Chicago District obtained a brochure for the proposed project site that was prepared by the American Heritage Corporation. This brochure describes the availability of a large, 197.45-acre parcel of vacant property located at 116th and Avenue O in Chicago, and the brochure notes that they will subdivide the land. The brochure includes a focused No Further Remediation (NFR) letter for the site from the Illinois Environmental Protection Agency (EPA), and this NFR letter indicates the remediation site consists of 204 acres located at 12200 South Avenue O, Chicago, Illinois. Although the NFR letter included with the brochure for the land was incomplete, a complete copy of the letter was subsequently provided to the Chicago District by the Illinois EPA through a Freedom of Information Act (FOIA) request.

The NFR letter, dated 8 December 2005, has been included with the current assessment as Attachment 5. A site base map included with the NFR letter shows the site remediation boundary. Although the majority of the proposed DMDF site is located within the site remediation boundary, a small area along the northern perimeter of the proposed site may need to be adjusted to stay within the area previously referenced in the NFR letter. The Chicago District's Civil Design Section reviewed the site remediation boundary and estimated that there should be sufficient space to shift the DMDF to the south if needed. The proposed DMDF site would only occupy approximately the southwestern quarter of the 204-acre site identified in the NFR letter, adjacent to Turning Basin No. 3 of the Calumet River, so the current assessment focused on this southwestern area of the site.

As alluded to earlier, a FOIA request was submitted to the Illinois EPA to obtain further information regarding the project site and the details concerning the NFR letter. The Illinois EPA released thirty-three (33) documents in response to the request, and one of the documents reveals that in 2004, Carlson Environmental Inc. (Carlson) enrolled in the Site Remediation Program (SRP) on behalf of their client, DM, LLC. In order to justify that the site met the requirements for the NFR letter, Carlson reviewed and researched former investigative activities and environmental records, performed environmental site investigations, and prepared reports that describe the investigations,

site history, remediation objectives, and remedial actions. The Illinois EPA reviewed the reports submitted by Carlson and the remedial activities, and then responded to Carlson's submittals with comments as well as requests for additional investigations, information, and/or analyses. Carlson provided the Illinois EPA with several additional submittals and responded to their comments, and, a little more than a year after Carlson enrolled in the SRP, the Illinois EPA determined that the actions and documentation satisfactorily met the requirements and issued the NFR letter for the site.

One of primary reports Carlson provided to the Illinois EPA was titled "Focused Site Investigation Remediation Objectives and Remedial Action Completion Report" (FSIR/ROR/RACR). This report was dated 26 August 2004, and it provides the following brief summary regarding the site history:

> "Use of the site by an industrial/commercial entity began in the early 1900's. The site and surrounding area at the time was a low-lying wetlands environment. The Grand Crossing Tack Company Steel Plant and then Interstate Iron and Steel occupied a small portion of the site to the northwest, which is now the current Republic Technologies International site. In 1941 the site and a large portion of the surrounding area was purchased by Republic Steel. The steel production activities were performed northwest of the subject site, but beginning in the 1940's, the steel processing waste, or slag materials, was deposited on the site. Deposition of the inorganic slag materials continued until the low-lying subject site was filled. Beginning in the early 1960's, Republic Steel used a material management company (Heckett) to process its slag materials. The Heckett Plant #3 operations were located at the far south central portion of the subject site and extended well into the adjacent site to the south which is now the Ford Supplier Park. In approximately 1967, a separate mill (referred to as the 14-inch mill) was constructed near the east central portion of the subject site. The 14-inch mill was a "rolling mill", which essentially flattened steel bars into sheets. In the early 1980's, LTV Steel purchased Republic Steel and operated as LTV /Republic Steel. In 1989, Republic *Engineered* Steels purchased a portion of the LTV/Republic Steel manufacturing operations, which included the subject site, and LTV continued to own and operate the coke plant located to the far north of the site. The 14-inch mill ceased operating in approximately 1996. In 1997, the 14-inch mill was razed and the site was reportedly remediated."

Carlson explains further in the FSIR/ROR/RACR that the site was purchased by the current owner, DM, LLC, in 2000, and the 200-acre parcel site has remained unoccupied since that time.

The FSIR/ROR/RACR consists of a 334-page main report that includes a separate database search. There is an additional 675-page attachment to the report that

contains soil boring logs and analytical chemistry data. The main report has been included in the current assessment as Attachment 4.

GENERAL METHODS

The following sections contain information requested and gathered in accordance with ER 1165-2-132 for this assessment. The information was obtained from the following sources:

- Existing information review
- Database research
- Historical topographic map review
- Historical aerial photograph review
- Sanborn map review
- Site visit

This information was used to determine if construction of the dredged material management facility at 12200 South Avenue O (329L-B) could have an impact on any HTRW occurrences that may exist in the surrounding areas, and if HTRW problems could have an impact on the implementation of the project. The information gathered from the above list of sources is detailed in the following sections:

EXISTING INFORMATION REVIEW

Water Quality

In accordance with Sections 305(b), 303(d) and 314 of the Clean Water Act, the Illinois EPA prepares an integrated report and 303(d) list to provide information to the Federal government and citizens of Illinois on the condition of surface water in the State of Illinois (Illinois EPA 2014). The report explains that the degree of support of a designated use is determined by an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data.

As noted earlier, the site at 12200 South Avenue O (329L-B) is located on the eastern bank of Turning Basin No. 3 of the Calumet River. The Calumet River originally flowed northwards along the site toward Lake Michigan, but, in 1922, the flow was reversed to protect the waters of Lake Michigan (Ross et al. 1988). Presently, the Calumet River generally flows southward along the site, away from Lake Michigan; however, the flow through the Calumet River is controlled at the Thomas J. O'Brien Lock and Dam, which is located near East 134th Street and South Torrence Avenue, and, during large storm events, the lock may redirect the flow northward along the site, towards Lake Michigan to prevent flooding (Fitzpatrick and Bhowmik 1990).

The Illinois EPA (2014) determined that the Calumet River was impaired for two (2) designated uses; fish consumption and primary contact recreation. The two (2) causes listed for the impairment of fish consumption were mercury and polychlorinated

biphenyls (PCBs), and the cause listed for the impairment of primary contact recreation was fecal coliform. The Illinois EPA (2014) attributed these impairments to the following four (4) potential sources; atmospheric deposition – toxics, unknown sources, combined sewer overflows, and urban runoff/storm sewers. Fitzpatrick and Bhowmik (1990) and Ross et al. (1988) studied the effects of pollution on Lake Calumet. These investigators provide substantial evidence of the adverse impacts to the Calumet region's ecosystem and suggest that these impacts were largely caused by past as well as current industrial activities, uncontrolled disposal of wastes, combined sewer overflows, surface runoff, seepage of contaminated groundwater, etc. Since the proposed DMDF will have engineered barriers and will be designed to prevent impacts to the surface or groundwater quality, the project is not expected to contribute to further degradation or impairment of the Calumet River.

Geology & Soil Quality

In the past, the topography in the vicinity of the placement site was low-lying and flat due to past glacial activity and lake level fluctuations, but the land often has a gentle slope toward Lake Michigan (Kay et al. 1996 and Suter et al. 1959). The land surface originally contained several beach ridges and moraine deposits, but much of the area was marshy and poorly drained under natural conditions (Kay et al. 1996; Cravens and Zahn 1990; Suter et al. 1959). In circa 1870, the marshy Calumet region was transformed into a center of heavy manufacturing and industrial activity (Colten 1985, Kay et al. 1997), and many of the beach ridges were leveled or removed by quarrying (Kay et al. 1996; Willman 1971).

In general, the Calumet region of northwestern Indiana and northeastern Illinois remains one of the most highly industrialized areas of the United States. Historically, industries in the region contributed to various filling activities (with slag, industrial wastes, and dredged material), and the subsequent chemical runoff from these sources has resulted in the degradation of soil, surface water, and groundwater resources in the region (Colten 1985, Kay et al. 1997). Incidentally, researchers have also measured high pH levels in the groundwater, and they have attributed these conditions to the disposal of slag in the area (Roadcap et al. 2005). Although there are a number of landfills in the area, the current topography over most of the region currently remains low-lying and flat.

For a regional geological perspective, in relation to the surrounding bedrock, the Chicago area is situated on the Kankakee Arch, a broad, gently sloping arch of Paleozoic bedrock (Willman 1971; Buschbach 1964; Suter et al. 1959). The Kankakee Arch is located between the Wisconsin Arch, which is northwest, and the Cincinnati Arch, which is southeast, and it separates two large depressions; the Illinois Basin, which is southwest and the Michigan Basin, which is northeast.

Igneous and metamorphic rocks are not native to the Chicago area except in deeply buried Precambrian (over 540 million year age (Ma)) formations; hence, the bedrock in the Chicago region is primarily sedimentary rock, including dolomite, limestone, shale,

sandstone, and siltstone (Willman 1971). According to Buschbach (1964), the surface elevation of the Precambrian base rock in the Chicago Loop area is roughly 4,500 feet below sea level. The Precambrian rocks are not sources of groundwater, and they form an impermeable layer below the sedimentary rocks (Suter et al. 1959).

Cambrian (540 – 490 Ma) rock in Northeastern Illinois ranges in thickness from around 2,000 to 3,500 feet from north to south, and the overlying Ordovician (490 – 445 Ma) rock ranges in thickness from about 700 to 1,100 feet from north to south (Buschbach 1964). Silurian (445 – 416 Ma) dolomite is the uppermost bedrock formation in the Chicago region, and this Silurian layer varies in thickness from less than an inch to more than 450 feet thick in the area (Suter et al. 1959). A figure in Suter et al. (1959) shows cross sections and stratigraphy of the bedrock and piezometric profiles in the Chicago region, and this figure suggests that the Silurian dolomite is approximately 450 feet thick near the proposed project site and the surface of the Cambrian-Ordovician aquifer is roughly at the bottom of this Silurian dolomite layer. Further discussion of the aquifers and groundwater is provided below. Suter et al. (1959) attributes the variation in thickness of the Silurian layer to erosion that occurred during the pre-Pleistocene and Pleistocene (2.6 Ma – 11,700 years ago). In addition, Suter et al. (1959) explains that the Silurian layer becomes thicker in the southeastern section of Chicago region, and, except in a few small areas, the Silurian rocks are overlain by glacial deposits.

A physical site data report was included with the Environmental Data Resources (EDR) Radius report. This report is included as Attachment 1. According to this report, the underlying bedrock is Middle Silurian aged (Niagoaran), which is the dolomite mentioned above. The EDR Radius report lists “Coloma” as the dominant soil component name, the soil surface texture was listed as loamy sand, and the soil was reportedly in the Class A hydrologic group, which indicates high infiltration rates and deep well-drained sands and gravels. The soil drainage class was listed as “excessively,” and this means the soils have a high hydraulic conductivity and low water holding capacity. The depth to bedrock was listed as greater than 60 inches, and the surficial soil types were sand, loamy fine sand, fine sand, sandy loam, and fine sandy loam in the general site area. However, the dominant soil name listed in the EDR report does not correspond with the most recent Cook County soil survey, which shows the soil unit for this property as “urban land.” It is likely that the ‘urban land’ reference is to slag and other fill materials which overly and obscure the native soils.

The glacial drift (glacial deposits) in the Chicago region is typically categorized as till or lacustrine (lake) deposits. Outwash sediments and organic-rich (peat) deposits are encountered in some areas but they are less common (IDNR 2000). IDNR (2000) describes till as a mixture of rocks and ground-up rock debris, ranging from tiny, clay-sized particles to large boulders. Suter et al. (1959) further explains that till is the debris from the glacial ice, and it contains a mixture of fragments of all sizes, usually without any stratification. Lacustrine deposits are fine-grained sediments, such as silt and clay, and outwash sediments are comprised of sand and gravel that was deposited in streams when the glaciers melted and retreated (IDNR 2000). Kay et al. (1996) estimate the glacial drift ranges in thickness from 1 foot in the vicinity of Thornton

Quarry to over 225 feet east of Burns Harbor, and they include a contour map that indicates the glacial drift ranges in thickness from approximately 50 to 75 feet in the vicinity of the proposed project site. Cravens and Zahn (1990) used data from wells and boring logs to draw cross-sections in the Lake Calumet area, and these researchers determined that the average thickness of glacial till in this area was 75 feet. According to Suter et al. (1959), "Water-yielding sand and gravel deposits locally occur in the drift, particularly in valleys cut in the bedrock."

As mentioned earlier in the site description, Carlson prepared a FSIR/ROR/RACR for the site (included in the current assessment as Attachment 4), and this report includes a substantial amount of detail from the soil and groundwater investigations that were performed, including the boring logs and other analyses. The following description of the soil is from Section 6 of the report:

> "Based on the geologic logs completed at the site and surrounding area, the shallow subsurface soil begins with a fill-material, which generally consists of silt, sand and gravel size combinations of slag with a thickness ranging between [two] 2 and [twelve] 12 ft. Beneath the fill is a well sorted fine sand which is generally saturated. In some locations, the sand is preceded by an organic layer of peat, up to two [2] feet thick, which constitutes the original wetland surface prior to the slag deposition activities."

Groundwater

There are four (4) main geologic units in the Chicago area that yield groundwater, and they can be divided into shallow and deep aquifers (Willman 1971; Suter et al. 1959). The shallow aquifers include (1) the sand and gravel beds in the unconsolidated glacial deposits and (2) the shallow dolomite aquifer (mainly the Silurian dolomite). The deep aquifers include (3) the upper Cambrian-Ordovician aquifer and (4) the lower Cambrian aquifer, which consists of the Mt. Simon Sandstone and lower sandstone layer of the Eau Claire Formation. Since the Mt. Simon Sandstone and lower sandstone layer of the Eau Clair Formation are hydraulically connected, they are considered to be one unit; the Mt. Simon Aquifer (Suter et al. 1959). The Mt. Simon Aquifer is the lowest hydrologic system in the Chicago area, and it is separated from the overlying system by the middle and upper parts of the Eau Clair Formation (Suter et al. 1959).

The upper Cambrian-Ordovician aquifer is most highly developed of the four (4) aquifers, but it has been depleted by pumping (Visocky 1997; Willman 1971; Suter et al. 1959). This deep aquifer is separated from the shallow aquifers by the relatively impervious Maquoketa Group Shale, which is the upper layer of the Ordovician deposits (Willman 1971; Suter et al. 1959). Ross et al. (1988) determined the Maquoketa Shale was approximately 200 feet thick in the Lake Calumet area, and these researchers mention that "The thick sequence of shale greatly limits the local movement of water downward to underlying formations." Willman (1971) explains that the deep Cambrian-

Ordovician aquifer rises to the west of the Chicago area, and that is where it is recharged.

According to Willman (1971), even though the deep Cambrian-Ordovician aquifer is highly developed, about sixty (60) percent of the total pumping in the Chicago area is from the shallow aquifers, and, unlike the deep aquifers, there has not been a widespread decline in the water levels of the shallow aquifers. Willman (1971) and Suter et al. (1959) indicate that the shallow aquifers are connected hydraulically and are recharged directly by seepage from precipitation.

Kay et al. (1996) mention that the shallow dolomite (Silurian) aquifer was separated from the upper unconsolidated and unconfined sand aquifer in most of their study area, which included Northwestern Indiana and the Lake Calumet area of Northeastern Illinois. According to these researchers, the shallow dolomite (Silurian) aquifer was overlain by a confining unit composed primarily of shale, silt, and clay till and lacustrine deposits. Moreover, Cravens and Zahn (1990) suggest that it is unlikely for contaminants in the shallow dolomite (Silurian) aquifer to be attributable to natural groundwater transport through the unconsolidated geologic materials overlying the bedrock aquifer because of the protection provided by the thick sequences of clayey drift deposits, which are reportedly numerous and diverse.

Suter et al. (1959) determined that the shallow dolomite (Silurian) aquifer consists of rock in most of the region, and the groundwater occurs in joints, fissures, and solution channels that range in size from hairline cracks to caverns. These researchers found that the distribution of water-bearing openings in the shallow dolomite was not uniform from depth to depth and from place to place. According to Suter et al. (1959), “The water levels in the dolomite vary greatly from time to time and place to place; however, at no location is there any apparent permanent decline.” These researchers explain that the differing water levels are caused by pumpage and by variations in recharge from precipitation.

Kay et al. (1996) determined that the shallow, upper unconsolidated and unconfined sand aquifer, commonly known as the Calumet aquifer, is continuous through most of the area east of Lake Calumet, and the saturated thickness of this aquifer ranges from 0 to about 70 feet. These same researchers also indicated that this shallow aquifer was not extensively pumped. Although they identified several wells that were drilled into the Calumet aquifer, the number of these wells that were in still use was unknown.

According to Cravens and Zahn (1990), groundwater use within 39 square miles of Lake Calumet is limited, and it continues to decline because nearly all water use in this region is supplied by surface water from Lake Michigan. In 1997, the Chicago City Council passed a groundwater ordinance prohibiting the installation of new potable water supply wells in order to limit the potential for persons to be exposed to potential contaminants by ingesting groundwater. The groundwater ordinance (§ 11-8-390) is provided in the Municipal Code of the City of Chicago, and it includes the following statement:

> "No groundwater well, cistern or other groundwater collection device installed after the effective date of this amendatory ordinance (May 14, 1997) may used to supply any potable water supply system, except at points of withdrawal by the City of Chicago or by units of local government pursuant to intergovernmental agreement with the City of Chicago."

The complete City of Chicago groundwater ordinance has also been included in this investigation as Attachment 6.

During the development of an Intergovernmental Agreement for the reuse of soil and rubble within the City of Chicago, a potable well survey was performed by the City of Chicago, Department of Environment (DOE) using information from the Illinois State Geological Survey (ISGS) regarding all confirmed records of wells installed within the City limits of Chicago and 200 feet beyond. After the survey, the DOE generated a map of the potable wells in Chicago, and this map shows that the closest potable drinking water wells are in a forest preserve, Eggers Woods, which is located approximately a mile northeast of the property.

The EDR Radius report identified multiple water wells within one mile of the project area, and these well locations are depicted in Figure 3. A review of the well entries in the EDR Radius report indicated that most of these wells were constructed and utilized for surveying or monitoring purposes or were drilled to perform engineering tests. There is some uncertainty with regards to a few of the wells, because the EDR report does not provide sufficient information. Nevertheless, due to the City of Chicago groundwater ordinance, it seems unlikely that any of these wells are still being utilized for potable water.

EDR has developed an information system to provide data on the general direction of groundwater flow. This information system is based on a review of reports submitted by environmental professionals to regulatory agencies at selected sites. EDR has extracted the date of the report, the hydrogeologically determined groundwater flow direction, and the depth to the water table. Information obtained from this data system suggests that at a location that is 1/4 mile to 1/2 mile east northeast of the property, the surficial aquifer groundwater flow direction was north northeast at a depth of approximately 98 feet on 20 November 1992. However, the conditions at this location 1/4 mile to 1/2 mile east northeast of the property may not reflect conditions at the actual site. Several of the wells listed in the EDR report include the results of groundwater level measurements performed during 1992 and 1993. The measurements ranged from 3.22 to 9.92 feet below the ground surface, and the average groundwater level for these measurements was 6.7 feet.

Site-specific hydrogeological data were provided in the EDR Summary Radius Map for the Allied Corporation site, which is located 1/8 mile to 1/4 mile south southwest of the proposed project site. The following data was inferred from CERCLIS investigation reports: The groundwater flow direction was determined to be variable, but, regionally, groundwater discharges into Lake Michigan. The measured depth to water was three

(3) to eight (8) feet. The lower aquifer is reportedly confined from the surficial aquifer, and the depth to bedrock was estimated to be 35 feet. A sole source aquifer was found to be present at or near the site.

As mentioned earlier, the FSIR/ROR/RACR by Carlson included groundwater investigations, and the main report has been included as Attachment 4. Section 6 of this report provides the results of the soil and groundwater investigations, and it notes that the "Shallow groundwater at the subject site was encountered within the fill material at depths varying from [two] 2 to [ten] 10 ft. [below the ground surface] bgs. This variance is due to the uneven topography of the site." In Section 5, the report describes the groundwater flow determination, and, according to this investigation, "The apparent near-surface or potentiometric groundwater flow direction is complex." In addition, according to the report, "the ground water direction is influenced by both the Calumet River to the west and Wolf Lake to the east resulting in a radial potentiometric flow." An average hydraulic conductivity value of 2.3×10^{-3} cm/sec for the entire site was calculated using the geometric mean of average hydraulic conductivity values for all the wells. In Section 6 of the report, it mentions that "The hydraulic gradient varies from less than 0.001 ft/ft, near the south and central portion of the site, to 0.003 ft/ft near the Calumet River."

Following the submission of the FSIR/ROR/RACR, the Illinois EPA response requested Carlson to identify any receptor exposure routes, and mentioned that groundwater wells were part of the exposure route for the ingestion of groundwater. In Carlson's response to the Illinois EPA, dated 21 March 2005, it explains the following:

> "Carlson requested a summary of all records on file with the Illinois State Water Survey (ISWS) and the Illinois State Geological Survey (ISGS) in regards to water wells in the area surrounding the subject site. Although some wells were identified within 1,000 feet of the subject site, these wells were all reported as being used for industrial/commercial purposes and not for drinking water. One well that was reportedly onsite and owned by the Metropolitan Water Reclamation District of Greater Chicago, was sealed in June, 2002."

An attachment to the 21 March 2005 correspondence from Carlson to the Illinois EPA includes an attachment containing the ISWS and ISGS well records that were reviewed, but a figure illustrating the locations was not provided since they did not identify any community or other potable wells.

Wetlands

As data stewards, the United States Fish and Wildlife Service (USFWS) is the principle Federal agency that provides wetland information to the public and other agencies. In 1986, the Emergency Wetlands Resources Act mandated that the USFWS complete the mapping and digitizing of the Nation's wetlands. The result of this effort is the Wetlands Geospatial Data Layer. This data layer houses all of the Service digital geospatial

wetlands data, and forms the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (NSDI). The National Spatial Data Infrastructure (NSDI) is a way of enhancing the accessibility, communication, and use of geospatial data to support a wide variety of decisions at all levels of society. As shown in Figure 6, a review of information available online using the USFWS Wetland Mapper suggests there might be limited wetlands on the proposed project site in small areas of the site adjacent to the Calumet River. In addition, the Calumet River is considered to be a deepwater habitat.

The Calumet River in the FWS Wetland Mapper was classified as R2UBHx. In this classification, "R" is for a Riverine System that includes all wetlands and deepwater habitats contained in natural or artificial channels that periodically or continuously contain flowing water or which forms a connecting link between two bodies of standing water. The "2" indicates the subsystem is "Lower Perennial," which is characterized by low gradient and slow water velocity. For such a system, there is no tidal influence, and some water flows throughout the year. The substrate consists mainly of sand and mud. The floodplain is well developed. Oxygen deficits may sometimes occur. The "UB" Class is for "unconsolidated bottom" and includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7cm), and a vegetative cover less than 30%. The "H" represents a water regime modifier indicating that the area is permanently flooded, where water covers the land surface throughout the year in all years. The term "x" is a special modifier indicating "excavated," or the wetland lies within a basin or channel that has been dug, gouged, blasted or suctioned through artificial means by mankind.

Similar to the USFWS Wetland Mapper, the EDR detail map included with the report only shows wetlands present in a small area adjacent to the Calumet River. The EDR detail map also shows that the 100-year floodplain exists along the portion of the site adjacent to Turning Basin No. 3 of the Calumet River.

Former Environmental Site Investigations

Earlier, in the site description, it was explained that documentation released by the Illinois EPA in response to the Chicago District's FOIA request revealed that the NFR letter was based on site investigations and remedial actions performed by Carlson on behalf of their client, DM, LLC. One of the primary reports Carlson provided to the Illinois EPA to justify the site had met the requirements for the NFR letter was the FSIR/ROR/RACR, which is dated 26 August 2004 and the main report was included as Attachment 4.

It is important to recognize that the FSIR/ROR/RACR was approximately for a 200-acre site, and the site base map included with the NFR letter shows the site remediation boundary. However, the plan for the DMDF site is only for roughly the southwestern quarter of the site shown in the base map, and a figure of the conceptual boundary for the DMDF is shown in Figure 2. This figure shows that the proposed project site would only be located on the western portion of the remediation site, near Turning Basin No. 3 of the Calumet River. In addition, by comparing the different site configurations, it is

obvious that the information in the FSIR/ROR/RACR includes an additional large area, of over 100 acres, to the northeast and east of the proposed project site. Moreover, the Carlson's Phase I ESA identified a number of issues in these off-site areas, such as a former coal gasification plant and former 14-inch mill. Since these areas are off-site, the information is less applicable and would only be a concern if contaminant migration pathways existed in the past or presently exist that would likely have resulted in a significant impact to the proposed project site.

In Section 3, Site Characterization, of the FSIR/ROR/RACR, it describes Carlson's review of previous Phase I ESAs. This includes Phase I ESAs conducted by Entrix, Inc. (Entrix) in 1995 and by Rust Environmental and Infrastructure, Inc. (RUST) in 1998. As part of their Phase I ESA, RUST reportedly performed a limited site investigation that included seven (7) soil borings and seven (7) temporary monitoring wells, but, according to the FSIR/ROR/RACR, no significant soil and ground water contamination was encountered.

Also, according to Section 3, Site Characterization, of the FSIR/ROR/RACR, Carlson initially performed a Phase I ESA for a former client in 1999, prior to working for DM, LLC. This initial Phase I ESA identified several RECs, and Carlson subsequently conducted a limited subsurface investigation in 1999. It notes in the report that Carlson did not complete the Phase I ESA for the applicant, DM, LLC, until 9 July 2004, and this Phase I ESA was included as an attachment to the FSIR/ROR/RACR, which was completed shortly afterwards. Incidentally, future references to Carlson's Phase I ESA in the current assessment will be in regards to the 9 July 2004 assessment that was attached to the FSIR/ROR/RACR. Carlson conducted the second phase of the subsurface investigation during late 2003 and 2004.

In the Phase I ESA Carlson, it mentions that they reviewed a large volume of environmental records, which implies there were many issues at the site associated with the heavily industrialized area and historical operations at the iron and steel manufacturing plant. Specifically, the Phase I ESA explains the following:

> "Carlson reviewed numerous environmental records, including Phase I and Phase II reports, notes, maps, and drawings associated with the subject property and adjacent properties. The information was obtained from Republic Technologies International files, which included all of Republic Engineered Steel/LTV/Republic Steel environmental records associated with the subject property. It should be noted, based on the volume of material reviewed, the reports, notes, maps, etc. could not be included as an attachment to this report."

Since the Republic Technologies International files reviewed by Carlson were not publically available information, the Chicago District did not have access to these files, and they were not reviewed as part of the current assessment. However, the Chicago District submitted a FOIA request to the Illinois EPA for environmental information regarding the LTV Steel site, which is located at 11600 South Burley Ave., a few blocks

north of the proposed project site, and the response included over 1,600 documents. Due to time constraints, these documents were not reviewed in detail, but a large percentage of the documents appear to be associated with the Clean Air Act (CAA) and air quality impacts. Iron and steel manufacturing plants also utilize a wide variety of hazardous substances, and the EDR Radius report for the LTV Steel site revealed numerous spill incident reports, some of which documented substantial spills.

In general, the heavy industries along the Calumet River, such as the iron and steel manufacturing plants, have been in operation since the early 1900s, but strong environmental regulations, such as the CAA, Clean Water Act (CWA), and Resource, Conservation, and Recovery Act (RCRA) were not promulgated until comparatively recent times. For instance, Congress passed the CAA in 1970, the CWA in 1972, and RCRA in 1976. As a consequence, it is often difficult to find older historical environmental records that describe any discharges or waste disposal practices prior to the mid 1970s, and Phase I ESAs are commonly dependent on historical topographic maps, aerial photographs, and Sanborn maps to evaluate potential environmental concerns.

Even though historical records of early practices at these heavy industries are scarce, there is some research that provides a glimpse into the typical procedures, such the report by Colten (1985) or Joel Greenberg's book, A Natural History of the Chicago Region (2002), which reports the following:

> "In 1954, the Corps of Engineers sued three (3) large steel companies for continuing to dump in the waterways the Corps was responsible for maintaining. Court records revealed hideous violations by the defendants, behavior suggesting that few advances had been made since the nineteenth century. Thousands of tons of solid waste flowed from their sewers directly into the Calumet River every year: Republic Steel added ten thousand tons, Interlake Iron twenty thousand tons, and Wisconsin Steel (International Harvester) twenty-seven thousand tons, which was just one part of the company's total daily discharge of 4.9 million gallons of untreated waste."

Another consideration is that spill incidents that occur on adjacent properties are generally not included with the database search. Table 1 has a list of the minimum search distances for Federal and State databases in ASTM E1527, and this table shows that the minimum search distance for spill incidents, such as those on the Federal Emergency Response Notification System (ERNS) list, is for the property only. In other words, spill incidents would not usually be provided for a database search unless they occurred directly on the subject property. Hence, if a number of incidents occurred at the Republic Technologies International site, directly to the north of the proposed project site, they would not have been included with the database search for the proposed project site.

Although the Chicago District did not have access to the files from the Republic Technologies International site, the FSIR/ROR/RACR prepared by Carlson was releasable under FOIA, and, evidently, this report provides a summary of the information in the files. Since historical records are difficult to obtain, the FSIR/ROR/RACR was a helpful resource for historical environmental site information.

It was noted earlier in the site description that according to the FSIR/ROR/RACR, beginning in the 1940s, steel processing waste, or slag material, was deposited on the site until the low-lying subject site was filled. The report further notes that in addition to the slag material, the steel production for Republic Steel also generated flue-dust that was stored off-site in an impound near the southwest boundary of the subject site. This off-site flue-dust pile was reportedly located in an area owned by the Schroud Realty Group, and the Illinois EPA recommended that this area be covered with a clay cap. The location of the flue dust pile is shown in the site base map included with the NFR letter.

In Section 4, History of the Site and Surrounding Area, Carlson's Phase I ESA provides greater details on the flue dust pile. This section explains that electric arc furnace (EAF) dust is classified as emission control dust/sludge from the primary production of steel in electric furnaces (K061), and, reportedly, LTV Steel stored EAF dust in the same general area as the flue-dust pile until approximately 1983. Section 3.1 of the FSIR/ROR/RACR, Site History, mentions that the EAF dust was transported off the site for disposal as hazardous waste in 1983. In Section 4, History of the Site and Surrounding Area, Carlson's Phase I ESA notes that "According to a previous report, the dust pile along with [four] 4-inches of underlying slag was removed in October 1986." Furthermore, this section of the Phase I ESA cites an Illinois EPA letter, dated 10 February 1988, that determined "the closure of the waste pile met the requirements of Interim Status Standards," and it explains that the report by RUST in 1998 included results from soil and groundwater samples collected from the north side of the flue dust pile, and "no elevated concentrations were detected." Based on this information, the Phase I ESA determined that "it does not appear that this flue dust pile represents a potential environmental concern to the subject site at this time."

In Section 11.0, Findings, of the Phase I ESA by Carlson, it identifies the following six (6) "Potential Environmental Concerns (PECs)."

- Former drum area (PEC 1)
- Historical Heckett operations (PEC 2)
- 14-inch mill and associated area (PEC 3)
- Potential tanks and mill scale staging (PEC 4)
- Historical on-site UST and historical adjacent (off-site) USTs and fuel oil USTs/ASTs (PEC 5)
- Historical coal gasification/coke production (PEC 6)

The same "PECs" detailed in Carlson's 9 July 2004 Phase I ESA were all subsequently identified as "RECs" and briefly summarized in Section 3 of the 26 August 2004

FSIR/ROR/RACR, which was completed shortly afterwards. This difference in terminology between the two (2) reports can be somewhat confusing, because in the conclusions of the Phase I ESA, it explains that “This assessment has revealed no evidence of RECs, which require additional investigation, in connection with the property with the exception of the following: historical Heckett operations (PEC 2).” Apparently, for an unknown reason, in the short time period between the two (2) reports, all the previously identified PECs were subsequently determined to be RECs.

Due to the poor quality of many of the figures and images in Carlson’s FSIR/ROR/RACR and Phase I ESA reports, it was often difficult to distinguish details and notations. However, the six (6) PECs identified by Carlson can be observed in Figure 8 of the Phase I ESA, and these same areas are shown more clearly in Figure 2 of the FSIR/ROR/RACR, as RECs. Only two (2) PECs/RECs, Numbers four (4) and five (5), were identified to be located on or adjacent to the southwestern quarter of the site proposed for the DMDF.

Regardless of the terminology, it is evident from Carlson’s Phase I ESA that the area associated with the historical Heckett operations was determined to be the most serious environmental concern. This is because this area was the only area recommended for further investigation. In particular, the report recommended that the extent of soil contamination be delineated and proper remediation (if any) be conducted.

As noted earlier in the site description by Carlson, Heckett was a material management company that processed slag for Republic Steel, and the Heckett operations were located at the far south central portion of the site and extended well into the adjacent site to the south, which is now the Ford Supplier Park. In Section 4.9 of the Phase I ESA, Summary of Carlson’s Additional Investigations, it explains the following:

> “The soils in the area of the former Heckett operations (PEC 2) were analyzed to determine whether potential USTs in this area had adversely impacted the soil. The soil samples were analyzed for [semi-volatile organic compounds] SVOCs and [volatile organic compounds] VOCs and/or polynuclear aromatic hydrocarbons (PNAs) and benzene, toluene, ethylbenzene, and xylene (BTEX). According to the laboratory analysis, contamination was detected and this area is potentially going to be separated from the "remediation site" for NFR consideration in the [Illinois EPA] IEPA Site Remediation Program. It should be noted, reportedly this property will be entered in the IEPA [Illinois EPA] Voluntary Site Remediation Program to obtain closure.”

The site base map included with the NFR letter shows that the site remediation boundary does not include, and specifically avoids, the area where the former Heckett operations building was located, roughly 600 feet to the southeast of the southeastern corner of the proposed DMDF project site. In Section 12 of the FSIR/ROR/RACR, Carlson notes that according to the Illinois OSFM, Heckett was a division of the Harsco Corporation and registered USTs at 12315 S. Burley Ave. in 1986. The report found

that three (3), 3,000 gallon USTs and two (2), 1,000 gallon USTs containing diesel and gasoline were registered at the property and removed in 1987.

This current assessment found no records in the Illinois EPA, Bureau of Land (BOL) databases for the SRPs or Leaking USTs (LUSTs), but the Heckett Plant 3 at 12315 S. Burley Ave. was identified in the Illinois EPA BOL Inventory database. It was also identified in the USEPA Facility Registry Service (FRS) database as a RCRA Small Quantity Generator (RCRA-SQG).

Although the area with the historical Heckett operations was not included within the site remediation boundary, the suggestion in Carlson's Phase I ESA that the property will be entered in the SRP likely originated because Carlson had knowledge of the plans for the site or may have been concurrently working on the FSIR/ROR/RACR and was planning to subsequently enroll the 200-acre property into the Illinois EPA SRP in order to acquire the NFR. Carlson typically provided a similar comment, indicating that each area would be entered into the SRP, for the other areas that were identified as containing PECs in the Phase I ESA.

The Opinions section of Carlson's Phase I ESA provides summaries of the impacts the individual PECs identified above might have on the subject property. In the summary for the historical Heckett operations, the Phase I ESA explains that contamination was detected in the area, the extent of contamination was being delineated, and, due to the on-site contamination, the historical Heckett operations area was concluded to represent a REC. This area is located in reasonably close proximity to the proposed DMDF project site, roughly 600 feet away, and it is evident that the soil contamination detected by Carlson was above the Illinois EPA cleanup objectives. Besides being identified as a REC, the historical Heckett operations area was obviously a problem because it was specifically excluded from the site remediation boundary on the site base map included with the NFR letter. Nevertheless, any likely impact to the proposed project site would likely be due to the migration of contaminated groundwater, and the NFR letter documents that the hazardous substances in the groundwater were addressed to the satisfaction of the Illinois EPA, subject to the implementation of the required controls, i.e. the activity and use limitations and institutional controls. As a consequence, the historical Heckett operations is a "Controlled" REC or **CREC** for the current assessment. The definition of a CREC was defined previously during the discussion of supplemental ASTM E1527 guidance. By the same reasoning, the other PECs/RECs that were identified by Carlson and are discussed further below also are **CRECs** for the current assessment.

For the subsurface investigation conducted by Carlson in the former drum area (PEC 1), soil samples were analyzed for PCBs, PNAs, and BTEX. The Phase I ESA determined that no compounds were detected in this area above the Illinois EPA cleanup objectives. The Phase I ESA mentions that this property will be entered in the Illinois EPA SRP, but, as indicated earlier, this was probably because Carlson had knowledge of the plans for the site or may have been concurrently working on the FSIR/ROR/RACR and was planning to subsequently enroll the entire property into the

Illinois EPA SRP. The former drum area (PEC 1) is shown in the report to be located north of 117th Street and approximately 2,000 feet to the northeast of the northeastern corner of the proposed DMDF project site. Carlson's Phase I ESA concluded that this area represents a HREC, and no additional investigations were warranted at the time. Unlike the Heckett operations area (PEC 2), the former drum area (PEC 1) was included within the site remediation boundary on the site base map included with the NFR letter. Although the former drum area (PEC 1) is located a considerable distance away from the proposed project site and no compounds were detected in this area above the Illinois EPA cleanup objectives, the site is subject to the implementation of the required controls, i.e. the activity and use limitations and institutional controls. As a result this area is a **CREC**, but it appears to have a low potential for causing any impacts to the soil at the proposed project site.

The fourteen (14)-inch mill (PEC 3) is discussed in Section 3.3 of the FSIR/ROR/RACR, Summary of Former Investigative Activities, and Section 4.1, of the Phase I ESA, Previous Environmental Assessment(s). These sections explain that Carlson reviewed documentation provided by Republic Technologies International that described extensive remediation efforts conducted by Chemtron Corporation (Chemtron), of Avon, Ohio to address potential environmental issues associated with the 14-inch mill in 1997. Since the details of these actions were provided in the FSIR/ROR/RACR, which has been included as Attachment 4, they have not been repeated in this current assessment, but, as also indicated in the FSIR/ROR/RACR, due to the historical operations in this area, there is still a potential for impacts to the subject property from the former 14-inch mill. Figure 2 of the FSIR/ROR/RACR shows that the former 14-inch mill building was located directly to the west of the proposed project site for the DMDF.

In the Opinions section of the Phase I ESA, Carlson summarizes the potential issues associated with the former 14-inch mill and associated area (PEC 3). This assessment explains that due to these potential issues, soil and groundwater samples were collected and analyzed for PCBs, SVOCs, VOCs, and RCRA metals. The results of the subsurface investigation showed that "Metals were detected in the soil as a result of the slag fill material. No other compounds were detected in the soil around the 14" [inch] mill above the IEPA [Illinois EPA] cleanup objectives." The Phase I ESA further reports that "Isolated organic contamination was detected in the ground water." By the same reasoning described earlier, this PEC 3 area is a **CREC**.

In regards to the potential tanks and mill scale area (PEC 4), the summary in the Opinions section of Carlson's Phase I ESA explains that tanks were identified in two (2) drawings they reviewed. The first was a drawing of the Republic Engineered Steel facility, dated September 1989, where "a tank was identified adjacent to the scrap preparation yard near a locker room/restroom (located in the northwestern portion of the property)." The second was a Republic drawing dated September 1994, where "two [2] above ground 10,000 [gallon] tanks were identified approximately 300 feet east of the north corner of the turning basin." Additional information on the contents of the tanks was not available, but apparently there was a reference to the tanks containing spent

pickling liquor. However, the summary says “Reportedly, the Republic Engineered Steel pickling activities were conducted off-site.”

The summary of PEC 4 in the Opinions section of Carlson’s Phase I ESA further indicates that a previous report identified a dark stained area near railroad tracks located in the northwestern portion of the subject property, and this area was reportedly used to stage mill scale prior to removal off-site. The summary then explains that Carlson and RUST both collected soil and groundwater samples from this area. RUST collected one soil and one groundwater sample and analyzed the samples for VOCs, SVOCs, thirteen (13) priority pollutant metals, pH, barium, cyanide, PCBs, and asbestos. Evidently, the results did not detect any parameters in the soil sample above the TACO Tier I objectives, but lead and antimony were detected above the Tier I objectives in the groundwater sample. Carlson analyzed the samples for PCBs, SVOCs, VOCs, and RCRA metals, but “no significant contamination was detected in the soil and groundwater around the potential tanks and mill scale staging area.” By the same reasoning mentioned before, this PEC 4 area is a **CREC**.

The Opinions section of Carlson’s Phase I ESA indicates that PEC 5 is primarily due to a historical on-site UST. Apparently, a 500-gallon gasoline UST was identified in the northwestern portion of the subject property on the Sanborn maps. Soil samples were collected from the area and then analyzed for PCBs, SVOCs, VOCs, and RCRA metals. The results reportedly did not show any significant contamination. In addition, the Findings section of the Phase I ESA apparently includes the off-site PECs along with PEC 5, and these PECs consist of historical adjacent 43,000-gallon crude oil USTs and fuel oil USTs/above ground storage tanks (ASTs). The summary describes five (5) 43,000-gallon USTs containing crude oil and an associated pump being located in the southern portion of the active Republic Technologies International site (adjacent to the northwest of the subject property.) The summary also indicates that fuel oil USTs and ASTs were identified on the Sanborn maps from 1921 through 1987, but the ASTs were not observed on the 1975 aerial photograph. Carlson previously collected soil and groundwater samples in this area, and, in general, the samples were analyzed for BTEX and PNAs. Since Carlson reportedly detected contamination in this area, the Phase I ESA explains that “the subject site was subdivided from this area of known contamination. As such, the contaminated area is located off-site, and based on the sampling data, no contamination is present on the subject property.” For the same reasons discussed for the other PECs, the PEC 5 area is a **CREC** for this current assessment.

The last environmental concern identified in Carlson’s Phase I ESA was the historical coal gasification operations/coke production plant (PEC 6). The report mentions that according to the Sanborn maps, aerial photographs, and previous reports/documentation, a coal gasification/coke production plant (Prestfuel Corporation, Trusslab Corporation and Slag Products) was located at the northeast corner of South Buffalo Avenue and 117th Street from at least 1946 to the mid-1960s. This site is roughly 2,000 feet northeast of the proposed DMDF project site. The Phase I ESA notes that Carlson identified numerous tar tanks and a Commonwealth Edison

substation on the property, so they conducted soil and groundwater subsurface investigations in this area. The soil and groundwater samples were analyzed for PCBs, SVOCs, VOCs, and RCRA metals, and "No significant soil or ground water contamination was detected in this area." Similar to the previously discussed PECs, PEC 6 is a **CREC**.

DATABASE SEARCH

The Environmental Database Resources, Inc. (EDR) report provides a comprehensive investigation of available environmental records in Federal and State databases approximately using the minimum search distances provided in ASTM E1527. Attachment 1 contains the comprehensive EDR Radius report, Table 2 provides a summary of the sites EDR identified within the recommended search distances, Table 3 contains a summary of orphan sites EDR was unable to map due to poor or inadequate address information, and Figure 5 shows an overview map of the sites EDR was able to identify and locate within the recommended search distances.

CERCLIS

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons pursuant to CERCLA. CERCLIS contains sites that are either proposed for or presently on the NPL, as well as sites in the screening and assessment phase for possible inclusion on the NPL. CERCLIS indicates the stages of evaluation and remediation that have been completed for any given site.

Superfund is the name of the environmental program to address abandoned hazardous waste sites, and it is also the name of the fund established by CERCLA for addressing such sites. Superfund is complicated and involves detailed procedures for performing site assessments, placing sites on the NPL, and the establishment and implementation of appropriate cleanup plans. Basic information about the Superfund program is provided on the following USEPA website: http://www.epa.gov/superfund/about.htm.

Presently, there are approximately 1,300 final NPL sites. The USEPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. In accordance with the National Contingency Plan (NCP), 40 CFR 300.425(e), a site may be deleted where no further response is appropriate if the USEPA determines that one of the following criteria has been met:

- USEPA, in conjunction with the State, determines that responsible or other parties have implemented all appropriate response actions required.

- USEPA, in consultation with the State, determines that all appropriate Superfund-financed responses under CERCLA have been implemented and that no further response by responsible parties is appropriate.

- A remedial investigation / feasibility study has shown that the release poses no signification threat to public health or the environment and, therefore, remedial measures are not appropriate.

The EDR Radius report did not identify any NPL or delisted NPL sites within the recommended search distances, but the report does include a site listed in CERCLIS named Allied Corporation at 12260 South Carondolet Ave. that is within the recommended 0.5-mile search distance.

The USEPA Superfund site information database indicates that the Allied Corporation site is still active, but it is not on the NPL. The non-NPL status shows that the State of Illinois is the lead agency for cleanup. A search of the Illinois EPA Bureau of Land (BOL) inventory database using the USEPA ID number for Allied Corporation shows a different facility name of "PVS Chemical Solutions" (PVS) at the same address, and this facility name has an Illinois EPA BOL ID number. The Illinois EPA BOL ID number for PVS is linked to the USEPA Facility Registry Service (FRS) facility detail report for PVS, and this report indicates the facility is a chemical plant, classified under the North American Industrial Classification System (NAICS) for chemical product and preparation manufacturing and basic inorganic and organic chemical manufacturing. In addition, the USEPA FRS facility detail report shows that besides CERCLIS, the site is associated with a number of other environmental information systems (databases), such as the Illinois Agency Compliance and Enforcement System (ACES), Integrated Compliance Information System (ICIS), Resource, Conservation, and Recovery Act (RCRA) Information System (RCRAInfo), Toxic Release Inventory System (TRIS), oil database, air facility system, biennial reporters, risk management plan, Emission Inventory System (EIS), and ICIS-National Pollutant Discharge Elimination System (NPDES). Allied Corporation is only listed as the facility name under CERCLIS, and PVS is the facility name used for the other databases. The USEPA FRS facility detail report also lists "Allied Corporation" as one of the alternative names for PVS Chemical Solutions, Inc.

The same site may be identified by a number of different alternative names, but, regardless of the facility name, the site at 12260 South Carondolet Ave. is presently listed as an active Superfund site. Although it was assessed and inspected under the USEPA Superfund program, it was not included on the NPL. The most recent action provided in the EDR Radius report is an expanded site inspection completed 4 June 1997, and the site was recommended for Hazard Ranking System (HRS) scoring. Details regarding the site inspection, extent of contamination, and current status of cleanup operations were not provided in the EDR Radius report, but a FOIA request for further information was submitted to the USEPA and Illinois EPA.

The FOIA response from the Illinois EPA included a 1,434-page Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation property located at the above-mentioned address and dated 23 May 2001. This report was prepared for Honeywell International, Inc., and, according to the Executive Summary, the report summarizes the results of the environmental investigations to "determine the nature, concentrations, migration, and extent of any

contaminant of concern." The Executive Summary also explains that the goal of the Remediation Applicant is to receive a comprehensive NFR letter from the Illinois EPA.

The site was described as 42 acres of undeveloped land between the Calumet River and PVS Chemical, Inc. to the north, 126th Street to the south, Carondolet Ave. to the east, and the Arrow Terminal facility to the west. Wolf Creek [also known as Indian Creek] reportedly transects the property and flows northwest to the Calumet River at the northern edge of the property. Based on this description, the most northern portion of the former Allied Corporation site would be located roughly 1,500 feet south southwest of the southern portion of the proposed DMDF project site.

The contaminants of concern (COCs) found to exceed the Tier I soil remediation objectives at the Former AlliedSignal Corporation included various compounds classified as VOCs, SVOCs, metals, pesticides, and PCBs. The COCs found to exceed the Tier I groundwater remediation objectives included various compounds classified as VOCs, SVOCs, and metals. The Executive Summary also notes "In addition to several contaminants of concern exceeding the Tier I remediation objectives, some areas were found to contain characteristically hazardous levels of cadmium, lead, and pH. Although not considered hazardous, one area of the site reportedly contained a tar-like substance layered with the near surface soil column."

In the Site History section of the Comprehensive Site Investigation Report Addendum, Carlson explains that the site has been owned by several industries since 1899, but no manufacturing activities have ever taken place on the site. Carlson further explains that "The site has, however, been used for waste disposal activities related to the adjacent former AlliedSignal facility (currently PVS Chemical) located directly to the north." In 1994, the site was purchased from AlliedSignal by the Schroud Realty Group. In 1999, the site was sold again to CenterPoint Properties, Inc." At the time the report was prepared, the site was unoccupied.

Another document regarding the AlliedSignal property that was released by the Illinois EPA through the FOIA request was a 321-page Remediation Objectives Report/Remedial Action Plan (ROR/RAP), dated 22 Oct. 2001. This report was submitted to the Illinois EPA by Carlson on behalf of the site owner and remedial applicant, CenterPoint Realty Services Corporation, for enrollment in the SRP and to receive a NFR letter. In the Introduction/Background of this report, it mentions that the 42-acre remediation site is vacant and the proposed development plan is part of a larger, 140-acre development that will be used as a manufacturing campus, primarily serving a nearby automobile manufacturer. Based on the aerial photograph, the site was subsequently developed, and it is now part of Ford Supplier Park. Although no NFR letter associated with the site was found in the Illinois EPA SRP database, evidently, the Illinois EPA was aware of the site characterization and likely required remedial activities prior to development. However, if the site was remediated, it should have been removed from the CERCLIS database, but there still might be remaining environmental issues for the site.

It explains in the appendix of ASTM E1527 that “CERCLA authorizes the Federal government to respond to the releases of hazardous substances, to seek reimbursement from potentially responsible parties (PRPs) or to order PRPs to abate releases or threatened releases of hazardous substances that may present an “imminent and substantial endangerment” to the public health or welfare of the environment.” The appendix further notes that “PRPs and other persons may seek cost recovery or contribution for response costs from other PRPs, provided they comply with certain requirements.” The legal complexities of CERCLA, including the identification of PRPs, financing, and/or cleanup plans, often delay the cleanup of Superfund sites.

Since the CERCLA database indicates that the Allied Corporation site has been active in the Superfund program since 1984, and the site characterization by Carlson revealed a number of COCs and environmental issues at the site, in the absence of further information, this site is a **REC** because hazardous substances from the site likely migrated through the groundwater to the proposed project site.

In addition to the information provided by CERCLIS and the USEPA FRS facility detail report, the EDR Radius report indicates that the PVS site is associated with several other Federal and State environmental databases including the USEPA’s Watch List, (NPDES), Illinois USTs and LUSTs, IEMA for spills, Illinois EPA SRP, RCRA Corrective Action Reports (CORRACTS), RCRA Large Quantity Generator (LQG), RCRA Administrative Action Tracking System (RAATS), and Aerometric Information Retrieval System (AIRS). Further information on these databases is provided in the EDR Radius report.

The PVS facility has been periodically inspected by the City of Chicago, Department of Public Health / Department of Environment (DOE). In the notes from a City of Chicago, DOE inspection report, it indicates PVS was cited by the Chicago Metropolitan Water Reclamation District (MWRD) because of high lead content in their wastewater discharge. The inspection report mentions that the PVS representative informed the City of Chicago, DOE inspector that that the groundwater in the area is typically high in lead. Apparently, a subsequent investigation by PVS discovered that their wastewater discharge pipe was broken, and the lead-contaminated groundwater was migrating into the broken wastewater discharge pipe. After the wastewater discharge pipe was repaired, the problem abated. This inspection report documents that there is lead-contaminated groundwater at the adjacent PVS site, and it is likely that this contaminated groundwater has migrated to the proposed DMDF project site. As a consequence, the lead-contaminated groundwater at the PVS site is **REC**.

