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COMMENT(S)

Construction Timeline and Ground Water Elevatin Graphs

Construction Completion Report

Waukegan Harbor Remedial Action Waukegan, Illinois

Canonie Environmental

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CONSTRUCTION COMPLETION REPORT
WAUKEGAN HARBOR REMEDIAL ACTION
WAUKEGAN, ILLINOIS

1.0 PROJECT OVERVIEW

1.1 General Site History

The U.S. Environmental Protection Agency (EPA) filed a complaint against Outboard Marine Corporation (OMC) on March 17, 1978 regarding alleged releases of polychlorinated biphenyls (PCBs) to the environment. The complaint against OMC was amended in 1982 under Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. A Consent Decree was signed by the United States of America, the State of Illinois, and OMC, and entered in the District Court for the Northern District of Illinois on April 27, 1989. The Consent Decree called for OMC to enter into a Trust Agreement and pay monies into a Trust for implementation of the Decree requirements.

1.2 Waukegan Harbor Trust

OMC formed the Harbor Trust (the Trust) with an agreement to fund and implement the design and remediation of the Waukegan Harbor site. Additional Trust responsibilities included oversight, operation, monitoring, and maintenance activities undertaken at the site. In April 1989, the Trust executed a contract with Canonie Environmental Services Corp. (Canonie) to develop a remedial design and perform the remediation of the site.

1.3 Project Description

This Construction Completion Report describes construction and remediation activities performed as part of the Waukegan Harbor Remedial Action located in Waukegan, Illinois, including performance standards achieved and significant modifications to remedial action work plans. The report contains data through January 6, 1995 at which time the final construction activity, a pumping test at Slip No. 3, was completed. Work at the Waukegan Harbor Site (site), approximately 40 miles north

of Chicago (see Figure 1), was conducted in accordance with local, state, and federal laws and regulations.

The purpose of the remedial design and remedial construction activities was to treat or isolate elevated levels of PCBs adsorbed onto the site sediments and soils. The design criteria are presented in Table 1. The major remedial activities at the site included:

- The remedial design for the containment of PCB-impacted soil and sediments at Waukegan Harbor and the surrounding land.

- Construction of a new boating slip for the relocation of Larsen Marine Services (LMS) from Slip No. 3 (see Figure 2).

- Isolation of Slip No. 3, for the containment of Upper Harbor sediments, by installing sheet piling and slurry walls, vertically, and capping with a synthetic liner and soil cover.

- Hydraulic dredging of designated sediments in Slip No. 3 for thermal treatment and hydraulic dredging of designated Upper Harbor sediment for placement in Slip No. 3 for containment.

- Excavation and thermal treatment of 12,750 tons of impacted soil and sediment.

- Construction of two containment cells (the East and West Containment Cells) on the northern area of the site by installing slurry walls and capping with synthetic liners and soil covers.

- Restoration of the North Ditch by excavation of designated sediments, placement in the West Cell, and backfilling the North Ditch with clean sand.

- Construction and operation of six separate water treatment plants to support the various construction operation activities during the remedial action.

- Installation and operation of an extraction well system at each containment cell to maintain an inward hydraulic gradient.

A detailed overview of the design is contained in the four-volume project work plan (Canonie, 1991a)[1]. A time line of the construction activities is presented on Figure 3.

Six water treatment plants were constructed in support of the remedial actions. The plants were designated 1 through 7. The Category 6 plant was owned by OMC and not used by Canonie during the remedial action. The six plants are described briefly below:

1. Category 1 treated water that was produced during dredging of the Upper Harbor.

2. Category 2 treated water that was produced during the dewatering of Slip No. 3.

3. Category 3 treated water generated during the dewatering of the West Containment Cell and dewatering during utility relocation.

4. Category 4 treated water produced during the thermal treatment of selected soils.

5. Category 5 is a mobile system that treated water generated during the operation and maintenance of extraction wells within the three containment cells.

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[1] The complete reference for each document cited in the text is included in the reference section.

6. Category 6 treated water from the retention pond and dewatering during the high pressure gas main reroute.

7. Category 7 was a temporary system used to treat ground water generated during the initial drawdown of the East Containment Cell.

Each treatment plant, with the exception of Category 6, is discussed in detail in a later section of this report.

Additional project plans produced during the design and used during construction activities include:

- Construction Specifications (Canonie, 1991b);
- Treatment Design and Operations Plan (Canonie, 1991c);
- Construction Quality Control Procedures (Canonie, 1991d);
- Remedial Action Health and Safety Plan (Canonie, 1991e);
- Treatment Health and Safety Plan (Canonie, 1991f);
- Remedial Action Quality Assurance Project Plan (Canonie, 1991g);
- Treatment Quality Assurance Project Plan (Canonie, 1991h).

All of the project plans were approved by the EPA in a June 27, 1991 letter to Mr. Glen Lenzi of OMC. A copy of the letter is included in Appendix A.

This Final Construction Report is organized as follows:

Section 2.0 - Health and Safety
Section 3.0 - New Slip and Slip No. 3 Containment Cell
Section 4.0 - Dredging
Section 5.0 - West Containment Cell
Section 6.0 - Thermal Treatment of Select Sediments and Soils
Section 7.0 - Stormwater Retention Pond
Section 8.0 - East Containment Cell
Section 9.0 - North Ditch

Drawings in this report are referenced with one of two different designations. The first method of designation is by a number, such as Figure 1, and refers to specific figures located in the figures section of the report. The second method of designation is by a letter and number, such as Figure W-1, which refers to a specific drawing in the record of construction drawings which accompanies this report. Reduced Record of Construction drawings are included in the figures section of this report behind the colored divider.

1.4 Work Plan Modifications

Several modifications to the work plans occurred during the remedial construction activities. The modifications are described in this final document. A listing of the modifications is presented below:

1. Six amendments were made to the Project Health and Safety Plan during construction. The amendments are listed in Section 2.0.

2. Additional treatment equipment was added to the Categories 2, 3, and 4 treatment plants to remove greater quantities of oil in the influent stream than anticipated in the design.

3. The slurry wall keys into the underlying till for the containment cells were greater than 3.5 feet, on the average, rather than a minimum of 3.0 feet as required by the Project Specifications.

4. Concrete curbing, and in certain areas a concrete slab, was placed along the north perimeter of Slip No. 3 to deter vehicle access onto the cell.

5. Area L in the East Containment Cell was extended to excavate additional PCB containing soil found during the investigation for the gas main reroute.

6. Soil berms were used across the North Ditch, rather than temporary sheet piling, to limit surface flow into the active excavation.

7. The northeast corner of the West Containment Cell was straightened so that the adjacent roadway was not undermined and to avoid interference with the high pressure gas main.

8. The waler connection for the Slip No. 3 cutoff wall was redesigned because a high water level in the harbor resulted in the connection, as originally designed, being partially submerged.

9. The Category 1 water treatment system was changed from gravity sand filters to pressure sand filters so that filtration occurred within closed vessels.

10. Turbidity measurements were made in Nephlometric Turbidity Units, which is the standard protocol, rather than Jackson Turbidity Units.

11. The East Containment Cell was not constructed continuously due to delays in the rerouting of the high pressure gas main around the East Cell.

12. The fines content of the soil-bentonite backfill was taken less frequently than that stated in the Project Specifications.

13. The rerouted force main along the east side of the East Cell was reconnected to the original force main, south of the North Ditch rather than north, due to the depth of the original force main on the north side of the ditch.

14. Obstructions at the clay till surface were encountered in each of the three containment cells during the construction of the slurry walls. The obstruction in the West Cell was fractured and removed so that key depth was achieved along the design alignment. However, in the case of the East and Slip No. 3 Containment Cells, the alignment was modified in the area of the obstructions.

15. During pre-design studies, soil contaminated with polynuclear aromatic hydrocarbons (PNA) was discovered in the area planned for placement of the New Slip. As a result, the design for the New Slip was modified from that contemplated in the IPC Work Plan, including but not limited to the location and dimensions of the slip, placement of a slurry wall around a portion of the slip, soil removal outside the slip, composition of soil remaining in the slip, and water quality testing. The changes were incorporated into the final design and construction.

16. To contain PNA-impacted soils from the New Slip excavation, a HDPE-lined cell was constructed south of the slip. This change was approved as part of the final design.

17. A storm water retention pond was constructed, adjacent to the West Containment Cell, to retain the initial runoff from the Plant 2 roof during construction activities.

18. The allowable slope of the cover material was modified to allow grades greater than 5 percent in several locations on the containment cells, as approved in the final design.

19. During the proof-of-process study and startup operations, the thermal desorption unit did not meet the destruction removal efficiency (DRE) air emissions standards. Modifications were made to correct the air emission problems and the system was able to comply with the DRE requirement when full-scale treatment activities resumed.

20. The depth of penetration of the sheet pile into the clay till was modified for the New Slip and for the cutoff wall at Slip No. 3. In addition, additional riprap material was added outside the sheet pile walls to address structural and wave action concerns.

21. Due to the age of the line and to improve future maintenance access, the sanitary sewer force main that was to be relocated around the New Slip was replaced instead by an entire new line along Sea-Horse Drive that completely bypassed the New Slip area.

2.0 HEALTH AND SAFETY

2.1 Program Description

Prior to the implementation of the remedial action, Canonie developed health and safety plans which applied to work activities to be conducted during the Waukegan Harbor project. The plans consisted of a Remedial Action Health and Safety Plan (Canonie, 1991e) and a Treatment Health and Safety Plan (Canonie, 1991f). The Remedial Action Health and Safety Plan describes the health and safety guidelines developed to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials. The Treatment Health and Safety Plan presented the guidelines used to protect on-site personnel, visitors, and the public during the thermal treatment of PCB-impacted soils and sediments. The health and safety plans were amended during the project to accommodate changed conditions requiring modified controls. A brief description of each amendment is presented in Section 2.2 of this report.

2.1.1 Air Monitoring

As part of the health and safety program, air monitoring was conducted during site operations to identify and quantify airborne levels of hazardous substances. The program, designed in accordance with 29 CFR 1910.120(h), utilized direct-reading instruments and PCB sampling equipment. Direct reading instruments consisted of the following:

1. An organic vapor analyzer (OVA) to detect concentrations of volatile organic compounds (VOCs);

2. A Miniram aerosol monitor (Miniram) to detect concentrations of total particulates;

3. A combustible gas indicator (CGI) to detect flammable or explosive atmospheres and oxygen concentrations.

These instruments were used for determining proper levels of personal protective equipment (PPE) and proper implementation of engineering controls. Airborne concentrations were monitored through the collection of discrete ambient air samples on personnel using Gilian sampling pumps and perimeter air monitoring using hi-volume samplers with polyurethane foam (PUF) sampling tubes. The high-volume samples were taken at fixed locations. The sample locations are shown on Figure 2. The air samples were analyzed for PCBs at Kemron Environmental Services in Novi, Michigan. A complete description of the air monitoring program is included in Canonie's safety plans (Canonie, 1991e).

2.1.2 Results

Air monitoring results are presented in Table 2. The highest positive detection for PCBs in the personnel sampling program [National Institute of Occupational Safety and Health (NIOSH) Method 5503) was 0.008 mg/m^3 which is well below the Threshold Limit Value-Permissible Exposure Limit (TLV-PEL) for PCBs of 1 mg/m^3. The perimeter air monitoring results were compared against a standard of 2.31 μg/m^3 established based on continuous exposure over a lifetime.

There were several exceedances for the perimeter air monitoring program. The exceedances are summarized in Table 3. It should be noted that most of the exceedances occurred at the air monitoring station upgradient of the site suggesting a non-remedial activity source. Consistent with the HASP, contingency measures, such as use of a water truck to reduce dust, were adopted.

2.2 Site Safety Plan Amendments

Amendments to the health and safety plan were used periodically in order to better address specific situations at the site. In all, a total of six amendments were approved by the EPA throughout the duration of the project. A copy of each executed amendment is presented in Appendix B. A brief description of each amendment is presented below.

2.2.1 Amendment #1

The excavation and handling of polynuclear aromatic hydrocarbon (PNA)-impacted soil was not addressed in the original Remedial Action Health and Safety Plan. However, PNA soil was encountered during the excavation of the New Slip. As a result, Amendment #1 was written to address the health and safety issues concerning these soils. Amendment #1 was approved on February 14, 1990.

2.2.2 Amendment #2

Amendment #2 was written to document a formal downgrade of PPE requirements for personnel working in the West Containment Cell. At the time this amendment was written, October 4, 1991, all analytical data collected from the West Containment area was below method detection limits. The levels of protection were therefore downgraded from Level C PPE to modified Level C PPE with no respirator.

2.2.3 Amendment #3

All air sampling data for dredging activities in Slip No. 3 were below detection limits for personal samples and below action levels for perimeter sampling. The materials in Slip No. 3 contained the highest concentrations of PCBs of all materials to be dredged. Since the Upper Harbor contained lower concentrations, Amendment #3 was written to downgrade PPE from Level C to modified Level D for the remainder of dredging activities at the site. The amendment was approved by the EPA on January 6, 1992.

2.2.4 Amendment #4

Analytical results from high volume air samples collected during Slip No. 3 and Upper Harbor dredging were below detection limits and also below action limits. As a result, an amendment was initiated to reduce the sample frequency at Hi-Vol Station #1 from three-day random sampling to six-day random sampling. Amendment #4 was approved by the EPA on January 31, 1995.

2.2.5 Amendment #5

Air sampling data collected during the North Ditch excavation showed three consecutive days below the action limit. Since the area of the ditch which contained the highest level of PCBs was complete at this time, an amendment to the Remedial Action Health and Safety Plan was issued to downgrade PPE from Level C to modified Level D. Amendment #5 was approved on July 16, 1992.

2.2.6 Amendment #6

Based on air monitoring results of activities in the West and East Containment Cells, Amendment #6 was initiated to downgrade PPE requirements from Level C to modified Level D. Approval was granted on September 16, 1992.

3.0 THE NEW SLIP AND SLIP NO. 3

The Remedial Action Plan called for construction of a New Slip for LMS (who previously occupied Slip No. 3), and conversion of the existing Slip No. 3 into a containment cell for PCB containing materials. The Remedial Action Plan also called for removal and thermal treatment of materials from Slip No. 3 which contain greater than 500 ppm total PCBs, and isolation in the Slip No. 3 containment cell of PCB materials between 50 and 500 ppm.

The New Slip was opened to the Upper Harbor on July 3, 1991. Shortly thereafter, LMS moved their operations from Slip No. 3 to the New Slip. Analytical results relevant to the construction of the New Slip are presented in a data report (Canonie, 1991i). Water level readings taken in the PNA cell sump and analytical results on the underdrain water from the PNA cell, since issuance of the report, are presented in Tables 4 and 5, respectively.

Additionally, from December 12 through 18, 1995, the last of the construction debris from the construction of the New Slip was removed from the New Slip area. The debris consisted of oak piling, concrete rubble, wood chips, and bushes. The debris was shipped to Waste Management's Woodland Recycling Center Landfill.

Conversion of Slip No. 3 into a containment cell is divided into the following items, which are discussed in Section 3.0.

1. Construction of a soil-bentonite filled sheet pile wall (cut-off wall) at the entrance of the slip;

2. Excavation of Area M;

3. Construction of a soil-bentonite slurry wall along the perimeter of the slip;

4. Dredging of Upper Harbor sediment into Slip No. 3;

5. Dewatering of Slip No. 3;

6. Placement of a permanent vegetated cap incorporating a synthetic liner over the containment cell.

The dredging of Slip No. 3 and the dredging of the Upper Harbor sediments into Slip No. 3 is presented in Section 4.0.

3.1 Slip No. 3 Cutoff Wall

The location of the Slip No. 3 cutoff wall is shown on Figure S-1. It traverses the east end of the former Slip No. 3 and is constructed of two rows of steel sheet piling which are 20 feet apart. Soil-bentonite backfill was placed between the sheet piling to maintain the continuity of the slurry wall at the Slip No. 3 containment cell. The backfill material was keyed into the clay an average of 3.1 feet along the centerline of the cutoff wall. Slip No. 3 slurry wall key data are presented in Table 6. Following placement of the backfill, a rock berm was placed on the harbor side of the cutoff wall (see Figure S-4).

Sheeting work for the cutoff wall began July 18, 1991 and was completed on September 25, 1991. The cutoff wall key trench was dug between October 3 and 9, 1991. Mixing of the backfill material for the cutoff wall began October 10, 1991. On October 19, 1991 placement of the backfill material into the cutoff wall began.

On October 21, 1991 the EPA issued an order, to the Trust, to stop backfill operations until U.S. Army Corps of Engineers' (ACOE) concerns regarding the potential overstressing of the sheeting, during installation, were addressed. In response to the ACOE's concerns, the Trust retained a consultant specializing in piling design and construction issues, and a pile test program was developed. On October 29, 1991 three pairs of sheet piles were driven 15 feet from the cutoff wall at a location selected by the ACOE. The sheets were driven to the same depth as the cutoff wall sheeting, removed, and inspected by the ACOE. No sheet interlock separation nor significant sheet pile deformation was observed.

Based on the results of the pile test, the EPA cancelled the stop order for the cutoff wall backfilling on the condition that a program be developed to monitor any movement of the cutoff wall during backfilling. The program that was developed consisted of daily monitoring of the rotational movement of the wall at ten locations and deflection of the wall at five places during backfilling operations. Contingency measures were required for rotational movements of three degrees or greater and a deflection of eight inches or greater. Backfilling operations resumed November 8, 1991 and were completed on November 23, 1991. Neither the rotational movement nor the deflection of the wall was sufficient to require contingency measures. Results of the cutoff wall monitoring program are presented in Table 7.

A rock berm was placed on the harbor side of the cutoff wall to help dissipate wind-generated waves in the Upper Harbor (see Figure S-4). Prior to placing the rock berm, sediments on the Upper Harbor side of the wall were dredged to the depths shown on Figure D-2. The depths shown on Figure D-2 were determined with a recording fathometer. The dredged sediments were placed into Slip No. 3. Additionally, 16 dock piles were installed for LMS after dredging and prior to placement of the rock berm. Dredging in the area of the cutoff wall was performed during early January 1992. The dock piles for LMS were driven between January 29 and February 3, 1992. Placement of the rock began February 8, 1992 and was completed on March 3, 1992. During the placement of the rock, the rotational movement and deflection of the cutoff wall sheeting was monitored. Neither rotational movement nor deflection of the wall was sufficient, during placement of the rock, to require implementation of contingency measures. The results are provided in Table 7.

3.2 Area M

Material from Slip No. 3 which contained greater than 500 parts per million (ppm) PCBs was removed for thermal treatment. Two types of materials were removed from Slip No. 3: sediment and soil. Section 4.0 presents discussion of the sediment removal, which was accomplished by hydraulic dredging. This section describes the excavation, by clamshell, of soil adjacent to Slip No. 3 (see Figure D-3). This area was designated Area M.

The Area M excavation is located adjacent to Slip No. 3 near the old water intake structure. Piling was driven at the perimeter of the Area M excavation between August 29, 1991 and September 12, 1991 to prevent the collapse of adjacent soils into the excavation. Excavation of soils within the area was complete by December 3, 1991. The sheeting was removed, cleaned, and transported off-site for reuse.

The Remedial Action Plan called for removal of soils within Area M to the top of the clay. The final survey logs are presented in Appendix A. The EPA approved completion of the excavation within this area on December 30, 1991. Confirmation of the EPA's approval is presented in Appendix A.

3.3 Slurry Wall Construction

The slurry walls at the Waukegan Harbor Site were constructed as follows:

1. A slurry wall platform was constructed along the slurry wall alignment. The minimum height was based on the design requirements (Canonie, 1991a).

2. A slurry pond was created for each containment cell. Bentonite was brought in by tanker truck and pneumatically pumped into the pond. The slurry was continuously mixed prior to and during excavation of the slurry wall.

3. The slurry wall area at each containment cell was excavated with a Caterpillar 245 backhoe capable of excavating to depths greater than 30 feet. As excavation began and progressed, slurry from the pond was pumped into excavation from the pond.

4. The slurry wall was excavated, on the average, over 3.5 feet into the underlying clay till. The excavated sand and clay were placed adjacent to the excavation where the soil was mixed with bentonite at a four percent by weight basis.

5. The soil-bentonite backfill was initially lowered into the excavation with a backhoe to prevent separation of the backfill. Once the backfill was above the slurry surface in the trench, the backfill was then placed with an end loader at the active backfill face.

6. The top of the slurry wall was cut to final grade during the installation of the gravel edge drain.

7. The quality assurance/quality control (QA/QC) information for the bentonite slurry and soil-bentonite backfill during the construction of the slurry wall was recorded on the Daily Quality Control Report, copies of which are included in Appendix C.

Eight thousand, eight hundred (8,800) cubic yards of soil-bentonite backfill were placed in the Slip No. 3 slurry wall and the cutoff wall. The soil-bentonite slurry wall at Slip No. 3 was constructed around the perimeter of Slip No. 3. The slurry wall was keyed an average of 3.7 feet into the clay which underlies the entire harbor area. Construction of the slurry wall began on September 23, 1991 and was completed on November 5, 1991.

On October 9, 1991 during excavation of the slurry trench, a 6-foot-diameter boulder was encountered at approximately 22 feet below grade near Station 11+20. The required depth was achieved within the trench on either side of the obstruction. On October 16, 1991, the slurry wall was rerouted south around the obstruction after re-routing a storm sewer in the area. Therefore, the entire slurry trench was excavated to the required depth.

Field and laboratory testing of the bentonite slurry and soil-bentonite backfill were performed to assure compliance with the project specifications. Samples of the soil-bentonite backfill were recovered approximately once every 2,500 cubic yards of material placed. The samples were tested for permeability and fines content. The results are summarized in Table 8. All samples meet the project specification

(Section 02229, Part 1, Canonie, 1991b) of a permeability less than 1 x 10^{-7} cm/sec and fines content greater than 10 percent passing the No. 200 sieve.

In the spring of 1993 during the installation of the final sections of the East Containment wall, Canonie increased the frequency for the grain size analyses for soil-bentonite backfill to a sample every 500 cubic yards of backfill. During the installation of the Slip No. 3 containment wall, a grain size analysis was performed on each sample tested for permeability. The overall testing frequency based on the installed wall quantities discussed above is one grain size test per 1,200 cubic yards of backfill. This frequency is less than that described in the specifications (Section 02229, Paragraph 4.3B of the Project Specifications; Canonie, 1991b).

The specified criteria for an acceptable backfill mix included a provision for a minimum percent by weight passing the No. 200 sieve (silt and clay) of at least 10 percent. This requirement was to insure the proper mixing of the clay from the soil-bentonite wall key with the fine sand and bentonite in a homogeneous mix. The percentage was adopted during the design, after testing several different soil-bentonite mixes. The results of the testing are presented in Canonie, 1991a, Section 1.4.2.2.

Since the purpose of the grain size testing was to insure uniformity of the backfill mix, Canonie analyzed the existing data for Slip No. 3 to determine the probability of any additional samples being less than 10 percent passing a No. 200 screen. The grain size data base for Slip No. 3 is shown in Table 8. Five samples were taken for an average percent passing the No. 200 screen of 27.4 percent and a standard deviation of 3.3 percent. Based on this sample set, there is better than a 99.5 percent probability that an additional sample or samples would exceed 10 percent passing a No. 200 screen. In other words, over 1,000 samples would have to be recovered to produce a result of less than 10 percent passing the No. 200 sieve. Therefore, if 13 additional samples had been recovered, in accordance with the specification, it is very unlikely that a result of less than 10 percent would have occurred. Additionally, as shown in the full-scale pumping test, Appendix D, the performance of the cells indicates a uniform and adequate containment wall at Slip No. 3.

Two in-situ permeability tests, as required by Section 4.4B of the Project Specification (Canonie, 1991b), were performed along the centerline of the slurry wall in the Slip No. 3 slurry wall. The location of the tests is shown on Figure 4. The results of the in-situ permeability tests are shown in Table 9. Both results were less than the required (Table 1, B.3) 1×10^{-7} cm/sec permeability.

3.3.1 Utility Relocation

Prior to the start of slurry wall construction, the storm drain discharging into the west end of Slip No. 3 was rerouted, between August 29, 1991 and September 9, 1991, along the southern perimeter of the containment cell. Due to the boulder encountered in the slurry wall at Station 11 + 20, a 40-foot section of the storm drain was rerouted further south to allow for realignment of the slurry wall around the obstruction. The final alignment of the storm drain is shown on Figure S-10.

3.4 Capping and Closure of the Containment Cell

Prior to the capping of Slip No. 3, 90 percent primary consolidation of the dredged sediments had to be achieved. The dewatering and subsequent consolidation of the sediments is discussed in Sections 4.2.2 and 4.3.

Construction activities for placement of the final cap at the Slip No. 3 containment cell began on August 8, 1994. The Category 2 Water Treatment Plant, used at Slip No. 3 to dewater the dredged sediments, was dismantled between August 8 and 12, 1994. The temporary monitoring wells were decommissioned on August 12, 1994. The north leg of the slurry wall was raised from Elevation 582 mean sea level (MSL) to 583 MSL, thus bringing the slurry wall to the same elevation throughout Slip No. 3. The remainder of the slurry wall was constructed to Elevation 583 MSL in 1991. Good contact between the old and new section of the slurry wall was maintained by removing desiccated backfill and placing the new backfill directly on the original backfill not affected by desiccation. The EPA approved the increase on October 22, 1994. A copy of the approval is presented in Appendix A. The gravel edge drain was installed around the slurry wall between September 6 and 27, 1994.

The 60-mil high-density polyethylene (HDPE) liner, Geonet drainage layer, and filter fabric were placed between September 21 and 29, 1994. The QA/QC logs for the liner installation are included in Appendix E. The 18-inch sand layer for the final cover was placed between September 29, 1994 and October 12, 1994. Density tests were taken on the 6-inch sand layer beneath the liner and the 18-inch sand layer on the liner. The density results are summarized in Table 10. A 6-inch layer of topsoil was placed between October 12 and 15, 1994. The hydroseeding of the containment cell was completed on October 21, 1994.

In the fall of 1994, Canonie proposed modifications to the layout of the cover along the northern perimeter of the Slip No. 3 containment cell. The modifications were desired to accommodate a request for increased access along LMS based on the final grade. Upon review of the proposal, the EPA required the placement of a concrete curb and slab as part of the modifications. The purpose of the curbing was to deter access to the cell from the north side. The purpose of the concrete slab was to provide a structural support over the slurry wall for the passage of a 50-ton boat lift which LMS intends to buy at a future date. The concrete curbing, located along the entire north perimeter, is offset three feet from the slurry wall with the exception of the curb along the slabs where the curb was placed adjacent to the slurry wall. The concrete slabs are located adjacent to LMS' main building and mast storage building. The curb and slab details are shown on Figures 5 through 7. The results of compressive strength testing on concrete cylinders from activities is presented in Table 11. All results exceeded the 28-day strength of 5,000 pounds per square inch (psi). The placement of the concrete was completed on December 4, 1994.

3.5 Monitoring Wells, Piezometers, and Recovery Wells

Two 6-inch permanent recovery wells were installed in the Slip No. 3 containment cell in July 1992 for the recovery of ground water for the long-term operation and maintenance of the cell. A copy of the boring log and well construction details are provided in Appendix F. The location of the recovery wells is shown on Figure 4. A 4-inch-diameter Grundfos pump (Model 10S03-6) was installed in each well and discharge piping was brought from the pump up to the well head. The electrical feed

to each well and the discharge piping for the treated water is shown on Figure S-2. The gravel roadway, constructed on the containment cell cap to access the two recovery wells, is also shown on Figure S-2. The ground water elevations taken between December 1992 and January 1995 in the monitoring wells and piezometers are presented in Table 12.

A series of four monitoring wells and piezometers were installed in July 1992 at Slip No. 3 to monitor the water levels inside and outside the slurry wall. The boring logs and well construction details are presented in Appendix F. The monitoring well and piezometer locations are shown on Figure S-2. A plot of the ground water elevations, monitoring wells, and piezometers from December 8, 1992 through January 6, 1995 is presented on Figure 8.

Ground water samples were recovered quarterly, beginning in the third quarter 1992, in accordance with Section 3.0 of the Operation and Maintenance Plan (Canonie, 1988a). The results are summarized in Table 13.

3.6 Slip No. 3 Containment Cell Dewatering (Category 5)

3.6.1 Dewatering in the Category 5 Treatment Plant

The dewatering of Slip No. 3 sediments, to promote consolidation of the sediments, is discussed in Section 4.2.2. The Category 5 mobile water treatment plant was used during the construction of the Slip No. 3 cap, and to induce an inward hydraulic gradient across the slurry wall after capping. A process flow diagram of the Category 5 plant is shown on Figure 9.

Water was treated with the Category 5 plant from August 24, 1994 to September 14, 1994 during construction; and from October 20, 1994 to January 6, 1995 after capping the cell. A total of 572,000 gallons of water from Slip No. 3 was treated through the Category 5 plant.

The performance criteria for the Category 5 plant was less than 1 ppb at the effluent port of the lead carbon vessel unit, and less than 1 ppb as a 30-day running average for the treatment plant effluent (O&M Plan, Section 4.0). The Category 5 plant met the discharge requirements during the dewatering of Slip No. 3 described above. The system influent, lead carbon, and system effluent were sampled for PCBs in accordance with Section 4.0 of the Project Operation and Maintenance Plan (O&M Plan). The results are summarized in Table 14.

3.6.2 Slip No. 3 Pumping Test

As part of a pumping test in the Slip No. 3 containment cell, the ground water levels at the monitoring wells and piezometers were measured on approximately a daily basis from October 20, 1994 through January 17, 1995 and less frequently thereafter. The recorded water levels are presented in Table 12 and on Figure 8.

The recovery of a ground water in the containment cell occurred more rapidly than calculated in the Design and Analysis Report (Section 4.6, Canonie, 1991a). The increased recovery rate is believed to be, in part, due to the result of a smaller storage coefficient for the dredged sediments than used in the Design and Analysis Report calculation. The storage coefficient used in the ground water modeling in the Design and Analysis Report was 0.3, which is typical of a medium grained beach sand. However, a fine grained material such as the dredged sediments, typically has a storage coefficient of 0.03 to 0.05 (ACOE, 1971). The small storage coefficient results in less water removal because water in the soil pores is not readily released and recovery occurs faster because there is less pore space to fill as the water reenters the cell. The data from the pumping test are consistent with the ACOE data. The results of the pumping test are discussed in further detail in Appendix D.

As a final construction-related activity, a pumping test was completed for each of the containment cells to confirm the performance of the slurry walls and cover for operation and maintenance. Upon successful testing, the containment cell entered the operation and maintenance phase of the remedial action.

4.0 DREDGING

Two areas required dredging in Waukegan Harbor: Slip No. 3 and the northern 980 feet of the harbor (Upper Harbor). Dredging was completed to a designated elevation or to a designated soil type such as clay till or sand, as required by the construction drawings. Upon completion of dredging activities, a bottom sampling program was performed to verify completion. The sampling program had two components. First, a recording fathometer depth sounder was used to determine the bottom elevation of the dredged area. Second, after the dredge soundings indicated that the elevation criteria had been met, soil samples from the harbor bottom were recovered at intervals described in Appendix K of Canonie, 1991a to assure that the organic silts had been removed. If an adequate volume of soil was recovered from a specific sample point, the sample was passed through a No. 200 sieve. Dredging was considered complete, in areas dredged to clay till, when all samples were demonstrated to have at least 50 percent, by weight, of the collected material retained by a No. 200 sieve, or 4 inches or less of material was recovered during sampling.

Prior to dredging Slip No. 3, construction of the cutoff wall and West Containment Cell Settling Pond were completed. A summary of construction activities for the Cutoff Wall and Settling Pond is provided in Sections 3.1 and 5.5, respectively. The material designated for removal from the slip was pumped, through double contained piping, to the Settling Pond for dewatering and treatment. Water decanted from the settled solids was pumped back to Slip No. 3 through double contained piping. Once the Slip No. 3 sediments were removed, the Upper Harbor material, requiring long-term containment, was dredged into the slip. The sediments deposited in the slip were dewatered to promote settlement for eventual capping of the cell.

4.1 Slip No. 3

Slip No. 3 dredging began December 8, 1991. An 8-inch hydraulic cutterhead dredge was used to dredge the slip. A polymer was added, through the dredge discharge line, to the dredged materials to enhance settlement of the dredged fines in the

Settling Pond. The dredge materials were pumped to the Settling Pond (see Section 5.5) in the West Containment Cell via the 8-inch double contained HDPE piping described above. Dredged spoils were allowed to settle to the bottom of the pond. The supernatant water was pumped back to Slip No. 3 via an 8-inch double contained HDPE return pipe.

Final dredge soundings were collected between December 21 and 23, 1991. The soundings were higher than proposed in the construction drawings. This was due to encountering the top of the clay till higher than anticipated. Additionally, a sand and rock berm was encountered along the toe of the south sheet pile wall of the slip. Since the criteria for dredging was based on the removal of the organic muck deposits, the dredging in this area was completed at a higher elevation than proposed. The slip bottom sediment was sampled on December 23, 1991. Pre- and post-dredge sounding data are presented on Figures D-11 through D-13. The EPA and ACOE approved the final dredge soundings for Slip No. 3 on December 30, 1991. Confirmation of the approval is presented in Appendix A.

4.2 Upper Harbor

In preparation for dredging the Upper Harbor, silt curtains were installed across the mouth of the New Slip and across the south end of the Upper Harbor in the locations shown on Figure D-2. The silt curtains were installed on December 17, 1991. Between December 18 and 20, 1991, the Upper Harbor was raked to collect oversized debris which could have interfered with dredging. The debris collected during raking was placed inside the Slip No. 3 Containment Cell.

Dredging operations for the Upper Harbor began January 3, 1992 and were completed February 25, 1992. A 10-inch hydraulic cutterhead dredge was used to dredge the Upper Harbor. A polymer was added to the dredged materials to enhance settlement of the dredged fine materials. The dredge pumped the sediments to the Slip No. 3 Containment Cell via a 10-inch HDPE pipeline. Dredged sediment settled to the bottom of the slip and the supernatant water was pumped to the Category 1 Water Treatment Plant located near the containment cell. The effluent from the treatment

plant flowed back to the Upper Harbor via the rerouted storm drain located along the south side of the Slip No. 3 Containment Cell.

Turbidity measurements were recorded daily during raking and dredging activities from depths of 10 and 20 feet on either side of the silt curtain and 500 feet south of the silt curtain in the Lower Harbor. Turbidity was measured in nephelometric turbidity units (NTU) (which is now the industry standard) rather than Jackson turbidity units specified in Appendix K (Canonie, 1991a). The change was approved by EPA on December 18, 1991. Confirmation of EPA's approval is presented in Appendix A. Turbidity results are given in Table 15. The turbidity readings outside of the silt curtain were less than 17 NTU, which is well below the 50 NTU action level.

Cross sectional drawings and bottom samples of the Upper Harbor were provided to the ACOE on February 26, 1992. The ACOE selected ten samples from the northern portion of the Upper Harbor for sieve analysis. Several of the samples failed the requirement of less than 50 percent fines content. Canonie, in concurrence with the EPA and ACOE, implemented a sampling program for the areas which failed the sieve analysis utilizing a split-spoon sampler. Samples which indicated the presence of four or more inches of muck were subjected to a sieve analysis. The ACOE selected two samples for sieve analysis. Both samples contained less than 50 percent fines. On March 11, 1992, the EPA and ACOE verbally approved the completion of the Upper Harbor dredging. Confirmation of EPA's approval is presented in Appendix A.

After completion of the Upper Harbor dredging and Category 1 water treatment, the harbor water was sprayed with Nalcolyte, a potable coagulant, to aid in the settling of suspended particulates. The Category 1 water treatment was completed on March 19, 1992. On March 20, 1992, 55 gallons of Nalcolyte were dispersed over the Upper Harbor. Consistent with the Remedial Action Plan, the silt curtains were removed 48 hours after the application of the coagulant. The silt curtains were removed March 23, 1992.

4.2.1 Category 1 Water Treatment

The Category 1 Water Treatment Plant was constructed to treat the water generated during the Upper Harbor dredging. The plant was to achieve an effluent quality of less than 15 parts per billion (ppb) total PCBs prior to returning the water to the Upper Harbor within the area isolated by silt curtains. The approved design called for two large gravity sand filter units operated in parallel. Prior to construction of the gravity sand filters, Canonie proposed an alternative treatment system consisting of pressure sand filters capable of a combined flow rate of 1,000 gallons per minute (gpm). The pressure sand filters provided a more versatile filtering capability in that they could be backwashed to remove accumulated solids, and were not susceptible to accidental overflow. In December 1991, after EPA approved the proposed change, construction of the Category 1 Water Treatment System began.

The plant was constructed on a sheltered, curbed concrete pad located near the Slip No. 3 Containment Cell. The influent lines leading to the plant, and the backwash line from the plant to the slip, were double contained. The curbed slab provided for spill containment. A shelter was constructed over the plant area. The shelter was heated to prevent winter freeze-up. Two 500-gpm, self-priming pumps provided the feed water to the plant. The pump suction lines were affixed to a float system which kept the suction ends above the settled muck. The plant was staffed 24 hours per day during operation. Each of the four sand filter beds were backwashed when the differential pressure of the vessel reached 15 psi. Effluent water from the three filters not being backwashed was used to supply the backwash water for the fourth vessel. All backwash water and waste materials were deposited in the Slip No. 3 containment cell.

The Category 1 Water Treatment Plant was tested between January 2 and 3, 1992. The system was operated for short periods of time to check for leaks. On both days, effluent water quality samples were collected. Upper Harbor dredging began January 3, 1992. On January 4, 1992 the system was placed into full operation. The analytical result from the sample collected January 2, 1992 was received on January 4, 1992. The result indicated 70 ppb of PCBs. The treatment system was

backwashed thoroughly and shut down. A section of silt curtain was installed in the northwest corner of the slip around the area of the pump suction to reduce the amount of solids reaching the pumps. After January 3, 1992, the system effluent exceeded 15 ppb only once on February 6, 1992. Corrective measures implemented on February 9, 1992, the day the result from February 6, 1992 was received, included raising the elevation of the suction line and reducing the flow through the treatment plant by 25 percent. The result on February 10, 1992 was 2.1 ppb. Analytical results for the Category 1 water treatment are presented in Table 16. The system was completely shut down on March 19, 1992, decontaminated, dismantled, and taken off site.

4.2.2 Category 2 Water Treatment

The Remedial Action Plan required that 90 percent primary consolidation be achieved in the Slip No. 3 sediment prior to installing the final cap at the slip. A series of five temporary recovery wells and two permanent recovery wells were installed to promote sediment consolidation through dewatering of the cell. The water removed by the recovery wells was treated by the Category 2 Water Treatment Plant, then pumped to a nearby storm drain which flowed to the Upper Harbor. The action levels for the Category 2 Treatment Plant were 1.0 ppb for the lead carbon vessel with the treatment plant effluent not greater than 5.0 ppb.

The Category 2 system consisted of a settling tank, a sand filter, two carbon vessels, and a cartridge filter, all placed in series. The Category 2 plant was placed on-line on April 14, 1992. The PCB results on samples taken from the plant are presented in Table 17. A process flow diagram is presented on Figure 10. A Klensorb™ oil absorbent unit and a bag filter were added to the Category 2 Plant on July 22, 1992. The Klensorb™ unit was placed prior to the settling tank to remove any free oils in the influent water stream. The bag filter was placed prior to the Klensorb™ to prevent any particulates from entering the Klensorb™ unit. The Category 2 Plant was taken off-line on August 9, 1994. The plant was cleaned, decontaminated, and taken off-site.

4.3 Consolidation of Dredged Sediment

A layer of clean sand was placed over the Slip No. 3 sediment after completion of the Upper Harbor dredging. The sand layer varied in thickness from approximately one foot at the east end to over three feet in the west end of the slip. The west end of the slip, which contained many of the fine silts that were dredged, was surcharged with clean sand to accelerate the consolidation of the sediments. The first surcharge, placed between December 9, 1992 and December 15, 1992, consisted of a 5-foot-thick sand layer placed over the western third of the sediments. A second surcharge, a one-foot sand layer, was placed over the western third of the sediments on August 2, 1993.

