FINAL MAGNETOMETER SURVEY AND PHASE II ENVIRONMENTAL SITE ASSESSMENT

Project Site:

3100 - 3200 WEST LAKE STREET
CHICAGO, ILLINOIS

Project #1162.003.08

Prepared for:

Chicago Department of Environment
Urban Management and Brownfields Redevelopment
30 North LaSalle Street
25th Floor
Chicago, Illinois 60602-2575

Prepared By:

Environmental Design International inc.
200 South Michigan Avenue, Suite 700
Chicago, Illinois 60604

June 30, 2004

EXECUTIVE SUMMARY

Environmental Design International inc. (EDI) was retained by the Chicago Department of Environment (CDOE) to conduct a Magnetometer Survey on May 26, 2004 and a Phase II Environmental Site Assessment (ESA) on May 27, 2004 at 3100 - 3200 West Lake Street in Chicago, Illinois. The work was conducted in accordance with the notice-to-proceed dated March 23, 2004 and the notice-to-proceed dated May 24, 2004.

The Magnetometer Survey and Phase II ESA was conducted based on recommendations from a previous Phase I ESA performed by G.S.G Environmental, Inc. in August 2003. The Phase I ESA identified recognized environmental conditions (RECs) consisting of the possible presence of contamination associated with historic industrial and commercial uses of the subject property and neighboring properties, the historic presence of a gasoline tank, and the presence of historic adjacent underground storage tank (UST) sites. One REC identified at the time of the Magnetometer Survey included eight abandoned 55-gallon drums on 214 North Albany Avenue. One drum appeared to have leaked into the surrounding soils.

The subject property consists of several contiguous parcels that are both City and privately owned. The subject property occupies approximately 80,000 square feet and contains vacant lots and several structures. The subject property is bordered on the north by an alley, then Beidler Elementary School, on the south by Lake Street then vacant and developed industrial/commercial properties, on the east by North Albany Avenue then vacant land, and on the west by North Kedzie Avenue. The property is rectangular in shape.

The Magnetometer Survey was conducted on May 26, 2004 to locate large metallic anomalies, which may possibly be USTs associated with the former structures located on parcels identified as RECs from the prior Phase I ESA. Five anomalies were identified on the following addresses:

- Anomaly 1 - 214 North Albany Avenue
- Anomaly 2 - 3120/3126 (back of lot) West Lake Street
- Anomaly 3 – 3124 West Lake Street
- Anomaly 4 – 3126 West Lake Street
- Anomaly 5 – 3148 West Lake Street

The anomalies were marked with spray paint, labeled, and photographed. No visual evidence of USTs was observed in the vicinity of the anomalies detected. The parcel located at 3142 West Lake Street was not investigated. The Right-of-Entry for this parcel was not obtained by the CDOE at the time of the survey.

On May 27, 2004, EDI conducted the Phase II ESA drilling investigation at the subject property. Eleven soil borings were advanced on the subject property and twenty-two soil samples (two

from each boring) were preserved and submitted for laboratory analysis according to the Work Plan dated March 30, 2004.

The subsurface of the subject property generally consisted of brown and gray mottled silty clay with traces of angular gravel underneath 4 feet of organic fill material with construction debris. No groundwater was encountered.

Polynuclear Aromatic Compounds (PNAs)

Shallow samples collected across the entire property exhibited levels of PNAs that exceed TACO Tier 1 SROs for Class I and Class II Migration to Groundwater, Residential Ingestion, Industrial/Commercial ingestion, and Construction Worker Ingestion. Naphthalene was detected in soil samples B-5 1-4 and B-10 1-4 that exceeded the TACO Tier 1 SRO for Construction Worker Inhalation.

Volatile Organic Compounds (VOCs)

Soil sample B-12 1-4 feet exhibited tetrachloroethene (PCE) at a concentration of 0.686 mg/kg. This detection exceeds the TACO Tier 1 SROs for Class I and Class II Migration to Groundwater. The PCE detection of 0.00141 mg/kg in the deeper soil sample, B-12 4-8 feet, was below the most stringent TACO Tier 1 SROs.