Besides the previously identified environmental concerns, PVS has received several formal as well as informal violations. It appears that many of the violations shown in the EDR Radius report are related to procedural requirements, compliance with the various administrative and reporting rules and regulations for RCRA-LQGs, and they do not necessarily indicate substantial releases of hazardous substances or petroleum products. Nevertheless, the PVS facility detail report from EDR includes a comment noting that groundwater violations were among the alleged violations. Furthermore, one

of the formal enforcement actions indicates that PVS released sulfuric acid, a hazardous substance, into the environment in an amount greater than the Reportable Quantity (RQ). Incident reports from the IEMA show a history of spills of sulfuric acid and other sulfur compounds, some of which appear to have resulted in considerable releases of hazardous substances that likely impacted the groundwater. Since there is a high probability that the contaminated groundwater migrated to the proposed DMDF project site, this information provides further evidence that the PVS site is a **REC**.

The EDR Radius report and biennial report (BR) documentation for the PVS site suggest that there has been a considerable amount of soil cleanup activity, and this cleanup activity may be related to the CERLIS issue described above. The EDR Radius report hazardous waste summary for waste code D008, which corresponds to lead, indicates that the USEPA biennial reporting year 2013 results for this waste was 337,380 lbs. (roughly 170 tons). However, information in the 2013 and 2011 USEPA BR database shows that PVS generated 343.72 and 168.69 tons of contaminated soil, respectively. For both reporting years, 2013 and 2011, the contaminated soil was reportedly shipped off site for disposal and they were one-time processes. Illinois EPA also prepares annual reports for generators and managers of hazardous waste in Illinois, and these reports corroborate the USEPA BR database information and show that in 2010, 2011, 2012, and 2013, PVS generated 145.44, 168.89, 168.89, and 343.72 tons of contaminated soil, respectively.

One of the documents released by the Illinois EPA under the FOIA request for the Allied Corporation was a RCRA inspection report for the PVS site. According to this report, a compliance evaluation inspection was conducted at the site by the Illinois EPA on 18 and 19 Dec. 2013. The report notes that lead contaminated soil (D008) is generated from onsite excavation activities and these activities are a prelude to construction projects. A Technical Manager for PVS was interviewed and explained that the land became contaminated with lead when backfill material arrived on the site in the 1890s. Once the soil is excavated, a hazardous waste determination is conducted to ascertain the presence and concentration of leachable lead (using the toxicity characteristic leaching procedure (TCLP)). For 2013 and 2014, the waste material was reportedly hauled to Envirite of Illinois (EQ Environmental) in Harvey, Illinois.

In Section 4 of the Phase I ESA by Carlson, History of the Site and Surrounding Area, the report discusses adjacent properties and mentions that they reviewed a Phase I ESA conducted by Harding Larson Associates (HLA). Apparently, in this Phase I ESA, HLA observed “numerous areas of stressed vegetation and staining (yellow solid material and black tar-like material)” and wetland areas on the property located to the south and west of the adjacent PVS Chemical facility. In addition, this section of Carlson’s Phase I mentions that “documented solid waste disposal activities have occurred in this area.” As a consequence, Carlson collected soil, sediment, and surface water samples from the area, and various VOCs, SVOCs, pesticides, PCBs, and metals were found in the samples. The Phase I ESA indicates this area was entered into the SRP, and the report cites a letter, dated July 28, 1999, from the Illinois EPA that required the remediation of soil exhibiting hazardous waste lead in this area and

additional sampling for numerous other areas. Based on the distance of this area from the property, Carlson's Phase I concluded that the potential for the area to impact the property was low, and it did not appear to represent a potential environmental concern to the subject site.

This same section of Carlson's Phase I ESA notes the following:

> "According to previous documentation, it appears numerous dumping incidents occurred along Carondelet Avenue, adjacent to the PVS Chemical Company property. Reportedly, construction debris, paint and solvents have been dumped in the area. Reportedly, the materials were removed and the area was cleaned up, however, information regarding sampling activities (if any) was not available. Carlson contacted city officials regarding these dumping incidents. According to city officials, construction debris was historically dumped in areas along Carondolet Avenue. Additional information regarding chemical dumping was not available. At the time of Carlson's site visit, no staining or stressed vegetation was observed in this area. In addition, based on the distance of these dumping incidents, the potential for these dumping incidents to impact the subject property is considered low."

The facility name "former AlliedSignal Site / Honeywell" and the associated USEPA Handler identification number identified in the EDR Radius report did not mention PVS as an alternative name and was not included as an alternative name for "PVS Chemical Solutions, Inc." in the USEPA FRS facility detail report for PVS. However, Allied Corporation and Allied Corp. are listed as alternative names for PVS in the USEPA FRS facility detail report for PVS, and it is obvious that this site was located at or near same address. The address in the EDR report for the "former AlliedSignal Site / Honeywell" facility name is only slightly different, "12260 South Carondolet Ave.-C," and the use of the term "former" suggests that it was likely at the same location or adjacent to PVS. The USEPA FRS facility detail report for the former AlliedSignal Site / Honeywell facility name has a NAICS Code for synthetic dye and pigment manufacturing, and it is listed as a RCRA Small Quantity Generator (SQG). Otherwise, this USEPA FRS facility detail report did not reveal any environmental issues or potential impacts to the project site associated with the "former AlliedSignal Site / Honeywell" facility name. However, as mentioned earlier, the Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation Property provides the details concerning the historical environmental issues associated with this site.

A related environmental issue concerns the Northeastern Illinois Planning Commission (NIPC) map of approximate locations of landfills and impoundments for the region. Based on the NIPC data, the EDR Radius report indicates a landfill / impoundment for "Allied Chemical" is located roughly a quarter mile south southwest of the proposed project site. The Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation Property indicates the site was used for

waste disposal activities, so this is most likely the same site being referenced by the NIPC data.

Incidentally, Information regarding alternative names for AlliedSignal Corporation was found on an Encyclopedia Britannica website, http://www.britannica.com/EBchecked/topic/16410/AlliedSignal, where it explains the following:

> "The corporation was formed in 1920 in the consolidation of several chemical manufacturers; the Barrett Company (founded 1903), supplying coal-tar chemicals and roofing; General Chemical Company (founded 1899), specializing in industrial acids; National Aniline & Chemical Company (founded 1917), producing dyes; Semet-Solvay Company (founded 1894), manufacturing coke and its by-products; and Solvay Process Company (founded 1881), producing alkalies and nitrogen materials. In the 1940s these companies were transformed into "divisions" of Allied Chemical. There were further reorganizations and acquisitions of companies and plants during the 1950s, '60s, and '70s, and Allied became a conglomerate. Taking the name Allied Corporation in 1981, the firm acquired the Bendix Corporation, a manufacturer of automotive and aerospace equipment, in 1983. In 1985 Allied merged with the Signal Companies, a major aerospace and engineering firm, to form Allied-Signal Inc., in a transaction representing the largest industrial merger up to that time. In 1986 Allied-Signal spun off about 35 of its diverse subsidiary operations into a new and separate company so that the parent corporation, renamed AlliedSignal in 1993, could concentrate on its growing aerospace electronics and automotive operations. AlliedSignal acquired Honeywell's stock in 1999 but dropped the AlliedSignal name in favour of the Honeywell name."

This same website indicates that alternate titles for AlliedSignal included the following: Allied Chemical & Dye Corporation, Allied Chemical Corporation, Allied Corporation, and Allied-Signal, Inc.

CERCLIS-No Further Remedial Action Planned (NFRAP) sites refers to archived sites, and the following is the description of these sites provided in EDR report:

> "Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at the site has been completed, and that EPA has determined no further steps will be taken to list this site on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site."

The map findings summary in the EDR Radius report shows that no CERCLIS-NFRAP sites were located within the recommended half mile search distance, but there was a CERCLIS-NFRAP site located slightly greater than a half mile north northeast of the project site. This site contained a large steel plant, the facility name is Republic / LTV Steel, and the address is 11600 South Burley Ave. Discovery was completed 1 Aug. 1980. After the preliminary assessment was completed on 1 Feb. 1983, the site was determined to be a low priority for further assessment. A site investigation was completed on 11 Jul. 1986, and this investigation found that the site did not qualify for the NPL based on existing information. The site was subsequently archived on 18 Nov. 1991. Although the Republic / LTV Steel site at 11600 South Burley Ave. did not qualify for the NPL and was archived from the inventory of CERCLIS sites, as explained below, the current assessment identified a number of additional issues with this site.

RCRAInfo

The RCRAInfo database lists sites which generate, transport, store, and/or dispose of hazardous waste defined by RCRA. The database includes RCRA Corrective Action Reports (CORRACTS), which identify hazardous waste handlers with RCRA corrective action activity. The database also includes RCRA treatment, storage, or disposal facilities (TSDFs), RCRA conditionally exempt small quantity generators (CESQGs), RCRA small quantity generators (SQGs), and RCRA large quantity generators (LQGs). The definitions of RCRA CESQGs, SQGs, and LQGs can be found in RCRA and are also summarized in the EDR Radius report.

The EDR Radius report identified the following two (2) RCRA CORRACTS facilities within the recommended search distance: 1) PVS Chemical Solutions, Inc., (PVS) at 12260 South Carondolet Ave. and 2) Republic / LTV Steel at 11600 South Burley Ave. Both of these sites were also discussed earlier for the CERCLIS database findings above.

In regards to PVS, the EDR Radius report shows under RCRA-CORRACTS that on 1 May 1987 a RCRA Facility Assessment (RFA) was completed but no determination was recorded. Several years later, on 27 Sep. 1991, the facility was assigned a medium corrective action priority. The next RFA documented in the EDR Radius report was completed 1 May 2009, and this assessment determined that a RCRA Facility Investigation (RFI) was not necessary. Consequently, it is evident that PVS resolved the previously identified RCRA corrective action issues.

For Republic / LTV Steel, the EDR Radius report shows under RCRA-CORRACTS that on 22 Sep. 1987 a RFA was completed, and this assessment determined that a RFI was necessary. Similar to the PVS facility, the EDR Radius report documents that the Republic / LTV Steel facility was assigned a medium corrective action priority several years later, on 27 Sep. 1991. In addition, as with PVS, the next RFA documented in the EDR Radius report for Republic / LTV Steel was completed on 1 May 2009, and this assessment determined that a RFI was not necessary. Hence, like PVS, the Republic /

LTV Steel facility evidently resolved the previously identified RCRA corrective action issues.

The EDR Radius report identified one RCRA-LQG, PVS Chemical Solutions, Inc. (PVS) and one RCRA-SQG, the former AlliedSignal Site / Honeywell. As noted earlier, these facilities seem to be located at or near the same site, and both facilities are reportedly located within a quarter mile, south southwest of the proposed project site. Besides being identified as a RCRA-SQG, the database search did not reveal any violations, environmental concerns, or potential impacts to the project site associated with the "former AlliedSignal Site / Honeywell" facility name. However, as explained earlier, this facility name is related to the issues discussed for the Allied Corporation facility name in the CERCLIS database findings above.

The EDR Radius report indicates the Republic / LTV site is a RCRA-CESQG, and the report also includes a list of historical RCRA-LQGs, including LTV Steel and the Chicago Coke Co. Inc. Furthermore, the EDR Radius report waste code summary includes an extensive list of hazardous wastes, and, under the NY Manifest database, the report shows that in 1983, waste petroleum oil with 500 ppm or greater levels of PCBs was generated and shipped off-site for disposal. The EDR Radius report includes evidence that the site received several notices for violations, but it appears these violations were primarily for administrative problems or compliance issues.

The USEPA FRS facility detail report for the LTV Steel Company shows that the site has been associated with a number of alternative names, and the report provides links to the TRIS database. TRIS identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under the Superfund Amendments and Reauthorization Act (SARA), Title III, Section 313. Although TRIS data do not necessarily indicate whether releases occurred that likely impacted the proposed project site, the data are helpful for evaluating potential risks and exposures. The TRIS data for the LTV Steel Company show a long list of hazardous chemicals and amounts that were released between 1987 to 2001 through air emissions, discharges to water, transfers to off-site locations other than Publicly Owned Treatment Works (POTWs), and non-production releases (as a result of remedial actions, catastrophic events, or other one-time events not associated with production processes). The minimum search distance for specific spill incidents, such as those included on the Federal Emergency Response Notification System (ERNS) list, are only reported for incidents that occur directly on the project site. Based on the TRIS data, it is likely that a number of spills of hazardous substances or petroleum occurred at 11600 South Burley Ave., and a previous Phase I ESA that the Chicago District conducted for this address included documentation of numerous spill incidents, and the amounts released for several of the spills were substantial.

As mentioned earlier, the most recent RFA was performed in 2009 for the LTV Steel Company site, and this assessment determined that a RFI was not necessary. This suggests that it would be unlikely for contamination to be released from the site that would pose a current or potential threat to human health and/or the environment.

Furthermore, the Illinois EPA SRP database shows the site was enrolled in the program on 10 Jul. 1997 and issued a focused NFR letter on 3 Feb. 1999 for 48.7 acres, with some land use restrictions and institutional controls. As a result, it is evident that the voluntary cleanup under the SRP may have addressed and/or resolved the corrective action concerns identified by the RFA performed in 1991.

Since the LTV Steel Company site has received an NFR letter from the Illinois EPA, the environmental conditions on the site are evidently improving. Nevertheless, the NFR letter includes land use restrictions and institutional controls, so, although the site was determined to not pose a risk to human health or the environment, the site obviously has environmental issues that remain. In addition, the USEPA enforcement case database reveals several cases where the LTV Steel Company received substantial federal penalties for violations of the CAA, and this suggests that there was a tendency for the company to follow a pattern of neglecting environmental concerns.

Even though the site received an NFR letter, it was a focused NFR letter for a small area of the property, and it seems to suggest that site contamination could still represent a potential concern. It explains in the NFR letter that the letter shall be considered "prima facie" evidence, based on first impression, or accepted as correct until proved otherwise, that the site does not constitute a threat to human health and the environment for the specified RECs so long as the site is utilized in accordance with the terms and conditions of the letter. A focused NFR letter signifies a release from further responsibilities for only *specific* RECs and related contaminants at a remediation site, where as a comprehensive NFR letter signifies a release from further responsibilities for *all* RECs and related contaminants at a remediation site. Such an NFR letter indicates the site is a **CREC**. Since there are institutional controls, the site would not be considered a HREC.

Although specific spill incidents for 11600 South Burley Ave. were not included in the EDR Radius report for 12200 South Avenue O, documentation was provided in a previous Phase I ESA for the LTV Steel site, and based on the long history of steel production, extensive use and/or generation of a wide variety of hazardous materials and wastes, and history of releases of hazardous substances, this site is a **CREC** because it is likely that hazardous substances were released that impacted the groundwater and possibly the soil at the proposed project site.

SSU

SSU refers to the State Sites Unit Listing, which is the State and Tribal equivalent to the CERCLIS and NPL. The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPAs SSU. These sites may or may not have already been listed on the Federal CERCLIS list. The database search located the following two (2) SSUs within the search distance: Indian Ridge Marsh at 122nd and Torrence Ave. and the Schroud Property at 12601 Carondolet Ave. Indian Ridge Marsh is approximately a half mile west southwest of the project site, and the Schroud Property is roughly a half mile south of the project site.

Indian Ridge Marsh is a slag only landfill that covers about 145 acres on the opposite and western side of the Calumet River from the project site. The City of Chicago has information on their website indicating that the City entered into a project participation agreement in 2010 to restore the marsh, and it is listed in the City's directory of natural areas. Since the Indian Ridge Marsh site is hydrologically separated from the proposed project site and located on the opposite and western side of the Calumet River, and it is a slag only landfill, there is a low potential for the site to cause any impacts to the soil and groundwater at the proposed project site.

In regards to the "Schroud Property" SSU, the EDR Radius report lists the facility type as a "Flue Dust Waste Pile," and the site is evidently a landfill. This site appears to be separate from the waste disposal activities that occurred at the former AlliedSignal site to the south southwest of the proposed project site. The size of the "Schroud Property" landfill / impoundment site is reportedly 25 acres, and several Illinois EPA enforcement orders are associated with the site. The first case describes the property as being bounded by a railroad on the east, Carondolet Ave. on the west, 126th St. on the south, and approximately 122nd St. on the north. The enforcement documents indicate that Mr. Schroud purchased the site from LTV Steel, and the plaintiffs alleged that LTV used the site for the disposal and storage of flue dust. In the most recent case, Mr. Schroud was found to be in indirect civil contempt and received roughly $853k in penalties based on the failure to properly cap the industrial landfill. The Illinois EPA Facility Compliance Tracking System (F.A.C.T.S.) database shows that the site has received a number of violations, but the most recent evaluation date was 23 Apr. 2004. The close proximity of this large impoundment / landfill to the project site and history of violations are a concern. In the past, such facilities were not typically engineered with a liner. As a result, there is a high probability that hazardous substances in the landfill leachate contaminated the groundwater beneath the site, particularly if the landfill was improperly capped, and this contaminated groundwater likely migrated and impacted the proposed project site. As a consequence, the "Schroud Property" is a **REC**.

SWF/LF

The EDR Radius report lists Solid Waste Facilities / Landfill (SWF/LF) sites, and the report explains that these data were based on a NIPC solid waste landfill inventory of active and inactive solid waste disposal sites. The report notes that prior to 1971, there was no obligation to register such sites. The review of the NIPC list revealed the following two (2) sites within approximately 0.5 miles of the project site: 1) Allied Chemical, located south southwest of the project site, and 2) "119th west of Calumet River," located west southwest of the project site. The EDR Radius report did not provide a specific address for either site, but there were old NIPC files available from the Chicago Metropolitan Agency for Planning (CMAP) that provided the approximate locations.

As mentioned earlier in the discussion for the CERCLIS database findings, based on the NIPC data, the EDR Radius report indicates a landfill / impoundment for "Allied

Chemical" is located roughly a quarter mile south southwest of the proposed project site. The Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation Property indicates the site was used for waste disposal activities, so this is most likely the same site being referenced by the NIPC inventory.

The other SWF/LF site identified in the EDR Radius report is a landfill located at "119th west of Calumet River." It appears this site was based on information published in Craig E. Colten's report (1985) on "Industrial Wastes in the Calumet Area, 1869-1970." Since this landfill was determined to be a low risk site, and it is hydraulically separated because it is located on the opposite and western side of the Calumet River, it is unlikely that it would cause any potential soil or groundwater impacts for the proposed project site.

UST/LUST

The EDR Radius report explains that the Illinois EPA maintains a record of LUST incident reports, and the Illinois OSFM maintains a list of facilities with USTs. Using these sources for data, the EDR Radius report identified two (2) LUST sites and one UST site within the recommended search distances. The two (2) LUST sites were the following: 1) PVS at 12260 Carondolet Ave, and 2) Gallo Equipment at 11835 South Avenue O. PVS was also the UST site that was identified.

Limited information was available on the LUST at the PVS facility, so a FOIA request was submitted to the Illinois EPA. One of the documents provided in response to the FOIA request explains that a leak test in Dec 1989 detected two (2) "pinhole" size leaks at the top of one of the tanks, so it was taken out of service and emptied of its contents. Tank closure activities took place on the 8th through 9th of May 1990. At the time, the water table was approximately two (2) feet below grade, and the tank was completely submerged. Consequently, the tank removal contractor coordinated with the Illinois EPA during removal. Based on the fact that the testing that was performed did not detect any analytes above the Illinois EPA soil and groundwater cleanup objectives, the contractor concluded that no further investigation was warranted and the site should be classified as a "clean closure." The most recent correspondence from the Illinois EPA to PVS Chemicals, dated 2 Mar. 2015, indicated that they reviewed and approved the 45-day incident report. The reason for the long delay in resolving the incident appears to be linked to administrative problems. Based on the information, it can be concluded that there was only minor leakage from the tank, the tank has been removed, and the potential for this LUST to impact the project site is low.

The EDR Radius report also identified PVS as the only site with USTs. The OSFM listed a total of nine (9) USTs, but three (3) have been removed and five (5) were exempt from registration. The OSFM rules for USTs and potential reasons for exemptions are provided in 41 IAC 174. The remaining tank is reportedly "out of service" and has not been used since 1 Sep. 1980. Based on this information, it

appears that PVS is properly maintaining the remaining USTs, and the potential for these tanks to impact the proposed project site is low.

For the Gallo Equipment LUST site, the EDR Radius report indicates the site is located approximately 2,000 feet northeast of the proposed project site, it lists the product as gasoline or diesel fuel, and a No Further Action (NFA) / NFR letter was provided 1 Nov. 2007. The OSFM website shows that seven (7) tanks were removed in 2002-2003. Of the tanks that were removed, five (5) had a 1,000 gallon capacity and two (2) had a 4,000 gallon capacity. The Illinois EPA LUST incident database indicates that the NFR letter utilizes worker caution as an institutional control. The City of Chicago has a detailed inspection report dated 23 Sep 2002 that indicates when two (2) 1,000 gallon gasoline tanks were removed, both tanks showed signs of gasoline releases. In addition, an inspection report from 8 Jan. 2003 notes that they removed three (3) 1,000 gallon and two (2) 4,000 gallon tanks. According to the report, there was a large amount of water within the excavation that contained two (2) 1,000 gallon tanks and two (2) 4,000 gallon tanks. The other excavation contained one (1) 1000 gallon tank and no standing water. The water was reportedly contaminated and was pumped out by a special waste hauler. The five (5) tanks were removed in two (2) days. The small excavation showed no evidence of contamination. The contractor implemented a remedial plan of dig and haul during tank removal, and the report notes that some of the tanks contained corrosion holes.

Since the tanks were removed, the removal and remedial operations were monitored by the City of Chicago, and the Illinois EPA issued Gallo Equipment an NFA/NFR letter, it seems that the tanks and associated contamination no longer pose a threat to human health or the environment. However, since the Illinois EPA included an institutional control for the NFR letter, it indicates the site is a **CREC**, but it appears this site has a low potential for causing any impacts to the soil or groundwater on the proposed project site.

SRP

The EDR Radius report explains that the SRP database identifies the status of all voluntary remediation projects administered through the pre-notice site cleanup program (1989 to 1995) and the site remediation program (1996 to present).

As mentioned earlier in the site description, the proposed project site at 12200 South Avenue O received a focused NFR letter that was issued for the site on 08 Dec. 2005 for 204 acres. The site was initially enrolled in the SRP on 30 Aug. 2004. The NFR letter includes a number of terms and conditions, and institutional controls include a groundwater use restriction and worker caution. Although the NFR letter was issued for a 204-acre site, the proposed project site would only occupy approximately the southwestern quarter of the property, adjacent to Turning Basin No. 3 of the Calumet River. A site base map showing the site remediation boundary is included with the NFR letter in Attachment 5, and the project site boundary map is shown in Figure 2. As a consequence, the current site investigation focused on this portion of the property.

In the NFR letter, under number three (3) of the Conditions and Terms of Approval, the letter explains “The recognized environmental conditions as characterized by the focused site investigation, consist of the following: a) Regulated substances of concern that have been successfully addressed are detailed in the attached Table A.” Table A exhibits a long list of volatile organic compounds (VOCs), semivolatile organic compounds, Aroclors, and metals. Since the NFR indicates these regulated substances of concern have been “successfully addressed,” it implies that these substances should not pose a risk to human health or the environment. Nevertheless, the letter also indicates that the Illinois EPA considers these substances to be a REC.

Even though the site received an NFR letter, the letter seems to suggest that the site contamination could still represent a potential concern. It explains in the NFR letter that the letter shall be considered "prima facie" evidence, based on first impression, or accepted as correct until proved otherwise, that the site does not constitute a threat to human health and the environment for the specified RECs so long as the site is utilized in accordance with the terms and conditions of the letter. ASTM E1527 indicates that such an NFR letter indicates the site is a **CREC**.

The EDR Radius report also identified another SRP site within the recommended search distance, and the facility name associated with this SRP was PVS. The SRP database shows that the site was enrolled in the program on 7 May 1996, but there was no evidence, such as an NFR letter or Sec. 4(y) letter, that any cleanup activity was performed or completed. The EDR Radius report lists the remediation applicant as CMC Land Holding Co. LLC, and it was for an area of 42 acres. The SRP did not provide an Illinois EPA project manager, and the database indicates the site is not active. The USEPA number in the Illinois EPA SRP database is linked to a different facility name, the former AlliedSignal Site / Honeywell facility name mentioned earlier in the discussion of the findings from both the CERCLIS and RCRAInfo databases. It was also discussed in the findings from the CERCLIS database, that Carlson prepared several reports in order to enroll in the SRP and acquire an NFR for the former AlliedSignal property. Although the Carlson report was completed at later date, 22 Oct. 2001, evidently a different company enrolled PVS in the program at an earlier date. The ROR/RAP Carlson prepared for the AlliedSignal site references a Phase I ESA, dated April 1996, for the same site by Harding Lawson and Associates (HLA).

As explained earlier in the findings of the CERCLIS database, based on the aerial photograph, the AlliedSignal Corporation site was subsequently developed, and it is now part of Ford Supplier Park. Although no NFR letter associated with the site was found in the Illinois EPA SRP database, it appears the Illinois EPA was aware of the site characterization and likely required remedial activities prior to development. However, if the site was remediated, it should have been removed from the CERCLIS and SRP databases, but there still might be remaining environmental issues for the site. Since the CERCLA database indicates that the Allied Corporation site has been active in the Superfund program since 1984, and the site characterization by Carlson revealed a number of COCs and environmental issues at the site, in the absence of further

information, this site is a **REC** because hazardous substances from the site likely migrated through the groundwater to the proposed project site.

Incidentally, a search of the Illinois EPA BOL inventory database using the USEPA number for Allied Corporation, which was discussed previously under the findings from the CERCLIS database, links the PVS and Allied Corporation facility names, and the Illinois EPA permit activities include coordination with the Bureau of Air (Asbestos / National Emission Standards for Hazardous Air Pollutants (NESHAP) for the removal of asbestos. Since a permit from the State of Illinois was acquired and no violations were reported, it appears the asbestos removal was performed in compliance with the Illinois state regulations.

As mentioned earlier in the findings of the RCRAInfo database, the Republic Steel / LTV Steel site was also enrolled in the SRP and issued an NFR letter.

Additional Environmental Records

The EDR Radius report identified the Cargill Salt Inc. site through the U.S. Department of Labor, Mine Safety and Health Administration database, but did not provide an address. The results from the actual database indicate that the site is an abandoned salt mine, and the address of record is 122nd & Torrence Ave. An Illinois EPA report on hazardous waste generators and managers for 2003 indicates Cargill has a facility located at 12201 South Torrence Ave. Since Torrence Ave is located on the opposite and western side of the Calumet River from the project site, the Cargill site is hydraulically separated and should not cause any potential soil or groundwater impacts.

The EDR Radius report notes that PVS was identified in a review of the WI Manifest list. Manifests document the movement of hazardous wastes from the generator through transporters to a TSDF. No further information was found for PVS for Wisconsin (WI) manifest data at the Wisconsin Department of Natural Resources Solid and Hazardous Waste Information Management System. Manifests can be helpful for indicating the type and quantity of hazardous wastes materials that are removed from a site, and this information is primarily used to evaluate the potential for environmental problems. However, manifest data generally does not indicate whether a spill or release occurred, so it would not be expected to provide information for evaluating RECs or likely impacts to the groundwater or soil at project site.

Orphan Sites

The EDR radius report includes a list of “orphan” sites, or sites that are listed in government databases but were not able to be mapped due to inadequate address information. Fifteen (15) orphan sites were identified in the EDR Radius report, and these sites were researched to identify the correct addresses and determine if they might pose an environmental concern. The results are detailed in Table 3.

Many of the orphan sites were not a concern for the project site because they were located a considerable distance from the project site and beyond the minimum search distance shown in Table 1. Other orphan sites were determined to be located on the western and opposite side of the Calumet River, so they were hydraulically separated and were not a potential concern for the project site.

Of the fifteen (15) orphan sites that were researched, Republic Engineered Steel was the only site that was determined to be an environmental concern for the proposed project site. Historically, several alternative site names and addresses have been associated with the steel plant and manufacturing operations in the vicinity of the proposed project site, which was identified in the EDR Radius report as the Republic Steel site at 12200 South Avenue O. Steel plant operations north of the project site were described under the site name "Republic / LTV Steel" at 11600 South Burley Ave. The additional name / address for the orphan site, Republic Engineered Steel at 116th and South Burley Ave., did not provide any further information, but the name "Republic Technologies International LLC" at 11610 S. Avenue O was associated with more alternative names and environmental interests. The situation for this site is similar to the situation described earlier for Republic / LTV Steel. Although specific incidents in this part of the site were not identified in the EDR Radius report, due to the long history of steel production, extensive use and/or generation of a wide variety of hazardous materials and wastes, and history of toxic releases, this site name and address is a **REC** that likely caused impacts to the groundwater and possibly the soil at the project site.

One additional orphan site was identified that was not listed in the EDR Radius report. The facility name for this site is Avenue O and 118th Street. The site was included in the CERCLIS database, but it is not on the NPL. Discovery, preliminary assessment, and site inspection were completed in 1986, and the site was determined to be a CERCLIS-NFRAP site that does not qualify for the NPL based on existing information. An expanded site inspection was completed in 1997, and the site was recommended for HRS scoring. Further details on the site history were found by reviewing previous FOIA requests. One request included an expanded site information report that provided details on inspection activities, source characterization, and a discussion of migration pathways.

This orphan site is described as being located east of Avenue O, between 116th Street and 118th Street, and roughly west of Ewing Ave. Apparently, the Illinois EPA initially declared the Avenue O site an illegal dump in 1974. Site history prior to 1974 is unknown, and a site investigation was not conducted until 1986, after a shopping mall and residential subdivision covered a large portion of the site. A low priority site inspection status was recommended in 1986 because of "the lack of information about what is presently at the site." At that time, there was no evidence of hazardous waste activities or the release of hazardous substances. A preliminary reassessment was performed in 1991 that recommended medium priority site inspection status because of the concern that residents could be exposed to possible surficial contamination. Most of the former dump site has been developed into a residential area with a shopping mall

and other businesses. Soil and sediment samples collected in 1994 indicated that some of the soils on the site and sediments in the adjacent wetlands east of the site were contaminated. Contaminants included semivolatile organic compounds (primarily polycyclic aromatic hydrocarbons (PAHs)), polychlorinated biphenyls (PCBs), and inorganic hazardous constituents (metals). Evidently, this CERLIS site is active but a low priority. The presence of the contaminated soils on a site that is roughly 2,000 feet northwest of the project site is a **REC** because it is likely that similar illegal dumping was taking place on the proposed project site or nearby and the groundwater migration pathway was not assessed.

HISTORICAL TOPOGRAPHIC MAP REVIEW

Evidence of environmental impacts can be determined by identifying the past land use and topographic changes at the project area and surrounding areas. Historical topographic maps of the area were reviewed to identify signs of dumping, fill, or excavation activities as well as the development of the area, such as the construction of industrial or residential structures and changes to the waterways and wetland areas. The historical topographic maps for the project site are included in Attachment 2.

Historical topographic maps were reviewed from the period of 1901 to 1997. The historical topographic maps were also compared to the historical aerial photographs, as discussed in the section below on the historical aerial photograph review.

The 1901 topographic map has a large scale of 1:62500. This map indicates there were a number of streets near the proposed project site, and a railroad track to the east of the site. However, this early map indicates that there were only a few large, industrial size buildings in the vicinity, such as the buildings shown adjacent to the slips on the opposite and western side of the Calumet River, north of the project site. It appears that the surrounding neighborhoods were mostly residential areas, and it seems as if there was a considerable amount of undeveloped land in the region.

The 1938 topographic map and subsequent maps were reproduced at a much smaller scale of 1:24000. The 1938 map shows substantially more detail regarding the area and proposed project site. Just to the north of the site, five or six large rectangular industrial-sized buildings were constructed, which correlates with the construction of the iron and steel manufacturing plant in the early 1900s. It appears that a drainage ditch for stormwater and the wetland area runs along the northern boundary of the proposed project site and drains towards the Calumet River. There are railroad spurs attached to the industrial buildings that connect to the “Pennsylvania” railroad line that runs north and south along the eastern side of the proposed project site. Small wetlands are shown to the north and south of the manufacturing plant, and a large wetland is located to the east of the railroad tracks. The proposed project site still appears to be undeveloped land, with a wetland located on the eastern side of the property. A cluster of smaller industrial buildings were constructed to the southwest of the proposed project site, approximately where the Calumet River begins to flow southwest. Railroad lines are also connected to the cluster of smaller industrial buildings southwest of the

proposed project site. There are no street names on the 1938 map, but these buildings appear to be approximately located near what is now 122nd Street and Carondolet Ave. In comparison to the 1901 topographic map, the 1938 map shows increased industrial development, particularly along the Calumet River. A number of large buildings were constructed in the area, as well as additional roadways and railroad tracks. A large building and rail yard was constructed on the western and opposite side of the Calumet River from the project site. The comparison between the 1901 and 1938 topographic maps is somewhat difficult because the maps were drawn at different scales.

The 1938 and 1953 historical topographic maps were drawn in the same scale, and, by comparing these maps, it can be observed that there were several conspicuous developments that occurred over the fifteen (15)-year time period. First, it can be observed that Turning Basin No. 3 was constructed on the eastern side of the proposed project site, and the 1953 map indicates the Calumet River was dredged to a depth of 21 feet near the site. The iron and steel manufacturing plant shown on the 1938 map has expanded considerably in the 1953 map, with larger and additional buildings with adjacent structures. Furthermore, the wetlands that were shown on the 1938 map on the north, south, and east sides of the iron and steel manufacturing plant have largely disappeared on the 1953 map, except for a small area on the eastern side of the railroad tracks. Evidently, the time period between 1938 and 1953 was when the iron and steel processing waste materials, known as slag materials, were deposited over the area and proposed project site, filling the wetlands. The material from the excavation of the turning basin may also have been used as fill material for the wetland area.

The 1953 map shows that the proposed project site remained as undeveloped land, but rail spurs were constructed along the northern and eastern sides of the property. The 1953 map shows that a four (4)-lane roadway running north and south on the eastern side of the railroad line was named S. Avenue O, and the smaller roadway that runs south from the site towards Mann Park was named S. Carondolet Ave. The road that runs east and west along the southern boundary of the proposed project site does not have a name, but it is shown on all the subsequent, 1960 through 1997 maps as E 120th Street. It should be recognized that in more recent maps, such as Google Earth, this same street is named E 122nd Street. The small unnamed roadway that runs north and south, adjacent to the railroad line on the eastern side of the proposed project site is unnamed on the USGS maps, but current maps show that this street is S. Burley Ave. A large rectangular building was constructed on the opposite and western side of the Calumet River to the northwest of the proposed project site, and text on the map indicates that the rail yard next to this building on the other side of the Calumet River was called the “Irondale Yard.”

All the historical topographic maps that were reviewed indicate that only minor developments occurred on the proposed project site. It appears the site was primarily utilized for the storage of iron and steel material. The 1947 Sanborn map of the Republic Steel site indicates it was a scrap iron yard. At least one small building was constructed on the site and the site contained small rail spurs and unimproved

roadways, but the maps indicate that no large buildings or structures were constructed on the property.

The 1960 map shows a small rectangular building or possibly materials stored in the northeast corner of the proposed project site. The 1965 map shows an unimproved road that runs around the perimeter of Turning Basin No. 3, and the road appears to end near a small structure in the southwestern corner of the property. The 1965 map also indicates that additional small rail spurs were constructed on the northern and eastern portions of proposed project site.

The 1973 and subsequent historical topographic maps show that a large rectangular building was constructed on the eastern side of S. Burley Ave. This building is shown in the documents prepared by Carlson as the former 14-inch mill building. Apparently the reason the building is initially shown in purple is because the U.S. Geological Survey (USGS) showed features in purple color if they were identified through aerial photographs. A small purple building is also shown on the 1973 map just to the southeast of Turning Basin No. 3 and northwest of the intersection of E. 120th Street and Carondolet Ave.

The 1991 and 1997 historical topographic maps show that the northern end of S. Carondolet Ave., E. 120th Street, and S. Burley Ave. near the proposed project site have been reduced to unimproved roadways. Moreover, these maps show that a number of additional unimproved roadways were constructed around the site.

HISTORICAL AERIAL PHOTOGRAPH REVIEW

Sixteen (16) historical aerial photographs of the area, for the time period from 1938 to 2010, were reviewed to help identify evidence of dumping, fill, or excavation activities as well as the development of the area, such as the construction of industrial or residential structures and changes to the waterways, wetland, and vegetated areas. The historical aerial photographs are included in Attachment 3.

The first historical photograph that was reviewed was taken in 1938. Similar to the historical topographic map for this year, the aerial photograph indicates the proposed project site was undeveloped in 1938. It is difficult to interpret from the black and white aerial photograph, but the western portion of the site seems to be covered with vegetation, and the eastern portion of the site appears to be largely covered by water and is a large wetland area. Similar to what was observed in all the historical topographic maps, the historical aerial photographs all show a railroad line running north and south along the eastern boundary of the property. Both the 1938 topographic map and 1938 aerial photograph show the large iron and steel manufacturing plant that was constructed in the early 1900s, just to the north of the proposed project site, and the drainage ditch that ran along the northern boundary of the property. In addition, both the 1938 topographic map and 1938 aerial photograph show the cluster of smaller industrial buildings constructed to the southwest of the proposed project site at the site presently occupied by PVS Chemical Solutions, Inc., southwest of the intersection of

Carondolet Ave. and E. 122nd Street. The streets surrounding the site all appear to be unimproved roadways. The 1938 aerial photograph also shows about ten (10) vessels in this short stretch of the Calumet River, which indicates that there was considerable industrial activity. One minor difference between the 1938 topographic map and 1938 aerial photograph is that the 1938 map shows the iron and steel manufacturing plant extending north to approximately to E. 117th Street, whereas the 1938 aerial photograph shows that the large buildings extended northward beyond E. 117th Street. Note that the actual name "E. 117th Street" is not shown on a topographic map until the 1960 topographic map.

The comparison between the 1938 and 1953 historical topographic maps identified several conspicuous developments that occurred between these time periods, and many of these same developments can also be observed by comparing the 1938 and 1952 aerial photographs. For instance, the 1952 aerial photograph clearly shows that Turning Basin No. 3 was constructed on the western portion of the proposed project site, and the material from the excavation was likely utilized along with waste materials, such as slag from the iron and steel manufacturing plant, to fill the wetland area on the eastern portion of the site. Similar to the 1953 topographic map, the 1952 aerial photograph shows that nearly all of the wetland area on the eastern side of the railroad line has been filled in with material, except for a small area just to the east of the railroad line. It is difficult to interpret the 1952 aerial photograph to distinguish or determine if any buildings were constructed on the proposed project site, but there are obvious signs of industrial activity, such as the appearance of square and rectangular shapes that are likely from the storage of materials or products associated with the iron and steel manufacturing plant. As noted earlier, the 1947 Sanborn Map of the Republic Steel site indicates the proposed project site was utilized as a scrap iron yard.

Near the turning basin in the 1952 aerial photograph, it appears that there was a small square-shaped steel structure, covering an area of approximately 100 feet by 50 feet. This small structure was constructed in the same roughly 30 degree diagonal position from the southwestern side to the northeastern side of the site that was used to construct the long rectangular buildings for the iron and steel manufacturing plant. It can be observed that much larger but similar structures were constructed on the southeastern end of the iron and steel manufacturing site. The 1947 Sanborn map of the Republic Steel site indicates that this was the location of an iron scrap yard and "steel craneway." Several large aboveground storage tanks (ASTs) can also be observed in this southwestern corner of the iron and steel manufacturing plant, and these tanks were also shown and labeled as "fuel oil tanks" on the 1947 Sanborn map. The 1947 Sanborn map also shows these tanks had capacities of 66,000, 100,000, and 300,000 gallons.

A few small dark areas in the 1952 aerial photograph are shown in the middle of the southern and southeastern portions of the proposed project site. The reason these areas are dark is unknown, but it might be because of ponds or remnants of the wetland area observed in the 1938 aerial photograph. The drainage ditch that was shown traversing the northern boundary of the proposed project site in the 1938 aerial

photograph and 1938 topographic map is difficult to distinguish and was apparently removed. A light-colored material, possibly lime or crushed limestone, appears to be present in small areas in the northern and north central portions of the site. The 1947 Sanborn map of the Republic Steel site shows a large lime stone pile in the northwestern area of the proposed project site. There is also a large, elongated pile of darker material just south of the light-colored material on the northern area of the proposed project site, and, similar to the light-colored material, this material extends from the Calumet River to approximately the middle of the site.

The 1958 and 1952 aerial photographs of the proposed project site are similar and show many of the same features. However, the 1958 aerial photograph more clearly shows that an unimproved road snaked from the iron and steel manufacturing plant on the northern end of the site through the middle of the site and down to the southern end of the site. The 1958 aerial photograph also more clearly shows that there were large stockpiles of materials placed on the site, and there were a number of rail cars parked on rail spurs along the eastern boundary of the site, apparently waiting for loading, unloading, or transport. In comparison to the 1952 aerial photograph, the buildings for the iron and steel manufacturing plant seem to have noticeably expanded in the 1958 aerial photograph.

The 1962 aerial photograph shows that the site appears to be filled with stockpiles of iron and/or steel materials, and unimproved roadways crisscross the site from the iron and steel manufacturing plant. The 1962 aerial photograph shows the unimproved roadway along the perimeter of Turning Basin No. 3 that was shown in the 1965 historical topographic map, but the 1962 aerial photograph also shows an unimproved roadway traveled straight through the middle of the site to the southern end of the site. The unimproved roadways and materials are shown in the same 30 degree diagonal pattern that gradually traverses the site from the southwestern side towards the northeastern side of the site. The light-colored areas observed in the previous 1952 and 1958 aerial photographs are no longer visible, but the 1962 aerial photograph clearly shows a diagonal rail spur in the same diagonal pattern described above, traversing the site from the middle of the upper middle section of Turning Basin No. 3 towards the northeastern corner of the proposed project site.

The 1962 and 1964 aerial photographs are similar, but the 1964 photograph is lighter and shows more details with regards to the rail spurs and rail cars diagonally traversing the proposed project site from upper middle section of Turning Basin No. 3 towards the northeastern corner of the site, as well as along the eastern boundary of the site. The 1962 and 1964 aerial photographs also indicate that the material storage for the iron and steel manufacturing plant was expanding towards the southwest in the area south of E. 122nd Street. The 1970 aerial photograph appears to be at a much larger scale and has poor quality, but this photograph clearly shows the large building that was constructed on the eastern side of S. Burley Ave. This building was identified in the 1973 and subsequent historical topographic maps, and it was also identified by Carlson as the former 14-inch mill building. The 1973 aerial photograph has more details regarding the former 14-inch mill building and more clearly shows the expansion of

material storage for the iron and steel manufacturing plant to the southwest in the area south of E. 122nd Street, as well as to areas to the west and northwest of the proposed project site.

The 1983 aerial photograph is a darker photograph, and, although the materials were difficult to distinguish, it appears that a large amount of dark-colored materials were stockpiled on the proposed project site. This same 1983 aerial photograph indicates that a substantial amount of industrial activity was occurring south of the site, on the southern side of E. 122nd Street, at the site presently occupied by the Schroud Property. This parcel of property south of the site shows a large dark area with two (2) small light-colored areas; one of the light-colored areas is near the middle of the site and is circular shaped, and the other light-colored area is in the southeastern portion of the site and is square shaped. The square shaped area appears to be a small structure.

In the 1988 aerial photograph, it shows that most of the stockpiled materials were removed from the proposed project site, and a few paved roads were constructed across the site. Paved roadways were also continued into the areas to the west and southwest of the site. Although most the materials were removed, a few small material stockpiles appear to remain on the proposed project site, and a couple of short rail car trains were still visible on the rail spurs. However, the quantity of stockpiled material seems to have decreased considerably, and the volume is much less than shown in the previous, 1983 aerial photograph. In addition, the 1988 aerial photograph reveals that the ASTs that were first noticed in the southeastern corner of the iron and steel manufacturing plant in the 1952 aerial photograph were removed, and the property to the south of the site remains as a large dark area with two (2) small light-colored areas, similar to the light-colored areas described earlier.

The 1993 aerial photograph shows that the main roadway that traverses through the middle of the proposed project site was paved, from the iron and steel manufacturing plant at the northern end of the site to E. 122nd Street at the southern end of the site. This aerial photograph also shows that the site remained mostly vacant and devoid of stockpiled materials, except for a few small remnants of materials and a short rail car train on one of the spurs from the railroad near the middle and northern portion of the site. Furthermore, the 1993 aerial photograph shows the formation of a large, approximately 250 foot by 50 foot, rectangular-shaped dark area near the northern boundary of the property, and a dark unimproved road leads from this dark area back towards the north to the iron and steel manufacturing plant. The parcel of property south of the site remains as a large dark area, but the small light-colored areas observed earlier were difficult to distinguish or were removed from the site.

In the 1998 aerial photograph, the proposed project site appears almost completely empty, and it was difficult to distinguish whether any rail cars or materials remained on site. The small steel structure that first appeared in the 1952 aerial photograph was apparently removed from the site, and the similar but much larger structures that were constructed on the southern end of the iron and steel manufacturing plant were also removed. Moreover, one or more additional buildings were evidently removed from the

southern end of the iron and steel manufacturing plant. The dark area near the northern boundary of the site that was revealed in the 1993 aerial photograph was still visible in the 1998 aerial photograph, and this aerial photograph also shows that the dark area on the parcel of property to the south of the proposed project site was removed or covered/capped with a lighter material.

The 2005 aerial photograph and subsequent pictures, 2007 through 2010, were all color aerial photographs. In the 2005 aerial photograph, the 14-inch mill building that was constructed to the east of the railroad line has been demolished and completely removed from the site. The small dark area near the northern boundary of the site that was first revealed in the 1993 aerial photograph was somewhat visible but difficult to distinguish on the proposed project site. The paved roadways were still visible on the site, but otherwise the site appears to be vacant, except for the presence of a line of trees mostly near the southern boundary of the site and some sparse vegetation. The 2005 aerial photograph also shows a large manufacturing plant was constructed in the southeastern portion of the photograph, south of E. 122nd Street, and a building was constructed to the southwest of the PVS site at 12260 South Carondolet Avenue.

The vegetation was shown to be more plentiful at the proposed project site in the 2007 aerial photograph, but there were still large patches where the growth was absent or limited. When slag and other waste materials from the iron and steel manufacturing process are placed on sites, these materials typically limit the growth of vegetation due to the increased levels of metal constituents, such as iron, and increased pH levels. Subsequent aerial photographs, taken every year from 2008 through 2010, suggest that the vegetation at the proposed project site has been gradually increasing but continues to be suppressed. The 2007 through 2010 historical aerial photographs show that there have not been any identifiable changes to proposed project site that might have an effect on the environmental conditions at the site. It appears that portions of the iron and steel manufacturing plant have been deteriorating and portions of buildings have been removed. Similar deterioration and minor changes were visible for the buildings located to the southwest of the proposed project site. The Schroud Property, which is located to the south of the proposed project site, appears to be a landfill that was poorly capped. The more recent aerial photographs, taken between 2005 and 2010, indicate that this site continues to have erosion problems and there were large areas with no vegetation established.

SITE VISIT

Two (2) employees from the Chicago District visited the proposed project site at 12200 South Avenue O on 16 April 2015. The purpose of the visit was to view the current site conditions. Notes and photographs from the site visit are included in Attachment 7.

The first concern was that site was not secured by a fence around the perimeter. The site was open, and there was substantial evidence of illegal dumping in the form of randomly placed assorted materials and garbage near the entrance to the site on 122nd Street, approximately a block east of Carondolet Avenue. It did not appear that there

had been widespread illegal dumping on the site itself, but there were two (2) areas where various discarded materials and a few discarded 55 gallon plastic drums were identified. In one area, a 55 gallon plastic drum was observed to be around a quarter full of oil, and some of the oil had spilled onto the ground. In a second area, a 55 gallon plastic drum was about a quarter full of an unknown white substance. There were other comparatively minor signs of waste materials on the site, such as scrap metal that had been compacted and a pile of stone material mixed with plastic tarps. In addition, several large expanses of the site were covered by slag, and vegetation was often absent, suppressed, or growth was severely limited. In one location, the slag appeared to be stained with a reddish color, and, in another area, the ground sounded hollow, as if there was empty space beneath the subsurface.

The topography was mostly flat at the site, but there were areas where the elevation was observed to slightly vary. In the northern portion of the site, north of the most northern road that crosses site in a southwest to northeast direction, the ground surface elevation rather abruptly increased by roughly five (5) to six (6) feet. In addition, similar increases of five (5) to six (6) foot berms of material were located in a few locations along the northern and southern boundaries of the site.

Along the Calumet River adjacent to Turning Basin No. 3, there was an area where the land had apparently eroded, and it could be seen that a substantial quantity of fill material with various bricks and miscellaneous concrete had been placed on the site near the water's edge. Bollards were observed near the entrance to the site and along the roadway that transverses the site from the southern boundary at E. 122nd Street to iron and steel manufacturing plant at the northern boundary of the site. In addition, remnants of structures and several large concrete blocks with a pipe through the center were observed at various locations, and there appeared to be a large number of groundwater monitoring wells in different areas around the site.

FINDINGS AND CONCLUSIONS

This report has discussed the findings of an HTRW investigation performed for the CAWS Long-Term Strategy for Dredged Material Management, previously known as the Calumet Harbor and River, Illinois and Indiana DMMP and Environmental Assessment. The property that was investigated is located at 12200 South Avenue O (329L-B), and it is being considered as a site for a future DMDF. Findings, conclusions, and recommendations regarding potential impacts due to HTRW and non-HTRW issues associated with the project site are summarized below.

In regards to the water quality, it was noted that the site is located along the eastern bank of Turning Basin No. 3 of the Calumet River. In 1922, the flow of the Calumet River was reversed to protect the waters of Lake Michigan, and, presently, the Calumet River generally flows southwards along the site, away from Lake Michigan. The Illinois EPA determined that the Calumet River is impaired for two (2) designated uses; fish consumption due to mercury and PCBs and primary contact recreation due to fecal coliform. The Illinois EPA (2014) attributed these impairments to the following four (4)

potential sources; atmospheric deposition – toxics, unknown sources, combined sewer overflows, and urban runoff/storm sewers. There is substantial evidence of the adverse impacts to the ecosystem caused by past, as well as current, industrial activity and general environmental conditions in the Calumet region. Since the proposed DMDF will have engineered barriers and will be designed to prevent impacts to the water quality, the project is not expected to contribute to further degradation or impairments of the water quality.

The geology and soil quality investigation found that the proposed project site exists in a highly industrialized area with low-lying and flat topography due to past glacial activity and lake level fluctuations. The underlying bedrock formation in the Chicago region has been identified as Middle Silurian aged (Niagoaran) dolomite, and it was estimated to be approximately 450 feet thick in the vicinity of the proposed project site. This dolomite layer in the vicinity of the site is typically overlain by a layer of glacial till or lacustrine deposits, and the thickness of the till or lacustrine deposits was estimated to be around 50 to 75 feet.