In an effort to promote consolidation, the pore water was withdrawn through a network of five temporary wells and treated with the Category 2 Treatment Plant which was described above. The approximate locations of the temporary wells is shown on Figure 4. The two permanent recovery wells were also placed on-line to further accelerate the consolidation process. The five temporary recovery wells were decommissioned prior to the final capping of Slip No. 3.

The progress of the consolidation process was monitored through four settling plates placed on Slip No. 3. The location of the plates is shown on Figure 4. Elevation readings were taken on the settling plates on generally one- to two-week intervals. The readings were plotted on both a semi-logarithmic scale (see Figure 11) and on an arithmetic scale (see Figure 12). Based on the settling plate data, 90 percent primary consolidation was achieved by May 1994.

A limited geotechnical investigation was performed on May 17, 1994 to confirm the conclusion that 90 percent primary consolidation had been achieved in the dredged sediments. The investigation consisted of drilling two soil borings, BH-1 and BH-2 (Figure 4), obtaining soil samples, and installing piezometers in the drilled boreholes. The soil boring logs and piezometer construction details are provided in Appendix F. The test boring results indicate that the sediments had consolidated from a liquified state into a uniformly consolidated soft clayey layer. No seams of liquified sediments

or voids were encountered during sampling of the borings. The sediments exhibited cohesive properties and full recovery was obtained with a standard split-spoon sampler or Shelby tube sampler. Additionally, the soil sample, upon removal from the sampler, retained the cylindrical shape of the sampler indicating that the soil had attained strength through the consolidation process. Atterberg limits, hydrometer analysis, water content determination, and one-dimensional consolidation tests were performed on selected samples from the May 17, 1994 boring program. The laboratory data results are presented in Table 18. The Atterberg limits indicate the sediments are a clayey silt or a silty clay. The hydrometer analysis confirms the results of the Atterberg limits. The consolidation tests indicated full primary consolidation had been achieved (P_c approximately = P_o).

5.0 WEST CONTAINMENT CELL

The West Containment Cell was designed and built to contain PCB soils with concentrations greater than 50 ppm total PCBs excavated from select areas onsite and residual treated soils. This included, in addition to soils encompassed by the slurry wall shown on Figure W-2, materials excavated from Area L near the East Containment Cell, the North Ditch, and the designated materials from Slip No. 3 including Area M.

5.1 Preparation of Cell

On May 29, 1992, work began on the West Containment Cell with the establishment of two survey control points by a State of Illinois licensed surveyor. Initial preparation of the cell included clearing and grubbing the area bounded by the slurry wall. This included the removal of vegetative growth, rubble, portions of a concrete roadway and railroad tracks, existing fencing, and a small utility shed. Several structures also were removed or modified to construct the slurry wall and settling pond. The structures requiring removal included a compressed gas cylinder storage building, a water storage tank tower, and a concrete fuel oil tank bunker. The front 20-foot sections of two steel storage buildings were removed for the construction of the slurry wall. The remaining portions of these two buildings were left intact to house Categories 3 and 4 water treatment plants and provide a storage shelter for the select soils to be treated with the SoilTech ATP Systems, Inc. (SoilTech) Anaerobic Thermal Processor (ATP).

Prior to commencement of the West Containment Cell slurry wall excavation, utility lines crossing the slurry wall alignment were rerouted around the slurry wall so that no penetration of the slurry wall existed. Such utilities included overhead electrical lines, underground electrical services, and storm and sanitary sewers.

On April 23, 1991, the EPA ordered that all dewatering water produced during the utility relocation work around the West Containment Cell be collected and treated prior to discharge. Additionally, EPA ordered that Category 3 standards be applied (less than 1.0 ppb with no single value greater than 5 ppb, page 55, Canonie, 1988b). To accommodate this request, a temporary water treatment plant consisting of two sets of three carbon vessels piped in series and capable of accommodating an aggregate maximum flow rate of 150 gallons per minute (gpm) was constructed. The six carbon vessels contained a total of 1,000 pounds of carbon and the treatment plant was constructed between June 11, 1991 and June 20, 1991. Water pumped from the utility trench was pumped to a 20,000-gallon mobile storage tank which was placed near the temporary treatment plant. The water was then pumped from the tank at a rate of approximately 120 gpm through the carbon vessels, and discharged to the North Ditch. Sample results from the temporary treatment system are presented in Table 19.

Sewer relocation efforts began June 25, 1991 with the relocation of the storm sewer discharging to the west end of the Crescent Ditch. The storm sewer was rerouted around the west and north perimeters of the west cell so that the storm sewer discharged directly into the North Ditch. Storm sewers designated Outfall 014 and 016 were also rerouted to flow directly to the North Ditch. Several other abandoned sewer lines were plugged on either side of the proposed slurry wall. The storm sewer reroutes were completed on July 11, 1991. Two sanitary sewer lines running through the proposed cell were also rerouted. The reroute of the sanitary sewer lines was completed on July 23, 1991.

During the relocation of the sewer lines several of the excavated areas were dewatered. Ground water from these areas was extracted using well points and sump pumps. All dewatering water was collected in a 20,000-gallon tank located within the proposed slurry wall area next to the storage building designated to shelter the water treatment plant. The collected water was treated with the temporary Category 3 treatment plant.

A series of electrical poles which traversed the proposed cell from the northwest to the southeast corners were rerouted by Commonwealth Edison. These poles were moved north of the West Containment Cell on August 12 through 14, 1991. An underground electrical line feeding light poles inside the cell also traversed the cell from its northwest to southeast corners. The two segments of the line which crossed the proposed slurry wall alignment were cut and removed. The remainder of the line was abandoned in-place and the light poles were removed.

5.2 Isolation Sheeting

Areas A through K, W, and X (see Figure W-4) at the Oval Lagoon and Crescent Ditch required excavation and either thermal treatment or encapsulation in the West Containment Cell. The horizontal extent of these areas was defined by sheeting driven in place at the locations shown on the construction drawings. The vertical extent was defined by either a specific elevation or top of clay. Soil from the areas on or outside the slurry wall path (Areas A, B, J, and X) were excavated prior to construction of the slurry wall and placed inside the West Containment Cell area. Additional soils to the south of Area X, the northern portion of Area I, were excavated and placed in the Oval Lagoon to accommodate the realignment of the northeast corner of the slurry wall. These soils were placed in the Oval Lagoon for temporary storage for thermal treatment. The excavated areas were backfilled with clean soils.

5.2.1 Crescent Ditch

Isolation sheeting was driven around the Crescent Ditch between June 21, 1991 and August 10, 1991. Excavation of the Crescent Ditch soils was completed on October 5, 1991. All soils excavated from the Crescent Ditch were deposited inside the Oval Lagoon sheeting. Once the soils were deposited in the Oval Lagoon, the soil mound was crowned and covered with a plastic liner to prevent rain and melted snow from infiltrating the soils. The excavated areas of the Crescent Ditch were backfilled with rubble, debris, and other material not requiring thermal treatment but designated for encapsulation in the West Containment Cell. Once the ditch was backfilled, the isolation sheeting was extracted. The Crescent Ditch isolation sheeting was removed

between October 21 and 25, 1991. The sheeting was decontaminated and taken off-site.

5.2.2 Oval Lagoon

Isolation sheeting was driven around the Oval Lagoon between August 10 and 22, 1991. Excavation of the Oval Lagoon soils, including the soils from the Crescent Ditch, was completed January 27, 1992. These soils were screened with a vibratory screen to remove large rock and debris. The screened material was placed in the Settling Pond area and mixed with the organic silts dredged from Slip No. 3 in order to provide a uniform feed material for the ATP unit. Once the material was mixed and as space became available, it was transported to the feed storage area for the ATP processor. The excavated areas of the Oval Lagoon were backfilled with rubble and debris not requiring thermal treatment, but designated for encapsulation in the West Containment Cell. The debris included asphalt pavement from the retention pond, portions of the die storage building, spent personal protective equipment such as Tyveks™, and treated soil. Once the lagoon was backfilled, the isolation sheeting was extracted. The Oval Lagoon isolation sheeting was removed between February 6 and 13, 1992. The sheeting was decontaminated and taken off-site.

5.3 Slurry Wall Construction

The layout for the West Containment Cell slurry wall was established on June 19, 1991. Prior to the construction of the West Containment Cell slurry wall working platform, it was determined that it would be advantageous to change the proposed configuration of the northeast corner of the wall. The close proximity of the wall to the road, in the corner, would result in the placement of the gravel edge drain under the existing roadway. Additionally, it was anticipated that accidental contact between motorists and the wall would jeopardize the long-term integrity of the wall. The approved realignment proposal for the slurry wall included the excavation of all material originally anticipated to be contained within the original confines of the wall in the corner to an elevation of 575 feet and placement of the material into the Oval Lagoon.

Construction of the slurry wall working platform began July 22, 1991 and was completed on August 2, 1991. The slurry pond was constructed within the West Containment Cell area and the first batch of bentonite slurry was mixed on August 1, 1991. Excavation for the West Cell slurry wall began August 5, 1991 and continued through September 6, 1991.

Field and laboratory testing of the bentonite slurry and soil-bentonite backfill were performed to assure compliance with the project specifications. The quality assurance/quality control (QA/QC) information for the bentonite slurry and soil-bentonite backfill during the construction of the slurry wall was recorded on the Daily Quality Control Report, copies of which are included in Appendix B. Based on the information in Appendix C and as summarized in Table 20, the average depth of the slurry wall key is 3.8 feet.

Samples of the soil-bentonite backfill were recovered once every 2,500 cubic yards of material placed. The samples were tested for permeability and fines content. The results are summarized in Table 8. All samples exceeded the Project Specification (Section 02229, Part 1, Canonie, 1991b) requirement of greater than 10 percent passing the No. 200 sieve.

In the spring of 1993 during the installation of the final sections of the East Containment wall, Canonie increased the frequency of the grain size analyses for soil-bentonite backfill to a sample every 500 cubic yards of backfill. During the installation of the West Containment wall, a grain size analysis was performed on each sample tested for permeability. The overall testing frequency based on the installed wall quantities discussed above, is one grain size test per 1,200 cubic yards of backfill. This frequency is less than that described in the specifications (Section 02229, Paragraph 4.3B of the Project Specifications; Canonie, 1991b).

As discussed in Section 3.3, the 10 percent passing the No. 200 sieve requirement was for the assessment of uniformity of the backfill mix. Canonie analyzed the existing data for the West Containment to determine the probability of any additional samples being less than 10 percent passing a No. 200 screen. The grain size data

base for the West Containment is shown in Table 8. Four samples were taken for an average percent passing the No. 200 screen of 20.8 percent and a standard deviation of 2.3 percent. Based on this sample set, there is better than a 99.5 percent probability that an additional sample or samples would exceed 10 percent passing a No. 200 screen. In other words, over 1,000 samples would have to be recovered to produce a result of less than 10 percent passing the No. 200 sieve. Therefore, if five additional samples had been recovered in accordance with the specifications, it is very unlikely that a result of less than 10 percent would have occurred. Additionally, as shown in the full-scale pumping test, Appendix D, the performance of the cells indicates a uniform and adequate containment wall at the West Containment.

The permeability result for the first of the three laboratory permeability tests was 3.0×10^{-7} cm/sec. The result is slightly above the 1×10^{-7} cm/sec value in the Project Specifications (Section 02229, Part 1, Canonie, 1991b). Confirmatory sampling was performed by reexcavating a portion of the slurry wall where the questionable backfill material was placed, and obtaining an additional sample (designated grab in Table 8). The permeability of the grab sample was 4.1×10^{-8} cm/sec, which meets the specification requirement.

In-situ permeability tests as required by Section 4.4 of the Project Specifications (Canonie, 1991b) were performed along the center line of the slurry wall. The construction document requires two tests per cell, however a third test was performed in the West Cell. The third test was installed in the area of Batch No. 2 of the backfill. The locations of the in-situ tests are shown on Figure 14. The results of the in-situ permeability tests are presented in Table 9. All three results are less than the required (Table 1, B.3) 1×10^{-7} cm/sec.

During the construction of the West Containment cell slurry wall, the density of the slurry in the trench routinely increased over that of the slurry in the mixing pond. The density increase was caused by the suspension of sand in the bentonite slurry in the trench. In mid-August 1991, the trench slurry density had increased to a level above the maximum allowable by the specifications for the project. In response to this problem, on August 16, 1991, a section of the slurry trench with high density slurry

was isolated by driving sheeting across the wall. The slurry in this area was pumped out and replaced with fresh slurry. The sheet pile wall was removed on August 21, 1991 after placement of the fresh slurry.

On August 16, 1991, the density of the slurry depth was carefully monitored to determine if the density was greater with depth. Density increases with depth would indicate settling of sand into the trench key. The results of the analysis are shown below.

Depth Below Platform	Slurry Density (pcf)
5	88
12	91
15	90

The density was consistent with depth, at approximately 5 pcf greater than the maximum of 85 pcf allowed in the specifications. Because the uniform fine sand was remaining in suspension, a request was made to the EPA to increase the allowable maximum to 95 pcf. The request was approved by the ACOE in September 1991 (see Appendix A).

On August 15, 1991, an obstruction in the West Containment Cell slurry wall was encountered. The obstruction appeared to be a boulder embedded in the top of the clay. Efforts to remove the obstruction were unsuccessful. The boulder was fractured in place, on August 16, 1991, and the slurry wall was dug to the specified depth. The West Containment Cell slurry wall was completed on September 6, 1991.

5.4 Category 3 Water Treatment

The Category 3 water treatment plant was constructed to treat ground water withdrawn from the West Containment Cell prior to capping the cell. The treatment criteria for Category 3 was less than 1 ppb in the effluent from the lead carbon and the effluent from the plant less than 1 ppb on a 30-day average and at no time greater

than 5 ppb (page 56, Canonie, 1988b). If the lead effluent result was equal to or greater than 1 ppb on two consecutive days, the lead carbon unit was removed, the carbon replaced, and put in the lag position and the former lag carbon unit was placed in the lead position. As discussed above in Section 5.1, a temporary Category 3 plant was constructed to treat ground water generated during dewatering for rerouting utilities around the West Containment Cell. The analytical results from sampling both the temporary and permanent Category 3 plants are presented in Table 19.

The permanent Category 3 plant (a process flow diagram of the plant is presented on Figure 13) described in Section 4.0 of the IPC Work Plan (Canonie, 1988b) started treating water from the West Containment Cell recovery wells on September 5, 1991. Just six days later, September 11, 1991, the water treatment plant experienced breakthrough. Due to the short life exhibited by the carbon, the plant was shut down for analysis. It was discovered that the influent water had a PCB concentration much greater than anticipated. The design was based on an expected influent concentration of 48 ppb. The influent sample collected September 13, 1991 had a concentration of 770,000 ppb PCBs. Samples were also collected and analyzed for volatile and semivolatile compounds. The test revealed no detectable levels of VOCs. The semivolatile results showed the presence of chlorinated biphenyls. The conclusion was that a significant free-phase PCB containing oil was being extracted by at least one of the recovery wells and the treatment plant was not able to remove this oil.

In order to enhance the performance of the Category 3 system, the carbon was replaced and the settling tank steam cleaned. In addition, a pressure vessel containing Klensorb™, an activated clay free-phase oil absorbent, was installed upstream of the sand and carbon filters between September 17 and 20, 1991. On September 21, 1991, Canonie instituted a pilot program which included the treatment of the ground water through the modified plant for approximately one hour, discharging the effluent back to the cell, and sampling of the plant waters to evaluate the effectiveness of the corrective actions. Samples received September 23, 1991 indicated that the system required further alterations. Addition of the Klensorb™ significantly reduced the PCB concentrations. However, the sand filter did not appear to be very effective at removing suspended solids. The sand filter medium was removed and placed in the

West Containment Cell. The sand filter vessels were thoroughly cleaned and refilled with a finer graded sand. The bag filter unit was also cleaned and the 5-micron filter bags were replaced with 1-micron filter bags.

The system was retested October 2 and 8, 1991. The October 8 results which were received on October 9, 1991 resulted in an effluent quality of less than 5 ppb, the maximum allowable effluent concentration. The system was returned to service discharging to the North Ditch on October 9, 1991. The PCB analytical results from the Category 3 plant are provided in Table 19.

During the first part of December, a newly constructed 100 gpm water treatment plant was installed next to the 50 gpm Category 3 water treatment plant. The new plant accommodated additional flows from the Storm Water Retention Pond and the sour water from the SoilTech ATP (Category 4 water) in addition to the Category 3 water. On December 20, 1991, the Category 3 influent water was diverted to the new plant. The portions of the previous system which were no longer needed were deconned and moved to Slip No. 3 for the construction of the Category 2 water treatment plant.

All three versions of the Category 3 water treatment plant required sand and carbon media backwashes and routine bag filter replacements. The spent filter bags and backwash water were deposited in the West Containment Cell. The backwash water was discharged into a recharge sump located within the boundaries of the slurry wall so that all the water would percolate into the cell. The spent bags from the bag filter were collected and buried within the cell. All waste media such as Klensorb™, carbon, and filter sand were buried inside the cell.

Between January 22, 1992 and March 2, 1992, the ATP wastewater (Category 4 wastewater) was run through the Category 3 water treatment plant. Difficulty with the plant discharge began on January 26, 1992, shortly after starting to discharge the Category 4 water through the Category 3 treatment plant. The difficulties were caused by elevated levels of fine droplets of PCB oil in the Category 4 water. The Category 3 plant was taken offline on March 20, 1992. The carbon and filter media

were removed on March 23, 1992; the vessels cleaned; and fresh carbon, sand, and cartridges placed in the vessels. The treatment plant was placed back online on April 1, 1992 treating only Category 3 water. A new plant was constructed to treat the Category 4 water. The Category 4 plant is described in Section 6.3.

After the elimination of the Category 4 water, the system was able to meet the required performance standards routinely. The system required only one more lead carbon replacement on June 8, 1992. On July 22, 1992, the Category 3 plant received its first batch of water from the Stormwater Retention Pond. The plant continued to treat West Containment Cell ground water and Retention Pond water until September 28, 1992 when the plant was shut down permanently. All filter media and sacrificial piping were removed and deposited in the West Containment Cell. The plant was thoroughly cleaned, dismantled, and moved out of the West Containment Cell.

5.5 Settling Pond Construction

A settling pond was constructed in the West Containment Cell to serve as a staging and dewatering impoundment for the dredged sediments from Slip No. 3. The settling pond construction began on October 26, 1991 with the construction of the earth berms. The earthwork was completed on November 20, 1991. The HDPE liner was placed between November 21, 1991 and December 1, 1991. The underdrain piping was placed on December 2 and 3, 1991. Dredged sediments began to flow to the Settling Pond on December 8, 1991.

5.6 Monitoring Wells, Piezometers, and Recovery Wells

A series of four monitoring wells and piezometers (labeled W-9 through W-12 and P-9 through P-12, respectively, see Figure 14) were installed near the corners of the cell to monitor the water level differential across the slurry wall. The monitoring wells also served as the compliance monitoring wells required in Section 3.0 of the O&M Plan (Canonie, 1988a). The well and piezometer pairs were installed between September 23 and 25, 1991 with the exception of W-11, P-11 pair (northwest

corner). The W-11, P-11 were installed after the installation of the settling pond. The monitoring well and piezometer locations are shown on Figure 14. Copies of the boring logs and well installation diagrams are presented in Appendix F. The ground water elevations, taken between December 1992 and January 1993 in the monitoring wells and piezometers, are presented in Table 21.

Three temporary recovery wells (see Figure 14) were installed in the West Containment Cell, August 6 and August 9, 1991, to dewater the cell for the construction of the settling pond. The discharge of the wells was piped to the Category 3 water treatment plant. Dewatering of the cell began September 6, 1991 and continued throughout the construction of the cell. Prior to placing the final cap, the three temporary wells were buried within the cell.

Two six-inch-diameter permanent recovery wells were installed in the West Containment Cell for the recovery of ground water from the cell. A copy of the boring log and well construction details are provided in Appendix F. The location of the wells and the gravel access road to the wells is shown on Figure W-3. Four-inch-diameter Grundfos submersible pumps were installed in each well and discharge piping was installed from the pump to the wellhead. The electrical feed to the well, and the discharge piping from the wells to the storm sewer, is shown on Figure W-3.

Ground water samples were recovered quarterly beginning in the third quarter 1992, in accordance with Section 3.0 of the O&M Plan (Canonie, 1988a). The results are summarized in Table 13.

5.7 Capping of the West Containment Cell

The final capping of the West Containment Cell began in September 1992 with the preparation of the subgrade. The six-inch sand cover was placed from September 25 to 29, 1992 and from October 8 to 13, 1992. Density tests were taken on the sand layer and the results are summarized in Table 10. The results all exceed the required (Part 3.3 E, Section 02223, Canonie, 1991b) 85 percent of maximum modified Proctor density.

Concrete caps were constructed over certain portions of the West Containment slurry wall (see Figure W-3). The purpose of the 10-foot-wide caps was to provide a structural bridging of the slurry wall in areas subjected to vehicular traffic. The concrete caps for the slurry wall were poured September 14, October 6, and October 7, 1992. The 28-day compressive strength results for the concrete are summarized in Table 11. The results all exceed the 28-day required (Part 2.5, C.1, Section 03300, Canonie, 1991b) strength of 3,000 psi.

The HDPE liner, geonet drainage layer, and filter fabric were installed between October 16, 1992 and October 24, 1992. The QA/QC logs for the liner installation are presented in Appendix E. The gravel edge drain and associated piping was placed between October 14 and November 6, 1992. The sand and topsoil cover was placed between October 27 and November 10, 1992. The asphalt roadway and parking areas (see Figure W-3) were paved on November 5 and 6, 1992. The West Containment Cell was hydroseeded and mulched on November 16, 1992. The November seeding did not germinate adequately due to the late planting date. Therefore, the West Containment Cell was reseeded on May 28, 1993.

5.8 West Containment Cell Dewatering

5.8.1 Dewatering with the Category 5 Treatment Plant

The dewatering of the West Containment Cell, prior to capping, is discussed in Section 5.4. Once the cell was capped, water removed from the cell was treated with the mobile Category 5 plant.

The Category 5 plant was set up at the West Containment Cell on December 8, 1992. The plant treated water continuously until December 28, 1992, when the plant shut down due to a faulty transformer. The transformer was replaced and the plant was restarted on January 10, 1993 and ran continuously through February 10, 1993. Approximately 210,000 gallons of water were treated between December and February. The PCB analytical results are presented in Table 14.

The Category 5 Plant was again set up in the West Cell from September 2 through October 7, 1993, to create a larger gradient across the slurry wall, and from November 18, 1993 through July 14, 1994 to perform a pumping test on the West Cell. One million nine hundred thousand (1,900,000) gallons of water were treated during the two intervals. The results of PCB analysis during water treatment are summarized in Table 14. The influent results were at or below the 1.0 ppb effluent criteria from December 20, 1993 to July 12, 1994, with the exception of the 2.0 ppb result on July 5, 1994. A plot of the ground water elevations, monitoring wells, and piezometers from December 8, 1992 through January 6, 1995 is presented on Figure 14.

5.8.2 West Containment Cell Pumping Test

As part of a pumping test in the West Containment Cell, the ground water levels at the monitoring wells and piezometers were measured on approximately a daily basis from November 18, 1993 through January 5, 1995 and less frequently thereafter. The recorded water levels are presented in Table 21 and on Figure 15. The recovery of ground water in the containment cell occurs more rapidly than calculated in the Design and Analysis Report (Canonie, 1991a, Section 4.6). The actual recovery rate probably reflects the actual storage coefficient for the soils contained in the cell rather than the assumed value used in the Design and Analysis Report calculation. The soils in the West Containment Cell include a large volume of Slip No. 3 sediment, the North Ditch sediment, the Oval Lagoon and Crescent Ditch sediment, and construction debris that is mixed with the soils. The assumed storage coefficient used in the ground water modeling in the Design and Analysis Report was 0.3, which is typical of a medium grained beach sand in an unconfined aquifer. However, a silt and fine sand mixture may have a storage coefficient as low as 0.03 (ACOE, 1971). The presence of debris further lowers the storage coefficient by preventing water storage. The small storage coefficient results in less water removal and faster recovery because there is less pore space to empty and fill. The results of the pumping test are discussed in further detail in Appendix D.

As a final construction-related activity, a pumping test was completed for each of the containment cells to confirm the performance of the slurry walls and cover for operation and maintenance. Upon successful testing, the containment cell entered the operation and maintenance phase of the remedial action.

6.0 THERMAL TREATMENT OF SELECT SEDIMENTS AND SOILS

Overview Process

SoilTech was subcontracted by Canonie to complete the select soil treatment task. SoilTech used the ATP technology to successfully remediate 12,700 tons of PCB-contaminated material, resulting in anaerobically desorbing approximately 30,000 gallons of PCB oils from the select soils.

The ATP processing unit resembles a rotating kiln. It contains the following four separate internal sections: preheat, retort, combustion, and cooling. Figure 16 is a simplified diagram showing the four internal sections. The feed enters through the preheat section, passes through a seal to the retort section, passes through another seal to the combustion chamber, and is cooled in the cooling section prior to discharge. The preheat section exit temperature is sufficient to vaporize the relatively low boiling point materials such as water and volatile organics (300°F to 450°F). The retort section operates at a temperature sufficient to vaporize heavy oil and PCBs (900°F to 1,100°F). Thermal cracking of the hydrocarbons takes place in the retort section, resulting in the formation of coke, which exits the retort section with the soil. The seals at both ends of the retort section maintain a near oxygen-free environment (less than one percent) and prevent the oxidation of the hydrocarbons. The residence times for the soil in the preheat and retort sections are approximately 15 to 20 minutes and 7 to 10 minutes, respectively; sufficiently long to ensure complete volatilization of the hydrocarbons at the design operating temperatures. The heat requirements are supplied by the combustion of natural gas and the residual coke in the combustion section. The elevated temperature in the retort section is achieved by recycling a portion of the hot soil from the combustion section back to the retort section via a sealed passageway and by heat transfer through the wall of the retort zone. The remaining soils in the combustion section enter the cooling section, where they are lifted and distributed onto the exterior of the preheat section to provide conductive heat transfer. The solids are thereby cooled to an exit temperature of approximately 450°F.

The processor components and support equipment used are described in further detail in the Treatment Design and Operations Plan (Canonie, 1991c).

6.1 Mobilization

SoilTech began to mobilize the ATP on November 18, 1991 and continued through mid-January 1992 when the adjustment and calibration period began. This period, which consisted of fine tuning the instrumentation and process equipment while operating on clean sand, was interrupted for several days due to severe cold weather.

6.2 Soil Processing Operations

6.2.1 Soil Mixing

The predominantly organic silts, dredged from Slip No. 3, were mixed in the settling pond with the sandier soils from the Oval Lagoon and Crescent Ditch soils. The mixing was performed to provide a uniform feed material for the ATP unit. The mixed soils were then transferred into an existing building located within the West Containment Cell. The building served several purposes. First, the building reduced airborne dust problems. Second, the building could be maintained slightly above freezing so that the material fed to the processor was not frozen. Third, holes were drilled in the concrete slab so that soil moisture would drain from the soil into the West Cell where it was extracted and treated with the Category 3 treatment plant. The reduction in soil moisture resulted in a higher throughput and a more efficient soil treatment operation.

The processed soil was staged in piles adjacent to the equipment. Once sampling results indicated that the treated soil met treatment requirements, the soil was moved to either the Oval Lagoon or the settling pond.

6.2.2 Treatment/Testing Criteria

During the proof of process, the feed soils were composited daily into a single sample and treated soils were composited into a second sample. Each sample was generated from six sub-samples collected at 4-hour intervals over a 24-hour period beginning and ending at 8:00 am. Following treatment, the soils were separated into daily production stockpiles until analytical results indicated that the treated soils contained less than 500 ppm and that the daily PCB removal efficiency was at least 97 percent. The stack gas was sampled on a weekly basis and analyzed for PCBs, PCDDs, PCDFs, and particulates. Recycle gas and scrubber water samples were also collected on a weekly basis and analyzed for PCBs, PCDDs, and PCDFs.

During the full-scale treatment phase, the sampling and handling of the feed and treated soils were identical to that in the proof-of-process phase. The requirements for stack and recycle testing remained the same during the full-scale phase. The frequency for stack testing was changed to once per week instead of monthly.

6.2.3 Proof-of-Process Study

The proof-of-process study was performed between January 22, 1992 and February 21, 1992. Approximately 4,500 tons of soil were processed during the study. The results of the proof-of-process study are discussed in Canonie, March 1992.

The PCB concentrations for the feed and treated soils are presented in Table 22, and the SoilTech Daily QA/QC Reports are presented in Appendix H. The average PCB concentration for the feed and treated soil is 11,000 ppm and 3.0 ppm, respectively. The average PCB removal efficiency calculates to 99.97 percent, which surpasses the 97 percent removal efficiency required in the Consent Decree. The single highest PCB concentration in the treated soil was 8.9 ppm which was well below the Consent Decree requirement of 500 ppm.

The gaseous emissions from the ATP unit, during the proof-of-process study, were monitored on a real-time basis through controls on the plant. Additionally, weekly stack gas sampling was performed by Clean Air Engineering, Inc. A summary of the PCB and the dioxin and furan stack gas test results is presented in Table 23. The results of the particulate emissions during the stack gas testing are presented in Table 24.

The ATP, a thermal desorption unit, was required by EPA to meet the air emissions standards for hazardous waste and municipal waste incinerators. The destruction removal efficiency (DRE) for the pilot study was 99.9998 percent, which did not meet the 99.9999 percent DRE for incineration of PCB materials. The average dioxin and furan concentration for the pilot study was 500 ng/cu m @ 7 percent O_2. The results exceed the municipal waste incinerator standard of 30 nanograms per dry standard cubic meter. The measures taken to correct the air emission exceedances are discussed in Section 6.2.4. The highest particulate emissions sample was 0.294 lb/hr, which is well below the 8.7 lb/hr requirement.

6.2.4 Full-Scale Thermal Treatment Operations

Full-scale thermal treatment activities began on February 22, 1992 and continued through March 5, 1992 at which time the ATP unit was shut down for modification to the gas handling system and for scheduled maintenance.

The modifications were performed between March 5 and 18, 1992 and included the following activities:

1. The flue gas carbon was replaced with a larger quantity of fresh carbon.

2. The wet scrubber (previously taken off-line) was filled with activated carbon.

3. Carbon vessels were installed on the noncondensable gas recycle lines.

4. The reactor residence time was increased through a recycle rate reduction and an increase in the combustion zone temperatures.

5. Fresh bags were installed on the primary bag house.

To ensure that performance was maintained, SoilTech instituted the following engineering controls:

1. Soda ash added to the combustion zone at 200 pounds per hour;

2. Maintained stack temperature at 170°F with automatic waste feed shutoff at 190°F;

3. Sampled stack carbon bed daily and changed carbon if PCB >10 ppm;

4. Tested stack weekly to ensure 99.9999 percent DRE was maintained;

5. Maintained pressure drop across stack carbon bed at five inch water column.

The ATP equipment remained shut down from March 19 through May 28, 1995 with the exception of the periods from April 9 through 15, 1992 and May 12 through 14, 1992, during which time the ATP unit was operated to perform additional stack gas sampling. During the May 12 through 14 operations, a series of four stack gas tests were performed and all met the 99.9999 percent DRE requirement.

Full-scale thermal treatment activities resumed on May 30, 1992 and were completed on June 23, 1992. The average PCB feed concentration for all soils treated was 10,500 ppm while the average PCB concentration in the treated soil was 2.2 ppm for a 99.98 percent removal efficiency. All PCB results for the treated soil were less than 9 ppm. The results surpass the Consent Decree requirements of greater than 97 percent removal efficiency with no treated soil result greater than 500 ppm. The PCB results, in soil, are presented in Table 22. The stack gas sample results for the project are summarized in Tables 23 and 24.

6.3 Category 4 Water Treatment

Category 4 water is defined by the Remedial Action Plan (RAP) as the wastewater produced by the SoilTech ATP Processor. The Category 4 water was intended to be commingled with the Category 3 water and treated with the Category 3 water treatment system. The resulting waste stream would follow the RAP criteria for Category 4 water treatment.

Production of Category 4 water began January 22, 1992. The water was pumped from the ATP unit to a 25,000-gallon storage tank located next to the Category 3 water treatment plant. Before combining this water with the Category 3 water, the Category 4 water was passed through a cartridge filter unit with 10-micron cartridge filters to remove suspended particulates. Beginning January 26, 1992, a sudden increase in PCB concentration was observed in the lead carbon effluent. The Klensorb™ was replaced January 29, 1992 and the lead carbon vessel material was changed out on February 5 and 21, 1992. On March 2, 1992, the mixing of Category 3 and 4 water prior to treatment was discontinued. The lead carbon effluent data stabilized (see Table 25) and the Category 4 water was temporarily stored in 25,000-gallon tanks.

On March 6, 1992, Canonie found that the combined Category 3 and 4 effluent contained detectable levels of phenol and other trace organics. Even though the Category 4 water was no longer being treated and the lead carbon had been changed recently, Canonie purchased a colorimetric field test kit to verify that phenol was no longer being released. The test kit analysis confirmed the presence of phenol in the treatment plant effluent. On March 20, 1992, the treatment system was shut down for cleaning. Both the lead and lag carbon beds were replaced between March 23 and 24, 1992.

The types and quantities of organic constituents found in the Category 4 water were not anticipated in the Category 4 treatment plant design, which anticipated that a single filtration step prior to the carbon would provide the most effective equipment train for treating the Category 4 water. The final Category 4 system included polymer addition, clarification, 0.5-micron particulate filtration, UV/chemical oxidation, chemical precipitation, and carbon polishing (see Figure 17). Canonie's testing of the treatment system effluent revealed that all analytes were at or below State of Illinois surface water discharge criteria except for biological oxygen demand. The effluent was, however, able to meet the requirements of the North Shore Sanitary District (NSSD), the local municipal sewage agency.

On September 16, 1992, Canonie received a connection permit from the NSSD. A copy of the NSSD permit and Discharge Control Document No. 92-EG-01 (DCD) are included in Appendix G. Canonie was allowed to discharge a maximum of 15,000 gallons of water per day at a flow rate not to exceed 10 gpm. The DCD detailed a schedule for sampling and analysis which allowed for discharge of the water prior to receipt of the analytical results. Canonie proposed the collection, storage, and testing of 21,000 gallon batches of effluent with NSSD review and approval of the data prior to discharging. A summary of the analytical results for each batch is presented in Table 26. Therefore, no sampling was required during discharge and the water quality could be assured. NSSD accepted the proposal. The discharge of the Category 4 water to NSSD occurred between September 16, 1992 and October 16, 1992. A total of 105,217 gallons had been treated and discharged to the NSSD sanitary treatment works.

6.4 Decontamination/Demobilization

Decontamination procedures followed for all tanks and equipment dedicated to PCB thermal treatment operations are outlined in 40 CFR 761.79. The rinseate from the diesel fuel used as the solvent in the decontamination process was added to the PCB oil previously extracted during soil processing. The oils were shipped between May 28, 1993 and December 20, 1993 by the Waukegan Harbor Trust to Deer Park, Texas for incineration by Rollins Environmental Services. A summary of the

shipments is presented in Table 27. Other process equipment used in the exclusion zone, but not in direct contact with PCBs, was cleaned with a high pressure washing using detergent as needed. Wipe samples were performed on equipment with high potential for PCB contamination. The criteria for these samples was 10 μg/100 cm^2 which is the most stringent clean-up criteria in accordance with 40 CFR 761.125.

7.0 STORMWATER RETENTION POND

As required by Section IV(G)(2)(c) of the Consent Decree and OMC's Best Management Practices Plan for storm drainage to the North Ditch, a 250,000-gallon capacity stormwater retention pond was constructed immediately east of the West Containment Cell. The purpose of the pond was to capture and retain the first one-quarter inch of rainfall runoff from the roof of OMC Building No. 2 during construction to prevent an inadvertent release of contaminated dust during the remedial action. The pond water was analyzed for PCBs after the rainfall event. If the result was less than 1 ppb, the water was released to the North Ditch in accordance with OMC's existing NPDES permit. If the result was greater than 1 ppb, the water was treated in the Category 3 water treatment plant prior to discharge into the North Ditch.

The slurry wall for the retention pond was constructed between December 9 and 16, 1991. The Daily Quality Control Reports for the slurry wall construction are presented in Appendix C. The two retention pond recovery wells were installed between December 18 and 20, 1991. Well construction details are presented in Appendix F. The recovery wells were used to dewater the excavation for the retention pond. The extracted water was treated with the Category 3 plant. The berms for the retention pond were constructed between February 21, 1992 and March 17, 1992. The liner for the retention pond was installed from March 24, 1992 through March 27, 1992. The QA/QC logs for the liner installation are included in Appendix E.

8.0 EAST CONTAINMENT CELL

The East Containment Cell, designed to isolate, in place, PCB soils with concentrations greater than 50 ppm, was constructed over two construction seasons due to delays encountered in the rerouting of OMC's high pressure gas main. The excavation of Area L; the slurry wall construction, with the exception of three segments totaling 230 feet; and the erosion protection along the North Ditch were completed by the end of 1992. The remaining 230 feet of slurry wall and the capping of the East Containment Cell were completed in the spring and summer of 1993.

8.1 Area L

The Area L discussion is presented in two parts. The first part, called Area L, is the 317-foot by 71-foot area designated on Figure E-2. The Area L soils were designated for removal, and disposal in the West Containment Cell because results (Mason & Hanger, 1980) indicated that the soils contained PCB concentrations greater than 50 ppm. The second area, called Extended Area L, includes the area from approximately Station 12+00 to 18+00 between the roadway and the containment cell. The extended Area L excavation became necessary after an investigation for the gas main reroute indicated the presence of PCBs, at concentrations greater than 50 ppm, outside of Area L.

8.1.1 Area L Excavation

A 2-foot layer of soil was excavated between September 23 and October 5, 1991 from Area L on the south side of the East Containment Cell (see Figure E-2). The excavated Area L soils were placed in Area E of the West Containment Cell. The area was backfilled with clean sand on October 7 and 8, 1991. The concrete roadway was replaced on November 16, 1991. The compressive strength test results from the test cylinders made during the concrete repair are presented in Table 11.

8.1.2 Extended Area L Excavation

On May 14, 1992, OMC submitted a plan to EPA for removing or containing the PCB impacted soils found outside of Area L. The plan included extending the slurry wall 50 feet south of the southwest corner and approximately halfway down the south side of the slurry wall, and excavating the top two feet of soils from Area L eastward to the plant roadway at approximately Station 12+00, and south from the slurry wall to the main roadway. The changes are shown on Figure 18. The modifications were accepted by EPA on June 19, 1992.

The extended Area L excavation was performed between July 8, 1992 and July 11, 1992. The excavated soils were placed in the West Containment Cell. The excavated area was backfilled with clean sand.

The new alignment of the slurry wall around Area L was constructed during the 1992 East Containment Cell slurry wall installation. The construction of the East Containment Cell began on July 1, 1992. A discussion of the slurry wall construction is presented in Section 8.3.

8.2 Utilities Relocation

Prior to the construction of the East Containment slurry wall, several utilities were rerouted to eliminate utility penetrations of the slurry wall. The rerouted utilities included a 12-inch-high pressure gas main, a 27-inch storm sewer, and an 8-inch force main. Additionally, during the slurry wall excavation, a previously unknown pipe was uncovered within the slurry wall alignment. The rerouting or abandoning of each utility is described below.

OMC coordinated with North Shore Gas for the rerouting of the high pressure gas main around the containment cell. The rerouting of the gas main was delayed until after the start of slurry wall construction for several reasons. However, one of the principal reasons was that PCBs greater than 50 ppm were detected in the soils along the reroute alignment (see Figure E-2) during an investigation prior to the start of

excavation. The remediation of the area is discussed in Section 8.1.2. Since the gas main was not rerouted prior to the start of slurry wall construction, the three segments, where the gas main intersected the slurry wall alignment, were completed in 1993 rather than 1992. The three segments were from Station 3+86 to Station 5+10, Station 11+45 to 11+95, and Station 21+15 to 21+71. The gas main reroute was completed on November 27, 1992. The Category 6 water treatment system (the former Category 3 treatment plant without the oil absorbent vessels or settling tank) was used to treat water generated during the dewatering activities for the gas main reroute. Results of the treatment plant are presented in Table 28.