Semi-Volatile Organic Compounds (SVOCs)

The maximum detection limits (MDLs) of seven SVOCs were above Tier 1 SROs for Class I and Class II Migration to Groundwater in soil samples B-12 1-4 and B-12 4-8. The Tier 1 SROs for the SVOCs are not achievable using current laboratory methods. Therefore, the laboratory detection limits are used as the default values for the respective constituent. For the purpose of this investigation, the detections of SVOCs in soil samples B-12 1-4 feet and B-12 4-8 feet do not change the conclusions and recommendations included herein. Detections of PNAs exceeding Class I and Class II Migration to Groundwater exist in soils analyzed that will require similar handling as the SVOC exceedances listed above.

Total Resource Conservation Recover Act (RCRA) Metals

Shallow soil samples collected from soil borings B-8, B-10 and B-11 yielded lead concentrations that are significantly higher than the TACO Tier 1 Residential, Industrial/Commercial, and Construction Worker Ingestion SROs of 400 mg/kg.

Toxicity Characteristic Leaching Procedure (TCLP) Lead

The TCLP lead detections in soil samples B-8 1-4 and B-11 1-4 are below the concentration that would classify it as hazardous waste (5 mg/L). They are above the TACO Tier 1 SROs for Class I and Class II Migration to Groundwater. Therefore the soil in this area would be classified as special waste during removal.

The TCLP lead detection in soil sample B-10 1-4 is above the concentration that would classify it as hazardous waste. This sample is also above the TACO Tier 1 SRO for Class I and Class II Migration to Groundwater. The soils in this area would be classified as hazardous waste during removal.

TCLP lead is an indication of the amount of lead that will leach to the groundwater from the soil due to precipitation. Groundwater is assumed to flow to the east toward Lake Michigan.

The City of Chicago has an ordinance prohibiting the use of groundwater, which can be used to effectively exclude the TACO Tier 1 SROs for the Class I and Class II Migration to Groundwater exposure pathway.

Based upon the preceding conclusions, the following recommendations are provided:

1. PNA and lead contamination could be managed by one of the following methods:

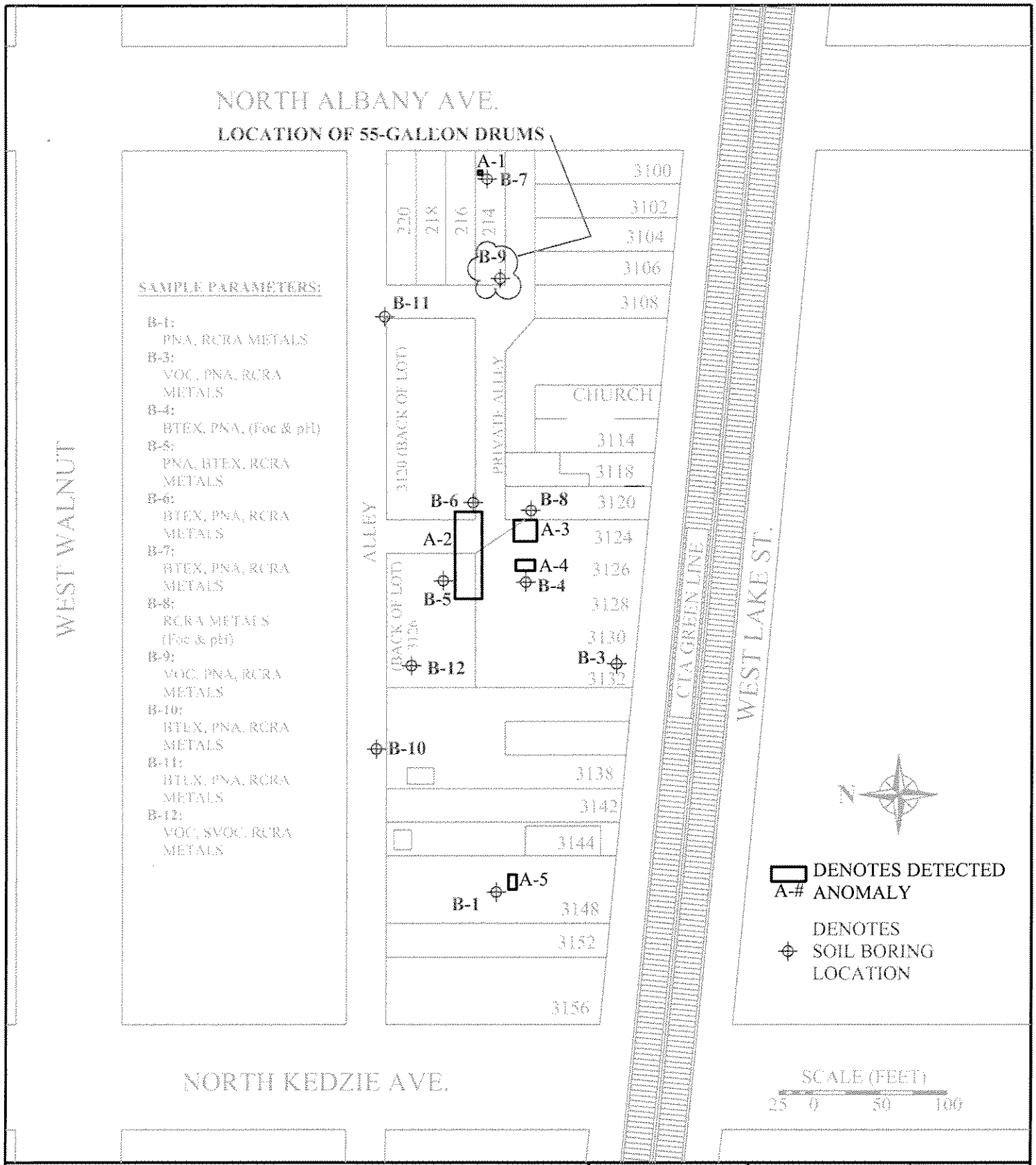
    a. Further delineation of the extent of contamination and removal of the contaminated soil.
    b. Removing the top three feet of soil and replacing it with clean fill in accordance with Subpart K of Illinois Environmental Protection Agency (IEPA) Title 35, Illinois Administrative Code (IAC) 742, or
    c. Placing an asphalt or concrete cap on the site in accordance with Subpart K of 35, IAC 742.

2. Future site activities should include development of a Health and Safety Plan (HASP) that identifies the contaminants of concern and includes precautions for construction workers.

3. If an engineered barrier in compliance with 35 IAC 742 Subpart K will not be used at the site, delineation of the horizontal extent of lead contamination surrounding B-8 1-4, B-10 1-4, and B-11 1-4 is recommended. The hazardous levels of lead associated with sample B-10 1-4 should be further defined and disposed of as hazardous waste.

4. Soil removed from contaminated areas of the site should be disposed as special waste. Soil removed in the vicinity of sample B-10 1-4 should be disposed of as hazardous waste.