The EDR Radius report listed “Columa” as the dominant component name of the soil at the proposed project site. The soil surface texture was listed in the report as loamy sand, and the soil was reportedly in the Class A hydrologic group, which indicates high infiltration rates and deep well-drained sands and gravels. The soil drainage class was listed as “excessively,” and this means the soils have a high hydraulic conductivity and low water holding capacity. The depth to bedrock was listed as greater than 60 inches, and the surficial soil types were found to be comprised of sand, loamy fine sand, fine sand, sandy loam, and fine sandy loam in the general site area. However, the dominant soil name listed in the EDR report does not correspond with the most recent Cook County soil survey, which shows the soil unit for this property as “urban land.”

Soil borings conducted at the site for the Phase I ESA prepared by Carlson revealed that the shallow subsurface at the site consists of a layer of fill material two (2) to twelve (12) feet thick. This fill material was reportedly comprised of silt, sand, and gravel size combinations of slag. The fill material was underlain by a well-sorted fine sand layer that was generally saturated, and, in some locations, the sand was preceded by an organic layer of peat that was up to two (2) feet thick.

The investigation of groundwater revealed that the Chicago area has both deep as well as shallow aquifers. These aquifers are hydrologically separated from each other by a thick sequence of shale, known as the Maquoketa Group Shale. Since the shallow aquifers tend to be hydraulically connected to the upper subsurface layer, they are more susceptible to adverse impacts from spill incidents and pollution. In the vicinity of the proposed project site, the shallow aquifers essentially include the geologic units discussed earlier, including the unconsolidated glacial till or lacustrine layer nearest the surface and the underlying Silurian dolomite layer.

The EDR Radius report identified multiple water wells within one mile of the project area, and these well locations were depicted in Figure 3. A review of the well entries in

the EDR report revealed that most of these wells were constructed and utilized for surveying or monitoring purposes or were drilled to perform engineering tests. There is uncertainty with regards to a few of the wells, because the EDR report does not provide sufficient information. In 1997, the Chicago City Council passed a groundwater ordinance prohibiting the installation of new potable water supply wells in order to limit the potential for persons to be exposed to potential contaminants by ingesting groundwater. Due to this groundwater ordinance, it seems unlikely that these wells are still being utilized for potable water. In addition, correspondence dated 21 March 2005, from Carlson to the Illinois EPA, indicates the ISWS and ISGS well records were searched, and no community or other potable wells were identified.

Information obtained from a groundwater data system developed by EDR suggests that at a location that is 1/4 mile to 1/2 mile east northeast of the property, the surficial aquifer groundwater flow direction was north northeast at a depth of approximately 98 feet on 20 November 1992. However, the conditions at this location, 1/4 mile to 1/2 mile east northeast of the property, may not reflect conditions at the actual site. Several of the wells listed in the EDR report include the results of groundwater level measurements performed during 1992 and 1993. The measurements ranged from 3.22 to 9.92 feet below the ground surface, and the average groundwater level for these measurements was 6.7 feet.

Site-specific hydrogeological data were provided in the EDR Summary Radius Map for the Allied Corporation site, which is located 1/8 mile to 1/4 mile south southwest of the proposed project site. The groundwater flow direction at this site was determined to be variable, but, regionally, groundwater was determined to discharge into Lake Michigan. The measured depth to water was three (3) to eight (8) feet. The lower aquifer is reportedly confined from the surficial aquifer, and the depth to bedrock was estimated to be 35 feet. A sole source aquifer was found to be present at or near the site.

Section 6 of the FSIR/ROR/RACR by Carlson provides the results of the soil and groundwater investigations, and it notes that the “Shallow groundwater at the subject site was encountered within the fill material at depths varying from [two] 2 to [ten] 10 ft. [below the ground surface] bgs. This variance is reportedly due to the uneven topography of the site.” In Section 5, the report describes the groundwater flow determination, and, according to this investigation, “The apparent near-surface or potentiometric groundwater flow direction is complex.” In addition, according to the report, “the ground water direction is influenced by both the Calumet River to the west and Wolf Lake to the east resulting in a radial potentiometric flow.” An average hydraulic conductivity value of 2.3×10^{-3} cm/sec for the entire site was calculated using the geometric mean of average hydraulic conductivity values for all the wells. In Section 6 of the report, it mentions that “The hydraulic gradient varies from less than 0.001 ft/ft, near the south and central portion of the site, to 0.003 ft/ft near the Calumet River.”

A review of wetland information available online using the USFWS Wetland Mapper suggests there might be limited wetlands on the proposed project site in small areas of the site adjacent to the Calumet River. In addition, the Calumet River is considered to

be a deepwater habitat. Similar to the findings of the USFWS Wetland Mapper, the EDR detail map included with the EDR Radius report only shows wetlands present in a small area adjacent to the Calumet River. The EDR detail map also shows that the 100-year floodplain exists along the portion of the site adjacent to the Calumet River.

In response to a FOIA request, the Illinois EPA provided the Chicago District with a former environmental site investigation by Carlson that included a Phase I ESA and FSIR/ROR/RACR. These reports provided beneficial information, and the Phase I ESA identified six (6) PECs, including a former drum area (PEC 1), historical Heckett operations (PEC 2), 14-inch mill and associated area (PEC 3), potential tanks and mill scale staging (PEC 4), historical on-site UST and historical adjacent (off-site) USTs and fuel oil USTs/ASTs (PEC 5), and historical coal gasification/coke production (PEC 6). The potential tanks and mill scale staging area (PEC 4) and historical on-site UST and historical adjacent (off-site) USTs and fuel oil USTs/ASTs (PEC 5) were the areas on or adjacent to the proposed project site. The PECs were subsequently called RECs in Carlson's FSIR/ROR/RACR.

Any likely impact to the proposed project site would likely be due to the migration of contaminated groundwater from the above-mentioned PECs/RECs, and the NFR letter documents that the hazardous substances in the groundwater were addressed to the satisfaction of the Illinois EPA, subject to the implementation of the required controls, i.e. the activity and use limitations and institutional controls. As a consequence, these PECs/RECs were determined to be **CRECs** with regards to the current assessment. In addition, it specifically states in the ASTM E1527 guidance that CRECs shall be listed in the findings section of the Phase I ESA and reported as RECs in the conclusions section of the Phase I ESA, so the CRECs essentially appear to be equivalent to **RECs**, and future CRECs were reported as RECs in this findings and conclusions section of the current assessment.

The EDR database search involved the investigation of publically available environmental records, and, besides the PECs/RECs identified above in Carlson's Phase I ESA and the FSIR/ROR/RACR, a number of other issues for the proposed project site were identified.

The EDR Radius report did not identify any NPL or delisted NPL sites within the recommended search distances, but a site was identified that is listed in CERCLIS named Allied Corporation at 12260 South Carondolet Ave., and this site was within the recommended 0.5-mile search distance. In addition to NPL or delisted NPL sites, CERCLIS includes sites proposed for the NPL, as well as sites in the screening and assessment phase for possible inclusion on the NPL.

Allied Corporation is listed as the facility name in CERCLIS, but PVS Chemical Solutions is listed as the facility name used for the same site address in several other environmental databases. Sites are often identified by different alternative names, but, regardless of the facility name, the site at 12260 South Carondolet Ave. is presently listed as an active Superfund site. Although it was assessed and inspected under the

USEPA Superfund program, it was not included on the NPL. The most recent action included in the EDR Radius report is an expanded site inspection completed 4 June 1997, and the site was recommended for HRS scoring. Details regarding the site inspection, extent of contamination, and current status of cleanup operations were not provided in the EDR Radius report, but a FOIA request for further information was submitted to the USEPA and Illinois EPA.

The Illinois EPA response to the FOIA request included 82 documents, one of which was a 1,434-page Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation property located at the above-mentioned address and dated 23 May 2001. The site was described as 42 acres of undeveloped land between the Calumet River and PVS Chemical, Inc. to the north, 126th Street to the south, Carondolet Ave. to the east, and the Arrow Terminal facility to the west. Wolf Creek [also known as Indian Creek] reportedly transects the property and flows northwest to the Calumet River at the northern edge of the property. Based on this description, the most northern portion of the former Allied Corporation site would be located roughly 1,500 feet south southwest of the southern portion of the proposed project site. A number of COCs were found to exceed the Tier I soil and groundwater remediation objectives, areas were found to contain characteristically hazardous levels of cadmium, lead, and pH, and one area of the site reportedly contained a tar-like substance layered with the near surface soil column.

In the Site History section of the Comprehensive Site Investigation Report Addendum, Carlson explains that the site has been owned by several industries since 1899, but no manufacturing activities have ever taken place on the site. It further explains that “The site has, however, been used for waste disposal activities related to the adjacent former AlliedSignal facility (currently PVS Chemical) located directly to the north.” In 1994, the site was purchased from AlliedSignal by the Schroud Realty Group. In 1999, the site was sold again to CenterPoint Properties, Inc.” At the time the report was prepared, the site was unoccupied.

Another document regarding the AlliedSignal property that was released by the Illinois EPA through the FOIA request was a 321-page Remediation Objectives Report/Remedial Action Plan (ROR/RAP), dated 22 Oct. 2001. In the Introduction/Background of this report, it mentions that the 42-acre remediation site is vacant and the proposed development plan is part of a larger, 140-acre development that will be used as a manufacturing campus, primarily serving a nearby automobile manufacturer. Based on the aerial photograph, the site was subsequently developed, and it is now part of Ford Supplier Park. Although no NFR letter associated with the site was found in the Illinois EPA SRP database, it appears the Illinois EPA was aware of the site characterization and likely required remedial activities prior to development. However, if the site was remediated, it should have been removed from the CERCLIS database, but there might still be remaining CERCLA issues for the site.

Since the CERCLA database indicates that the Allied Corporation site has been active in the Superfund program since 1984, and the site characterization by Carlson revealed

a number of COCs and environmental issues at the site, in the absence of further information, this site is a **REC** because hazardous substances from the site likely migrated through the groundwater to the proposed project site.

The site southwest of the proposed project site at 12260 South Carondolet Avenue is presently owned by PVS, and this site is a **REC** because of documented evidence that the site has lead-contaminated soil and groundwater and other environmental issues related to the facility operations and possibly associated with the activities at the former Allied Corporation or AlliedSignal Corporation property. The site is listed in a number of Federal and State environmental databases, has received several formal as well as informal violations, and documentation indicates the site has a history of spills and releases of sulfuric acid and other sulfur compounds, some of which appear to have resulted in considerable releases of hazardous substances that likely impacted the groundwater on the proposed project site. In addition, there is documented evidence of dumping incidents adjacent to the facility, solid waste disposal activities, and soil exhibiting hazardous waste lead that is on or adjacent to the site.

The EDR Radius report shows that no CERCLIS-NFRAP sites were located within the recommended half mile search distance, but there was a CERCLIS-NFRAP site located slightly greater than a half mile north northeast of the project site. This site contained a large steel plant, the facility name is Republic / LTV Steel, and address is 11600 South Burley Ave. The Republic / LTV Steel site did not qualify for the NPL and was archived from the inventory of CERCLIS sites, but, as explained further below, the investigation identified a number of other issues with this site.

The EDR Radius report identified two (2) RCRA CORRACTS facilities within the recommended search distance, PVS and Republic / LTV Steel. Documentation for both of these sites indicates that subsequent assessments were performed that determined RCRA Facility Investigations (RFIs) were not necessary. Hence, the documentation suggests that both of these sites resolved their respective RCRA corrective action issues.

According to the EDR Radius report, PVS is listed as a RCRA-LQG and the former AlliedSignal Site / Honeywell is listed as a RCRA-SQG. As noted earlier, both of these facility names are evidently associated with the same address, 12260 South Carondolet Ave., which is located within a quarter mile, south southwest of the proposed project site. The identification of this site as a RCRA-LQG and SQG does not necessarily indicate that there are or have been environmental problems, but this information is another factor to be taken into consideration along with the other concerns that were previously identified for the PVS and the former AlliedSignal Corporation site.

In addition to being identified above as a CERLIS-NFRAP and CORRACTS site, the Republic / LTV site at 11600 South Burley Ave. was identified as a RCRA-CESQG in the EDR Radius report. The report also includes a list of historical RCRA-LQGs that were located at the same site, including LTV Steel and the Chicago Coke Co. Inc. The EDR Radius report waste code summary for this site includes an extensive list of

hazardous wastes, and, under the NY Manifest database, the report shows that in 1983 waste petroleum oil with 500 ppm or greater levels of PCBs was generated and shipped off-site for disposal. The EDR Radius report includes evidence that this site received several notices for violations, but it appears the majority of these violations were for administrative problems or compliance issues. The USEPA FRS facility detail report for the LTV Steel Company shows that the site has been associated with a number of alternative names, and this report links to the TRIS database, where it shows a long list of hazardous chemicals and amounts that were released from the site. In addition, a previous Phase I ESA conducted by the Chicago District for this address included documentation of numerous spill incidents, and the amounts released for several of the spills were substantial. The Illinois EPA SRP database shows that the 11600 South Burley Ave. site was enrolled in the program on 10 Jul. 1997 and issued a focused NFR Letter on 3 Feb. 1999 for 48.7 acres, with some land use restrictions and institutional controls. As a result, it is evident that the voluntary cleanup under the SRP may have addressed and/or resolved the corrective action concerns identified by the RCRA Facility Assessment (RFA) performed in 1991.

The Republic / LTV Steel Company site at 11600 South Burley Ave., as well as the proposed project site, both received NFR letters from the Illinois EPA, and it is evident that the environmental conditions for these sites have improved. Nevertheless, the NFR letters include property use restrictions, activity and use limitations, and institutional and/or engineering controls, so these sites obviously have environmental impacts that remain and need to be taken into consideration. In addition, the USEPA enforcement case database reveals several cases where the LTV Steel Company received substantial federal penalties for violations of the CAA, and this suggests there was a tendency to disregard environmental regulations. Since the EDR database search only reports spill incidents for the target property, spills that occurred at 11600 South Burley Ave. were not included in the EDR Radius report for 12200 South Avenue O. Based on the long history of steel production, extensive use and/or generation of a wide variety of hazardous materials and wastes, and history of releases of hazardous substances, both of these sites are **RECs** because it is likely that hazardous substances were released that impacted the groundwater and possibly the soil at the proposed project site.

The EDR database search identified two (2) SSUs within the search distance: Indian Ridge Marsh at 122nd and Torrence Ave. and the Schroud Property at 12601 Carondolet Ave. Since the Indian Ridge Marsh site is hydraulically separated on the opposite and western side of the Calumet River and it is a slag only landfill, there is a low potential for this site to cause any impacts to the soil and groundwater at the proposed project site. The “Schroud Property” is roughly a half mile south of the project site, and, according to the EDR Radius report, the facility type was listed as a “Flue Dust Waste Pile,” which is evidently a landfill. This site appears to be separate from the waste disposal activities that occurred at the former AlliedSignal site to the south southwest of the proposed project site. The size of the “Schroud Property” landfill / impoundment site is reportedly 25 acres, and several Illinois EPA enforcement orders are associated with the site. The first case describes the property as being bounded by a railroad on the east, Carondolet Ave. on the west, 126th St. on the south, and approximately 122nd Street on the north.

The enforcement documents indicate that Mr. Schroud purchased the site from LTV Steel, and the plaintiffs alleged that LTV used the site for the disposal and storage of flue dust. In the most recent case, Mr. Schroud was found to be in indirect civil contempt and received roughly $853k in penalties based on the failure to properly cap the industrial landfill. The Illinois EPA Facility Compliance Tracking System (F.A.C.T.S.) database shows that the site has received a number of violations, but the most recent evaluation date was 23 Apr. 2004. The close proximity of this large impoundment / landfill to the project site and history of violations are a concern. In the past, such facilities were not typically engineered with a liner. As a result, there is a high probability that hazardous substances in the landfill leachate contaminated the groundwater beneath the site, particularly if the landfill was improperly capped, and this contaminated groundwater likely migrated and impacted the project site. As a consequence, the “Schroud Property” is a **REC**.

SWF/LF sites that were identified in the EDR Radius report included the previously discussed Allied Chemical site that was estimated by NIPC to be roughly a quarter mile south southwest of the proposed project site, and a site located at “119th west of Calumet River,” located within a half mile west southwest of the proposed project site. The Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation Property indicates the site was used for waste disposal activities, so this is most likely the same Allied Chemical site being referenced by the NIPC inventory. The landfill located at “119th west of Calumet River” appears to be based on information published in Craig E. Colten's report (1985) on "Industrial Wastes in the Calumet Area, 1869-1970." Since it was determined to be a low risk site, and it is hydraulically separated because it is located on the opposite and western side of the Calumet River, it is unlikely that this site would cause any potential soil or groundwater impacts for the project site.

The EDR Radius report identified two (2) LUST sites and one UST site within the recommended search distances. One of the LUST sites was the PVS site discussed previously, and the other LUST site was the Gallo Equipment site at 11835 South Avenue O. PVS was also the UST site that was identified.

Based on information released through a FOIA request, the LUST incident at the PVS site only resulted in minor leakage from the tank, the tank was removed, and the potential for this LUST to impact the project site is low. In addition, the documentation indicates that PVS has removed three (3) USTs, but one remaining tank is reportedly "out of service" and has not been used since 1 Sep. 1980. Otherwise, PVS appears to be properly maintaining the USTs that remain on the property, so the potential for these tanks to impact the proposed project site is low.

Documentation for the LUST incident at the Gallo Equipment site indicates the site is located approximately 2,000 feet northeast of the proposed project site, the tanks were removed, the removal and remedial operations were monitored by the City of Chicago, and the Illinois EPA issued Gallo Equipment an NFA/NFR letter that utilizes worker caution as an institutional control. As a result, it can be concluded that the tanks and

associated contamination no longer pose a threat to human health or the environment. However, since the Illinois EPA included an institutional control for the NFR letter, it indicates the site is a **REC**, but it appears this site has a low potential for causing any impacts to the soil or groundwater on the proposed project site.

The proposed project site and adjacent Republic / LTV Steel site both enrolled in the SRP and were issued NFR letters. In addition, the EDR Radius report identified PVS as another SRP site. The SRP database shows that the site was enrolled in the program approximately 19 years ago, on 7 May 1996, but there was no evidence, such as an NFR letter or Sec. 4(y) letter, that any cleanup activity was performed or completed. The EDR Radius report lists the remediation applicant as CMC Land Holding Co. LLC, and it was for an area of 42 acres. The USEPA number in the Illinois EPA SRP database is linked to a different facility name, the former AlliedSignal Site / Honeywell facility name mentioned earlier in the discussion of the findings from both the CERCLIS and RCRAInfo databases. It was also mentioned in the discussion of the CERCLIS database that Carlson prepared several reports in 2001 for the former AlliedSignal Corporation property in order to receive an NFR letter. Evidently, PVS enrolled in the program at an earlier date. The ROR/RAP Carlson prepared for the AlliedSignal site references a Phase I ESA, dated April 1996, for the same site by Harding Lawson and Associates (HLA).

As explained earlier, based on the aerial photograph, the AlliedSignal Corporation site was subsequently developed, and it is now part of Ford Supplier Park. Although no NFR letter associated with the site was found in the Illinois EPA SRP database, it appears the Illinois EPA was aware of the site characterization and likely required remedial activities prior to development. However, if the site was remediated, it should have been removed from the CERCLIS and SRP databases, but there still might be remaining environmental issues for the site. Since the CERCLA database indicates that the Allied Corporation site has been active in the Superfund program since 1984, and the site characterization by Carlson revealed a number of COCs and environmental issues at the site, in the absence of further information, this site is a **REC** because hazardous substances from the site likely migrated through the groundwater to the proposed project site.

A review of additional environmental records and orphan sites in the EDR Radius report was conducted. The additional environmental records did not reveal any potential concerns for impacts to the proposed project site. The EDR Radius report also identified fifteen (15) orphan sites, but there was only one of these sites, Republic Engineered Steel, that was determined to be a potential environmental concern for the proposed project site. Historically, several alternative site names and addresses have been associated with the steel plant and manufacturing operations in the vicinity of the proposed project site, which was identified in the EDR Radius report as the Republic Steel site at 12200 South Avenue O. Steel plant operations north of the project site were described under the site name "Republic / LTV Steel" at 11600 South Burley Ave. The additional name / address for the orphan site, Republic Engineered Steel at 116th and South Burley Ave., did not provide any further information, but the name "Republic

Technologies International LLC" at 11610 S. Avenue O was associated with more alternative names and environmental interests. The situation for this site is similar to the situation described earlier for Republic / LTV Steel. Although specific incidents in this part of the site were not identified in the EDR Radius report, due to the long history of steel production, extensive use and/or generation of a wide variety of hazardous materials and wastes, and history of toxic releases, this site name and address is a **REC** that likely caused impacts to the groundwater and possibly the soil at the project site.

One additional orphan site was identified that was not listed in the EDR Radius report. The facility name for this site is Avenue O and 118th Street. The site was included in the CERCLIS database, but it is not on the NPL. Discovery, preliminary assessment, and site inspection were completed in 1986, and the site was determined to be a CERCLIS-NFRAP site that does not qualify for the NPL based on existing information. An expanded site inspection was completed in 1997, and the site was recommended for HRS scoring. Further details on the site history were found by reviewing previous FOIA requests. One request included an expanded site information report that provided details on inspection activities, source characterization, and a discussion of migration pathways.

This orphan site is described as being located east of Avenue O, between 116th Street and 118th Street, and roughly west of Ewing Ave. Apparently, the Illinois EPA initially declared the Avenue O site an illegal dump in 1974. Site history prior to 1974 is unknown, and a site investigation was not conducted until 1986, after a shopping mall and residential subdivision covered a large portion of the site. A low priority site inspection status was recommended in 1986 because of "the lack of information about what is presently at the site." At that time, there was no evidence of hazardous waste activities or the release of hazardous substances. A preliminary reassessment was performed in 1991 that recommended medium priority site inspection status because of the concern that residents could be exposed to possible surficial contamination. Most of the former dump site has been developed into a residential area with a shopping mall and other businesses. Soil and sediment samples collected in 1994 indicated that some of the soils on the site and sediments in the adjacent wetlands east of the site were contaminated. Contaminants included semivolatile organic compounds (primarily polycyclic aromatic hydrocarbons (PAHs)), polychlorinated biphenyls (PCBs), and inorganic hazardous constituents (metals). Evidently, this CERLIS site is active but a low priority. The presence of the contaminated soils on a site that is roughly 2,000 feet northwest of the project site is a **REC** because it is likely that similar illegal dumping was taking place on the proposed project site or nearby and the groundwater migration pathway was not assessed.

Historical topographic maps, Sanborn maps, and historical aerial photographs of the site were reviewed to identify past land use and help identify evidence of dumping, fill, or excavation activities as well as the development of the area, such as the construction of industrial or residential structures and changes to the waterways, wetland, and vegetated areas. The details were provided earlier, but, in general, the review of these

historical documents revealed that many changes that have occurred over the years to the proposed project site and surrounding vicinity. The site appeared to be undeveloped and basically a wetland in 1938, but, by 1952, the site was almost completely filled in with material and Turning Basin No. 3 of the Calumet River was constructed along the western of the site. The iron and steel manufacturing plant to north of the site expanded, and the documentation reveals that substantial quantities of materials were stockpiled on the site from the early 1950s through the early 1980s. The types of materials that were stored on the proposed project site were difficult to distinguish, but it appears that the site was primarily utilized for the storage of iron and steel material, and the 1947 Sanborn map of the Republic Steel site indicates it was a scrap iron yard. Only minor developments were visible on the proposed project site. At least one small building was constructed on the site, and the site contained small rail spurs and unimproved roadways. The historical documents did not show the construction of any large buildings or structures on the proposed project site.

During the site visit, it was observed that site was open and unsecured, and there was evidence of illegal dumping in the vicinity. It did not appear that there had been widespread illegal dumping on the site itself, but there were two (2) areas where various discarded materials and a few discarded 55 gallon plastic drums were identified. In one area, a 55 gallon plastic drum was observed to be around a quarter full of oil, and some of the oil had spilled onto the ground. In a second area, a 55 gallon plastic drum was about a quarter full of an unknown white substance. There were other comparatively minor signs of waste materials on the site, such as scrap metal that had been compacted and a pile of stone material mixed with plastic tarps. In addition, several large expanses of the site were covered by slag, and vegetation was often absent, suppressed, or growth was severely limited. In one location, the slag appeared to be stained with a reddish color, and in another area the ground sounded hollow, as if there was empty space beneath the subsurface.

The topography was mostly flat at the site, but there were areas where the elevation was observed to slightly vary. In the northern portion of the site, north of the most northern road that crosses site in a southwest to northeast direction, the ground surface elevation rather abruptly increased by roughly five (5) to six (6) feet. In addition, similar increases of five (5) to six (6) foot berms of material were located in a few locations along the northern and southern boundaries of the site.

Along the Calumet River adjacent to Turning Basin No. 3, there was an area where the land had apparently eroded, and it could be seen that a substantial quantity of fill material with various bricks and miscellaneous concrete had been placed on the site near the water's edge. Bollards were observed near the entrance to the site and along the roadway that transverses the site from the southern boundary at E. 122nd Street to iron and steel manufacturing plant at the northern boundary of the site. In addition, remnants of structures and several large concrete blocks with a pipe through the center were observed at various locations, and there appeared to be a large number of groundwater monitoring wells in different areas around the site.

Table 4 summarizes the RECs for further investigation. Although there are a number of RECs and environmental issues with the site, most of these conditions were taken into account when the Illinois EPA issued the NFR letter. As a consequence, the Illinois EPA recognized that contamination would remain in place subject to the terms and conditions specified in the NFR letter, i.e. property use restrictions, activity and use limitations, institutional controls, or engineering controls.

As indicated earlier, in NFR letter, it states the following:

> "This Letter shall be considered *prima facie* evidence that the Remediation Site described in the attached Illinois EPA Site Remediation Program Environmental Notice and shown in the attached Site Base Map does not constitute a threat to human health and the environment for the specified recognized environmental conditions so long as the Site is utilized in accordance with the terms and conditions of this Letter."

The first recommendation is that at the earliest opportunity, the site should be surrounded by fencing and secured from the possibility of further contamination from illegal dumping. Next, it is recommended that the areas where the 55-gallon drums were identified during the site visit be evaluated, cleaned up, and remediated, if necessary.

It is important to note that Paragraph 8 of the NFR letter indicates that pursuant to Section 58.10(f) of the Act (415 ILCS 5/58.10(f)), the Illinois EPA could seek to void the letter, and this paragraph includes potential specific acts or omissions that could result in the voidance of the letter. Paragraph 8(f) includes "Subsequent discovery of contaminants, not identified as part of the investigative or remedial activities upon which the issuance of the Letter was based, that pose a threat to human health or the environment." As a consequence, at a minimum, an additional site investigation is recommended to verify that the contaminant concentrations in the soil and groundwater are comparable to the concentrations identified as part of the investigative or remedial activities upon which the issuance of the NFR letter was based. This investigation should also verify that there have not been any further environmental impacts to the site. However, the details for the additional site investigation (Phase II) are beyond the scope of the current assessment.

Table 4, RECs for Further Investigation, includes the proximity of the RECs with respect to the proposed project site, the soil and groundwater COCs, and the matrix at the proposed project site that would likely be impacted by the RECs. It is recommended that an appropriate number of soil and groundwater samples be collected and analyzed for the relevant COCs to evaluate and characterize the current site conditions. Statistical analyses will need to be conducted to determine the mean COC concentrations and upper 95 percent confidence limits of the mean values for comparison to the concentrations of COCs in the soil and groundwater that were utilized by the Illinois EPA as the basis for the NFR letter. A number of groundwater wells were identified during the site visit at various locations on the proposed project site, and

several of these wells appeared to be in good condition and may be suitable for field groundwater measurements and sample collection.

In accordance with the current design for the DMDF, the facility should be isolated from the site using a compacted clay liner, and constructed over the site to minimize excavation and worker exposure to the existing site conditions. All construction activities need to be performed in accordance with the terms and conditions of the NFR letter. The NFR letter notes in Term 5 that “At a minimum, a safety plan should be developed to address possible worker exposure in the event that any future excavation and construction activities may occur within the contaminated soil.” Furthermore, in this same paragraph, it explains that “Soil excavated below in the areas shown on the attached site base map must be returned to the same depth from which it was excavated or properly managed or disposed in accordance with applicable state and federal regulations.”

No Phase I ESA / HTRW investigation can completely eliminate uncertainty regarding the potential for contamination associated with a project area. Performance of the investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for contamination in connection with a project area, and this practice recognizes time and cost constraints.

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Figures

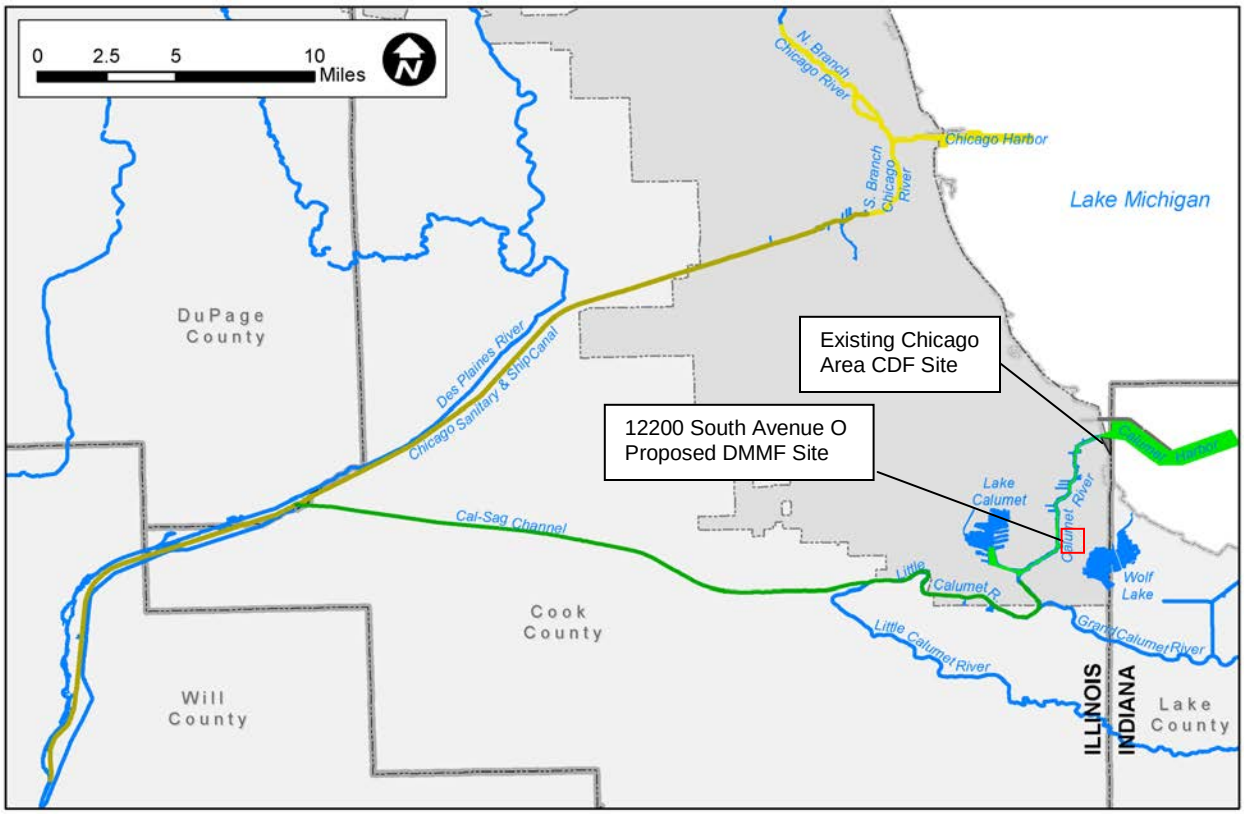
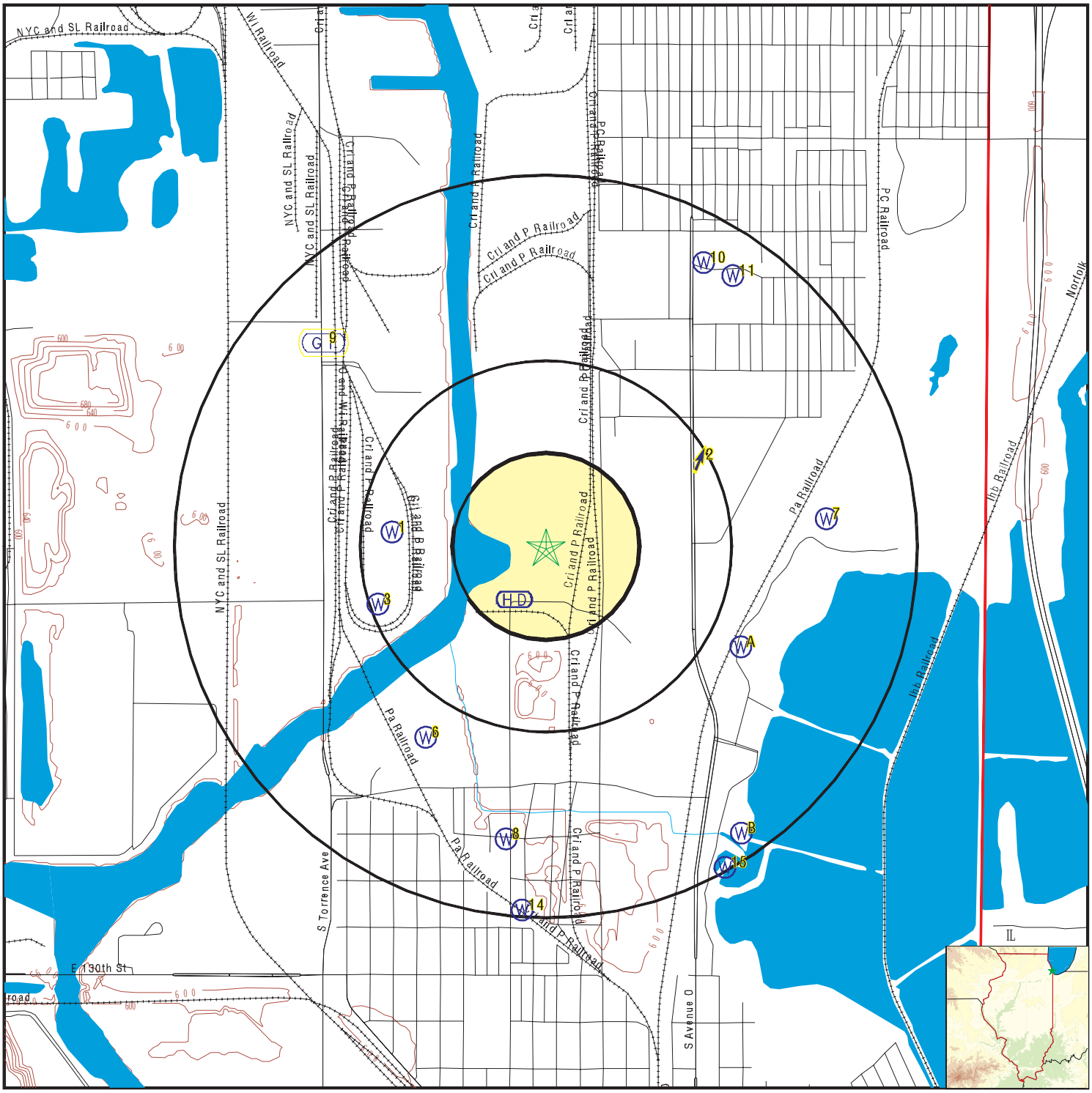


Figure 1 – Project Vicinity Map

Figure 2 – Project Site Boundary Map

PHYSICAL SETTING SOURCE MAP - 4056149.10s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data

SITE NAME: Republic Steel	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 12200 South Avenue O Chicago IL 60617	CONTACT: Richard Saichek
LAT/LONG: 41.6759 / 87.5477	INQUIRY #: 4056149.10s
	DATE: September 04, 2014 3:14 pm

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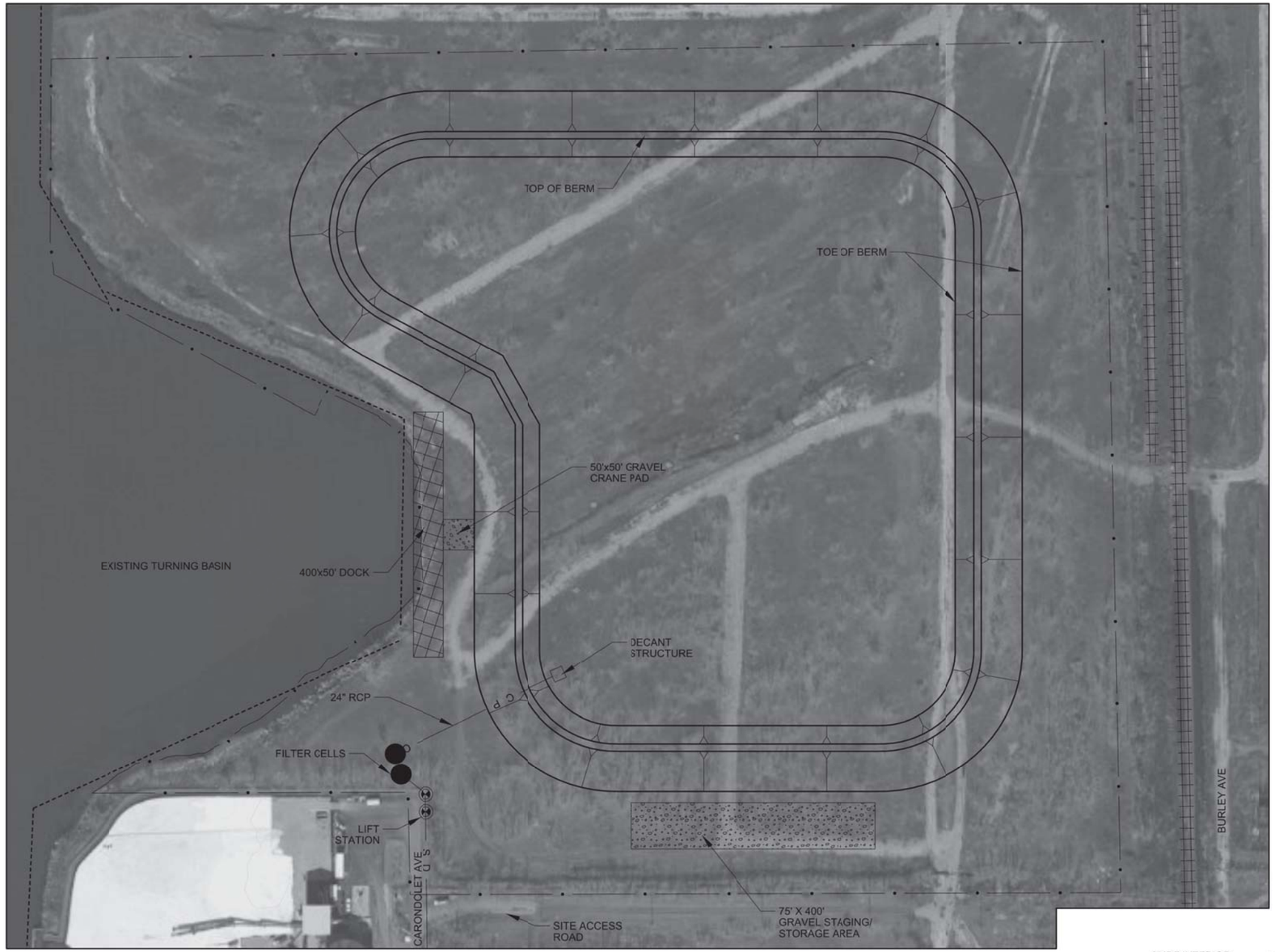


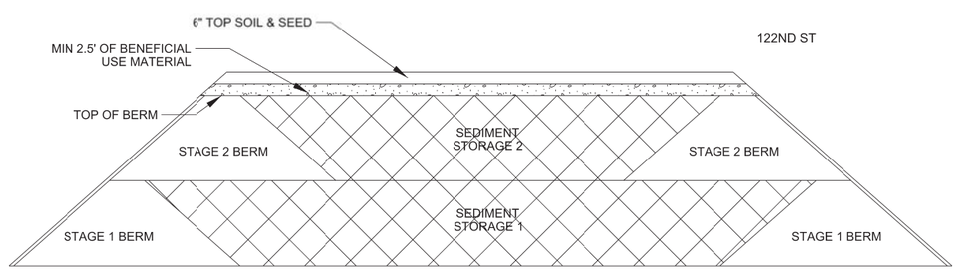
N

0 200' 400'

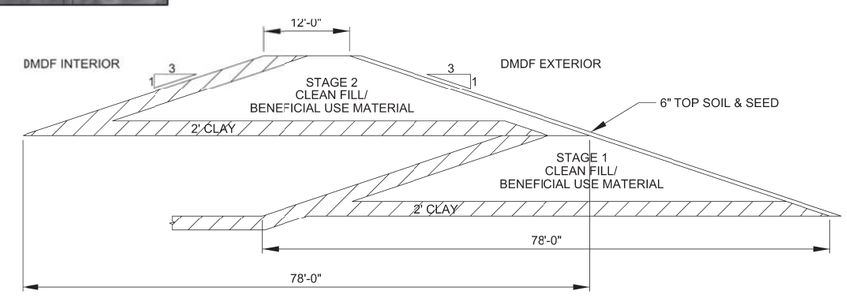
NOTES:

1. BERM LAYOUT SHOWN IS FOR 700,000 CY CONFINED CAPACITY.
2. ALL MATERIAL TO REMAIN ON SITE.
3. SLOPE BOOTOM OF DISPOSAL FACILITY TO DRAIN TOWARDS DECANT STRUCTURE.
4. EFFLUENT TO BE CONNECTED TO EXISTING MWRD SEWER AND SENT TO TREATMENT PLANT.

DISPOSAL FACILITY SATISTICS		
CONFINED CAPACITY (CY)	TOTAL BERM HEIGHT (FT)	BERM CENTERLINE AREA (AC)
680,000	22	18.5



TYPICAL CROSS SECTION ACROSS CDF
N.T.S



TYPICAL 11FT DOUBLE BERM CROSS SECTION
N.T.S

US Army Corps of Engineers Chicago District

MARK	DESCRIPTION	TRACKING NO	ACTION	DATE	MARK	DESCRIPTION	TRACKING NO	ACTION	DATE

U.S. ARMY CORPS OF ENGINEERS
CHICAGO DISTRICT
CHICAGO, IL

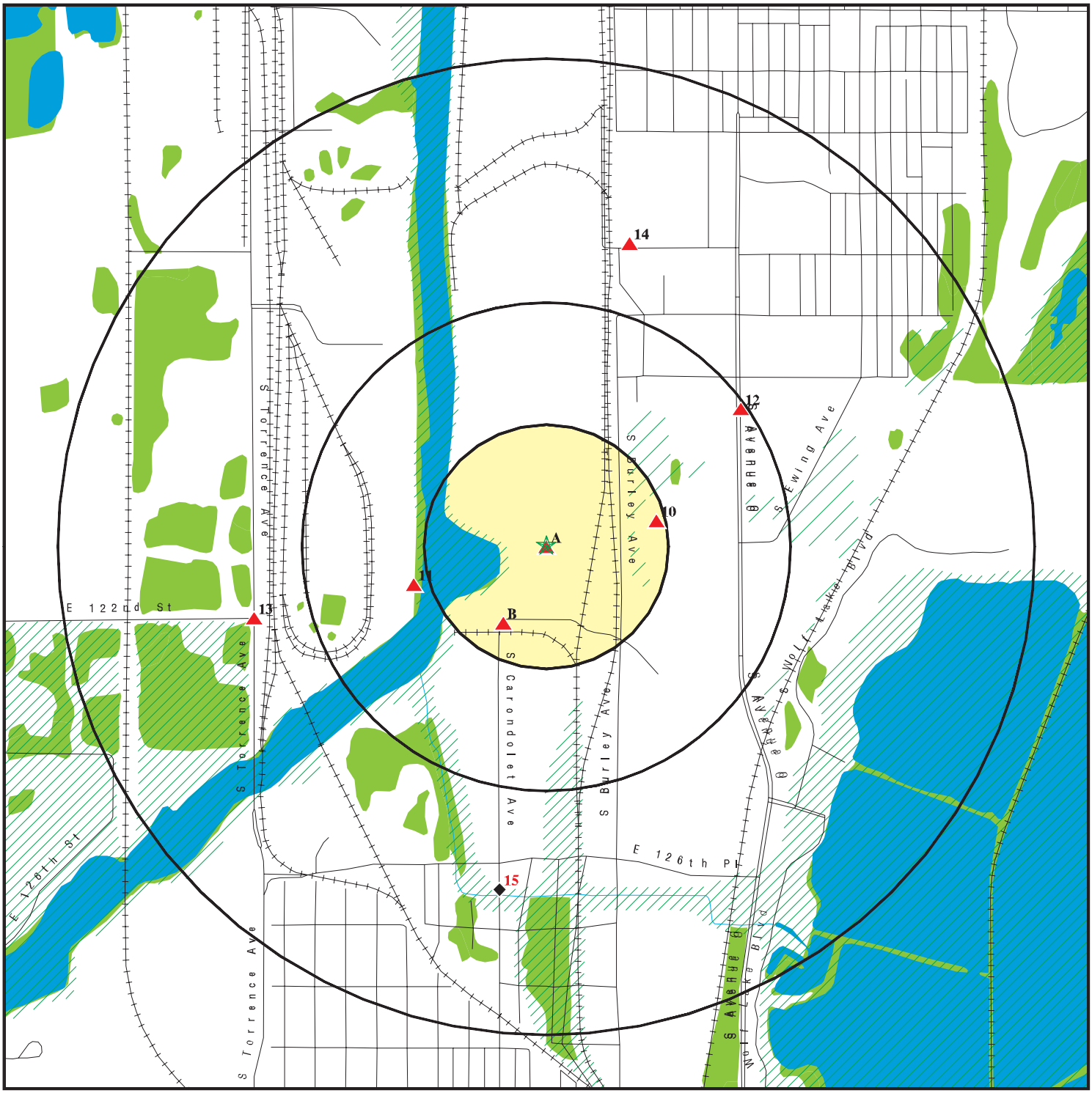
DESIGNED BY: | DATE:
DWN BY: A | CKD BY: | SOLICITATION NO.:
SUBMITTED BY: | CONTRACT NO.:
PLOT SCALE: 1:1 2000' | PLOT DATE: 10/7/2015 | FILE NUMBER:
SIZE: ANSI B | FILE NAME: 329L-CS102-329.dgn

CALUMET HARBOR & RIVER
DREDGED MATERIAL MANAGEMENT PLAN
REGIONAL SEDIMENT MANAGEMENT FACILITY

CONCEPTUAL SITE LAYOUT
329L-B - REPUBLIC STEEL

SHEET IDENTIFICATION
CS102-329
SHEET 5 OF 8

overview MAP - 4056149.10s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Republic Steel	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 12200 South Avenue O Chicago IL 60617	CONTACT: Richard Saichek
LAT/LONG: 41.6759 / 87.5477	INQUIRY #: 4056149.10s
	DATE: September 04, 2014 3:12 pm

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U.S. Fish and Wildlife Service

National Wetlands Inventory

CAWS DMMP

Mar 16, 2015

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Tables

Table 1: Minimum Search Distance for Federal and State Database Searches[1]

Standard Environmental Record Sources	Approximate Minimum Search Distance (miles)
Federal NPL site list	1.0
Federal Delisted NPL site list	0.5
Federal CERCLIS list	0.5
Federal CERCLIS NFRAP site list	0.5
Federal RCRA CORRACTS facilities list	1.0
Federal RCRA non-CORRACTS TSD facilities list	0.5
Federal RCRA generators list	property and adjoining properties
Federal institutional control/engineering control registries	property only
Federal ERNS list	property only
State and tribal lists of hazardous waste sites identified for investigation or remediation:	
State- and tribal-equivalent NPL	1.0
State- and tribal-equivalent CERCLIS	0.5
State and tribal landfill and/or solid waste disposal site lists	0.5
State and tribal leaking storage tank lists	0.5
State and tribal registered storage tank lists	property and adjoining properties
State and tribal institutional control/ engineering control registries	property only
State and tribal voluntary cleanup sites	0.5
State and tribal Brownfield sites	0.5

[1]ASTM E1527-13

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Republic Steel	A1	IL INST CONTROL & IL SRP	S106635182 & N/A	Target Property (12200 South Avenue O, Chicago, IL 60633)	08 Dec. 2005	A focused No Further Remediation (NFR) letter was issued on 08 Dec. 2005 and it was recorded on 05 Jan. 2006 for 204 acres. The site was enrolled in the site remediation program (SRP) 30 Aug. 2004.	Institutional controls include a groundwater use restriction and worker caution. The site contamination represents a potential liability concern, and, as noted in the NFR letter, this letter shall be considered "prima facie" (based on first impression, accepted as correct until proved otherwise) evidence that the site does not constitute a threat to human health and the environment for the specified recognized environmental conditions so long as the site is utilized in accordance with the terms and conditions of the letter. ASTM E1527 indicates that this NFR letter represents a **"controlled recognized environmental condition (CREC)."** Since there are institutional controls, it would not be considered a historical recognized environmental condition (HREC).	A comprehensive No Further Remediation (NFR) Letter signifies a release from further responsibilities for all recognized environmental conditions (RECs) and related concerns at a remediation site. A focused NFR Letter signifies a release from further responsibilities for only specific RECs and related contaminants of concern at a remediation site.
Republic Steel	A2	FINDS	1011902545 & N/A	Target Property (12200 South Avenue O, Chicago, IL 60633)	N/A	Registry ID #110037191972; Illinois - Agency Compliance and Enforcement System (ACES) is the Illinois EPA Project to facilitate the permitting operations. USEPA Facility Registry Service (FRS) Information System Id / Report Link = 170001576097 = Illinois Environmental Protection Agency ID	No additional information provided for facility by USEPA or Illinois EPA	
Republic Steel	A3	IL BOL	S113272697 & N/A	Target Property (12200 South Avenue O, Chicago, IL 60633)	N/A	Site ID = 170001576097 , Inv Num = 0316555091 = LPC#	Site and NFR Letter (see Map ID A1) is listed in the Illinois EPA Site Remediation Program (SRP) database. Potential impact was described earlier under Map ID A1.	
Allied Chemical	B4	IL NIPC	S100790075 & N/A	Site is SSW 1/8 - 1/4; 0.180 mi.; 949 ft.; only listed address is "Chicago, IL"	unknown	The Chicago Metropolitan Agency for Planning (CMAP) http://www.cmap.illinois.gov/ has a NIPC database that describes an Allied Chemical industrial impoundment with Illinois EPA number S103100023, in T37N, R15E, Sec. 30 NW, Map # 195 (see comments). Neither number (the EDR ID Number in the EDR Radius Search results nor the number in the NIPC database) returned results from the Illinois EPA BOL database. However, the Illinois EPA BOL database does show an Allied Chemical Facility is located at 2400 E 130th St, which is a few miles southwest of the project site.	The NIPC database (Solid Waste Site List) indicates there is a Allied Chemical industrial impoundment at the T37N, R15E, Sec. 30 NW location. The most recent, 1997 topographic map shows that south of the project site, less than a quarter mile south of 122nd Street, there are mounds within an area of roughly 25 acres that indicate the location of an industrial impoundment / landfill. This landfill / impoundment facility is associated with the Schroud Property that is discussed further under Map ID # 15. It is unknown if the Allied Chemical impoundment is associated with the Schroud Property, but the Schroud Property is considered to be a **Recognized Environmental Condition (REC)** because there appears to be strong likelihood that contamination from the impoundment / landfill could have impacted the groundwater at the project site. The Allied Chemical impoundment was not reported as a site needing corrective action or listed in the Illinois EPA Bureau of Land (BOL) database, so the potential for this impoundment / landfill to impact the project site may be low. Nevertheless, the proximity of this potential impoundment / landfill to the project site is a concern because in the past such facilities were not engineered with liners.	Use of the Northeastern Illinois Planning Commission (NIPC) database is described below under definitions. The "Cook Solid Waste Site List" and "North Cook Map Solid Waste Sites" were used together to help describe the Allied Chemical site. In addition, "Allied Corp." and "Allied Corporation" are listed as alternative names for PVS Chemicals, Inc. (which is located south of the property and described below) on the USEPA Facility Registry Service (FRS) website. Moreover, Map ID B9 in the EDR Radius Search lists the name "Former Allied Signal Site / Honeywell."