The 27-inch storm drain was rerouted around the southern perimeter of the containment cell (see Figure E-2) then run westward to the junction box at the retention pond. The installation began on October 9, 1991 and was completed on October 16, 1991. The existing line was abandoned in place by cutting and removing the pipe section that interfered with slurry wall construction. The open ends of the pipe remaining in the ground were capped. The segment of the 27-inch storm drain immediately south of the slurry wall was relocated between July 15 and 17, 1992 approximately 40 feet south to the location shown on Figure E-2. The relocation was performed to accommodate the new location for the high pressure gas main. The pipe segments of the former line that interfered with the new alignment of the slurry wall were again cut and removed while the open ends remaining in the ground were capped.

The reroute of the 8-inch force main began on September 23, 1991. The force main was rerouted around the east perimeter of the containment cell. On September 24, 1991, it was discovered that the proposed tie-in point, approximately 50 feet north of the North Ditch, was 14 feet below grade and encased inside a 20-inch steel pipe. Canonie, on October 18, 1991, submitted an alternate connection plan to the EPA. The plan was verbally approved by EPA on November 14, 1991. Confirmation of the approval is presented in Appendix A.

The revised plan, as shown on Figure 19, consisted of excavating two feet of soil from the northeast corner of the cell moving the northeast corner of the slurry wall to the southwest, then making the connection on the south side of the ditch. The final connection for the force main was made on December 11, 1991.

In December 1991, while making the final connection for the force main, an unknown 15-inch-diameter steel pipe was found. The pipe was not identified on any drawing and the North Shore Sanitary District indicated that the pipe was not part of their operations. On March 23, 1992, Canonie submitted a work plan for identifying the contents and decommissioning the pipe. A live tap of the unknown pipe was performed on April 21, 1992. The pipe did not contain liquids. Ground water samples were taken during dewatering activities for the tap by driving a temporary piezometer into the sand and sampling the ground water with a PVC bailer. Volatile and semivolatile constituents were not detected in the sample. Metals were detected but were below the state action level, see Table 29. The unknown pipe was decommissioned between June 8 and 10, 1992 by removing a 5-foot section of pipe at each point intersecting the slurry wall alignment and capping the ends remaining in the ground.

8.3 Slurry Wall Construction

Construction of the East Containment Cell slurry wall began on July 1, 1992. Work on the slurry wall, with the exception of three segments, was completed on August 15, 1992. Three segments of the wall, Station 3+86 to 5+10, Station 11+45 to 11+95, and Station 21+15 to 21+71 were left unexcavated due to the delay in rerouting the high pressure gas main. The slurry wall was keyed an average of 4.1 feet into the clay till. The daily quality control reports are presented in Appendix C. The slurry wall key data is summarized in Table 30.

On July 25, 1992, an obstruction was encountered at approximately Station 8+80 of the slurry wall. Between July 25 and 28, 1992, efforts were made to remove or break the obstruction so that the required key depth could be achieved along the designed slurry wall alignment. The efforts were unsuccessful due to the closeness

of the 8-inch force main and the property line to the east. However, the required key depth was achieved to the west of the obstruction. According to the design, soil excavated along the slurry wall would normally be mixed into the soil-bentonite backfill. Since the soils in the bypass area were to be located within the slurry wall, the excavated soils were placed in the east cell and not incorporated in the soil-bentonite backfill. Clean sand from the sand pile at the New Slip was utilized for the soil-bentonite backfill in this area. The final alignment of the slurry wall in the area of the obstruction is shown on Figure E-2.

Field and laboratory testing of the soil-bentonite backfill was performed to assure compliance with the specifications. Samples of the soil-bentonite backfill were recovered once every 2,500 cubic yards of material placed. The samples were tested for permeability. The results are summarized in Table 8. All samples meet the Project Specification (Section 02229, Part 1, Canonie, 1991b) of a permeability less than 1×10^{-7} cm/sec.

In the spring of 1993 during the installation of the final sections of the East Containment wall, Canonie increased the frequency for the grain size analyses for soil-bentonite backfill to a sample every 500 cubic yards of backfill. During the installation of the East Containment wall in 1992, a grain size analysis was performed on each sample tested for permeability. The overall testing frequency based on the complete installed wall quantities discussed above is one grain size test per 1,200 cubic yards of backfill. This frequency is less than that described in the specifications (Section 02229, Paragraph 4.3B of the Project Specifications; Canonie, 1991b).

As discussed in Section 3.3, the 10 percent passing the No. 200 sieve requirement was for the assessment of uniformity of the backfill mix. Canonie analyzed the existing data for the East Containment to determine the probability of any additional samples being less than 10 percent passing a No. 200 screen. The grain size data base for the East Cell is shown in Table 8. Four samples were taken for an average percent passing the No. 200 screen of 15.9 percent and a standard deviation of 2.3 percent. Based on this sample set, there is better than a 99.5 percent probability that an additional sample or samples would exceed 10 percent passing a No. 200

screen. In other words, over 1,000 samples would have to be recovered to produce a result of less than 10 percent passing the No. 200 sieve. Therefore, if six additional samples had been recovered in accordance with the specifications, it is very unlikely that a result of less than 10 percent would have occurred. Additionally, as shown in the full-scale pumping test, Appendix D, the performance of the cells indicates a uniform and adequate containment wall at the East Containment.

Two in-situ permeability tests were performed along the centerline of the slurry wall. The locations of the tests are presented on Figure 20 and the results are summarized in Table 9. Both results were less than the required (Table 1, B.3) 1×10^{-7} cm/sec permeability.

The concrete slurry wall cap placed in the high traffic areas was installed in two separate sections. The first 260 feet of concrete cap was installed on September 22, 1992. The remaining sections of the slurry wall concrete cap were placed between May 12 and 19, 1993. The compressive strength results of the concrete cylinders prepared during the concrete pour are presented in Table 11. All results exceed the required (Part 2.5, C.1, Section 02223, Canonie, 1991b) 28-day strength requirement of 3,000 psi.

In April 1993, Canonie remobilized to the site to complete the East Containment Cell slurry wall. The three remaining segments of the slurry wall were completed between April 26, 1993 and May 10, 1993.

8.4 Capping and Closure of the East Containment Cell

The East Containment Cell final cover, as originally designed, was to contain an asphalt parking lot in the western half of the cell. However, the surface slope of the East Containment Cell increased due primarily to the inclusion of concrete and asphalt debris from the gas main reroute and soil from the slurry wall platform. Therefore, the final cover in the western half of the cell was changed to a vegetative cover.

Construction activities for placement of the final cap on the East Containment Cell began on May 14, 1993. The gravel edge drain was installed between May 12, 1993 and June 10, 1993. Two catch basins and an 8-inch storm drain pipe were installed into the gravel edge drain along the western perimeter of the cell on June 18 and 19, 1993. The catch basins and pipe were intended to drain runoff from the parking area. Although the parking area was replaced with a vegetative cover, the catch basins and pipe were still installed to improve drainage in the area.

Concurrently, with the gravel edge drain construction, the 6-inch sand subgrade was placed on the east cell. The subgrade placement was completed on June 11, 1993. Density tests were taken on the compacted backfill and are summarized in Table 10. The results meet the 95 percent modified Proctor density (Part 3.3 D, Section 02223, Canonie, 1991b) for structural fill (beneath the roadway) and 85 percent modified Proctor density (Part 3.3 E, Section 02223, Canonie, 1991b) for non-structural backfill.

The 60-mil HDPE liner was placed between June 11 and 16, 1993. The QA/QC logs for the seaming of the liner are presented in Appendix E. The geonet and filter fabric were placed between June 14 and 19, 1993. Placement of the 18-inch sand layer occurred between June 18 and July 9, 1993. The 6-inch topsoil layer was installed between July 1 and 15, 1993. The stone subbase for the roadway through the East Containment was placed between July 9 and 13, 1993. The asphalt pavement for the roadway was placed between July 22 and 26, 1993. The East Containment Cell was hydroseeded the week of August 2, 1993. Three-foot-high concrete barriers were placed along the roadway between August 6 and 20, 1993. The concrete barriers were not part of the original design, but were placed at the request of OMC to provide additional protection for the East Containment Cell cover.

8.5 Monitoring Wells, Piezometers, and Recovery Wells

Two 6-inch-diameter permanent recovery wells (R-3 and R-4) were installed on September 15 and 16, 1992 in the East Containment Cell for the recovery of ground water from the cell. Copies of the boring logs and well construction details are

provided in Appendix F. The location of the recovery wells is shown on Figure 20. A 4-inch-diameter Grundfos submersible pump (Model 10S03-6) was installed in each well, and discharge piping was installed from the pump to the wellhead. The electrical feed to the well, and the discharge piping from the well to the North Ditch, are shown on Figure E-3.

A series of four monitoring wells (W-5 through W-8) and piezometers (P-5 through P-8) were installed in September 1992 and May 1993 near the corners of the cell to monitor the head difference across the slurry wall. The monitoring well and piezometer locations are shown on Figure 20. Copies of the boring logs and well installation diagrams are presented in Appendix F.

The ground water elevations taken between July 1993 and January 1995 in the monitoring wells and piezometers is presented in Table 31.

Ground water samples were recovered quarterly beginning in the second quarter 1993, in accordance with Section 3.0 of the O&M Plan (Canonie, 1988a). The results are summarized in Table 13.

8.6 East Containment Cell Dewatering (Category 5 and 7)

8.6.1 Dewatering with the Category 5 and 7 Treatment Plants

The dewatering of the East Containment Cell began on July 27, 1993 with the pumping of water from Recovery Well R-4 and the treatment of the water with the Category 5 plant. The Category 5 plant was used to treat water in the East Cell through November 18, 1993, with the exception of the period from September 2 to October 7, 1993 when the plant was moved to the West Cell (see Section 5.8). A total of 1,332,000 gallons of ground water from the East Containment Cell were treated through the Category 5 Plant after the final cap was placed.

Canonie submitted to the EPA on June 25, 1993 a plan to construct a second Category 5 plant that would be used at Recovery Well R-3 for the dewatering of the

East Cell. The purpose of the second plant was to enable the pumping of R-3 and R-4 simultaneously, thus accelerating the drawdown ground water level within the East Cell. The operation of the second plant, designated Category 7, was verbally approved in July 1993. The Category 7 Plant operated from August 16, 1993 through December 17, 1993. A total of 1,010,000 gallons of ground water were treated through the Category 7 Plant.

The system influent, lead carbon, and system effluent for the Categories 5 and 7 Treatment Plants were sampled for PCBs in accordance with the project work plans. The analytical results for the Category 5 and Category 7 Plants are summarized in Tables 14 and 32, respectively. It is interesting to note that the PCB concentrations in the system influent are less than or equal to the treatment requirements for the system effluent during the dewatering of the East Containment Cell. The East Containment Cell ground water elevation from July 27, 1993 to August 28, 1995 is presented on Figure 21.

8.6.2 East Containment Cell Pumping Test

As part of a pumping test in the East Containment Cell, the ground water levels at the monitoring wells and piezometers were measured on approximately a daily basis from June 22, 1993 through October 1, 1994 and less frequently thereafter. The recorded water levels are presented in Table 31 and on Figure 21. The recovery of ground water in the containment cell occurs quicker than calculated in the Design and Analysis Report (Section 4.6, Canonie, 1991a). The actual recovery rate probably reflects the actual storage coefficient for the fine grain sands in the East Containment rather than the assumed value used in the Design and Analysis Report calculation. The storage coefficient used in the ground water modeling in the Design and Analysis Report was 0.3, which is typical of a medium-grained beach sand in an unconfined aquifer. However, a uniform fine-grained sand may have a storage coefficient as low as 0.1 (ACOE, 1971). The small storage coefficient results in less water removal during drawdown and faster recovery because there is less pore space to empty and fill. The results of the pumping test are discussed in further detail in Appendix D.

As a final construction-related activity, a pumping test was completed for each of the containment cells to confirm the performance of the slurry walls and cover for operation and maintenance. Upon successful testing, the containment cell entered the operation and maintenance phase of the remedial action.

9.0 NORTH DITCH REMEDIATION

The remediation of the North Ditch called for the dewatering of the ditch, excavation of sediments to prespecified depths, and backfilling the ditch to original elevation with clean soil. The water removed from the ditch was pumped to the West Containment Cell so the water would be treated with the Category 3 Plant as part of the West Cell dewatering program. The excavated soil was transported to the West Containment Cell.

In order to limit the volume of water removed from the North Ditch, a ground water barrier was constructed on the south side to minimize ground water infiltration into the ditch. An existing sheet pile wall served as a ground water barrier on the north side of the ditch. The south ground water barrier consisted principally of a 2-foot-wide slurry wall down to the clay till surface. After completion of the North Ditch restoration, 4-foot-wide, 10-foot-deep sections of the slurry wall were excavated every 200 feet and backfilled with gravel. Sheet piling, rather than a slurry wall, was placed adjacent to the high voltage power line towers so that the slurry wall excavation would not impact the tower's foundation.

9.1 Preparation of North Ditch

The North Ditch was cleared of large vegetation during February 1992. On February 12, 1992, Canonie requested a change in the work plans from the EPA. The request was to change the temporary sheeting bulkhead, across the North Ditch, to a soil berm. The request was granted on June 5, 1992. Approval documentation is included in Appendix A.

The excavation of the North Ditch slurry wall began on June 8, 1992. Problems with trench cave-in were observed beginning June 9, 1992. The problem was traced to an elevated concentration of calcium in the bentonite. The excavated portion of the slurry wall was backfilled on June 12, 1992 and a new load of bentonite slurry was mixed. Excavation of the slurry wall was completed on June 26, 1992. The daily quality control reports are included in Appendix C.

The sheeting adjacent to the power poles was vibrated into place between June 29 and July 2, 1992. All sheeting was removed, decontaminated, and shipped off-site by August 19, 1992 after the completion of the North Ditch remediation.

9.2 North Ditch Excavation and Backfill

The North Ditch was excavated in approximately 400-foot segments. In order to prevent surface water runoff into the active excavation, a soil berm was placed across the ditch at each end of the excavation. The 36-inch storm drain entering the ditch at the west end was temporarily plugged with sand bags, and water collecting in the pipe was pumped through bypass piping to the east end of the excavation limits.

The excavation of the North Ditch occurred between July 7 and August 14, 1992. The excavated soil was transported by off-road trucks to the West Containment Cell. Once the excavation grades were checked and accepted by the Waukegan Harbor Trust and Corps of Engineers, the ditch was backfilled with clean sand. The backfilling of the North Ditch was completed on September 23, 1992. Upon completion of the North Ditch excavation and backfilling, a 4-foot-wide, 10-foot-deep section of the slurry wall was removed, on 200-foot intervals, from Station 0+00 to Station 9+00. The excavated areas were backfilled with gravel in order to reestablish ground water flow back to the ditch.

In order to prevent erosion of the North Ditch in the area adjacent to the north leg of the East containment slurry wall, the design called for erosion protection in the North Ditch from approximately Station 9+00 to Station 17+25 (see Drawing 87-126-E118). The erosion protection consisted of a 160-mil filter fabric overlain by an 18-inch layer of 2-inch by 9-inch rock (approximately 2 to 65 pounds per piece). See Detail 3, Figure M-2. The erosion protection system was placed between August 18 and September 19, 1994.

10.0 SUMMARY AND PROJECT STATUS

Remedial construction activities for the Waukegan Harbor Superfund site were completed between November 1990 and December 1994. As part of the remediation, a new slip was constructed for a small business in the harbor, the North Ditch restoration was completed, over 30,000 cubic yards of sediment were removed from the Upper Harbor, over 12,000 tons of the most heavily impacted soil and sediment were thermally treated, and the lesser impacted sediments were isolated in three on-site containment cells, totaling approximately 12 acres in size. The remedial activities were completed in accordance with the Remedial Action Plan, with the exception of modifications, listed in Section 1.4 of this report. The modifications were necessary due to site-specific conditions and are discussed in the relevant sections of the report.

The performance standards for the remedial activities were met. The specific standards and the results are presented in the relevant sections of the report. One set of treatment standards that was noteworthy is the performance of the thermal treatment equipment. The Consent Decree required that PCB removal activities have a removal efficiency of not less than 97 percent, with no single treated value greater than 500 ppm. The removal efficiency for the thermal desorption activities was 99.98 percent with all treated values less than 9 ppm.

With the completion of remediation, activities at the site have moved to the operation and maintenance phase. Operation and maintenance activities are conducted in accordance with the August 22, 1988 Operation and Maintenance Plan for the Waukegan Harbor site (Appendix VII of the Consent Decree and any subsequent modifications approved by EPA).

REFERENCES

U.S. Army Corps of Engineers, 1971, "Dewatering and Groundwater Control for Deep Excavations".

Canonie Environmental Services Corp., 1988a, Operation and Maintenance Plan, Waukegan Harbor Superfund Site, Waukegan, Illinois.

Canonie Environmental Services Corp., 1988b, IPC Work Plan, Waukegan Harbor Superfund Site, Waukegan, Illinois.

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Canonie Environmental Services Corp., 1991c, Treatment Design and Operations Plan, Waukegan Harbor Superfund Site, Waukegan, Illinois.

Canonie Environmental Services Corp., 1991d, Construction Quality Control Procedures, Waukegan Harbor Superfund Site, Waukegan, Illinois.

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Canonie Environmental Services Corp., 1991g, Remedial Action Quality Assurance Project Plan, Waukegan Harbor Superfund Site, Waukegan, Illinois.

Canonie Environmental Services Corp., 1991h, Treatment Quality Assurance Project Plan, Waukegan Harbor Superfund Site, Waukegan, Illinois.

Canonie Environmental Services Corp., 1991i, Data Report, Soil and Water Test Results, November 1990 to June 1991, New Slip Area, Waukegan Harbor Superfund Site, Waukegan, Illinois.

Mason & Hanger, Silas Mason Co., Inc., Drawing No. 81-088-E16, Subsurface Investigation, North Ditch Area.

TABLE 1

DESIGN CRITERIA
WAUKEGAN HARBOR REMEDIAL ACTION

A. Containment Cell Bottom Soils

1. The soil thickness is greater than or equal to four feet.

2. The flow through the bottom is less than the flow through four feet of soil with a permeability of 1×10^{-7} cm/sec.

3. Greater than 30 percent of the soil is finer than a No. 200 sieve.

B. Soil-Bentonite Slurry Walls

1. The slurry wall will be a minimum of 3 feet thick, and will be at least one-half-foot-thick for each 10 feet of hydraulic head across the wall.

2. The slurry walls will be keyed into cell bottom soils such that the flow underneath the wall through the clayey in-situ soils is less than or equal to the flow directly through the soil-bentonite slurry wall. The minimum depth of penetration of the slurry wall key will be three feet into the clayey till below any permeable lenses, weathered zones, desiccation cracks, or other geologic features that might permit seepage under the well.

3. The slurry walls will have an in-situ permeability less than or equal to 1×10^{-7} cm/sec.

4. The slurry backfill mix must be compatible with site ground water and ground water that has contacted soils containing PCBs.

5. Slurry walls will have a minimum of a five-foot overlap at corners.

6. All slurry walls will be constructed vertically.

7. Slurry levels will be maintained at least two feet above the ground water table during construction.

TABLE 1

DESIGN CRITERIA
WAUKEGAN HARBOR REMEDIAL ACTION

C. Containment Cell Cover

1. The top of the containment cell will be at least 2 feet above the monthly mean 100-year lake level (40 CFR 761.75).

2. Containment cell cover design shall comply with the RCRA regulations, as outlined in 40 CFR 264.310.

3. A topsoil cover, if used, will be a minimum of 6 inches thick.

4. The slope of a cover will be between one and five percent.

5. The cover will have a surface drainage diversion system around the perimeter of the cap.

6. The drainage layer below the top of the cap will have a hydraulic conductivity of greater than 1×10^{-2} cm/sec.

7. If a topsoil cover is used, the drainage layer will be overlain by a filter media.

8. The bottom layer will be located two feet below ground surface and will have a slope of at least two percent.

9. The bottom layer will consist of a synthetic liner with a minimum of 40 mil thickness.

D. Slip No. 3 Requirements

1. The side of the Slip No. 3 containment exposed to the harbor will be protected from erosion and damage due to collision of boats.

2. The slurry wall on the east side of the Slip No. 3 containment cell will be protected from frost action.

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KA062091-S3	6/20/91	NIOSH 5503	96 liters	<.001 mg/m3	SLIP 3
KA062091-ECC	6/20/91	NIOSH 5503	95.2 liters	<.001 mg/m3	EAST CONTAINMENT
KA-062091-WCC	6/20/91	NIOSH 5503	95 liters	<.001 mg/m3	WEST CONTAINMENT
KA-062191-S3	6/21/91	NIOSH 5503	80 liters	<.001 mg/m3	SLIP 3
KA-062191-ECC	6/21/91	NIOSH 5503	84.4 liters	<.001 mg/m3	EAST CONTAINMENT
KA-062191-WCC	6/21/91	NIOSH 5503	83.9 liters	<.001 mg/m3	WEST CONTAINMENT
KA-062191-FB	6/21/91	NIOSH 5503	N/A	<.001 mg/m3	FIELD BLANK
KA-071091-1	7/10/91	EPA TO4	326,880 liters	84 ng/m3	STATION 1
KA-071091-2A	7/10/91	EPA TO4	326,880 liters	<76 ng/m3	STATION 2A
KA-071091-2B	7/10/91	EPA TO4	326,880 liters	<76 ng/m3	STATION 2B
KA-071091-3	7/10/91	EPA TO4	326,880 liters	304 ng/m3	STATION 3
KA-071091-4	7/10/91	EPA TO4	326,880 liters	499 ng/mm3	STATION 4
KA-071091-5	7/10/91	EPA TO4	326,880 liters	643 ng/m3	STATION 5
KA-071091-FB	7/10/91	EPA TO4	326,880 liters	<25 ug	FIELD BLANK
KA-071091-NDS	7/10/91	NIOSH 5503	75 liters	<.001 mg/	NORTH DITCH, SANDY
KA-071091-NDO	7/10/91	NIOSH 5503	68 liters	<.001 mg/	NORTH DITCH, DUCKY
KA-071191-1	7/11/91	EPA TO4	326,880 liters	<76 ng/m3	STATION 1
KA-071191-2A	7/11/91	EPA TO4	326,880 liters	<70 ng/m3	STATION 2A
KA-071191-3	7/11/91	EPA TO4	326,880 liters	88 ng/m3	STATION 3
[illegible]1191-4	7/11/91	EPA TO4	326,880 liters	119 ng/m3	STATION 4
KA-071191-5	7/11/91	EPA TO4	316,880 liters	772 ng/m3	STATION 5
KA-071191-FB	7/11/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KA-071191-WWCC	7/11/91	NIOSH 5503	84 liters	<.001 mg/m3	WEST CONTAINMENT
KA-071291-1	7/12/91	EPA TO4	326,880 liters	<76 ng/m3	STATION 1
KA-071291-2A	7/12/91	EPA TO4	334,051 liters	<75 mg/m	STATION 2A
KA-071291-2B	7/12/91	EPA TO4	329,270 liters	<76 ng/m3	STATION 2B
KA-071291-3	7/12/91	EPA TO4	330,285 liters	280 ng/m3	STATION 3
KA-071291-4	7/12/91	EPA TO4	326,880 liters	325 ng/m3	STATION 4
KA-071291-5	7/12/91	EPA TO4	324,172.9 liters	1855 ng/m3	STATION 5
KA-071291-FB	7/12/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KA-071291-WWCC	7/12/91	NIOSH 5503	120 liters	<.001 mg/m3	WEST CONTAINMENT
KA-071291-WWCC9N	7/12/91	NIOSH 5503	118.6 liters	<.001 mg/m3	WEST CONTAINMENT
KA-071291-FB	7/12/91	NIOSH 5503	N/A	<.1 mg/m3	FIELD BLANK
KA-071791-1	7/17/91	EPA TO4	310,080 liters	<79 ng/m3	STATION 1
KA-071791-2A	7/17/91	EPA TO4	326,160 liters	<70 ng/m3	STATION 2A
KA-071791-2B	7/17/91	EPA TO4	324,720 liters	<77 ng/m3	STATION 2B
KA-071791-3	7/17/91	EPA TO4	317,520 liters	<79 ng/m3	STATION 3
KA-071791-4	7/17/91	EPA TO4	317,520 liters	432 ng/m3	STATION 4
KA-071791-5	7/17/91	EPA TO4	316,800 liters	197 ng/m3	STATION 5
KA-072391-1	7/23/91	EPA TO4	318, 240 liters	233 ng/m3	STATION 1
KA-072391-2A	7/23/91	EPA TO4	328, 320 liters	274 ng/m3	STATION 2A
KA-072391-3	7/23/91	EPA TO4	318, 240 liters	1420 ng/m3	STATION 3
KA-072391-4	7/23/91	EPA TO4	328,320 liters	2470 ng/m3	STATION 4
[illegible]72391-5	7/23/91	EPA TO4	322,560 liters	2363 ng/m3	STATION 5
[illegible]2391-FB	7/23/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV072991-1	7/29/91	EPA TO4	336,960 liters	<74 ng/m3	STATION 1

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV072991-2A	7/29/91	EPA TO4	334,080 liters	<74 ng/m3	STATION 2A
KAHV072991-2B	7/29/91	EPA TO4	322,560 liters	<74 ng/m3	STATION 2B
KAHV072991-3	7/29/91	EPA TO4	334,080 liters	74 ng/m3	STATION 3
KAHV072991-4	7/29/91	EPA TO4	337,650 liters	297 ng/m3	STATION 4
KAHV072991-5	7/29/91	EPA TO4	336,960 liters	2610 ng/m3	STATION 5
KAHV072991-FB	7/29/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KA-080191-1	8/1/91	NIOSH 5503	21.9 liters	<.005 mg/m3	AREA J
KA-080191-2	8/1/91	NIOSH 5503	20.3 liters	<.005 mg/m3	AREA J
KA-080291-1	8/2/91	NIOSH 5503	29.8 liters	<.003 mg/m3	AREA J
KAHV080491-1	8/4/91	EPA TO4	337,680 liters	<74 ng/m3	STATION 1
KAHV080491-2A	8/4/91	EPA TO4	343,476 liters	<73 ng/m3	STATION 2A
KAHV080491-3	8/4/91	EPA TO4	332,640 liters	<75 ng/m3	STATION 3
KAHV080491-4	8/4/91	EPA TO4	324,000 liters	<77 ng/m3	STATION 4
KAHV080491-5	8/4/91	EPA TO4	332,640 liters	542 ng/m3	STATION 5
KAHV080491-FB	8/4/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KA080591-1	8/5/91	NIOSH 5503	55.3 liters	<.001 mg/m3	WEST CONTAINMENT
KA080591-FB	8/5/91	NIOSH 5503	N/A	<.05 mg/ n3	FIELD BLANK
KA080691-1	8/6/91	NIOSH 5503	51.4 liters	<.001 mg/m3	WEST CONTAINMENT
KA080791-1	8/7/91	NIOSH 5503	58.3 liters	<.001 mg/m3	WEST CONTAINMENT
KAHV081091-1	8/10/91	EPA TO4	328,320 liters	<76 ng/m3	STATION 1
KAHV081081-2A	8/10/91	EPA TO4	339,840 liters	<74 ng/m3	STATION 2A
KAHV081091-2B	8/10/91	EPA TO4	324,000 liters	<78 ng/m3	STATION 2B
KAHV081091-3	8/10/91	EPA TO4	354,240 liters	457 ng/m3	STATION 3
KAHV081091-4	8/10/91	EPA TO4	348,380 liters	819 ng/m3	STATION 4
KAHV081091-5	8/10/91	EPA TO4	318,862 liters	769 ng/m3	STATION 5
KAHV081091-FB	8/10/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV081691-FB	8/16/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV081691-1	8/16/91	EPA TO4	295,677 liters	<84 ng/m3	STATION 1
KAHV081691-2A	8/16/91	EPA TO4	314,730 liters	<80 ng/m3	STATION 2A
KAHV081691-3	8/16/91	EPA TO4	318,240 liters	385 ng/m3	STATION 3
KAHV081691-4	8/16/91	EPA TO4	322,560 liters	565 ng/m3	STATION 4
KAHV081691-5	8/16/91	EPA TO4	289,440 liters	258 ng/m3	STATION 5
KAHV082291-1	8/22/91	EPA TO4	340,092 liters	<74 ng/m3	STATION 1
KAHV082291-2A	8/22/91	EPA TO4	308,254 liters	<81 ng/m3	STATION 2A
KAHV082291-2B	8/22/91	EPA TO4	322,726 liters	107 ng/m3	STATION 2B
KAHV082291-3	8/22/91	EPA TO4	336,960 liters	251 ng/m3	STATION 3
KAHV082291-4	8/22/91	EPA TO4	336,960 liters	2883 ng/m3	STATION 4
KAHV082291-5	8/22/91	EPA TO4	311.040 liters	4781 ng m3	STATION 5
KAHV082291-FB	8/22/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KA082291-1	8/22/91	NIOSH 5503	31 liters	<.003 mg/mg	AREA F, SWEDE
KA082291-2	8/22/91	NIOSH 5503	31.2 liters	<.003 mg/mg	AREA F
KAHV082891-1	8/28/91	EPA TO4	323,048 liters	1729 ng/m3	STATION 1
KAHV082891-2A	8/28/91	EPA TO4	318,240 liters	380 ng/m3	STATION 2A
KAHV082891-3	8/28/91	EPA TO4	313,920 liters	357 ng/m3	STATION 3
KAHV082891-4	8/28/91	EPA TO4	322,331 liters	2361 ng/m3	STATION 4
KAHV082891-5	8/28/91	EPA TO4	254,284 liters	3743 ng/m3	STATION 5

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV082891-FB	8/28/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV090391-1	9/3/91	EPA TO4	282,881 liters	<88 ng/m3	STATION 1
KAHV090391-2A	9/3/91	EPA TO4	280,083 liters	904 ng/m3	STATION 2A
KAHV090391-2B	9/3/91	EPA TO4	280,699 liters	898 ng/m3	STATION 2B
KAHV090391-3	9/3/91	EPA TO4	292,334 liters	2209 ng/m3	STATION 3
KAHV090391-4	9/3/91	EPA TO4	274,882 liters	751 ng/m3	STATION 4
KAHV090391-5	9/3/91	EPA TO4	277,790 liters	856 ng/m3	STATION 5
KAHV090391-FB	9/3/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV090991-3	9/9/91	EPA TO4	299,513 liters	98.6 ng/m3	STATION 3
KAHV090991-4	9/9/91	EPA TO4	316,792 liters	3601 ng/m3	STATION 4
KAHV090991-5	9/9/91	EPA TO4	295,193 liters	6166 ng/m3	STATION 5
KAHV090991-FB	9/9/91	EPA TO4	N/A	<25 ug	FIELD BLANK
NO POWER TO STATIONS 1, 2A, OR 2B ON 09-09-91					
KA090291-1	9/2/91	NIOSH 5503	91.5 liters	<.001 mg/m3	JIM, W CONTAINMENT
KA091091-1	9/10/91	NIOSH 5503	36.5 liters	<.003 mg/m3	SANDY, W CONTAINMENT
KAHV091591-1	9/15/91	EPA TO4	280,857 liters	142 ng/m3	STATION 1
KAHV091591-2A	9/15/91	EPA TO4	295,042 liters	<85 ng/m3	STATION 2A
KAHV091591-2B	9/15/91	EPA TO4	287,950 liters	<86 ng/m3	STATION 2B
KAHV091591-3	9/15/91	EPA TO4	303,553 liters	<82 ng/m3	STATION 3
[illegible]'091591-4	9/15/91	EPA TO4	297,879 liters	1110 mg/m3	STATION 4
K[illegible]V091591-5	9/15/91	EPA TO4	303,127 liters	373 mg/m3	STATION 5
KAHV091591-FB	9/15/91	EPA TO4	N/A	<25 ng/m3	FIELD BLANK
KA091881-1	9/18/91	NIOSH 5503	25.4 liters	<.004 mg/m3	AREA E, WEST CONTAINMENT
KAHV091891-1	9/18/91	EPA TO4	316,047 liters	<79 mg/m3	STATION 1
KAHV091891-2A	9/18/91	EPA TO4	316,047 liters	<79 mg/m3	STATION 2A
KAHV091891-3	9/18/91	EPA TO4	306,886 liters	145 ng/m3	STATION 3
KAHV091891-4	9/18/91	EPA TO4	337,422 liters	1215 ng/m3	STATION 4
KAHV091891-5	9/18/91	EPA TO4	305,359 liters	510 ng/m3	STATION 5
KAHV091891-FB	9/18/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KA091991-1	9/19/91	NIOSH 5503	25.4 liters	<.004 mg/m3	AREA E, WCC
KAHV091991-1	9/19/91	EPA TO4	325,352 liters	145 ng/m3	STATION 1
KAHV091991-2A	9/19/91	EPA TO4	323,802 liters	163 ng/m3	STATION 2A
KAHV091991-2B	9/19/91	EPA TO4	312,958 liters	139 ng/m3	STATION 2B
KAHV091991-3	9/19/91	EPA TO4	306,761 liters	231 ng/m3	STATION 3
KAHV091991-4	9/19/91	EPA TO4	333,097 liters	185 ng/m3	STATION 4
KAHV091991-5	9/19/91	EPA TO4	306,761 liters	123 ng/m3	STATION 5
KAHV091991-FB	9/19/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV092091-FB	9/20/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV092091-1	9/20/91	EPA TO4	310,057 liters	<80mg/m3	STATION 1
KAHV092091-2A	9/20/91	EPA TO4	336,022 liters	<74 mg/m3	STATION 2A
KAHV092091-3	9/20/91	EPA TO4	308,529 liters	<81 mg/m3	STATION 3
KAHV092091-4	9/20/91	EPA TO4	329,149 liters	1566 ng/m3	STATION 4
KAHV092091-5	9/20/91	EPA TO4	318,457 liters	972 ng/m3	STATION 5
K[illegible]92191-1	9/21/91	NIOSH 5503	45.8 liters	<.002 mg/m3	AREA E, SWEDE, WCC
[illegible]092191-FB	9/21/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV092191-1	9/21/91	EPA TO4	298,123 liters	<84mg/m3	STATION 1

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV092191-2A	9/21/91	EPA TO4	305,539 liters	<82mg/m3	STATION 2A
KAHV092191-2B	9/21/91	EPA TO4	295,157 liters	<85mg/m3	STATION 2B
KAHV092191-3	9/21/91	EPA TO4	298,230 liters	<84mg/m3	STATION 3
KAHV092191-4	9/21/91	EPA TO4	320,371 liters	529 ng/m3	STATION 4
KAHV092191-5	9/21/91	EPA TO4	296,640 liters	528 ng/m3	STATION 5
KA092391-1	9/23/91	NIOSH 5503	54.7 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA092491-1	9/24/91	NIOSH 5503	56.9 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA092591-1	9/25/91	NIOSH 5503	44.0 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA092691-1	9/26/91	NIOSH 5503	58.7 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA092791-1	9/27/91	NIOSH 5503	59 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA092891-FB	9/28/91	NIOSH 5503	N/A	<.01 ug	FIELD BLANK
KA092891-1	9/28/91	NIOSH 5503	44.5 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KAHV092791-FB	9/27/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV092791-1	9/27/91	EPA TO4	284,044 liters	<88 ng/m3	STATION 1
KAHV092791-2A	9/27/91	EPA TO4	318,240 liters	<79 ng/m3	STATION 2A
KAHV092791-3	9/27/91	EPA TO4	306,425 liters	355 ng/m3	STATION 3
KAHV092791-4	9/27/91	EPA TO4	320,166 liters	1008 ng/m3	STATION 4
KAHV092791-5	9/27/91	EPA TO4	303,932 liters	902 ng/m3	STATION 5
KA093091-1	9/30/91	NIOSH 5503	32 liters	<.003 mg/m3	SWEDE, W CONTAINMENT
KA100191-1	10/1/91	NIOSH 5503	58 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA100291-1	10/2/91	NIOSH 5503	52 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA100391-1	10/3/91	NIOSH 5503	58 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA100391-FB	10/3/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV100391-1	10/3/91	EPA TO4	295,442 liters	433 ng/m3	STATION 1
KAHV100391-2A	10/3/91	EPA TO4	311,902 liters	<.80 ng/m3	STATION 2A
KAHV100391-2B	10/3/91	EPA TO4	294,136 liters	<85 ng/m3	STATION 2B
KAHV100391-3	10/3/91	EPA TO4	314,345 liters	369 ng/m3	STATION 3
KAHV100391-4	10/3/91	EPA TO4	300,873 liters	573 ng/m3	STATION 4
KAHV100391-5	10/3/91	EPA TO4	278,419 liters	5438 ng/m3	STATION 5
KA100491-1	10/4/91	NIOSH 5503	43.8 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA100591-1	10/5/91	NIOSH 5503	39.1 liters	<.003 mg/m3	SWEDE, W CONTAINMENT
KA100791-1	10/7/91	NIOSH 5503	57.8 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA100891-1	10/8/91	NIOSH 5503	57.5 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA100991-1	10/9/91	NIOSH 5503	55.5 liters	<.002 mg/m3	JIM, W CONTAINMENT
KA101091-1	10/10/91	NIOSH 5503	54.4 liters	<.002 mg/m3	LOUIE, W CONTAINMENT
KA101091-FB	10/10/91	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KAHV100991-FB	10/9/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV100991-1	10/9/91	EPA TO4	314,474 liters	<79 ng/m3	STATION 1
KAHV100991-2A	10/9/91	EPA TO4	295,159 liters	<84 ng/m3	STATION 2A
KAHV100991-3	10/9/91	EPA TO4	323,590 liters	287 ng/m3	STATION 3
KAHV100991-4	10/9/91	EPA TO4	308,513 liters	1825 ng/m3	STATION 4
KAHV100991-5	10/9/91	EPA TO4	314,474 liters	1736 ng/m3	STATION 5
KA101191-1	10/11/91	NIOSH 5503	56.5 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA101291-1	10/12/91	NIOSH 5503	28.8 liters	<.003 mg/m3	SWEDE, W CONTAINMENT
KA101491-1	10/14/91	NIOSH 5503	52.1 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA101591-1	10/15/91	NIOSH 5503	56.1 liters	<.002 mg/m3	SWEDE, W CONTAINMENT