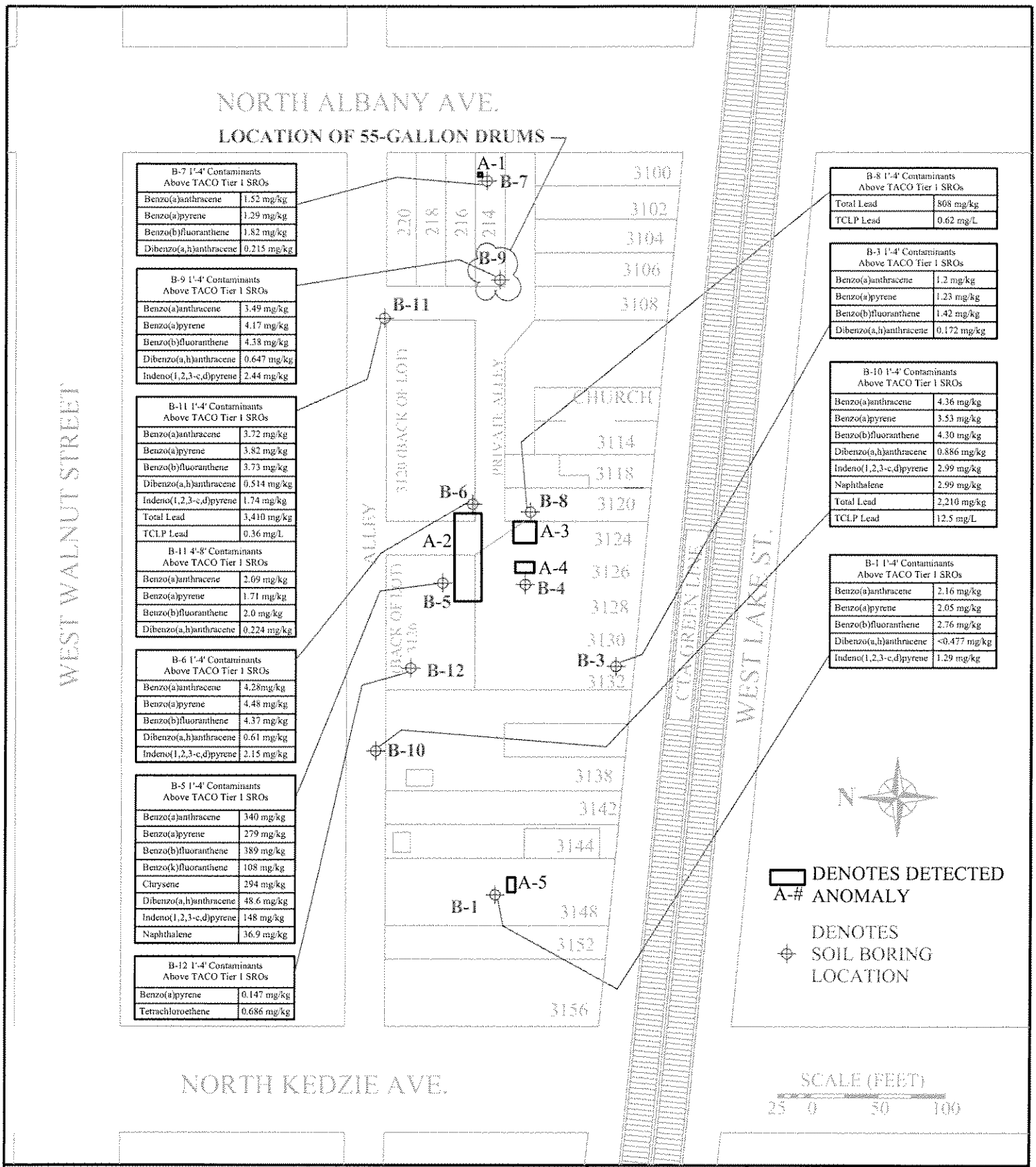
5. If the top 3 feet of soil are removed from the site, the source of contamination will be removed and groundwater contaminant migration modeling should not be necessary.



Title: SITE MAP WITH ANOMALY AND SOIL BORING LOCATIONS	**Issued** 05/04/04	**Drawn by:** SD	**Drawing** Figure 2
Site: 3100–3200 WEST LAKE STREET	**Revised** 06/16/04	**EDI proj. no.** 1162.003.08	
Client: CITY OF CHICAGO- DEPARTMENT OF ENVIRONMENT			

EDI ENVIRONMENTAL DESIGN INTERNATIONAL inc.
200 S. MICHIGAN AVENUE, SUITE 700
CHICAGO, IL 60604 PHONE: (312) 356-5400

MAGNETOMETER SURVEY AND PHASE II ESA
SITE MAP WITH ANOMALY AND
SOIL BORING LOCATIONS



Title:	**SITE MAP WITH CONTAMINANT CONCENTRATIONS**	**Issued** 05/04/04	**Drawn by:** SD	**Drawing** Figure 3
Site:	**3100–3200 WEST LAKE STREET**	**Revised** 06/16/04	**EDI proj. no.** 1162.003.08	
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MAGNETOMETER SURVEY AND PHASE II ESA
SITE MAP WITH CONTAMINANT CONCENTRATIONS