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
PVS Chemical Solutions, Inc.	B5	IL NPDES	S104527368 & N/A	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	1-Oct-2012	PVS Chemicals, Inc. (Illinois) is listed in the USEPA Facility Registry Service (FRS) and has EPA Registry ID Number 110000435208. NPDES Permit ID Number IL0002640 was issued most recently on 26 Sep. 2012, effective date is 01 Oct. 2012, and it expires 30 Sep. 2017. The NPDES permit is for two outfalls that discharge to the Calumet River. For the NPDES permit, the USEPA's ICIS database (see comments) lists two outfalls (001 and 002), and the pipe descriptions for these outfalls indicates the discharge is "non-contact cooling water.' Chlorine is used for zebra mussel control, and residual chlorine in the discharge is monitored when the chlorine is used to control zebra mussels. The discharge is also monitored for flow rate, temperature, and pH.	For the NPDES permit, the USEPA's ICIS database lists a number of Clean Water Act (CWA) violations, but they appear to all be minor violations, mostly for the non-compliance with the schedule for submission of the discharge monitoring report (DMR) (non-receipt violations). As a consequence, the potential for the NPDES permit and associated violations to impact the project site is low.	A description of the USEPA's Integrated Compliance Information System (ICIS) is provided in the defintions below. ICIS is combined with the Permit Compliance System (PCS) database and the PCS-ICIS database can be accessed from the Envirofacts website (http://www.epa.gov/enviro/). Search the PCS-ICIS database for the facility using the NPDES permit number and then click on the NPDES permit number in the search results to find status of the permit.
PVS Chemical Solutions, Inc.	B5	IL LUST	N/A	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	14-Dec-1989	Incident Number = 892636; IL EPA ID (LPC #) = 0316550004; Product = Diesel. There is limited information on this LUST. The IEMA (see comments) only indicates that there was a leak of diesel fuel from an underground tank. The cause of the release is attributed to a "failed tank test," and the data input status is "closed." There is no information of the amount released. The Illinois EPA website indicates that although the release was on 14 Dec. 1989, the 20-day and 45-day reports were not filed until 27 Nov. 2006. Under General information, the Illinois EPA website indicates a notice of release letter was sent 29 Dec. 1989, a response letter was received on 16 Jan 1990, a review letter was sent on 10 Jun. 1991, a 45-day report addendum was received on 29 Sep. 2014, and a review letter was sent on 4 Feb 2015. According to the OSFM website (see comments), there are nine (9) USTs associated with the site, the facility number is 2022004, and no deficiencies were found. The details on the USTs were in listed in a separate Excel sheet named "PVS Chem_USTs" in this same Excel file spreadsheet. The OFSM website indicates the tank with the "diesel fuel" product (Tank 1) had a capacity of 9000 gals and it was removed on 12 Jun. 1990.	On 20 Mar. 2015, Ms. Melinda Weller, the project manager at the Illinois EPA, was contacted by telephone. She said she did not have any further information on the incident and recommended submitting a FOIA request for the 20-day and 45-day reports. The FOIA request was submitted later the same day. The Illinois EPA response to the FOIA request was received 27 Mar. 2015, and it included 15 documents that provide the details regarding the leak, tank removal, and closure. Document #5, dated 8 Jun 1990, from the tank removal contractor to the plant manager at PVS Chemicals Inc., summarizes the activities. (It appears the closure report submitted by PVS Chemicals to the Illinois EPA may have been lost.) A leak test in Dec 1989 detected two (2) "pin hole" leaks at the top of the tank, so it was taken out of service and emptied of its contents. Tank closure activities took place on 8 through 9 May 1990. At the time, the water table was approximately two (2) feet below grade, and the tank was completely submerged. Consequently, the tank removal contractor coordinated with the Illinois EPA during removal. Based on the fact that testing did not detect any analytes above Illinois EPA soil and groundwater cleanup objectives, the contractor concluded that no further investigation was warranted and the site should be classified as a "clean closure." From this information, it can be concluded that there was only minor leakage and the potential for this LUST to impact the project site is low.	Results are from three searches: The first is the Hazardous Material Incident Reports (using the incident number), where the link is available on the Illinois Emergency Management Agency website (http://www.illinois.gov/iema). The second search is from the Illinois EPA site L.U.S.T. Incident Tracking Database Search website (http://epadata.epa.state.il.us/land/ust/search.asp) using either the incident number or LPC number. The third search was the Illinois Office of the State Fire Marshal (OSFM) website (http://webapps.sfm.illinois.gov/ustsearch/); searched facility name with wild card characters (i.e. %PVS%) (change facility status to "all"). This revealed that the IEMA Number on the OSFM site is 89-2636.
PVS Chemical Solutions, Inc.	B5	SPILLS	N/A	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	30-Dec-88	Incident ID: NL881734 - The incident report indicates that the type was HAZMAT: gas or vapor cloud, and the Data Input Status was listed as "closed." Under Materials Involved, the report lists the name = SO 3 Sulfan Sulfur Trioxide, Type = unknown, and amount released = unknown. No further information was provided.	This report indicates that the release only affected the air, so there is a low potential for any residual impacts to the soil or groundwater.	Found this incident through a search for Hazardous Material Incident Reports (using the site address and wild card character *, i.e. 12260 S* Carondolet*), using the Illinois Emergency Management Agency website (http://www.illinois.gov/iema). This search revealed 23 incident reports and the results of these incidents were provided under a separate tab "PVS_Spills" in this same Excel spreadsheet.

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
PVS Chemical Solutions, Inc.	B5	SRP		Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	30-Dec-88	According to the EDR Radius Report, the IL EPA number = LPC# = 0316555004, USEPA ID = ILR000105445, Date of Enrollment = 7 May 1996, no report of an NFR or Sec. 4(y) Letter (see comments), remediation applicant was CMC Land Holding Co. LLC, and the area is for 42 acres. A search of the Illinois EPA SRP database using the LPC# corroborated most of the information in the EDR Radius Report and that the SRP has no project manager and is not active, The USEPA number in the Illinois EPA SRP database is linked to the FRS and EPA Registry ID = 110009453527, which is for the Honeywell (former Allied Signal) site at the same address. The USEPA FRS website reports that the former Allied Signal site was a RCRA small quantity generator (SQG) with NAICS code description of "synthetic dye and pigment manufacturing." The USEPA Enforcement and Compliance History (ECHO) database indicates that under the RCRA program the Current Compliance Status is "No Violation." The Allied Signal / Chemical site has not been listed as a site needing corrective action in either the Illinois EPA Bureau of Land (BOL) or USEPA RCRAInfo databases,	Little information was available regarding the reason for the enrollment of the former Allied Signal, or Allied Chemical, site in the SRP or the issues or problems at the site. The Allied Chemical site identified earlier in the IL NIPC database is also discussed above for Map ID B4. The CMC Land Holding Co. LLC enrolled this site into the SRP, but, since no NFR letter was reported and the SRP is not active, it is evident that efforts for the successful remediation of the site were never completed. Nevertheless, the Allied Signal / Chemical site has not been listed as needing any corrective actions and there are reportedly no RCRA violations associated with the site. Hence, since the site was enrolled in the SRP there must be one or more environmental issues or problems, but it appears that the potential for the former Allied Signal / Chemical site to impact human health and the environment or the project site is low.	According to the Illinois EPA SRP Glossary, a Section 4(y) Letter refers to Section 4(y) of the Environmental Protection Act. The Illinois EPA may issue a letter pursuant to the Act when a remediation applicant demonstrates successful completion of limited remedial actions. A Section 4(y) Letter does not necessarily represent that all or certain environmental conditions at a site do not constitute a threat to human health and the environment, only that specific actions have been successfully completed. No Further Remediation Letters were not available until 1996.
PVS Chemical Solutions, Inc.	B6	IL UST	U001142976 & N/A	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	N/A	The EDR Report includes the Facility ID =2022004, Facility Status = Inactive, and Facility Type = None. This Map ID = B6 also lists the details for the status of the USTs. As mentioned earlier under Map ID = B5 for the IL LUST database, the details for the USTs were input into a separate Excel sheet named "PVS_Chem_USTs" in this same Excel file spreadsheet. There are a total of nine (9) USTs listed, but three (3) of them have been removed and five (5) of them were exempt from registration. The remaining tank is reportedly "out of service" and has not been used since 1 Sep. 1980.	As explained under Map ID = B5 for the LUST database for this same site name, the information indicates that there was only minor leakage from the one LUST, the tank was subsequently removed and the potential for impact to the project site is low. Of the remaining USTs, Tanks 4 and 5 have been removed and Tanks 2, 3, 6, 8, and 9 are exempt from registration because they should not pose a considerable threat to the environment. The only remaining tank of concern is Tank 7. Since Tank 7 has been registered and reportedly out of service since 1 Sep. 1980, it appears that the potential for this UST to impact the project site is low.	
PVS Chemical Solutions, Inc.	B7	CORRACTS	1000248910 & 60633PVSCH 12260	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	1-May-09	According to the EDR Report, the EPA ID = ILD001833714 and the area name = entire facitlity. The EDR Report documentation shows the RCRA Facility Assessment (RFA) was completed 01 May 1987 and the facility was assigned a medium corrective action priority on 27 Sep. 1991. However, it seems that a RCRA Facility Investigation (RFI) was subsequently determined to be unnecessary on 01 May 2009.	Since the RFI was determined to be unnecessary, it indicates that there was insufficient evidence that the contamination that was released would pose a current or potential threat to human health and/or the environment. It may further indicate that the USEPA determined an investigation was not needed at the site because remediation was not necessary.	

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Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
PVS Chemical Solutions, Inc.	B7	RCRA-LQG and RAATS	1000248910	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	1-Mar-12	RCRA-LQG and RCRA Adminstrative Action Tracking System (RAATS) (see defintions below). The EDR report shows PVS Chemcial Solutions, Inc. (PVS) is RCRA_LQG and in the past PVS was a small quantity generator (SQG) (see definitions below). Moreover, the EDR report includes the following alternate name for the site; "Chicago MFG Campus" (see comments), and indicates that under this name the site was a Conditionally Exempt SQG (CESQG). The EDR report hazardous waste summary includes waste code = D008, waste name = lead, and indicates the USEPA biennial reporting year 2013 results for this waste = 337380 lbs. (roughly 170 tons). This information differed from the information at the USEPA's biennial report (BR) website at http://www.epa.gov/enviro/facts/br/search.html, queried using PVS handler ID = ILD001833714. This search revealed that in 2013 and 2011 PVS generated 343.72 and 168.89 tons of contaminated soil, respectively. For both reporting years, 2013 and 2011, the contaminated soil was shipped off site for disposal and they were one-time processes. Illinois EPA has annual reports for generators and managers of hazardous waste in Illinois available at the following website: http://www.epa.illinois.gov/topics/waste-management/waste-disposal/hazardous-waste/annual-report/index. These reports corroborate earlier information and show that in 2010, 2011, 2012, and 2013, the PVS generated 145.44, 168.89, 168.89, and 343.72 tons of contaminated soil, respectively. The EDR report and ECHO database both show that there have been numerous RCRA violations. The details for the violations were summarized in a separate Excel sheet named "PVS Facility Violations" in this same Excel file spreadsheet. According to the USEPA ECHO database there were two (2) enforcement cases (see comments).	The majority of the past violations of PVS Chemical Solutions, Inc. (PVS) that are shown in the EDR Radius report appear to be related to procedural requirements, compliance with the various administrative and reporting rules and regulations for RCRA-LQGs, and do not indicate significant releases of hazardous substances or petroleum products. However, the PVS facility details report from EDR includes a comment noting that groundwater violations were among the alleged violations. Furthermore, one of the formal enforcement actions (see comments) indicates that PVS released sulfuric acid, a hazardous substance, into the environment in an amount greater than the Reportable Quantity (RQ). These impacts to groundwater represent a **Recognized Environmental Condition (REC) because it is likely that one or more hazardous substances from the PVS site may have impacted the groundwater on the project site.** The RCRA hazardous waste disposal records in the biennial report suggest the PVS site has conducted substantial cleanup activity and provides evidence of significant soil contamination near the project site. In addition, the PVS site appears to represent a business environmental risk because it is a RCRA-LQG that has received numerous violations, formal enforcement actions (see comments), and penalties.	There were two (2) enforcement cases listed in ECHO against PVS Chemical Solutions and the details were described in a separate Excel sheet named "PVS Facility Violations" in this same Excel file spreadsheet: Searching the USEPA ECHO database for the name "Chicago MFG Campus" resulted in two (2) additional facilities: "Chicago MFG Campus" at 126th & Carondolet (FRS ID = 110018176935) and the other named "Chicago MFG Campus Lot 4" at 12525 S Carondolet Ave. (FRS ID = 110025252615).
PVS Chemical Solutions, Inc.	B7	TRIS	1000248910	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	2011 & 2013	The EDR Report includes results from the Toxic Chemical Release Inventory System (TRIS). The TRIS ID = 60633PVSCH12260. The EDR Facility Detail Report indicates that for 2011 there was a quantity of stack air release of 1515 lbs/yr of sulfuric acid aerosols. The toxic release inventory (TRI) search website (http://www.epa.gov/enviro/facts/tri/search.html) can be searched using the TRI facility identification ID = 60633PVSCH12260. This search revealed that the quantity of sulfuric acid aerosols increased to 10,744 lbs in 2013.	The TRIS indicates that the PVS Chemical Solutions, Inc. site only released contamination that has an effect on the air, so there is a low potential for significant impacts to the project site soil or groundwater from these releases. However, the release of the sulfuric acid from the stack or fugitive emissions from the adjacent PVS Chemical Solutions, Inc. site might represent a business environmental risk because there may be potential effects for nearby properties and air quality.	
PVS Chemical Solutions, Inc.	B7	WI Manifest	1000248910	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	2013	The EDR Report includes the WI Manifest ID # = 002167346GBF and TSD EPA ID:WID988580056. A search of the Wisconsin DNR Solid and Hazardous Waste Information System (SHWIMS) at http://dnr.wi.gov/sotw/Welcome.do using the TSD EPA ID returned the Badger Disposal of Wi, Inc. facility, which performs a variety of waste management activities. A manifest is a document that lists and tracks hazardous waste from the generator through transporters to a treatment, storage, and disposal facility (TSD).	No further information was found for the PVS Chemical Solutions, Inc. site from the Wisconsin (WI) manifest data. The manifest would indicate the type and quantity of hazardous wastes materials that were removed from the site. Although further information was not found, this information would not be expected to have an impact on the project site.	
PVS Chemical Solutions, Inc.	B7	AIRS	1000248910	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	N/A	Reported air emissions include particulates, sulfur dioxide, volatile organic compunds (VOCs), sulfur trioxide, carbon monoxide.	The AIRS database provides information on contamination that was released from the site that would impact the local or regional air quality, so there is a low potential for significant impacts to the project site soil or groundwater from these releases.	

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PVS Chemical Solutions, Inc.	B7	EPA Watch List	1000248910	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	2012	According to the EDR Report, PVS Chemicals Solutions Inc. (PVS) was on the April, May, June, and July 2012 monthly EPA RCRA Watch List. A review of the actual reports on the following USEPA website; https://echo.epa.gov/trends/watch-list-reports revealed that PVS was on the Watch List throughout 2012. In addition, PVS is periodically inspected by the City of Chicago, Dept. of Public Health / Dept. of Environment (see comments). The notes from a City inspection performed on 16 Jan. 2015 indicates that last year the facility was cited by the Chicago Metropolitan Water Reclamation District because of high lead content in their waste water discharge. The PVS representative, Dale Price, told the City inspector that that the groundwater in the area is typically high in lead. An investigation discovered that the discharge pipe was broken and the lead-contaminated groundwater migrated into the waste water discharge pipe. The pipe was repaired, the sewer system was fixed, and the problem abated. The City inspector also observed sulfur leaking from the sulfur furnace, and the PVS representative indicated the furnace was scheduled to be replaced in 2016.	The EPA RCRA Watch List (see definitions below) indicates that PVS Chemicals Solutions Inc. (PVS) was one of the facilities that required additional dialog between the USEPA, state, and local agencies. because of the length of time an alleged significant or high priority violation had gone unaddressed or unresolved (see comments). The presence of an adjacent property on the USEPA RCRA Watch List is not a recognized environmental condition (REC), but it does appear to represent a business environmental risk and an important consideration because an alleged significant or high priority violation remained unaddressed or unresolved for a long period of time. **The report of lead-contaminated groundwater at the adjacent property is a REC, because there is a strong likelihood that the lead-contaminated groundwater exists at the project site**.	
Allied Corporation	B8	CERCLIS	1015731015 & ILD001833714	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	8-Dec-99	The EDR Report provides the Superfund Site ID # = 0500112, USEPA ID # = ILD001833714, CERCLIS alias site names = Calumet Wks and Calumet Plt, and indicates that on 8-Dec-1999 the site had Non-National Priority List (NPL) status = "OS" = Other Cleanup Activity: State-Lead Cleanup. The EDR Report lists the following assessment history: Discovery on 1-Apr-1979, Preliminary Assessment on 1-Sep-1984 - low priority for further assessment, Site Inspection 23-Sep-1986 - higher priority for further assessment; Expanded Site Inspection 12-Jun-1996 through 4-Jun-1997 - recommended for Hazard Ranking System (HRS) Scoring. The Superfund Site Information database (see comments) indicates that this is an "active" site but not on the NPL. The other information was the same as included in the EDR report above. A search of the Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) (see comments) using the BOL Inventory # = 0316550004 returned the name "PVS Chemical Solutions" and Agency ID # = 170000041256. This Agency ID # was linked to a number of Illinois EPA permit activities, such as coordination with the Bureau of Air (Asbestos / National Emission Standards for Hazardous Air Pollutants NESHAP) for removal of asbestos. No violations were reported, so it appears the asbestos removal was performed in compliance with the State of Illinois regulations.	The site appears to still be active and in the process of "State-Lead Cleanup," but it is not on the NPL and a search of the IL BOL inventory database using the corresponding USEPA ID # reveals an alternative name for the site = "PVS Chemcial Solutions" at the same site address. The USEPA Facility Registry Service (FRS) Facility Detail Report site also lists PVS Chemical Solutions as an alternative name for the Allied Corporation. A Comprehensive Site Investigation Report Addendum prepared by Carlson for the Former AlliedSignal Corporation property was received in response to a FOIA request, and this report explains the historical environmental issues. Since the CERCLA database indicates that the Allied Corporation site has been active in the Superfund program since 1984, and the site characterization by Carlson revealed a number of COCs and environmental issues at the site, in the absence of further information, this site is a **REC** because hazardous substances from the site likely migrated through the groundwater to the proposed project site.	The Superfund Site ID # = 0500112 can be used to search active sites at the following Superfund Site Information database website (CERCLIS USEPA): http://cumulis.epa.gov/supercpad/cursites/srchsites.cfm. This site provided basically the same information as the EDR report. The Illinois EPA Bureau of Land (BOL) Inventory Database = http://epadata.epa.state.il.us/land/inventory/. This database can be searched using the USEPA ID # = ILD001833714 to find the BOL Inventory # = 0316550004. The Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) database = http://epadata.epa.state.il.us/tiefiledata/.
Allied Corporation	B8	FINDS	NA	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	NA	A search of the USEPA FRS database (http://www.epa.gov/enviro/html/fii/fii_query_java.html) using the FINDS Registry ID # = 110040531868 in the EDR Report reveals a facility name = Savage Services Corp. (Savage), listed at the same address. Savage is reportedly operating and has air permits. The Standard Industrial Code (SIC) / North American Industrial Classification System Code (NAICS) for Savage are the following: Coal and other minerals and ores / Coal and other mineral and ore merchant wholesalers. The listed air pollutants include carbon monoxide, nitrogen dioxide, particulate matter, sulfur dioxide, and volatile organic compounds (VOCs). Savage appears to be in compliance with the air permits for the site and no past violations were found.	The information indicates that air pollutants released from the site would impact the local or regional air quality, and there is a low potential for significant impacts to the project site soil or groundwater from these releases.	A description of the FINDS database is included with the definitions below.

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Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Allied Corporation	B8	EPA Watch List	NA	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave. Chicago, IL 60633	2012	The EDR report indicates that Allied Corporation was on the EPA Watch list for 5 months, August through December, in 2012, but the Facility ID # = ILD001833714 in the EDR report is the number corresponding to the PVS Chemical Solutions, Inc. name discussed earlier under Map ID #B7. It appears that this is may be a duplicate entry due to the different names for the same address. Note that according to the Encyclopedia Brittannica, URL = http://www.britannica.com/EBchecked/topic/16410/AlliedSignal, the AlliedSignal corporation (Map ID# B9) was formed in 1920 in the consolidation of several chemical manufacturers; the Barrett Company (founded 1903), supplying coal-tar chemicals and roofing; General Chemical Company (founded 1899), specializing in industrial acids; National Aniline & Chemical Company (founded 1917), producing dyes; Semet-Solvay Company (founded 1894), manufacturing coke and its by-products; and Solvay Process Company (founded 1881), producing alkalies and nitrogen materials. Continued in Comments column....	See EPA Watch List database for Map ID #B7.	In the 1940s these companies were transformed into "divisions" of Allied Chemical. There were further reorganizations and acquisitions of companies and plants during the 1950s, '60s, and '70s, and Allied became a conglomerate. Taking the name Allied Corporation in 1981, the firm acquired the Bendix Corporation, a manufacturer of automotive and aerospace equipment, in 1983. In 1985 Allied merged with the Signal Companies, a major aerospace and engineering firm, to form Allied-Signal Inc., in a transaction representing the largest industrial merger up to that time. Continued in Comments below...
Former Allied Signal Site / Honeywell	B9	RCRA-SQG	1004698302 & ILR00010544 5	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave.-C Chicago, IL 60633	N/A	EPA ID (Handler ID) listed in the EDR report = ILR000105445. The EDR report also indicates the site was a historical generator and was classified as a LQG in 2001. The Hazardous Waste Summary in the EDR report includes the following waste codes: D000 (not defined), D002 (caustic or acidic waste that has a high or low pH that is used to clean metal parts prior to painting), D006 (cadmium), and D008 (lead). The following RCRAInfo website: http://www.epa.gov/enviro/facts/rcrainfo/search.html was used to query the Handler ID, and the query result showed a similar name = Honeywell (Former Allied) for the site. The North American Industrial Classification System Code (NAICS) for this site name = Synthetic Dye and Pigment Manufacturing. The RCRAInfo results link to FRS database, and FRS (Registry ID# 110009453527) shows that the site is listed as a SQG (as of 7 Dec. 2006) and biennial reporter as of 31 Dec. 2005. No violations were identified, and no facility was displayed when searching the following biennial report website: http://www.epa.gov/enviro/facts/br/search.html.	The results from the RCRA-SQG database do not indicate any environmental issues or potential impacts to the project site.	According to Encyclopedia Britannica online at the following URL = http://www.britannica.com/EBchecked/topic/16410/AlliedSignal. AlliedSignal is a former American corporation that became a leading manufacturer of aerospace systems and components before merging with Honeywell International, Inc. in 1999. Alternate titles include Allied Chemical & Dye Corp., Allied Chemical Corp., Allied Corp., Allied-Signal Inc. In 1986 Allied-Signal spun off about 35 of its diverse subsidiary operations into a new and separate company so that the parent corporation, renamed AlliedSignal in 1993, could concentrate on its growing aerospace electronics and automotive operations. AlliedSignal acquired Honeywell's stock in 1999 but dropped the AlliedSignal name in favour of the Honeywell name.(also see Status and Comments above) SQG is included in the definitions below.
Former Allied Signal Site / Honeywell	B9	FINDS	1004698302 & ILR00010544 5	Site is SSW 1/8 - 1/4; 0.185 mi.; 977 ft.; 12260 South Carondolet Ave.-C Chicago, IL 60633	N/A	The EDR report lists the facility registry system (FRS) ID# = 110009453527. No further information was found beyond the results for the RCRA-SQG above.	The results from the FINDS database do not indicate any environmental issues or potential impacts to the project site.	A description of the FINDS database is included with the definitions below.

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Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Cargill Salt Inc.	10	US MINES	1016473579	Site is ENE 1/8 - 1/4; 0.232 mi.; 1225 ft.; No address provided.	NA	The Mine ID# = 1102463 from the EDR report can be used to query the database located at the following U.S. Department of Labor, Mine Safety and Health Administration website: http://www.msha.gov/drs/drshome.htm. The results indicate the site is an abandoned salt mine (status date = 21 May 1982), and the address of record is at 122nd & Torrence, Chicago, IL 60617. An Illinois EPA report on hazardous waste generators and managers for 2003 available at the following website: http://www.epa.state.il.us/land/hazardous-waste/reports/2003/report.pdf, shows that Cargill has a facility located at 12201 S. Torrence Ave, Chicago, IL 60617. This facility reportedly generated 1.472 tons of "other organic liquid," identified by waste code W219.	Torrence Ave is located on the opposite, western side of the Calumet River from the project site, so the Cargill site should not cause any potential soil or groundwater impacts for the project site.	
No Site Name Provided	11	IL NIPC	S100790150 & N/A	Site is WSW 1/4 - 1/2; 0.282 mi.; 1488 ft.; 119th West of Calumet River	NA	The IL NIPC data was researched using the same methods as described for Map ID # B4. It appears that this waste site was based on information published in Craig E. Colten's report on "Industrial Wastes in the Calumet Area, 1869-1970."	This site appears to be one of the low risk waste disposal point sites in Figure 5-2 of Mr. Colten's report for the subject time period. Since it was determined to be a low risk site and it is located on the opposite, western side of the Calumet River, it is unlikely that it would cause any potential soil or groundwater impacts for the project site.	
Gallo Equipment	12	RCRA-SQG	1000824025 & ILD984903872	Site is NE 1/4 - 1/2; 0.488 mi.; 2577 ft.; 11835 S. Avenue O, Chicago, IL 60617	NA	The EPA ID (Handler ID) listed in the EDR report = ILD984903872. The Hazardous Waste Summary in the EDR report includes the following waste codes: D001 (Ignitable hazardous waste - defined in EDR report), D008 (lead), D018 (benzene), and D039 (tetrachloroethylene). The EDR report shows that facility has received notices of violations in the past. In 1992, there was a Illinois State violation for the area of State Regulation SR - 722.134(d) "generators - pre-transport," but it appears the facility achieved compliance later that same year. No recent RCRA violations were found on the USEPA Enforcement and Compliance History Online (ECHO) website	The RCRA SQG information concerning the Gallo Equipment site indicates that it has a low potential for causing any impacts to the soil or groundwater on the project site.	SQG is included in the definitions below.
Gallo Equipment	12	FINDS	NA	Site is NE 1/4 - 1/2; 0.488 mi.; 2577 ft.; 11835 S. Avenue O, Chicago, IL 60617	NA	The EDR report lists the facility registry system (FRS) ID# = 110005916054. No further information was found beyond the results for the RCRA-SQG above.	The information concerning the Gallo Equipment SQG site indicates that it has a low potential for causing any impacts to the soil or groundwater on the project site.	

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Gallo Equipment	12	LUST		Site is NE 1/4 - 1/2; 0.488 mi.; 2577 ft.; 11835 S. Avenue O, Chicago, IL 60617	23 Sep. 2002	According to the EDR report, the incident # = 20021352, the Illinois EPA # = LPC # = 0316485007, and Illinois Emergency Management Agency (IEMA) date = 23 Sep. 2002. The EDR report also lists that the product was gasoline, diesel and a No Further Action (NFA) / No Further Remediation (NFR) letter was provided 1 Nov. 2007 and recorded 6 Sep. 2008. The OSFM website (see comments) shows the facility ID # is 2013731 and seven tanks were removed in 2002 - 2003. Five (5) of the tanks had a capacity of 1000 gals. and two (2) of the tanks had a capacity of 4000 gals. The product in the tanks was either gasoline or diesel fuel. The Illinois EPA LUST incident database indicates that the NFR letter utilizes worker caution as an institutional control. The City of Chicago has a detailed inspection report dated 23 Sep 2002 that indicates when two (2) 1000 gal. gasoline tanks were removed, both tanks showed signs of gasoline releases. In addition, an inspection report from 8 Jan. 2003 notes that for facility ID # = 2013731 and removal permit # = 107162, they removed three (3) 1,000 gal. and two (2) 4,000 gal. tanks. There was a great amount of water within the large excavation that contained two (2) 1000 gal. tanks and two (2) 4000 gal. tanks. The other excavation contained one (1) 1000 gal. tank and no standing water. The water was reportedly contaminated and was pumped out by a special waste hauler. The five (5) tanks were removed in two days. The small excavation showed no evidence of contamination. The contractor implemented a remedial plan of dig and haul during tank removal, and the report notes that some of the tanks contained corrosion holes. H2002-2492.	The tanks were removed and the Illinois EPA issued Gallo Equipment an NFA / NFR. it appears that the Gallo Equipment site has a low potential for causing any impacts to the soil or groundwater.	The incident # = IEMA # = 02-1352 was used to search the Office of the Illinois State Fire Marshal website = http://webapps.sfm.illinois.gov/ustsearch/. The IEMA # = 20021352 can also be used to search the Illinois EPA LUST incident tracking database search website = http://epadata.epa.state.il.us/land/ust/Search.asp. The address, "11835 S. Avenue O" , can be searched in the City of Chicago data portal = https://data.cityofchicago.org/ for Chicago Dept. of Public Health environmental lookup table, which includes inspection notes and complaints.
Indian Ridge Marsh	13	IL SSU	S104296101 & NA	Site is WSW 1/2 - 1; 0.616 mi.; 3251 ft.; 122nd and Torrence Ave., Chicago IL 60617	NA	The SSU refers to the State Sites Unit Listing, which is the State or tribal Response Action Program; basically the State or tribal equivalent of CERCLIS. The EDR report lists the facility ID # = 0316485053 and indicates that the Indian Ridge Marsh is a slag only landfill that covers about 145 acres on the opposite, western side of the Calumet River from the project site. The facility ID # was used to search the BOL inventory database (see comments), and the facility name was listed as "Chicago DOT", but a search of the Illinois EPA State Response Action Program shows the name as "Indian Ridge Marsh" and indicates the SSU Status = "Transferred" and the Current Program ="City of Chicago." The City of Chicago has information on their website indicating that the City entered into a project participation agreement in 2010 to restore the marsh and it is listed in the City's directory of natural areas.	Since the Indian Ridge Marsh site is on the opposite, western side of the Calumet River and it is a slag only landfill, there is a low potential for the site to cause any impacts to the soil and groundwater at the project site.	The Illinois EPA Bureau of Land (BOL) Inventory Database website = http://epadata.epa.state.il.us/land/inventory/index.asp. The Illinois EPA also has a database for the State Response Action Program = http://epadata.epa.state.il.us/land/ssu/.
Republic / LTV Steel	14	CERC-NFRAP	1000424200 & ILD056623598	Site is NNE 1/2 - 1; 0.644 mi.; 3400 ft.;11600 S. Burley Ave. Chicago, IL 60617	18 Nov. 1991	The EDR report provides the USEPA ID # = ILD056623598, and this number can be used to search the USEPA Superfund Site Information database (see comments). It is an archived site, and the results show that it is not on the National Priority List (NPL), the non-NPL status date is 18 Nov. 1991, and the status is that the NFRAP-site does not qualify for the NPL based on existing information. Discovery was completed 1 Aug. 1980, Preliminary Assessment on 1 Feb 1983 - low priority for further assessment, Site Inspection on 11 Jul. 1986 - NFRAP-site does not qualify for the NPL based on existing information, Hazard Ranking System Package on 28 Jul. 1986, and the site was archived on 18 Nov. 1991.	The information provided by the non-NPL NFRAP status does not suggest that there are no hazards associated with the site. It only indicates that based on the information the USEPA the site was not judged to be a potential NPL site.	The USEPA Superfund Site Information database =http://cumulis.epa.gov/supercpad/cursites/srchsites.cfm.

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Republic / LTV Steel	14	CORRACTS & RCRA-CESQG & NY MANIFEST	1000424200 & ILD05662359 8	Site is NNE 1/2 - 1; 0.644 mi.; 3400 ft.;11600 S. Burley Ave. Chicago, IL 60617	NA	The USEPA CORRACTS database identifies hazardous waste handlers with RCRA corrective action activity. The EDR report lists the USEPA ID # = ILD056623598 and documents that a RCRA Facility Assessment (RFA), completed 22 Sep. 1987, determined that further investigation was necessary. On 27 Sep. 1991 the facility was assigned a medium corrective action priority. There is no information on any further action until 1 May 2009, when another RFA determined that further investigation was not necessary. The EDR report indicates the site is a RCRA-Conditionally Exempt SQG (CESQG), which is defined below. However, the EDR report also includes a list of historical RCRA-LQGs, including LTV Steel and the Chicago Coke Co. Inc. The EDR report waste code summary includes an extensive list of hazardous wastes, and, under the NY Manifest database, the report shows in 1983 waste petroleum oil with 500 ppm or greater levels of PCBs was generated and shipped off-site for disposal. The EDR report includes evidence that the site received several notices of violations, but it appears these violations were primarily for administrative problems or compliance issues. The LTV Steel Company USEPA Registry ID # = 110038685269 (see comments) can be used to search the USEPA Facility Registry Service (FRS) database = http://www.epa.gov/enviro/html/fii/fii_query_java.html. The facility detail report for LTV Steel shows a number of alias site names and provides links to the Toxic Release Inventory System (TRIS) and TRI ID # = 60617LTVST11600, which shows a long list of hazardous chemicals and the amounts that were released from 1987 to 2001 through air emissions, discharges to water, and transfers to off-site locations other than Publicly Owned Treatment Works (POTWs), and non-production releases (as a result of remedial actions, catastrophic events, or other one-time events not associated with production processes).	The most recent RFA, completed 1 May 2009, determined further investigation was unnecessary, so this seems to suggests that the RFA concluded it would be unlikely for contamination to be released that would pose a current or potential threat to human health and / or the environment. A search of the Illinois EPA SRP database (see comments) shows the site was enrolled 10 Jul. 1997 and issued a focused No Further Remediation (NFR) Letter on 3 Feb. 1999 (recorded 2 Mar. 1999) for 48.7 acres, with some land use restrictions and institutional controls. As a result, it seems the voluntary cleanup under the SRP may have addressed / resolved the corrective action concerns identified by the earlier RFA. Nonetheless, a search of the USEPA enforcement case database (see comments) reveals several cases where substantial federal penalties were assessed for violations of the Clean Air Act (CAA), which suggests a potential pattern for neglecting environmental issues. Although specific incidents were not included in this EDR report, due to the long history of steel production, extensive use and / or generation of a wide variety of hazardous materials and wastes, and history of toxic releases, this site is considered a **Controlled ecognized Environmental Condition (CREC)** that likely caused impacts to the groundwater and possibly the soil at the project site.	USEPA ID # = ILD056623598 can be used to search the Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) = http://epadata.epa.state.il.us/tiefiledata/. This search provided an Illinois EPA Bureau of Land (BOL) ID # = 0316500002 and Tie File # = 170000041318. The Tie File # link shows this same number = Agency ID # for Calumet Transload Railroad LLC. This link also shows links to Bureau of Air (BOA) and BOL Site Remediation Program Data. The BOL ID # link connects to the Site Remediation Program (SRP) Data for USEPA ID # ILD056623598 for Republic / LTV Steel. This USEPA ID # links to the USEPA Registry ID # =110038685269 for LTV Steel Company. The BOL ID # = 0316500002 can also be used to search the Illinois EPA Site Remediation Program (SRP) = http://epadata.epa.state.il.us/land/srp/. The USEPA Registry ID # = 110038685269 can be used to search the enforcement case database = http://echo.epa.gov/facilities/enforcement-case-search.
Schroud Property	15	IL SSU & IL BOL	S107926333 & N/A	Site is South 1/2 - 1; 0.709 mi.; 3744 ft.;12601 Carondolet Ave. Chicago, IL 60633	NA	SSU refers to the State Sites Unit Listing, which is the State or tribal Response Action Program; basically the State or tribal equivalent of CERCLIS. The EDR report lists the facility ID # = 0316550015 and facility type = Flue Dust Waste Pile. The size of the site is reportedly 25 acres. The facility (site) ID # can be used to query the Illinois EPA State Response Action Program database = http://epadata.epa.state.il.us/land/ssu/, and the results from this database match the results in the EDR report. The database also indicates the Current Program = DLC-CO (Division of Legal Counsel) and the SSU Status is "Transferred." A search of Illinois EPA enforcement orders (see comments) results in three (3) Circuit Court of Cook County cases with the following order dates; 9 May 2003, 7 May 2009, and 13 Dec. 2010. The first case describes the property as covering an area of around 26 acres and being bounded by a railroad on the east, Carondolet Ave. on the west, 126th St. on the south, and approximately 122nd St. on the north. Mr. Schroud reportedly purchased the site from LTV Steel and the plaintiffs alleged that LTV used the site for the disposal and storage of flue dust. In the most recent case, Mr. Schroud was found to be in indirect civil contempt and received roughly $853k in penalties based on the failure to properly cap the industrial landfill. The Illinois EPA F.A.C.T.S. database (see comments) shows that the site has received a number of violations, but the most recent evaluation date was 23 Apr. 2004.	As noted earlier for Map ID # B4, the most recent, 1997 topographic map shows that south of the project site, less than a quarter mile south of 122nd Street, there are mounds within an area of roughly 25 acres that indicate the location of an industrial impoundment / landfill. This landfill also matches the description for the Schroud property. As explained earlier, the proximity of this potential large impoundment / landfill to the project site is a concern because in the past such facilities were not engineered with a liner or cap. As a result, **this site is considered a REC.**	"Schroud" can be searched in the Illinois EPA enforcement orders database = http://www.epa.state.il.us/cgi-bin/en/orders/orders.pl to find case records. The facility ID # for the site can also be searched in the F.A.C.T.S. (Facility Compliance Tracking System) database = http://epadata.epa.state.il.us/land/WebFACTS/index.asp

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Heckett (from Carlson Report)							No records were returned for the IL BOL Lust database or the SRP database.	Searched "Heckett" in the Illinois EPA BOL Inventory database. It resulted in BOL Inventory ID# = 0316550006 for Hecket Plant 3 at 12315 S Burley Ave. Chicago, IL. The Inventory ID # linked to USEPA ID# = ILD039061908 and this ID# was linked to the USEPA FRS Facilty Detail Report, which shows the same facility name and address and that the EPA Registry ID# = 110009368923 and ACES information ID# = 170000389899.

Table 2: EDR Radius Search Results								
Site Name	**Map ID**	**Database(s) (see EDR report)**	**EDR ID Number & EPA ID Number**	**Proximity to Site (Address)**	**Associated Date of Incident**	**Status**	**Potential Impact**	**Comments**
Definitions & notes:								
RCRA Large Quantity Generator = LQG is defined as = Handler generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill, into any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time.								
RCRA Small Quantity Generator (SQG) is defined as = Handler generates more than 100 and less than 1000 kg of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time.								
RCRA Conditionally Exempt Small Quantity Generator (CESQG) is a handler that generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.								
RCRA Adminstrative Action Tracking System (RAATS) contains records based on enforcement actions issued under RCRA pertaining to major violators and includes adminstrative and civil actions brought by the USEPA. For admistrative actions after 30 Sep. 1995, data entry in the RAATS database was discontinued. USEPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.								
EPA Watch List: The EPA used to maintain a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List did not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency had led those organizations to allege that an unproven violation had in fact occurred. Being on the Watch List did not represent a higher level of concern regarding the alleged violations that were detected, but instead indicated cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved. The Office of Enforcement and Compliance (OECA) subsequently evaluated the utility of the Watch List and determined that it was not an up to date approach for tracking the most important violators, it was too rigid and static to provide the most helpful information to managers, and that the burdens of maintaining and updating the data were greater than the overall benefits. As a result, the Watch List was discontinued, and the last RCRA Watch List was for August 2013.								
FINDS: Facility Index System/Facility Registry System Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System). ACES (Illinois - Agency Compliance And Enforcement System) is the Illinois EPA Project to facilitate the permitting operations.								
USEPA's Integrated Compliance Information System (ICIS) is a web-based system (database) that provides information for the Federal Enforcement and Compliance (FE&C) and NPDES programs. The FE&C component supports USEPA's Civil Enforcement and Compliance program activities, and the NPDES program supports tracking of NPDES permits, limits, discharge monitoring data, and other program reports. ICIS is combined with the Permit Compliance System (PCS) database. The PCS-ICIS database can be accessed from the Envirofacts website (http://www.epa.gov/enviro/).								
Northeastern Illinois Planning Commission (NIPC) database has an inventory of active and inactive solid waste disposal sites. NIPC and Chicago Area Transportation Study (CATS) were merged into the Chicago Metropolitan Agency for Planning (CMAP). CMAP Data Hub (https://datahub.cmap.illinois.gov) has a dataset titled "NIPC Historical Inventory of Solid Waste Disposal Sites in Northeastern Illinois." Within this dataset, there are two subsets of data from 1986, the "Cook Solid Waste Site List" and "North Cook Map Solid Waste Sites" that can be used together to help find former solid waste sites.								
CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System. CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL..								
CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.								
N/A = Not Available								
AFS = (Aerometric Information Retrieval System (AIRS) Facility Subsystem). AIRS is the national repository for information concerning airborne pollution in the U.S. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare state implementation plans and by USEPA to estimate total national emissions.								
ERNS – Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.								
NAICS = North American Industrial Classification System Codes								
HMIRS – Hazardous Materials Information Reporting System - hazardous material spill incidents reported to the DOT.								

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
IL SSU, IL BOL (S107926345)	60617	Van Vlissingen Property	96th & Van Vlissingen Road	A search of the Illinois EPA site remediation program (SRP) database using the BOL # = 0316515138 listed in the EDR facility detail report for the site reveals a site located at 9910 South Van Vlissingen Road that was enrolled in the SRP on 13 May 2005. A search of the Illinois EPA State Response Action Program database shows the street address as 96th and Van Vlissingen Road, the SSU Status = "Transferred" and the Current Program is SRP.	The Van Vlissingen Road property is located more than 3 miles north of project site on the opposite and western side of the Calumet River. As a consequence, this orphan property is not a potential concern for impacting the proposed project site.	
IL BOL (S113272519)	60617	Republic Engineered St	116th & Burley	The EDR facility detail report for the site provides IL BOL site ID # = 170000529113 (=Tie File #) and Inv # = 0316515093 and explains the site was found in the IL Bureau of Land (BOL) Inventory Database. The IL BOL Inventory Database lists the Lat/Lon as 41.684794/-87.544775 = the intersection of 116th and S. Burley Ave. The IL BOL Database Tie File # has a link to the USEPA Facility Registry Service (FRS), but the link was broken - the USEPA site only says "No program facility found for RCRAINFO." The USEPA FRS database =http://www.epa.gov/enviro/html/fii/fii_query_java.html was searched for the name "Republic Engineered St," and this revealed two sites; the first one called "Republic Engineered St" at 116th & Burley and a second site called "Republic Technologies International LLC at 11610 S. Avenue O. The Detailed Facility Report for the first site shows an EPA Registry ID # = 110018337129, the Information System ID / Report Link # = the Tie File # above. This same site is reportedly in the solid waste program and lists the IL BOL Inv # above. The second site has a EPA Registry ID # = 110000434370, Handler ID # = ILD984780163 = Biennial Reporters ID #, Toxic Release Inventory (TRI) System ID # = 60617RPBLC11610, Solid Waste Program ID # = 0316515025, and Republic Engineered Steels, Inc is listed as one of the alternative names. The Solid Waste Program ID # = 0316515025 can be used to search the IL BOL inventory database, and it shows "Republic Engineered Steels, Inc." at 11610 S. Ave. O. A search of the IL BOL Site Remediation Program Database with IL BOL ID # = LPC # = 0316515025 shows the site was enrolled on 23 May 2001, but it is reportedly not active and no records were returned regarding any No Further Remediation (NFR) letters. A search of the IL BOL AFIIS (see comments) using the IL BOL ID # shows an Agency ID # = 170000056132 and records of IL EPA permits, but no further information for spills or enforcement actions were found with this ID #.	Historically, several alternative site names and addresses have been associated with the steel plant and manufacturing operations in the vicinity of the project site. The project site was initially identified as Republic Steel at 12200 South Avenue O (Map ID # A1, A2, A3), and steel plant operations north of the project site were described under the site name "Republic / LTV Steel" at 11600 S. Burley (Map ID # 14). The additional name /address for "Republic Engineered St" at 116th and S. Burley did not provide any further concerns, but the name "Republic Technologies International LLC" at 11610 S. Avenue O was associated with more alternative names and environmental interests. The situation for this site is similar to the situation described in Table 2 for Map ID #14 (Republic / LTV Steel), although specific incidents at this site were not identified in the EDR report, due to the long history of steel production, extensive use and / or generation of a wide variety of hazardous materials and wastes, and history of toxic releases, this site is considered a **Controlled Recognized Environmental Condition (CREC)** that likely caused impacts to the groundwater and possibly the soil at the project site. It is a "controlled" REC because the impacts from the site were considered when the NFR letter was issued by the Illinois EPA.	Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) = http://epadata.epa.state.il.us/tiefiledata/.
CERCLIS, RCRA NonGen / NLR (1015731053)	60633	Paxton Landfill Corporation	116th & Paxton Avenue	According to the EDR facility detail report, the site has EPA ID # = ILD069498186, and this site is a known or suspect abandoned, inactive or uncontrolled hazardous waste site (CERCLIS). The EDR report also indicates the site is considered to be a RCRA non-generator (Non-Gen) / no longer regulated (NLR) site, but it has received notices of violations. The EPA ID # from the EDR Report = Handler ID # can be used to search the RCRAInfo database = http://www.epa.gov/enviro/facts/rcrainfo/search.html, the resulting handler name is "Paxton Landfill Corp 2" and the address is listed as 12201 S Oglesby Ave & 116th Street. The results from RCRAInfo link to the Facility Registry Service (FRS) facility detail report, where the name is "Paxton Landfill Corp," and the address is simply 12201 S. Oglesby with EPA Registry ID # = 110018484086. The facility detail report includes a number of alternative (alias) names, including U.S. Drum Disposal Corp. The most recent City of Chicago Department of Public Health inspection reports, available from the City of Chicago data portal = https://data.cityofchicago.org/, indicate that the site is a certified closed landfill with IL BOL ID # = 0316000033, and it is being overseen by the Illinois EPA.	The Paxton Landfill Corporation orphan site is evidently located approximately a 1/2 mile west and on the western and opposite side of the Calumet River from the project site. As a consequence, this orphan site is hydraulically separated and a considerable distance from the project site, so it is not a potential concern for impacting the proposed project site.	

Table 4: RECs for Further Investigation

RECs	Proximity to Site/Direction	Soil/Groundwater (GW) CoCs	Likely Impacted matrix
RECs in Carlson's Phase I ESA:			
1. The former drum area	2,000 ft./northeast of site	PCBs, PAHs, & BTEX	Groundwater
2. Historical Heckett operations	600 ft./southeast of site	VOCs, SVOCs, PAHs, & BTEX	Groundwater
3. 14-inch mill and associated area	Adjacent/west of site	PCBs, VOCs, SVOCs, & RCRA metals / [VOCs & SVOCs]	Soil / Groundwater
4. Potential tanks & mill scale staging area	On property/northwestern area	PCBs, VOCs, SVOCs, & RCRA metals / [Pb & Sb]	Soil / Groundwater
5. Historical on-site UST, historical adjacent (off-site) USTs, & fuel oil USTs/ASTs	On property/northern area	PCBs, VOCs, SVOCs, BTEX, PAHs, & RCRA metals	Soil / Groundwater
6. Historical coal gasification/coke production.	2,000 ft./northeast of site	PCBs, VOCs, SVOCs, & RCRA metals	Groundwater
RECs in the current assessment:			
1. Republic Steel (12200 S. Ave. O)	Proposed project site	PCBs, VOCs, SVOCs, BTEX, PAHs, RCRA metals	Soil / Groundwater
2. Allied Corp./Former Allied Signal Corp. (12260 S. Carondolet Ave.)	1,500 ft./southwest of site	PCBs, VOCs, SVOCs, metals, pesticides, & pH / [VOCs, SVOCs, & metals]	Groundwater
3. PVS Chemical Solutions, Inc. (12260 S. Carondolet Ave.)	Adjacent/southwest of site	Sulfur compounds, Pb, & pH / [Sulfur compounds, Pb, & pH]	Soil / Groundwater
4. Republic / LTV Steel Co. (11600 S. Burley Ave.)	Adjacent/north of site	PCBs, VOCs, SVOCs, BTEX, PAHs, RCRA metals	Soil / Groundwater
5. Republic Technologies International, LLC (11610 S. Ave. O)	Adjacent/north of site	PCBs, VOCs, SVOCs, BTEX, PAHs, RCRA metals	Soil / Groundwater
6. Schroud Property (12601 S. Carondolet Ave.)	Adjacent/south of site	Metals / metals (particularly Pb)	Soil / Groundwater
7. Gallo Equipment (11835 S. Ave. O)	2,000 ft./northeast of site	VOCs & SVOCs	Groundwater
8. Avenue O and 118th Street	2,000 ft./northeast of site	PAHs, PCBs, & metals	Groundwater

Notes: CoCs refers to Contaminants of Concern, including, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-VOC (SVOCs), polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene and xylenes (BTEX), RCRA metals (As, Ba, Cd, Cr, Hex. Cr, Cyanide, Pb, Hg, Se, Ag). Parameters in brackets in Table 4 are CoCs specifically for groundwater samples.