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV101591-FB	10/15/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV101591-1	10/15/91	EPA TO4	302,767 liters	<83 ng/m3	STATION 1
KAHV101591-2A	10/15/91	EPA TO4	305,078 liters	<82 ng/m3	STATION 2A
KAHV101591-2B	10/15/91	EPA TO4	310,650 liters	<80 ng/m3	STATION 2B
KAHV101591-3	10/15/91	EPA TO4	321,503 liters	377 ng/m3	STATION 3
KAHV101591-4	10/15/91	EPA TO4	324,776 liters	1007 ng/m3	STATION 4
KAHV101591-5	10/15/91	EPA TO4	323,568 liters	444 ng/m3	STATION 5
KA101691-1	10/16/91	NIOSH 5503	56.4 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA101791-1	10/17/91	NIOSH 5503	55.1 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA101891-1	10/18/91	NIOSH 5503	53.7 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA101991-1	10/19/91	NIOSH 5503	53.4 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA102191-1	10/21/91	NIOSH 5503	52.3 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA102191-FB	10/21/91	NIOSH 5503	N/A	<.01 ug	FIELD BLANK
KAHV102191-FB	10/21/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV102191-1	10/21/91	EPA TO4	295,042 liters	<91 ng/m3	STATION 1
KAHV102191-2B	10/21/91	EPA TO4	283,240 liters	<88 ng/m3	STATION 2B
KAHV102191-3	10/21/91	EPA TO4	298,927 liters	<84 ng/m3	STATION 3
KAHV102191-4	10/21/91	EPA TO4	294,740 liters	451 ng/m3	STATION 4
KAHV102191-5	10/21/91	EPA TO4	283, 240 liters	533 ng/m3	STATION 5
[illegible]02291-1	10/22/91	NIOSH 5503	56.3 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
[illegible]02391-1	10/23/91	NIOSH 5503	55.6 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA102491-1	10/24/91	NIOSH 5503	46.9 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KA102591-1	10/25/91	NIOSH 5503	48.5 liters	<.002 mg/m3	SWEDE, W CONTAINMENT
KAHV102791-FB	10/27/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV102791-1	10/27/91	EPA TO4	331,257 liters	144 ng/m3	STATION 1
KAHV102791-2A	10/27/91	EPA TO4	393,270 liters	<64 ng/m3	STATION 2A
KAHV102791-2B	10/27/91	EPA TO4	295,335 liters	<85 ng/m3	STATION 2B
KAHV102791-3	10/27/91	EPA TO4	320,000 liters	190 ng/m3	STATION 3
KAHV102791-4	10/27/91	EPA TO4	303,840 liters	1399 ng/m3	STATION 4
KAHV102791-5	10/27/91	EPA TO4	315,200 liters	177 ng/m3	STATION 5
KAHV110291-FB	11/2/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV110291-1	11/2/91	EPA TO4	319,886 liters	<78 ng/m3	STATION 1
KAHV110291-2A	11/2/91	EPA TO4	322,726 liters	<77 ng/m3	STATION 2A
KAHV110291-3	11/2/91	EPA TO4	347,110 liters	169 ng/m3	STATION 3
KAHV110291-4	11/2/91	EPA TO4	372,748 liters	287 ng/m3	STATION 4
KAHV110291-5	11/2/91	EPA TO4	329,180 liters	408 ng/m3	STATION 5
KA110891-FB	11/8/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV110891-1	11/8/91	EPA TO4	315,450 liters	<79 ng/m3	STATION 1
KAHV110891-2A	11/8/91	EPA TO4	327,654 liters	<76 ng/m3	STATION 2A
KAHV110891-2B	11/8/91	EPA TO4	328,119 liters	<76 ng/m3	STATION 2B
KAHV110891-3	11/8/91	EPA TO4	327,068 liters	<76 ng/m3	STATION 3
KAHV110891-4	11/8/91	EPA TO4	320,829 liters	<78 ng/m3	STATION 4
KAHV110891-5	11/8/91	EPA TO4	301,800 liters	<83 ng/m3	STATION 5
[illegible]HV111491-FB	11/14/91	EPA TO4	N/A	<25 ug	FIELD BLANK
[illegible]/111491-1	11/14/91	EPA TO4	288,578 liters	<87 ng/m3	STATION 1
KAHV111491-2A	11/14/91	EPA TO4	282,415 liters	<89 ng/m3	STATION 2A

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV111491-3	11/14/91	EPA TO4	285,470 liters	<88 ng/m3	STATION 3
KAHV111491-4	11/14/91	EPA TO4	308,749 liters	738 ng/m3	STATION 4
KAHV111491-5	11/14/91	EPA TO4	281,476 liters	577 ng/m3	STATION 5
KAHV112091-FB	11/20/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV112091-1	11/20/91	EPA TO4	309,859 liters	<81 ng/m3	STATION 1
KAHV112091-2A	11/20/91	EPA TO4	302,227 liters	177 ng/m3	STATION 2A
KAHV112091-2B	11/20/91	EPA TO4	293,765 liters	<85 ng/m3	STATION 2B
KAHV112091-3	11/20/91	EPA TO4	303,876 liters	281 ng/m3	STATION 3
KAHV112091-4	11/20/91	EPA TO4	313,095 liters	1631 ng/m3	STATION 4
KAHV112091-5	11/20/91	EPA TO4	302,471 liters	1839 ng/m3	STATION 5
KA112291-FB	11/22/91	NIOSH 5503	N/A	<0.1 ug	FIELD BLANK
KA112291-1	11/22/91	NIOSH 5503	43.1 liters	<.002 mg/m3	AREA W
KA112291-2	11/22/91	NIOSH 5503	42.7 liters	<.002 mg/m3	AREA W
KAHV112691-FB	11/26/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV112691-1	11/26/91	EPA TO4	309,458 liters	<81 ng/m3	STATION 1
KAHV112691-2A	11/26/91	EPA TO4	302,611 liters	<83 ng/m3	STATION 2A
KAHV112691-3	11/26/91	EPA TO4	305,721 liters	<82 ng/m3	STATION 3
KAHV112691-4	11/26/91	EPA TO4	314,150 liters	<80 ng/m3	STATION 4
KAHV112691-5	11/26/91	EPA TO4	291,793 liters	<86 ng/m3	STATION 5
KAHV120291-FB	12/2/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV120291-1	12/2/91	EPA TO4	316,172 liters	<79 ng/m3	STATION 1
KAHV120291-2A	12/2/91	EPA TO4	314,999 liters	<79 ng/m3	STATION 2A
KAHV120291-2B	12/2/91	EPA TO4	317,741 liters	<79 ng/m3	STATION 2B
KAHV120291-3	12/2/91	EPA TO4	307,353 liters	<81 ng/m3	STATION 3
KAHV120291-4	12/2/91	EPA TO4	302,912 liters	<83 ng/m3	STATION 4
KAHV120291-5	12/2/91	EPA TO4	300,886 liters	<83 ng/m3	STATION 5
KAHV120791-FB	12/7/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV120791-1	12/7/91	EPA TO4	295,754 liters	**unidentified**	STATION 1
KAHV120791-2A	12/7/91	EPA TO4	297,561 liters	<84 ng/m3	STATION 2A
KAHV120791-3	12/7/91	EPA TO4	300,867 liters	**unidentified**	STATION 3
KAHV120791-4	12/7/91	EPA TO4	309,782 liters	357 ng/m3	STATION 4
KAHV120791-5	12/7/91	EPA TO4	301,801 liters	249 ng/m3	STATION 5
KA120891-1	12/8/91	NIOSH 5503	67.8 liters	<.001 mgg/m3	DREDGE, TED MCCOY
KA120891-2	12/8/91	NIOSH 5503	67.7 liters	<.001 mg/m3	DREDGE CLAUDE METIVA
KAHV120891-FB	12/8/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV120891-1	12/8/91	EPA TO4	316,685 liters	206 ng/m3	STATION 1
KAHV120891-2A	12/8/91	EPA TO4	319,836 liters	<78 ng/m3	STATION 2A
KAHV120891-2B	12/8/91	EPA TO4	310,444 liters	<81 ng/m3	STATION 2B
KAHV120891-3	12/8/91	EPA TO4	322,419 liters	189 ng/m3	STATION 3
KAHV120891-4	12/8/91	EPA TO4	320,907 liters	748 ng/m3	STATION 4
KAHV120891-5	12/8/91	EPA TO4	315,554 liters	291 ng/m3	STATION 5
KA120991-1	12/9/91	NIOSH 5503	63.2 liters	<.002 mg/m3	DREDGE, CLAUDE METIVA
KA120991-2	12/9/91	NIOSH 5503	64.9 liters	<.002 mg/m3	DREDGE, TODD METIVA
KAHV120991-FB	12/9/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV120991-1	12/9/91	EPA TO4	313,929 liters	180 ng/m3	STATION 1
KAHV120991-2A	12/9/91	EPA TO4	320,412 liters	<78 ng/m3	STATION 2A

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV120991-3	12/9/91	EPA TO4	321,824 liters	333 ng/m3	STATION 3
KAHV120991-4	12/9/91	EPA TO4	320,733 liters	325 ng/m3	STATION 4
KAHV120991-5	12/9/91	EPA TO4	320,733 liters	**unidentified**	STATION 5
KA121091-1	12/10/91	NIOSH 5503	67.5 liters	<.001 mg/m3	DREDGE, CLAUDE METIVA
KA121091-2	12/10/91	NIOSH 5503	66.4 liters	<.001 mg/m3	DREDGE, TODD METIVA
KAHV121091-1	12/10/91	EPA TO4	299,107liters	<84 ng/m3	STATION 1
KA121191-1	12/11/91	NIOSH 5503	66.8 liters	<.001 mg/m3	DREDGE, TED
KA121191-2	12/11/91	NIOSH 5503	66.9 liters	<.001 mg/m3	DREDGE, CLAUDE METIVA
KAHV121191-1	12/11/91	EPA TO4	301,801 liters	631 ng/m3	STATION 1
KA121291-1	12/12/91	NIOSH 5503	67.3 liters	<.001 mg/m3	DREDGE, TODD METIVA
KA121291-2	12/12/91	NIOSH 5503	67.2 liters	<.001 mg/m3	DREDGE, TED
KAHV121291-1	12/12/91	EPA TO4	311,294 liters	193 ng/m3	STATION 1
KA121391-1	12/13/91	NIOSH 5503	65.5 liters	<.002 mg/m3	DREDGE, TED
KA121391-2	12/13/91	NIOSH 5503	66.1 liters	<.002 mg/m3	DREDGE, CLAUDE METIVA
KAHV121391-1	12/13/91	EPA TO4	309,227 liters	200 ng/m3	STATION 1
KA121491-1	12/14/91	NIOSH 5503	73.4 liters	<.001 mg/m3	DREDGE, CLAUDE METIVA
KA121491-2	12/14/91	NIOSH 5503	74.1 liters	<.001 mg/m3	DREDGE, TED
KAHV121491-FB	12/14/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV121491-1	12/14/91	EPA TO4	328,183 liters	<76 ng/m3	STATION 1
[illegible]/121491-2A	12/14/91	EPA TO4	339,500 liters	<74 ng/m3	STATION 2A
[illegible]V121491-2B	12/14/91	EPA TO4	334,973 liters	<75 ng/m3	STATION 2B
KAHV121491-3	12/14/91	EPA TO4	331,323 liters	146 ng/m3	STATION 3
KAHV121491-4	12/14/91	EPA TO4	337,237 liters	119 ng/m3	STATION 4
KAHV121491-5	12/14/91	EPA TO4	333,522 liters	<75 ng/m3	STATION 5
KA121591-1	12/15/91	NIOSH 5503	72.1 liters	<.001 mg/m3	DREDGE, TODD METIVA
KA121591-2	12/15/91	NIOSH 5503	70.9 liters	<.001 mg/m3	DREDGE, TED
KAHV121591-1	12/15/91	EPA TO4	328,183 liters	<76 mg/m3	STATION 1
KA121691-1	12/16/91	NIOSH 5503	53.1 liters	<.002 mg/m3	DREDGE, TODD METIVA
KA121691-2	12/16/91	NIOSH 5503	52.6 liters	<.002 mg/m3	DREDGE, CLAUDE METIVA
KA121791-1	12/17/91	NIOSH 5503	63.1 liters	<.002 mg/m3	DREDGE, TED
KA121791-2	12/17/91	NIOSH 5503	64.3 liters	<.002 mg/m3	DREDGE, TODD METIVA
KAHV121691-1	12/16/91	EPA TO4	313,783 liters	81 mg/m3	STATION 1
KAHV121791-1	12/17/91	EPA TO4	330,949 liters	<75 mg/m3	STATION 1
KA121891-1	12/18/91	NIOSH 5503	64.4 liters	<.002 mg/m3	DREDGE, TED
KA121891-2	12/18/91	NIOSH 5503	64.9 liters	<.002 mg/m3	DREDGE, CLAUDE METIVA
KA121991-1	12/19/91	NIOSH 5503	60.3 liters	<.002 mg/m3	DREDGE, CLAUDE METIVA
KA121991-2	12/19/91	NIOSH 5503	59.2 liters	<.002 mg/m3	DREDGE, TED
KA122091-1	12/20/91	NIOSH 5503	107.2 liters	<.001 mg/m3	DREDGE, CLAUDE METIVA
KA122091-2	12/20/91	NIOSH 5503	106.1 liters	<.001 mg/m3	DREDGE, TODD METIVA
KAHV122091-FB	12/20/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV122091-1	12/20/91	EPA TO4	311,009 liters	<80 ng/m3	STATION 1
KAHV122091-2A	12/20/91	EPA TO4	331,429 liters	<75 ng/m3	STATION 2A
KAHV122091-3	12/20/91	EPA TO4	332,999 liters	267 ng/m3	STATION 3
KAHV122091-4	12/20/91	EPA TO4	344,698 liters	160 ng/m3	STATION 4
[illegible]122091-5	12/20/91	EPA TO4	311,135 liters	<80 mg/m3	STATION 5
KAHV122391-1	12/23/91	EPA TO4	317,340 liters	<79 ng/m3	STATION 1

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KA122391-1	12/23/91	NIOSH 5503	30.8 liters	<.003 mg/m3	DREDGE, CLAUDE METIVA
KA122391-2	12/23/91	NIOSH 5503	30.8 liters	<.003 mg/m3	DREDGE, TODD METIVA
KA122391-FB	12/23/91	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KAHV122691-FB	12/26/91	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV122691-1	12/26/91	EPA TO4	311,009 liters	398 ng/m3	STATION 1
KAHV122691-2A	12/26/91	EPA TO4	314,417 liters	<79 ng/m3	STATION 2A
KAHV122691-2B	12/26/91	EPA TO4	318,863 liters	<78 ng/m3	STATION 2B
KAHV122691-3	12/26/91	EPA TO4	319,475 liters	420 ng/m3	STATION 3
KAHV122691-4	12/26/91	EPA TO4	333,828 liters	865 ng/m3	STATION 4
KAHV122691-5	12/26/91	EPA TO4	305,837 liters	545 ng/m3	STATION 5
KAHV122991-1	12/29/91	EPA TO4	309,133 liters	<81 ng/m3	STATION 1
KAHV010192-FB	1/1/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV010192-1	1/1/92	EPA TO4	314,928 liters	1281 ng/m3	STATION 1
KAHV010192-2A	1/1/92	EPA TO4	306,720 liters	160 ng/m3	STATION 2A
KAHV010192-3	1/1/92	EPA TO4	309,155 liters	<81 ng/m3	STATION 3
KAHV010192-4	1/1/92	EPA TO4	316,483 liters	<80 ng/m3	STATION 4
KAHV010192-5	1/1/92	EPA TO4	291,787 liters	408 ng/m3	STATION 5
KAHV010392-FB	1/3/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV010392-1	1/3/92	EPA TO4	312,595 liters	<80 ng/m3	STATION 1
KAHV010392-2A	1/3/92	EPA TO4	319,314 liters	<78 ng/m3	STATION 2A
KAHV010392-2B	1/3/92	EPA TO4	300,346 liters	<83 ng/m3	STATION 2B
KAHV010392-3	1/3/92	EPA TO4	318,816 liters	<78 ng/m3	STATION 3
KAHV010392-4	1/3/92	EPA TO4	335,519 liters	*unidentified	STATION 4
KAHV010392-5	1/3/92	EPA TO4	308,303 liters	*unidentified	STATION 5
KAHV010492-1	1/4/92	EPA TO4	302,611 liters	337 ng/m3	STATION 1
KAHV010492-2A	1/4/92	EPA TO4	313,559 liters	<80 ng/m3	STATION 2A
KAHV010492-3	1/4/92	EPA TO4	319,314 liters	297 ng/m3	STATION 3
KAHV010492-4	1/4/92	EPA TO4	324,518 liters	<77 ng/m3	STATION 4
KAHV010492-5	1/4/92	EPA TO4	302,611 liters	924ng/m3	STATION 5
KA010492-1	1/4/92	NIOSH 5503	27.0 liters	<.004 mg/m3	CLAUDE METIVA, DREDGE
KA010592-1	1/5/92	NIOSH 5503	59.4 liers	<.002 mg/m3	DARWIN METIVA, DREDGE
KAHV010592-FB	1/5/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV010592-1	1/5/92	EPA TO4	314,909 liters	*unidentified	STATION 1
KAHV010592-2A	1/5/92	EPA TO4	316,863 liters	<75 ng/m3	STATION 2A
KAHV010592-3	1/5/92	EPA TO4	319,314 liters	*unidentified	STATION 3
KAHV010592-4	1/5/92	EPA TO4	323,718 liters	270 ng/m3	STATION 4
KAHV010592-5	1/5/92	EPA TO4	305,914 liters	560 ng/m3	STATION 5
KA010692-1	1/6/92	NIOSH 5503	36.5 liters	<.003mg/m3	DARWIN METIVA, DREDGE
KA010792-1	1/7/92	NIOSH 5503	47.8 liters	<.002 mg/m3	CLAUDE METIVA DREDGE
KAHV010692-1	1/6/92	EPA TO4	309,844 liters	339 ng/m3	STATION 1
KAHV010792-1	1/7/92	EPA TO4	292,378 liters	444 ng/m3	STATION 1
KA010892-1	1/8/92	NIOSH 5503	58.2 liters	<.002 mg/m3	TED, DREDGE
KAHV010892-FB	1/8/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV010892-1	1/8/92	EPA TO4	303,066 liters	540 ng/m3	STATION 1
KAHV010892-2A	1/8/92	EPA TO4	305,127 liters	<82 ng/m3	STATION 2A
KAHV010892-2B	1/8/92	EPA TO4	307,008 liters	<81 ng/m3	STATION 2B

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV010892-3	1/8/92	EPA TO4	306,720 liters	506 ng/m3	STATION 3
KAHV010892-4	1/8/92	EPA TO4	307,188 liters	510 ng/m3	STATION 4
KAHV010892-5	1/8/92	EPA TO4	286,102 liters	<87 ng/m3	STATION 5
KA010992-1	1/9/92	NIOSH 5503	61.0 liters	<.002 mg/m3	DARWIN METIVA, DREDGE
KA011092-1	1/10/92	NIOSH 5503	35.3 liters	<.003mg/m3	DARWIN METIVA, DREDGE
KAHV011092-1	1/10/92	EPA TO4	311,040 liters	<80 ng/m3	STATION 1
KA011192-1	1/11/92	NIOSH 5503	57.2 liters	<.002 mg/m3	TED, DREDGE
KAHV011092-1	1/11/92	EPA TO4	289,397 liters	<86 ng/m3	STATION 1
KAHV011192-1	1/11/92	EPA TO4	300,316 liters	<83 ng/m3	STATION 1
KAHV011292-1	1/12/92	EPA TO4	291,954 liters	<86 ng/m3	STATION 1
KA011392-1	1/13/92	PUMP AND SAMPLE DROPPED IN UPPER HARBOR.....			
KAHV011392-FB	1/13/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV011392-1	1/13/92	EPA TO4	313,632 liters	<80ng/m3	STATION 1
KAHV011392-2A	1/13/92	EPA TO4	316 235 liters	<79 ng/m3	STATION 2A
KAHV011392-3	1/13/92	EPA TO4	319,503 liters	410 ng/m3	STATION 3
KAHV011392-4	1/13/92	EPA TO4	335,298 liters	358 ng/m3	STATION 4
KAHV011392-5	1/13/92	EPA TO4	301,802 liters	551 ng/m3	STATION 5
KA011592-1	1/15/92	NIOSH 5503	45.1 liters	<.002 mg/m3	SANDY, WCC
KA011592-2	1/15/92	NIOSH 5503	39.2 liters	<.003 mg/m3	TED, DREDGE
[illegible]11692-1	1/16/92	NIOSH 5503	52.0 liters	<.002 mg/m3	SANDY, WCC
[illegible]11692-2	1/16/92	NIOSH 5503	81.9 liters	<.001 mg/m3	CLAUDE,DREDGE
KA011792-1	1/17/92	NIOSH 5503	52.3 liters	<.002 mg/m3	SANDY, WCC
KAHV011792-FB	1/17/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV011792-1	1/17/92	EPA TO4	342,667 liters	<73 ng/m3	STATION 1
KAHV011792-2A	1/17/92	EPA TO4	346,089 liters	<72 ng/m3	STATION 2A
KAHV011792-2B	1/17/92	EPA TO4	346,338 liters	<72 ng/m3	STATION 2B
KAHV011792-3	1/17/92	EPA TO4	342,602 liters	<73 ng/m3	STATION 3
KAHV011792-4	1/17/92	EPA TO4	354,158 liters	619 ng/m3	STATION 4
KAHV011792-5	1/17/92	EPA TO4	319,423 liters	<78 ng/m3	STATION 5
KA011892-1	1/18/92	NIOSH 5503	71.6 liters	<.001 mg/m3	DARWIN, DREDGE
KA011792-1	1/17/92	NIOSH 5503	72.0 liters	<.001 mg/m3	DARWIN, DREDGE
KA011892-2	1/18/92	NIOSH 5503	50.5 liters	<.002 mg/m3	TED, DREDGE
KAHV011892-FB	1/18/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV011892-1	1/18/92	EPA TO4	334,047 liters	<85 ng/m3	STATION 1
KAHV011892-2A	1/18/92	EPA TO4	345,856 liters	<72 ng/m3	STATION 2A
KAHV011892-3	1/18/92	EPA TO4	345,850 liters	<72 ng/m3	STATION 3
KAHV011892-4	1/18/92	EPA TO4	351,761 liters	648 ng/m3	STATION 4
KAHV011892-5	1/18/92	EPA TO4	334,046 liters	<75 ng/m3	STATION 5
KAHV011992-1	1/19/92	EPA TO4	313,611 liters	<80 ng/m3	STATION 1
KAHV011992-2A	1/19/92	EPA TO4	327,493 liters	<76 ng/m3	STATION 2A
KAHV011992-2B	1/19/92	EPA TO4	317,032 liters	<79 ng/m3	STATION 2B
KAHV011992-3	1/19/92	EPA TO4	325,168 liters	<77 ng/m3	STATION 3
KAHV011992-4	1/19/92	EPA TO4	334,400 liters	1541 ng/m3	STATION 4
KAHV011992-5	1/19/92	EPA TO4	311,287 liters	1110 ng/m3	STATION 5
[illegible]2091-1	1/20/92	NIOSH 5503	30.0 liters	<.003 mg/m3	SANDY, WCC
KA012092-2	1/20/92	NIOSH 5503	77.7 liters	<.001 mg/m3	CLAUDE, DREDGE

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KA012192-1	1/21/92	NIOSH 5503	43.9 liters	<.002 mg/m3	SANDY, WCC
KA012192-2	1/21/92	SAMPLE DROPPED IN HARBOR.....			
KA012292-1	1/22/92	NIOSH 5503	41.7 liters	<.002 mg/m3	SANDY, WCC
KA012292-2	1/22/92	NIOSH 5503	23.7 liters	<.004 mg/m3	CLAUDE METIVA, DREDGE
KAHV012292-1	1/22/92	EPA TO4	311,284 liters	<80 ng/m3	STATION 1
KA012392-1	1/23/92	NIOSH 5503	49.7 liters	<.002 mg/m3	SANDY, WCC
KA012392-2	1/23/92	NIOSH 5503	49.7 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KAHV012392-FB	1/23/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV012392-1	1/23/92	EPA TO4	307,907 liters	<80 ng/m3	STATION 1
KAHV012392-2A	1/23/92	EPA TO4	322,813 liters	<81 ng/m3	STATION 2A
KAHV012392-3	1/23/92	EPA TO4	329,934 liters	504 ng/m3	STATION 3
KAHV012392-4	1/23/92	EPA TO4	331,200 liters	2116 ng/m3	STATION 4
KAHV012392-5	1/23/92	EPA TO4	313,318 liters	710 ng/m3	STATION 5
KA012492-1	1/24/92	NIOSH 5503	30.6 liters	<.003 mg/m3	SANDY,WCC
KA012492-2	1/24/92	NIOSH 5503	49.4 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KAHV012492-FB	1/24/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV012492-1	1/24/92	EPA TO4	316,483 liters	<79 ng/m3	STATION 1
KAHV012492-2A	1/24/92	EPA TO4	327,672 liters	<76 ng/m3	STATION 2A
KAHV012492-2B	1/24/92	EPA TO4	327,627 liters	<76 ng/m3	STATION 2B
KAHV012492-3	1/24/92	EPA TO4	322,078 liters	549 ng/m3	STATION 3
KAHV012492-4	1/24/92	EPA TO4	338,831 liters	880 ng/m3	STATION 4
KAHV012492-5	1/24/92	EPA TO4	313,216 liters	738 ng/m3	STATION 5
KA012592-1	1/25/92	NIOSH 5503	56.5 liters	<.002 mg/m3	SANDY, WCC
KA012592-2	1/25/92	NIOSH 5503	72.2 liters	<.001 mg/m3	CLAUDE METIVA, DREDGE
KAHV012592-FB	1/25/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV012592-1	1/25/92	EPA TO4	315,200 liters	<79 ng/m3	STATION 1
KAHV012592-2A	1/25/92	EPA TO4	328,852 liters	<76 ng/m3	STATION 2A
KAHV012592-3	1/25/92	EPA TO4	326,344 liters	<77 ng/m3	STATION 3
KAHV012592-4	1/25/92	EPA TO4	344,886 liters	934 ng/m3	STATION 4
KAHV012592-5	1/25/92	EPA TO4	315,200 liters	<79 ng/m3	STATION 5
KA012792-1	1/27/92	NIOSH 5503	57.3 liters	<.002 mg/m3	SANDY,WCC
KA012792-2	1/27/92	NIOSH 5503	58.4 liters	<.002 mg/m3	DARWIN METIVA, DREDGE
KA012892-1	1/28/92	NIOSH 5503	71.7 liters	<.001 mg/m3	SANDY, WCC
KA012892-2	1/28/92	NIOSH 5503	94.9 liters	<.001 mg/m3	TED, DREDGE
KA012992-1	1/29/92	NIOSH 5503	58.3 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KA013092-1	1/30/92	NIOSH 5503	61.7 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KA013192-1	1/31/92	NIOSH 5503	58.6 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KA020192-1	2/1/92	NIOSH 5503	34.0 liters	<.003 mg/m3	TED, DREDGE
KAHV013192-FB	1/31/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV013192-1	1/31/92	EPA TO4	294,300 liters	745 ng/m3	STATION 1
KAHV013192-2A	1/31/92	EPA TO4	327,262 liters	392 ng/m3	STATION 2A
KAHV013192-2B	1/31/92	EPA TO4	321,768 liters	456 ng/m3	STATION 2B
KAHV013192-3	1/31/92	EPA TO4	321,768 liters	<78 ng/m3	STATION 3
KAHV013192-4	1/31/92	EPA TO4	313,066 liters	1437 ng/m3	STATION 4
KAHV013192-5	1/31/92	EPA TO4	300,968 liters	927 ng/m3	STATION 5
KA020392-1	2/3/92	NIOSH 5503	52.2 liters	<.002 mg/m3	TED, DREDGE

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KA020492-1	2/4/92	NIOSH 5503	105 liters	<.001 mg/m3	CLAUDE METIVA, DREDGE
KA020592-1	2/5/92	NIOSH 5503	110.9 liters	<.001 mg/m3	DARWIN METIVA, DREDGE
KA020692-1	2/6/92	NIOSH 5503	9.0 liters	<.011 mg/m3	TIM, WCC
KA020692-2	2/6/92	NIOSH 5503	100.3 liters	<.001 mg/m3	CLAUDE, DREDGE
KAHV020692-FB	2/6/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV020692-1	2/6/92	EPA TO4	295,758 liters	<84 ng/m3	STATION 1
KAHV020692-2A	2/6/92	EPA TO4	320,999 liters	409 ng/m3	STATION 2A
KAHV020692-3	2/6/92	EPA TO4	318,550 liters	183 ng/m3	STATION 3
KAHV020692-4	2/6/92	EPA TO4	336,339 liters	2059 ng/m3	STATION 4
KAHV020692-5	2/6/92	EPA TO4	307,673 liters	479 ng/m3	STATION 5
KA020792-1	2/7/92	NIOSH 5503	56.6 liters	<.001 mg/m3	TIM, WCC
KA020792-2	2/7/92	NIOSH 5503	98.6 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KA021092-1	2/10/92	NIOSH 5503	48.6 liters	<.002 mg/m3	SWEDE, WCC
KA021092-2	2/10/92	NIOSH 5503	54.1 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KA021192-1	2/11/92	NIOSH 5503	53.3 liters	<.003 mg/m3	CLAUDE METIVA, DREDGE
KA021192-2	2/11/92	NIOSH 5503	44.8 liters	<.002 mg/m3	SWEDE, WCC
KA021292-1	2/12/92	NIOSH 5503	37.8 liters	<.003 mg/m3	DARWIN METIVA, DREDGE
KA021292-2	2/12/92	NIOSH 5503	51.5 liters	<.002 mg/m3	LOUIE, WCC
KAHV021292-FB	2/12/92	EPA TO4	N/A	<25 ug	FIELD BLANK
K 021292-1	2/12/92	EPA TO4	299,856 liters	<83 ng/m3	STATION 1
K 021292-2A	2/12/92	EPA TO4	316,274 liters	<79 ng/m3	STATION 2A
KAHV021292-2B	2/12/92	EPA TO4	313,420 liters	<80 ng/m3	STATION 2B
KAHV021293-3	2/12/92	EPA TO4	316,800 liters	<79 ng/m3	STATION 3
KAHV021292-4	2/12/92	EPA TO4	313,920 liters	504 ng/m3	STATION 4
KAHV021292-5	2/12/92	EPA TO4	294,300 liters	682 ng/m3	STATION 5
KA021392-1	2/13/92	NIOSH 5503	40.2 liters	<.002 mg/m3	DARWIN METIVA, DREDGE
KA021392-2	2/13/92	NIOSH 5503	52.0 liters	<.002 mg/m3	SWEDE, WCC
KA021492-1	2/13/92	NIOSH 5503	46.2 liters	<.002 mg/m3	TED, DREDGE
KA021592-1	2/15/92	NIOSH 5503	43.3 liters	<.002 mg/m3	CLAUDE METIVA, DREDGE
KA021792-1	2/17/92	NIOSH 5503	22.6 liters	<.004 mg/m3	DARWIN METIVA, DREDGE
KA021792-2	2/17/92	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KA021892-1	2/18/92	NIOSH 5503	40.4 liters	<.002 mg/m3	TODD METIVA, DREDGE
KAHV021892-FB	2/18/92	EPA TO4	N/A	< 25 ug	FIELD BLANK
KAHV021892-1	2/18/92	EPA TO4	304,850 liters	<82 ng/m3	STATION 1
KAHV021892-2A	2/18/92	EPA TO4	315,628 liters	201.5 ng/m3	STATION 2A
KAHV021892-3	2/18/92	EPA TO4	316,121 lliters	<79 ng/m3	STATION 3
KAHV021892-4	2/18/92	EPA TO4	327,021 liters	<76 ng/m3	STATION 4
KAHV021892-5	2/18/92	EPA TO4	299,585 liters	1780 ng/m3	STATION 5
KA021992-1	2/19/92	NIOSH 5503	15.3 liters	<.007 mg/m3	CLAUDE DREDGE
KA022192-1	2/21/92	NIOSH 5503	10.6 liters	<.009 mg/m3	DARWIN METIVA, DREDGE
KA022292-1	2/22/92	NIOSH 5503	44.7 liters	<.002 mg/m3	TODD METIVA, DREDGE
KA022492-1	2/24/92	NIOSH 5503	39.8 liters	<.003 mg/m3	TODD METIVA, DREDGE
KAHV022492-FB	2/24/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV022492-1	2/24/92	EPA TO4	307,930 liters	137 ng/m3	STATION 1
K 022492-2A	2/24/92	EPA TO4	308,054 liters	<81 ng/m3	STATION 2A
K v022492-2B	2/24/92	EPA TO4	311,357 liters	<80 ng/m3	STATION 2B

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV022492-3	2/24/92	EPA TO4	318,816 liters	189 ng/m3	STATION 3
KAHV022492-4	2/24/92	EPA TO4	316,483 liters	1356 ng/m3	STATION 4
KAHV022492-5	2/24/92	EPA TO4	307,930 liters	1363 ng/m3	STATION 5
KA022592-1	2/25/92	NIOSH 5503	44.4 liters	<.002 mg/m3	TODD METIVA, DREDGE
KA022692-1	2/26/92	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KAHV030192-FB	3/1/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV030192-1	3/1/92	EPA TO4	287,971 liters	448 ng/m3	STATION 1
KAHV030192-2A	3/1/92	EPA TO4	298,152 liters	271 ng/m3	STATION 2A
KAHV030192-3	3/1/92	EPA TO4	298,152 liters	434 ng/m3	STATION 3
KAHV030192-4	3/1/92	EPA TO4	308,333 liters	884 ng/m3	STATION 4
KAHV030192-5	3/1/92	EPA TO4	287,971 liters	1778 ng/m3	STATION 5
KAHV030792-FB	3/7/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV030792-1	3/7/92	EPA TO4	288,321 liters	215 ng/m3	STATION 1
KAHV030792-2A	3/7/92	EPA TO4	298,575 liters	<84 ng/m3	STATION 2A
KAHV030792-2B	3/7/92	EPA TO4	296,654 liters	<84 ng/m3	STATION 2B
KAHV030792-3	3/7/92	EPA TO4	298,575 liters	337 ng/m3	STATION 3
KAHV030792-4	3/7/92	EPA TO4	314,133 liters	657 ng/m3	STATION 4
KAHV030792-5	3/7/92	EPA TO4	288,321 liters	1322 ng/m3	STATION 5
KAHV031392-FB	3/13/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV031392-1	3/13/92	EPA TO4	304,850 liters	<82 ng/m3	STATION 1
KAHV031392-2A	3/13/92	EPA TO4	324,720 liters	<77 ng/m3	STATION 2A
KAHV031392-3	3/13/92	EPA TO4	324,720 liters	169 ng/m3	STATION 3
KAHV031392-4	3/13/92	EPA TO4	331,639 liters	512 ng/m3	STATION 4
KAHV031392-5	3/13/92	EPA TO4	310.458 liters	301 ng/m3	STATION 5
KAHV031992-FB	3/19/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV031992-1	3/19/92	EPA TO4	286, 095 liters	344 ng/m3	STATION 1
KAHV031992-2A	3/19/92	EPA TO4	304,751 liters	<82 ng/m3	STATION 2A
KAHV031992-2B	3/19/92	EPA TO4	308.054 liters	<81 ng/m3	STATION 2B
KAHV031992-3	3/19/92	EPA TO4	310,256 liters	405 ng/m3	STATION 3
KAHV031992-4	3/19/92	EPA TO4	319,003 liters	502 ng/m3	STATION 4
KAHV031992-5	3/19/92	EPA TO4	299,308 liters	944 ng/m3	STATION 5
KAHV032592-FB	3/25/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV032592-1	3/25/92	EPA TO4	305,806 liters	<82 ng/m3	STATION 1
KAHV032592-2A	3/25/92	EPA TO4	320,723 liters	<78 ng/m3	STATION 2A
KAHV032592-3	3/25/92	EPA TO4	320,748 liters	250 ng/m3	STATION 3
KAHV032592-4	3/25/92	EPA TO4	317,508 liters	1597 ng/m3	STATION 4
KAHV032592-5	3/25/92	EPA TO4	342.182 liters	322 ng/m3	STATION 5
KA033192-1	3/31/92	NIOSH 5503	33.5 liters	<.003 mg/m3	FLOYD FARKUS, SLIP 3
KAHV033192-FB	3/31/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV033192-1	3/31/92	EPA TO4	286,011 liters	<87 ng/m3	STATION 1
KAHV033192-2A	3/31/92	EPA TO4	311,180 liters	<80 ng/m3	STATION 2A
KAHV033192-2B	3/31/92	EPA TO4	331,370 liters	271 ng/m3	STATION 2B
KAHV033192-3	3/31/92	EPA TO4	296,811 liters	<84 ng/m3	STATION 3
KAHV033192-4	3/31/92	EPA TO4	312,705 liters	2171 ng/m3	STATION 4
KAHV033192-5	3/31/92	EPA TO4	302,028 liters	1825 ng/m3	STATION 5
KA040192-1	4/1/92	NIOSH 5503	39.3 liters	<.003 mg/m3	BOB CRACHY, SLIP 3

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KA040192-FB	4/1/92	NIOSH 5503	N/A	<0.1 ug	FIELD BLANK
KAHV040692-FB	4/6/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV040692-1	4/6/92	EPA TO4	289,282 liters	<86 ng/m3	STATION 1
KAHV040692-2A	4/6/92	EPA TO4	310,429 liters	<81 ng/m3	STATION 2A
KAHV040692-3	4/6/92	EPA TO4	291,403 liters	519 ng/m3	STATION 3
KAHV040692-4	4/6/92	EPA TO4	301,766 liters	1986 ng/m3	STATION 4
KAHV040692-5	4/6/92	EPA TO4	391,403 liters	2925 ng/m3	STATION 5
KAHV041292-FB	4/12/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV041292-1	4/12/92	EPA TO4	307,635 liters	314 ng/m3	STATION 1
KAHV041292-2A	4/12/92	EPA TO4	333,132 liters	<74 ng/m3	STATION 2A
KAHV041292-2B	4/12/92	EPA TO4	316,274 liters	<79 mg/m3	STATION 2B
KAHV041292-3	4/12/92	EPA TO4	305,413 liters	247 ng/m3	STATION 3
KAHV041292-4	4/12/92	EPA TO4	299,794 liters	<82 ng/m3	STATION 4
KAHV041292-5	4/12/92	EPA TO4	296,523 liters	1662 ng/m3	STATION 5
KAHV041892-FB	4/18/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV041892-1	4/18/92	EPA TO4	288,084 liters	359 ng.m3	STATION 1
KAHV041892-2A	4/18/92	EPA TO4	297,562 liters	<84 ng/m3	STATION 2A
KAHV041892-3	4/18/92	EPA TO4	291,263 liters	<86 ng/m3	STATION 3
KAHV041892-4	4/18/92	EPA TO4	301,621 liters	306 ng/m3	STATION 4
[illegible]/041892-5	4/18/92	EPA TO4	289,143 liters	1708 ng/m3	STATION 5
[illegible]/042492-FB	4/24/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV042492-1	4/24/92	EPA TO4	297,007 liters	<84 ng/m3	STATION 1
KAHV042492-2A	4/24/92	EPA TO4	312,912 liters	364 ng/m3	STATION 2A
KAHV042492-2B	4/24/92	EPA TO4	297,007 liters	362 ng/m3	STATION 2B
KAHV042492-3	4/24/92	EPA TO4	302,594 liters	667 ng/m3	STATION 3
KAHV042492-4	4/24/92	EPA TO4	302,349 liters	3231 ng/m3	STATION 4
KAHV042492-5	4/24/92	EPA TO4	302,594 liters	5195 ng/m3	STATION 5
KAHV043092-FB	4/30/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV043092-1	4/30/92	EPA TO4	278,170 liters	<89 ng/m3	STATION 1
KAHV043092-2A	4/30/92	EPA TO4	283 ,181 liters	<88 ng/m3	STATION 2A
KAHV043092-3	4/30/92	EPA TO4	281,142 liters	626 ng/m3	STATION 3
KAHV043092-4	4/30/92	EPA TO4	288,430 liters	190 ng/m3	STATION 4
KAHV043092-5	4/30/92	EPA TO4	281,141 liters	6494 ng/m3	STATION 5
KAHV050792-1	5/7/92	EPA TO4	296,595 liters	227 ng/m3	STATION 1
KAHV050792-2A	5/7/92	EPA TO4	313,059 liters	<80 ng/m3	STATION 2A
KAHV050792-2B	5/7/92	EPA TO4	302,400 liters	<83 ng/m3	STATION 2B
KAHV050792-3	5/7/92	EPA TO4	302,078 liters	<83 ng/m3	STATION 3
KAHV050792-4	5/7/92	EPA TO4	293,468 liters	749 ng/m3	STATION 4
KAHV050792-5	5/7/92	EPA TO4	302,078 liters	658 ng/m3	STATION 5
KAHV051292-FB	5/12/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV051292-1	5/12/92	EPA TO4	293,078 liters	1011 ng/m3	STATION 1
KAHV051292-2A	5/12/92	EPA TO4	301,579 liters	761 ng/m3	STATION 2A
KAHV051292-3	5/12/92	EPA TO4	290,822 liters	1833 ng/m3	STATION 3
KAHV051292-4	5/12/92	EPA TO4	298,166 liters	6101 ng/m3	STATION 4
[illegible]051292-5	5/12/92	EPA TO4	295,963 liters	8971 ng/m3	STATION 5
K[illegible]V051892-FB	5/18/92	EPA TO4	N/A	<25 ug	FIELD BLANK

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV051892-1	5/18/92	EPA TO4	294,734 liters	751 ng/m3	STATION 1
KAHV051892-2A	5/18/92	EPA TO4	303,573 liters	<82 ng/m3	STATION 2A
KAHV051892-2B	5/18/92	EPA TO4	295,046 liters	<85 ng/m3	STATION 2B
KAHV051892-3	5/18/92	EPA TO4	291,741 liters	828 ng/m3	STATION 3
KAHV051892-4	5/18/92	EPA TO4	300,330 liters	1451 ng/m3	STATION 4
KAHV051892-5	5/18/92	EPA TO4	297,147 liters	6418 ng/m3	STATION 5
KAHV052592-FB	5/25/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV052592-1	5/25/92	EPA TO4	302,227 liters	271 ng/m3	STATION 1
KAHV052592-2A	5/25/92	EPA TO4	303,430 liters	<82 ng/m3	STATION 2A
KAHV052592-3	5/25/92	EPA TO4	299,168 liters	<84 ng/m3	STATION 3
KAHV052592-4	5/25/92	EPA TO4	299,938 liters	565 ng/m3	STATION 4
KAHV052592-5	5/25/92	EPA TO4	297,007 liters	3599 ng/m3	STATION 5
KAHV053092-FB	5/30/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV053092-1	5/30/92	EPA TO4	293,674 liters	324 ng/m3	STATION 1
KAHV053092-2A	5/30/92	EPA TO4	298,865 liters	314 ng/m3	STATION 2A
KAHV053092-2B	5/30/92	EPA TO4	288,601 liters	<87 ng/m3	STATION 2B
KAHV053092-3	5/30/92	EPA TO4	289,224 liters	1354 ng/m3	STATION 3
KAHV053092-4	5/30/92	EPA TO4	293,674 liters	1759 ng/m3	STATION 4
KAHV053092-5	5/30/92	EPA TO4	288,351 liters	5687 ng/m3	STATION 5
KAHV060592-FB	6/5/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV060592-1	6/5/92	EPA TO4	285,120 liters	739 ng/m3	STATION 1
KAHV060592-2A	6/5/92	EPA TO4	301,015 liters	244 ng/m3	STATION 2A
KAHV050592-2B	6/5/92	EPA TO4	291,089 liters	1080 ng/m3	STATION 2B
KAHV060592-3	6/5/92	EPA TO4	301,485 liters	5302 ng/m3	STATION 3
KAHV060592-4	6/5/92	EPA TO4	290,737 liters	4520 ng/m3	STATION 4
KAHV060592-5	6/5/92	EPA TO4	290,737 liters	2751 ng/m3	STATION 5
KAHV061192-FB	6/11/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV061192-1	6/11/92	EPA TO4	272,290 liters	598 ng/m3	STATION 1
KAHV061192-2A	6/11/92	EPA TO4	281,374 liters	274 ng/m3	STATION 2A
KAHV061192-2B	6/11/92	EPA TO4	275,375 liters	546 ng/m3	STATION 2B
KAHV061192-3	6/11/92	EPA TO4	270,328 liters	1456 ng/m3	STATION 3
KAHV061192-4	6/11/92	EPA TO4	277,736 liters	7922 ng/m3	STATION 4
KAHV061192-5	6/11/92	EPA TO4	276,384 liters	1303 ng/m3	STATION 5
KAHV061792-FB	6/17/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV061792-1	6/17/92	EPA TO4	269,680 liters	<92 ng/m3	STATION 1
KAHV061792-2A	6/17/92	EPA TO4	278,670 liters	<89 ng/m3	STATION 2A
KAHV061792-3	6/17/92	EPA TO4	262,245 liters	467 ng/m3	STATION 3
KAHV061792-4	6/17/92	EPA TO4	280,794 liters	1874 ng/m3	STATION 4
KAHV061792-5	6/17/92	EPA TO4	269,099 liters	627 ng/m3	STATION 5
KAHV062392-FB	6/23/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV062392-1	6/23/92	EPA TO4	280,882 liters	360 ng/m3	STATION 1
KAHV062392-2A	6/23/92	EPA TO4	289,060 liters	<86 ug/m3	STATION 2A
KAHV062392-2B	6/23/92	EPA TO4	277,735 liters	<90 ng/m3	STATION 2B
KAHV062392-3	6/23/92	EPA TO4	282,941 liters	448 ng/m3	STATION 3
KAHV062392-4	6/23/92	EPA TO4	296,267 liters	924 ng/m3	STATION 4
KAHV062392-5	6/23/92	EPA TO4	280,882 liters	1946 ng/m3	STATION 5

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV0629992-FB	6/29/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV062992-1	6/29/92	EPA TO4	285,799 liters	243 ng/m3	STATION 1
KAHV062992-2A	6/29/92	EPA TO4	293,020 liters	<88 ng/m3	STATION 2A
KAHV062992-3	6/29/92	EPA TO4	282,679 liters	519 ng/m3	STATION 3
KAHV062992-4	6/29/92	EPA TO4	291,980 liters	183 ng/m3	STATION 4
KAHV062992-5	6/29/92	EPA TO4	284,759 liters	2674 ng/m3	STATION 5
KAHV070592-FB	7/5/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV070592-1	7/5/92	EPA TO4	290,880 liters	295 ng/m3	STATION 1
KAHV070592-2A	7/5/92	EPA TO4	292,533 liters	415 ng/m3	STATION 2A
KAHV070592-2B	7/5/92	EPA TO4	287,251 liters	394 ng/m3	STATION 2B
KAHV070592-3	7/5/92	EPA TO4	282,383 liters	1896 ng/m3	STATION 3
KAHV070592-4	7/5/92	EPA TO4	292,248 liters	3278 ng/m3	STATION 4
KAHV070592-5	7/5/92	EPA TO4	282,269 liters	1811 ng/m3	STATION 5
KA070592	7/5/92	NIOSH 5503	47.8 liters	<.003 mg/m3	BACKGROUND/NORTH DITCH
KA070692	7/6/92	NIOSH 5503	48.5 liters	<.002 mg/m3	BACKGROUND/NORTH DITCH
KA070792	7/7/92	NIOSH 5503	33.5 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KAHV070792-FB	7/7/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV070792-1	7/7/92	EPA TO4	289,608 liters	202 ng/m3	STATION 1
KAHV070792-2A	7/7/92	EPA TO4	299,544 liters	<83 ng/m3	STATION 2A
[illegible]/070792-3	7/7/92	EPA TO4	289,608 liters	229 ng/m3	STATION 3
[illegible]V070792-4	7/7/92	EPA TO4	299,205 liters	627 ng/m3	STATION 4
KAHV070792-5	7/7/92	EPA TO4	281,620 liters	1279 ng/m3	STATION 5
KA070892	7/8/92	NIOSH 5503	57.2 liters	0.006 mg/m3	BILL HARRIS/NORTH DITCH
KA070892-FB	7/8/92	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KAHV070892-FB	7/8/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV070892-1	7/8/92	EPA TO4	299,769 liters	377 ng/m3	STATION 1
KAHV070892-2A	7/8/92	EPA TO4	304,483 liters	<82 ng/m3	STATION 2A
KAHV070892-2B	7/8/92	EPA TO4	304,145 liters	<82 ng/m3	STATION 2B
KAHV070892-3	7/8/92	EPA TO4	299,205 liters	1967 ng/m3	STATION 3
KAHV070892-4	7/8/92	EPA TO4	309,089 liters	2275 ng/m3	STATION 4
KAHV070892-5	7/8/92	EPA TO4	303,766 liters	762 ng/m3	STATION 5
KA070992	7/9/92	NIOSH 5503	55.6 liters	0.006 mg/m3	BILL HARRIS/NORTH DITCH
KAHV070992-FB	7/9/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV070992-1	7/9/92	EPA TO4	294,491 liters	293 ng/m3	STATION 1
KAHV070992-2A	7/9/92	EPA TO4	304,145 liters	<82 ug/m3	STATION 2A
KAHV070992-3	7/9/92	EPA TO4	289,326 liters	2012 ng/m3	STATION 3
KAHV070992-4	7/9/92	EPA TO4	304,145 liters	1352 ng/m3	STATION 4
KAHV070992-5	7/9/92	EPA TO4	301,486 liters	1165 ng/m3	STATION 5
KA071092	7/10/92	NIOSH 5503	56.1 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KA071192	7/11/92	NIOSH 5503	43.9 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KAHV071192-FB	7/11/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV071192-1	7/11/92	EPA TO4	292,248 liters	715 ng/m3	STATION 1
KAHV071192-2A	7/11/92	EPA TO4	302,227 liters	<83 ng/m3	STATION 2A
K[illegible]V071192-2B	7/11/92	EPA TO4	299,427 liters	<83 ng/m3	STATION 2B
[illegible]/071192-3	7/11/92	EPA TO4	292,248 liters	288 ng/m3	STATION 3
KAHV071192-4	7/11/92	EPA TO4	307,217 liters	2345 ng/m3	STATION 4

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV071192-5	7/11/92	EPA TO4	303,048 liters	3613 ng/m3	STATION 5
KA071392	7/13/92	NIOSH 5503	52.1 liters	<.002mg/m3	BILL HARRIS/NORTH DITCH
KA071592	7/15/92	NIOSH 5503	25.7 liters	<.004 mg/m3	BILL HARRIS/NORTH DITCH
KA071692	7/16/92	NIOSH 5503	49.9 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KA071792	7/17/92	NIOSH 5503	32.8 liters	0.008 mg/m3	BILL HARRIS/NORTH DITCH
KA071892	7/18/92	NIOSH 5503	49.8 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KAHV071792-FB	7/17/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV071792-1	7/17/92	EPA TO4	303,529 liters	141 ng/m3	STATION 1
KAHV071792-2A	7/17/92	EPA TO4	305,280 liters	<79 ng/m3	STATION 2A
KAHV071792-3	7/17/92	EPA TO4	315,360 liters	1299 ng/m3	STATION 3
KAHV071792-4	7/17/92	EPA TO4	300,240 liters	2181 ng/m3	STATION 4
KAHV071792-5	7/17/92	EPA TO4	315,360 liters	3282 ng/m3	STATION 5
KA071892A	7/18/92	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KA072192	7/21/92	NIOSH 5503	52.7 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KA072292	7/22/92	NIOSH 5503	55.1 liters	<.002 mg/m3	BILL HARRIS/NORTH DITCH
KA072392	7/23/92	NIOSH 5503	71.4 liters	<.001 mg/m3	BILL HARRIS/NORTH DITCH
KA072392-FB	7/23/92	NIOSH 5503	N/A	<0.1 ug	BILL HARRIS/NORTH DITCH
KAHV072392-FB	7/23/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV072392-1	7/23/92	EPA TO4	304,400 liters	312 ng/m3	STATION 1
KAHV072392-2A	7/23/92	EPA TO4	313,700 liters	148 ng/m3	STATION 2A
KAHV072392-2B	7/23/92	EPA TO4	312,854 liters	101 ng/m3	STATION 2B
KAHV072392-3	7/23/92	EPA TO4	303,360 liters	890 ng/m3	STATION 3
KAHV072392-4	7/23/92	EPA TO4	316,526 liters	560 ng/m3	STATION 4
KAHV072392-5	7/23/92	EPA TO4	318,213 liters	4688 ng/m3	STATION 5
KA072492	7/24/92	NIOSH 5503	47.4 liters	not recorded	BILL HARRIS/NORTH DITCH
KA072992	7/29/92	NIOSH 5503	50.1 liters	<0.1 ug	SWEDE/NORTH DITCH
KAHV072992-FB	7/29/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV072992-1	7/29/92	EPA TO4	301,280 liters	185 ng/m3	STATION 1
KAHV072992-2A	7/29/92	EPA TO4	314,740 liters	108 ng/m3	STATION 2A
KAHV072992-3	7/29/92	EPA TO4	306,245 liters	590 ng/m3	STATION 3
KAHV072992-4	7/29/92	EPA TO4	321,667 liters	389 ng/m3	STATION 4
KAHV072992-5	7/29/92	EPA TO4	313,759 liters	7315 ng/m3	STATION 5
KA073092	7/30/92	NIOSH 5503	30.1 liters	<0.1 ug	SWEDE/NORTH DITCH
KAHV080492-FB	8/4/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV080492-1	8/4/92	EPA TO4	302,455 liters	306 ng/m3	STATION 1
KAHV080492-2A	8/4/92	EPA TO4	305,178 liters	257 ng/m3	STATION 2A
KAHV080492-2B	8/4/92	EPA TO4	314,474 liters	426 ng/m3	STATION 2B
KAHV080492-3	8/4/92	EPA TO4	302,142 liters	2316 ng/m3	STATION 3
KAHV080492-4	8/4/92	EPA TO4	310,619 liters	2466 ng/m3	STATION 4
KAHV080492-5	8/4/92	EPA TO4	305,962 liters	4252 ng/m3	STATION 5
KA080592	8/5/92	NIOSH 5503	54.2 liters	<0.1 ug	BILL HARRIS/NORTH DITCH
KAHV081092-FB	8/10/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV081092-1	8/10/92	EPA TO4	294,484 liters	189 ng/m3	STATION 1
KAHV081092-2A	8/10/92	EPA TO4	304,319 liters	1001 ng/m3	STATION 2A
KAHV081092-3	8/10/92	EPA TO4	294,786 liters	2647 ng/m3	STATION 3
KAHV081092-4	8/10/92	EPA TO4	301,072 liters	2390 ng/m3	STATION 4

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV081092-5	8/10/92	EPA TO4	297,977 liters	794 ng/m3	STATION 5
KAHV081692-FB	8/16/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV081692-1	8/16/92	EPA TO4	303,529 liters	<82 ng/m3	STATION 1
KAHV081692-2A	8/16/92	EPA TO4	313,920 liters	<80 ng/m3	STATION 2A
KAHV081692-2B	8/16/92	EPA TO4	313,667 liters	<80 ng/m3	STATION 2B
KAHV081692-3	8/16/92	EPA TO4	295,373 liters	1725 ng/m3	STATION 3
KAHV081692-4	8/16/92	EPA TO4	307,786 liters	2374 ng/m3	STATION 4
KAHV081692-5	8/16/92	EPA TO4	306,109 liters	944 ng/m3	STATION 5
KA081392	8/13/92	NIOSH 5503	54.3 liters	<.002 mg/m3	BILL HARRIS-NORTH DITCH
KA081792	8/17/92	NIOSH 5503	15.3 liters	<.007 mg/m3	BILL HARRIS-NORTH DITCH
KA081892-E	8/18/92	NIOSH 5503	56.8 liters	<.002 mg/m3	BILL HARRIS-NORTH DITCH
KA081992-E	8/19/92	NIOSH 5503	56. liters	<.002 mg/m3	BILL HARRIS-NORTH DITCH
KA082092-E	8/20/92	NIOSH 5503	31.9 liters	<.003 mg/m3	BILL HARRIS-NORTH DITCH
KA082092-W	8/20/92	NIOSH 5503	34. liters	<.003 mg/m3	TODD-WCC
KA082192-W	8/21/92	NIOSH 5503	53.7 liters	0.004 mg/m3	TODD-WCC
KA082292-W	8/22/92	NIOSH 5503	39.3 liters	<.003 mg/m3	TODD-WCC
KA082292-FB	8/22/92	NIOSH 5503	N/A	<0.1 ug	FIELD BLANK
KAHV082292-FB	8/22/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV082292-1	8/22/92	EPA TO4	297,466 liters	505 ng/m3	STATION 1
[illegible]/082292-2B	8/22/92	EPA TO4	302,569 liters	<83 ng/m3	STATION 2B
[illegible]V082292-3	8/22/92	EPA TO4	302,221 liters	1207 ng/m3	STATION 3
KAHV082292-4	8/22/92	EPA TO4	312,206 liters	2897 ng/m3	STATION 4
KAHV082292-5	8/22/92	EPA TO4	301,030 liters	1547 ng/m3	STATION 5
KA082492-W	8/24/92	NIOSH 5503	17.3 liters	<.006 mg/m3	TODD-WCC
KA082592-W	8/24/92	NIOSH 5503	39.9 liters	<.003 mg/m3	TODD-WCC
KAHV082892-FB	8/28/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV082892-1	8/28/92	EPA TO4	297,412 liters	286 ng/m3	STATION 1
KAHV082892-2A	8/28/92	EPA TO4	310,320 liters	215 ng/m3	STATION 2A
KAHV082892-2B	8/28/92	EPA TO4	309,588 liters	204 ng/m3	STATION 2B
KAHV082892-3	8/28/92	EPA TO4	295,200 liters	938 ng/m3	STATION 3
KAHV082892-4	8/28/92	EPA TO4	305,595 liters	2878 ng/m3	STATION 4
KAHV082892-5	8/28/92	EPA TO4	307,098 liters	1065 ng/m3	STATION 5
KA090192-W	9/1/92	NIOSH 5503	50.8 liters	<.002 mg/m3	JOHN-WCC
KA090392-W	9/3/92	NIOSH 5503	16.9 liters	<.006 mg/m3	BILL-WCC
KA090492-W	9/4/92	NIOSH 5503	54.5 liters	<.002 mg/m3	BILL-WCC
KAHV090392-FB	9/3/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV090392-1	9/3/92	EPA TO4	300,240 liters	<83 ng/m3	STATION 1
KAHV090392-2B	9/3/92	EPA TO4	310,320 liters	145 ng/m3	STATION 2B
KAHV090392-3	9/3/92	EPA TO4	301,490 liters	4258 ng/m3	STATION 3
KAHV090392-4	9/3/92	EPA TO4	307,589 liters	4506 ng/m3	STATION 4
KAHV090392-5	9/3/92	EPA TO4	307,129 liters	2285 ng/m3	STATION 5
KA090892-W	9/8/92	NIOSH 5503	30.2 liters	<.003 mg/m3	JOHN-WCC
KA090992-FB	9/9/92	NIOSH 5503	N/A	<0.1 ug	FIELD BLANK
K[illegible]091092-W	9/10/92	NIOSH 5503	56.6 liters	<.002 mg/m3	JOHN-WCC
[illegible]/090992-FB	9/9/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV090992-1	9/9/92	EPA TO4	305,474 liters	<92 ng/m3	STATION 1

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV090992-2A	9/9/92	EPA TO4	314,681 liters	<79 ng/m3	STATION 2A
KAHV090992-2B	9/9/92	EPA TO4	316,740 liters	<79 ng/m3	STATION 2B
KAHV090992-3	9/9/92	EPA TO4	306,504 liters	302 ng/m3	STATION 3
HAHV090992-4	9/9/92	EPA TO4	368,451 liters	469 ng/m3	STATION 4
KAHV090992-5	9/9/92	EPA TO4	310,139 liters	487 ng/m3	STATION 5
KA091192-W	9/11/92	NIOSH 5503	50.3 liters	<.002 mg/m3	AL-WCC
KA091492-W	9/14/92	NIOSH 5503	49.4 liters	<.002 mg/m3	JOHN-WCC
KAHV091592-FB	9/15/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV091592-3A	9/15/92	EPA TO4	295,200 liters	118 ng/m3	STATION 3A
KAHV091592-4	9/15/92	EPA TO4	313,667 liters	581 ng/m3	STATION 4
KAHV091592-5	9/15/92	EPA TO4	303,840 liters	509 ng/m3	STATION 5
KA091692-E	9/16/92	NIOSH 5503	49.4 liters	<.002 mg/m3	BILL HARRIS-ECC
KAHV092192-FB	9/21/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV092192-3A	9/21/92	EPA TO4	311,040 liters	286 ng/m3	STATION 3A
KAHV092192-3B	9/21/92	EPA TO4	312,480 liters	581 ng/m3	STATION 3B
KAHV092192-4	9/21/92	EPA TO4	324,000 liters	460 ng/m3	STATION 4
KAHV092192-5	9/21/92	EPA TO4	321,120 liters	1102 ng/m3	STATION 5
KA092292-E	9/22/92	NIOSH 5503	38.6 liters	<.003 mg/m3	BILL HARRIS-ECC
KA092492-W	9/24/92	NIOSH 5503	41.1 liters	<.002 mg/m3	JOHN-WCC
KA092492-FB	9/24/92	NIOSH 5503	N/A	<.01 ug	FIELD BLANK
KA092592-W	9/25/92	NIOSH 5503	13. liters	<.008 mg/m3	JOHN-WCC
KAHV092792-FB	9/27/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV092792-3A	9/27/92	EPA TO4	306,334. liters	403 ng/m3	STATION 3A
KAHV092792-4	9/27/92	EPA TO4	316,776. liters	586 ng/m3	STATION 4
KAHV092792-5	9/27/92	EPA TO4	317,885. liters	272 ng/m3	STATION 5
KAHV100392-FB	10/3/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV100392-3A	10/3/92	EPA TO4	305,440. liters	1100 ng/m3	STATION 3A
KAHV100392-3B	10/3/92	EPA TO4	305,440. liters	731 ng/m3	STATION 3B
KAHV100392-4	10/3/92	EPA TO4	321,667. liters	177 ng/m3	STATION 4
KAHV100393-5	10/3/92	EPA TO4	318,213. liters	3519 ng/m3	STATION 5
KA100592-W	10/5/92	NIOSH 5503	40.1 liters	<.001 mg/m3	JOHN-WCC
KA100692-W	10/6/92	NIOSH 5503	52.2 liters	<.001 mg/m3	JOHN-WCC
KAHV100992-FB	10/9/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV100992-3A	10/9/92	EPA TO4	293,560. liters	<85 ng/m3	STATION 3A
KAHV100992-4	10/9/92	EPA TO4	306,720. liters	<82 ng/m3	STATION 4
KAHV100992-5	10/9/92	EPA TO4	307,384. liters	<81 ng/m3	STATION 5
KA100792-FB	10/7/92	NIOSH 5503	N/A	<.1 ug	FIELD BLANK
KA100792-W	10/7/92	NIOSH 5503	47.6 liters	<.001 mg/m3	JOHN-WCC
KAHV101592-FB	10/15/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV101592-3A	10/15/92	EPA TO4	297,007. liters	<84 ng/m3	STATION 3A
KAHV101592-3B	10/15/92	EPA TO4	296,885. liters	579 ng/m3	STATION 3B
KAHV101592-4	10/15/92	EPA TO4	310,995. liters	<80 ng/m3	STATION 4
KAHV101592-5	10/15/92	EPA TO4	302,227. liters	886 ng/m3	STATION 5
KAHV102192-FB	10/21/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV102192-3A	10/21/92	EPA TO4	297,147. liters	<84 ng/m3	STATION 3A
KAHV102192-4	10/21/92	EPA TO4	315,466. liters	<79 ng/m3	STATION 4

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV102192-5	10/21/92	EPA TO4	306,878. liters	639 ng/m3	STATION 5
KAHV102792-FB	10/27/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV102792-3A	10/27/92	EPA TO4	278,438. liters	<89 ng/m3	STATION 3A
KAHV102792-3B	10/27/92	EPA TO4	283,636. liters	<88 ng/m3	STATION 3B
KAHV102792-4	10/27/92	EPA TO4	295,876. liters	<84 ng/m3	STATION 4
KAHV102792-5	10/27/92	EPA TO4	285,715. liters	561 ng/m3	STATION 5
KAHV110292-FB	11/2/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV110292-3A	11/2/92	EPA TO4	311,070. liters	832.6 ng/m3	STATION 3A
KAHV110292-4	11/2/92	EPA TO4	328,314. liters	490.4 ng/m3	STATION 4
KAHV110292-5	11/2/92	EPA TO4	324,078. liters	129.6 ng/m3	STATION 5
KAHV110892-FB	11/8/93	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV110892-3A	11/8/93	EPA TO4	312,912. liters	<80 ng/m3	STATION 3A
KAHV110892-3B	11/8/93	EPA TO4	307,892. liters	<81 ng/m3	STATION 3B
KAHV110892-4	11/8/93	EPA TO4	318,254. liters	351 ng/m3	STATION 4
KAHV110892-5	11/8/93	EPA TO4	314,750. liters	<79 ng/m3	STATION 5
KAHC111492-FB	11/14/92	EPA TO4	N/A	<25 ug	FIELD BLANK
KAHV111492-3A	11/14/92	EPA TO4	313,632. liters	<77 ng/m3	STATION 3A
KAHV111492-4	11/14/92	EPA TO4	324,720. liters	<77 ng/m3	STATION 4
KAHV111492-5	11/14/92	EPA TO4	314,012. liters	<80 ng/m3	STATION 5
[illegible]/112092-FB	11/20/92	EPA TO4	N/A	<25 ug	FIELD BLANK
[illegible]V112092-3A	11/20/92	EPA TO4	298,970. liters	<83 ng/m3	STATION 3A
KAHV112092-3B	11/20/92	EPA TO4	304,371. liters	<82 ng/m3	STATION 3B
KAHV112092-4	11/20/92	EPA TO4	312,705. liters	<80 ng/m3	STATION 4
KAHV112092-5	11/20/92	EPA TO4	302,028. liters	<83 ng/m3	STATION 5
WINTER SHUTDOWN					
KAHV042693-3A	4/26/93	EPA TO4	318,409 liters	713 ng/m3	STATION 3A
KAHV042693-4	4/26/93	EPA TO4	338,364 liters	239 ng/m3	STATION 4
KAHV042693-5	4/26/93	EPA TO4	323,867 liters	243 ng/m3	STATION 5
KAHV042693-FB	4/26/93	EPA TO4	N/A	<20 ug	FIELD BLANK
KAHV050293-FB	5/2/93	EPA TO4	N/A	<20 ug	FIELD BLANK
KAHV050293-3A	5/2/93	EPA TO4	290,880 liters	<69 ng/m3	STATION 3A
KAHV050293-3B	5/2/93	EPA TO4	290,822 liters	169 ng/m3	STATION 3B
KAHV050293-4	5/2/93	EPA TO4	295,912 liters	178 ng/m3	STATION 4
KAHV050293-5	5/2/93	EPA TO4	299,547 liters	279 ng/m3	STATION 5
KAHV050893-FB	5/8/93	EPA TO4	N/A	<20 ug	FIELD BLANK
KAHV050893-3A	5/8/93	EPA TO4	309,917 liters	<64 ng/m3	STATION 3A
KAHV050893-4	5/8/93	EPA TO4	315,792 liters	263 ng/m3	STATION 4
KAHV050893-5	5/8/93	EPA TO4	315,058 liters	621 ng/m3	STATION 5
KA042693-ECC	4/26/93	NIOSH 5503	35.1 liters	<0.003 mg/m3	JIM-ECC
KA042993-ECC	4/29/93	NIOSH 5503	36.2 liters	<0.003 mg/m3	JIM-ECC
KA050493-ECC	5/4/93	NIOSH 5503	44.1 liters	<0.002 mg/m3	PHIL-ECC
KA050793-ECC	5/7/93	NIOSH 5503	48.2 liters	<0.002 mg/m3	PHIL-ECC
[illegible]1093-FB	5/10/93	NIOSH 5503	N/A	<0.1 ug	FIELD BLANK
KAHV051493-FB	5/14/93	EPA TO4	N/A	<20 ug	FIELD BLANK

TABLE 2

AIR MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

SAMPLE NUMBER	DATE	TYPE OF SAMPLE	TOTAL SAMPLE	RESULTS	LOCATION
KAHV051493-3A	5/14/93	EPA TO4	301,363 liters	156 ng/m3	STATION 3A
KAHV051493-3B	5/14/93	EPA TO4	303,955 liters	151 ng/m3	STATION 3B
KAHV051493-4	5/14/93	EPA TO4	317,909 liters	176 ng/m3	STATION 4
KAHV051493-5	5/14/93	EPA TO4	309,830 liters	<65 ng/m3	STATION 5
KAHV052093-FB	5/20/93	EPA TO4	N/A	<20 ug	FIELD BLANK
KAHV052093-3A	5/20/93	EPA TO4	310,417 liters	70 ng/m3	STATION 3A
KAHV052093-4	5/20/93	EPA TO4	319,507 liters	153 ng/m3	STATION 4
KAHV052093-5	5/20/93	EPA TO4	316,541 liters	73 ng/m3	STATION 5
KAHV052693-FB	5/26/93	EPA TO4	N/A	<20 ug	FIELD BLANK
KAHV052693-3A	5/26/93	EPA TO4	304,502 liters	771 ng/m3	STATION 3A
KAHV052693-3B	5/26/93	EPA TO4	303,475 liters	484 ng/m3	STATION 3B
KAHV052693-4	5/26/93	EPA TO4	312,686 liters	63 ng/m3	STATION 4
KAHV052693-5	5/26/93	EPA TO4	307,111 liters	166 ng/m3	STATION 5
KAHV060193-FB	6/1/93	EPA TO4	N/A	<20 ug	FIELD BLANK
KAHV060192-3A	6/1/93	EPA TO4	301,190 liters	488 ng/m3	STATION 3A
KAHV060193-4	6/1/93	EPA TO4	313,618 liters	102 ng/m3	STATION 3B
KAHV060193-5	6/1/93	EPA TO4	312,869 liters	65 ng/m3	STATION 4
KAHV060792-FB	6/7/93	EPA TO4	N/A	<20 ug	STATION 5
KAHV060793-3A	6/7/93	EPA TO4	303,352 liters	386 ng/m3	FIELD BLANK
KAHV060793-3B	6/7/93	EPA TO4	305,424 liters	440 ng/m3	STATION 3A
KAHV060793-4	6/7/93	EPA TO4	<63 ng/m3	<63 ng/m3	STATION 4
KAHV060793-5	6/7/93	EPA TO4	292 liters	292 ng/m3	STATION 5

** = Suspected PCBs present. Unable to match with standard Aroclors for quantification.

TABLE 3

AIR MONITORING EXCEEDANCES
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Station Where Exceedance Occurred and Results	Weather Conditions	Activity
07/29/91	Station 5 Result: 2.6 µg/m3	Wind S-SE 0-17 mph 0.18 in of rain	Preparation of West Containment slurry wall.
08/22/91	Station 4 Result: 2.9 µg/m3	Wind N-NE 0-11 mph	Oval Lagoon sheeting, West Containment slurry wall marked on Slip No. 3 cutoff wall.
10/03/91	Station 5 Result: 5.3 µg/m3	Wind NW 1-14 mph 0.17 in of rain	Excavation of Slip No. 3 slurry wall, excavation of Area L east cell, excavation of Area D west cell.
04/06/92	Station 5 West of the West Containment Result: 2.925 µg/m3	Wind SE 2-15 mph	Only activity on-site was the construction of the East Containment Cell slurry wall platforms.
04/24/92	Stations 4 and 5 adjacent to the West Containment Results: 3.231 µg/m3 5.195 µg/m3	Wind SW 2-12 mph 0.17 in of rain	Only activity on-site was placement of clean sand in Slip No. 3.
04/30/92	Station 5 west of West Containment Result: 6.494 µg/m3	Wind SW to NW 0-10 mph	No activity on-site.
05/12/92	Stations 4 and 5 adjacent to the West Containment cell Results: Station 4 5.9 µg/m3 Station 5 8.8 µg/m3	Wind SW to NW at 0-26 mph with gusts up to 37 mph, temperature ranged from 44 degrees F to 83 degrees F	SoilTech performing test run of processor after modifications.

TABLE 3

AIR MONITORING EXCEEDANCES
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Station Where Exceedance Occurred and Results	Weather Conditions	Activity
05/18/92	Station 5 Results: 6.2 µg/m3	Wind W to NW at 0-20 mph, with gusts to 30 mph, temperature 44 to 55 degrees F	Minimum activity, no intrusive activity, SoilTech was only performing maintenance.
05/25/92	Station 5 Results: 3.4 µg/m3	Wind W to NW at 0-23 mph, with gusts to 37 mph, temperature 33 to 50 degrees F	May 25, 1992 was a site holiday. May 26, 1992 SoilTech was only performing maintenance.
05/30/92	Station 5 Results: 5.5 µg/m3	Wind NW to SE at 0-15 mph, with gusts to 25 mph, temperature 50 to 73 degrees F	May 30, 1992 at 1730 hours, SoilTech began processing select soils. This was the only activity occurring on site.
06/11/92	Station 4 Results: 7.7 µg/m3	Wind W to NE at 0-7 mph, with gusts to 10 mph, temperature 56 to 83 degrees F	June 11, 1992 SoilTech continued processing select soils. Hi-Tech prepared slurry pond for North Ditch slurry wall. Meridian preparing subgrading for Ditch slurry wall. Meridian preparing reasphalting of parking area from Hi-Vol Station 4 to the east.
06/29/92	Station 5 Result: 2.49 µg/m3	Wind SW to NW at 0-8 mph, with gusts to 16 mph, temperature 57 to 71 degrees F	June 29, 1992 SoilTech continued decontamination of ATP unit. Hi-Tech prepared slurry pond for ECC slurry wall and setting sheet pile along the North Ditch slurry wall.
07/05/92	Station 4 Result: 3.1 µg/m3	Wind SW to E at 0-12 mph, with gusts to 18 mph, temperature 60 to 80 degrees F	July 6, 1992 SoilTech continued decontamination of ATP unit. Hi-Tech continued excavation of ECC slurry wall and prepared to begin excavation of North Ditch sediments.
07/11/92	Station 5 Result: 3.4 µg/m3	Winds NW to NE at 0-12 mph, with gusts to 16 mph. Temperature 67 to 76 degrees F. 1.14 inches of rain	July 11, 1992 Hi-Tech continued excavation of the ECC slurry wall and excavation of the North Ditch sediments.

TABLE 3

AIR MONITORING EXCEEDANCES
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Station Where Exceedance Occurred and Results	Weather Conditions	Activity
07/17/92	Station 5 Result: 3.1 µg/m3	Winds S to NW at 0-12 mph, with gusts to 21 mph. Temperature 64 to 85 degrees F.	July 17, 1992 Hi-Tech continued excavation of the ECC slurry wall and excavation of the North Ditch sediments. SoilTech continued decontamination and demobilization of the Taciuk unit.
07/23/92	Station 5 Result: 4.51 µg/m3	Winds NW to N at 5 mph, with gusts averaging 5.7 mph. Temperature 61 to 65 degrees F. 0.17 inches of rain.	July 23, 1992 Hi-Tech continued excavation of the North Ditch. Hi-Tech continued excavation of the East Containment cell. SoilTech continued decontamination and demobilization of the Taciuk unit.
07/29/92	Station 5 Result: 7.14 µg/m3	Winds NW to NE at 6 mph, with gusts up to 11 mph. Temperature 62 to 73 degrees F. July 30, 1992, the site received greater than one inch of rain by 10:00 am.	July 29,1992 Hi-Tech continued excavation of the North Ditch and the East Containment Cell slurry wall. SoilTech continued decontamination and demobilization of the Taciuk unit. July 30, 1992, Hi-Tech shut down before noon due to rain.
08/04/92	Station 5 Result: 4.0 µg/m3	Winds NW to W at 4 mph, with gusts up to 18 mph. Temperature 54 to 74 degrees F.	August 4, 1992 Hi-Tech continued excavation of the North Ditch and the East Containment Cell slurry wall. SoilTech continued decontamination
08/10/92	Station 3 Result: 2.47 µg/m3	Winds S to W at 4.5 mph, with gusts to 28 mph. Temperature 63 to 91 degrees F.	August 10, 1992 Hi-Tech continued excavation of the East Containment Cell slurry wall and placement of the stone in the North Ditch. SoilTech continued decontamination and demobilization of the Taciuk unit.
08/22/92	Station 4 Result: 2.78 µg/m3	Winds E to SE at 3.4 mph, with gusts to 14 mph. Temperature 67 to 85 degrees F.	August 22, 1992 Hi-Tech continued rough grade of the West Containment Cell and completed the sand cover at Slip No. 3. SoilTech continued decontamination and demobilization of the Taciuk unit.
08/28/92	Station 4 Result: 2.70 µg/m3	Winds E to NW at 7.6 mph, with gusts to 31 mph. Temperatures 53 to 74 degrees F. 0.27 inches of rain.	August 28, 1992 Hi-Tech had no work scheduled. SoilTech continued demobilization of the Taciuk unit.

TABLE 3

AIR MONITORING EXCEEDANCES
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Station Where Exceedance Occurred and Results	Weather Conditions	Activity
09/03/92	Station 3 Result: 4.08 µg/m3	Winds W to NE at 4.0 mph, with gusts to 13 mph. Temperature 59 to 77 degrees F.	September 3, 1992 Hi-Tech continued subgrade preparation of the West Containment Cell and guard rail replacement along the North Ditch road.
	Station 4 Result: 4.33 µg/m3	Winds W to NE at 4.0 mph, with gusts to 13 mph. Temperature 59 to 77 degrees F.	September 3, 1992 Hi-Tech continued subgrade preparation of the West Containment Cell and guard rail replacement along the North Ditch road.
10/03/92	Station 5 Result: 3.34 µg/m3	Wind S-SW 1-15 mph	No activity on site.

TABLE 4

TEMPORARY DESIGNATED SOIL STOCKPILE (PNA CELL)
WATER LEVEL READINGS
WAUKEGAN HARBOR REMEDIAL ACTION

Reading Date	Reading Above Sump (inches)	Elevation (feet MSL)	Action Level (feet MSL)	Difference (inches)
11/18/93	35.75	585.79	586.14	-4.21
11/22/93	36.75	585.87	586.14	-3.21
11/23/93	37	585.89	586.14	-2.96
12/3/93	34.75	585.71	586.14	-5.21
1/15/94	34.25	585.66	586.14	-5.71
2/15/94	34	585.64	586.14	-5.96
3/15/94	34.25	585.66	586.14	-5.71
4/15/94	36.25	585.83	586.14	-3.71
5/15/94	36.5	585.85	586.14	-3.46
6/15/94	37.65	585.95	586.14	-2.31
8/8/94	38	585.98	586.14	-1.96
8/26/94	18.25	584.33	586.14	-21.71
9/1/94	34.25	585.66	586.14	-5.71
9/6/94	36.5	585.85	586.14	-3.46
9/20/94	32.25	585.5	586.14	-7.71
9/30/94	36	585.81	586.14	-3.96
10/10/94	36	585.81	586.14	-3.96
10/27/94	35.25	585.75	586.14	-4.71
12/2/94	29.5	585.27	586.14	-10.46

TABLE 5

SUMMARY ANALYTICAL RESULTS
STOCKPILE UNDERDRAIN TREATMENT EFFLUENT
WAUKEGAN HARBOR REMEDIAL ACTION

Sample I.D. Kemron I.D. Sample Date	PNEF-E5 07-189-0 7/15/91	PNEF-E6 07-357-0 7/29/91	PNEF-E7 08-119-01 8/8/91	PNEF-E8 09-340-0 9/25/91	PNEF-E9 10-299-0 10/22/91	PNEF-E10 01-041-01 12/22/91
COMPOUND						
Volatiles (µg/l)						
Methylene Chloride	3 BJ	9 B	2 J	5 U	5 U	2 J
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5 U	5 U	2 BJ	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U
Total Xylenes	5 U	5 U	5 U	5 U	5 U	5 U
Semivolatiles (µg/l)						
Phenol	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U
Bis (2-Ethylhexyl) Phthalate	10 U	10 U	10 U	10 U	10 U	10 U
PCBs (µg/l)						
Aroclor 1016	NT	NT	NT	NT	NT	NT
Aroclor 1221	NT	NT	NT	NT	NT	NT
Aroclor 1232	NT	NT	NT	NT	NT	NT
Aroclor 1242	NT	NT	NT	NT	NT	NT
Aroclor 1248	NT	NT	NT	NT	NT	NT
Aroclor 1254	NT	NT	NT	NT	NT	NT
Aroclor 1260	NT	NT	NT	NT	NT	NT
Oil and Grease (mg/l)	<1	5	4	<1	<1	<1
Suspended Solids (mg/l)	<5	<5	<5	<5	<5	<5

Notes:

1. Volatile and semivolatile compounds not listed were not detected in any sample.
2. Qualifier 'U' indicates not detected at given quantification limit.
3. Qualifier 'J' indicates detected below quantification limit and estimated.
4. Qualifier 'B' indicates that this component was also detected in the blank.
5. NT indicates no test performed on sample.