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
SSU (S101215364)	60617	U.S. Drum Disposal II	2400 East 119th Street	The EDR detail for the SSU lists facility ID # = 0316005310 and the site size is listed as 2.5 acres. Using the facility ID #, the site can be searched in the Illinois EPA State Response Action Program database = http://epadata.epa.state.il.us/land/ssu/, and the results shows the same address as the EDR report and indicates the current program is NPL, SSU status = transferred, and the site type = drums - waste-oil recycler. The search of the IL BOL inventory database = http://epadata.epa.state.il.us/land/inventory/ links the site to USEPA ID # = ILD981961667 and Tie File # = 170000387392. The USEPA ID # can be used to search "active sites" at the Superfund site information database = http://cumulis.epa.gov/supercpad/cursites/srchsites.cfm. The results shows a site name of "US DRUM II" and the NPL Status = "Part of NPL Site." The "Parent Site" is the "Lake Calumet Cluster" site, and this site name can be used to search the Superfund site information database to find the EPA ID # = ILD000716852 and the site progress profile. This profile indicates that physical cleanup activities have started, a remedy has been selected, and "human exposures at this site are under control." The site address is listed as 122nd Street and Stoney Island Avenue, Chicago, Illinois 60633.	The U.S. Drum Disposal II orphan site is evidently located approximately a 1/2 mile west and on the western and opposite side of the Calumet River from the project site. As a consequence, the site is hydraulically separated and a considerable distance from the project site, and, even though the U.S. Drum Disposal II orphan site is part of a NPL site, it is not a potential concern for impacting the project site.	
IL NIPC (S100790023)	N/A	Calumet Container	East 136 Street	A search of the site name in the 1986 NIPC Cook County solid waste site list shows # 0316000039 and Map ID # 119. The corresponding NIPC Cook County map shows the site located far to the east of the project site, near the Illinois - Indiana border, and south of Wolf Lake. The site number can be used for the Illinois EPA BOL inventory ID # to search the IL BOL inventory database = http://epadata.epa.state.il.us/land/inventory/. The results from this database have same facility name = Calumet Container at an address of 1631 State Line Road, Hammond, IN. These results also show the Tie File # = 170000493231 and there is a link to the Illinois EPA State Response Action Program (SSU) database, where it says the site type = "Drums - Waste-oil recycler," the site size is 10 acres, and the status = archived. The links from the IL BOL to the USEPA were broken, but a search of the site name "Calumet Container" at the USEPA facility registry service (FRS) database = http://www.epa.gov/enviro/html/fii/fii_query_java.html provides three (3) sites named Calumet Container; the first at 1631 State Line Road Hammo, Chicago, IL, the second at 3631 State Line Ave, Hammond, IN, and the third at State Line & 136th Street, Hammond, IN. For the first and third sites, the USEPA indicated there was "no valid (quality assured) locational data currently available in the FRS database for this facility." The second site address is a CERCLA site in Indiana that is not on the NPL and has been referred for removal (No Further Remedial Action Planned- NFRAP).	The site location most likely associated with the orphan site name = Calumet Container is roughly two (2) miles from the project site, so it is a considerable distance from the project site and not a potential concern for impacting the project site.	
RGA LUST (S115517476)	N/A	Ryerson Steel	2558 West 16th	The EDR facility detail report notes that this orphan site was identified in the Illinois EPA Recovered Government Archive (RGA) Leaking Underground Storage Tank database. A search of the Illinois EPA BOL AFIIS database (see comments) using the site name = "ryerson" revealed two (2) sites with the same organization name = Joseph T. Ryerson but different site names: Ryerson Tull, IL EPA BOL ID # = 0316005558 and Joseph T Ryerson, IL EPA BOL ID # = 031600EBE. Both sites were listed at the same address = 2558 W 16th St, Chicago, IL 60608, with Agency ID # 170000050478.	Since the location of this orphan site appears to be more than 14 miles from the project site, it is not a potential concern for impacting the project site.	Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) = http://epadata.epa.state.il.us/tiefiledata/.
IL BOL (S113272498)	60617	US Steel Southworks	79th and Brandon	The EDR facility detail report lists the IL EPA BOL site ID # = 170000174004 and inventory ID # = 0316515061. The IL EPA BOL AFIIS database can be searched using the inventory ID #, and the results show that the site was in the Site Remediation Program (SRP). The site is no longer active. It was enrolled on 14 Dec. 1993 and issued a No Further Remediation (NFR) letter dated 31 Jul 1997. The listed address for the SRP site is 79th Street and Brandon Avenue, Chicago IL60617.	Although this orphan site was not mapped correctly, the intersection of 79th Street and South Brandon Ave. refers the location of the former U.S. Steel South Works facility, which has been closed. The site also had an entrance at 8555 South Green Bay Avenue, Chicago, IL 60617. This site is located approximately 4 miles north of the project site, on the opposite side of the Calumet River. Hence, this orphan site is hydraulically separated and a considerable distance away from the project site, so it is not a potential concern for impacting the proposed project site.	Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) = http://epadata.epa.state.il.us/tiefiledata/.

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
UST (U003838643)	60617	95th Street Property	95th Street and Colfaz Avenue	The EDR facility detail report lists facility ID # 2040770 and the source for the information is the Illinois State Fire Marshal IL UST database = http://webapps.sfm.illinois.gov/ustsearch/. A search of this database using the facility ID # reveals that the site owner, Maytag Corporation, had an Illinois Emergency Managment Agency (IEMA) ID # = 01-1802 for LUST fund eligibility and deductibility determinations. The link to the IEMA ID # shows the site listed in the Illinois EPA LUST Incident database (LPC # = 0316480015) and the address is listed as 95th St. and Colfax Ave. in Chicago, IL	It is evident that the UST database refers to a site at 95th Street and Colfax Ave. in Chicago, IL which is roughly three (3) miles from the project site. As a result, the 95th Street property orphan site is not a potential concern for impacting the project site.	
UST (U003715164)	60617	Luke Pillarella	10558 Avenue North	The EDR facility detail report lists facility ID # 2039386 and the source for the information is the Illinois State Fire Marshal IL UST database = http://webapps.sfm.illinois.gov/ustsearch/. A search of this database using the facility ID # reveals that the facility name = Luke Pillarella had an Illinois Emergency Managment Agency (IEMA) ID # = 99-2215 associated with the facility. The link to the IEMA ID # shows the site listed in the Illinois EPA LUST Incident Tracking database = http://epadata.epa.state.il.us/land/ust/Search.asp (LPC # = 0316515022). and the address is listed as 10558 Avenue North, Chicago, IL 60617. A search of the LPC # in the AFIIS database (see comments) shows that the organization and site name is Lsc Auto Inc. and this address actually appears to be 10558 South Ave N.	It is evident that the UST database is referring to an orphan site at 10558 South Ave. N. in Chicago, IL which is around two (2) miles north from the project site. As a result, the Luke Pillarella orphan site F16	Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) = http://epadata.epa.state.il.us/tiefiledata/.
FTTS, HIST FTTS (1007561205)	60617	Acme Steel Co.	10730 South Benley	The EDR facility detail report for the ACME Steel Co. orphan site indicates the information for the HIST FTTS was from the National Compliance Database (NCDB). A search of the facility name "Acme Steel" in the USEPA Facility Restistry System (FRS) database (see comments) reveals two (2) sites in the vicinity of the project site; one named Acme Steel Co. at 11236 South Torrence Ave, Registry ID 110000434325, and the other one named DTE Chicago Fuels Terminal at 10730 South Burley Ave., Registry ID 110000434316. ACME Steel Co. is one of the alternative names listed for the DTE Chicago Fuels Terminal site, the address is similar to the listed site address (there is no South Benley in the 60617 zip code area), and the registry notes that the source of the data was the NCDB. The ACME Steel Co. on Torrence Ave. is reportedly a coke plant, and this site is listed in CERCLIS but not on the National Priority List (NPL). The FRS lists the National American Industry Classification System Code (NAICS) for the DTE Chicago Fuels Terminal site as a coal and other mineral and ore merchant wholesaler, but the Standard Industrial Classification Code (SIC) for this site is cold-rolled steel sheet, strip, and bars. Since one of the alternative names was the ACME Steel Co, it is evident that the site was formerly a steel plant site. A search of the registry ID = 110000434316 in the ECHO database (see comments) reveals an enforcement case (# 05-1993-1583) where the respondent (ACME Steel Co.) failed to comply with various PCB marking, recordkeeping and storage regulations under TSCA. The Illinois State database also shows the site has received violation notices for compliance with regulations (see comments). Both sites are located roughly one (1) mile north of the projecct site. The ACME Steel Co. site is on the western and opposite side of the Calumet River from the project site, and the DTE Chicago Fuels Terminal site is located on the same side of the Calumet River as the project site.	The ACME Steel Co. coke plant site on Torrence Ave. is located roughly a mile north of the project site and on the western and opposite side of the Calumet River. As a result, this ACME Steel Co. coke plant site may affect the air quality in the vicinity but it is hydraulically separated and not a potential concern for impacting the project site. The DTE Chicago Fuels Terminal site is also located roughly a mile north of the project site. This site has a similar address and appears to be the orphan site. This orphan site has a history of violations and it also may affect the air quality in the vicinity, but it is a considerable distance away and has a low potential to impact the soils or groundwater at the project site.	The USEPA database site for enforcement and compliance history online (ECHO) = http://echo.epa.gov/. G15 The FRS site for the DTE Chicago Fuels Terminal site lists an alternate name = "KCBX Terminal South," and a USEPA ID # = ILD099215741 is associated with this name. This USEPA ID # can be searched in the Illinois EPA BOL Inventory database to find the Illinois EPA BOL ID # = 0316515001. The Illinois EPA BOL ID# can then be searched in the Facility Compliance Tracking System (F.A.C.T.S.) database = http://epadata.epa.state.il.us/land/WebFACTS/index.asp. The violations that were found included State Statute 21(a) - Cause or allow open dumping, and State Regulation 722.111 - RCRA - Waste Determination.

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
IL AIRS (S107743034)	N/A	International Mill Service U.S.	P.O. Box 17569	A search of the facility name "International Mill Service" in the USEPA Facility Restistry System (FRS) database (see comments) reveals a site in the vicinity of the project site named International Mill Service US Steel, Registry ID 110010389329, at the same P.O. Box as listed in the site address in the EDR report. An alternate name for this site is "Intl. Mill Service / US Steel Southwork." Links associated with this FRS listing only indicate potential air quality impacts and that the facility has been permanently closed.	The U.S. Steel Southworks site was discussed earlier in association with the orphan site located at the intersection of 79th Street and South Brandon Ave. As noted in that discussion, this site has been permanently closed. The site also had an entrance at 8555 South Green Bay Avenue, Chicago, IL 60617. This site is located approximately 4 miles north of the project site, on the opposite side of the Calumet River. Hence, this orphan site is hydraulically separated and a considerable distance away from the project site, so it is not a potential concern for impacting the project site.	The USEPA Facility Restistry System (FRS) database = http://www.epa.gov/enviro/html/fii/fii_query_java.html.
FINDS (1005495082)	60617	International Mill Service U.S. Steel	P.O. Box 17569	A search of the facility name "International Mill Service" in the USEPA Facility Restistry System (FRS) database (see comments) reveals a site in the vicinity of the project site named International Mill Service US Steel, Registry ID 110010389329, at the same P.O. Box as listed in the site address in the EDR report. An alternate name for this site is "Intl. Mill Service / US Steel Southwork." Links associated with this FRS listing only indicate potential air quality impacts and that the facility has been permanently closed.	The U.S. Steel Southworks site was discussed earlier in association with the orphan site located at the intersection of 79th Street and South Brandon Ave and for the previous orphan site. As noted before, this site has been permanently closed. The site also had an entrance at 8555 South Green Bay Avenue, Chicago, IL 60617. This site is located approximately 4 miles north of the project site, on the opposite side of the Calumet River. Hence, this orphan site is hydraulically separated and a considerable distance away from the project site, so it is not a potential concern for impacting the project site.	The USEPA Facility Restistry System (FRS) database = http://www.epa.gov/enviro/html/fii/fii_query_java.html.
IL BOL (S113272466)	60617	Sundstrom Pressed Steel	8030 S. Chicago Ave	The EDR facilty detail report indicates this orphan site was found in the Illinois EPA BOL inventory database, and the IL BOL ID # = 0316515002. The link at the Illinois EPA BOL is to USEPA # ILD005144175. The USEPA Facility Registry System (FRS) database shows that this is a metal stamping company and small quantity generator (SQG) located at 8030 S. South Chicago Ave., Chicago, IL 60617 and the EPA Registry ID # = 110002125502.	The Sundstrom orphan site is located around five (5) miles north northwest of the project site on the western and opposite side of the Calumet River. As a result, this orphan site is not considered to be a potential concern for impacting the project site.	
IL RGA LUST (S115503323)	N/A	Crucible Steel	4501 West Courtland	The EDR facility detail report shows that this orphan site was found in the Illinois Recovered Government Archive for Leaking Underground Storage Tanks. The name "Crucible" can be searched in the E18and the results show that the site is located at 4501 West Courtland, Chicago, IL 60639, and the site is associated with Illinois Emergency Management Agency (IEMA) ID # = 920962 and the LPC # = 0316195034. The Illinois EPA site is also linked to the USEPA Facility Registry System (FRS) site with USEPA Registry ID # = 110005957848.	Based on the zip code and USEPA FRS listings, the correct address for this orphan UST site is 4501 W. Courtland Street, Chicago, IL 60639. This location is approximately 18 miles northwest of the project site. As a consequence, this orphan site is not a potential concern for impacting the project site.	

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
FINDS (1016304994)	60617	Vessel Slips Adjacent to Wisconsin	South of 106th Street	The EDR facility detail report shows that this orphan site was identified in the FINDS database with USEPA Registry ID # = 110013803429 and the site was also listed in the CERCLIS database and has a USEPA ID # ILN000508208. The site is listed in the FRS database (see comments) and there is a link to Superfund site information that indicates discovery was completed on 25 Aug. 2000, a preliminary assessment was completed 30 Aug. 2001, where the site was assigned code H = higher priority for further assessment, and a national priorities list responsible party search was completed 7 Feb. 2002. The USEPA site indicates the State is the lead. The Illinois EPA Bureau of Land (BOL) inventory database (see comments) was searched using the site name = Wisconsin Steel." The results are associated with IL BOL ID # = 0316485097 and facility name = Wisconsin Steel Mooring Slips at 11002 S. Torrence Ave, Chicago, IL. The IL BOL also lists the "Wisconsin Steel Works Trust" facility name at 2800 E. 106th St., IL BOL ID # 0316510002. The IL BOL ID # = LPC # for the Wisconsin Steel mooring slips = 0316485097 is linked to the Site Remediation Program, and the information shows that the slips received two (2) comprehensive No Further Remediation (NFR) letters; the first one is dated 22 Dec. 2011 for the North Slip, 4.1 acres, and the other one is dated 20 Dec 2013 for the South Slip, 4.774 acres, and reportedly has a clean soil engineered barrier.	The slips are located approximately a mile north of the project site and the IL BOL indicates both slips received comprehensive NFR letters. The slips are located on the western and opposite side of the Calumet River. The contaminated Wisconsin Steel vessel slips are located upstream from the project site, so contaminated sediment could potentially migrate downstream towards the project site. However, the Illinois EPA information suggests that the contamination in the slips has been adequately addressed and they are located a considerable distance away. As a result, it appears that there is a low potential for this orphan site to impact the project site.	The USEPA Facility Restistry System (FRS) database = http://www.epa.gov/enviro/html/fii/fii_query_java.html. The Illinois EPA Bureau of land (BOL) database = http://epadata.epa.state.il.us/land/inventory/.
IL LUST (S112351894)	60633	Chicago Dept. of Transportation	13007 Torrece Avenue	The EDR facility detail report indicates this orphan site is an IL Leaking Underground Storage Tank (LUST) site, with Incident # = 20121279 = Illinois Emergency Management Agency (IEMA) # and Illinois EPA BOL ID # = 0316555119. The incident can be searched in the Illinois EPA L.U.S.T Incident Tracking database (see comments) using the IL EPA ID # = LPC #, but the database lists the same address information listed in the EDR report. A search of the EPA BOL ID # in the AFIIS database (see comments) shows that the address is actually at 13007 S **Torrence** Ave., Chicago, IL 60633, which is roughly located a mile southwest of the project site. The IL BOL L.U.S.T. Incident Tracking database site shows a Notice of Release Letter was sent 14 Dec. 2012 and miscellaneous correspondence was received on 18 Mar. 2013. The office of the State Fire Marshal database (see comments) was searched using the zip code = 60633 for all sites, and it listed Facility # = 2040125 for a vacant parcel with the same owner name at the same address = 13007 S. Torrence Ave. This database lists seven (7) underground storage tanks (USTs) with product = gasoline, diesel fuel, or kerosene, but the status values for all these tanks is either "Does Not Exist" or "Exempt from registration." The City of Chicago Data Portal (see comments) indicates that on 14 Mar 2013, the owner removed Tank #2, a 4,000 gal. gasoline tank and Tank #7, a 1,000 gal. tank (actual size = 250 gal.). The rest of the tanks, 3,4,5 and 6 were not found for IEMA # H2012-1279.	This orphan site is located roughly a mile to the southwest of the project site and the status values for the tanks indicates they either do not exist or they are exempt from registration. It is evident from the IL BOL L.U.S.T Incident Tracking database that a release occurred at this orphan site, but the site is a considerable distance away and the lack of any response or cleanup records from the Illinois EPA and / or the City of Chicago indicates that the release was minor or cleanup procedures were sufficient to protect human health and the environment. As a consequence, it seems that there is a low potential for this LUST release to impact the project site.	Illinois EPA L.U.S.T. Incident Tracking Database = http://epadata.epa.state.il.us/land/ust/, Illinois EPA BOL Agency Facility Inventory and Information Search System (AFIIS) = http://epadata.epa.state.il.us/tiefiledata/. The Office of the State Fire Marshal database = http://webapps.sfm.illinois.gov/ustsearch/Search.aspx. The City of Chicago Data Portal = https://data.cityofchicago.org/ and inspections of sites and environmental records are included with the Chicago Department of Public Health (CDPH) dataset.

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
CERCLIS	60617	Avenue O and 118th Street	Avenue O and 118th Street	A search of the Envirofacts Facility Registry System (FRS) using zip code = 60617 reveals 526 facilities. By zooming in to the project site, a site appears at the corner of E. 118th and S. Avenue O that was not identified in the EDR report. The FRS shows the site has EPA Registry ID # = 110009283783 and EPA ID # = ILD981194087. The EPA ID # links the site to the Superfund database. The Superfund database shows the site name = "Avenue O & 118th Street" and the status is "Not on the NPL." Discovery, preliminary assessment (L = low priority for further assessment), and site inspection (N = No Further Remediation Action Planned (NFRAP)-site does not qualify for the NPL based on existing information) were completed in 1986. Expanded site inspection was completed in 1997, and the site was recommended for hazardous ranking system (HRS) scoring. A search of the IL BOL inventory database using the EPA ID # revealed a BOL Inventory # = 0316000012, site name = Avenue "O", and Tie File # = 170000387472. The IL BOL inventory database results also link to further results that indicate the site is located on Avenue O between 116th Street and 118th Street and the Owner and Operator is listed as Republic Steel Corp. A search for the EPA ID # at the freedom of information act (FOIA) online site (see comments) for all types of documents from the U.S. Environmental Protection Agency resulted in 5 items, and the first item had Tracking Number = EPA-R5-2015-004529 and requester = Jordon Carey (submitted 18 Mar. 2015. The Tracking Number is a link to "Record Details," webpage that has links to a Department of Justice "DOJ_Index" Microsoft Excel file with an index of documents and "request tracking number" that links to the released records.	One of the FOIA documents for the Avenue O and 118th Street site is document 000000291525 = Expanded Site Information Final Report, dated December 1996. The DOJ index file indicates this report was prepared for the USEPA by Black and Veatch. The report details the site history, inspection activities, source characterization, and discussion of migration pathways. The site is located east of Avenue O, between 116th Street and 118th Street, and roughly west of Ewing Ave. Apparently, the Illinois EPA initially declared the Avenue O site an illegal dump in 1974. Site history prior to 1974 is unknown, and a site investigation was not conducted until 1986, after a shopping mall and residential subdivision covered a large portion of the site. A low priority site inspection status was recommended in 1986 because of "the lack of information about what is presently at the site." At that time, there was no evidence of hazardous waste activities or the release of hazardous substances. A preliminary reassessment was performed in 1991 that recommended medium priority site inspection status because of concern that residents could be exposed to possible surficial contamination. Most of the former dump site has been developed into a residential area with a shopping mall and other businesses. Soil and sediment samples collected in 1994 indicated that some of the soils on the site and sediments in the adjacent wetlands east of the site were contaminated. Contaminants included semivolatile organic compounds (primarily polycyclic aromatic hydrocarbons (PAHs)), polychlorinated biphenyls (PCBs), and inorganic hazardous constituents (metals). Evidently, this CERLIS site is active but a low priority. The presence of the contaminated soils on the site adjacent to the project site is a **Recognized Environmental Condition (REC)** because it is likely that similar illegal dumping was taking place on the project site and the groundwater migration pathway was not assessed.	A database of Freedom of Information Act (FOIA) requests that have previously been provided can be searched at the following website: https://foiaonline.regulations.gov/foia/action/public/search/#

Table 3: EDR Orphan Site Search Results						
Due to poor or inadequate address information, EDR did not map the following sites:						
Database(s) (see EDR report) & (EDR ID #)	**Zip**	**Site Name**	**Listed Site Address**	**Status**	**Potential Impact**	**Comments**
Definitions & notes:						
FINDS: Facility Index System/Facility Registry System Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System). ACES (Illinois - Agency Compliance And Enforcement System) is the Illinois EPA Project to facilitate the permitting operations.						
FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.						
Northeastern Illinois Planning Commission (NIPC) database has an inventory of active and inactive solid waste disposal sites. NIPC and Chicago Area Transportation Study (CATS) were merged into the Chicago Metropolitan Agency for Planning (CMAP). CMAP Data Hub (https://datahub.cmap.illinois.gov) has a dataset titled "NIPC Historical Inventory of Solid Waste Disposal Sites in Northeastern Illinois." Within this dataset, there are two subsets of data from 1986, the "Cook Solid Waste Site List" and "North Cook Map Solid Waste Sites" that can be used together to help find former solid waste sites.						
CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System. CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL..						
CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.						
N/A = Not Available						
AFS = (Aerometric Information Retrieval System (AIRS) Facility Subsystem). AIRS is the national repository for information concerning airborne pollution in the U.S. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare state implementation plans and by USEPA to estimate total national emissions.						
NAICS = National Industry Classification System Codes						

Attachments

(Available upon request)

printed 05/27/2014 9:04AM by Elizabeth Ilowski p. 1/27 05/29/2009 1:52PM L 170001576097 0316555091 REPUBLIC STEEL 31A 02/03/2006 472.442 L010103 L16-00877 B:43355 F:50497 I:00000143 EPA4247
03/01/2006 EPA4273 05/29/2009 RECORDED NFR

06-28279

0316555091
Republic Steel
SR/Hec H

CARLSON ENVIRONMENTAL

February 3, 2006

PN 2158C

Mr. Robert O'Hara
IEPA Bureau of Land/RPMS
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

RE: Recorded NFR Letter
LPC #0316555091 - Cook County
Chicago/Former Republic Steel
Site Remediation/Technical Reports

Dear Mr. O'Hara:

Enclosed is a certified copy of the NFR Letter, for the above-referenced site, as recorded by the Cook County Recorder of Deeds. If you have any questions or require additional information, please contact me at (312) 346-2140.

Sincerely,

CARLSON ENVIRONMENTAL, INC.

Bruce A. Shabino, P.G.
Senior Project Manager

enclosure

cc: Daniel Murphy, DM LLC

RECEIVED
FEB 0 8 2006
IEPA/BOL

RELEASABLE
FEB 1 5 2006
REVIEWER MM

65 East Wacker Place · Suite 1500 · Chicago, Illinois 60601 · Phone (312) 346-2140 · Fax (312) 346-6956 · www.carlsonenv.com

printed 05/27/2014 9:04AM by Elizabeth Ilowski p. 2/27

PREPARED BY:

Name: Mr. Daniel Murphy
DM LLC

Address: One Pierce Place
Suite 200E
Itasca, IL 60143

Doc#: 0600555131 Fee: $72.00
Eugene "Gene" Moore RHSP Fee:$10.00
Cook County Recorder of Deeds
Date: 01/05/2006 01:52 PM Pg: 1 of 25

RETURN TO:

Name: Mr. Daniel Murphy
DM LLC

Address: One Pierce Place
Suite 200E
Itasca, IL 60143

THE ABOVE SPACE FOR RECORDER'S OFFICE

The remediation applicant must submit this Environmental No Further Remediation Letter within 45 days of its receipt, to the Office of the Recorder of Cook County.

Illinois State EPA Number: 0316555091

DM LLC, the Remediation Applicant, whose address is One Pierce Place Suite 200E, Itasca, IL 60143 has performed investigative and/or remedial activities for the remediation site depicted on the attached Site Base Map and identified by the following:

1. Legal description or Reference to a Plat Showing the Boundaries:

RECEIVED
FEB 0 8 2006
IEPA/BOL

Property Legal Description:

PARCEL 1:

THAT PART OF LOT 6 IN THE DIVISION OF THE NORTH 102 ACRES OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE EAST LINE OF SECTION 19 AND A LINE 1283.00 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 19; THENCE SOUTH 00 DEGREES 14 MINUTES 59 SECONDS WEST ON THE EAST LINE OF THE NORTHEAST 1/4 OF SECTION 19, 152.50 FEET TO THE SOUTHEAST CORNER OF SAID LOT 6; THENCE NORTH 89 DEGREES 14 MINUTES 15 SECONDS WEST ON THE SOUTH LINE OF SAID LOT 6 (SAID LINE BEING PARALLEL TO THE NORTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 19), 1355.71 FEET TO A POINT ON THE SOUTHERLY PROJECTION OF THE EASTERLY BOUNDARY LINE OF PROPERTY CONVEYED AS PARCEL "A" BY REPUBLIC STEEL CORPORATION TO DEFENSE PLANT CORPORATION BY DEED DATED FEBRUARY 17, 1943 RECORDED IN THE RECORDER'S OFFICE OF COOK COUNTY, ILLINOIS AS DOCUMENT NUMBER 13047028, SAID EASTERLY BOUNDARY LINE PROJECTED SOUTHERLY BEING COMMON WITH THE EASTERLY

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

(217) 782-6761

December 8, 2005

CERTIFIED MAIL
7004 2510 0001 8646 6868

Mr. Daniel Murphy
DM LLC
One Pierce Place
Suite 200E
Itasca, IL 60143

Re: 0316555091 /Cook
Chicago /Republic Steel
Site Remediation Program/Technical Reports
No Further Remediation Letter

Dear Mr. Murphy:

The *Remedial Action Completion Report* (August 23, 2005/Log Number 05-26159), as prepared by Carlson Environmental, Inc. for the above referenced Remediation Site, has been reviewed by the Illinois Environmental Protection Agency ("Illinois EPA") and demonstrates that the remedial action was completed in accordance with 35 Illinois Administrative Code Parts 740 and 742.

The Remediation Site, consisting of 204 acres, is located at 12200 South Avenue O, Chicago, Illinois. Pursuant to Section 58.10 of the Illinois Environmental Protection Act ("Act") (415 ILCS 5/1 et seq.), your request for a no further remediation determination is granted under the conditions and terms specified in this letter. The Remediation Applicant, as identified on the Illinois EPA's Site Remediation Program DRM-1 Form received August 30, 2004 is DM LLC.

This focused No Further Remediation Letter ("Letter") signifies a release from further responsibilities under the Act for the performance of the approved remedial action. This Letter shall be considered prima facie evidence that the Remediation Site described in the attached Illinois EPA Site Remediation Program Environmental Notice and shown in the attached Site Base Map does not constitute a threat to human health and the environment for the specified recognized environmental conditions so long as the Site is utilized in accordance with the terms and conditions of this Letter.

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Conditions and Terms of Approval

Level of Remediation and Land Use Limitations

1) The land use specified in this Letter may be revised if:

   a) Further investigation or remedial action has been conducted that documents the attainment of objectives appropriate for the new land use.

   b) A new Letter is obtained and recorded in accordance with Title XVII of the Act and regulations adopted thereunder.

2) The Remediation Site is restricted to Industrial/Commercial land use.

3) The recognized environmental conditions, as characterized by the focused site investigation, consist of the following:

   a) Regulated substances of concern that have been successfully addressed are detailed in the attached Table A.

Institutional Controls:

4) Section 11-8-390 of the Municipal Code of Chicago (Potable Water Wells), effectively prohibits the installation and the use of potable water supply wells and is an acceptable institutional control under the following conditions:

   a) Where a groundwater ordinance is used to assure long-term protection of human health, the Remediation Applicant must record a copy of the groundwater ordinance adopted and administered by the City of Chicago along with this Letter.

   b) The Remediation Applicant shall provide written notification to the City of Chicago and to owner(s) of all properties under which groundwater contamination attributable to the Remediation Site exceeds the objectives approved by the Illinois EPA. The notification shall include:

      i) The name and address of the local unit of government;

      ii) The citation of Section 11-8-390

      iii) A description of the property for which the owner is being sent notice by adequate legal description or by reference to a plat showing the boundaries;

      iv) A statement that the ordinance restricting the groundwater use has been used by the Illinois EPA in reviewing a request for groundwater remediation objectives;

      v) A statement as to the nature of the release and response action with the name, address, and Illinois EPA inventory identification number; and

      vi) A statement as to where more information may be obtained regarding the ordinance.

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c) Written proof of this notification shall be submitted to the Illinois EPA within forty-five (45) days from the date of this Letter to.

Robert E. O'Hara
Illinois Environmental Protection Agency
Bureau of Land/RPMS
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

d) The following activities shall be grounds for voidance of the ordinance as an institutional control and this Letter:

i) Modification of the referenced ordinance to allow potable uses of groundwater;

ii) Approval of a site-specific request, such as a variance, to allow use of groundwater at the Remediation Site or at the affected properties;

iii) Failure to provide written proof to the Illinois EPA within forty-five (45) days from the date of this Letter of written notification to the City of Chicago and affected property owner(s) of the intent to use Section 11-8-390 of the Municipal Code of Chicago (Potable Water Wells), as an institutional control at the Remediation Site; and

iv) Violation of the terms and conditions of this No Further Remediation letter.

Other Terms

5) At a minimum, a safety plan should be developed to address possible worker exposure in the event that any future excavation and construction activities may occur within the contaminated soil. Areas of the site requiring a safety plan are shown on the attached site base map. Any excavation within the contaminated soil will require implementation of a safety plan consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, OSHA regulations (particularly in 29 CFR 1910 and 1926), state and local regulations, and other USEPA guidance. Soil excavated below in the areas shown on the attached site base map must be returned to the same depth from which it was excavated or properly managed or disposed in accordance with applicable state and federal regulations.

6) Where the Remediation Applicant is not the sole owner of the Remediation Site, the Remediation Applicant shall complete the attached *Property Owner Certification of the No Further Remediation Letter under the Site Remediation Program* Form. This certification, by original signature of each property owner, or the authorized agent of the owner(s), of the Remediation Site or any portion thereof who is not a Remediation Applicant shall be recorded along with this Letter.

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7) Further information regarding this Remediation Site can be obtained through a written request under the Freedom of Information Act (5 ILCS 140) to:

Illinois Environmental Protection Agency
Attn: Freedom of Information Act Officer
Bureau of Land-#24
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

8) Pursuant to Section 58.10(f) of the Act (415 ILCS 5/58.10(f)), should the Illinois EPA seek to void this Letter, the Illinois EPA shall provide notice to the current titleholder and to the Remediation Applicant at the last known address. The notice shall specify the cause for the voidance, explain the provisions for appeal, and describe the facts in support of this cause. Specific acts or omissions that may result in the voidance of the Letter under Sections 58.10(e)(1)-(7) of the Act (415 ILCS 5/58.10(e)(1)-(7)) include, but shall not be limited to:

a) Any violation of institutional controls or the designated land use restrictions;

b) The failure to operate and maintain preventive or engineering controls or to comply with any applicable groundwater monitoring plan;

c) The disturbance or removal of contamination that has been left in-place in accordance with the Remedial Action Plan. Access to soil contamination may be allowed if, during and after any access, public health and the environment are protected consistent with the Remedial Action Plan;

d) The failure to comply with the recording requirements for this Letter;

e) Obtaining the Letter by fraud or misrepresentation;

f) Subsequent discovery of contaminants, not identified as part of the investigative or remedial activities upon which the issuance of the Letter was based, that pose a threat to human health or the environment;

g) The failure to pay the No Further Remediation Assessment Fee within forty-five (45) days after receiving a request for payment from the Illinois EPA;

h) The failure to pay in full the applicable fees under the Review and Evaluation Services Agreement within forty-five (45) days after receiving a request for payment from the Illinois EPA.

9) Pursuant to Section 58.10(d) of the Act, this Letter shall apply in favor of the following persons:

a) DM LLC;

b) The owner and operator of the Remediation Site;

c) Any parent corporation or subsidiary of the owner of the Remediation Site;

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d) Any co-owner, either by joint-tenancy, right of survivorship, or any other party sharing a relationship with the owner of the Remediation Site;

e) Any holder of a beneficial interest of a land trust or inter vivos trust, whether revocable or irrevocable, involving the Remediation Site;

f) Any mortgagee or trustee of a deed of trust of the owner of the Remediation Site or any assignee, transferee, or any successor-in-interest thereto;

g) Any successor-in-interest of the owner of the Remediation Site;

h) Any transferee of the owner of the Remediation Site whether the transfer was by sale, bankruptcy proceeding, partition, dissolution of marriage, settlement or adjudication of any civil action, charitable gift, or bequest;

i) Any heir or devisee of the owner of the Remediation Site;

j) Any financial institution, as that term is defined in Section 2 of the Illinois Banking Act and to include the Illinois Housing Development Authority, that has acquired the ownership, operation, management, or control of the Remediation Site through foreclosure or under the terms of a security interest held by the financial institution, under the terms of an extension of credit made by the financial institution, or any successor-in-interest thereto; or

k) In the case of a fiduciary (other than a land trustee), the estate, trust estate, or other interest in property held in a fiduciary capacity, and a trustee, executor, administrator, guardian, receiver, conservator, or other person who holds the remediated site in a fiduciary capacity, or a transferee of such party.

10) This letter, including all attachments, must be recorded as a single instrument within forty-five (45) days of receipt with the Office of the Recorder of Cook County. For recording purposes, the Illinois EPA Site Remediation Program Environmental Notice attached to this Letter should be the first page of the instrument filed. This Letter shall not be effective until officially recorded by the Office of the Recorder of Cook County in accordance with Illinois law so that it forms a permanent part of the chain of title for the Remediation Site.

11) Within thirty (30) days of this Letter being recorded by the Office of the Recorder of Cook County, a certified copy of this Letter, as recorded, shall be obtained and submitted to the Illinois EPA to:

Robert E. O'Hara
Illinois Environmental Protection Agency
Bureau of Land/RPMS
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

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12) In accordance with Section 58.10(g) of the Act, a No Further Remediation Assessment Fee based on the costs incurred for the Remediation Site by the Illinois EPA for review and evaluation services will be applied in addition to the fees applicable under the Review and Evaluation Services Agreement. Request for payment of the No Further Remediation Assessment Fee will be included with the billing statement.

If you have any questions regarding this correspondence, you may contact the Illinois EPA project manager, Mr. Steve McCaslin at (217) 782-6760.

Sincerely,

Lawrence W. Eastep, P.E., Manager
Remedial Project Management Section
Division of Remediation Management
Bureau of Land

Attachments(2): Property Owner Certification of No Further Remediation Letter under the Site Remediation Program Form
Notice to Remediation Applicant

cc: Bruce A. Shabino
Carlson Environmental, Inc.
65 East Wacker Place
Suite 1500
Chicago, IL 60601

Commissioner
Chicago Department of Environment
25th Floor
30 North LaSalle Street
Chicago, Illinois 60602-2575

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BOUNDARY LINE OF A PARCEL OF LAND CONVEYED BY DEFENSE PLANT CORPORATION TO SOUTH CHICAGO AND SOUTHERN RAILROAD COMPANY BY DEED DATED JUNE 2, 1945 AND RECORDED IN THE RECORDER'S OFFICE OF COOK COUNTY, ILLINOIS AS DOCUMENT NUMBER 13540700; THENCE NORTH 00 DEGREES 23 MINUTES 40 SECONDS EAST (ON THE LAST DESCRIBED EASTERLY BOUNDARY LINE PROJECTED SOUTHERLY), 152.50 FEET TO A POINT ON A LINE 1283.00 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 19, THENCE SOUTH 89 DEGREES 14 MINUTES 15 SECONDS EAST ON THE LAST DESCRIBED LINE, 1355.33 FEET TO THE POINT OF BEGINNING (EXCEPT THEREFROM THE EAST 65 FEET THEREOF); ALSO

LOT 7 (EXCEPT THAT PART THEREOF LYING WEST OF THE EAST LINE OF THE SOUTHERLY PROJECTION OF THE EASTERLY BOUNDARY LINE OF PROPERTY CONVEYED AS PARCEL "A" BY REPUBLIC STEEL CORPORATION TO DEFENSE PLANT CORPORATION BY DEED DATED FEBRUARY 17, 1943 AND RECORDED AS DOCUMENT 13047028, SAID EASTERLY BOUNDARY LINE PROJECTED SOUTHERLY BEING COMMON WITH THE EASTERLY BOUNDARY LINE OF A PARCEL OF LAND CONVEYED BY DEFENSE PLANT CORPORATION TO SOUTH CHICAGO AND SOUTHERN RAILROAD COMPANY BY DEED DATED JUNE 2, 1945 AND RECORDED AS DOCUMENT 13540700, AND EXCEPT THE EAST 65 FEET THEREOF) ALL IN THE DIVISION OF THE NORTH 102 ACRES OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; ALSO

THAT PART, IF ANY, OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING NORTH OF THE NORTH LINE OF MEA'S SUBDIVISION OF PART OF THE SOUTH EAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 19, SOUTH OF THE SOUTH LINE OF LOT 7 OF THE DIVISION OF THE NORTH 102 ACRES OF THE NORTHEAST 1/4 OF SECTION 19, WEST OF THE WEST LINE OF AVENUE "O" AND EAST OF THE CENTER LINE OF THE VACATED ALLEY LYING WEST OF AND ADJOINING LOTS 53 TO 60 BOTH INCLUSIVE, IN MEA'S SUBDIVISION, EXTENDED NORTHERLY; ALSO

THAT PART, IF ANY, LYING NORTH OF A LINE PARALLEL TO AND 957 FEET NORTH OF THE SOUTH LINE OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, OF LOTS 1, 26, 27, 52 AND 53 IN MEA'S SUBDIVISION OF PARTS OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 19; ALSO

THAT PART, IF ANY, OF THE FOLLOWING COURSES, LYING NORTH OF A LINE PARALLEL TO AND 957 FEET NORTH OF THE SOUTH LINE OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, AS FOLLOWS:

(A) THE NORTH AND SOUTH 16 FOOT ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 1 TO 8 BOTH INCLUSIVE, AND EAST OF AND ADJOINING THE EAST LINE OF LOTS 19 TO 26 BOTH INCLUSIVE IN MEA'S SUBDIVISION OF PART OF THE SOUTH EAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 19;

(B) THE NORTH AND SOUTH 16 FOOT ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 27 TO 34 BOTH INCLUSIVE AND EAST OF AND ADJOINING THE EAST LINE OF LOTS 45 TO 52 BOTH INCLUSIVE IN MEA'S SUBDIVISION, AFORESAID;

(C) THE EAST 8 FEET OF THE NORTH AND SOUTH 15 FOOT ALLEY LYING WEST OF AND ADJOINING LOTS 53 TO 60 BOTH INCLUSIVE, IN MEA'S SUBDIVISION AFORESAID AND EAST OF AND ADJOINING LOTS 1 TO 12 BOTH INCLUSIVE IN BLOCK 1 IN INDIAN RIDGE SUBDIVISION, BEING A SUBDIVISION OF 40 ACRES IN THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 19 AFORESAID;

(D) GREEN BAY AVENUE LYING WEST OF AND ADJOINING LOTS 19 TO 26 BOTH INCLUSIVE AND EAST OF AND ADJOINING LOTS 27 TO 34 BOTH INCLUSIVE, IN MEA'S SUBDIVISION AFORESAID;

(E) MACKINAW AVENUE LYING WEST OF AND ADJOINING LOTS 45 TO 52 BOTH INCLUSIVE AND EAST OF AND ADJOINING LOTS 52 TO 60 BOTH INCLUSIVE IN MEA'S SUBDIVISION AFORESAID, ALL IN COOK COUNTY, ILLINOIS.

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PARCEL 1A: A NON-EXCLUSIVE EASEMENT FOR THE BENEFIT OF PARCELS 1 THROUGH 9 HEREIN, AS CREATED BY EASEMENT AGREEMENT DATED NOVEMBER 28, 1989 AND RECORDED DECEMBER 1, 1989 AS DOCUMENT NUMBER 89572950, BY AND BETWEEN LTV STEEL COMPANY, INC., A NEW JERSEY CORPORATION, AND REPUBLIC ENGINEERED STEELS, INC., A DELAWARE CORPORATION, PURSUANT TO PARAGRAPH 1, AS FOLLOWS:

ROADWAY EASEMENT: A 66 FOOT INGRESS-EGRESS EASEMENT ALONG 116TH STREET LYING BETWEEN AVENUE "O" AND THE WEST LINE OF PARCEL 1 (AS DESCRIBED ABOVE) EXTENDED NORTH, LYING WITHIN THE FOLLOWING DESCRIBED PROPERTY:

THE SOUTH 66 FEET OF THE NORTH 1283 FEET OF THE EAST 1471 FEET, AS MEASURED ON A LINE 1283 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

PARCEL 2:

LOTS 1 TO 65 BOTH INCLUSIVE IN MEA'S SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN,

(EXCEPTING THEREFROM THOSE PARTS DESCRIBED AS FOLLOWS:

THE EAST 32 FEET OF LOTS 1 TO 8 BOTH INCLUSIVE AND THAT PART OF LOT 8 DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTH LINE OF LOT 8 DISTANT 80 FEET WEST OF (AS MEASURED AT RIGHT ANGLES TO) THE EAST LINE OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; THENCE NORTHEASTERLY ALONG A STRAIGHT LINE A DISTANCE OF 21.213 FEET TO A POINT LYING 15 FEET NORMALLY DISTANT NORTH OF THE AFORESAID SOUTH LINE OF LOT 8 AND 65 FEET NORMALLY DISTANT WEST OF THE AFORESAID EAST LINE OF SECTION 19; THENCE SOUTH PARALLEL WITH THE SAID EAST LINE A DISTANCE OF 15 FEET TO A POINT ON THE SOUTH LINE OF AFORESAID LOT 8; THENCE WEST ALONG SAID SOUTH LOT LINE A DISTANCE OF 15 FEET TO THE POINT OF BEGINNING;

ALSO EXCEPT THE EAST 32 FEET OF LOTS 9 TO 13 INCLUSIVE AND THAT PART OF LOT 9 DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTH LINE OF SAID LOT 9 DISTANT 65 FEET WEST OF (AS MEASURED AT RIGHT ANGLES TO) THE EAST LINE OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; THENCE WEST ALONG THE SAID NORTH LINE OF LOT 9 A DISTANCE OF 15 FEET TO A POINT; THENCE SOUTHEASTERLY ALONG A STRAIGHT LINE A DISTANCE OF 21.213 FEET TO A POINT LYING 15 FEET NORMALLY DISTANT SOUTH OF THE AFORESAID NORTH LINE OF LOT 9 AND 65 FEET NORMALLY DISTANT WEST OF THE EAST LINE OF SAID SECTION 19; THENCE NORTH PARALLEL WITH THE SAID EAST LINE A DISTANCE OF 15 FEET TO THE POINT OF BEGINNING) IN MEA'S SUBDIVISION OF PART OF THE SOUTH EAST 1/4 OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, (AND ALSO EXCEPTING THAT PART, IF ANY, LYING NORTH OF A LINE PARALLEL TO AND 957 FEET NORTH OF THE SOUTH LINE OF SAID NORTHEAST ¼ OF SAID LOTS 1, 26, 27, 52 AND 53); ALSO

ALL THAT PART OF THE NORTH AND SOUTH 16 FOOT VACATED ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 35 TO 39 BOTH INCLUSIVE AND EAST OF AND ADJOINING THE EAST LINE OF LOTS 40 TO 44 BOTH INCLUSIVE IN MEA'S SUBDIVISION OF PART OF THE SOUTH EAST ¼ OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; ALSO ALL THAT PART OF THE NORTH AND SOUTH 15 FOOT VACATED ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 53 TO 65 BOTH INCLUSIVE IN MEA'S SUBDIVISION AFOREMENTIONED AND EAST OF AND ADJOINING THE EAST LINE OF LOTS 1 TO 6 BOTH INCLUSIVE, AND THE NORTH 18 FEET OF LOT 7, ALL IN BLOCK 12 OF INDIAN RIDGE SUBDIVISION OF

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PART OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15 EAST OF THE THIRD PRINCIPAL MERIDIAN; ALSO

ALL THAT PART OF VACATED MACKINAW AVENUE LYING WEST OF AND ADJACENT TO LOTS 40 TO 44 AND EAST OF AND ADJACENT THE EAST LINE OF LOTS 61 TO 65 IN MEA'S SUBDIVISION AFORESAID; ALSO

ALL THAT PART OF VACATED GREEN BAY AVENUE LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 14 TO 18 BOTH INCLUSIVE AND LYING EAST OF AND ADJOINING THE EAST LINE OF LOTS 35 TO 39, BOTH INCLUSIVE, ALL IN MEA'S SUBDIVISION OF PART OF THE SOUTH EAST ¼ OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; ALSO, ALL OF THE NORTH AND SOUTH 16 FOOT VACATED ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 9 TO 13 AND LYING EAST OF AND ADJOINING THE EAST LINE OF LOTS 14 TO 18 BOTH INCLUSIVE IN MEA'S SUBDIVISION AFORESAID.

PARCEL 3:

(A) LOTS 1 TO 12 IN BLOCK 1;

(B) LOTS 1 TO 24 IN BLOCK 2; AND

(C) LOTS 3, 5 TO 8, 15 TO 18, 19 (EXCEPT SOUTH 8 FEET), 29 TO 33, 42 TO 46 AND THE SOUTH ½ OF LOT 47 IN BLOCK 11, LOTS 1 TO 24, BOTH INCLUSIVE, IN BLOCK 12 IN INDIAN RIDGE SUBDIVISION OF PART OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; AND

(D) LOTS 1 TO 5 IN RESUBDIVISION OF THE SOUTH 8 FEET OF LOT 19, AND ALL OF LOTS 20 TO 24 IN BLOCK 11 INDIAN RIDGE SUBDIVISION OF PART OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; ALSO

LOT 9 (EXCEPT THE NORTH 16 FEET THEREOF AND EXCEPT THAT PART THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF SAID LOT 9, 23 FEET SOUTH OF THE NORTH LINE OF SAID LOT; THENCE NORTH 7 FEET ON THE WEST LINE OF SAID LOT; THENCE EAST 7 FEET ON THE SOUTH LINE OF THE NORTH 16 FEET OF LOT 8; THENCE SOUTHWESTERLY TO THE POINT OF BEGINNING, AS DEDICATED FOR ALLEY BY DOCUMENT 11279600) AND ALL OF LOTS 10 TO 14 BOTH INCLUSIVE, LOT 34 (EXCEPT THE SOUTH 16 FEET THEREOF AND THAT PART THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 34; THENCE SOUTH ON THE EAST LINE OF SAID LOT TO THE NORTH LINE OF THE SOUTH 16 FEET OF SAID LOT, THENCE WEST ON THE NORTH LINE OF THE SOUTH 16 FEE OF SAID LOT, 7 FEET AND THENCE NORTHEASTERLY TO THE POINT OF BEGINNING, AS DEDICATED FOR ALLEY BY DOCUMENT NUMBER 11279600), AND ALL OF LOTS 35 TO 38, BOTH INCLUSIVE, IN BLOCK 11 IN INDIAN RIDGE SUBDIVISION, BEING A SUBDIVISION OF 40 ACRES IN THE SOUTHWEST CORNER OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 13, EAST OF THE THIRD PRINCIPAL MERIDIAN IN COOK COUNTY ILLINOIS; ALSO

ALL THAT PART OF THE NORTH AND SOUTH 14 FOOT VACATED ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOTS 11 TO 14, BOTH INCLUSIVE, AND LYING EAST OF AND ADJOINING THE EAST LINE OF LOTS 35 TO 38, BOTH INCLUSIVE; ALSO A TRIANGULAR PART OF THE NORTH AND SOUTH 14 FOOT VACATED ALLEY LYING WEST OF AND ADJOINING THE WEST LINE OF LOT 10 DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 10; THENCE WEST 4 FEET ON THE SOUTH LINE OF SAID LOT 10, PRODUCED WEST; THENCE NORTHEASTERLY ON A STRAIGHT LINE TO THE WEST LINE OF SAID LOT 10 TO A POINT 4 FEET NORTH OF THE SOUTHWEST CORNER OF SAID LOT 10; THENCE SOUTH 4 FEET TO THE POINT OF BEGINNING, ALL IN BLOCK 11 OF INDIAN RIDGE SUBDIVISION OF PART OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN; ALSO

ALL THAT PART OF THE NORTH AND SOUTH 7 FOOT VACATED ALLEY LYING EAST OF THE SOUTH 7 FEET OF LOT 7 AND LOTS 8 TO 24, BOTH INCLUSIVE, IN BLOCK 12 OF INDIAN RIDGE SUBDIVISION AFOREMENTIONED; ALSO ALL THAT PART OF VACATED MAKINAW AVENUE LYING WEST OF AND

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ADJOINING THE WEST LINE OF LOTS 40 TO 44, BOTH INCLUSIVE, AND EAST OF AND ADJOINING THE EAST LINE OF LOTS 61 TO 65 BOTH INCLUSIVE ALL IN MEA'S SUBDIVISION AFOREMENTIONED.

PARCEL 4:

THE EAST 880 FEET OF THE SOUTH 462 FEET (EXCEPTING THEREFROM THE SOUTH 33 FEET THEREOF DEDICATED FOR EAST 118TH STREET AND ALSO EXCEPTING THEREFROM THE EAST 33 FEET THEREOF DEDICATED FOR SOUTH AVENUE "O") OF THE SOUTH EAST ¼ OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THEREFROM THE WEST 32 FEET OF THE EAST 65 FEET OF THE EAST 880 FEET OF THE NORTH 429 FEET OF THE SOUTH 462 FEET OF THE SOUTHEAST ¼ OF THE NORTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS).

PARCEL 5:

THAT PART OF THE SOUTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, IF SAID ¼ SECTION WERE SQUARED OUT AS IN DEED FROM CHARLES B. SHED AND WIFE TO JOHN H. HARDIN, JAMES C. KIMBERLY AND REGINALD H. HARDIN, TRUSTEES, DATED FEBRUARY 16, 1920 AND RECORDED APRIL 20, 1920 AS DOCUMENT NUMBER 6798311 LYING EAST OF THE 14 FOOT STRIP OF LAND CONVEYED TO THE CITY OF CHICAGO FOR THE WIDENING OF BURLEY AVENUE BY DEED DATED SEPTEMBER 29, 1918 AND RECORDED JUNE 17, 1918 AS DOCUMENT NUMBER 6342639 AND SOUTH OF THE SOUTH LINE OF EAST 118TH STREET (EXCEPT THE EAST 50 FEET THEREOF) AND (EXCEPT THE WEST 15 FEET OF THE EAST 65 FEET OF THE SOUTH 782.05 FEET OF THE NORTH 815.05 FEET THEREOF) IN COOK COUNTY, ILLINOIS; ALSO

ALL THAT PART OF SOUTH BURLEY AVENUE DEDICATED BY DOCUMENT 2559611 TOGETHER WITH ALL THAT PART OF SOUTH BURLEY AVENUE DEEDED BY DOCUMENT 6342639 BEING 2 ADJOINING STRIPS OF LAND 66 FEET AND 14 FEET IN WIDTH, RESPECTIVELY, IN THE SOUTHEAST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING BETWEEN A LINE 33 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF THE SOUTHEAST ¼ OF SAID SECTION 19 AND A LINE 33 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF THE SOUTHEAST ¼ OF SAID SECTION 19, IN COOK COUNTY, ILLINOIS.