TABLE 6

SLURRY WALL KEY DATA
SLIP NO. 3 CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
0+00	586.5	24.5	30.5	562.0	556.0
0+10	586.5	24.7	29.6	561.8	556.9
0+20	586.5	25.0	28.3	561.5	558.2
0+30	586.5	24.8	27.8	561.7	558.7
0+40	586.5	24.7	28.3	561.8	558.2
0+50	586.5	24.7	27.6	561.8	558.9
0+65	586.5	24.6	28.3	561.9	558.2
0+80	586.5	24.5	27.4	562.0	559.1
0+90	586.5	24.2	27.8	562.3	558.7
1+00	586.5	24.0	26.7	562.5	559.8
1+10	586.5	23.7	27.2	562.8	559.3
1+20	586.5	23.5	27.7	563.0	558.8
1+30	586.5	24.8	29.1	561.7	557.4
1+40	586.5	26.0	29.7	560.5	556.8
1+50	586.5	25.5	29.4	561.0	557.1
1+60	586.5	25.0	27.9	561.5	558.6
1+70	586.5	25.1	28.8	561.4	557.7
1+80	586.5	25.2	28.4	561.3	558.1
2+05	586.5	25.3	28.4	561.2	558.1
2+10	586.5	25.3	28.7	561.2	557.8
2+20	586.5	25.2	28.4	561.3	558.1
2+30	586.5	25.0	30.1	561.5	556.4
2+40	586.5	25.0	28.1	561.5	558.4
2+50	586.5	25.0	28.8	561.5	557.7
2+60	586.5	25.0	29.4	561.5	557.1
2+70	586.5	25.0	28.2	561.5	558.3
2+80	586.5	24.9	30.4	561.6	556.1
2+90	586.5	25.1	29.6	561.4	556.9
3+00	586.5	25.1	29.1	561.4	557.4
3+20	586.5	25.1	29.1	561.4	557.4
3+30	586.5	25.2	28.6	561.3	557.9
3+40	586.5	25.2	28.8	561.3	557.7
3+50	586.5	25.2	28.6	561.3	557.9
3+60	586.5	25.5	29.6	561.0	556.9
3+80	586.5	26.0	29.0	560.5	557.5
4+00	586.5	26.0	29.4	560.5	557.1
4+10	586.5	26.0	29.5	560.5	557.0
4+30	586.5	26.0	28.9	560.5	557.6
4+40	586.5	25.7	29.1	560.8	557.4
4+50	586.5	25.5	28.8	561.0	557.7
4+60	586.5	25.3	28.9	561.2	557.6

TABLE 6

SLURRY WALL KEY DATA
SLIP NO. 3 CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
4+70	586.5	25.4	29.3	561.1	557.2
4+90	586.5	25.4	28.4	561.1	558.1
5+10	586.5	25.3	28.6	561.2	557.9
5+25	586.5	25.4	27.4	561.1	559.1
5+30	586.5	25.5	28.8	561.0	557.7
5+35	586.5	23.5	29.0	563.0	557.5
5+45	586.5	23.5	29.1	563.0	557.4
5+55	586.5	23.0	28.5	563.5	558.0
5+60	586.5	23.0	27.0	563.5	559.5
5+64	581.7	22.1	23.5	559.6	558.2
5+79	581.7	21.4	23.5	560.3	558.2
5+94	581.7	22.0	23.5	559.7	558.2
6+14	581.7	22.5	23.5	559.2	558.2
6+29	581.7	22.0	23.5	559.7	558.2
6+44	581.7	21.9	25.0	559.8	556.7
6+59	581.7	20.7	24.1	561.0	557.6
6+74	581.7	21.1	24.6	560.6	557.1
6+89	581.7	21.4	24.4	560.3	557.3
7+04	581.7	22.5	25.3	559.2	556.4
7+19	581.7	22.6	25.4	559.1	556.3
7+34	581.7	21.4	27.3	560.3	554.4
7+49	581.7	21.4	27.2	560.3	554.5
7+64	581.7	20.5	24.0	561.2	557.7
7+79	581.7	20.5	24.0	561.2	557.7
7+94	581.7	20.9	25.4	560.8	556.3
8+09	581.7	20.9	25.0	560.8	556.7
8+24	581.7	20.9	24.8	560.8	556.9
8+39	581.7	20.9	23.3	560.8	558.4
8+80	586.5	26.0	30.1	560.5	556.4
8+90	586.5	26.0	29.2	560.5	557.3
9+00	586.5	26.0	29.7	560.5	556.8
9+10	586.5	26.0	31.3	560.5	555.2
9+20	586.5	26.0	30.7	560.5	555.8
9+30	586.5	26.0	28.9	560.5	557.6
9+40	586.5	26.0	29.4	560.5	557.1
9+50	586.5	26.0	29.0	560.5	557.5
9+60	586.5	26.0	29.7	560.5	556.8
9+80	586.5	26.0	29.2	560.5	557.3
9+90	586.5	26.0	29.4	560.5	557.1
10+00	586.5	25.8	29.6	560.7	556.9

TABLE 6

SLURRY WALL KEY DATA
SLIP NO. 3 CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
10+15	586.5	25.6	29.1	560.9	557.4
10+30	586.5	25.4	28.3	561.1	558.2
10+50	586.5	25.2	28.6	561.3	557.9
10+60	586.5	25.0	28.8	561.5	557.7
10+70	586.5	25.0	28.1	561.5	558.4
10+80	586.5	25.0	28.9	561.5	557.6
10+90	586.5	24.8	29.6	561.7	556.9
11+00	586.5	24.9	27.7	561.6	558.8
11+05	586.5	24.9	29.1	561.6	557.4
11+10	586.5	24.8	30.6	561.7	555.9
11+15	586.5	24.8	28.7	561.7	557.8
11+20	586.5	24.7	29.6	561.8	556.9
11+30	586.5	24.6	28.3	561.9	558.2
11+34	586.5	24.6	29.8	561.9	556.7
11+35	586.5	24.1	28.7	562.4	557.8
11+38	586.5	24.4	30.2	562.1	556.3
11+50	586.5	24.0	27.9	562.5	558.6
11+60	586.5	25.0	28.3	561.5	558.2
11+70	586.5	24.5	28.7	562.0	557.8
11+85	586.5	24.5	29.0	562.0	557.5
12+00	586.5	24.5	28.3	562.0	558.2
12+10	586.5	24.5	27.5	562.0	559.0
12+30	586.5	24.5	28.2	562.0	558.3
12+40	586.5	24.5	30.3	562.0	556.2
12+50	586.5	24.4	28.0	562.1	558.5
12+70	586.5	24.3	28.9	562.2	557.6
12+80	586.5	24.2	27.2	562.3	559.3
12+90	586.5	24.1	27.6	562.4	558.9
13+00	586.5	23.8	28.0	562.7	558.5
13+10	586.5	24.0	27.3	562.5	559.2
13+20	586.5	24.0	27.7	562.5	558.8
13+40	586.5	24.0	27.0	562.5	559.5
13+50	586.5	24.0	27.1	562.5	559.4
13+60	586.5	23.8	27.6	562.7	558.9
13+70	586.5	23.7	27.5	562.8	559.0
13+80	586.5	23.5	26.9	563.0	559.6
13+90	586.5	23.5	28.0	563.0	558.5
14+00	586.5	23.5	27.3	563.0	559.2
14+10	586.5	23.5	27.2	563.0	559.3
14+20	586.5	23.5	26.8	563.0	559.7

TABLE 6

SLURRY WALL KEY DATA
SLIP NO. 3 CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
14+30	586.5	23.7	29.3	562.8	557.2
14+40	586.5	23.7	27.5	562.8	559.0
14+60	586.5	24.0	27.7	562.5	558.8
14+70	586.5	24.0	28.5	562.5	558.0
14+80	586.5	24.0	27.0	562.5	559.5
14+90	586.5	24.0	27.4	562.5	559.1
15+00	586.5	24.0	27.0	562.5	559.5
15+10	586.5	24.0	27.6	562.5	558.9
15+20	586.5	24.0	27.0	562.5	559.5
15+30	586.5	24.5	29.0	562.0	557.5
15+40	586.5	25.0	28.2	561.5	558.3
15+50	586.5	24.7	28.3	561.8	558.2
15+60	586.5	24.5	28.0	562.0	558.5
15+70	586.5	24.0	27.6	562.5	558.9
15+80	586.5	24.2	28.7	562.3	557.8
16+00	586.5	24.0	28.3	562.5	558.2
16+20	586.5	24.0	27.4	562.5	559.1
16+30	586.5	24.0	27.7	562.5	558.8
16+40	586.5	24.0	26.9	562.5	559.6
16+50	586.5	24.2	27.9	562.3	558.6
16+60	586.5	24.5	27.7	562.0	558.8

TABLE 7

CUTOFF WALL MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		PT. 1	PT. 2	PT. 3	PT. 4	PT. 5	PT. 6	PT. 7	PT.8	PT. 9	PT. 10
11/6	Northing		4675.27		4617.68		4560.23		4502.54		4444.69
	Easting		4751.62		4735.15		4717.08		4701.14		4684.01
	Angle	0.5 OUT	1.3 IN	0.4 IN	2.0 IN	0.2 OUT	1.4 IN	0.3 IN	1.1 IN	1.1 OUT	1.1 IN
11/7		No backfill was placed, so no data were collected.									
11/8	Northing		4675.29		4617.76		4560.23		4502.44		4444.62
	Easting		4751.58		4735.01		4717.08		4701.14		4684.01
	Angle	0.7 OUT	1.2 IN	0.2 IN	1.9 IN	0.4 OUT	1.4 IN	0.1 IN	0.9 IN	1.0 OUT	0.8 IN
11/9	Northing		4675.26		4617.71		4560.20		4502.51		4444.60
	Easting		4751.57		4734.96		4717.05		4701.14		4684.04
	Angle	0.6 OUT	1.4 IN	0.2 IN	1.9 IN	0.4 OUT	1.7 IN	0.2 IN	1.0 IN	1.1 OUT	0.7 IN
11/10		Sunday, no backfill was placed.									
11/11		Began excavating north end of wall and driving support piling; no backfill placed.									
11/12		Completed driving support piling and resumed excavating north end; no backfill placed.									
11/13		Completed excavating key trench; no backfill placed.									
11/14	Northing		4675.26		4617.65		4560.13		4502.43		4444.55
	Easting		4751.60		4734.97		4717.07		4701.16		4684.10
	Angle	0.4 OUT	1.0 IN	0.2 IN	1.8 IN	0.2 OUT	1.8 IN	0.4 IN	1.0 IN	1.2 OUT	0.6 IN
11/15	Northing		4675.13		4617.60		4560.11		4502.44		4444.54
	Easting		4751.54		4734.96		4717.04		4701.15		4684.04
	Angle	0.4 OUT	1.0 IN	0.4 IN	1.6 IN	0.2 OUT	1.8 IN	0.3 IN	1.0 IN	1.0 OUT	0.6 IN
11/16	Northing		4675.13		4617.60		4560.11		4502.43		4444.54
	Easting		4751.54		4734.96		4717.05		4701.14		4684.04
	Angle	0.4 OUT	1.2 IN	0.2 IN	1.8 IN	0.3 OUT	1.6 IN	0.4 IN	1.0 IN	1.0 OUT	0.6 IN
11/17		Sunday; no backfill placed.									

TABLE 7

CUTOFF WALL MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		PT. 1	PT. 2	PT. 3	PT. 4	PT. 5	PT. 6	PT. 7	PT.8	PT. 9	PT. 10
11/18	Northing		4675.13		4617.58		4560.11		4502.44		4444.53
	Easting		4751.53		4734.96		4717.06		4701.16		4684.07
	Angle	0.4 OUT	0.8 IN	0.2 IN	1.6 IN	0.2 OUT	1.6 IN	0.2 IN	0.6 IN	1.0 OUT	0.4 IN
11/19	Northing		4675.19		4617.64		4560.13		4502.49		4444.60
	Easting		4751.52		4734.90		4717.00		4701.03		4683.92
	Angle	0.4 OUT	0.9 IN	0.4 IN	2.0 IN	0.2 OUT	1.6 IN	0.4 IN	0.9 IN	1.0 OUT	0.9 IN
11/20	Northing		4675.16		4617.62		4560.15		4502.47		4444.57
	Easting		4751.51		4734.91		4717.01		4701.06		4683.95
	Angle	0.7 OUT	1.0 IN	0.3 IN	1.6 IN	0.2 OUT	1.6 IN	0.2 IN	0.8 IN	0.9 OUT	0.6 IN
11/21	Northing		4675.16		4617.62		4560.13		4502.47		4444.57
	Easting		4751.51		4734.91		4717.04		4701.06		4683.95
	Angle	0.4 OUT	1.1 IN	0.5 IN	1.7 IN	0.1 OUT	1.8 IN	0.4 IN	1.2 IN	0.9 OUT	0.7 IN
11/22	Northing		4675.16		4617.62		4560.12		4502.48		4444.61
	Easting		4751.51		4734.91		4717.04		4701.05		4683.89
	Angle	0.4 OUT	1.1 IN	0.3 IN	1.7 IN	0.1 IN	1.9 IN	0.3 IN	1.2 IN	0.8 OUT	0.7 IN
11/23	Northing		4675.16		4617.61		4560.12		4502.48		4444.60
	Easting		4751.51		4734.91		4717.03		4701.06		4683.93
	Angle	0.4 OUT	1.2 IN	0.3 IN	1.8 IN	0.1 OUT	1.8 IN	0.3 IN	1.3 IN	0.9 OUT	0.7 IN
11/24		Sunday; no backfill placed.									
11/25		Excavated slurry trench north of cutoff wall; no backfill placed.									
1/3	Northing		4675.15		4617.61		4560.12		4502.50		4444.59
	Easting		4751.51		4734.87		4717.04		4701.02		4683.94
	Angle	0.2 OUT	1.6 IN	0.1 IN	2.1 IN	0.6 OUT	1.7 IN	0.7 IN	1.3 IN	1.2 OUT	1.0 IN
1/4	Northing		4675.16		4617.63		4560.11		4502.48		4444.64
	Easting		4751.52		4734.87		4717.05		4701.03		4683.94
	Angle	0.4 OUT	1.2 IN	0.2 IN	1.8 IN	0.1 IN	1.8 IN	0.3 IN	1.1 IN	1.3 OUT	0.7 IN

TABLE 7

CUTOFF WALL MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		PT. 1	PT. 2	PT. 3	PT. 4	PT. 5	PT. 6	PT. 7	PT.8	PT. 9	PT. 10
1/5	Northing		4675.15		4617.65		4560.13		4502.48		4444.63
	Easting		4751.51		4734.88		4717.06		4701.03		4683.95
	Angle	0.4 OUT	1.4 IN	0.2 IN	1.7 IN	0.2 IN	1.9 IN	1.3 IN	1.2 IN	1.4 OUT	0.7 IN
1/6	Northing		4675.14		4617.61		4560.10		4502.42		4444.55
	Easting		4751.57		4734.98		4717.09		4701.20		4684.14
	Angle	0.2 OUT	1.2 IN	0.2 IN	1.7 IN	0.1 IN	1.7 IN	0.3 IN	1.1 IN	1.1 OUT	0.5 IN
1/7	Northing		4675.16		4617.64		4560.10		4502.48		4444.63
	Easting		4751.52		4734.90		4717.08		4701.05		4683.97
	Angle	0.4 OUT	1.3 IN	0.2 IN	1.6 IN	0.1 IN	1.7 IN	0.2 IN	1.1 IN	1.3 OUT	0.5 IN
1/8	Northing		4675.16		4617.62		4560.09		4502.47		4444.58
	Easting		4751.52		4734.89		4717.12		4701.07		4683.97
	Angle	0.4 OUT	1.1 IN	0.1 IN	1.7 IN	0.1 OUT	1.7 IN	0.4 IN	1.0 IN	1.2 OUT	0.5 IN
1/9	Northing		4675.15		4617.61		4560.10		4502.45		4444.60
	Easting		4751.54		4734.92		4717.14		4701.12		4684.00
	Angle	0.3 OUT	1.4 IN	0.1 IN	1.7 IN	0.1 IN	1.7 IN	0.2 IN	1.1 IN	1.2 OUT	0.5 IN
1/10		Dredging was not performed adjacent to cutoff wall.									
1/11		Dredging was not performed adjacent to cutoff wall.									
1/12		Sunday; no dredging performed.									
1/13		Dredging was not performed adjacent to cutoff wall.									
1/14	Northing		4675.15		4617.63		4560.08		4502.46		4444.60
	Easting		4751.54		4734.93		4717.15		4701.11		4683.98
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.									
1/15		Dredging was not performed adjacent to cutoff wall.									
1/16		Dredging was not performed adjacent to cutoff wall.									
1/17		Dredging was not performed adjacent to cutoff wall.									

TABLE 7

CUTOFF WALL MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		PT. 1	PT. 2	PT. 3	PT. 4	PT. 5	PT. 6	PT. 7	PT.8	PT. 9	PT. 10
1/18	Northing		4675.15		4617.63		4560.08		4502.46		4444.59
	Easting		4751.54		4734.93		4717.14		4701.10		4683.94
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.									
1/19		Dredging was not performed adjacent to cutoff wall.									
1/20		Dredging was not performed adjacent to cutoff wall.									
1/21		Dredging was not performed adjacent to cutoff wall.									
1/22	Northing		4675.13		4617.60		4560.08		4502.43		4444.58
	Easting		4751.54		4734.97		4717.22		4701.18		4684.00
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.									
1/23		Dredging was not performed adjacent to cutoff wall.									
1/24		Dredging was not performed adjacent to cutoff wall.									
1/25		Dredging was not performed adjacent to cutoff wall.									
1/26		Dredging was not performed adjacent to cutoff wall.									
1/27	Northing		4675.13		4617.63		4560.08		4502.44		4444.61
	Easting		4751.54		4734.94		4717.20		4701.15		4684.02
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.									
1/28		Dredging was not performed adjacent to cutoff wall.									
1/29		Dredging was not performed adjacent to cutoff wall.									
1/30	Northing		4675.13		4617.62		4560.07		4502.43		4444.62
	Easting		4751.54		4734.95		4717.22		4701.17		4684.00
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.									
1/31		Dredging was not performed adjacent to cutoff wall.									
2/1		Dredging was not performed adjacent to cutoff wall.									
2/2		Dredging was not performed adjacent to cutoff wall.									
2/3		Dredging was not performed adjacent to cutoff wall.									

TABLE 7

CUTOFF WALL MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		PT. 1	PT. 2	PT. 3	PT. 4		PT. 5	PT. 6	PT. 7	PT.8	PT. 9	PT. 10
2/4	Northing		4675.13		4617.63			4560.07		4502.42		4444.60
	Easting		4751.53		4734.94			4717.18		4701.15		4684.00
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.										
2/5		Dredging was not performed adjacent to cutoff wall.										
2/6		Dredging was not performed adjacent to cutoff wall.										
2/7	Northing		4675.12		4617.60			4560.07		4502.41		4444.59
	Easting		4751.55		4734.96			4717.23		4701.18		4684.02
	Angle	Dredging was not performed adjacent to cutoff wall. Twice per week coordinate points only.										
2/8	Northing		4675.12		4617.62			4560.07		4502.43		4444.62
	Easting		4751.55		4734.97			4717.23		4701.18		4683.99
	Angle	0.4 OUT	1.4 IN	0.2 IN	1.8 IN		0.2 IN	1.7 IN	0.1 IN	1.2 IN	1.1 OUT	0.6 IN
2/9		Sunday; no stone placed.										
2/10	Northing		4675.12		4617.62			4560.06		4502.43		4444.62
	Easting		4751.55		4734.97			4717.25		4701.18		4683.99
	Angle	0.4 OUT	1.2 IN	0.2 IN	1.8 IN		0.6 IN	1.5 IN	0.7 IN	1.2 IN	1.2 OUT	0.5 IN
2/11	Northing		4675.13		4617.62			4560.07		4502.43		4444.62
	Easting		4751.55		4734.97			4717.25		4701.20		4684.00
	Angle	0.4 OUT	1.2 IN	0.2 IN	1.8 IN		0.5 IN	1.6 IN	0.5 IN	1.2 IN	1.0 OUT	0.6 IN
2/12	Northing		4675.12		4617.59			4560.05		4502.42		4444.59
	Easting		4751.56		4734.98			4717.30		4701.23		4684.02
	Angle	0.4 OUT	1.2 IN	0.3 IN	1.8 IN		0.7 IN	1.4 IN	0.7 IN	1.0 IN	1.1 OUT	0.4 IN
2/13	Northing		4675.12		4617.60			4560.04		4502.41		4444.59
	Easting		4951.56		4734.97			4717.31		4701.24		4684.03
	Angle	0.4 OUT	1.2 IN	0.3 IN	1.8 IN		0.7 IN	1.4 IN	0.7 IN	1.0 IN	1.1 OUT	0.4 IN
2/14		Insignificant amount of stone placed.										

TABLE 7

CUTOFF WALL MONITORING RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		PT. 1	PT. 2	PT. 3	PT. 4	PT. 5	PT. 6	PT. 7	PT.8	PT. 9	PT. 10
2/15	Northing		4675.12		4617.59		4560.05		4502.42		4444.59
	Easting		4751.57		4734.98		4717.29		4701.23		4684.03
	Angle	0.4 OUT	1.2 IN	0.3 IN	1.8 IN	0.7 IN	1.4 IN	0.7 IN	1.0 IN	1.1 OUT	0.4 IN
2/16-2/20		Placement of RR4 stone (first layer of berm) complete.									
2/21	Northing		4675.12		4617.60		4560.05		4502.40		4444.57
	Easting		4751.56		4734.96		4717.29		4701.28		4684.07
	Angle	Rotational point monitoring not required.									
2/22-2/28		Placement of RR4 stone (first layer of berm) complete.									
2/29	Northing		4675.13		4617.61		4560.06		4502.42		4444.58
	Easting		4751.56		4734.94		4717.26		4701.23		4684.06
	Angle	Rotational point monitoring not required. Points 8 and 10 appeared damaged by bucket placing stone.									

NOTES:

1. Upper Harbor dredging began 1/3/92.
2. Placement of first rock layer began 2/8/92.
3. Data for 11/6/91 represent the baseline condition.
4. Angle is given in degrees from vertical. 'IN' and 'OUT' indicate whether sheet deflection is toward center of cutoff wall or away from cutoff wall, respectively.

TABLE 8

PERMEABILITY AND FINES CONTENT RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Containment Cell	Batch No.	Permeability (cm/sec)	Percent Fines
West	2	3.0×10^{-7}	20.2
	14	8.6×10^{-8}	18.4
	20	5.6×10^{-8}	20.6
	Grab	4.1×10^{-8}	24.0
	Percent Fines Average		20.8
	Percent Fines Standard Deviation		2.3
Slip No. 3	11	2.2×10^{-8}	27.0
	31	1.3×10^{-8}	24.2
	15	2.9×10^{-8}	29.8
	22	1.8×10^{-8}	24.5
	32	5.0×10^{-8}	31.7
	Percent Fines Average		27.4
	Percent Fines Standard Deviation		3.3
East	29	2.2×10^{-8}	16.1
	7	8.4×10^{-9}	19.5
	3	1.9×10^{-8}	16.7
	4/26/93	Not Tested	16.2
	4/30/93	Not Tested	15.0
	5/3/93	Not Tested	13.7
	5/4/93	Not Tested	12.4
	5/7/93	Not Tested	14.5
	5/8/93	Not Tested	19.0
	Percent Fines Average		15.9
	Percent Fines Standard Deviation		2.3
	OVERALL AVERAGE		20.2

Note: Soil-bentonite backfill placed at each containment cell:
West: 4,900 cubic yards
Slip No. 3: 9,700 cubic yards
East: 7,800 cubic yards

TABLE 9

IN SITU PERMEABILITY TEST RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Containment Cell	Test Designation	Permeability (cm/sec)
West	PZ-1	1.8×10^{-8}
West	PZ-2	4.6×10^{-8}
West	PZ-3	9.5×10^{-8}
East	PZ-N	6.5×10^{-8}
East	PZ-SE	4.0×10^{-9}
Slip No. 3	PZ-NE	5.8×10^{-9}
Slip No. 3	PZ-SW	3.9×10^{-8}

TABLE 10

SUBGRADE DENSITY RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Test No.	Containment Cell	Dry Density (pcf)	Percent Compaction	Required % Compaction (a)	Location	Notes
1	West	114.5	87	85	Cell Subgrade	
2	West	132.0	100.3	85	Cell Subgrade	
3	West	120.1	91.3	85	Cell Subgrade	
4	West	125.1	95.1	85	Cell Subgrade	
5	West	117.8	89.5	85	Cell Subgrade	
6	West	111.6	88.6	85	Cell Subgrade	
7	West	117.4	89.2	85	Cell Subgrade	
8	West	117.6	89.4	85	Cell Subgrade	
9	East	117.6	97.3	85	Cell Subgrade	
10	East	116.2	96.1	85	Cell Subgrade	
11	East	115.3	95.4	85	Cell Subgrade	
12	East	114.3	94.5	85	Cell Subgrade	
13	East	117.6	97.3	85	Cell Subgrade	
14	East	116.2	96.1	85	Cell Subgrade	
15	East	115.3	95.4	85	Cell Subgrade	
16	East	114.3	94.5	85	Cell Subgrade	
17	East	116.3	96.2	95	Road Subgrade	
18	East	113.4	93.8	85	Cell Subgrade	
19	East	114.5	94.7	95	Road Subgrade	
20	East	120.8	91.8	95	Road Subgrade	
21	East	114.0	94.3	85	Cell Subgrade	
22	East	108.9	90.1	85	Cell Subgrade	
23	East	108.8	90	85	Cell Subgrade	
24	East	117.9	97.5	85	Cell Subgrade	
25	East	109.5	90.6	85	Cell Subgrade	
26	East	114.8	95	85	Cell Subgrade	
27	East	117.4	97.1	85	Cell Subgrade	
28	East	126.7	96.3	95	Road Subgrade	
29	East	116.7	96.5	95	Road Subgrade	
30	East	119.0	98.4	95	Road Subgrade	
31	East	119.8	99.1	95	Road Subgrade	
32	East	114.5	94.7	95	Road Subgrade	

TABLE 10

SUBGRADE DENSITY RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Test No.	Containment Cell	Dry Density (pcf)	Percent Compaction	Required % Compaction (a)	Location	Notes
33	East	124.2	100	95	Road Subgrade	Retest of Test #32 after reroll.
34	East	121.3	100	85	Cell Subgrade	
35	East	118.6	98.1	85	Cell Subgrade	
36	East	108.6	89.8	85	Cell Subgrade	
37	East	109.0	90.2	85	Cell Subgrade	
38	East	113.6	94	85	Cell Subgrade	
39	East	108.7	89.9	85	Cell Subgrade	
40	East	117.4	97.1	85	Cell Subgrade	
41	East	116.7	96.5	85	Cell Subgrade	
42	East	119.9	98.5	85	Cell Subgrade	
43	East	117.5	97.2	85	Cell Subgrade	
44	East	110.4	91.3	85	Cell Subgrade	
45	East	116.3	96.2	85	Cell Subgrade	
46	East	120.8	99.9	85	Cell Subgrade	
47	East	115.2	95.3	85	Cell Subgrade	
48	East	119.8	99.1	95	Road Subgrade	Retest of Test #19 after reroll.
49	East	113.8	94.1	95	Road Subgrade	Retest of Test #20 after reroll.
50	East	124.3	100	85	Cell Subgrade	
51	East	119.4	98.8	95	Road Subgrade	Retest of Test #51 after reroll.
52	East	115.3	95.4	85	Cell Subgrade	
53	East	107.3	99.5	95	Road Subgrade	
54	East	107.5	99.7	95	Road Subgrade	
55	East	103.9	99.7	95	Road Subgrade	
56	East	105.0	96.4	95	Road Subgrade	
57	East	111.6	103.5	95	Road Subgrade	
58	East	105.4	98.8	95	Road Subgrade	
59	East	98.6	91.5	95	Road Subgrade	
60	East	101.9	94.5	95	Road Subgrade	Retest of Test #59 after reroll.
61	East	98.7	91.6	95	Road Subgrade	Retest of Test #60 after reroll.
62	East	104.3	96.8	95	Road Subgrade	Retest of Test #61 after reroll.
63	Slip No. 3	107.6	94.8	85	Cell Subgrade	
64	Slip No. 3	109.5	96.5	85	Cell Subgrade	

TABLE 10

SUBGRADE DENSITY RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Test No.	Containment Cell	Dry Density (pcf)	Percent Compaction	Required % Compaction (a)	Location	Notes
65	Slip No. 3	111.1	97.9	85	Cell Subgrade	
66	Slip No. 3	112.7	99.3	85	Cell Subgrade	
67	Slip No. 3	109.5	96.5	85	Cell Subgrade	
68	Slip No. 3	111.3	98.1	85	Cell Subgrade	
69	Slip No. 3	113.3	99.9	85	Cell Subgrade	
70	Slip No. 3	108.9	96	85	Cell Subgrade	
71	Slip No. 3	107.8	95.1	95	Concrete Pad Subgrade	
72	Slip No. 3	108.2	95.4	95	Concrete Pad Subgrade	
73	Slip No. 3	108.0	95.2	95	Concrete Pad Subgrade	
74	Slip No. 3	108.1	95.2	95	Concrete Pad Subgrade	

(a) Maximum dry density as determined by the Modified Proctor Test ASTM D-1557.

TABLE 11

CONCRETE COMPRESSIVE STRENGTH RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Sample No.	Sample Date	Containment Cell	Location	Compressive Strength (psi)	Required Strength (psi)
1	9/17/92	West	Slurry Wall Cap	4,680	3,000
2	9/17/92	West	Slurry Wall Cap	4,710	3,000
3	9/17/92	West	Slurry Wall Cap	4,950	3,000
4	9/22/92	East	Slurry Wall Cap	6,750	3,000
5	9/22/92	East	Slurry Wall Cap	6,970	3,000
6	9/22/92	East	Slurry Wall Cap	6,840	3,000
7	5/13/93	East	Slurry Wall Cap	4,775	3,000
8	5/13/93	East	Slurry Wall Cap	5,058	3,000
9	5/17/93	East	Slurry Wall Cap	5,447	3,000
10	5/17/93	East	Slurry Wall Cap	5,554	3,000
11	5/19/93	East	Slurry Wall Cap	5,960	3,000
12	5/19/93	East	Slurry Wall Cap	5,872	3,000
13	9/26/94	Slip No. 3	Slurry Wall Cap	3,918	3,000
14	12/2/94	Slip No. 3	Curb	6,120	5,000
15	12/5/94	Slip No. 3	Curb	7,128	5,000
16	12/6/94	Slip No. 3	Curb and Slab	7,411	5,000

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/9/92	DEPTH	4.76	11.05	5.38	13.82	3.88	12.50	2.20	11.77		
	ELEV.	582.58	577.33	582.85	574.90	582.83	575.20	581.54	573.11		
	DIFF.	5.25		7.95		7.63		8.43			
1/19/93	DEPTH	4.80	18.45	5.40	13.00	3.90	12.10	--	10.70		
	ELEV.	582.54	569.93	582.83	575.72	582.81	575.60		574.18		
	DIFF.	12.61		7.11		7.21					
1/25/93	DEPTH	4.25	11.00	5.00	13.20	3.55	12.10	--	8.50	16.20	17.50
	ELEV.	583.09	577.38	583.23	575.52	583.16	575.60		576.38	575.15	574.41
	DIFF.	5.71		7.71		7.56					
2/1/93	DEPTH	4.55	14.30	5.35	14.15	3.80	13.00	2.30	10.35	17.00	18.45
	ELEV.	582.79	574.08	582.88	574.57	582.91	574.70	581.44	574.53	574.35	573.46
	DIFF.	8.71		8.31		8.21		6.91			
2/8/93	DEPTH	4.50	11.60	5.35	14.95	3.80	13.80	2.25	11.10	17.60	18.90
	ELEV.	582.84	576.78	582.88	573.77	582.91	573.90	581.49	573.78	573.75	573.01
	DIFF.	6.06		9.11		9.01		7.71			
2/16/93	DEPTH	4.60	11.85	5.35	14.95	3.50	13.40	--	11.35	17.35	18.75
	ELEV.	582.74	576.53	582.88	573.77	583.21	574.30		573.53	574.00	573.16
	DIFF.	6.21		9.11		8.91					
2/22/93	DEPTH	4.86	12.10	5.42	14.92	3.95	13.95	--	12.00	18.32	19.86
	ELEV.	582.48	576.28	582.81	573.80	582.76	573.75		572.88	573.03	572.05
	DIFF.	6.20		9.01		9.01					

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/8/93	DEPTH	4.22	12.56	5.00	14.26	3.52	14.54	2.08	12.40	18.88	20.16
	ELEV.	583.12	575.82	583.23	574.46	583.19	573.16	581.66	572.48	572.47	571.75
	DIFF.	7.30		8.77		10.03		9.18			
3/15/93	DEPTH	4.40	12.46	5.22	14.62	3.76	13.86	2.20	12.78	18.14	20.14
	ELEV.	582.94	575.92	583.01	574.10	582.95	573.84	581.54	572.10	573.21	571.77
	DIFF.	7.02		8.91		9.11		9.44			
3/22/93	DEPTH	4.08	12.32	5.30	14.82	3.32	13.90	2.10	13.00	18.00	20.18
	ELEV.	583.26	576.06	582.93	573.90	583.39	573.80	581.64	571.88	573.35	571.73
	DIFF.	7.20		9.03		9.59		9.76			
4/2/93	DEPTH	3.50	9.10	4.46	13.10	2.74	11.92	--	11.10	15.74	18.76
	ELEV.	583.84	579.28	583.77	575.62	583.97	575.78		573.78	575.61	573.15
	DIFF.	4.56		8.15		8.19					
4/8/93	DEPTH	4.18	7.30	4.76	10.14	3.40	9.64	1.86	12.10	--	18.98
	ELEV.	583.16	581.08	583.47	578.58	583.31	578.06	581.88	572.78		572.93
	DIFF.	2.08		4.89		5.25		9.10			
4/16/93	DEPTH	3.66	6.26	--	9.00	2.86	8.08	1.48	11.12	--	18.24
	ELEV.	583.68	582.12		579.72	583.85	579.62	582.26	573.76		573.67
	DIFF.	1.56				4.23		8.50			
4/27/93	DEPTH	4.36	6.56	5.10	8.70	3.6	7.44	1.66	9.18	--	16.46
	ELEV.	582.98	581.82	583.13	580.02	583.11	580.26	582.08	575.70		575.45
	DIFF.	1.16		3.11		2.85		6.38			

TABLE 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/4/93	DEPTH	4.12	6.74	4.86	9.44	3.34	8.16	1.38	9.36	13.42	16.06
	ELEV.	583.22	581.64	583.37	579.28	583.37	579.54	582.36	575.52	577.93	575.85
	DIFF.	1.58		4.09		3.83		6.84			
5/11/93	DEPTH	4.52	7.28	5.18	10.04	3.68	8.82	1.42	9.70	13.98	16.14
	ELEV.	582.82	581.10	583.05	578.68	583.03	578.88	582.32	575.18	577.37	575.77
	DIFF.	1.72		4.37		4.15		7.14			
5/17/93	DEPTH	4.65	7.88	5.06	10.66	3.8	10.54	1.80	10.02	14.40	16.34
	ELEV.	582.69	580.50	583.17	578.06	582.91	577.16	581.94	574.86	576.95	575.57
	DIFF.	2.19		5.11		5.75		7.08			
5/24/93	DEPTH	4.30	8.35	4.90	11.27	3.37	9.94		10.12	14.96	16.60
	ELEV.	583.04	580.03	583.33	577.45	583.34	577.76	583.74	574.76	576.39	575.31
	DIFF.	3.01		5.88		5.58		8.98			
6/9/93	DEPTH	3.75	7.70	4.43	10.26	2.86	9.05	1.45	8.80	14.72	15.95
	ELEV.	583.59	580.68	583.80	578.46	583.85	578.65	582.29	576.08	576.63	575.96
	DIFF.	2.91		5.34		5.20		6.21			
6/14/93	DEPTH	4.17	7.83	4.88	8.80	3.24	8.00	1.50	9.33	14.65	16.03
	ELEV.	583.17	580.55	583.35	579.92	583.47	579.70	582.24	575.55	576.70	575.88
	DIFF.	2.62		3.43		3.77		6.69			
6/22/93	DEPTH	4.24	7.92	4.87	10.65	3.44	9.22	1.52	9.60	20.50	16.27
	ELEV.	583.10	580.46	583.36	578.07	583.27	578.48	582.22	575.28	570.85	575.64
	DIFF.	2.64		5.29		4.79		6.94			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/29/93	DEPTH	4.35	8.50	4.97	11.74	3.45	10.35	1.60	9.80	24.53	16.58
	ELEV.	582.99	579.88	583.26	576.98	583.26	577.35	582.14	575.08	566.82	575.33
	DIFF.	3.11		6.28		5.91		7.06			
7/9/93	DEPTH	3.67	6.94	4.30	11.55	2.66	10.18	1.50	9.00	21.13	15.97
	ELEV.	583.67	581.44	583.93	577.17	584.05	577.52	582.24	575.88	570.22	575.94
	DIFF.	2.23		6.76		6.53		6.36			
7/19/93	DEPTH	3.91	7.50	4.48	11.75	2.96	10.46	1.65	10.00	23.31	16.65
	ELEV.	583.43	580.88	583.75	576.97	583.75	577.24	582.09	574.88	568.04	575.26
	DIFF.	2.55		6.78		6.51		7.21			
8/9/93	DEPTH	4.72	10.23	5.31	14.10	3.8	12.76	--	11.63	24.63	18.12
	ELEV.	582.62	578.15	582.92	574.62	582.91	574.94		573.25	566.72	573.79
	DIFF.	4.47		8.30		7.97					
8/23/93	DEPTH	4.68	11.54	5.31	14.68	3.76	13.62	2.20	13.50	25.63	25.00
	ELEV.	582.66	576.84	582.92	574.04	582.95	574.08	581.54	571.38	565.72	566.91
	DIFF.	5.82		8.88		8.87		10.16			
8/31/93	DEPTH	4.30	11.52	4.66	15.23	3.1	13.88	1.66	14.10	24.14	26.00
	ELEV.	583.04	576.86	583.57	573.49	583.61	573.82	582.08	570.78	567.21	565.91
	DIFF.	6.18		10.08		9.79		11.30			
9/9/93	DEPTH	4.72	12.34	5.20	16.52	3.62	15.10	2.10	14.52	25.45	25.65
	ELEV.	582.62	576.04	583.03	572.20	583.09	572.60	581.64	570.36	565.90	566.26
	DIFF.	6.58		10.83		10.49		11.28			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/16/93	DEPTH	4.57	12.76	5.09	17.12	3.55	15.80	1.55	15.00	25.40	26.42
	ELEV.	582.77	575.62	583.14	571.60	583.16	571.90	582.19	569.88		565.49
	DIFF.	7.15		11.54		11.26		12.31			
9/21/93	DEPTH	4.60	13.00	5.09	16.77	3.56	15.80	1.54	15.46	21.06	25.84
	ELEV.	582.74	575.38	583.14	571.95	583.15	571.90	582.20	569.42	570.29	566.07
	DIFF.	7.36		11.19		11.25		12.78			
9/30/93	DEPTH	4.34	12.33	4.90	17.35	3.4	16.11	1.60	15.44	21.22	26.20
	ELEV.	583.00	576.05	583.33	571.37	583.31	571.59	582.14	569.44	570.13	565.71
	DIFF.	6.95		11.96		11.72		12.70			
10/7/93	DEPTH	4.65	12.85	5.14	17.50	3.6	16.28	1.84	15.50	21.50	26.52
	ELEV.	582.69	575.53	583.09	571.22	583.11	571.42	581.90	569.38	569.85	565.39
	DIFF.	7.16		11.87		11.69		12.52			
10/11/93	DEPTH	4.65	13.08	5.15	17.58	3.62	16.38	1.85	15.54	26.50	26.50
	ELEV.	582.69	575.30	583.08	571.14	583.09	571.32	581.89	569.34	564.85	565.41
	DIFF.	7.39		11.94		11.77		12.55			
10/22/93	DEPTH	4.52	13.32	5.04	17.89	3.55	16.73	1.86	15.72	25.03	26.55
	ELEV.	582.82	575.06	583.19	570.83	583.16	570.97	581.88	569.16	566.32	565.36
	DIFF.	7.76		12.36		12.19		12.72			
10/26/93	DEPTH	4.60	13.42	5.16	18.06	3.63	16.86	1.64	15.86	25.10	25.80
	ELEV.	582.74	574.96	583.07	570.66	583.08	570.84	582.10	569.02	566.25	566.11
	DIFF.	7.78		12.41		12.24		13.08			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/5/93	DEPTH	4.74	13.80	5.29	18.08	3.76	17.08	1.76	16.17	25.00	26.50
	ELEV.	582.60	574.58	582.94	570.64	582.95	570.62	581.98	568.71	566.35	565.41
	DIFF.	8.02		12.30		12.33		13.27			
11/8/93	DEPTH	4.88	13.97	4.39	18.34	3.86	17.22	1.84	16.24	27.52	24.70
	ELEV.	582.46	574.41	583.84	570.38	582.85	570.48	581.90	568.64	563.83	567.21
	DIFF.	8.05		13.46		12.37		13.26			
11/19/93	DEPTH	4.70	14.26	5.26	17.80	3.72	16.80	--	16.23	22.30	23.00
	ELEV.	582.64	574.12	582.97	570.92	582.99	570.90	--	568.65	569.05	568.91
	DIFF.	8.52		12.05		12.09		--			
11/23/93	DEPTH	4.84	14.36	5.38	17.76	3.84	16.72	1.88	16.36	22.20	23.95
	ELEV.	582.50	574.02	582.85	570.96	582.87	570.98	581.86	568.52	569.15	567.96
	DIFF.	8.48		11.89		11.89		13.34			
12/2/93	DEPTH	4.12	14.48	4.74	17.90	3.21	16.90	1.68	16.30	22.50	24.04
	ELEV.	583.22	573.90	583.49	570.82	583.50	570.80	582.06	568.58	568.85	567.87
	DIFF.	9.32		12.67		12.70		13.48			
12/7/93	DEPTH	4.48	14.38	5.16	17.85	3.62	17.78	1.83	16.45	22.57	24.15
	ELEV.	582.86	574.00	583.07	570.87	583.09	569.92	581.91	568.43	568.78	567.76
	DIFF.	8.86		12.20		13.17		13.48			
12/16/93	DEPTH	4.76	14.58	5.34	18.10	3.79	17.10	1.84	16.52	22.70	24.26
	ELEV.	582.58	573.80	582.89	570.62	582.92	570.60	581.90	568.36	568.65	567.65
	DIFF.	8.78		12.27		12.32		13.54			

TABL .2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/22/93	DEPTH	4.70	14.65	5.12	17.60	3.78	16.59	1.90	16.58	22.13	24.18
	ELEV.	582.64	573.73	583.11	571.12	582.93	571.11	581.84	568.30	569.22	567.73
	DIFF.	8.91		11.99		11.82		13.54			
12/30/93	DEPTH	5.17	14.75	5.60	17.50	4.05	16.37	2.22	16.47	22.54	24.10
	ELEV.	582.17	573.63	582.63	571.22	582.66	571.33	581.52	568.41	568.81	567.81
	DIFF.	8.54		11.41		11.33		13.11			
1/7/94	DEPTH	5.07	14.90	5.50	17.82	4.05	16.73	2.10	16.64	22.70	24.25
	ELEV.	582.27	573.48	582.73	570.90	582.66	570.97	581.64	568.24	568.65	567.66
	DIFF.	8.79		11.83		11.69		13.40			
1/13/94	DEPTH	5.13	15.07	5.60	17.90	4.08	16.86	2.31	16.70	22.76	24.27
	ELEV.	582.21	573.31	582.63	570.82	582.63	570.84	581.43	568.18	568.59	567.64
	DIFF.	8.90		11.81		11.79		13.25			
1/20/94	DEPTH	5.38	15.25	5.73	17.89	4.16	16.83	2.37	16.80	22.90	24.35
	ELEV.	581.96	573.13	582.50	570.83	582.55	570.87	581.37	568.08	568.45	567.56
	DIFF.	8.83		11.67		11.68		13.29			
1/28/94	DEPTH	4.76	15.43	5.28	17.95	3.79	16.94	2.02	16.83	22.94	24.38
	ELEV.	582.58	572.95	582.95	570.77	582.92	570.76	581.72	568.05	568.41	567.53
	DIFF.	9.63		12.18		12.16		13.67			
2/7/94	DEPTH	5.17	15.62	5.66	17.90	frozen	16.87	frozen	16.97	23.02	24.55
	ELEV.	582.17	572.76	582.57	570.82	--	570.83	--	567.91	568.33	567.36
	DIFF.	9.41		11.75		--		--			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/15/94	DEPTH	5.20	15.72	5.71	17.89	frozen	16.84	frozen	17.09	23.06	24.62
	ELEV.	582.14	572.66	582.52	570.83	--	570.86	--	567.79	568.29	567.29
	DIFF.	9.48		11.69		--		--			
2/25/94	DEPTH	4.39	15.37	5.18	17.60	frozen	16.58	frozen	16.77	22.83	24.45
	ELEV.	582.95	573.01	583.05	571.12	--	571.12	--	568.11	568.52	567.46
	DIFF.	9.94		11.93		--		--			
3/3/94	DEPTH	4.60	15.34	5.21	17.52	3.72	16.44	1.72	16.90	22.62	24.44
	ELEV.	582.74	573.04	583.02	571.20	582.99	571.26	582.02	567.98	568.73	567.47
	DIFF.	9.70		11.82		11.73		14.04			
3/8/94	DEPTH	4.02	14.90	4.73	17.30	3.20	16.28	1.45	15.61	22.17	23.97
	ELEV.	583.32	573.48	583.50	571.42	583.51	571.42	582.29	569.27	569.18	567.94
	DIFF.	9.84		12.08		12.09		13.02			
3/15/94	DEPTH	4.12	14.22	5.05	16.67	3.37	15.76	1.87	16.06	21.34	23.63
	ELEV.	583.22	574.16	583.18	572.05	583.34	571.94	581.87	568.82	570.01	568.28
	DIFF.	9.06		11.13		11.40		13.05			
3/22/94	DEPTH	4.26	13.52	5.00	16.00	3.33	15.07	1.78	15.95	25.40	21.42
	ELEV.	583.08	574.86	583.23	572.72	583.38	572.63	581.96	568.93	565.95	570.49
	DIFF.	8.22		10.51		10.75		13.03			
3/31/94	DEPTH	4.57	12.80	5.30	15.41	3.81	14.38	2.08	16.06	21.12	26.53
	ELEV.	582.77	575.58	582.93	573.31	582.90	573.32	581.66	568.82	570.23	565.38
	DIFF.	7.19		9.62		9.58		12.84			

TABLE .2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/5/94	DEPTH	4.40	12.68	5.44	15.30	3.91	14.20	2.00	16.07	20.74	29.80
	ELEV.	582.94	575.70	582.79	573.42	582.80	573.50	581.74	568.81	570.61	562.11
	DIFF.	7.24		9.37		9.30		12.93			
4/12/94	DEPTH	3.90	12.51	5.09	15.18	3.4	14.06	1.58	15.98	20.18	26.57
	ELEV.	583.44	575.87	583.14	573.54	583.31	573.64	582.16	568.90	571.17	565.34
	DIFF.	7.57		9.60		9.67		13.26			
4/21/94	DEPTH	4.88	12.22	5.42	15.00	3.93	13.88	2.10	15.80	21.26	26.36
	ELEV.	582.46	576.16	582.81	573.72	582.78	573.82	581.64	569.08	570.09	565.55
	DIFF.	6.30		9.09		8.96		12.56			
4/28/94	DEPTH	4.78	12.44	5.29	15.28	3.77	14.10	2.00	15.97	19.98	26.56
	ELEV.	582.56	575.94	582.94	573.44	582.94	573.60	581.74	568.91	571.37	565.35
	DIFF.	6.62		9.50		9.34		12.83			
5/5/94	DEPTH	4.77	12.32	5.38	15.32	3.85	14.16	1.93	16.09	21.45	26.60
	ELEV.	582.57	576.06	582.85	573.40	582.86	573.54	581.81	568.79	569.90	565.31
	DIFF.	6.51		9.45		9.32		13.02			
5/11/94	DEPTH	4.15	12.66	5.37	15.71	3.9	14.53	2.03	16.33	21.67	26.61
	ELEV.	583.19	575.72	582.86	573.01	582.81	573.17	581.71	568.55	569.68	565.30
	DIFF.	7.47		9.85		9.64		13.16			
5/13/94	DEPTH	4.25	12.64	5.43	15.68	3.82	14.53	2.02	18.38	21.73	26.55
	ELEV.	583.09	575.74	582.80	573.04	582.89	573.17	581.72	566.50	569.62	565.36
	DIFF.	7.35		9.76		9.72		15.22			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/17/94	DEPTH	5.00	12.77	5.53	15.82	3.98	14.67	1.98	16.58	21.83	26.60
	ELEV.	582.34	575.61	582.70	572.90	582.73	573.03	581.76	568.30	569.52	565.31
	DIFF.	6.73		9.80		9.70		13.46			
5/24/94	DEPTH	4.95	12.99	5.38	16.10	3.8	14.94	1.84	16.80	22.00	26.60
	ELEV.	582.39	575.39	582.85	572.62	582.91	572.76	581.90	568.08	569.35	565.31
	DIFF.	7.00		10.23		10.15		13.82			
6/2/94	DEPTH	5.13	13.27	5.62	16.53	4.07	15.33	1.94	16.93	22.52	26.56
	ELEV.	582.21	575.11	582.61	572.19	582.64	572.37	581.80	567.95	568.83	565.35
	DIFF.	7.10		10.42		10.27		13.85			
6/6/94	DEPTH	5.00	13.37	5.44	16.67	3.92	15.47	1.75	16.94	22.63	26.55
	ELEV.	582.34	575.01	582.79	572.05	582.79	572.23	581.99	567.94	568.72	565.36
	DIFF.	7.33		10.74		10.56		14.05			
6/14/94	DEPTH	4.55	13.59	5.50	16.70	3.95	15.60	1.30	16.59	22.08	26.30
	ELEV.	582.79	574.79	582.73	572.02	582.76	572.10	582.44	568.29	569.27	565.61
	DIFF.	8.00		10.71		10.66		14.15			
6/21/94	DEPTH	5.05	13.72	5.47	16.70	3.9	15.56	1.25	16.46	22.08	26.35
	ELEV.	582.29	574.66	582.76	572.02	582.81	572.14	582.49	568.42	569.27	565.56
	DIFF.	7.63		10.74		10.67		14.07			
6/28/94	DEPTH	4.48	12.20	4.88	16.16	3.53	15.09	0.80	15.35	20.45	23.15
	ELEV.	582.86	576.18	583.35	572.56	583.18	572.61	582.94	569.53	570.90	568.76
	DIFF.	6.68		10.79		10.57		13.41			

TABL. .2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/29/94	DEPTH	4.34	12.15	4.98	16.14	3.6	15.03	0.93	15.40	20.07	22.95
	ELEV.	583.00	576.23	583.25	572.58	583.11	572.67	582.81	569.48	571.28	568.96
	DIFF.	6.77		10.67		10.44		13.33			
6/30/94	DEPTH	4.53	12.15	5.12	16.07	3.63	14.98	0.95	15.36	22.10	26.30
	ELEV.	582.81	576.23	583.11	572.65	583.08	572.72	582.79	569.52	569.25	565.61
	DIFF.	6.58		10.46		10.36		13.27			
7/1/94	DEPTH	4.64	12.11	5.15	16.04	3.6	14.93	1.73	15.30	21.15	25.14
	ELEV.	582.70	576.27	583.08	572.68	583.11	572.77	582.01	569.58	570.20	566.77
	DIFF.	6.43		10.40		10.34		12.43			
7/2/94	DEPTH	4.60	12.12	5.21	16	3.70	14.92	1.73	15.32	21.18	25.27
	ELEV.	582.74	576.26	583.02	572.72	583.01	572.78	582.01	569.56	570.17	566.64
	DIFF.	6.48		10.30		10.23		12.45			
7/5/94	DEPTH	4.18	11.61	4.46	15.81	2.94	14.50	1.46	14.83	19.11	22.02
	ELEV.	583.16	576.77	583.77	572.91	583.77	573.20	582.28	570.05	572.24	569.89
	DIFF.	6.39		10.86		10.57		12.23			
7/6/94	DEPTH	4.36	11.42	4.73	15.66	3.5	14.65	1.50	14.54	20.35	24.62
	ELEV.	582.98	576.96	583.50	573.06	583.21	573.05	582.24	570.34	571.00	567.29
	DIFF.	6.02		10.44		10.16		11.90			
7/8/94	DEPTH	4.45	11.35	4.99	15.46	3.48	14.42	1.53	14.57	20.06	24.50
	ELEV.	582.89	577.03	583.24	573.26	583.23	573.28	582.21	570.31	571.29	567.41
	DIFF.	5.86		9.98		9.95		11.90			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/9/94	DEPTH	4.52	11.31	5.04	15.39	3.58	14.34	1.63	14.57	19.98	24.42
	ELEV.	582.82	577.07	583.19	573.33	583.13	573.36	582.11	570.31	571.37	567.49
	DIFF.	5.75		9.86		9.77		11.80			
7/11/94	DEPTH	4.69	11.33	5.17	15.22	3.67	14.15	1.73	14.50	19.61	24.21
	ELEV.	582.65	577.05	583.06	573.50	583.04	573.55	582.01	570.38	571.74	567.70
	DIFF.	5.60		9.56		9.49		11.63			
7/14/94	DEPTH	4.62	11.19	5.05	14.98	3.57	13.92	1.04	14.33	19.34	23.95
	ELEV.	582.72	577.19	583.18	573.74	583.14	573.78	582.70	570.55	572.01	567.96
	DIFF.	5.53		9.44		9.36		12.15			
7/15/94	DEPTH	4.67	11.20	5.17	14.93	3.66	13.85	1.57	14.26	19.24	23.88
	ELEV.	582.67	577.18	583.06	573.79	583.05	573.85	582.17	570.62	572.11	568.03
	DIFF.	5.49		9.27		9.20		11.55			
7/17/94	DEPTH	4.28	11.22	5.22	14.80	3.7	13.68	1.75	14.10	19.03	23.66
	ELEV.	583.06	577.16	583.01	573.92	583.01	574.02	581.99	570.78	572.32	568.25
	DIFF.	5.90		9.09		8.99		11.21			
7/18/94	DEPTH	4.80	11.20	5.15	14.75	3.73	13.63	2.05	14.07	18.97	23.64
	ELEV.	582.54	577.18	583.08	573.97	582.98	574.07	581.69	570.81	572.38	568.27
	DIFF.	5.36		9.11		8.91		10.88			
7/20/94	DEPTH	4.78	11.26	5.15	14.62	3.64	13.52	1.60	13.88	18.85	23.43
	ELEV.	582.56	577.12	583.08	574.10	583.07	574.18	582.14	571.00	572.50	568.48
	DIFF.	5.44		8.98		8.89		11.14			

TABLE 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/21/94	DEPTH	4.75	11.24	5.17	14.51	3.66	13.47	1.64	13.83	18.75	23.36
	ELEV.	582.59	577.14	583.06	574.21	583.05	574.23	582.10	571.05	572.60	568.55
	DIFF.	5.45		8.85		8.82		11.05			
7/22/94	DEPTH	4.71	11.18	5.11	14.48	3.62	13.40	1.60	13.73	18.95	23.31
	ELEV.	582.63	577.20	583.12	574.24	583.09	574.30	582.14	571.15	572.40	568.60
	DIFF.	5.43		8.88		8.79		10.99			
7/24/94	DEPTH	4.80	11.16	5.24	14.38	3.76	13.30	1.71	13.61	18.98	23.21
	ELEV.	582.54	577.22	582.99	574.34	582.95	574.40	582.03	571.27	572.37	568.70
	DIFF.	5.32		8.65		8.55		10.76			
7/25/94	DEPTH	4.83	11.15	5.27	14.34	3.80	13.23	1.72	13.53	18.92	23.10
	ELEV.	582.51	577.23	582.96	574.38	582.91	574.47	582.02	571.35	572.43	568.81
	DIFF.	5.28		8.58		8.44		10.67			
7/26/94	DEPTH	4.86	11.23	5.32	14.30	3.84	13.20	1.75	13.47	18.98	23.06
	ELEV.	582.48	577.15	582.91	574.42	582.87	574.50	581.99	571.41	572.37	568.85
	DIFF.	5.33		8.49		8.37		10.58			
7/28/94	DEPTH	4.90	11.33	5.37	14.21	3.9	13.10	1.71	13.33	18.90	22.96
	ELEV.	582.44	577.05	582.86	574.51	582.81	574.60	582.03	571.55	572.45	568.95
	DIFF.	5.39		8.35		8.21		10.48			
7/29/94	DEPTH	4.92	11.39	5.41	14.24	3.92	13.08	1.73	13.30	19.24	22.90
	ELEV.	582.42	576.99	582.82	574.48	582.79	574.62	582.01	571.58	572.11	569.01
	DIFF.	5.43		8.34		8.17		10.43			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/31/94	DEPTH	4.93	11.50	5.40	14.26	3.9	13.06	--	13.20	19.65	22.85
	ELEV.	582.41	576.88	582.83	574.46	582.81	574.64	--	571.68	571.70	569.06
	DIFF.	5.53		8.37		8.17		--			
8/1/94	DEPTH	4.92	11.58	5.39	14.29	3.9	13.10	1.70	13.24	17.60	20.10
	ELEV.	582.42	576.80	582.84	574.43	582.81	574.60	582.04	571.64	573.75	571.81
	DIFF.	5.62		8.41		8.21		10.40			
8/2/94	DEPTH	4.90	11.56	5.37	14.22	3.88	13.06	1.72	13.10	17.56	20.06
	ELEV.	582.44	576.82	582.86	574.50	582.83	574.64	582.02	571.78	573.79	571.85
	DIFF.	5.62		8.36		8.19		10.24			
8/4/94	DEPTH	4.58	11.58	5.13	13.98	3.57	12.96	1.42	12.71	17.03	19.75
	ELEV.	582.76	576.80	583.10	574.74	583.14	574.74	582.32	572.17	574.32	572.16
	DIFF.	5.96		8.36		8.40		10.15			
8/5/94	DEPTH	4.71	11.53	5.24	13.82	3.72	12.87	1.64	12.73	16.84	19.63
	ELEV.	582.63	576.85	582.99	574.90	582.99	574.83	582.10	572.15	574.51	572.28
	DIFF.	5.78		8.09		8.16		9.95			
8/6/94	DEPTH	4.73	11.46	5.27	13.73	3.73	12.80	1.66	12.60	16.80	19.55
	ELEV.	582.61	576.92	582.96	574.99	582.98	574.90	582.08	572.28	574.55	572.36
	DIFF.	5.69		7.97		8.08		9.80			
8/7/94	DEPTH	4.80	11.44	5.28	13.60	3.76	12.65	1.67	12.47	16.63	19.41
	ELEV.	582.54	576.94	582.95	575.12	582.95	575.05	582.07	572.41	574.72	572.50
	DIFF.	5.60		7.83		7.90		9.66			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/8/94	DEPTH	4.80	11.46	5.28	13.51	3.76	12.54	1.73	12.37	16.52	19.34
	ELEV.	582.54	576.92	582.95	575.21	582.95	575.16	582.01	572.51	574.83	572.57
	DIFF.	5.62		7.74		7.79		9.50			
8/10/94	DEPTH	4.85	11.53	5.49	13.28	3.92	12.40		12.04	16.45	19.17
	ELEV.	582.49	576.85	582.74	575.44	582.79	575.30	583.74	572.84	574.90	572.74
	DIFF.	5.64		7.30		7.49		10.90			
8/11/94	DEPTH	4.40	10.60	5.12	12.32	3.42	12.14	1.47	10.07	15.72	18.98
	ELEV.	582.94	577.78	583.11	576.40	583.29	575.56	582.27	574.81	575.63	572.93
	DIFF.	5.16		6.71		7.73		7.46			
8/12/94	DEPTH	4.42	10.89	5.22	11.38	3.59	11.33	1.59	10.64	15.12	18.65
	ELEV.	582.92	577.49	583.01	577.34	583.12	576.37	582.15	574.24	576.23	573.26
	DIFF.	5.43		5.67		6.75		7.91			
8/13/94	DEPTH	4.21	9.83	5.00	9.81	3.23	9.92	1.45	9.75	13.61	18.30
	ELEV.	583.13	578.55	583.23	578.91	583.48	577.78	582.29	575.13	577.74	573.61
	DIFF.	4.58		4.32		5.70		7.16			
8/14/94	DEPTH	4.51	9.85	5.15	9.30	3.53	9.17	1.51	9.40	13.25	18.05
	ELEV.	582.83	578.53	583.08	579.42	583.18	578.53	582.23	575.48	578.10	573.86
	DIFF.	4.30		3.66		4.65		6.75			
8/15/94	DEPTH	4.49	10.20	5.24	8.59	3.64	7.85	1.72	9.65	13.11	17.77
	ELEV.	582.85	578.18	582.99	580.13	583.07	579.85	582.02	575.23	578.24	574.14
	DIFF.	4.67		2.86		3.22		6.79			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/16/94	DEPTH	4.58	10.25	5.27	8.17	3.73	6.90	1.72	8.78	12.83	17.60
	ELEV.	582.76	578.13	582.96	580.55	582.98	580.80	582.02	576.10	578.52	574.31
	DIFF.	4.63		2.41		2.18		5.92			
8/17/94	DEPTH	4.59	10.20	5.31	7.94	3.72	6.42	1.80	9.76	12.68	17.43
	ELEV.	582.75	578.18	582.92	580.78	582.99	581.28	581.94	575.12	578.67	574.48
	DIFF.	4.57		2.14		1.71		6.82			
8/18/94	DEPTH	4.66	10.14	5.31	7.81	3.75	6.25	1.75	9.56	12.56	17.33
	ELEV.	582.68	578.24	582.92	580.91	582.96	581.45	581.99	575.32	578.79	574.58
	DIFF.	4.44		2.01		1.51		6.67			
8/19/94	DEPTH	4.68	10.01	5.32	7.62	3.8	6.17	1.78	9.42	12.34	17.03
	ELEV.	582.66	578.37	582.91	581.10	582.91	581.53	581.96	575.46	579.01	574.88
	DIFF.	4.29		1.81		1.38		6.50			
8/20/94	DEPTH	4.60	9.73	5.22	7.05	3.61	5.70	1.72	8.88	11.91	16.86
	ELEV.	582.74	578.65	583.01	581.67	583.10	582.00	582.02	576.00	579.44	575.05
	DIFF.	4.09		1.34		1.10		6.02			
8/21/94	DEPTH	4.72	9.76	5.28	6.87	3.68	5.57	1.76	9.03	11.83	16.76
	ELEV.	582.62	578.62	582.95	581.85	583.03	582.13	581.98	575.85	579.52	575.15
	DIFF.	4.00		1.10		0.90		6.13			
8/22/94	DEPTH	4.72	9.68	5.32	6.92	3.77	5.78	1.72	8.94	11.71	16.60
	ELEV.	582.62	578.70	582.91	581.80	582.94	581.92	582.02	575.94	579.64	575.31
	DIFF.	3.92		1.11		1.02		6.08			

TABL. 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/23/94	DEPTH	4.75	9.60	5.32	6.91	3.84	5.53	1.78	8.85	11.70	16.57
	ELEV.	582.59	578.78	582.91	581.81	582.87	582.17	581.96	576.03	579.65	575.34
	DIFF.	3.81		1.10		0.70		5.93			
8/24/94	DEPTH	4.78	9.59	5.35	6.98	3.82	5.74	1.77	8.88	11.67	16.36
	ELEV.	582.56	578.79	582.88	581.74	582.89	581.96	581.97	576.00	579.68	575.55
	DIFF.	3.77		1.14		0.93		5.97			
8/25/94	DEPTH	4.80	9.51	5.37	7.25	3.83	5.90	1.82	8.70	20.06	16.28
	ELEV.	582.54	578.87	582.86	581.47	582.88	581.80	581.92	576.18	571.29	575.63
	DIFF.	3.67		1.39		1.08		5.74			
8/26/94	DEPTH	4.79	9.45	5.38	7.40	3.92	6.18	1.80	8.60	21.57	16.25
	ELEV.	582.55	578.93	582.85	581.32	582.79	581.52	581.94	576.28	569.78	575.66
	DIFF.	3.62		1.53		1.27		5.66			
8/27/94	DEPTH	4.80	9.47	5.31	7.62	3.86	6.45	1.78	8.57	21.60	16.22
	ELEV.	582.54	578.91	582.92	581.10	582.85	581.25	581.96	576.31	569.75	575.69
	DIFF.	3.63		1.82		1.60		5.65			
8/28/94	DEPTH	4.92	9.43	5.36	8.20	3.9	6.77	1.85	8.70	21.90	16.15
	ELEV.	582.42	578.95	582.87	580.52	582.81	580.93	581.89	576.18	569.45	575.76
	DIFF.	3.47		2.35		1.88		5.71			
8/29/94	DEPTH	4.90	9.44	5.42	8.42	3.93	6.97	1.90	8.60	23.28	16.12
	ELEV.	582.44	578.94	582.81	580.30	582.78	580.73	581.84	576.28	568.07	575.79
	DIFF.	3.50		2.51		2.05		5.56			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/30/94	DEPTH	4.75	9.45	5.41	8.78	3.86	7.27	1.82	8.52	22.36	16.02
	ELEV.	582.59	578.93	582.82	579.94	582.85	580.43	581.92	576.36	568.99	575.89
	DIFF.	3.66		2.88		2.42		5.56			
8/31/94	DEPTH	4.91	9.60	5.48	9.00	3.93	7.55	1.96	8.73	24.25	16.11
	ELEV.	582.43	578.78	582.75	579.72	582.78	580.15	581.78	576.15	567.10	575.80
	DIFF.	3.65		3.03		2.63		5.63			
9/1/94	DEPTH	4.94	9.73	5.42	9.35	3.91	7.83	1.94	8.68	22.20	16.11
	ELEV.	582.40	578.65	582.81	579.37	582.80	579.87	581.80	576.20	569.15	575.80
	DIFF.	3.75		3.44		2.93		5.60			
9/2/94	DEPTH	4.95	9.74	5.40	9.55	3.9	8.00	1.78	8.74	22.10	16.10
	ELEV.	582.39	578.64	582.83	579.17	582.81	579.70	581.96	576.14	569.25	575.81
	DIFF.	3.75		3.66		3.11		5.82			
9/4/94	DEPTH	4.93	9.85	5.46	10.15	3.9	8.57	1.75	8.72	24.32	16.08
	ELEV.	582.41	578.53	582.77	578.57	582.81	579.13	581.99	576.16	567.03	575.83
	DIFF.	3.88		4.20		3.68		5.83			
9/6/94	DEPTH	4.92	9.93	5.40	10.56	3.93	9.00	1.86	8.81	23.78	16.08
	ELEV.	582.42	578.45	582.83	578.16	582.78	578.70	581.88	576.07	567.57	575.83
	DIFF.	3.97		4.67		4.08		5.81			
9/7/94	DEPTH	4.96	10.00	5.44	10.78	3.98	9.26	1.95	8.86	23.74	16.13
	ELEV.	582.38	578.38	582.79	577.94	582.73	578.44	581.79	576.02	567.61	575.78
	DIFF.	4.00		4.85		4.29		5.77			

TABL .2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/8/94	DEPTH	5.31	10.05	5.53	11.02	4	9.56	1.98	8.88	23.55	16.10
	ELEV.	582.03	578.33	582.70	577.70	582.71	578.14	581.76	576.00	567.80	575.81
	DIFF.	3.70		5.00		4.57		5.76			
9/9/94	DEPTH	5.13	10.00	5.54	11.17	3.95	9.66	1.78	8.88	23.40	16.10
	ELEV.	582.21	578.38	582.69	577.55	582.76	578.04	581.96	576.00	567.95	575.81
	DIFF.	3.83		5.14		4.72		5.96			
9/10/94	DEPTH	5.14	10.15	5.27	10.60	3.69	9.60	1.83	9.00	22.90	16.15
	ELEV.	582.20	578.23	582.96	578.12	583.02	578.10	581.91	575.88	568.45	575.76
	DIFF.	3.97		4.84		4.92		6.03			
9/12/94	DEPTH	5.35	10.28	5.50	11.23	3.8	9.86	1.98	8.72	23.78	16.05
	ELEV.	581.99	578.10	582.73	577.49	582.91	577.84	581.76	576.16	567.57	575.86
	DIFF.	3.89		5.24		5.07		5.60			
9/13/94	DEPTH	5.36	10.31	5.51	11.31	3.81	9.97	1.88	8.69	23.50	15.90
	ELEV.	581.98	578.07	582.72	577.41	582.90	577.73	581.86	576.19	567.85	576.01
	DIFF.	3.91		5.31		5.17		5.67			
9/14/94	DEPTH	5.10	10.35	5.41	11.52	3.83	10.14	1.94	8.65	23.00	15.90
	ELEV.	582.24	578.03	582.82	577.20	582.88	577.56	581.80	576.23	568.35	576.01
	DIFF.	4.21		5.62		5.32		5.57			
9/15/94	DEPTH	5.05	10.40	5.56	11.66	3.97	10.24	2.10	8.70	23.42	16.00
	ELEV.	582.29	577.98	582.67	577.06	582.74	577.46	581.64	576.18	567.93	575.91
	DIFF.	4.31		5.61		5.28		5.46			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/16/94	DEPTH	5.00	10.41	5.59	11.79	4.05	10.40	2.05	8.70	23.35	16.00
	ELEV.	582.34	577.97	582.64	576.93	582.66	577.30	581.69	576.18	568.00	575.91
	DIFF.	4.37		5.71		5.36		5.51			
9/17/94	DEPTH	4.94	10.65	5.61	11.85	4.3	10.47	2.11	8.74	15.51	15.91
	ELEV.	582.40	577.73	582.62	576.87	582.41	577.23	581.63	576.14	575.84	576.00
	DIFF.	4.67		5.75		5.18		5.49			
9/18/94	DEPTH	4.97	10.56	5.59	11.79	4.23	10.45	2.00	8.71	15.38	15.82
	ELEV.	582.37	577.82	582.64	576.93	582.48	577.25	581.74	576.17	575.97	576.09
	DIFF.	4.55		5.71		5.23		5.57			
9/19/94	DEPTH	5.50	10.57	5.60	11.83	4.3	10.50	2.07	8.66	15.00	15.75
	ELEV.	581.84	577.81	582.63	576.89	582.41	577.20	581.67	576.22	576.35	576.16
	DIFF.	4.03		5.74		5.21		5.45			
9/20/94	DEPTH	5.45	10.63	5.67	11.78	4.45	10.41	2.00	8.63	15.03	15.67
	ELEV.	581.89	577.75	582.56	576.94	582.26	577.29	581.74	576.25	576.32	576.24
	DIFF.	4.14		5.62		4.97		5.49			
9/21/94	DEPTH	5.38	10.60	5.95	11.65	4.7	10.33	1.95	8.51	14.90	15.55
	ELEV.	581.96	577.78	582.28	577.07	582.01	577.37	581.79	576.37	576.45	576.36
	DIFF.	4.18		5.21		4.64		5.42			
9/22/94	DEPTH	5.05	10.67	5.85	11.57	4.57	10.31	1.97	8.54	14.80	15.52
	ELEV.	582.29	577.71	582.38	577.15	582.14	577.39	581.77	576.34	576.55	576.39
	DIFF.	4.58		5.23		4.75		5.43			

TABL. 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/23/94	DEPTH	5.07	10.65	6.36	11.53	4.65	10.25	1.95	8.50	14.70	15.50
	ELEV.	582.27	577.73	581.87	577.19	582.06	577.45	581.79	576.38	576.65	576.41
	DIFF.	4.54		4.68		4.61		5.41			
9/24/94	DEPTH	4.99	10.63	6.01	11.49	4.41	12.14	1.97	11.86	14.63	15.45
	ELEV.	582.35	577.75	582.22	577.23	582.30	577.43	581.77	576.50	576.72	576.46
	DIFF.	4.60		4.99		4.87		5.27			
9/25/94	DEPTH	5.15	10.65	6.05	11.48	4.33	12.12	2.05	11.78	14.55	15.39
	ELEV.	582.19	577.73	582.18	577.24	582.38	577.45	581.69	576.58	576.80	576.52
	DIFF.	4.46		4.94		4.93		5.11			
9/26/94	DEPTH	5.06	10.60	6.41	11.43	4.75	12.03	1.87	11.67	14.45	15.30
	ELEV.	582.28	577.78	581.82	577.29	581.96	577.54	581.87	576.69	576.90	576.61
	DIFF.	4.50		4.53		4.42		5.18			
9/27/94	DEPTH	5.00	10.63	6.36	11.40	4.71	12.05	1.93	11.65	14.40	15.30
	ELEV.	582.34	577.75	581.87	577.32	582.00	577.52	581.81	576.71	576.95	576.61
	DIFF.	4.59		4.55		4.48		5.10			
9/28/94	DEPTH	5.03	10.62	5.95	11.40	4.35	12.00	1.97	11.65	14.35	15.25
	ELEV.	582.31	577.76	582.28	577.32	582.36	577.57	581.77	576.71	577.00	576.66
	DIFF.	4.55		4.96		4.79		5.06			
9/29/94	DEPTH	5.16	10.78	6.00	11.51	4.46	12.15	2.01	11.78	14.48	15.36
	ELEV.	582.18	577.60	582.23	577.21	582.25	577.42	581.73	576.58	576.87	576.55
	DIFF.	4.58		5.02		4.83		5.15			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/30/94	DEPTH	5.05	10.65	5.87	11.35	4.34	11.96	1.89	11.59	14.25	15.15
	ELEV.	582.29	577.73	582.36	577.37	582.37	577.61	581.85	576.77	577.10	576.76
	DIFF.	4.56		4.99		4.76		5.08			
10/1/94	DEPTH	5.02	10.62	5.87	11.33	4.32	11.98	1.90	11.54	14.26	15.15
	ELEV.	582.32	577.76	582.36	577.39	582.39	577.59	581.84	576.82	577.09	576.76
	DIFF.	4.56		4.97		4.80		5.02			
10/2/94	DEPTH	5.02	10.60	5.90	11.33	4.43	11.95	2.00	11.55	14.22	15.14
	ELEV.	582.32	577.78	582.33	577.39	582.28	577.62	581.74	576.81	577.13	576.77
	DIFF.	4.54		4.94		4.66		4.93			
10/3/94	DEPTH	5.16	10.65	6.06	11.33	4.45	11.99	1.87	11.48	14.25	15.08
	ELEV.	582.18	577.73	582.17	577.39	582.26	577.58	581.87	576.88	577.10	576.83
	DIFF.	4.45		4.78		4.68		4.99			
10/4/94	DEPTH	5.21	10.63	6.08	11.39	4.5	12.05	1.93	11.52	14.26	15.10
	ELEV.	582.13	577.75	582.15	577.33	582.21	577.52	581.81	576.84	577.09	576.81
	DIFF.	4.38		4.82		4.69		4.97			
10/5/94	DEPTH	5.32	10.57	6.10	11.25	4.46	11.87	1.95	11.39	14.06	14.94
	ELEV.	582.02	577.81	582.13	577.47	582.25	577.70	581.79	576.97	577.29	576.97
	DIFF.	4.21		4.66		4.55		4.82			
10/6/94	DEPTH	5.28	10.54	6.11	11.21	4.55	11.88	1.94	11.38	14.10	14.90
	ELEV.	582.06	577.84	582.12	577.51	582.16	577.69	581.80	576.98	577.25	577.01
	DIFF.	4.22		4.61		4.47		4.82			

TABL 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/7/94	DEPTH	5.30	10.52	6.10	11.19	4.62	11.80	1.95	11.27	14.00	14.84
	ELEV.	582.04	577.86	582.13	577.53	582.09	577.77	581.79	577.09	577.35	577.07
	DIFF.	4.18		4.60		4.32		4.70			
10/9/94	DEPTH	5.00	10.60	5.73	11.20	4.3	11.93	1.83	11.30	14.08	14.95
	ELEV.	582.34	577.78	582.50	577.52	582.41	577.64	581.91	577.06	577.27	576.96
	DIFF.	4.56		4.98		4.77		4.85			
10/10/94	DEPTH	4.88	10.41	5.72	10.80	4.22	11.63	1.85	11.24	13.85	14.75
	ELEV.	582.46	577.97	582.51	577.92	582.49	577.94	581.89	577.12	577.50	577.16
	DIFF.	4.49		4.59		4.55		4.77			
10/11/94	DEPTH	4.90	10.42	5.72	11.05	4.28	11.70	1.87	11.16	13.90	14.75
	ELEV.	582.44	577.96	582.51	577.67	582.43	577.87	581.87	577.20	577.45	577.16
	DIFF.	4.48		4.84		4.56		4.67			
10/13/94	DEPTH	4.92	10.40	5.81	10.93	4.27	11.58	1.82	11.00	13.75	14.58
	ELEV.	582.42	577.98	582.42	577.79	582.44	577.99	581.92	577.36	577.60	577.33
	DIFF.	4.44		4.63		4.45		4.56			
10/14/94	DEPTH	4.95	10.32	5.73	10.95	4.25	11.60	1.87	11.00	13.75	14.57
	ELEV.	582.39	578.06	582.50	577.77	582.46	577.97	581.87	577.36	577.60	577.34
	DIFF.	4.33		4.73		4.49		4.51			
10/15/94	DEPTH	4.98	10.30	5.76	10.90	4.2	11.55	1.75	10.95	13.70	14.52
	ELEV.	582.36	578.08	582.47	577.82	582.51	578.02	581.99	577.41	577.65	577.39
	DIFF.	4.28		4.65		4.49		4.58			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/16/94	DEPTH	5.00	10.31	5.80	10.90	4.22	11.54	1.76	10.96	13.72	14.54
	ELEV.	582.34	578.07	582.43	577.82	582.49	578.03	581.98	577.40	577.63	577.37
	DIFF.	4.27		4.61		4.46		4.58			
10/17/94	DEPTH	4.87	10.23	5.63	10.80	4.11	11.45	1.65	10.80	13.60	14.37
	ELEV.	582.47	578.15	582.60	577.92	582.60	578.12	582.09	577.56	577.75	577.54
	DIFF.	4.32		4.68		4.48		4.53			
10/18/94	DEPTH	4.85	10.18	5.67	10.75	4.15	11.38	1.80	10.71	13.50	14.26
	ELEV.	582.49	578.20	582.56	577.97	582.56	578.19	581.94	577.65	577.85	577.65
	DIFF.	4.29		4.59		4.37		4.29			
10/20/94	DEPTH	4.87	10.15	5.73	10.79	4.18	11.40	1.85	10.70	22.00	14.28
	ELEV.	582.47	578.23	582.50	577.93	582.53	578.17	581.89	577.66	569.35	577.63
	DIFF.	4.24		4.57		4.36		4.23			
10/21/94	DEPTH	4.90	10.11	5.75	10.97	4.19	11.54	1.87	10.68	21.90	14.29
	ELEV.	582.44	578.27	582.48	577.75	582.52	578.03	581.87	577.68	569.45	577.62
	DIFF.	4.17		4.73		4.49		4.19			
10/23/94	DEPTH	4.95	10.24	5.74	11.38	4.24	11.93	1.90	10.92	22.90	14.62
	ELEV.	582.39	578.14	582.49	577.34	582.47	577.64	581.84	577.44	568.45	577.29
	DIFF.	4.25		5.15		4.83		4.40			
10/24/94	DEPTH	4.97	10.30	5.80	11.53	4.26	12.07	2.00	11.04	23.30	14.72
	ELEV.	582.37	578.08	582.43	577.19	582.45	577.50	581.74	577.32	568.05	577.19
	DIFF.	4.29		5.24		4.95		4.42			