PARCEL 6:

THAT PART OF THE NORTH 1204.34 FEET OF THE NORTH ½ OF THE SOUTHEAST ¼ AND THE NORTH ½ OF THE SOUTHWEST ¼ OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING EAST OF THE EASTERLY CHANNEL LINE OF THE CALUMET RIVER AS ESTABLISHED BY SURVEY OF THE UNITED STATES ENGINEER'S OFFICE WAR DEPARTMENT (AS SHOWN ON SHEET NUMBER 6 DATED MARCH, 1939 AND SHEETS NUMBER 7 AND 8 DATED MARCH, 1938, (TITLED CONTROL SURVEY CALUMET RIVER, AND LYING WESTERLY OF THE WESTERLY RIGHT OF WAY LINE OF THAT PART OF THE SOUTH CHICAGO AND SOUTHERN RAILROAD RIGHT OF WAY LYING IN THE SOUTHEAST ¼ OF FRACTIONAL SECTION 19, SAID WESTERLY RIGHT OF WAY LINE DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE SOUTH LINE OF THE SOUTHEAST FRACTIONAL QUARTER OF SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, SAID POINT BEING 1192.98 FEET EAST OF THE SOUTHWEST CORNER OF THE SOUTHEAST ¼ OF SAID FRACTIONAL QUARTER SECTION 19; THENCE NORTH 0 DEGREES 21 MINUTES 45 SECONDS WEST ON A LINE 100 FEET WEST OF AND PARALLEL WITH THE WESTERLY LINE OF THE 66 FOOT STREET DEDICATED BY PLAT FILED FOR RECORD IN THE RECORDER'S OFFICE ON JULY 2, 1897 AS DOCUMENT 2559611, A DISTANCE OF 33 FEET TO THE POINT OF BEGINNING.

THENCE CONTINUING NORTH 00 DEGREES 21 MINUTES 45 SECONDS WEST ALONG THE WESTERLY RIGHT OF WAY LINE OF SAID RAILROAD A DISTANCE OF 2612.22 FEET TO THE NORTH LINE OF THE SOUTHEAST FRACTIONAL QUARTER OF SAID SECTION 19, SAID POINT BEING ON A LINE 100.93 FEET WEST OF THE EAST LINE OF THE WEST 28.60 FEET OF SOUTH BURLEY AVENUE (NOW VACATED) LYING IN THE NORTHEAST ¼ OF SAID SECTION 19 AND LYING SOUTHERLY OF THE FOLLOWING

DESCRIBED LINE: COMMENCING AT THE POINT OF INTERSECTION OF THE WESTERLY RIGHT OF WAY LINE OF SAID RAILROAD WITH THE NORTH LINE OF THE SOUTHEAST ¼ OF SECTION 19; THENCE SOUTH 0 DEGREES 21 MINUTES 45 SECONDS EAST OF THE WESTERLY RIGHT OF WAY OF SAID RAILROAD ABOVE-DESCRIBED, A DISTANCE OF 331.55 FEET TO A POINT OF BEGINNING; THENCE SOUTH 60 DEGREES 17 MINUTES 38 SECONDS WEST, A DISTANCE OF 1248.12 FEET TO A POINT; THENCE NORTH 72 DEGREES 13 MINUTES 18 SECONDS WEST A DISTANCE OF 111.05 FEET TO A POINT; THENCE SOUTH 60 DEGREES 38 MINUTES 23 SECONDS WEST A DISTANCE OF 382.20 FEET TO A POINT, SAID POINT BEING ON A LINE 78 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF THE NORTH 1204.34 FEET OF THE NORTH ½ OF THE SOUTHWEST ¼ OF SAID SECTION 19; THENCE NORTH 89 DEGREES 08 MINUTES 10 SECONDS WEST ON THE LAST DESCRIBED LINE A DISTANCE OF 287.95 FEET TO THE EASTERLY CHANNEL LINE OF THE CALUMET RIVER (DESCRIBED ABOVE), EXCEPTING FROM THE ABOVE-DESCRIBED PARCEL, THE EAST 39 FEET THEREOF, IN COOK COUNTY, ILLINOIS.

PARCEL 7:

THAT PART OF THE SOUTH ½ OF FRACTIONAL SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING WEST OF A CERTAIN TRACT OF LAND CONVEYED TO THE SOUTH CHICAGO AND SOUTHERN RAILROAD COMPANY BY DEED DATED OCTOBER 13, 1917 AND RECORDED MARCH 23, 1918 AS DOCUMENT 6292041 AND EAST OF THE U.S. CHANNEL LINE OF THE CALUMET RIVER AS ESTABLISHED BY THE U.S. GOVERNMENT, (EXCEPTING THEREFROM THE NORTH 1204.34 FEET AND EXCEPTING THEREFROM THE SOUTH 200 FEET OF THAT PART OF THE SOUTHWEST ¼ LYING EAST OF THE CALUMET RIVER AND EXCEPT THE SOUTH 200 FEET OF THE WEST 33 FEET OF THE SOUTHEAST ¼ OF SECTION 19 AFORESAID AND EXCEPT SOUTH 33 FEET OF SAID TRACT), IN COOK COUNTY, ILLINOIS EXCEPTING THEREFROM THAT PART BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT THE POINT OF INTERSECTION OF THE WEST LINE OF THE ABOVE-DESCRIBED TRACT OF LAND CONVEYED TO THE SOUTH CHICAGO AND SOUTHERN RAILROAD COMPANY AND THE SOUTH LINE OF THE NORTH 1204.34 FEET OF THE NORTH ½ OF THE SOUTHEAST ¼ OF SAID SECTION 19; THENCE SOUTH 00 DEGREES 21 MINUTES 45 SECONDS EAST OF THE WEST LINE OF SAID RAILROAD, A DISTANCE OF 662.00 FEET TO A POINT; THENCE SOUTH 89 DEGREES 38 MINUTES 18 SECONDS WEST, A DISTANCE OF 68 FEET TO A POINT; THENCE NORTH 00 DEGREES 21 MINUTES 45 SECONDS WEST A DISTANCE OF 663.46 FEET TO A POINT ON THE SOUTH LINE OF THE NORTH 1204.34 FEET OF THE SOUTHEAST ¼ OF SAID SECTION 19; THENCE SOUTH 89 DEGREES 08 MINUTES 10 SECONDS EAST OF THE LAST DESCRIBED LINE, A DISTANCE OF 68.02 FEET TO THE POINT OF BEGINNING.

EXCEPTING FROM PARCELS 6 AND 7 THE FOLLOWING DESCRIBED PROPERTY:

THAT PART OF THE SOUTHEAST ¼ AND A PORTION OF THE SOUTHWEST ¼ ALL IN SECTION 19, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING EAST OF THE EASTERLY CHANNEL LINE OF THE CALUMET RIVER AND LYING WEST OF THE WESTERLY RIGHT OF WAY LINE OF THE SOUTH CHICAGO AND SOUTHERN RAILROAD IN COOK COUNTY, ILLINOIS DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE WESTERLY RIGHT OF WAY LINE OF SAID RAILROAD WITH THE NORTH LINE OF THE SOUTHEAST ¼ OF SECTION 19 AFORESAID, THENCE ON AN ASSUMED BEARING OF SOUTH 00 DEGREES 21 MINUTES 45 SECONDS EAST ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 331.55 FEET; THENCE SOUTH 60 DEGREES 17 MINUTES 38 SECONDS WEST 44.74 FEET OT THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 60 DEGREES 17 MINUTES 38 SECONDS WEST 1203.38 FEET; THENCE 72 DEGREES 13 MINUTES 18 SECONDS WEST 111.05 FEET; THENCE SOUTH 29 DEGREES 42 MINUTES 22 SECONDS EAST 513.24 FEET; THENCE NORTH 57 DEGREES 42 MINUTES 48 SECONDS EAST 1063.92 FEET; THENCE NORTH 00 DEGREES 21 MINUTES 45 SECONDS WEST 439.92 FEET TO THE POINT OF BEGINNING.

PARCEL 8:

THE NORTH 883.0 FEET OF THAT PART OF THE NORTHEAST ¼ OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, IF SAID ¼ SECTION WERE SQUARED OUT AS IN DEED FROM CHARLES B. SHED AND WIFE TO JOHN H. HARDIN, JAMES C. KIMBERLY AND REGINALD H.

HARDIN, TRUSTEES, DATED FEBRUARY 16, 1920 AND RECORDED APRIL 20, 1920 AS DOCUMENT NUMBER 6798311 LYING EAST OF THE 80 FOOT STRIP OF LAND CONVEYED TO THE CITY OF CHICAGO FOR STREET PURPOSES BY DEED DATED SEPTEMBER 29, 1917 AND RECORDED JUNE 17, 1918 AS DOCUMENT NUMBER 6342629 AND RE-RECORDED JULY 2, 1918 AS DOCUMENT NUMBER 6351917,

EXCEPT THE LANDS CONVEYED TO THE SOUTH CHICAGO AND SOUTHERN RAILROAD COMPANY BY DEED DATED NOVEMBER 28, 1899 AND RECORDED DECEMBER 12, 1899 AS DOCUMENT NUMBER 2907147;

AND EXCEPT THE EAST 50 FEET OF THE NORTH 464.005 FEET THEREOF;

AND EXCEPT THEREFROM THAT PART THEREOF FALLING WITHIN THE FOLLOWING PARCEL, THAT PART OF SECTIONS 29 AND 30, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING EAST AND NORTHEASTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT THAT IS 75 FEET WEST OF THE EAST LINE OF SAID SECTION 30 AND A DISTANCE OF 464.005 FEET SOUTH OF THE NORTHEAST CORNER OF SAID SECTION 30, AS MEASURED ALONG SAID EAST LINE OF SAID SECTION 30; THENCE SOUTHEASTERLY ALONG A CURVE HAVING A RADIUS OF 2083.483 FEET FOR A DISTANCE OF 814.882 FEET, (SAID CURVE BEING TANGENT TO THE AFORESAID LINE THAT IS 75 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF SAID SECTION 30 AND ALSO BEING TANGENT TO THE 700 FOOT RADIUS CURVE STATED IN SAID DOCUMENT NUMBER 10690326); THENCE CONTINUING SOUTHEASTERLY ALONG A LINE TANGENT TO THE 2083.483 FOOT RADIUS CURVE A DISTANCE OF 214.78 FEET, MORE OR LESS, TO THE NORTHWESTERLY RIGHT OF WAY LINE OF THE SOUTH CHICAGO AND SOUTHERN RAILROAD (PENN CENTRAL); ALSO

THE NORTH 883.0 FEET OF ALL THAT PART OF SOUTH BURLEY AVENUE AND SOUTH BRANDON AVENUE DEEDED BY DOCUMENT 6342629 AND 6351917 BEING A STRIP OF LAND 80 FEET IN WIDTH IN NORTHEAST FRACTIONAL QUARTER OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING BETWEEN A LINE 150 FEET SOUTH OF AND PARALLEL WITH SOUTH LINE OF EAST 122ND STREET EXTENDED EAST AND A LINE 33 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF THE NORTHEAST FRACTIONAL QUARTER OF SAID SECTION 30, IN COOK COUNTY, ILLINOIS; ALSO

AND EXCEPTING THEREFROM THAT PART DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 30; THENCE SOUTH 0 DEGREES, 50 MINUTES 18 SECONDS EAST ALONG THE EAST LINE OF SAID SECTION 30, 883.10 FEET; THENCE NORTH 89 DEGREES 58 MINUTES 06 SECONDS WEST ALONG A LINE PARALLEL TO AND 883.0 FEET SOUTH OF THE NORTH LINE OF SAID SECTION 30, 32.52 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE WESTERLY RIGHT OF WAY LINE OF AVENUE "O"; THENCE CONTINUING NORTH 89 DEGREES 58 MINUTES 06 SECONDS WEST, 200.00 FEET; THENCE NORTH 0 DEGREES 50 MINUTES 18 SECONDS WEST, 538.11 FEET; THENCE NORTH 89 DEGREES 9 MINUTES 42 SECONDS EAST, 182.49 FEET TO THE WESTERLY RIGHT OF WAY LINE OF AVENUE "O"; THENCE SOUTH 0 DEGREES 50 MINUTES 18 SECONDS EAST ALONG THE WESTERLY RIGHT OF WAY LINE OF AVENUE "O" 122.54 FEET; THENCE ALONG SAID RIGHT OF WAY LINE OF AVENUE "O" SOUTH 89 DEGREES 9 MINUTES 52 SECONDS WEST, 25.0 FEET; THENCE 421.47 FEET ALONG SAID WESTERLY RIGHT OF WAY LINE ON THE ARC OF A CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 2,083.48 FEET, THE LONG CHORD OF WHICH BEARS SOUTH 6 DEGREES, 38 MINUTES, 0 SECONDS EAST, 420.75 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY , ILLINOIS; ALSO

AND EXCEPT THAT PART OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 30 TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH IS BOUNDED BY THE FOLLOWING DESCRIBED LINES:

ON THE NORTH BY A LINE SOUTH OF, PARALLEL WITH AND 33 FEET NORMALLY DISTANT FROM THE NORTH LINE OF SAID EAST 1/2 OF THE NORTHEAST 1/4 OF SAID SECTION 30; ON THE SOUTH BY A LINE SOUTH OF, PARALLEL WITH AND 183 FEET NORMALLY DISTANT FROM THE NORTH LINE OF SAID EAST 1/2 OF THE NORTHEAST 1/4 OF SAID SECTION 30; ON THE EAST BY A LINE EAST OF, PARALLEL

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WITH AND 247 FEET NORMALLY DISTANT FROM THE WEST LINE OF SAID EAST 1/2 OF THE NORTHEAST 1/4 OF SAID SECTION 30; ON THE WEST BY THE EAST RIGHT OF WAY LINE OF SOUTH BURLEY AVENUE, SAID RIGHT OF WAY LINE BEING A CURVED LINE CONCAVE TO THE WEST AND HAVING A RADIUS OF 2040.08 FEET, IN COOK COUNTY , ILLINOIS.

PARCEL 9:

THE NORTH 475.0 FEET OF THE WEST 898 FEET OF THE NORTHEAST FRACTIONAL QUARTER OF SECTION 30, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, EXCEPT THE NORTH 33 FEET AND THE WEST 33 FEET THEREOF DEDICATED FOR STREETS BY PLAT OF DEDICATION RECORDED JULY 2, 1897 AS DOCUMENT 2559612, IN COOK COUNTY, ILLINOIS; ALSO

THAT PART OF THE NORTHEAST FRACTIONAL QUARTER OF SECTION OF 30, TOWNSHIP 37 NORTH, RANGE 15, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTH LINE OF EAST 122ND STREET (BEING A LINE 33 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE, AND AN EASTWARD EXTENSION THEREOF, OF SAID NORTHEAST FRACTIONAL QUARTER) WITH THE EAST LINE OF THE WEST 898 FEET OF SAID NORTHEAST FRACTIONAL QUARTER AND RUNNING THENCE SOUTH 88 DEGREES 52, MINUTES 49 SECONDS EAST ON THE SOUTH LINE OF EAST 122ND STREET A DISTANCE OF 295.41 FEET TO ITS INTERSECTION WITH A LINE 100 FEET WEST OF AND PARALLEL TO THE EAST LINE OF THE PARCEL OF LAND CONVEYED TO THE SOUTH CHICAGO AND SOUTHERN RAILROAD BY DOCUMENT 6292041; THENCE SOUTH 00 DEGREES 19 MINUTES 21 SECONDS EAST ON THE LAST DESCRIBED PARALLEL LINE, A DISTANCE OF 1.26 FEET TO A POINT OF CURVE; THENCE SOUTHWESTERLY ON THE WESTERLY LINE OF SAID RAILROAD, 1.57 FEET; THENCE CONTINUING ALONG THE WESTERLY LINE OF SAID RAILROAD, BEING THE ARC OF A CIRCLE CONVEX TO THE SOUTHEAST, HAVING A RADIUS 1860.08 FEET, AN ARC DISTANCE OF 584.36 FEET TO A POINT OF TANGENCY; THENCE CONTINUING SOUTHWESTERLY ON THE WESTERLY LINE OF SAID RAILROAD, TANGENT TO THE LAST DESCRIBED ARC OF 1860.08 FOOT RADIUS, A DISTANCE OF 159.44 FEET; THENCE NORTHWESTERLY ON THE STRAIGHT LINE TO THE POINT OF INTERSECTION OF A LINE 898 FEET EAST OF AND PARALLEL TO THE WEST LINE OF SAID NORTHEAST 1/4 OF SECTION 30 AND A LINE 475 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE NORTHEAST 1/4 OF SECTION 30; THENCE NORTH ON SAID LINE 898 FEET EAST OF AND PARALLEL TO THE WEST LINE OF SAID NORTHEAST 1/4 OF SECTION 30 TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

Remediation Site boundary:

THE BOUNDARY OF THE "REMEDIATION SITE" IS DEFINED BY THE PROPERTY OUTLINED IN THIS LEGAL DESCRIPTION, MINUS THE PORTION OF LAND BEGINNING APPROXIMATELY 600 FEET WEST OF THE SOUTHEAST CORNER OF PARCEL 8 AND PROGRESSING 300 FEET NORTH, THEN 400 FEET WEST, THEN 300 FEET SOUTH.

2. Common Address: 12200 South Avenuc O, Chicago, IL

3. Real Estate Tax Index/Parcel Index Number:

26-19-200-028
26-19-200-032
26-19-200-036
26-19-202-023
26-19-202-024
26-19-203-021
26-19-203-022
26-19-204-017
26-19-204-018
26-19-205-017
26-19-205-018
26-19-206-024
26-19-206-043
26-19-206-044

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26-19-206-045
26-19-206-046
26-19-206-047
26-19-206-048
26-19-206-049
26-19-207-001
26-19-207-002
26-19-207-003
26-19-207-004
26-19-301-004
26-19-301-005
26-19-301-009
26-19-301-010
26-19-400-012
26-19-400-013
26-19-400-014
26-19-400-015
26-19-400-016
26-19-400-017
26-19-400-018
26-19-401-003
26-19-401-005
26-19-401-008
26-30-200-006
26-30-200-008
26-30-200-010
26-30-201-006
26-30-201-011

4. Remediation Site Owner: DM LLC

5. Land Use: Industrial/Commercial

6. Site Investigation: Focused

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SITE REMEDIATION PROGRAM
TABLE A: REGULATED SUBSTANCES OF CONCERN
0316555091/Republic Steel

Volatile Organic Compounds

CAS No.	Compound Name
67-64-1	Acetone
107-02-8	Acrolein (Propenal)
79-10-7	Acrylic Acid
107-13-1	Acrylonitrile
71-43-2	Benzene
314-40-9	Bromacil
108-86-1	Bromobenzene
74-97-5	Bromochloromethane
75-27-4	Bromodichloromethane
75-25-2	Bromoform
74-83-9	Bromomethane
106-99-0	1,3-Butadiene
71-36-3	n-Butanol (Butanol)
78-93-3	2-Butanone (MEK)
104-51-8	n-Butylbenzene
135-98-9	sec-Butylbenzene
98-06-6	tert-Butylbenzene
105-60-2	Caprolactam
75-15-0	Carbon Disulfide
56-23-5	Carbon Tetrachloride
108-90-7	Chlorobenzene
124-48-1	Chlorodibromomethane (Dibromochloromethane)
75-00-3	Chloroethane
67-66-3	Chloroform
74-87-3	Chloromethane
95-49-8	2-Chlorotoluene
106-43-4	4-Chlorotoluene
108-94-1	Cyclohexanone
96-12-8	1,2-Dibromo-3-Chloropropane
74-95-3	Dibromomethane
106-93-4	1,2-Dibromomethane
75-34-3	1,1-Dichloroethane
107-06-2	1,2-Dichloroethane
75-35-4	1,1-Dichloroethene
156-60-5	*trans*-1,2-Dichloroethene
156-59-2	*cis*-1,2-Dichloroethene
75-71-8	Dichlorodifluoromethane
78-87-5	1,2-Dichloropropane
142-28-9	1,3-Dichloropropane

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594-20-7	2,2-Dichloropropane
563-58-6	1,1-Dichloropropene
10061-02-6	*trans*-1,3-Dichloropropene
10061-01-5	*cis*-1,3-Dichloropropene
111-90-0	Diethylene Glycol Monoethyl Ether
123-91-1	1,4-Dioxane
64-17-5	Ethanol
141-78-6	Ethyl Acetate
140-88-5	Ethyl Acrylate
100-41-4	Ethylbenzene
107-21-1	Ethylene Glycol
111-76-2	Ethylene Glycol Monobutyl Ether
103-11-8	2-Ethylhexyl Acrylate
50-00-0	Formaldehyde
98-01-1	Furfural
110-54-3	Hexane
591-78-6	2-Hexanone
74-88-4	Iodomethane (Methyl Iodide)
78-83-1	Isobutyl Alcohol (Isobutanol)
67-63-0	Isopropyl Alcohol (Isopropanol)
98-82-4	Isopropylbenzene (Cumene)
99-87-6	p-Isopropyltoluene
67-56-1	Methyl Alcohol (Methanol)
79-20-9	Methyl Acetate
108-87-2	Methylcyclohexane
75-09-2	Methylene Chloride
108-10-1	4-Methyl-2-Pentanone (MIBK)
1634-04-4	Methyl Tertiary Butyl Ether (MTBE)
91-20-3	Naphthalene
109-60-4	n-Propyl Acetate
103-65-1	n-Propylbenzene
57-55-6	Propylene Glycol
107-98-2	Propylene Glycol Monoethyl Ether
100-42-5	Styrene
127-18-4	Tetrachloroethene
630-20-6	1,1,1,2-Tetrachloroethane
79-34-5	1,1,2,2-Tetrachloroethane
109-99-9	Tetrahydrofuran
79-01-6	Trichloroethene
71-55-6	1,1,1-Trichloroethane
79-00-5	1,1,2-Trichloroethane
75-69-4	Trichlorofluoromethane
96-18-4	1,2,3-Trichloropropane
95-63-6	1,2,4-Trimethylbenzene
99-35-4	1,3,5-Trimethylbenzene
108-88-3	Toluene

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108-05-4	Vinyl Acetate
75-01-4	Vinyl Chloride
1330-20-7	Xylenes (total)

Semivolatile Organic Compounds

CAS No.	
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
62-53-3	Aniline
120-12-7	Anthracene
25057-89-0	Bentazon
100-52-7	Benzaldehyde
92-87-5	Benzidine
56-55-3	Benzo(a)anthracene
50-32-8	Benzo(a)pyrene
205-99-2	Benzo(b)fluoranthene
191-24-2	Benzo(g,h,i)perylene
207-08-9	Benzo(k)fluoranthene
100-51-6	Benzyl Alcohol
65-85-0	Benzoic acid
111-44-4	bis(2-Chloroethyl)ether
111-91-1	bis(2-Chloroethoxy)methane
117-81-7	bis(2-Ethylhexyl)phthalate
101-55-3	4-Bromophenyl-phenyl ether
1689-84-5	Bromoxycil
85-68-7	Butyl benzyl phthalate
98-54-4	para-tert-Butylphenol
86-74-8	Carbazole
1563-66-2	Carbofuran
106-47-8	4-Chloroaniline
59-50-7	4-Chloro-3-methlyphenol
91-58-7	2-Chloronaphthalene
95-57-8	2-Chlorophenol
7005-72-3	4-Chlorophenyl-phenyl ether
218-01-9	Chrysene
53-70-3	Dibenzo(a,h)anthracene
132-64-9	Dibenzofuran
95-50-1	1,2-Dichlorobenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	1,4-Dichlorobenzene
91-94-1	3,3'-Dichlorobenzidine
120-83-2	2,4-Dichlorophenol
84-66-2	Diethylphthalate
105-67-9	2,4-Dimethylphenol
131-11-3	Dimethylphthalate
99-65-0	1,3-Dinitorbenzene

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84-74-2	Di-n-butylphthalate
534-52-1	4,6-Dinitro-2-methylphenol
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene
117-84-0	Di-*n*-octyl phthalate
206-44-0	Fluoranthene
86-73-7	Fluorene
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadiene
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
193-39-5	Indeno(1,2,3-cd)pyrene
78-59-1	Isophorone
101-14-4	4,4'-Methylene bis(2-chloroaniline)
59-50-7	3-Methyl-4-Chlorophenol
101-77-9	4,4'-Methylenedianiline
91-57-6	2-Methylnaphthalene
95-48-7	2-Methylphenol (*o*-Cresol)
108-39-4	3-Methylphenol
106-44-5	4-Methylphenol (*p*-Cresol)
109-06-8	2-Methylpyridine
88-74-4	2-Nitroaniline
99-09-2	3-Nitroaniline
100-01-6	4-Nitroaniline
98-95-3	Nitrobenzene
55-63-0	Nitroglycerin
88-75-5	2-Nitrophenol
100-02-7	4-Nitrophenol
86-30-6	N-Nitrosodiphenylamine
621-64-7	N-Nitroso-di-n-propylamine
108-60-1	2,2'-oxybis(1-chloropropane)
82-68-8	Pentachloronitrobenzene
87-86-5	Pentachlorophenol
85-01-8	Phenanthrene
108-95-2	Phenol
129-00-0	Pyrene
121-82-4	RDX (Cyclonite)
118-79-6	2,4,6-Tribromophenol
87-61-6	1,2,3-Trichlorobenzene
120-82-1	1,2,4-Trichlorobenzene
99-35-4	1,3,5-Trinitrobenzene
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
118-96-7	2,4,6-Trinitrotoluene

Aroclors

CAS No.	Compound Name
12674-11-2	Aroclor - 1016
11104-28-2	Aroclor - 1221
11141-16-5	Aroclor - 1232
53469-21-9	Aroclor - 1242
12672-29-6	Aroclor - 1248
11097-69-1	Aroclor - 1254
11096-82-5	Aroclor - 1260

Metals

CAS No.	Compound Name
7440-38-2	Arsenic
7440-39-3	Barium
7440-43-9	Cadmium
16065-83-1	Chromium, ion, trivalent
18540-29-9	Chromium, ion, hexavalent
57-12-5	Cyanide (amenable)
7439-92-1	Lead
7439-97-6	Mercury
7782-49-2	Selenium
7440-22-4	Silver
7440-23-5	Sodium

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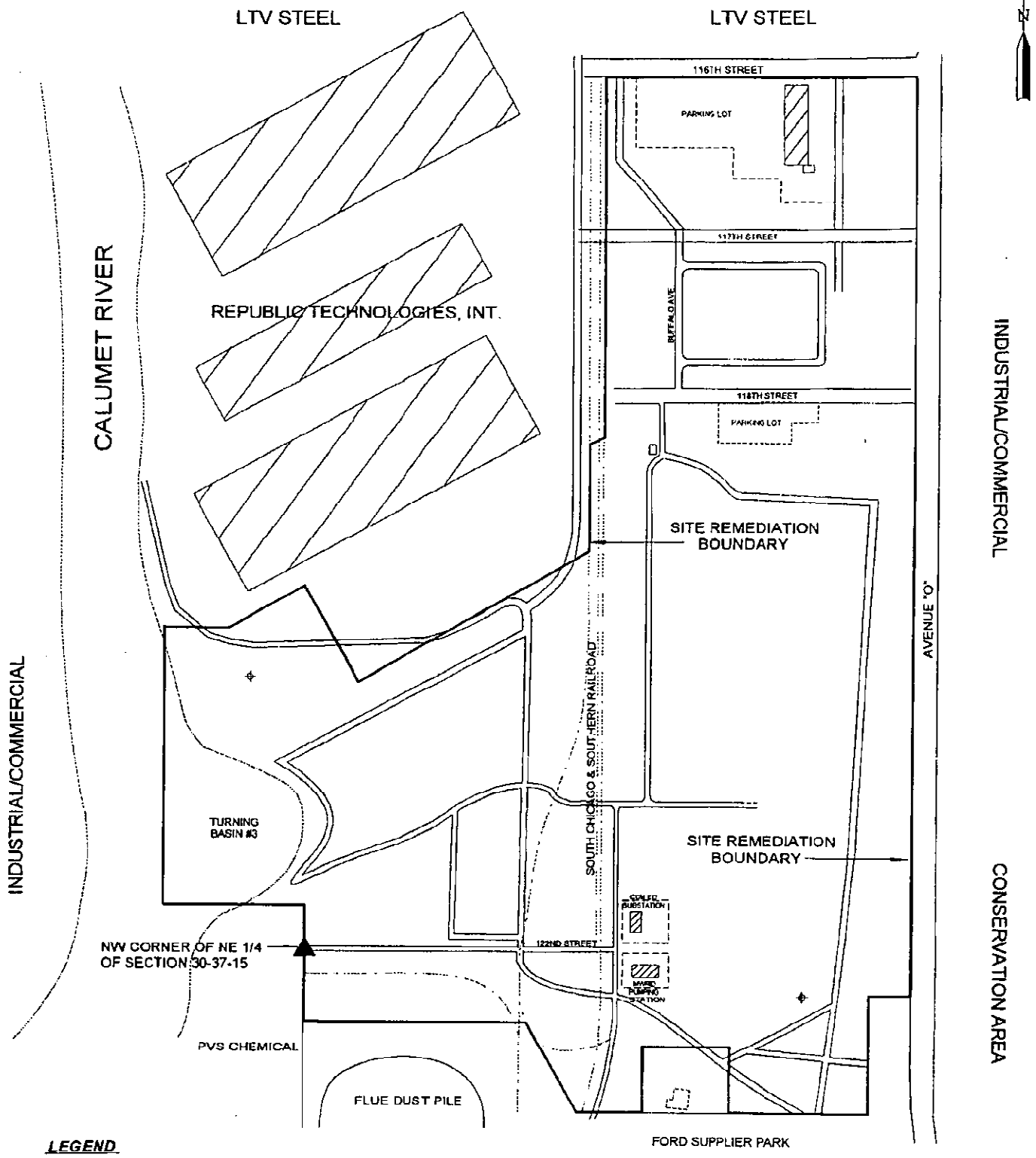
Site Base Map
0316555091/Cook
Chicago/Republic Steel
Site Remediation Program



LEGEND

◆ AREA WHERE CONSTRUCTION WORKER CAUTION IS REQUIRED

CARLSON ENVIRONMENTAL, INC.
55 E. Wacker Place, Suite 1500
Chicago, Illinois
(312) 346-2140

DRW: BAS	
PN: 215BC	
DATE: 11/28/05	
APPROX. SCALE: 1" = 600'	

Site Base Map
0316555091/Cook
Chicago/Republic Steel
Site Remediation Program

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PROPERTY OWNER CERTIFICATION OF THE NFR LETTER UNDER THE SITE REMEDIATION PROGRAM

Where the Remediation Applicant (RA) is not the sole owner of the remediation site, the RA shall obtain the certification by original signature of each owner, or authorized agent of the owner(s), of the remediation site or any portion thereof who is not an RA. The property owner(s), or the duly authorized agent of the owner(s) must certify, by original signature, the statement appearing below. This certification shall be recorded in accordance with Illinois Administrative Code 740.620.

Include the full legal name, title, the company, the street address, the city, the state, the ZIP code, and the telephone number of all other property owners. Include the site name, street address, city, ZIP code, county, Illinois inventory identification number and real estate tax index/parcel index number.

A duly authorized agent means a person who is authorized by written consent or by law to act on behalf of a property owner including, but not limited to:

1. For corporations, a principal executive officer of at least the level of vice-president;
2. For a sole proprietorship or partnership, the proprietor or a general partner, respectively; and
3. For a municipality, state or other public agency, the head of the agency or ranking elected official.

For multiple property owners, attach additional sheets containing the information described above, along with a signed, dated certification for each. All property owner certifications must be recorded along with the attached NFR letter.

Property Owner Information

Owner's Name: Daniel B. Light
Title: Member
Company: Avenue O LLC
Street Address: 220 Honey Lake Court
City: N. Barrington State: IL Zip Code: 60010 Phone: 847-381-9080

Site Information

Site Name: Chicago/Republic Steel
Site Address: 12200 South Avenue O
City: Chicago State: IL Zip Code: _____ County: Cook
Illinois inventory identification number: 0316555091/Cook
Real Estate Tax Index/Parcel Index No. See attached listing

I hereby certify that I have reviewed the attached No Further Remediation Letter and that I accept the terms and conditions and any land use limitations set forth in the letter.

Owner's Signature: Daniel B. Light, MEMBER Date: 12/21/05

SUBSCRIBED AND SWORN TO BEFORE ME
this 21ST day of December, 2005

Notary Public

OFFICIAL SEAL
WADE B LIGHT
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:12/18/07

The Illinois EPA is authorized to require this information under Sections 415 ILCS 5/58 - 58.12 of the Environmental Protection Act and regulations promulgated thereunder. If the Remediation Applicant is not also the sole owner of the remediation site, this form must be completed by all owners of the remediation site and recorded with the NFR Letter. Failure to do so may void the NFR Letter. This form has been approved by the Forms Management Center. All information submitted to the Site Remediation Program is available to the public except when specifically designated by the Remediation Applicant to be treated confidentially as a trade secret or secret process in accordance with the Illinois Compiled Statutes, Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines.

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COMMITTEE ON ENERGY, ENVIRONMENTAL PROTECTION AND PUBLIC UTILITIES.

AMENDMENT OF TITLE 11, CHAPTER 8 AND TITLE 2, CHAPTER 30 OF MUNICIPAL CODE OF CHICAGO BY ESTABLISHMENT OF DEFINITION OF POTABLE WATER, REGULATION OF POTABLE WATER SUPPLY SYSTEM AND EMPOWERMENT OF COMMISSIONER OF ENVIRONMENT FOR IMPLEMENTATION OF STATE OF ILLINOIS SITE REMEDIATION PROGRAM.

The Committee on Energy, Environmental Protection and Public Utilities submitted the following report:

CHICAGO, May 14, 1997.

To the President and Members of the City Council:

Your Committee on Energy, Environmental Protection and Public Utilities, having held a meeting on Tuesday, May 13, 1997 and having had under consideration an ordinance signed by The Honorable Richard M. Daley, Mayor, prohibiting installation of new potable water supply wells and allowing the Commissioner of Environmental Protection to enter into agreements to implement the State of Illinois Site Remediation Program, begs leave to report and recommend that Your Honorable Body *Pass* the proposed ordinance transmitted herewith.

This recommendation was concurred in by a viva voce vote of members of the committee.

Respectfully submitted,

(Signed) VIRGINIA A. RUGAI,
Chairman.

On motion of Alderman Rugai, the said proposed ordinance transmitted with the foregoing committee report was *Passed* by yeas and nays as follows:

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Yeas -- Aldermen Granato, Haithcock, Tillman, Preckwinkle, Holt, Steele, Beavers, Dixon, Shaw, Buchanan, Huels, Frias, Olivo, Burke, Jones, Coleman, Peterson, Murphy, Rugai, Troutman, Evans, Munoz, Zalewski, Chandler, Solis, Burnett, E. Smith, Burrell, Wojcik, Suarez, Gabinski, Austin, Colom, Banks, Giles, Allen, Laurino, O'Connor, Doherty, Natarus, Bernardini, Hansen, Levar, Shiller, Schulter, Moore, Stone -- 47.

Nays -- None.

Alderman Beavers moved to reconsider the foregoing vote. The motion was lost.

The following is said ordinance as passed:

Be It Ordained by the City Council of the City of Chicago:

SECTION 1. Chapter 11-8 of the Municipal Code of Chicago is hereby amended by adding a new Section 11-8-385 and by amending Section 11-8-390 by inserting the language in italics, as follows:

11-8-385 Potable Water Defined.

Potable water is any water used for human consumption, including, but not limited to water used for drinking, bathing, washing dishes, preparing foods and watering gardens in which produce intended for human consumption is grown.

11-8-390 Prohibited Use Of Secondary Water: *Prohibited Installation Of New Potable Water Supply Wells.*

No secondary water shall overflow into or be discharged into any surge tank, storage tank, or reservoir; or shall in any way be piped or conveyed into the water supply system of any building, structure, or premises to become a part of or be mixed with the fresh water supply from the mains of the Chicago Waterworks System either inside of the premises or in the water service pipe. Secondary water shall not be piped to or used in any plumbing fixture, or for cooling crushers, rollers, or mixers where foods, candies, liquids or materials are manufactured for human or animal consumption. No connection, tap, or opening shall be made in a water distribution system other than an approved water distribution system which will permit such water being used for drinking.

Wherever the fire-protective equipment in any building, structure or premises has service from the Chicago Waterworks System, no pipe or other conduit which conveys secondary water shall be cross-connected to the fire-protective equipment. All fire-protective equipment connected to the Chicago Waterworks System shall be constructed in such manner that

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all tanks, pipes, pumps, surge tanks, and fire hydrants can be thoroughly drained, flushed and cleaned by the owners of such equipment and premises and there shall be no direct connections from the tanks, pipes and other equipment to any drainage pipes or sewers. *No groundwater well, cistern or other groundwater collection device installed after the effective date of this amendatory ordinance may be used to supply any potable water supply system, except at points of withdrawal by the City of Chicago or by units of local government pursuant to intergovernmental agreement with the City of Chicago.*

SECTION 2. Section 2-30-030 of the Municipal Code of Chicago is hereby amended by deleting the language in brackets and inserting the language in italics, as follows:

2-30-030 Commissioner -- Powers And Duties Designated.

The commissioner of the environment shall have the following powers and duties:

* * * * *

(21) To enter into grant agreements, cooperation agreements and other agreements or contracts with governmental entities, private business and civic and community groups necessary to implement the Green Streets Program and other urban forestry, beautification and environmental enhancement programs; *and agreements to implement the State of Illinois Site Remediation Program;*

SECTION 3. This ordinance shall be in full force and effect from and after its passage and approval.

COMMITTEE ON HOUSING AND REAL ESTATE.

ACCEPTANCE OF BID FOR PURCHASE OF CITY-OWNED PROPERTY AT 443 EAST 46TH PLACE UNDER ADJACENT NEIGHBORS LAND ACQUISITION PROGRAM.

The Committee on Housing and Real Estate submitted the following report:

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I CERTIFY THAT THIS
IS A TRUE AND CORRECT COPY
OF DOCUMENT # 0600555131.

JAN 17 06

RECORDER OF DEEDS, COOK COUNTY

CELRC-TS-DH 5 November 2014

DRAFT MEMORANDUM FOR CELRC-PM-PL (Bucaro)

SUBJECT: Phase I Environmental Site Assessment (HTRW Investigation) for Chicago Area Waterway System Dredged Material Management Plan – Former LTV Steel Site, 11600 South Burley Avenue (330L), Chicago, Illinois

1. References:
   a. ASTM International (formerly the American Society for Testing of Materials). Publication E 1527-13. Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process.
   b. ASTM International (formerly the American Society for Testing of Materials). Publication E 1903-97 (Reapproved 2002). Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

2. Enclosed is the Phase I Environmental Site Assessment (ESA) for the former LTV Steel Site, located at 11600 South Burley Avenue, Chicago, Illinois. This site is being considered for a for a future confined disposal facility (CDF) as part of the Chicago Area Waterway System (CAWS) Dredged Material Management Plan (DMMP). The investigation is based on a review of existing information, database research, a review of historical topographic maps and aerial photographs, and a site visit. The results of the Phase I ESA are summarized in the Findings and Conclusions section of the report.

3. A list of the data gaps and other issues with the Phase I ESA is provided in the Findings and Conclusions section of the report and repeated below for your convenience:

   a. Access was not provided during the site visit, and the view was largely obstructed by a tall corrugated metal fence. As a consequence, this represents a data gap that needs to be corrected by arranging a visit to the site where access can be provided to adequately observe the site conditions.

   b. There were a number of incidents where various hazardous substances or petroleum products were reportedly released onto the property. For several of these incidents, the documentation did not report whether containment and cleanup actions occurred. There were other incidents where containment and cleanup activities were reported, such as the use of berms and a vacuum truck, but it was not clear if these actions were sufficient. Further investigation of information sources at the regulatory agencies, or possibly through the identification and interview of a key site manager, might help determine whether adequate containment and cleanup actions were performed. The

ASTM E 1527-13 standard (Reference a) explains that a key site manager is the owner or operator of a property with good knowledge of the uses and physical characteristics of the property. The E 1527-13 standard uses the inability to interview the key site manager as an example of a data gap.

c. In response to a Freedom of Information Act (FOIA) request for the site, the Illinois Environmental Protection Agency (EPA) provided 1621 documents. The database research indicates that the majority of the documents address impacts to the air quality due to emissions from the ovens and furnaces at the steel plant. Since these releases impact the air quality and are short-term, there are generally negligible or de minimus long-term impacts to the soils and groundwater. Nevertheless, although there is a large quantity of information that would be time consuming and difficult to review, a review of this information could be beneficial and might identify documents that address environmental concerns, such as the incidents mentioned earlier.

d. There was one UST with a capacity of 1000 gallons that was not reported as removed. Due to time constraints, it is presently unknown and further information is needed to determine if this tank is still present on the site. In addition, due to time constraints, a thorough review of all the orphan sites was not completed and further information is needed to determine the status regarding the enrollment of Republic Engineered Steels, Inc. in the Site Remediation Program (SRP).

4. As explained in ASTM E 1527-13 (Reference a), a Phase I ESA typically does not include any testing or sampling of materials. ASTM E 1903-97 (Reference b) describes the Phase II ESA process, and this standard provides a framework for evaluating the RECs and/or issues identified in the Phase I ESA for the purpose of providing information regarding the nature and extent of contamination to assist in making informed decisions about the property.

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CELRC-TS-DH
SUBJECT: Phase I Environmental Site Assessment (HTRW Investigation) for Chicago Area Waterway System Dredged Material Management Plan – Former LTV Steel Site, 11600 South Burley Avenue (330L), Chicago, Illinois

5. Questions on this memorandum can be addressed to Richard Saichek, at extension 5507 or by email to richard.e.saichek@usace.army.mil.

Jay A. Semmler, P.E.
Chief, Hydraulic and Environmental
Engineering Section

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PHASE I ENVIRONMENTAL SITE ASSESSMENT (HTRW INVESTIGATION) FOR CHICAGO AREA WATERWAY SYSTEM DREDGED MATERIAL MANAGEMENT PLAN

LTV Steel, 11600 South Burley Avenue (330L), Chicago, Illinois

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Hydraulic and Environmental Engineering Section (TS-DH)
U.S. Army Corps of Engineers, Chicago District

November 2014

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LTV STEEL, 11600 SOUTH BURLEY AVENUE (330L), CHICAGO, ILLINOIS

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Attachment 1: EDR Radius Report
Attachment 2: Historical Topographic Maps
Attachment 3: City Directory
Attachment 4: Sanborn Maps
Attachment 5: Historical Aerial Photographs
Attachment 6: Site Visit Memorandum

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INTRODUCTION

The purpose of this report is to discuss the Phase I Environmental Site Assessment (ESA) for the former LTV Steel Company site located at 11600 South Burley Avenue (330L). This site is being considered for a future confined disposal facility (CDF) as part of the Chicago Area Waterway System (CAWS) Dredged Material Management Plan (DMMP). The procedures used to perform this investigation are described in detail below.

AUTHORITY AND GUIDANCE

As a matter of U.S. Army Corps of Engineers (USACE) policy, it explains in Engineer Regulation (ER) 1165-2-132, Hazardous, Toxic and Radioactive Waste (HTRW) Guidance for Civil Works Projects (1992) the following:

> "Construction of Civil Works projects in HTRW-contaminated areas should be avoided where practicable. This can be accomplished by early identification of potential problems in reconnaissance, feasibility, and pre-construction, engineering, and design (PED) phases before any land acquisition begins."

Furthermore, as discussed in this same regulation, it is USACE policy that "The plan for and execution of each Civil Works project will routinely include a phased and documented review to provide for early identification of HTRW potential at Civil Works project sites."

The HTRW guidance document for civil works projects (ER 1165-2-132) explains that for a reconnaissance phase investigation the procedures include the assessment of existing and past land uses, potential impact of known HTRW sites from adjacent or nearby lands, observations made through a database research, such as a historical aerial photograph and topographic map review, and a site visit. ER 1165-2-132 states that "Due to the many potential adverse impacts of HTRW, an initial assessment will be conducted as early as practical during the reconnaissance phase and included with the reconnaissance report." This guidance document also notes that this report is to document if it is determined that there is no suspected HTRW problem, or, conversely, if further HTRW study is warranted and the project site is still under consideration, the report should include any recommendation to conduct additional HTRW investigations during the feasibility phase.

According to ER 1165-2-132, "HTRW assessments during the feasibility phase will determine the type and extent of HTRW contamination, if any, and how HTRW considerations will impact on the alternative project plans." This same ER explains that the feasibility phase of the investigation should include the following:

> "a preliminary identification of potential source areas, contaminant release mechanisms, exposure routes, potentially exposed populations, as well as

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> a determination of the non-numerical risk or potential adverse health effects for identified potential receptors. Investigation activities may include topographic setting, underlying geology, surface and groundwater flow, building and utility layouts, the condition of all structures above and below ground, and characterization of chemical constituents of HTRW contaminants. The level of detail should be sufficient to determine the extent of HTRW contaminants in relation to alternative Civil Works project features and adjacent lands potentially impacted by these features."

Supplemental guidance for this Phase I ESA report was provided by the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-13) prepared by ASTM International, formerly known as the American Society for Testing and Materials (ASTM). The purpose of the E 1527-13 standard is to "define good commercial and customary practice in the U.S. for conducting an ESA of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Title 42 of the U.S. Code, Section 9601 (42 U.S.C. §9601) and petroleum products." According to the E 1527-13 standard, "the goal of the processes established by this practice is to identify "recognized environmental conditions" (RECs)."

> According to the E-1527-13 standard, "The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimus conditions are not recognized environmental conditions."

As explained in the E-1527 standard, the scope of the practice is limited. There may be certain environmental conditions that exist on a property that are beyond the scope of the practice, but may warrant consideration. The need to include such conditions needs to be evaluated based upon a number of factors, such as the nature of the property and reasons for performing the assessment. A more comprehensive evaluation would consider business environmental risks (not only RECs). Business environmental risks are defined in the ASTM E 1527 standard as risks that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in the ASTM E 1527 standard practice. Consideration of business environmental risks may involve one or more non-scope considerations, some of which are described in Section 13 of the ASTM E 1527 standard.

This ASTM standard requires the following four components for the identification of RECs in connection with a parcel of commercial real estate; a records review, site visit, interviews, and evaluation and report preparation. Although the current report utilized E

1527-13 for guidance, it was not performed to the same level of detail. For instance, no interviews were conducted or key site manager was identified and the site visit was limited because access was not provided and the view was obstructed by a tall corrugated metal fence. This initial investigation primarily relied upon the information in the EDR report and documentation provided in response to a freedom of information act (FOIA) request to the Illinois Environmental Protection Agency (Illinois EPA).

A summary of the information gathered from the records review is detailed in the following sections.

Hazardous, Toxic, and Radioactive Waste

The purpose of ER 1165-2-132 is to provide guidance and outline procedures to facilitate early identification and appropriate consideration of HTRW issues and problems.

Non-Hazardous, Toxic, and Radioactive Waste

In accordance with the definition in ER 165-2-132, HTRW includes any material listed as a "hazardous substance" under CERCLA defined in Title 42 of the U.S. Code, Section 9601, Paragraph 14 (42 U.S.C. §9601)(14).

ER 165-2-132 also excludes dredged material and sediments beneath navigable waters proposed for dredging from HTRW. These materials only qualify as HTRW if they are within the boundaries of a site designated by the U.S. Environmental Protection Agency (USEPA) or a state for a response action (either a removal action or remedial action) under CERCLA, or if they are part of a National Priority List (NPL) site under CERCLA.

The definition of HTRW in ER 165-2-132 also refers to the petroleum exclusion from CERCLA liability. Specifically, 42 U.S.C. §9601(14) states the following:

> "The term "hazardous substance" means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C. 1321(b)(2)(A)], (B) any element, compound, mixture, solution or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S.C 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 U.S.C. 1317(a)], (E) any hazardous pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 U.S.C. 2606]. *The term does not include petroleum, including any crude oil or any fraction*

> *thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).*"

It further explains in the E 1527-13 ASTM standard that "The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to the Standard Definitions of Petroleum Statistics," as published in the American Petroleum Institute Fifth (1995) Edition.

Underground Storage Tanks (USTs) are federally regulated under Title 40 of the Code of Federal Regulations (CFR), Part 280 (40 CFR 280), which includes technical standards and corrective action requirements for owner and operators of USTs.

Although USTs and other issues with petroleum products are not considered to be "HTRW" in ER 165-2-132, these issues have been included in this investigation. These issues are also covered in ASTM E 1527, and this standard uses the following reasoning:

> "Petroleum products are included within the scope of this practice because "they are of concern with respect to many parcels of commercial real estate and current custom and usage is to include inquiry into the presence of petroleum products when doing an environmental assessment of commercial real estate. Inclusion of petroleum products within the scope of this practice is not based upon the applicability, if any, of CERCLA to petroleum products.

LAWS AND REGULATIONS

Federal

As discussed above, Federal guidance for appropriate consideration of HTRW problems and issues is provided in ER 1165-2-132 and USTs are federally regulated under 40 CFR Part 280.

State

Illinois regulates USTs under 35 IAC 731, petroleum USTs under 35 IAC 734, and the evaluation of risk to human health posed by environmental conditions and remediation objectives under 35 IAC 742. In 35 IAC 731.112 of the UST regulations, it provides definitions for several important terms. First, this State regulation defines a "regulated substance" as any "hazardous substance" or "petroleum." Second, 35 IAC 731.112 defines a "hazardous substance UST system" as a UST system that contains a "hazardous substance" or any mixture of "hazardous substances" and "petroleum"

which is not a petroleum UST system. Third, 35 IAC 731.112 defines a petroleum UST as a UST system that contains petroleum or a mixture of “petroleum” with de minimus quantities of other “regulated substances.” All of these definitions were derived from the Federal UST regulations in 40 CFR 280.12. The regulations in 35 IAC 731 are applicable to owners and operators of a UST system as defined in 35 IAC 731.112, except for USTs excluded under 35 IAC 731.110, subsection (b) or (c). The 35 IAC 734 regulations are applicable to owners or operators of any UST system used to contain petroleum and for which a release is reported to the Illinois Emergency Management Agency (IEMA) in accordance with the Office of the State Fire Marshal (OSFM).

PROJECT DESCRIPTION

Material dredged from the Calumet Harbor and River Federal navigation project has been placed in the Chicago Area Confined Disposal Facility (CDF) since 1984. Due to the cumulative volume placed into the facility, future material placement is limited. In accordance with engineering regulation (ER) 1105-2-100, Planning Guidance Notebook, Appendix E, all Federal navigational maintenance projects must demonstrate there is sufficient dredged material placement capacity for a minimum of twenty (20) years. If the preliminary assessment (PA) determines there is not sufficient capacity, a Dredged Material Management Plan (DMMP) must be prepared to identify the specific measures necessary to manage the volume of material likely to be dredged over a twenty (20) year period. Since the PA for the Chicago Area CDF determined that there was not sufficient capacity for a twenty (20)-year period, a DMMP is currently in preparation. As part of the DMMP, potential sites for a CDF are being identified, and one of the sites under consideration is the site located at 11600 South Burley Avenue (330L).

A draft conceptual site layout for the proposed facility is currently in development. As a conceptual plan, the intent for the site is to “build up” on the existing land rather than to perform extensive excavation in the existing soils; this approach would limit disturbance of existing soil and groundwater and would minimize impacts to the existing site conditions. The conceptual plan indicates that a compacted clay liner would be constructed at the site and would be used to form the bottom of the CDF. Earthen dikes would be constructed along the outside perimeter to contain the dredged material. The design for the facility will also include the construction of several other features, such as crane pads and dock space along the Calumet River, decant structures, effluent discharge pipes, and/or effluent filter cells, and an access road along a portion of the facility. Water management features have not been identified in the draft DMMP, but may include the construction of trenches and/or conduits for water management and potential water treatment. The sources of water that would need to be managed within the facility include the water associated with the dredged material and water from precipitation and stormwater runoff. After the facility has been filled, and all the material has been sufficiently dewatered and consolidated, a final cover will be constructed and stabilized to prevent erosion. The cap will be designed to minimize infiltration and disturbance of the dredged material.

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SITE DESCRIPTION

The proposed LTV Steel (330L) CDF site would be located at 11600 South Burley Avenue, Chicago, Illinois 60617 (see the project vicinity map in Figure 1). A project site boundary map, showing an approximate boundary for the site, is shown in Figure 2. The proposed site consists of approximately 40-acres of property formerly owned by the LTV Steel Company. The site is located in Cook County, Township 37 North, Range 15 East, Section 19, on the Lake Calumet 7.5' Series U.S. Geological Survey (USGS) Quadrangle Map (Illinois State Geological Survey Public Land Survey System (http://isgs.illinois.edu/plss)). The site is presently undeveloped, and, based on aerial photography, the property is being utilized to store and manage scrap metal and other building or construction materials.

GENERAL METHODS

The following sections contain information requested and gathered in accordance with ER 1165-2-132 for this assessment. The information was based on the following sources:

- Existing information review
- Database research
- Historical topographic map review
- Historical aerial photograph review
- Site visit

This information was used to determine if there are RECs associated with the property at 11600 South Burley Avenue (330L). The information was also used to identify business environmental risk issues that could potentially impact HTRW occurrences that may exist in the surrounding areas, and/or if HTRW problems could have an impact on the implementation of the project.

EXISTING INFORMATION REVIEW

Water Quality

In accordance with Sections 305(b), 303(d) and 314 of the Clean Water Act, the Illinois EPA prepares an integrated report and 303(d) list to provide information to the Federal government and citizens of Illinois on the condition of surface water in the State of Illinois (Illinois EPA 2014). The report explains that the degree of support of a designated use is determined by an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data.

As shown in Figure 2, the site at 11600 South Burley Avenue (330L) is located on the eastern side of the Calumet River. The Calumet River generally flows westward, away from Lake Michigan, but the flow is controlled at the Thomas J. O'Brien Lock and Dam, which is located near East 134th Street and South Torrence Avenue. During large storm

events the lock may direct the flow eastward, towards Lake Michigan to prevent flooding.

The Illinois EPA determined that the Calumet River was impaired for two (2) designated uses; fish consumption and primary contact recreation. The two (2) causes listed for the impairment of fish consumption were mercury and polychlorinated biphenyls (PCBs), and the cause listed for the impairment of primary contact recreation was fecal coliform.

Geology & Soil Quality

The topography in the vicinity of the placement site is flat due to past glacial activity and lake level fluctuations, but the land often has a gentle slope toward Lake Michigan (Kay et al. 1996 and Suter et al. 1959). The land surface contains several beach ridges and moraine deposits, but much of the area is marshy and poorly drained under natural conditions (Kay et al. 1996; Cravens and Zahn 1990; Suter et al. 1959). In circa 1870, the marshy Calumet region was transformed into a center of heavy manufacturing and industrial activity (Colten 1985, Kay et al. 1997), and many of the beach ridges were leveled or removed by quarrying (Kay et al. 1996; Willman 1970).

For a regional geological perspective, in relation to the surrounding bedrock, the Chicago area is situated on the Kankakee Arch, a broad, gently sloping arch of Paleozoic bedrock (Willman 1971; Buschbach 1964; Suter et al. 1959). The Kankakee Arch is located between the Wisconsin Arch, which is northwest, and the Cincinnati Arch, which is southeast, and it separates two large depressions; the Illinois Basin, which is southwest and the Michigan Basin, which is northeast.

Igneous and metamorphic rocks are not native to the Chicago area except in deeply buried Precambrian (over 540 million year age (Ma)) formations; hence, the bedrock in the Chicago region is primarily sedimentary rock, including dolomite, limestone, shale, sandstone, and siltstone (Willman 1971). According to Buschbach (1964), the surface elevation of the Precambrian base rock in the Chicago Loop area is roughly 4,500 feet below sea level. The Precambrian rocks are not sources of groundwater, and they form an impermeable layer below the sedimentary rocks (Suter et al. 1959).

Cambrian (540 – 490 Ma) rock in Northeastern Illinois ranges in thickness from around 2,000 to 3,500 feet from north to south, and the overlying Ordovician (490 – 445 Ma) rock ranges in thickness from about 700 to 1,100 feet from north to south (Buschbach 1964). Silurian (445 – 416 Ma) dolomite is the uppermost bedrock formation in the Chicago region, and this Silurian layer varies in thickness from less than an inch to more than 450 feet thick in the area (Suter et al. 1959). Suter et al. (1959) attributes the variation in thickness of the Silurian layer to erosion that occurred during the pre-Pleistocene and Pleistocene (2.6 Ma – 11,700 years ago). In addition, Suter et al. (1959) explains that the Silurian layer becomes thicker in the southeastern section of Chicago region, and, except in a few small areas, the Silurian rocks are overlain by glacial deposits.

The physical site data report included in the Environmental Data Resources (EDR) report (Attachment 1) corroborates that the bedrock beneath the site is Middle Silurian aged (Niagoaran) dolomite. The report indicates that the surficial soils are “urban land” with a number of subordinate soil types in the general area, including fine sand, fine sandy loam, silty clay loam, and loamy fine sand.

The glacial drift (glacial deposits) in the Chicago region is typically categorized as till or lacustrine (lake) deposits. Outwash sediments and organic-rich (peat) deposits are encountered in some areas but they are less common (IDNR 2000). IDNR (2000) describes till as a mixture of rocks and ground-up rock debris, ranging from tiny, clay-sized particles to large boulders. Suter et al. (1959) further explains that till is the debris from the glacial ice, and it contains a mixture of fragments of all sizes, usually without any stratification. Lacustrine deposits are fine-grained sediments, such as silt and clay, and outwash sediments are comprised of sand and gravel that was deposited in streams when the glaciers melted and retreated (IDNR 2000). Kay et al. (1996) estimate the glacial drift ranges in thickness from 1 foot in the vicinity of Thornton Quarry to over 225 feet east of Burns Harbor, and they include a contour map that indicates the glacial drift ranges in thickness from approximately 50 to 75 feet in the vicinity of the proposed placement site. Cravens and Zahn (1990) used data from wells and boring logs to draw cross-sections in the Lake Calumet area, and these researchers determined that the average thickness of glacial drift in this area was 75 feet, including surficial deposits of late glacial Lake Chicago (Equality Formation).

Groundwater

Willman (1970) and Suter et al. (1959) explain that there are four (4) main geologic units in the Chicago area that yield groundwater, and they can be divided into shallow and deep aquifers. The shallow aquifers include (1) the sand and gravel beds in the unconsolidated glacial deposits and (2) the shallow dolomite aquifer (mainly the Silurian dolomite). The deep aquifers include (3) the upper Cambrian-Ordovician aquifer and (4) the lower Cambrian aquifer, which consists of the Mt. Simon Sandstone and lower sandstone layer of the Eau Claire Formation. The Mt. Simon Sandstone and lower sandstone layer of the Eau Clair Formation are hydraulically connected, so they are considered to be one unit; the Mt. Simon Aquifer (Suter et al. 1959). The Mt. Simon Aquifer is the lowest hydrologic system in the Chicago area, and it is separated from the overlying system by the middle and upper parts of the Eau Clair Formation (Suter et al. 1959). Suter et al. (1959) describes the middle and upper parts of the Eau Clair Formation as fine- to medium-grained, compact sandstone, and cemented sandstone predominates in the middle unit. Moreover, the middle and upper parts of the Eau Clair Formation contain variable amounts of green to gray sandy shale and siltstone and sandy brown dolomite.

The Cambrian-Ordovician is the most highly developed bedrock aquifer, but it has been depleted by pumping (Visocky 1997; Willman 1970; Suter et al. 1959). Visocky 1997 indicates that this aquifer is encountered at an average depth of about 1,000 feet at

Chicago, and peak pumpage of 182.9 mgd occurred in 1979. The artesian pressure declined by more than 850 feet in Chicago, but levels are starting to rise due to the shift towards other sources of water (Visocky 1997). This aquifer is separated from the shallow aquifers by the relatively impervious Maquoketa Group Shale, which is the upper layer of the Ordovician deposits (Willman 1970; Suter et al. 1959). Ross et al. (1988) determined the Maquoketa Shale was approximately 200 feet thick in the Lake Calumet area, and they mention that "The thick sequence of shale greatly limits the local movement of water downward to underlying formations." Willman (1970) explains that the Cambrian-Ordovician aquifer rises to the west of the Chicago region, and it is recharged where it outcrops at the surface or through glacial deposits in the western part of the region.

Even though the Cambrian-Ordovician is the most highly developed aquifer, sixty (60) percent of the total pumping in the Chicago area is from the shallow aquifers, and, unlike the deeper aquifers, there has not been a widespread decline in the water levels of the shallow aquifers (Willman 1970). Willman (1970) indicates that the shallow aquifers are connected hydraulically, and he indicates that they are recharged directly by seepage from precipitation. Conversely, Kay et al. (1996) mention that the Silurian (shallow bedrock) aquifer was separated from the upper unconsolidated and unconfined sand aquifer in most of their study area by a confining unit composed primarily of silt and clay till and lacustrine deposits. Moreover, Cravens and Zahn (1990) believe it is unlikely for contaminants in the Silurian dolomite aquifer to be attributable to natural groundwater transport through the unconsolidated geologic materials overlying the bedrock aquifer because of the protection provided by the thick sequences of clayey drift deposits, which are numerous and diverse.

According to Cravens and Zahn 1990, groundwater use within 39 square miles of Lake Calumet is limited, and it continues to decline because nearly all water use in this region is supplied by surface water from Lake Michigan. In § 11-8-390 of the Municipal Code of the City of Chicago, it states that "No groundwater well, cistern or other groundwater collection device installed after May 14, 1997 may used to supply any potable water supply system, except at points of withdrawal by the City of Chicago or by a unit of local government pursuant to Intergovernmental Agreement with the City of Chicago." During the development of an Intergovernmental Agreement for the reuse of soil and rubble within the City of Chicago, a potable well survey was performed by the City of Chicago, Department of Environment (DOE) using information from the Illinois State Geological Survey (ISGS) regarding all confirmed records of wells installed within the City limits of Chicago and 200 feet beyond. After the survey, the DOE generated a map of the potable wells in Chicago, and this map shows that the closest potable drinking water wells are in a forest preserve, Eggers Woods, which is located approximately 1.5 miles northeast of the target property.

The Calumet region of northwestern Indiana and northeastern Illinois is one of the most industrialized areas of the United States. Current and historical industries in the region and various filling activities (with slag, dredged material, and other industrial wastes) and the subsequent chemical runoff from these sources have resulted in the

degradation of surface and groundwater resources in the region (Colten 1985, Kay et al. 1997). In some locations, the groundwater has elevated pH levels, and this attributed to the disposal of slag in the area (Roadcap et al. 2005). In addition, Fitzpatrick and Bhowmik (1990) and Ross et al. (1988) studied the effects of pollution on Lake Calumet, and these investigators provide substantial evidence of the adverse impacts to the ecosystem caused by past, as well as current, industrial activity in the area.

Cravens and Zhan (1990) determined that groundwater flow through the shallow, unconsolidated deposits of the Lake Calumet area is intrinsically connected to the surface waters, such as the streams, rivers, lakes, and wetlands, of the area. Furthermore, since the elevation of the land surface is flat and low in this area, these researchers indicate that the water table is commonly near the land surface. The lateral flow through the unconsolidated deposits is generally dependent on the local topography, and the natural flow is believed to be altered due to the large amount of fill material that has been deposited over most of the region, as well as other modifying factors, such as landfilling, channelization of rivers, filling of surface waters, sewer and ditch construction, and the presence of large impervious urban areas (Cravens and Zhan 1990, Fitzpatrick and Bhowmik 1990).

The EDR report shows that multiple wells are located within one mile of the project area (see Figure 3). A review of these entries suggests that the wells were typically developed for surveying or water monitoring purposes or were drilled for engineering investigations.

The EDR report provides hydrogeologic information. Some of this information is based on site-specific subsurface investigations documented in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) investigation reports. The CERCLIS information for the Interlake property (116th and Stoney Island suggests that the surficial aquifer flow direction at a site ½ to 1 mile west of the target property was west southwest toward Lake Calumet. The measured depth to water was less than fifteen (15) feet. The surficial sand unit aquifer is underlain by the Silurian (lower Niagaran) dolomite aquifer, but no information was available about the hydraulic connection between these two (2) aquifers. Since this site is located on the other side of the Calumet River and a considerable distance from the target property, it is likely that the conditions at this site do not reflect the hydrogeologic conditions at the target property.

EDR developed an information system (AQUIFLOW) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to the water table. Information obtained from this information system suggests that 1/2 mile to 1 mile southeast of the target property the surficial aquifer flow direction was north northeast. However, as mentioned above, there are a number of factors that can affect the groundwater flow through shallow unconsolidated deposits, so this general flow direction may not reflect the conditions at the target property.

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Wetlands

As data stewards, the United States Fish and Wildlife Service (FWS) is the principle Federal agency that provides wetland information to the public and other agencies. In 1986, the Emergency Wetlands Resources Act mandated that the FWS complete the mapping and digitizing of the Nation's wetlands. The result of this effort is the Wetlands Geospatial Data Layer. This data layer houses all of the Service digital geospatial wetlands data, and forms the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (NSDI). The National Spatial Data Infrastructure (NSDI) is a way of enhancing the accessibility, communication, and use of geospatial data to support a wide variety of decisions at all levels of society. Review of information available online using the FWS Wetland Mapper indicates that there are no wetlands near the project area (see Figure 4). The EDR report radius map also indicates potential locations for the wetlands (see Figure 5). Based on this figure, it appears that a small wetland could be located adjacent to the Calumet River, but the actual site conditions and wetland presence would need to be confirmed by a wetland specialist.

DATABASE SEARCH

A search of available environmental records was conducted utilizing EDR. EDR searched Federal and state databases using the minimum search distances issued in the ASTM E 1527-05 guidelines. The comprehensive EDR database report is provided as Attachment 1. Table 1 provides recommended ASTM search distances for Federal and State databases. Table 2 provides a summary of regulated sites found within the recommended search distance. EDR sites referenced in the below discussion are shown in Figure 5.

CERCLIS

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) contains data on any potential hazardous waste site that has been reported by states, municipalities, private companies, or private persons pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLIS database indicates the stages of evaluation and remediation that have been completed for any given site. The CERCLIS database includes the NPL. The NPL identifies over 1,200 sites for priority cleanup under the Superfund program, and the CERCLIS-No Further Remedial Action Planned (NFRAP) list. CERCLIS-NFRAP sites are archived sites, and the following is the description of these sites provided in EDR report:

> "Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at the site has been completed, and that EPA has determined no further steps will be taken to list this site on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time.

> This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site."

The EDR database search identified one CERCLIS-NFRAP site within the search distance. Actually, this site is located on the target property. No NPL or CERCLIS sites were located within the recommended search distance.

The EDR report lists several company names at the target property, but the name associated with the CERCLIS-NFRAP finding was Republic/LTV Steel. According to the assessment history in the EDR report, discovery was completed 1 August 1980. A preliminary assessment was then completed on 1 February 1983, and the site was assigned a low priority for further assessment. The assessment history indicates a site inspection was completed 11 July 1986, and the hazard ranking system package was completed on 28 July 1986. In addition, the assessment history explains that the site was determined to not qualify for the NPL based on existing information, and it was archived on 18 November 1991. Republic/LTV Steel was also included on the CORRACTS, Resource, Conservation, and Recovery Act (RCRA)-conditionally exempt small quantity generators (CESQGs), and NY Manifest databases. The USEPA Facility Registry Service (FRS) Facility Detail Report lists the North American Industry Classification System (NAICS) code for the LTV Steel Company as 331111 and the associated description for this code is "iron and steel mills."

The USEPA FRS Facility Detail Report lists several alternative names for the LTV Steel Company, including Calumet Transload Railroad, LLC, Republic/LTV Steel, Edw. C Levy Co., Chicago Coke Co, Inc., and LTV Steel Co., Chicago Works. The EDR report indicates the Edw. C. Levy Co. ceased operations in November 1993 and the Chicago Coke Co. Inc. facility ceased operations in January 2008.

Republic/LTV Steel is listed under many information systems in the current USEPA FRS Facility Detail Report, and the data sources are in parentheses: These systems include the national compliance database (NCDB), agency compliance and enforcement systems (ACES), Integrated Compliance Information System (ICIS), air facility system (AIRS/AFS), national pollutant discharge elimination system (NPDES) (ICIS), Resource, Conservation, and Recovery Act Information System (RCRAINFO), Emission Inventory System (EIS), Toxic Release Inventory System (TRIS) (TRI Reporting Form), and Biennial Reporters (RCRAINFO). The ICIS and ICIS-NPDES systems show five (5) formal enforcement actions against the company. The AFS database lists numerous plant actions, including three (3) violations where substantial penalties were assessed, from 29 November 1973 through 10 January 2008. The AFS database also lists the air program status as "permanently closed." The USEPA Enforcement and Compliance History Online (ECHO) database shows that there were several quarters in 2012 and 2013, and, as recently as the first quarter of 2014, where the LTV Steel Co. had violations under the Clean Water Act (CWA). However, these CWA violations were related to effluent, compliance schedule, permit schedule, or single event violations. As

a consequence, the CWA violations did not place the LTV Steel Co. into significant or reportable non-compliance status.

The EDR report lists 34 incidents for the Emergency Response Notification System (ERNS) and 71 incidents for IL SPILLS databases for the LTV Steel Company or the alternative names for the target property. These databases list information on reported releases of oil and hazardous substances. Most of these incidents were related to the release of gas or vapor air emissions from the operations of coke ovens or furnaces and several incidents were listed in both databases. Typically, the chemicals from the industrial air emissions are captured and/or dispersed due to the wind and/or evaporated into the atmosphere. Although the long-term release of the air emissions from the steel mill furnaces could have impacted the soils in the vicinity of the site from particulates deposited back to the soils, urban areas typically have elevated concentrations of combustion chemicals due to automobile exhaust and other industrial activities. The short-term releases of gas or vapor primarily impact the air quality and dissipate over time, so there is a minimal impact to the soils and groundwater at the site. The long-term impact to the soils at the site from the furnaces and steel manufacturing is probably similar to the surrounding areas, and there is limited evidence that the particulates would present a REC.

Although the releases of air emissions from the furnaces and steel manufacturing are not anticipated to be a REC, spills of hazardous substances were also listed in the ERNS and IL SPILL databases. For example, an incident in the IL SPILLS (A127) database occurred on 16 November 1997 that resulted in the release of 50,000 gallons of tar and flushing liquor (benzene) from an above ground tank due to “employee malfunction.” The report did not include any information on containment or cleanup actions for this spill. Another incident was listed in both the ERNS (Map ID A4) and IL SPILLS (Map ID A25) databases, and these reports explain that a pipe burst on 14 January 1998 that resulted in 10,000 lbs of spilled benzene. Again, there was no information on the containment or cleanup actions for this spill. There is also an incident in the IL SPILLS (Map ID A88) database that explains that on 6 May 2000 a smaller, 2,000 gallon release, of coal tar occurred but, similar to the other releases, containment and cleanup were not reported. Further information is needed to determine if these spills were properly contained and cleaned up, but, in the absence of further information, these incidents are considered to be RECs because they suggest that there were releases and there is the likely presence of hazardous substances on the property.

There are also several notable ERNS and IL SPILLS incidents associated with the LTV Steel Company at the target property that report spills that were subsequently cleaned up. For instance, there is an ERNS incident (Map ID A34) that occurred on 15 March 1993 and indicates 27,000 gallons of coal tar spilled onto the concrete and slag ground, but the material was reportedly recovered in September and placed into lined roll-off boxes. Another ERNS incident (Map ID A48) occurred on 27 August 1996 and indicates a 6,000 gallon capacity storage tank ruptured, but the release was reportedly stopped, the material was contained, and the affected soil was picked up. An ERNS

incident (Map ID A51) occurred on 16 November 1997 that indicates valves were improperly opened and 1100 lbs of tar and flushing liquor (benzene) spilled and an unknown amount went to the sewer. This report indicates a vacuum truck was on site and a sand berm was in place to contain and clean up the spill. An additional incident in the IL SPILLS (Map ID A110) database occurred on 7 March 1998, and it explains a condenser pipe broke, releasing 34,000 gallons of cyanide and ammonia. This spill was also reportedly contained and cleaned up by vacuuming.

In addition to the ERNS and IL SPILLS databases, the LTV Steel Company at the target property also had a couple of spill incidents listed in the Hazardous Materials Information Reporting System HMIRS database (hazardous material spill incidents reported to the Department of Transportation (DOT). One notable spill of 67 gallons of strong ammonia liquid occurred on 20 November 1996. The area was apparently diked with sand and the material was absorbed with sand using a front-end loader, bobcat, and shovel.

Although these releases were reportedly cleaned up, it is uncertain if the clean up actions were sufficient or if the cleanup actions were reviewed or inspected by environmental regulators. Due to the quantity of material spilled, the number of releases, and the history of environmental violations, it is likely that the cleanup of many spills was inadequate and there is residual contamination in the soils and groundwater that presents a threat to human health or the environment. As a consequence, even though these spills were reportedly cleaned up, the hazardous substances, including cyanide, ammonia, and petroleum products, such as benzene, are considered to be a REC because they are likely present at a quantity greater than de minimus conditions.

Overall, it is evident from the USEPA information systems and reports of incidents and violations in the EDR report that the LTV Steel Company has a long and complex history and represents an environmental risk for the property. Further research is needed to investigate whether the spills were adequately cleaned up, but, even if they were cleaned up, due to the quantity of material, the number of reported releases, and the history of violations, it seems likely that residual contamination is present and this history of spills is a REC. In addition, a FOIA request was submitted to the Illinois EPA, and the Agency provided 1621 files with documentation on the site and correspondence regarding LTV/Republic operations. Due to time constraints, a comprehensive review of this documentation was not performed and this represents a data gap for this assessment.

RCRIS

The Resource, Conservation, and Recovery Information System (RCRIS) database lists sites which generate, transport, store, and/or dispose of hazardous waste defined by the Resource, Conservation and Recovery Act (RCRA). The RCRIS database includes RCRA Corrective Action Reports (CORRACTS), which identify hazardous waste handlers with RCRA corrective action activity; RCRA treatment, storage, or disposal facilities (TSDFs), RCRA conditionally exempt small quantity generators (CESQGs),

RCRA small quantity generators (SQGs), and RCRA large quantity generators (LQGs). The descriptions of the quantities needed to classify the generators into the CESQG, SQG, and LQG categories are provided in the EDR report.

The EDR database search located the target property as a RCRA-SQG and RCRA-CESQG site and also as a CORRACTS site. In addition, another CORRACTS site was identified within a distance of a half mile to one mile from the target property. The EDR database search did not identify any RCRA-LQGs or RCRA non-CORRACTS TSD facilities within the search distance.

South Shore Recycling was identified as the RCRA-SQG at the target property. The USEPA RCRAINFO database lists the NAICS code for South Shore Recycling as 42393, and this indicates the company is a “recyclable material merchant wholesaler.” The USEPA ICIS database lists a different NAICS code (339999) for this company and indicates the company is involved in “all other miscellaneous manufacturing.” There were no indications of any violations for this company in the ECHO database.

Republic/LTV Steel was identified in RCRIS as both the RCRA-CESQG and CORRACTS site located at the target property. The EDR report indicates that under CORRACTS, a RCRA Facility Assessment (RFA) on Republic/LTV Steel was completed on 22 September 1987, and it was determined that a RCRA Facility Investigation (RFI) was necessary. The facility was then assigned a medium corrective action priority on 27 September 1991. Another RFA, conducted on 1 May 2009, determined that a RFI was not necessary.

The other CORRACTS site that the EDR database search located was PVS Chemical Solutions, Inc. located at 12260 South Carondolet, which is approximately a half mile to one mile south of the target property. The NAICS code for this company is 325199 and the description is “all other basic organic chemical manufacturing.” In addition to CORRACTS, PVS Chemical Solutions is a RCRA-LQG and is listed in the TRIS, RCRA Administrative Action Tracking System (RAATS), WI Manifest, US AIRS, and EPA Watch List databases. Under CORRACTS, the EDR report indicates that a RFA on PVS Chemical Solutions was completed on 1 May 1987 and the facility or area was assigned a medium corrective action priority on 27 September 1991. Another RFA, conducted on 1 May 2009, determined that a RFI was not necessary. (Incidentally, these are the same dates on which Republic/LTV Steel was assigned a medium corrective action priority and on which it was later determined that a RFI was not necessary).

The EDR report shows that PVS Chemical Solutions Inc. has received numerous notices of violations, but the regulations that were violated were often not reported, and it seems that many of these violations were informal and involved compliance with documentation records, manifesting, reporting, and general facility standards, such as the preparation of contingency plans and emergency procedures. Besides these paperwork and reporting violations, the regulations that were violated included financial requirements, container use and management, and groundwater monitoring. Violations

were determined on 24 Aug 1984 (10 violations), 2 Apr 1985 (6 violations), 8 Aug 1985 (27 violations), 30 Sep 1985 (2 violations), 25 Mar 1986 (4 violations), 23 Mar 1987 (4 violations), 23 Nov 1987 (4 violations), and 15 May 2007 (24 violations).

A review of the site on the USEPA FRS Facility Detail Report shows that, similar to the LTV Steel Company, the PVS Chemicals Inc. site is included in a number of information systems, including the ICIS, RCRA (RCRAINFO), TRIS, EIS, Occupational Safety and Health Administration Information system (OSHA-OIS), AIRS/AFS, ACES, oil database, CERCLIS, and biennial reporters.

Under the CERCLIS EPA ID ILD001833714, the site name is listed as Allied Corporation. According to this database, discovery was completed 1 April 1979. A preliminary assessment was completed 1 September 1984, with an outcome of low priority for further assessment. A site inspection was then completed on 23 September 1986, with an outcome of higher priority for further assessment. Lastly, an expanded site inspection was completed on 4 June 1997, with a recommendation for Hazardous Ranking System (HRS) Scoring. In addition, the USEPA ECHO database shows that PVS Chemicals Inc. site has a history non-compliance with the Clean Water Act and RCRA and penalties have been assessed.

Although there is a history of environmental violations by PVS Chemical Solutions, Inc, as explained above, these violations have primarily concerned recordkeeping and compliance problems. Furthermore, this site is located a considerable distance, a half mile to one mile, south of the target property, and there is no information that suggests that releases from this site have resulted in the presence or likely presence of hazardous substances or petroleum products in, on, or at the target property. Evidently, the site mainly has an effect on the air quality, and the USEPA Toxic Release Inventory (TRI) reports show that the releases from this company include ammonia and sulfuric acid aerosols. Since there is no evidence of releases of hazardous substances and a low potential for this site to impact the soils and groundwater at the target property due to the distance and operations, the PVS Chemical Solutions, Inc. site is not considered to be a REC. Nonetheless, although PVS Chemical Solutions, Inc. is located a fair distance away from the target property and it is not considered to be a REC, this site is a RCRA-LQG that has a long history of violations, the USEPA apparently requires this company to perform groundwater monitoring, and the lack of planning for contingencies and emergencies is a concern and indicates the site represents a business environmental risk that needs to be taken into consideration.

ERNS

The ERNS database lists information on reported releases of oil and hazardous substances. The database search yielded 34 ERNS reports for the subject property. These reports were all associated with the LTV Steel Company at the target property location and were discussed earlier.

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SSU

The State Sites Unit Listing (SSU) is the State and Tribal equivalent to the CERCLIS and NPL; the State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPAs SSU. These sites may or may not have already been listed on the Federal CERCLIS list. The database search located one SSU within the search distance, the Indian Ridge Marsh site at 122nd Street and Torrence Avenue, which is located approximately one half mile to a mile southwest of the target property on the opposite side of the Calumet River. This site is reportedly a landfill that contains slag materials, a by-product from steel manufacturing that is prevalent throughout the region. Under some circumstances, slag can cause impacts to groundwater, but it is commonly used as fill material. Since the Indian Ridge Marsh property is located nearly a mile from the target property, and on the other side of the Calumet River, it is unlikely to be a concern.

SWF/LF

The EDR report lists Solid Waste Facilities/Landfill (SWF/LF) sites, and the report explains that these data were acquired from a list compiled by the Illinois EPA, titled "Available Disposal for Solid Waste in Illinois – Solid Waste Landfills Subject to State Surcharge." These sites may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. No SWF/LF sites were located within the search distance.

The EDR search also reviews sites in the Northeastern Illinois Planning Commission (IL NIPC) solid waste landfill inventory of active and inactive solid waste disposal sites. According to the EDR report, the IL NIPC inventory is based on state, local government and historical archive data, and this database search identified three (3) NIPC sites within the recommended search distance. These sites were identified as 116th east of Calumet River, 114th east of Calumet River, and 113th east of Calumet River. All three of these sites are located approximately one quarter mile to a half mile west or northwest of the target property, across the Calumet River. Since these sites are located on the other side of the Calumet River from the subject property, it is unlikely that they would impact the proposed project and they are not considered to represent any associated RECs or business environmental risks.

UST/LUST

The Illinois State Fire Marshall maintains a listing of registered underground storage tanks (USTs), as required by RCRA Subtitle I. The Illinois EPA maintains a listing of leaking underground storage tank (LUST) reports. The EDR database search located two (2) UST facilities but no LUSTs within the recommended search distance. One of the USTs (Map ID 132) was identified as being at 116th and Burley Avenue, one quarter mile east of the target property, but it is actually associated with the LTV Steel Company and appears to be located on the target property. The other UST (Map ID A84) was located at the target property.

According to the EDR report, the first UST site (Map ID A132), for a first notify date of 22 April 1986, included two (2) tanks that were exempt from registration. Tank 1 had a capacity of 1,000 gallons and the substance in the tank was gasoline, and Tank 2 had a capacity of 2.000 gallons and the substance in the tank was diesel fuel. The second UST site (Map ID A84), for a first notify date of 6 May 1986, included six (6) tanks and all the tanks with the exception of Tank 8 had a status of removed: Tank 2 had a capacity 8,000 gallons for "quench oil"; Tank 3 had a capacity 40,000 gallons of "quench oil"; Tank 5 had a capacity of 3,000 gallons of gasoline; Tank 6 had a capacity of 3,000 gallons of gasoline; Tank 7 had a capacity 3,000 gallons of gasoline; and Tank 8 had a capacity of 1,000 gallons and the status was "currently in use."

Due to time constraints, it is presently unknown and further information is needed to determine if any of the USTs are still present on the site.

SRP

The Site Remediation Program (SRP) database lists all voluntary remediation projects administered through the pre-notice site clean-up program (1989 to 1995) and the site remediation program (1996 to present). The database search located one SRP site within the search distance, which was Republic Engineered Steels Inc., located at 11610 South Avenue O, approximately one quarter to one half mile east of the target property. The address for this Republic Engineered Steels Inc. is essentially on or adjacent to the target property, and, as mentioned above, one of the alternative names for the LTV Steel Company is Republic/LTV Steel. The Illinois EPA shows that this site was enrolled 23 May 2001, but the SRP is no longer active and there is no date for the No Further Remediation (NFR) Letter. Due to time constraints, no further information is known at this time, but additional research is needed to determine the status regarding the extent of any spills or contamination as well as the progress of any remediation activities.

EDR Manufactured Gas Plant (MGP)

The EDR describes their proprietary Manufactured Gas Plant (MGP) Database as a database that includes records of coal gas plants (MGPs) compiled by EDR researchers. The EDR report notes that manufactured gas sites were used in the U.S. from the 1800s to 1950s to produce a gas that could be distributed and used as fuel. Furthermore, many of the by-products of the gas production were potentially hazardous to human health and the environment, including substances such as coal tar, sludge, and various oils. These by-products were frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

The EDR database search identified one MGP site; Peoples Gas and Light. This site is located approximately one half to one mile northwest of the target property. Since this site is situated on the other side of the Calumet River from the target property, it is

unlikely releases from the site would impact the proposed project and it is not considered to pose a REC or business environmental risk.

Orphans

The EDR radius report includes a list of “orphan” sites, or sites that are listed in government databases but were not able to be mapped due to inadequate address information. A review of the addresses of fifteen (15) orphan sites was conducted.

The LTV Steel – Chicago Coke Plant is located at the target property, but most of the other properties are located a considerable distance from the target property. As a consequence, it is unlikely that releases from these sites would impact the proposed project and they are not considered to pose a REC or business environmental risk. Due to time constraints, a thorough review of all these sites was not completed. See Table 3 for a summary of information obtained from the database search and additional investigation conducted online.

HISTORICAL TOPOGRAPHIC MAP REVIEW

Indications of environment concerns be determined by identifying the past land use and topographic changes at the project area and surrounding areas. Historical topographic maps of the area were reviewed to identify evidence of dumping, fill, or excavation activities as well as the development of the area, such as the construction of industrial or residential structures and changes to the waterways and wetland areas. The historical topographic maps for the project site are included in Attachment 2.

Historical topographic maps were reviewed from the period of 1901 to 1997. The 1901 topographic map is at a comparatively large scale of 1:62500 and indicates that there was a fair amount of development in the area surrounding the project site. This map shows there were a number of slips to the north and one to the northwest of the target property on the western side of the Calumet River. A railroad line (Pittsburgh, Ft. Wayne, and Chicago railroad) ran north and south along the eastern edge of the property. A network of roads existed in a grid pattern in the vicinity of the target property on both sides of the Calumet River. The property itself was comprised of undeveloped land, and the Calumet River had a number of curves that indicate it was a low-lying area where the flow could meander.

The 1938 topographic map and other historical topographic maps that were reviewed had a smaller scale of 1:24000. These maps show substantially more detail, including wetlands and the growth of industrial and residential development in the surrounding area. The target property is shown in the 1938 map to be undeveloped land and several areas of wetlands are shown in the vicinity, particularly southeast of the site. The 1938 map indicates a turning basin and circular channel were dredged through a portion of the property, and a railroad line (Pennsylvania railroad) still runs north and south along the eastern side of the property. Incidentally, a railroad line is still present

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today and runs north and south along the eastern side of the property throughout the historical maps and aerial photographs.

The 1938 topographic map shows that two (2) additional slips were constructed to the northwest of the target property on the western side of the Calumet River, and a more extensive railroad network and rail yard were constructed on the western side of the Calumet River. Many large buildings were constructed adjacent to the slips as well as to the south of the property, and these were likely associated with the iron and steel or grain handling industry. According to Colten (1985), between 1869 and 1921, the character of the Calumet region was “altered profoundly.” Iron and steel firms, as well as grain handling facilities, chose to locate there because bulk cargos could be handled by deep-draft lake ships, and there was an ample supply of open land, some of which could be used for waste disposal (Colten 1985). The 1938 map also shows that there were a number of branches and spurs (short branches) from the railway lines that connected to the industrial buildings.

The EDR city directory search is shown in Attachment 3. This documentation reports that from 1947 to 1976 the Republic Steel Corporation was located at the site address. Moreover, the Sanborn maps in Attachment 4 show that the Republic Steel plant structures were present at the site from 1946 to 1992. The buildings and structures for the Republic Steel Corporation are clearly evident in the 1953 topographic map, which shows that several large industrial building and minor structures were constructed on the target property, just south and to the west of East 114th Street. This map also shows that a rail yard or rail terminal was constructed directly north of the plant, with several small buildings in the vicinity. Furthermore, there are several small circular structures in this area north of the large industrial buildings that indicate the presence of above-ground storage tanks. The 1953 map shows that the turning basin was relocated much further south of the property, and it is now called Turning Basin 3, and the Calumet River appears to have been straightened and dredged to a depth of 21 feet. The 1953 topographic map also suggests that fill materials were used to alter the wetlands previously shown southwest of the property in the 1938 map. In addition, the 1953 map shows that the network of roads to the northeast of the target property became a residential neighborhood called South Chicago and the network of roads to the northwest became a residential neighborhood known as Stony Island.

Throughout the remainder of the historical topographic maps, including the 1960, 1965, 1973, 1977, 1991, and 1997, maps, the target property remains essentially the same as in the 1953 map. In general, these maps show that the property was occupied by various large industrial buildings and minor structures constructed for the Republic Steel Corporation. The different topographic maps indicate that minor alterations were made to these buildings and structures, but they are approximately the same size and in the same configuration. One example of a minor change is the number of small circular structures that appear to the north of the large buildings. As mentioned above, these small circular structures indicate the presence of above-ground storage tanks. The 1953 and 1960 topographic maps show four (4) small circular structures located to the north of the large buildings, but the 1965 map shows only two (2) small circular

structures with a couple of much smaller circular structures that appears as dots. Although there were minor alterations to the buildings and structures over time, the historical topographic maps suggest that the target property largely remained the same as it was in 1953.

The area surrounding the target property only showed a few signs of development and growth since 1953. For instance, the1960 map shows the construction of Washington High School to the east of the target property, just south of East 114th Street, and the 1965 map shows the construction of Rowan Park just south of the high school. In addition, the 1973 map shows a residential area was constructed to the east of the high school, and a large structure was constructed to the southwest of the target property, east of the railroad tracks between 117th and 120th Streets. This same map also shows the reduction of wetlands in the area to the west of the property on the other side of the Calumet River, and the development of ponds in this area. The 1991 and 1997 maps show large earthen mounds that were created in this same area west of the target property that resulted from the construction of landfills.

HISTORICAL AERIAL PHOTOGRAPH REVIEW

In addition to the historical topographic map review, historical aerial photographs of the area were reviewed to identify evidence of environmental issues, such as dumping, fill, or excavation activities, as well as to evaluate the development of the area, such as the construction of industrial or residential structures and changes to the waterways, wetland, and vegetated areas. The historical aerial photographs are included in Attachment 5.

Historical aerial photographs were reviewed for the period between 1938 and 2012, and all the photographs were at the same scale of 1 inch equal to 500 feet. Limited vegetation is shown in most of the historical photographs due to the large amount of industrial activity at the site and in the surrounding area. It can be observed in the 1938 historical aerial photograph of the site that human activities occurred that altered the natural landscape. This photograph depicts a large rectangular area at the target property, possibly from excavation and the creation of ridges of earthen materials and/or linear paths going through the vegetation and wetlands. Nonetheless, the actual activities and reasons for these visual effects are unknown. As observed in the 1938 topographic map, the 1938 aerial photograph shows a large industrial plant located to the south of the target property, and a small circular channel and turning basin that were apparently dredged at the site. The 1938 topographic map shows a few roads to the east of the railroad track that runs north and south along the eastern perimeter of the target property, but the 1938 aerial photograph only shows one prominent road that runs parallel to the railroad track in the northeastern area of the photograph, and the other roads are less prominent or difficult to discern. In general, the 1938 aerial photograph shows the area east of the railroad track remained largely undeveloped, and only a few structures are visible. The 1938 aerial photograph also shows a number of ships along the western bank of the Calumet River.

The 1952 aerial photograph shows substantial changes occurred at the target property since the 1938 aerial photograph was taken. Several large industrial buildings and minor structures were constructed on the site for the Republic Steel Corporation plant, and manufacturing activity is evident from the emissions from the smokestacks at the plant. The railroad tracks that run north and south along the eastern perimeter of the target property appear to have been enlarged and straightened, and small buildings and a large parking lot were constructed on the eastern side of the railroad tracks. North of the property is a large area that contains stockpiles of materials, which appear to be coal or possibly iron ore or other materials associated with the steel manufacturing process. Small circular structures observed in the 1953 topographic map are visible and appear to be above-ground storage tanks or silos, and a number of large ships and barges can be observed in the Calumet River.

The 1958 through 1988 historical aerial photographs show that the buildings and structures at the target property essentially remained the same as depicted in the 1952 aerial photograph. The 1993 aerial photograph then shows that the buildings and structures on the target property were all demolished, approximately between 114th and 116th Streets and east of the Calumet River to the railroad tracks. This aerial photograph shows the site was cleared of nearly all the structures and completely leveled, with the exception of a small parking area shown in the northeastern corner of the property and what appear to be a few very small stockpiles of materials or debris.

Although 1993 aerial photograph shows the target property was cleared, the 1997 topographic map indicates that the buildings and structures still existed, so there is conflicting information regarding the date the buildings and structures were demolished. It is possible that the date on the aerial photograph was incorrect, but the historical photographic evidence is generally accurate, and it seems more plausible that there may have been an error in the 1997 historical topographic map. The 1997 topographic map appears to be the most recent map available, so it could not be determined if this error was corrected in a subsequent topographic map. All the remaining historical photographs, from 1998 through 2012, indicate that the site was primarily being utilized to stockpile stone, concrete, iron, steel, and other various other materials.

In addition, the historical aerial photographs indicate that substantial changes to the industrial development of the surrounding area have occurred over time and there continues to be industrial activity in the vicinity of the target property, on the both sides of the Calumet River. The 1962 aerial photograph shows the construction of large silos across the Calumet River and to the south of the target property, and the 1973 aerial photograph shows that a large industrial building was constructed in the southeastern corner of the photograph. This same building was then apparently demolished because it is not present in the 2005 and subsequent aerial photographs. The industrial buildings for the steel plant can be observed south of the target property in all the historical aerial photographs, and it appears that there have not been many alterations to these buildings. Conversely, it is evident that a number of changes have occurred over time at the property to the north of the site. In the 1952 through 1998 aerial

photographs, as mentioned above, it appears that this northern property was initially used for storing materials, such as coal, iron ore, and other materials associated with the steel manufacturing process, but, after 1998, the subsequent aerial photographs, such 2005 through 2012, show that the area previously utilized for stockpiling materials contains vegetation and small ponds. Furthermore, it can be observed that the small circular and/or cylindrical structures on this property that were shown in the 1952 to 1988 aerial photographs and were probably utilized for above-ground storage appear to have been removed and they are not shown in the 1993 and later aerial photographs.

SITE VISIT

Members of the Chicago and Rock Island Districts project delivery team (PDT) visited the project site on 17 September 2014. The purpose of the visit was to view the site conditions. Notes and photographs of the site visit are included in Attachment 6. According to the notes from the site visit, the site is actively occupied as a recycling/manufacturing/storage facility and the photographs show large stockpiles of various materials and concrete Jersey Barriers. Site access was not provided and the view was largely obstructed by a tall corrugated metal fence, but it was observed that the amount of natural vegetation was limited. The limited site reconnaissance represents an important data gap for this phase I ESA.

FINDINGS AND CONCLUSIONS

This Phase I ESA was performed to determine if the site at 11600 South Burley Avenue (330L) being considered for a CDF as part of the CAWS DMMP has RECs or business environmental risks that may exist in the surrounding areas and if RECs could have an impact on the implementation of the project. The review of existing information determined the following:

The Calumet River is located along the western boundary of the site, and it generally flows westward, away from Lake Michigan. Existing information from the Illinois EPA determined that the Calumet River is impaired for two (2) designated uses; fish consumption due to mercury and PCBs and primary contact recreation due to fecal coliform.

The topography of the Calumet Region is typically flat due to historical glacial activity and fluctuations in the level of Lake Michigan. Silurian dolomite is the uppermost bedrock formation in the Chicago region, and it varies in thickness from less than an inch to more than 450 feet in some areas. The bedrock formations underlying the area are typically overlain by heterogeneous deposits of unconsolidated glacial till, which is debris from the glacial ice that once covered the area. The glacial till consists of a mixture of fragments of all sizes, usually without any stratification. This includes fine-grained, lacustrine deposits, such as silt and clay, as well as outwash sediments comprised of sand and gravel.

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Surface soils were identified as “urban land” with subordinate surficial soil types in the general area that included fine sand, fine sandy loam, silty clay loam, and loamy fine sand.

There are four (4) geological units that yield groundwater in the Chicago area, and these units they are divided into shallow and deep aquifers. Although groundwater is available, the use of groundwater from wells is limited within the area because water is supplied from Lake Michigan. In addition, the City of Chicago has an ordinance in the Municipal Code that prohibits the use of groundwater for potable water. The land surface is generally flat and at a low elevation, so the water table is commonly near or less than fifteen (15) feet beneath the land surface. The lateral flow of groundwater through the shallow aquifer comprised of unconsolidated deposits is often dependent on the local topography and connected to surface waters, such as the streams, rivers, lakes, and wetlands in the area. Due to the large amount of fill materials and modifications to the land surface from channelization, landfilling, sewer and ditch construction, and the presence of large impervious urban areas, the natural flow has been altered.

According to the EDR report and FWS online Wetland Mapper, there are no wetlands near the project, but the EDR report suggests that a small wetland could be located on the project site adjacent to the Calumet River. Actual site conditions and wetland presence should be confirmed by a wetland specialist.

The target property was listed under a variety of company names and these companies were listed in many different database information systems. The LTV Steel Company had a number of alternative names, including Calumet Transload Railroad, LLC, Republic/LTV Steel, Edw. C Levy Co., Chicago Coke Co, Inc., and LTV Steel Co., Chicago Works. This company has a history of violating environmental regulations and has been subjected to enforcement actions and penalties, and the ERNS and IL SPILLS databases showed numerous incidents. Many of these incidents were due to releases of hazardous substances to the air from the ovens and furnaces at the steel plant, and, since these releases primarily impact the air quality and are short-term, there are generally minimal long-term effects to the soils and groundwater. There were also several notable incidents where hazardous substances were released on the property, and the information regarding the cleanup is limited or not reported. Further information is needed to determine if these spills were properly contained and cleaned up, but, in the absence of further information, these incidents are considered to be RECs because they suggest that there were releases and there is the likely presence of hazardous substances on the property and/or in the groundwater.

There were releases of various compounds on the target property that were reportedly cleaned up, but it is uncertain if the clean up actions were sufficient or if the cleanup actions were reviewed or inspected by environmental regulators. Due to the quantity of material spilled, the number of releases, and the history of environmental violations, it is likely that the cleanup of many spills was inadequate and there is residual contamination in the soils and groundwater that may present a threat to human health

or the environment. As a consequence, even though these spills were reportedly cleaned up, they are considered to be a REC because it is likely that the substances are present at the site in a quantity greater than de minimus conditions.

Several USTs were identified at the site but due to time constraints, it is presently unknown and further information is needed to determine if any of the USTs are still present on the site. In addition, due to time constraints, a thorough review of all the orphan sites was not completed and further information is needed to determine the status regarding the enrollment of Republic Engineered Steels, Inc in the SRP.

A FOIA request was submitted to the Illinois EPA for the site, and the Agency provided 1621 files with documentation on the site and correspondence regarding LTV/Republic operations. Due to time constraints, a comprehensive review of this documentation was not performed and this represents a considerable data gap for this assessment. In summary, the target property has a long industrial use history. A number of actions have occurred to address site issues, but it is not known whether these actions are complete and sufficient.

Another company named PVS Chemical Solutions, Inc, exhibited a history of environmental violations, but these violations primarily concerned recordkeeping and compliance problems. Moreover, the site is located a considerable distance, a half mile to one mile, south of the target property, and there is no information that suggests that releases from this site have resulted in the presence or likely presence of hazardous substances or petroleum products in, on, or at the target property. The site mainly impacts air quality, and there was no documentation that indicated past releases or the likelihood of impact to the soils and groundwater at the target property. Due to the distance from the target property and reported operations, the PVS Chemical Solutions, Inc. site is not considered to be a REC. Nonetheless, although PVS Chemical Solutions, Inc. is located a fair distance away from the target property and it is not considered to be a REC, this site is a RCRA-LQG that has a long history of violations, the USEPA apparently requires this company to perform groundwater monitoring, and these are indications that the site represents a business environmental risk that needs to be taken into consideration.

A review of historical topographic maps and aerial photographs, city directory, and Sanborn maps shows that the site was formerly occupied by a large steel plant in a heavily industrial area. However, this documentation did not reveal evidence of any particularly outstanding environmental issues due to activities such as dumping, fill, or excavation. Based on the information in the EDR report, the large buildings for the Republic Steel Corporation were likely constructed in around 1946 and these buildings were demolished around 1992. After the demolition, it appears the site has been used to stockpile stone, concrete, iron, steel, and other various other materials.

Members of the Chicago and Rock Island Districts project delivery team (PDT) visited the project site on 17 September 2014 to view the site conditions. Notes and photographs of the site visit are included in Attachment 4. Site access was not provided

and the view was largely obstructed by a tall corrugated metal fence, but it was observed that the amount of natural vegetation was limited. The limited site reconnaissance represents another important data gap for this phase I ESA.

No Phase I ESA can completely eliminate uncertainty regarding the potential for contamination associated with a project area. Performance of the investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for contamination in connection with a project area, and this practice recognizes time and cost constraints.

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Figures

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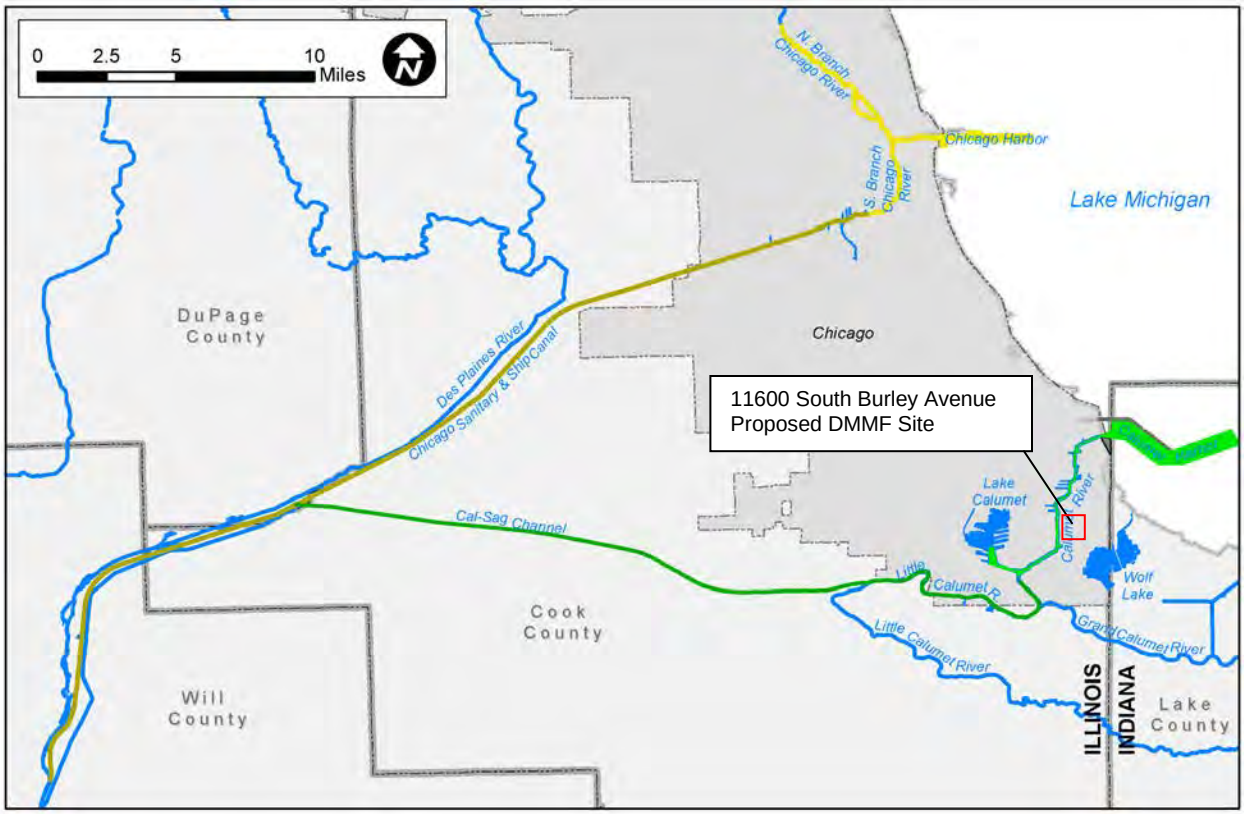
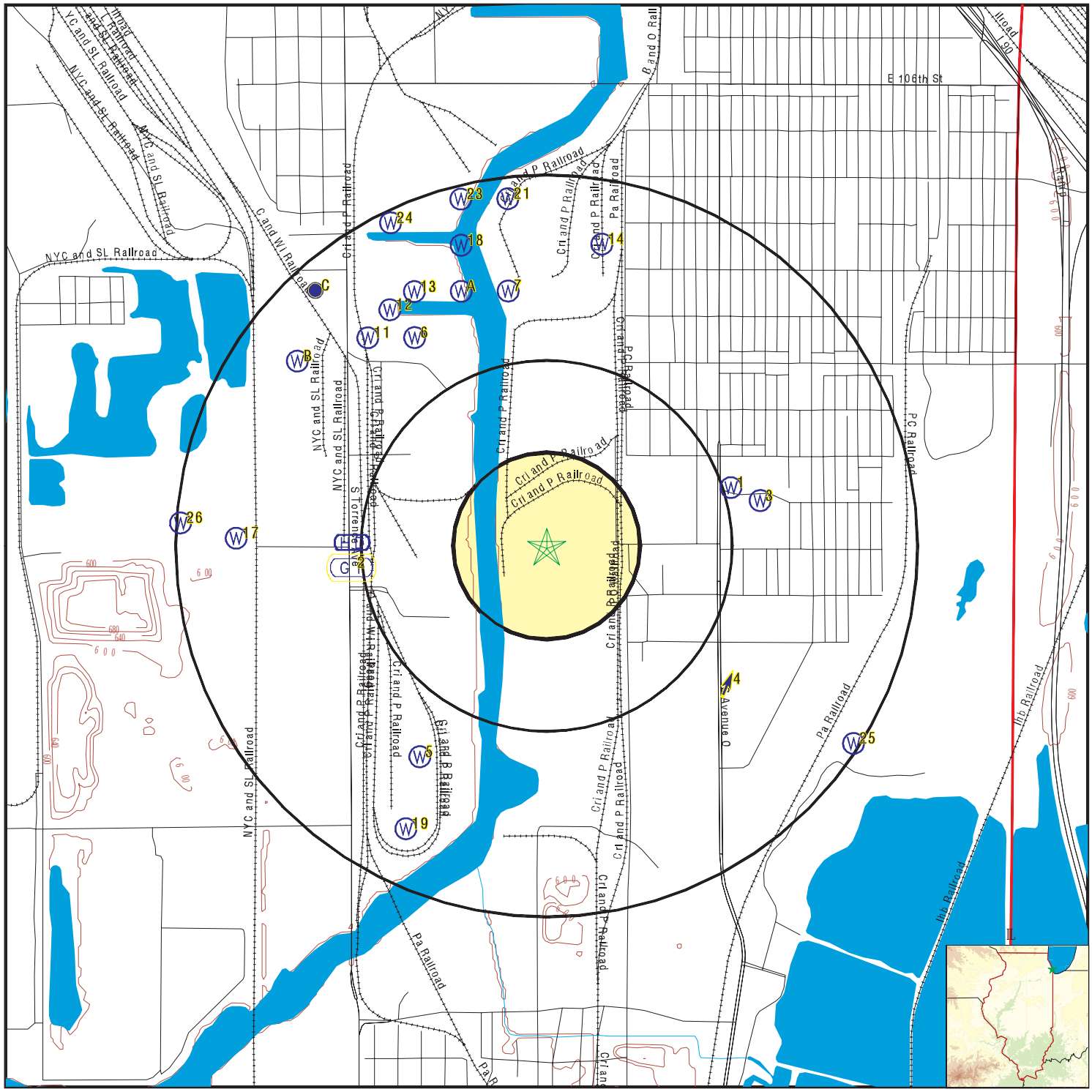


Figure 1 – Project Vicinity Map

Figure 2 – Project Site Boundary Map

PHYSICAL SETTING SOURCE MAP - 4056149.2s


E 106th St
NYC and SL Railroad
C and WI Railroad
Cri and P Railroad
B and O Railroad
P C Railroad
Pa Railroad
Avenue O
S Torrence Ave
Illinois Central Gulf Railroad
Illinois Central Gulf Railroad
Cri and B Railroad
Illinois Central Gulf Railroad
Illinois Central Gulf Railroad
Illinois Central Gulf

U.S. Fish and Wildlife Service

National Wetlands Inventory

LTV Wetland

Sep 24, 2014

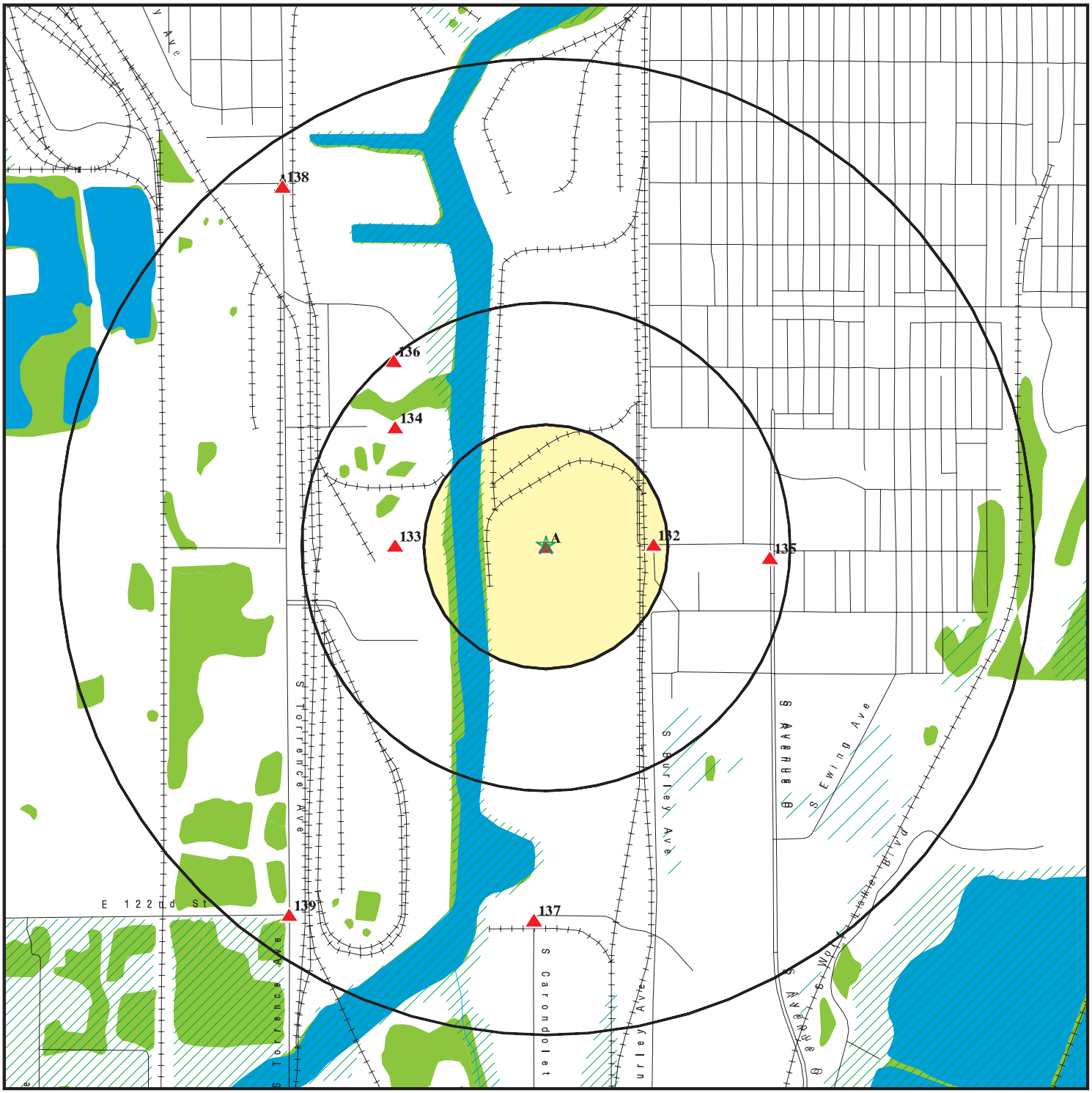
Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

overview MAP - 4056149.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: LTV Steel	CLIENT: U.S. Army Corps of Engineers
ADDRESS: 11600 South Burley Avenue Chicago IL 60617	CONTACT: Richard Saichek
LAT/LONG: 41.6847 / 87.5491	INQUIRY #: 4056149.2s
	DATE: September 04, 2014 4:43 pm

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Tables

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Table 1: Minimum Search Distance for Federal and State Database Searches

Database	Approximate Minimum Search Distance (mi)
Federal NPL Site List	1.0
Federal CERCLIS List	0.5
Federal CERCLIS NFRAP site list	Property and Adjoining Properties
Federal RCRA CORRACTS Facilities List	1.0
Federal RCRA non-CORRACTS TSD Facilities List	0.5
Federal RCRA Generators List	Property and Adjoining Properties
Federal ERNS List	Property Only
State Equivalent NPL	1.0
State Equivalent CERCLIS	0.5
State Landfill/Solid Waste Disposal Site Lists	0.5
State LUST Lists	0.5
State registered UST List	Property and Adjoining Properties

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
Chicago Coke Co. Inc.	A1	1008128967	IL AIRS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	Jan. 2008	Facility ceased operations in Jan. 2008	Release only had effect on air. Low potential for any impact to soil or groundwater.
Edw. C. Levy Co.	A2	1008151568	IL AIRS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	Nov. 1993	Facility ceased operations in Nov. 1993	Release only had effect on air. Low potential for any impact to soil or groundwater.
Republic/LTV Steel	A3	1000424200 - ILD056623598	CERC-NFRAP CORRACTS RCRA-CESQG NY MANIFEST	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA ID # ILD056623598, EPA Registry ID: 110038685269	Facility was assigned a medium corrective action priority. Large quantity generator that has a history of violations. Facility represents a REC that needs further investigation.
Chicago Coke Plant	A4	984197380	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Jan-1998	14 Jan. 1998 pipe burst and spilled 10000 lbs of benzene.	Soil and groundwater contamination due to industrial activity and spills of hazardous substances is a REC.
LTV Steel	A5	91234348	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Oct-1991	A5 = Raw Coke Oven Gases (50 lbs - 17 Oct. 1991)	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A6	92277839	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Aug-1992	A6 = Coke Oven Emissions release (500 lbs - 17 Aug. 1992)	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co. Chicago Works	A7	1005930236	TSCA	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	1986	Facility manufactured chemicals on TSCA list - 1986	Chemicals included light oils, coal tar, and tar decanter sludge, and spills could have caused soil and groundwater contamination. Low potential for impact.
LTV Steel Co. Chicago Works	A8	1005930243	TSCA	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	1988	Facility manufactured chemicals on TSCA list - 1998	Chemicals included light oils, coal tar, and tar decanter sludge, and spills could have caused soil and groundwater contamination. Low potential for impact.
LTV Steel Co. Chicago Works	A9	1005930235	TSCA	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	1990	Facility manufactured chemicals on TSCA list - 1990	Chemicals included light oils, coal tar, and tar decanter sludge, and spills could have caused soil and groundwater contamination. Low potential for impact.
LTV Steel Co. Chicago Works	A10	1011830412	RMP	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	Jun. 1999	Risk Management Plan (RMP) Accepted by USEPA Jun. 1999	Facility developed a RMP for storage of ammonia. Purpose of risk management plan is to minimize potential impacts. Low potential for impact.
South Shore Recycling	A11	1014952823 - ILR000171975	RCRA-SQG	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA RCRA Handler ID# ILR000171975 USEPA Registry ID# 110046151524	Low risk because it is a small quantity generator with no violations.
Edw. C. Levy Co.	A12	1012093911	FINDS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA Registry ID# 110038743697	Environmental interest listed as "air minor (permanently closed). Low potential for impact.
LTV Steel Co.	A13	1009517585	FTTS & HIST FTTS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	Inspection for TSCA PCB	No violations occurred, so no potential impacts were identified.
RSR Partners LLC	A14	1014923266 - ILR000167833	RCRA NonGen / NLR	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA RCRA Handler ID# ILR000167833	Other hazardous waste activities were identified, such as batteries and lamps. No violations occurred, so no potential impacts were identified.
LTV Steel Co. Chicago Works	A15	1005930231	TSCA & US AIRS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	1994	Facility manufactured chemicals on TSCA list - 1994	(TSCA) Chemicals included light oils, coal tar, and tar decanter sludge, and spills could have caused soil and groundwater contamination. (US AIRS) Total particulate matter - potential uncontrolled emissions < 100 tons/yr; in compliance with procedural requirements & attainment for given pollutant. Low potential for impact.
South Shore	A16	1015797094	FINDS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA Registry ID #110046151524; RCRA ID #ILR000171975; Agency Compliance and Enforcement Systems ID #170001936412; Integrated compliance informaton system ID #3400052997	Low potential for any impact

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Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
Reserve Marine Terminals	A17	1014120205	US AIRS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	Particulate emissions	Low potential for any impact
LTV Steel	A18	91219694	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	31-May-1991	Spill Date 31 May 1991, coke oven emissions	Low potential for any impact
LTV Steel	A19	90185309	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	11-Sep-1990	Spill Date 11 Sep 1990, coke oven gas (over 1 lb)	Low potential for any impact
Reserve Marine Terminals	A20	1015904406	FINDS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA Registry ID #110046596741; Air Facility System - Environmental interest is air minor (operating)	Low potential for any impact
LTV Steel	A21	91218604	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	21-May-1991	Spill Date 21 May 1991; coke oven gases	Low potential for any impact
LTV Steel	A22	S115743984	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	3-Feb-1996	Spill Date 03 Feb 1996; 45 lbs of clean coke oven gas	Low potential for any impact
Republic Engineered Steel	A23	S115727121	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	19-Nov-1990	Spill Date 19 Nov 1990; unknown oily substance on Calumet River (unknown amount)	Low potential for any impact
LTV Steel	A24	91201081	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	15-Jan-1991	Spill Date 15 Jan 1991; anhydrous Ammonia (quantity not reported)	Low potential for any impact
LTV Steel	A25	S115748835	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Jan-1998	Report Date 14 Jan 1998; Light Oil (Benzene), approximately 10,000 lbs. (broken pipeline) (same as A4)	
RSR Partners LLC	A26	1015828778	FINDS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA Registry ID #110044807554; RCRA - Other Hazardous Waste Activities, RCRA ID #ILR000167833	NAICS Code = Recyclable Material Merchant Wholesalers; Low potential for any impact
LTV Steel	A27	93341113	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Sep-1993	Spill Date: 9 Sep 1993; benzo(a)pyrene (5 lbs) benzo(b)fluorothene (8 lbs) - Release from coal tar storage tank.	Remediated gravel - low potential for impact because area was remediated.
LTV Steel	A28	93342761	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Oct-1993	Spill Date: 7 Oct 1993; Coke Gas (1000 lbs)	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A29	91220582	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Jun-1991	Spill Date: 7 Jun 1991; Coke Oven Gas - 5 min release, unknown quantity	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A30	91220765	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	10-Jun-1991	Spill Date: 10 Jun 1991; Coke Oven Gas (1 lb)	Release only had effect on air. Low potential for any impact to soil or groundwater.
Napuck Salvage of Waupaca LLC	A31	1015904407	FINDS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA Registry ID #110046596750; Air Facility System ID #1703106103 (air minor (operating)); Emission Inventory System ID #16567711 (criteria and hazardous air pollutant inventory	NAICS Code = All other miscellaneous manufacturing; Releases would have impact on air quality. Low potential for any impact to soil or groundwater.
LTV Steel	A32	2000545599	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	18-Oct-2000	Incident Date_ 18 Oct 2000; 6-inch pipeline ruptured, spilled 1000 gallons of "debenzolized" wash oil onto pavement and surrounding soil	Material reportedly contained, vac truck used, excavated soil, clean up crew on site - Since spill was cleaned up, there is low potential for impact to soil and groundwater.
LTV Steel	A33	92286925	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	4-Oct-1992	Spill Date: 04 Oct 1992; Coke Oven Emissions (quantity not reported)	Release only had effect on air. Low potential for any impact to soil or groundwater.

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LTV Steel	A34	93339598	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	15-Mar-1993	Spill Date: 15 Mar. 1993; Naptha, Coal Tar, spilled 27,000 gallons onto concrete and slag ground.	Material was reportedly recovered in September and placed into lined rolloffs. REC because there is a potential for soil and groundwater contamination.
LTV Steel	A35	93348709	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	23-Nov-1993	Spill Date: 23 Nov 1993; oil, misc. coal tar, spilled 20 gallons	Material was reportedly contained in dike, scooped and placed into containers. Since it was a small quantity that was contained and cleaned up there is a low potential for impacts to soil and groundwater quality.
LTV Steel	A36	94359683	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	13-Feb-1994	Spill Date: 13 Feb 1994; Coke Oven Emissions (5 lbs)	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A37	93352064	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Dec-1993	Spill Date: 17 Dec 1993; oil, misc. coal tar, spilled 700 gals	Bypass drain on tank was left open, leak was reportedly secured and vac trucks were used to contain and clean-up material. REC because a large quantity of material was spilled, and the material could have potentially impacted the soils and groundwater.
LTV Steel	A38	93348117	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Nov-1993	Spill Date: 16 Nov 1993; oil, misc. coal tar, spilled 40 gals (354 lbs)	Pipe malfunctioned and material reportedly released into diked area and recovered. The response indicates the material was recovered, but it is a REC because of a potential for soil and groundwater impacts.
LTV Steel	A39	94354109	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Jan-1994	Spill Date: 09 Jan 1994; Coke Oven Emissions (3 lbs)	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A40	S111880365	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	21-May-1991	21 May. 1991: Incident listed on Illinois Emergency Management Agency (IEMA) website: Incident # 911365. Status: Closed; Hazmat incident type = gas or vapor cloud; Materials Involved = Coke oven gas; Container Type = Other/Coke oven battery; Amount Released = greater than 1 lb; Cause of release = equipment malfunction	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A41	94394254	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Sep-1994	Incident Date: 16 Sep 1994; Coke Oven Emissions, quantity not reported, duration of release was 27 minutes	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel (Coke Battery?)	A42	93353073	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	29-Dec-1993	Spill Date: 29 Dec 1993; raw coke oven gas, 3 lbs is quantity	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A43	93351122	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	12-Dec-1993	Spill Date: 12 Dec 1993; clean coke oven gas, unknown quantity, release lasted 8 hrs, failure of pilot ignition system	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A44	94394857	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	22-Sep-1994	Spill Date: 22 Sep 1994; coke oven gas, quantity is 90 lbs, failed ventilation fan	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A45	96070380	HMIRS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Jun-1996	date: 7 Jun 1996; spill of fuel Nalco Fuel Tach 8252, Combustible Liquid N.O.S, 1 gallon	Small quantity of fuel was spilled, so there is a low potential for impacts to soil and groundwater.
LTV Steel	A46	96120518	HMIRS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	20-Nov-1996	date: 20 Nov 1996; spill of Strong Ammonia Liquid, Hazardous Waste, 67 gallons	Area was diked with sand and material was absorbed with sand with use of a front-end loader, bobcat, and shovel. Although it appears that the material was contained and cleaned up, the spill is a REC because it may have impacted the soils and/or groundwater.
By Products Plant	A47	96489782	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	5-May-1996	date: 5 May 1996; did not report type of material spilled or quantity; notes indicate "Hiro Hax" unit malfunction, release was secured and cleanup crews were at the scene.	Potential REC because there is a potential for impact to soil/land.

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Not reported	A48	96505354	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	27-Aug-1996	date: 27 Aug. 1996; storage tank (6,000 gal. capacity) ruptured; release was stopped, material contained and picked up affected soil.	Potential REC because there is a potential for impact to soil/land.
Bleeder Stack #1	A49	96511201	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Oct-1996	16 Oct. 1996; Ignition pilot failed and resulted in the release of material.	Release only had effect on air. Low potential for any impact to soil or groundwater.
Not reported	A50	96511314	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Oct-1996	17 Oct. 1996; process equipment - a vent valve was opened, but release wa secured.	Release only had effect on air. Low potential for any impact to soil or groundwater.
Chicago Coke Plant	A51	97411821	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Nov-1997	16 Nov 1997; valves improperly opened. Benzene /tar and flushing liquor spill (1100 lbs). Unknown amount went to sewer. Vacuum trucks on site, sand berm in place.	Although spill area was diked with sand, the spill is a potential REC because it was a large quantity and it may have impacted the soils and/or groundwater.
LTV Steel	A52	S111878514	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Nov-1990	09 Nov 1990; no information provided	Further information is needed to determine if this spill is a potential REC.
Republic Engineered Steel	A53	S111878621	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	19-Nov-1990	19 Nov 1990; incident occurred, but no information provided	Further information is needed to determine if this spill is a potential REC.
Chicago Coke Plant	A54	97414282	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	3-Dec-1997	3 Dec 1997; 100 lbs of tar spilled on land due to storage tank leak. Leak was secured material and contaminated soil was removed.	Spill was reportedly small and cleaned up so there is a low potential for soil and groundwater contamination
LTV Steel	A55	98427517	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Mar-1998	9 Mar 1998; Employee tripped a valve causing a flare to open - spill of coke oven emissions (1780 lbs)	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A56	93342942	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	10-Oct-1993	10 Oct. 1993; Spilled coke oven gas (800 lbs) - Monitor system for gas bleed system failed, allowing release.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel	A57	1012087131	FINDS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	USEPA Registry ID# 110038685269 - Many environmental interests and information systems: national compliance database (NCDB) (two (2) different ID #s), agency compliance and enforcement systems (ACES), integrated compliance information system (ICIS) - formal enforcement action, ICIS-NPDES, RCRA CESQG, emission inventory system (EIS), air facility system, toxic release inventory system (TRIS), and biennial reporters.	Several reported violations of the NPDES permit 11 Nov 2013, but apparently they are minor violations. Further information is necessary to evaluate potential RECs.
LTV Steel Chicago Works	A58	S104491686	IL Eng Controls and IL SRP	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	3-Feb-1999	Engineering controls - NFR Letter dated 3 Feb 1999 - Clean soil barrier for 48.7 acres. SRP - enrolled 10 Jul 1997 NFR letter dated 3 Feb 1999.	Institutional controls and the presence of the clean soil barrier to control site contamination are potential impacts for liability concerns, use of the site, and construction of the project.
LTV Steel Co.	A59	S108966990	IL Financial Assurance	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown	Hazardous Subtitle C Closure Activity US EPA Number (RCRA ID) ILD056623598	Presence of closed remediation area is a potential REC.
LTV Steel Co. Outfall 004 on Calumet River	A60	98452901	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	28-Aug-1998	28 Aug 1998: Spill from unknown oil source - on-going investigation to determine source for sheen on Calumet River.	Low potential for impact if source was determined and cleaned up.
LTV Steel	A61	S111880268	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	12-May-1991	12 May 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A62	S111881290	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	15-Aug-1991	15 Aug 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.

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LTV Steel	A63	S111880460	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	31-May-1991	31 May 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A64	S111879146	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	15-Jan-1991	15 Jan. 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A65	S111880564	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	10-Jun-1991	10 Jun. 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A66	98435605	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-May-1998	6 May 1998: Spill with unknown oil and unknown quantity. Service water main in old pump station ruptured and carried residual oil in building to outfall.	Low potential for impact if source was determined and cleaned up.
LTV Steel Co	A67	S111881952	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Oct-1991	17 Oct. 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A68	S111880543	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Jun-1991	07 Jun. 1991: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A69	S111889759	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	29-Dec-1993	29 Dec. 1993: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A70	S111885002	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Aug-1992	17 Aug. 1992: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A71	S111882180	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-Nov-1991	6 Nov. 1991: Incident ID: 19913188; Same as Map ID # A108	
LTV Steel Co	A72	S111890084	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	13-Feb-1994	13 Feb. 1994: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A73	S111899897	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Nov-1997	16 Nov. 1997: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A74	S111889629	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	12-Dec-1993	12 Dec. 1993: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A75	S111889147	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	10-Oct-1993	10 Oct. 1993: Found on Illinois Emergency Management Agency (IEMA) website: Incident # 932689. Status: Closed, Hazmat incident type = gas/vapor cloud; Coke oven gas; 800 lbs released due to faulty monitor N. Stack	Apparently the release only had an effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co	A76	S111889131	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Oct-1993	7 Oct. 1993: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A77	S111897218	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Oct-1993	16 Oct. 1993: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A78	S111891899	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Sep-1994	16 Sep. 1994: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A79	S111891808	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Sep-1994	7 Sep. 1994: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.

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LTV Steel Co / Chicago Coke Plant	A80	S111899254	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	22-Aug-1997	22 Aug 1997: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A81	S111885543	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	4-Oct-1992	4 Oct 1992: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A82	S111896854	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	27-Aug-1996	27 Aug 1996: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co	A83	S111896045	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	5-May-1996	5 May 1996: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
Chicago Works	A84	U000865483	IL UST	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	Office of the State Fire Marshall (OFSM) first notify date = 6 May 1986	USTs: Tank 2 - capacity 8000 (quench oil), status - removed; Tank 3 - capacity 40000 (quench oil), status - removed; Tank 5 - capacity 3000 (gasoline), status - removed; Tank 6 - capacity 3000 (gasoline), status - removed; Tank 7 - capacity 3000 (gasoline), status - removed; Tank 8 - capacity 1000, status - currently in use.	Need further information to determine if tank leakage was an issue. If tanks were leaking, this would represent a potential REC.
LTV Steel Co.	A85	S111900359	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Jan-1998	14 Jan 1998: Spill with no details, but date corresponds with Map IDs A4 and A25.	
LTV Steel Co.	A86	S111900011	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	3-Dec-1997	3 Dec 1997: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A87	S111901309	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-May-1998	6 May 1998: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A88	S111907156	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-May-2000	6 May 2000: Incident No. 20000844, data input status = closed, hazmat incident type = leak or spill, material name = coal tar, amount of release = 2,000 gals, cause of release = fitting either melted or…, containment cleanup not reported.	Need further information to determine whether this spill was contained and cleaned up. If material was not cleaned up, it would represent a potential REC.
LTV Steel Co.	A89	S111903715	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-Feb-1999	6 Feb 1999: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A90	S111902409	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	28-Aug-1998	28 Aug 1998: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
RSR Partners LLC	A91	S113272275	IL BOL	Target Property (11600 S. Burley Ave.-B, Chicago, IL 60617)	no date	Interest type not reported	No impact indicated.
LTV Steel Co	A92	S111900767	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Sep-1988	Same as Map ID # A110: 14 Sep. 1988: Found on IEMA website: Incident # 881233. Status: Closed, Hazmat incident type = leak; Materials = Cyanide and Ammonia; Type = unknown; 34,000 gals released; Cause = Condensor pipe broke; Containment/cleanup = vacuuming, contained	Depending on the amount that was contained and cleaned up this is possibly a potential REC.
LTV Steel Co	A92	S111900767	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Mar-1998	9 Mar 1998: Spill with no details. Could have been air emissions? (Under same Map ID as incident above for A92)	Need further information to determine whether it might be a potential REC.

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South Shore Recycling	A93	S113708696	IL BOL	Target Property (11600 S. Burley Ave.-C, Chicago, IL 60617)	no date	Interest type not reported	No impact indicated.
Calumet Transload Railroad LLC	A94	S113272403	IL BOL	Target Property (11600 S. Burley Ave.-A, Chicago, IL 60617)	no date	Interest type not reported	No impact indicated.
LTV Steel Co.	A95	S115748522	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	3-Dec-1997	IEMA Spills Report for Incident No. 972316, Status = closed; Hazmat Incident Type = Spill; Material Name = Tar; Type = unknown, Container Type = Aboveground tank; Amount Released = 100 gal approximately, Cause of Release = ruptured hose, containment / cleanup actions = not reported.	Need further information to determine whether this spill was contained and cleaned up. If material was not cleaned up, it would represent a potential REC.
LTV Steel Co.	A96	S115740448	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	22-Sep-1994	IEMA Spills Report for Incident No. 942170, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven gas; Type = unknown, Container Type = Other - Flare Stack; Amount Released = 90 lbs, Cause of Release = equipment failure, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A97	S115740403	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Sep-1994	IEMA Spills Report for Incident No. 942125, Data Input Status = closed; Hazmat Incident Type = gas release; Material Name = coke oven gas; Type = unknown, Container Type = Other - Gas Main; Amount Released = More than 1 lb, Cause of Release = loss of steam turbine exhaust, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A98	S115740313	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Sep-1994	IEMA Spills Report for Incident No. 942034, Data Input Status = closed; Hazmat Incident Type = leak/gas; Material Name = coke oven gas; Type = unknown, Container Type = Other/manual bleeder flare; Amount Released = 4000 cu. ft., Cause of Release = equipment malfunction, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A99	S115749779	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-May-1998	IEMA Spills Report for Incident No. 981054, Data Input Status = closed; Hazmat Incident Type = spill; Material Name = oil sheen; Type = unknown, Container Type = Other/basement of mill building; Amount Released = unknown, Cause of Release = service water main break, containment / cleanup actions = not reported.	Low potential for impact if source was determined and cleaned up.
LTV Steel Co.	A100	S111895474	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	2-Feb-1996	28 Aug 1998: Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A101	S115727013	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Nov-1990	IEMA Spills Report for Incident No. 903337, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven gas; Type = unknown, Container Type = Other / coke oven; Amount Released = est. over 1 lb, Cause of Release = equipment malfunction, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
LTV Steel Co.	A102	S115730448	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Oct-1991	IEMA Spills Report for Incident No. 912960, Data Input Status = closed; Hazmat Incident Type = vapor cloud release; Material Name = raw coke oven gas; Type = unknown, Container Type = Other / coke oven; Amount Released = 750 lbs, Cause of Release = malfunction, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A103	S115737636	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Oct-1993	IEMA Spills Report for Incident No. 932673, Data Input Status = closed; Hazmat Incident Type = vapor cloud release; Material Name = coke oven gas; Type = unknown, Container Type = Other / Flare Stack; Amount Released = 1000 lbs, Cause of Release = pilot light igniter failed, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A104	S115738589	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Feb-1994	IEMA Spills Report for Incident No. 940308, Data Input Status = closed; Hazmat Incident Type = leak/gas or vapor cloud; Material Name = coke oven emissions; Type = unknown, Container Type = Other: coke oven system; Amount Released = excess of 1 lb, Cause of Release = frozen pilot gas line, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A105	S115734045	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	4-Oct-1992	IEMA Spills Report for Incident No. 922788, Data Input Status = closed; Hazmat Incident Type = gas; Material Name = coke oven emissions; Type = unknown, Container Type = Other: coke oven battery; Amount Released = 5 lbs, Cause of Release = exhaust fan failure, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A106	S115729787	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	15-Aug-1991	IEMA Spills Report for Incident No. 912298, Data Input Status = closed; Hazmat Incident Type = vapor cloud; Material Name = coke oven gas; Type = unknown, Container Type = Other: coke oven; Amount Released = more than 1 lb, Cause of Release = blew hole in #1 flue, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A107	S115733504	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Aug-1992	IEMA Spills Report for Incident No. 912298, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven emissions; Type = unknown, Container Type = Other: coke oven; Amount Released = 500 lbs, Cause of Release = equipment malfunction, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A108	S115730676	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-Nov-1991	IEMA Spills Report for Incident No. 913188, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven gas; Type = unknown, Container Type = Other: coke oven battery; Amount Released = 8600 lbs, Cause of Release = equipment failed, containment / cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A109	S115727644	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	15-Jan-1991	IEMA Spills Report for Incident No. 910139, Data Input Status = closed; Hazmat Incident Type = leak; Material Name = ammonia; Type = unknown, Container Type = pipeline; Amount Released = unknown, Cause of Release = pump malfunction, containment / cleanup actions = not reported.	Leak represents a potential REC.

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
LTV Steel Co.	A110	S115727644	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Sep-1988	Same as Map ID A92; IEMA Spills Report for Incident No. 881233, Data Input Status = closed; Hazmat Incident Type = leak; Material Name = cyanide and ammonia; Type = unknown, Container Type = pipeline; Amount Released = 34,000 gallons, Cause of Release = condensor pipe broke, containment / cleanup actions - vacuuming, contained.	Depending on the amount that was contained and cleaned up this is a possible REC.
LTV Steel Co.	A111	S115744555	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	5-May-1996	IEMA Spills Report for Incident No. 960747, Data Input Status = closed; Hazmat Incident Type = leak; Material Name = oxidation product, Type = unknown, Container Type = aboveground tank; Amount Released = 1,000 lbs, Cause of Release = employee error, containment / cleanup actions - not reported.	Depending on the amount that was contained and cleaned up this is a possible REC.
LTV Steel Co.	A112	S115749237	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Mar-1998	IEMA Spills Report for Incident No. 980512, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven emissions, Type = unknown, Container Type = other: flare; Amount Released = 1,782 lbs est, Cause of Release = valve malfunction, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A113	S115745364	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	27-Aug-1996	IEMA Spills Report for Incident No. 961556, Data Input Status = closed; Hazmat Incident Type = spill; Material Name = sodium hypochlorite (chemical commonly found in bleach), Type = unknown, Container Type = aboveground tank; Amount Released = 600 gals or 800 lbs, Cause of Release = corrosion; tank ruptured, containment / cleanup actions - not reported.	Depending on the amount that was contained and cleaned up this is a possible REC.
LTV Steel Co.	A114	S115737652	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	10-Oct-1993	IEMA Spills Report for Incident No. 980512, Data Input Status = closed; Hazmat Incident Type = gas/vapor cloud; Material Name = coke oven gas, Type = unknown, Container Type = other: coke oven; Amount Released = 800 lbs, Cause of Release = faulty monitor n. stack, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A115	S115738134	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	12-Dec-1993	IEMA Spills Report for Incident No. 933171, Data Input Status = closed; Hazmat Incident Type = gas/vapor release; Material Name = coke oven gas (benzene), Type = unknown, Container Type = pipeline; Amount Released = 122 lbs, Cause of Release = pilot ignition froze and part of pipeline burst, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A116	S115752182	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-Feb-1999	IEMA Spills Report for Incident No. 990265, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = gas/vapor from coke oven, Type = unknown, Container Type = Other: coke oven; Amount Released = perhaps 4 lbs, Cause of Release = unknown, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A117	S115741878	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	5-Apr-1995	IEMA Spills Report for Incident No. 950667, Data Input Status = closed; Hazmat Incident Type = leak; Material Name = light oil (contains benzene), Type = unknown, Container Type = pipeline; Amount Released = 292 lbs (219 lbs benzene), Cause of Release = rusted pipe, containment / cleanup actions - not reported.	Depending on the amount that was contained and cleaned up this is a possible REC.

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
LTV Steel Co.	A118	S115729041	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	7-Jun-1991	IEMA Spills Report for Incident No. 911546, Data Input Status = closed; Hazmat Incident Type = leak/gas cloud; Material Name = coke oven gas, Type = unknown, Container Type = Other: above ground process equipment; Amount Released = 5000 lbs, Cause of Release = equipment failure, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A119	S115728958	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	31-May-1991	IEMA Spills Report for Incident No. 911462, Data Input Status = closed; Hazmat Incident Type = leak; Material Name = coke oven emissions, Type = unknown, Container Type = Other: coke battery; Amount Released = 27,000 lbs, Cause of Release = malfunction equipment, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A120	S115750877	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	28-Aug-1998	IEMA Spills Report for Incident No. 982154, Data Input Status = closed; Hazmat Incident Type = leak; Material Name = unknown oil, Type = unknown, Container Type = not applicable; Amount Released = less than 1 gal., Cause of Release = excavation, containment / cleanup actions - not reported.	Since less than 1 gallon leaked, there is a low potential for any impact to soil or groundwater.
LTV Steel Co.	A121	S111893369	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	5-Apr-1995	5 Apr 1995: Incident ID: 19950667, Spill with no details. Could have been air emissions?	Need further information to determine whether it might be a potential REC.
LTV Steel Co.	A122	S115745728	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	17-Oct-1996	IEMA Spills Report for Incident No. 961620, Data Input Status = closed; Hazmat Incident Type = release; Material Name = liquid benzene, Type = unknown, Container Type = Other: Ammonia Still; Amount Released = 382 lbs, Cause of Release = valve left open, containment / cleanup actions - not reported.	Depending on the amount that was contained and cleaned up this is a possible REC.
LTV Steel Co.	A123	S115738336	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	9-Jan-1994	IEMA Spills Report for Incident No. 940055, Data Input Status = closed; Hazmat Incident Type = gas; Material Name = coke oven gas, Type = unknown, Container Type = Other: coke oven; Amount Released = approximately 1 lb, Cause of Release = failure of exhauster blower, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A124	S115738263	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	29-Dec-1993	IEMA Spills Report for Incident No. 933302, Data Input Status = closed; Hazmat Incident Type = vapor cloud; Material Name = benzene, Type = unknown, Container Type = Other: coke battery; Amount Released = 22 lbs, Cause of Release = flare did not light, containment / cleanup actions - not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A125	S115747765	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	22-Aug-1997	IEMA Spills Report for Incident No. 971558, Data Input Status = closed; Hazmat Incident Type = spill; Material Name = cyclohexylamine, Type = unknown, Container Type = Other: metal tote; Amount Released = 56.5 gals., Cause of Release = valve damaged, containment / cleanup actions - not reported.	Depending on the amount that was contained and cleaned up this is a possible REC.
Chicago Coke Plant	A126	984197381	ERNS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	14-Jan-1998	Benzene spill: Quantity = 10,000 lbs. Comments: Area contained with sand. Ground was frozen so equipment to scrape ground could not dig through the soil. Apparently the company planned to wait for the temperature to rise befor excavating the broken pipe, which burst due to the weather conditions.	Depending on the amount that was contained and cleaned up this is a possible REC.

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
LTV Steel Co.	A127	S115748408	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	16-Nov-1997	IEMA Spills Report for Incident No. 97202, Data Input Status = closed; Hazmat Incident Type = spill; Material Name = Tar & Flushing Liquor (Benzene), Type = unknown, Container Type = Above Ground Tank; Amount Released = 50,000 gals., Cause of Release = employee malfunction. Containment/Cleanup actions = not reported.	Depending on the amount that was contained and cleaned up this is a possible REC.
LTV Steel Co./Chicago Coke Co./Edw. C. Levy Co.	A128	1016463841	ICIS (Integrated Compliance Information System	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown (see enforcement action ID #?)	Enforcement Action ID = 05-1994-0174 Program ID #s (Boiler 912751, NCBD 105#1990917021572, TRIS 60617LTVST11600, FRS 110038685269, RMP 100000028597, RCRAINFO ILD056623598, NEI NEI48755, EIS 7300111, ACES 170000056604, ACES 170000041318, AIRS/AFS 1703101221, BR ILD056623598, NCDB 105#19910228021571)	Enforcement Action Type = Civil Judicial Action
LTV Steel Co./Chicago Coke Co./Edw. C. Levy Co.	A128	1016463841	ICIS (Integrated Compliance Information System	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown (see enforcement action ID #?)	Enforcement Action ID = 05-1986-0026, Program ID #s (NEI NEI48755, BOILER 912751, NCBD 105#19900917021572, TRIS 60617LTVST11600, FRS 110038685269, RMP 100000028597, RCRAINFO ILD056623598, NCDB 105#19910228021571, EIS 7300111, ACES 170000056604, ACES 170000041318, BR ILD056623598, AIRS/AFS 1703101221)	Enforcement Action Type = Civil Judicial Action
LTV Steel Co./Chicago Coke Co./Edw. C. Levy Co.	A128	1016463841	ICIS (Integrated Compliance Information System	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown (see enforcement action ID #?)	Enforcement Action ID = 05-1985-0466, Program ID #s (BR ILD056623598, AIRS/AFS 1703101221, ACES 170000041318, ACES 170000056604, EIS 7300111, NCDB 105#19910228021571, RCRAINFO ILD056623598, RMP 100000028597, FRS 110038685269, TRIS 60617LTVST11600, NCBD 105#19900917021572, BOILER 912751, NEI NEI48755)	Enforcement Action Type = TSCA 16 Action for Penalty
Republic Steel/Chicago Coke Co./Edw. C. Levy Co.	A128	1016463841	ICIS (Integrated Compliance Information System	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown (see enforcement action ID #?)	Enforcement Action ID = 05-1982-0052, Program ID #s (BR ILD056623598, AIRS/AFS 1703101221, NEI NEI48755, BOILER 912751, NCBD 105#19900917021572, TRIS 60617LTVST11600, FRS 110038685269, RMP 100000028597, RCRAINFO ILD056623598, NCDB 105#19910228021571, EIS 7300111, ACES 170000056604, ACES 170000041318)	Enforcement Action Type = Civil Contempt
Republic Steel/Chicago Coke Co./Edw. C. Levy Co.	A128	1016463841	ICIS (Integrated Compliance Information System	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	unknown (see enforcement action ID #?)	Enforcement Action ID = 05-1978-0023, Program ID #s (BR ILD056623598, BOILER 912751, NCBD 105#19900917021572, TRIS 60617LTVST11600, FRS 110038685269, RMP 100000028597, NEI NEI48755, NCDB 105#19910228021571, EIS 7300111, ACES 170000056604, ACES 170000041318, AIRS/AFS 1703101221, RCRAINFO ILD056623598)	Enforcement Action Type = Civil Judicial Action
LTV Steel Co.	A129	S115729062	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	6-Oct-1991	IEMA Spills Report for Incident No. 911567, Data Input Status = closed; Hazmat Incident Type = gas cloud; Material Name = coke oven gas, Type = unknown, Container Type = Other/Battery; Amount Released = 2500 gals., Cause of Release = equipment malfunction/primary cooler; Containment/Cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
LTV Steel Co.	A130	S115728863	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	21-May-1991	IEMA Spills Report for Incident No. 911365, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven gas, Type = unknown, Container Type = Other/coke oven battery; Amount Released = greater than 1 lb., Cause of Release = equipment malfunction; Containment/Cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A131	S115728766	IL SPILLS	Target Property (11600 S. Burley Ave., Chicago, IL 60617)	12-May-1991	IEMA Spills Report for Incident No. 911268, Data Input Status = closed; Hazmat Incident Type = gas or vapor cloud; Material Name = coke oven gas, Type = unknown, Container Type = Other/coke oven battery; Amount Released = 35,000 lbs, Cause of Release = exhaust (equipment failure); Containment/Cleanup actions = not reported.	Release only had effect on air. Low potential for any impact to soil or groundwater.
LTV Steel Co.	A132	U001142579	IL UST	116th & Burley Ave.	Office of the State Fire Marshall (OFSM) first notify date = 22 Apr 1986	USTs: Tank 1 (status = exempt from registration, capacity = 1000, substance = gasoline); Tank 2 - (status = exempt from registration, capacity = 2000, substance = diesel fuel).	Need further information to determine if tank leakage was an issue. If tanks were leaking, this would represent a potential REC.
116th East of Calumet River	133	S100790151	IL NIPC	No Address (1/4 - 1/2 (0.309 mi. - 1633 ft west)	unknown	unknown	impact unlikely since site is on the opposite side of the Calumet River
114th East of Calumet River	134	S100790152	IL NIPC	No Address (1/4 - 1/2 (0.394 mi. - 2079 ft NW)	unknown	unknown	impact unlikely since site is on the opposite side of the Calumet River
Republic Engineered Steels, Inc.	135	S107744830	IL SRP, IL AIRS	11610 South Avenue O, Chicago, IL 60617	Enrolled in SRP 23 May 2001	SRP: IL EPA ID: 0316515025, US EPA ID: ILD984780163, 82 acres. NFR letter not reported / AIRS cease operation date = 18 Feb. 1994	
113th East of Calumet River	136	S100790153	IL NIPC	No Address (1/4 - 1/2 (0.492 mi. - 2599 ft NW)	unknown	unknown	impact unlikely since site is on the opposite side of the Calumet River
PVS Chemical Solutions	137	1000248910 / 60633PVSCH12260	CORRACT, RCRA-LQG, TRIS, RAATS, WI Manifest, US AIRS, EPA Watch List	12260 S. Carondolet, Chicago, IL 60633	CORRACTS - See status; RCRA LQG start date = 13 Oct 1981	EPA ID: ILD001833714 CORRACTs 1 May 2009 - RCRA Facility Investigation (RFI) is not necessary; 27 Sep 1991 - Facility assigned medium corrective action priority; 1 May 1987 - RCRA Facility Assessment (RFA) Completed	The site has a history of environmental violations but it seems these issues mostly concern recordkeeping and compliance problems. The site is located a considerable distance away, the impact from the site mainly has an effect on the air, and it does not appear that the site has a history of spills or accidents. As a result, it seems there is a low potential for impact to soil and groundwater and the site is not considered to be a REC.
PVS Chemical Solutions	137	1000248910 / 60633PVSCH12260	CORRACT, RCRA-LQG, TRIS, RAATS, WI Manifest, US AIRS, EPA Watch List	12260 S. Carondolet, Chicago, IL 60633	see status	EPA Registry ID: 110000435208. Violations were determined on 24 Aug 1984 (10 violations), 2 Apr 1985 (6 violations), 8 Aug 1985 (27 violations), 30 Sep 1985 (2 violations), 25 Mar 1986 (4 violations), 23 Mar 1987 (4 violations), 23 Nov 1987 (4 violations), and 15 May 2007 (24 violations)	The site has a history of environmental violations but it seems these issues mostly concern recordkeeping and compliance problems. The site is located a considerable distance away, the impact from the site mainly has an effect on the air, and it does not appear that the site has a history of spills or accidents. As a result, it seems there is a low potential for impact to soil and groundwater and the site is not considered to be a REC.
Peoples Gas and Light	138	1008407324	EDR MGP	11000-11054 S. Torrence Ave, Chicago, IL 60617	unknown	manufactored gas plant - no additional information available	Since site is approximately a mile to the northwest and on the other side of the Calumet River, the potential for impact is low.
Indiana Ridge Marsh	139	S104296101	IL SSU	122nd and Torrence Ave. Chicago, IL 60617	unknown	Landfill - Slag only	Since site is approximately a mile to the southwest and on the other side of the Calumet River, the potential for impact is low.

Table 2: EDR Radius Search Results							
Site Name	**Map ID**	**EDR ID Number - EPA ID Number**	**Database**	***Proximity to Site (Address)***	**Associated Date of Incident**	**Status**	**Potential for Impact**
Database Info:							
AFS = (Aerometric Information Retrieval System (AIRS) Facility Subsystem). AIRS is the national repository for information concerning airborne pollution in the U.S. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare state implementation plans and by USEPA to estimate total national emissions.							
ERNS – Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.							
RMP – Risk Management Plan Facility							
FINDS – Facility Index System/Facility Registration System - Contains both facility information and 'pointers' to other sources that contain more detail.							
FTTS – Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) - FTTS tracks administrative cases and pesticide enforcement actions and compliance							
NAICS = National Industry Classification System Codes							
HMIRS – Hazardous Materials Information Reporting System - hazardous material spill incidents reported to the DOT.							
RAATS - RCRA Administrative Action Tracking System							

Table 3: Orphan Site Search Results

Orphan Site Name	Database	Proximity to Site *(Address)*	Status
Van Vlissingen Property	Illinois EPA Bureau of Land (BOL) Inventory Database	Approximately 3.0 miles northwest of the site. *(96th St & Van Vlissingen, Chicago, IL)*	BOL ID # 0316515138. No clear indication of reason for entry. Physically and hydrologically disconnected from project area. Not a REC.
Paxton Landfill Corporation	CERCLIS and RCRA NonGen	116th Street and Paxton Avenue. Roughly 1.0 mile west of the site, on the opposite side of the Calumet River.	USEPA ID# ILD000716852 BOL ID# 0316000031 (American Incineration). The Lake Calumet Cluster Site (LCCS) – Superfund site consists of Alburn Incinerator, U.S. Drum II., and Paxton Area Lagoons[1].
L.H.L #2	CERC-NFRAP	116th and N & W RR	
U.S. Drum Disposal II	CERCLA and RCRA	2400 East 119th Street. Roughly 1.0 mile west of the site, on the opposite side of the Calumet River.	USEPA ID# ILD000716852 BOL ID# 0316000031 (American Incineration). The Lake Calumet Cluster Site (LCCS) – Superfund site consists of Alburn Incinerator, U.S. Drum II., and Paxton Area Lagoons[1].
Calumet Container	IL NIPC	East 136th Street. 1631 State Line Road, Hammond, IN Approximately 3 miles northeast of the site. There is also a Calumet Container Corporation facility located at 12158 S. Stony Island Avenue, about a quarter mile to the west of the site. The Calumet Container Corporation site is listed as a RCRA-SQG and LUST site.	Agency ID 170000493231 BOL ID 0316000039 - These ID numbers are for the location of a State Sites Unit Data site. BOL ID 0316555005 and USEPA ID # ILD082070780 are the ID numbers for the RCRA
Ryerson Steel Co.	IL RGA LUST	2558 West 16th Street	

Orphan Site Name	Database	Proximity to Site *(Address)*	Status
US Steel South Works	Illinois EPA Bureau of Land (BOL) Inventory Database	79th Street & Brandon	
ACME Steel Company	FTTS[2] and Historical FTTS	10730 South Benley	
International Mill Service U.S. Steel	IL AIRS and FINDS	P.O. Box 17569	
Sundstrom Pressed Steel	Illinois EPA Bureau of Land (BOL) Inventory Database	8030 South Chicago Avenue.	
LTV Steel-Chicago Coke Plant	FINDS	Chicago Works	
Crucible Steel	IL RGA LUST	4501 West Cortland	
Vessel Slips Adjacent to Wisconsin Steel	FINDS	South of 106th Street.	
Chicago Department of Transportation	IL LUST	13007 Torrence Avenue	

[1] http://www.epa.gov/region5/superfund/npl/illinois/ILD000716852.html

[2] FTTS = tracking system tracks administrative cases and pesticide enforcement actions and compliance activities related to Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) / Toxic Substances Control Act (TSCA) and Emergency Planning and Community Right-to-Know Act (EPCRA).

NIPC = Northern Illinois Planning Commission