TABL. .2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/25/94	DEPTH	5.08	10.40	5.74	11.69	4.31	12.24	1.98	11.20	23.40	14.90
	ELEV.	582.26	577.98	582.49	577.03	582.40	577.33	581.76	577.16	567.95	577.01
	DIFF.	4.28		5.46		5.07		4.60			
10/26/94	DEPTH	5.03	10.47	5.80	11.83	4.3	12.39	1.90	11.30	23.62	15.01
	ELEV.	582.31	577.91	582.43	576.89	582.41	577.18	581.84	577.06	567.73	576.90
	DIFF.	4.40		5.54		5.23		4.78			
10/27/94	DEPTH	5.02	10.50	5.84	11.95	4.32	12.47	1.90	11.32	23.60	15.05
	ELEV.	582.32	577.88	582.39	576.77	582.39	577.10	581.84	577.04	567.75	576.86
	DIFF.	4.44		5.62		5.29		4.80			
10/29/94	DEPTH	5.03	10.56	5.77	12.25	4.31	12.75	2.15	11.46	23.65	15.17
	ELEV.	582.31	577.82	582.46	576.47	582.40	576.82	581.59	576.90	567.70	576.74
	DIFF.	4.49		5.99		5.58		4.69			
10/31/94	DEPTH	4.52	10.70	5.30	12.40	3.79	13.00	1.67	11.60	23.60	15.35
	ELEV.	582.82	577.68	582.93	576.32	582.92	576.57	582.07	576.76	567.75	576.56
	DIFF.	5.14		6.61		6.35		5.31			
11/1/94	DEPTH	4.40	10.75	5.25	12.59	3.68	13.10	1.51	11.67	23.70	15.41
	ELEV.	582.94	577.63	582.98	576.13	583.03	576.47	582.23	576.69	567.65	576.50
	DIFF.	5.31		6.85		6.56		5.54			
11/3/94	DEPTH	4.60	10.82	5.32	12.81	3.92	13.31	1.65	11.85	23.85	15.62
	ELEV.	582.74	577.56	582.91	575.91	582.79	576.26	582.09	576.51	567.50	576.29
	DIFF.	5.18		7.00		6.53		5.58			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/4/94	DEPTH	4.58	10.83	5.38	12.85	3.85	13.35	1.66	11.86	23.84	15.63
	ELEV.	582.76	577.55	582.85	575.87	582.86	576.22	582.08	576.50	567.51	576.28
	DIFF.	5.21		6.98		6.64		5.58			
11/6/94	DEPTH	4.27	11.07	5.20	13.22	3.65	13.78	1.55	12.29	23.80	16.00
	ELEV.	583.07	577.31	583.03	575.50	583.06	575.79	582.19	576.07	567.55	575.91
	DIFF.	5.76		7.53		7.27		6.12			
11/7/94	DEPTH	4.23	10.98	5.15	13.16	3.68	13.69	1.50	12.18	23.90	15.90
	ELEV.	583.11	577.40	583.08	575.56	583.03	575.88	582.24	576.18	567.45	576.01
	DIFF.	5.71		7.52		7.15		6.06			
11/8/94	DEPTH	4.30	10.98	5.25	13.15	3.67	13.68	1.68	12.10	23.60	15.82
	ELEV.	583.04	577.40	582.98	575.57	583.04	575.89	582.06	576.26	567.75	576.09
	DIFF.	5.64		7.41		7.15		5.80			
11/10/94	DEPTH	4.17	11.15	5.20	13.28	3.77	13.90	1.55	12.38	23.50	16.05
	ELEV.	583.17	577.23	583.03	575.44	582.94	575.67	582.19	575.98	567.85	575.86
	DIFF.	5.94		7.59		7.27		6.21			
11/11/94	DEPTH	4.32	11.13	5.23	13.31	3.8	13.90	1.60	12.34	23.65	16.05
	ELEV.	583.02	577.25	583.00	575.41	582.91	575.67	582.14	576.02	567.70	575.86
	DIFF.	5.77		7.59		7.24		6.12			
11/12/94	DEPTH	4.36	11.16	5.27	13.37	3.82	13.94	1.68	12.34	23.70	16.05
	ELEV.	582.98	577.22	582.96	575.35	582.89	575.63	582.06	576.02	567.65	575.86
	DIFF.	5.76		7.61		7.26		6.04			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/14/94	DEPTH	4.39	11.30	5.20	13.56	3.76	14.00	1.70	12.50	23.65	16.19
	ELEV.	582.95	577.08	583.03	575.16	582.95	575.57	582.04	575.86	567.70	575.72
	DIFF.	5.87		7.87		7.38		6.18			
11/16/94	DEPTH	4.48	11.30	5.37	13.67	3.81	14.20	1.80	12.54	23.60	16.28
	ELEV.	582.86	577.08	582.86	575.05	582.90	575.37	581.94	575.82	567.75	575.63
	DIFF.	5.78		7.81		7.53		6.12			
11/17/94	DEPTH	4.48	11.35	5.39	13.70	3.92	14.27	1.72	12.57	23.00	16.25
	ELEV.	582.86	577.03	582.84	575.02	582.79	575.30	582.02	575.79	568.35	575.66
	DIFF.	5.83		7.82		7.49		6.23			
11/18/94	DEPTH	4.53	11.47	5.40	13.82	3.95	14.45	1.80	12.73	21.30	16.48
	ELEV.	582.81	576.91	582.83	574.90	582.76	575.12	581.94	575.63	570.05	575.43
	DIFF.	5.90		7.93		7.64		6.31			
11/20/94	DEPTH	4.55	11.40	5.37	13.65	3.87	14.25	1.70	12.55	21.00	16.27
	ELEV.	582.79	576.98	582.86	575.07	582.84	575.32	582.04	575.81	570.35	575.64
	DIFF.	5.81		7.79		7.52		6.23			
11/20/94	DEPTH	4.54	11.30	5.35	13.60	3.85	14.24	1.71	12.52	21.15	16.25
	ELEV.	582.80	577.08	582.88	575.12	582.86	575.33	582.03	575.84	570.20	575.66
	DIFF.	5.72		7.76		7.53		6.19			
11/21/94	DEPTH	4.52	11.50	5.39	13.72	3.91	14.34	1.64	12.58	21.40	16.36
	ELEV.	582.82	576.88	582.84	575.00	582.80	575.23	582.10	575.78	569.95	575.55
	DIFF.	5.94		7.84		7.57		6.32			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/21/94	DEPTH	4.58	11.62	5.53	13.94	3.96	14.58	1.70	12.69	21.00	16.48
	ELEV.	582.76	576.76	582.70	574.78	582.75	574.99	582.04	575.67	570.35	575.43
	DIFF.	6.00		7.92		7.76		6.37			
11/23/94	DEPTH	4.65	11.61	5.45	13.90	4.03	14.53	1.75	12.85	21.00	16.55
	ELEV.	582.69	576.77	582.78	574.82	582.68	575.04	581.99	575.51	570.35	575.36
	DIFF.	5.92		7.96		7.64		6.48			
11/25/94	DEPTH	4.70	11.65	5.50	13.95	4.03	14.57	1.79	12.87	21.10	16.80
	ELEV.	582.64	576.73	582.73	574.77	582.68	575.00	581.95	575.49	570.25	575.11
	DIFF.	5.91		7.96		7.68		6.46			
11/27/94	DEPTH	4.60	11.60	5.60	13.90	4.1	14.55	1.80	12.85	21.00	16.74
	ELEV.	582.74	576.78	582.63	574.82	582.61	575.02	581.94	575.51	570.35	575.17
	DIFF.	5.96		7.81		7.59		6.43			
11/28/94	DEPTH	4.29	11.73	5.14	13.90	3.68	14.55	1.60	12.79	21.00	16.75
	ELEV.	583.05	576.65	583.09	574.82	583.03	575.02	582.14	575.57	570.35	575.16
	DIFF.	6.40		8.27		8.01		6.57			
11/28/94	DEPTH	4.35	11.80	5.15	14.03	3.75	14.70	1.52	12.95	21.00	16.80
	ELEV.	582.99	576.58	583.08	574.69	582.96	574.87	582.22	575.41	570.35	575.11
	DIFF.	6.41		8.39		8.09		6.81			
11/29/94	DEPTH	4.47	11.82	5.37	14.07	3.87	14.71	1.70	13.05	21.10	16.76
	ELEV.	582.87	576.56	582.86	574.65	582.84	574.86	582.04	575.31	570.25	575.15
	DIFF.	6.31		8.21		7.98		6.73			

TABLE 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/29/94	DEPTH	4.50	11.81	5.35	14.05	3.89	14.69	1.72	13.05	21.00	16.75
	ELEV.	582.84	576.57	582.88	574.67	582.82	574.88	582.02	575.31	570.35	575.16
	DIFF.	6.27		8.21		7.94		6.71			
11/30/94	DEPTH	4.55	11.85	5.41	14.08	3.94	14.73	1.85	13.10	21.05	16.80
	ELEV.	582.79	576.53	582.82	574.64	582.77	574.84	581.89	575.26	570.30	575.11
	DIFF.	6.26		8.18		7.93		6.63			
11/30/94	DEPTH	4.55	11.80	5.45	14.03	3.91	14.70	1.82	13.03	21.00	16.80
	ELEV.	582.79	576.58	582.78	574.69	582.80	574.87	581.92	575.33	570.35	575.11
	DIFF.	6.21		8.09		7.93		6.59			
12/1/94	DEPTH	4.60	11.80	5.50	14.03	4	14.69	1.88	13.00	21.05	16.66
	ELEV.	582.74	576.58	582.73	574.69	582.71	574.88	581.86	575.36	570.30	575.25
	DIFF.	6.16		8.04		7.83		6.50			
12/1/94	DEPTH	4.58	11.78	5.49	14.01	3.9	14.58	1.80	12.90	21.00	16.76
	ELEV.	582.76	576.60	582.74	574.71	582.81	574.99	581.94	575.46	570.35	575.15
	DIFF.	6.16		8.03		7.82		6.48			
12/2/94	DEPTH	4.56	11.82	5.47	14.03	4.02	14.70	1.84	12.98	21.10	16.80
	ELEV.	582.78	576.56	582.76	574.69	582.69	574.87	581.90	575.38	570.25	575.11
	DIFF.	6.22		8.07		7.82		6.52			
12/2/94	DEPTH	4.67	11.84	5.43	14.03	4	14.69	1.90	12.97	21.00	16.80
	ELEV.	582.67	576.54	582.80	574.69	582.71	574.88	581.84	575.39	570.35	575.11
	DIFF.	6.13		8.11		7.83		6.45			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/4/94	DEPTH	4.93	11.88	5.47	14.05	4.02	14.71	1.90	13.00	21.00	16.69
	ELEV.	582.41	576.50	582.76	574.67	582.69	574.86	581.84	575.36	570.35	575.22
	DIFF.	5.91		8.09		7.83		6.48			
12/5/94	DEPTH	4.74	11.92	5.47	14.10	4	14.82	1.85	13.10	21.00	16.75
	ELEV.	582.60	576.46	582.76	574.62	582.71	574.75	581.89	575.26	570.35	575.16
	DIFF.	6.14		8.14		7.96		6.63			
12/5/94	DEPTH	4.74	11.98	5.45	14.16	4	14.82	1.84	13.14	21.03	16.83
	ELEV.	582.60	576.40	582.78	574.56	582.71	574.75	581.90	575.22	570.32	575.08
	DIFF.	6.20		8.22		7.96		6.68			
12/6/94	DEPTH	4.80	12.00	5.50	14.18	4.01	14.81	1.88	13.18	21.10	16.86
	ELEV.	582.54	576.38	582.73	574.54	582.70	574.76	581.86	575.18	570.25	575.05
	DIFF.	6.16		8.19		7.94		6.68			
12/6/94	DEPTH	4.74	11.95	5.50	14.15	4	14.79	1.82	13.12	21.10	16.84
	ELEV.	582.60	576.43	582.73	574.57	582.71	574.78	581.92	575.24	570.25	575.07
	DIFF.	6.17		8.16		7.93		6.68			
12/7/94	DEPTH	4.28	12.10	5.03	14.25	3.58	14.90	1.60	13.19	21.12	16.95
	ELEV.	583.06	576.28	583.20	574.47	583.13	574.67	582.14	575.17	570.23	574.96
	DIFF.	6.78		8.73		8.46		6.97			
12/9/94	DEPTH	4.34	12.10	5.24	14.26	3.75	14.95	1.68	13.24	21.00	17.00
	ELEV.	583.00	576.28	582.99	574.46	582.96	574.62	582.06	575.12	570.35	574.91
	DIFF.	6.72		8.53		8.34		6.94			

TABL. 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/10/94	DEPTH	4.44	11.99	5.32	14.18	3.81	14.80	1.79	13.15	21.00	16.88
	ELEV.	582.90	576.39	582.91	574.54	582.90	574.77	581.95	575.21	570.35	575.03
	DIFF.	6.51		8.37		8.13		6.74			
12/12/94	DEPTH	4.71	12.12	5.51	14.35	4.02	14.95	1.92	13.31	21.10	16.97
	ELEV.	582.63	576.26	582.72	574.37	582.69	574.62	581.82	575.05	570.25	574.94
	DIFF.	6.37		8.35		8.07		6.77			
12/12/94	DEPTH	4.65	12.07	5.47	14.28	3.94	14.90	1.84	13.24	21.10	16.91
	ELEV.	582.69	576.31	582.76	574.44	582.77	574.67	581.90	575.12	570.25	575.00
	DIFF.	6.38		8.32		8.10		6.78			
12/13/94	DEPTH	4.75	12.18	5.50	14.40	3.99	15.00	1.92	13.50	21.10	17.10
	ELEV.	582.59	576.20	582.73	574.32	582.72	574.57	581.82	574.86	570.25	574.81
	DIFF.	6.39		8.41		8.15		6.96			
12/13/94	DEPTH	4.70	12.10	5.50	14.31	3.98	14.97	1.90	13.30	21.00	16.98
	ELEV.	582.64	576.28	582.73	574.41	582.73	574.60	581.84	575.06	570.35	574.93
	DIFF.	6.36		8.32		8.13		6.78			
12/15/94	DEPTH	4.75	12.08	5.45	14.33	3.9	14.95	1.95	13.30	21.00	16.97
	ELEV.	582.59	576.30	582.78	574.39	582.81	574.62	581.79	575.06	570.35	574.94
	DIFF.	6.29		8.39		8.19		6.73			
12/15/94	DEPTH	4.74	12.07	5.45	14.32	3.95	14.96	1.94	13.29	21.00	16.97
	ELEV.	582.60	576.31	582.78	574.40	582.76	574.61	581.80	575.07	570.35	574.94
	DIFF.	6.29		8.38		8.15		6.73			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/16/94	DEPTH	4.72	12.15	5.43	14.32	3.91	14.95	1.94	13.28	21.00	16.93
	ELEV.	582.62	576.23	582.80	574.40	582.80	574.62	581.80	575.08	570.35	574.98
	DIFF.	6.39		8.40		8.18		6.72			
12/16/94	DEPTH	4.70	12.16	5.40	14.32	3.87	14.96	1.89	13.29	21.00	16.95
	ELEV.	582.64	576.22	582.83	574.40	582.84	574.61	581.85	575.07	570.35	574.96
	DIFF.	6.42		8.43		8.23		6.78			
12/18/94	DEPTH	4.50	12.21	5.40	14.45	3.85	15.11	1.88	13.43	21.00	17.13
	ELEV.	582.84	576.17	582.83	574.27	582.86	574.46	581.86	574.93	570.35	574.78
	DIFF.	6.67		8.56		8.40		6.93			
12/18/94	DEPTH	4.48	12.23	5.39	14.44	3.83	15.10	1.86	13.43	21.05	17.11
	ELEV.	582.86	576.15	582.84	574.28	582.88	574.47	581.88	574.93	570.30	574.80
	DIFF.	6.71		8.56		8.41		6.95			
12/20/94	DEPTH	4.64	12.25	5.43	14.46	3.93	15.10	1.90	13.43	21.00	17.11
	ELEV.	582.70	576.13	582.80	574.26	582.78	574.47	581.84	574.93	570.35	574.80
	DIFF.	6.57		8.54		8.31		6.91			
12/20/94	DEPTH	4.63	12.24	5.42	14.45	3.94	15.09	1.91	13.42	21.00	17.10
	ELEV.	582.71	576.14	582.81	574.27	582.77	574.48	581.83	574.94	570.35	574.81
	DIFF.	6.57		8.54		8.29		6.89			
12/22/94	DEPTH	4.70	12.27	5.45	14.47	3.98	15.05	1.94	13.45	21.00	17.12
	ELEV.	582.64	576.11	582.78	574.25	582.73	574.52	581.80	574.91	570.35	574.79
	DIFF.	6.53		8.53		8.21		6.89			

TABLE .
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/22/94	DEPTH	4.68	12.30	5.34	14.44	3.94	15.07	1.90	13.40	21.00	17.10
	ELEV.	582.66	576.08	582.89	574.28	582.77	574.50	581.84	574.96	570.35	574.81
	DIFF.	6.58		8.61		8.27		6.88			
12/23/94	DEPTH	4.68	12.30	5.33	14.43	3.94	15.05	1.88	13.45	21.00	17.17
	ELEV.	582.66	576.08	582.90	574.29	582.77	574.52	581.86	574.91	570.35	574.74
	DIFF.	6.58		8.61		8.25		6.95			
12/23/94	DEPTH	4.66	12.31	5.32	14.43	3.95	15.04	1.86	13.45	21.00	17.18
	ELEV.	582.68	576.07	582.91	574.29	582.76	574.53	581.88	574.91	570.35	574.73
	DIFF.	6.61		8.62		8.23		6.97			
12/24/94	DEPTH	4.69	12.33	5.35	14.47	3.98	15.08	1.89	13.47	21.00	17.20
	ELEV.	582.65	576.05	582.88	574.25	582.73	574.49	581.85	574.89	570.35	574.71
	DIFF.	6.60		8.63		8.24		6.96			
12/27/94	DEPTH	4.72	12.35	5.39	14.53	4	15.15	1.90	13.49	21.00	17.22
	ELEV.	582.62	576.03	582.84	574.19	582.71	574.42	581.84	574.87	570.35	574.69
	DIFF.	6.59		8.65		8.29		6.97			
12/28/94	DEPTH	4.73	12.46	5.52	14.65	3.98	15.30	2.01	13.60	21.10	17.30
	ELEV.	582.61	575.92	582.71	574.07	582.73	574.27	581.73	574.76	570.25	574.61
	DIFF.	6.69		8.64		8.46		6.97			
12/28/94	DEPTH	4.76	12.40	5.50	14.62	3.95	15.26	1.95	13.57	21.05	17.26
	ELEV.	582.58	575.98	582.73	574.10	582.76	574.31	581.79	574.79	570.30	574.65
	DIFF.	6.60		8.63		8.45		7.00			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/29/94	DEPTH	4.79	12.47	5.53	14.66	4.08	15.31	1.96	13.66	21.08	17.30
	ELEV.	582.55	575.91	582.70	574.06	582.63	574.26	581.78	574.70	570.27	574.61
	DIFF.	6.64		8.64		8.37		7.08			
12/29/94	DEPTH	4.77	12.45	5.54	14.60	4.07	15.27	1.94	13.67	21.00	17.28
	ELEV.	582.57	575.93	582.69	574.12	582.64	574.30	581.80	574.69	570.35	574.63
	DIFF.	6.64		8.57		8.34		7.11			
12/31/94	DEPTH	4.80	12.50	5.58	14.64	4.10	15.31	1.96	13.64	21.05	17.29
	ELEV.	582.54	575.88	582.65	574.08	582.61	574.26	581.78	574.72	570.30	574.62
	DIFF.	6.66		8.57		8.35		7.06			
1/2/95	DEPTH	4.86	12.50	5.60	14.71	4.18	15.34	2.00	13.69	21.00	17.36
	ELEV.	582.48	575.88	582.63	574.01	582.53	574.23	581.74	574.67	570.35	574.55
	DIFF.	6.60		8.62		8.30		7.07			
1/3/95	DEPTH	4.88	12.56	5.65	14.74	4.20	15.37	2.08	13.71	21.00	17.40
	ELEV.	582.46	575.82	582.58	573.98	582.51	574.20	581.66	574.65	570.35	574.51
	DIFF.	6.64		8.60		8.31		7.01			
1/3/95	DEPTH	4.90	12.54	5.68	14.68	4.19	15.32	2.10	13.68	21.00	17.34
	ELEV.	582.44	575.84	582.55	574.04	582.52	574.25	581.64	574.68	570.35	574.57
	DIFF.	6.60		8.51		8.27		6.96			
1/4/95	DEPTH	4.91	12.60	5.74	14.79	4.26	15.42	2.13	13.77	21.00	17.49
	ELEV.	582.43	575.78	582.49	573.93	582.45	574.15	581.61	574.59	570.35	574.42
	DIFF.	6.65		8.56		8.30		7.02			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/4/95	DEPTH	4.94	12.59	5.75	14.79	4.25	15.42	2.15	13.73	21.00	17.47
	ELEV.	582.40	575.79	582.48	573.93	582.46	574.15	581.59	574.63	570.35	574.44
	DIFF.	6.61		8.55		8.31		6.96			
1/5/95	DEPTH	4.98	12.52	5.74	14.63	4.26	15.29	2.17	13.62	21.00	17.28
	ELEV.	582.36	575.86	582.49	574.09	582.45	574.28	581.57	574.74	570.35	574.63
	DIFF.	6.50		8.40		8.17		6.83			
1/5/95	DEPTH	4.95	12.53	5.75	14.60	4.27	15.25	2.15	13.57	21.00	17.30
	ELEV.	582.39	575.85	582.48	574.12	582.44	574.32	581.59	574.79	570.35	574.61
	DIFF.	6.54		8.36		8.12		6.80			
1/6/95	DEPTH	5.00	12.54	5.83	14.64	4.24	15.30	2.25	13.51	17.60	17.17
	ELEV.	582.34	575.84	582.40	574.08	582.47	574.27	581.49	574.85	573.75	574.74
	DIFF.	6.50		8.32		8.20		6.64			
1/7/95	DEPTH	5.03	12.60	5.74	14.61	4.22	15.36	2.27	13.70	17.42	17.32
	ELEV.	582.31	575.78	582.49	574.11	582.49	574.21	581.47	574.66	573.93	574.59
	DIFF.	6.53		8.38		8.28		6.81			
1/10/95	DEPTH	5.11	12.63	5.89	14.48	4.29	15.15	2.21	13.65	17.05	17.24
	ELEV.	582.23	575.75	582.34	574.24	582.42	574.42	581.53	574.71	574.30	574.67
	DIFF.	6.48		8.10		8.00		6.82			
1/11/95	DEPTH	4.95	12.54	5.80	14.25	4.2	14.94	2.05	13.40	16.93	17.01
	ELEV.	582.39	575.84	582.43	574.47	582.51	574.63	581.69	574.96	574.42	574.90
	DIFF.	6.55		7.96		7.88		6.73			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/12/95	DEPTH	4.95	12.58	5.50	14.19	4.1	14.95		13.42	16.81	16.98
	ELEV.	582.39	575.80	582.73	574.53	582.61	574.62	583.74	574.94	574.54	574.93
	DIFF.	6.59		8.20		7.99		8.80			
1/13/95	DEPTH	5.00	12.60	5.80	14.15	4.2	14.90	2.08	13.40	16.79	16.98
	ELEV.	582.34	575.78	582.43	574.57	582.51	574.67	581.66	574.96	574.56	574.93
	DIFF.	6.56		7.86		7.84		6.70			
1/14/95	DEPTH	5.03	12.60	5.87	14.15	4.21	14.85	2.00	13.39	16.75	16.95
	ELEV.	582.31	575.78	582.36	574.57	582.50	574.72	581.74	574.97	574.60	574.96
	DIFF.	6.53		7.79		7.78		6.77			
1/16/95	DEPTH	5.00	12.58	5.86	14.10	3.85	14.85	2.00	13.48	16.78	17.12
	ELEV.	582.34	575.80	582.37	574.62	582.86	574.72	581.74	574.88	574.57	574.79
	DIFF.	6.54		7.75		8.14		6.86			
1/17/95	DEPTH	4.87	12.57	5.80	14.10	3.82	14.83	1.99	13.40	16.71	17.00
	ELEV.	582.47	575.81	582.43	574.62	582.89	574.74	581.75	574.96	574.64	574.91
	DIFF.	6.66		7.81		8.15		6.79			
1/18/95	DEPTH	4.72	12.43	5.60	13.99	3.82	14.67	1.87	13.27	16.44	16.92
	ELEV.	582.62	575.95	582.63	574.73	582.89	574.90	581.87	575.09	574.91	574.99
	DIFF.	6.67		7.90		7.99		6.78			
1/19/95	DEPTH	4.58	12.38	5.35	13.85	3.8	14.59	1.80	13.15	16.37	16.85
	ELEV.	582.76	576.00	582.83	574.87	582.91	574.98	581.94	575.21	574.98	575.06
	DIFF.	6.76		7.96		7.93		6.73			

TABL. 2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/20/95	DEPTH	4.52	12.30	5.30	13.81	3.8	14.55	1.75	13.10	16.31	16.83
	ELEV.	582.82	576.08	582.88	574.91	582.91	575.02	581.99	575.26	575.04	575.08
	DIFF.	6.74		7.97		7.89		6.73			
1/23/95	DEPTH	4.50	12.30	5.29	13.80	3.74	14.52	1.72	13.00	16.30	16.80
	ELEV.	582.84	576.08	582.89	574.92	582.97	575.05	582.02	575.36	575.05	575.11
	DIFF.	6.76		7.97		7.92		6.66			
1/25/95	DEPTH	4.48	12.29	5.25	13.70	3.76	14.50	1.70	13.00	16.27	16.80
	ELEV.	582.86	576.09	582.93	575.02	582.95	575.07	582.04	575.36	575.08	575.11
	DIFF.	6.77		7.91		7.88		6.68			
1/27/95	DEPTH	4.40	12.21	5.23	13.66	3.76	14.48	1.55	12.98	16.25	16.70
	ELEV.	582.94	576.17	582.95	575.06	582.95	575.09	582.19	575.38	575.10	575.21
	DIFF.	6.77		7.89		7.86		6.81			
1/30/95	DEPTH	4.41	12.20	5.66	13.89	3.9	14.28	Frozen	13.00	16.05	16.70
	ELEV.	582.93	576.18	582.52	574.83	582.81	575.29	#VALUE!	575.36	575.30	575.21
	DIFF.	6.75		7.69		7.52		#VALUE!			
2/1/95	DEPTH	4.40	12.18	5.65	13.84	3.95	14.28	Frozen	13.02	16.04	16.72
	ELEV.	582.94	576.20	582.53	574.88	582.76	575.29	#VALUE!	575.34	575.31	575.19
	DIFF.	6.74		7.65		7.47		#VALUE!			
2/4/95	DEPTH	4.38	12.20	5.64	13.86	3.94	14.22	Frozen	13.00	16.05	16.70
	ELEV.	582.96	576.18	582.54	574.86	582.77	575.35	#VALUE!	575.36	575.30	575.21
	DIFF.	6.78		7.68		7.42		#VALUE!			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/6/95	DEPTH	4.37	12.20	5.65	13.84	3.95	14.20	--	13.01	16.04	16.69
	ELEV.	582.97	576.18	582.53	574.88	582.76	575.37	#VALUE!	575.35	575.31	575.22
	DIFF.	6.79		7.65		7.39		#VALUE!			
2/8/95	DEPTH	4.34	12.21	5.62	13.85	3.95	14.22	--	13.00	16.02	16.67
	ELEV.	583.00	576.17	582.56	574.87	582.76	575.35	#VALUE!	575.36	575.33	575.24
	DIFF.	6.83		7.69		7.41		#VALUE!			
2/10/95	DEPTH	4.30	12.22	5.60	13.84	3.94	14.21	--	12.89	16.00	16.65
	ELEV.	583.04	576.16	582.58	574.88	582.77	575.36	#VALUE!	575.47	575.35	575.26
	DIFF.	6.88		7.70		7.41		#VALUE!			
2/13/95	DEPTH	4.31	12.20	5.60	13.81	3.9	14.20	--	12.89	15.95	16.60
	ELEV.	583.03	576.18	582.58	574.91	582.81	575.37	#VALUE!	575.47	575.40	575.31
	DIFF.	6.85		7.67		7.44		#VALUE!			
2/15/95	DEPTH	4.30	12.19	5.59	13.80	3.86	14.21	--	12.90	15.97	16.59
	ELEV.	583.04	576.19	582.59	574.92	582.85	575.36	#VALUE!	575.46	575.38	575.32
	DIFF.	6.85		7.67		7.49		#VALUE!			
2/17/95	DEPTH	4.66	12.10	5.60	13.75	4.1	14.50	--	12.80	15.81	16.50
	ELEV.	582.68	576.28	582.58	574.97	582.61	575.07	#VALUE!	575.56	575.54	575.41
	DIFF.	6.40		7.61		7.54		#VALUE!			
2/21/95	DEPTH	4.95	12.00	5.55	13.74	4.15	14.70	--	12.61	15.55	16.47
	ELEV.	582.39	576.38	582.63	574.98	582.56	574.87	#VALUE!	575.75	575.80	575.44
	DIFF.	6.01		7.65		7.69		#VALUE!			

TABLE .2
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/24/95	DEPTH	4.91	11.87	5.59	12.99	4.14	13.67	2.09	12.59	15.61	16.17
	ELEV.	582.43	576.51	582.59	575.73	582.57	575.90	581.65	575.77	575.74	575.74
	DIFF.	5.92		6.86		6.67		5.88			
2/25/95	DEPTH	4.92	11.90	5.62	12.95	4.15	13.61	2.10	12.57	15.59	16.17
	ELEV.	582.42	576.48	582.56	575.77	582.56	575.96	581.64	575.79	575.76	575.74
	DIFF.	5.94		6.79		6.60		5.85			
3/1/95	DEPTH	4.91	11.93	5.61	12.94	4.15	13.60	2.08	12.58	15.58	16.15
	ELEV.	582.43	576.45	582.57	575.78	582.56	575.97	581.66	575.78	575.77	575.76
	DIFF.	5.98		6.79		6.59		5.88			
3/3/95	DEPTH	4.90	11.92	5.60	12.91	4.17	13.59	2.06	12.55	15.55	16.16
	ELEV.	582.44	576.46	582.58	575.81	582.54	575.98	581.68	575.81	575.80	575.75
	DIFF.	5.98		6.77		6.56		5.87			
3/7/95	DEPTH	4.80	11.79	5.53	12.73	4	13.41	2.00	12.41	15.31	16.01
	ELEV.	582.54	576.59	582.65	575.99	582.71	576.16	581.74	575.95	576.04	575.90
	DIFF.	5.95		6.66		6.55		5.79			
3/10/95	DEPTH	4.61	11.70	5.49	12.66	3.9	13.37	--	12.30	15.25	15.88
	ELEV.	582.73	576.68	582.69	576.06	582.81	576.20	#VALUE!	576.06	576.10	576.03
	DIFF.	6.05		6.63		6.61		#VALUE!			
3/13/95	DEPTH	4.55	11.62	5.45	12.61	3.85	13.35	1.95	12.22	15.21	15.85
	ELEV.	582.79	576.76	582.73	576.11	582.86	576.22	581.79	576.14	576.14	576.06
	DIFF.	6.03		6.62		6.64		5.65			

TABLE 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/16/95	DEPTH	4.51	11.60	5.41	12.60	3.8	13.36	1.90	12.25	15.20	15.86
	ELEV.	582.83	576.78	582.77	576.12	582.91	576.21	581.84	576.11	576.15	576.05
	DIFF.	6.05		6.65		6.70		5.73			
3/20/95	DEPTH	4.48	11.57	5.40	12.55	3.77	13.29	1.89	12.18	15.15	15.81
	ELEV.	582.86	576.81	582.78	576.17	582.94	576.28	581.85	576.18	576.20	576.10
	DIFF.	6.05		6.61		6.66		5.67			
3/23/95	DEPTH	4.41	11.54	5.52	12.50	4	13.22	1.85	12.19	15.15	15.82
	ELEV.	582.93	576.84	582.66	576.22	582.71	576.35	581.89	576.17	576.20	576.09
	DIFF.	6.09		6.44		6.36		5.72			
3/24/95	DEPTH	4.63	11.49	5.50	12.46	3.99	13.13	1.86	12.19		
	ELEV.	582.71	576.89	582.68	576.26	582.72	576.44	581.88	576.17	591.35	591.91
	DIFF.	5.82		6.42		6.28		5.71			
3/30/95	DEPTH	4.49	11.41	5.43	12.38	3.96	13.09		12.05	15.06	15.66
	ELEV.	582.85	576.97	582.75	576.34	582.75	576.48	583.74	576.31	576.29	576.25
	DIFF.	5.88		6.41		6.27		7.43			
3/31/95	DEPTH	4.53	11.38	5.43	12.34	3.95	13.02		12.08	15.02	15.62
	ELEV.	582.81	577.00	582.75	576.38	582.76	576.55	583.74	576.28	576.33	576.29
	DIFF.	5.81		6.37		6.21		7.46			
4/3/95	DEPTH	4.62	11.33	5.47	12.29	4.01	12.99		11.93	14.97	15.54
	ELEV.	582.72	577.05	582.71	576.43	582.70	576.58	583.74	576.43	576.38	576.37
	DIFF.	5.67		6.28		6.12		7.31			

TABL. 12
(Continued)
SLIP 3 GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-1	P-1	W-2	P-2	W-3	P-3	W-4	P-4	R-1	R-2
	T.O.R.	587.34	588.38	588.23	588.72	586.71	587.70	583.74	584.88	591.35	591.91
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/25/95	DEPTH	4.30	10.48	5.23	11.49	3.65	12.19	1.61	11.28	14.18	14.66
	ELEV.	583.04	577.90	582.95	577.23	583.06	577.38	582.13	577.08	577.17	577.25
	DIFF.	5.14		5.72		5.68		5.05			
7/7/95	DEPTH	4.57	9.99	5.39	10.85	3.94	11.52	1.84	10.58	13.52	14.17
	ELEV.	582.77	578.39	582.79	577.87	582.77	578.05	581.90	577.78	577.83	577.74
	DIFF.	4.38		4.92		4.72		4.12			
7/26/95	DEPTH	4.40	9.77	5.22	10.51	3.77	11.17	1.68	10.27	13.18	13.82
	ELEV.	582.94	578.61	582.96	578.21	582.94	578.40	582.06	578.09	578.17	578.09
	DIFF.	4.33		4.75		4.54		3.97			
8/10/95	DEPTH	4.39	9.55	5.15	10.29	3.71	10.95	1.60	10.01	12.95	13.58
	ELEV.	582.95	578.83	583.03	578.43	583.00	578.62	582.14	578.35	578.40	578.33
	DIFF.	4.12		4.60		4.38		3.79			
8/24/95	DEPTH	4.45	9.40	5.26	10.15	3.84	10.85	1.74	9.95	12.85	13.50
	ELEV.	582.89	578.98	582.92	578.57	582.87	578.72	582.00	578.41	578.50	578.41
	DIFF.	3.91		4.35		4.15		3.59			

TABLE 13

PCB RESULTS
QUARTERLY MONITORING WELL SAMPLING
WAUKEGAN HARBOR REMEDIAL ACTION

	SLIP NO. 3 CONTAINMENT CELL				EAST CONTAINMENT CELL				WEST CONTAINMENT CELL			
Quarter	W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-9	W-10	W-11	W-12
3-rd 1992	<1.0 ppb	1.4 ppb	<1.0 ppb	<1.0 ppb	--	--	--	--	2.0 ppb	39 ppb	1.7 ppb	<1.0 ppb
4-th 1992	<1.0 ppb	1.4 ppb	3.4 ppb	<1.0 ppb	--	--	--	--	<1.0 ppb	17 ppb	1.9 ppb	<1.0 ppb
1-st 1993	1.8 ppb	1.2 ppb	1.5 ppb	<1.0 ppb	--	--	--	--	<1.0 ppb	14 ppb	2.4 ppb	3.1 ppb
2-nd 1993	3.9 ppb	<1.0 ppb	<1.0 ppb	5.2 ppb	3.1 ppb	4.2 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	4.4 ppb	<1.0 ppb	<1.0 ppb
3-rd 1993	<1.0 ppb	<1.0ppb	<1.0 ppb	<1.0 ppb	3.0 ppb	4.2 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	27 ppb(1)	<1.0 ppb	<1.0 ppb
4-th 1993	<1.0 ppb	<1.0 ppb	<1.0	<1.0 ppb	11.0 ppb	<1.0 ppb	1.0 ppb	1.0 ppb	<1.0 ppb	52 ppb(2)	2.0 ppb	<1.0 ppb
1-st 1994	<1.0 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	8.0 ppb	<1.0 ppb	1.0 ppb	1.0 ppb	<1.0 ppb	2.0 ppb	5.0 ppb	<1.0 ppb
2-nd 1994	<1.0 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	4.0 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	4.0 ppb	3.0 ppb	<1.0 ppb
3-rd 1994	2.0 ppb	<1.0 ppb	1.0 ppb	<1.0 ppb	3.0 ppb	1.0 ppb	<1.0 ppb	2.0 ppb	<1.0 ppb	50 ppb(3)	5.0 ppb	<1.0 ppb
4-th 1994	<1.0 ppb	<1.0 ppb	42 ppb (4)	<1.0 ppb	<1.0 ppb	<1.0 ppb	<1.0 ppb	2.0 ppb	<1.0 ppb	22 ppb (5)	5.0 ppb	<1.0 ppb
Background (6)	1.9 ppb	1.3 ppb	1.7 ppb	2.1 ppb	6.3 ppb	2.6 ppb	1.0 ppb	1.0 ppb	1.3 ppb	1.9 ppb	1.8 ppb	1.5 ppb

Notes:
1. The monitoring well resampled on September 27, 1993. The result of the resampling was 15 ppb.
2. The monitoring well was resampled on December 2, 1993. The result of the resampling was 3.0 ppb.
3. The monitoring well was resampled on September 12, 1994. The result of the resampling was 3.0 ppb.
4. The monitoring well was resampled on December 8, 1994. The result of the resampling was 13 ppb.
5. The monitoring well was resampled on December 8, 1994. The result of the resampling was 14 ppb.
6. Background is defined in the the Operation and Maintenance Plan (Canonie, 1988b), as the average of the first four quarterly sampling events occurring after well installation.

TABLE 14

CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Effluent	Lead Carbon Effluent	Cartridge Filter	System Influent	System Influent Duplicate	Blank	Containment Cell	Notes
12/8/92		3.1		<1.0			West	Category 5 on-line at 2:00 pm.
12/9/92							West	
12/10/92							West	
12/11/92							West	
12/12/92							West	
12/13/92							West	
12/14/92							West	
12/15/92							West	
12/16/92		<1.0		<1.0			West	
12/17/92							West	
12/18/92							West	
12/19/92		<1.0					West	
12/20/92							West	
12/21/92							West	
12/22/92							West	
12/23/92		7.5					West	
12/24/92							West	
12/25/92							West	
12/26/92							West	
12/27/92							West	
12/28/92		<1.0		<1.0			West	Category 5 was shutdown for repairs.
1/10/93		<1.0		<1.0			West	Category 5 on-line at 2:00 pm.
1/11/93							West	
1/12/93							West	
1/13/93							West	
1/14/93							West	
1/15/93							West	
1/16/93							West	
1/17/93							West	
1/18/93		6					West	
1/19/93							West	
1/20/93							West	
1/21/93							West	
1/22/93	<1.0	<1.0					West	
1/23/93							West	
1/24/93							West	
1/25/93		<1.0					West	

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events. System effluent less than 1.0 ug/l on a 30-day average and all results less than 5.0 ug/l.

TABLE 14

CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Effluent	Lead Carbon Effluent	Cartridge Filter	System Influent	System Influent Duplicate	Blank	Containment Cell	Notes
1/26/93							West	
1/27/93							West	
1/28/93							West	
1/29/93		<1.0					West	
1/30/93							West	
1/31/93							West	
2/1/93		<1.0					West	
2/2/93							West	
2/3/93							West	
2/4/93							West	
2/5/93							West	
2/6/93							West	
2/7/93							West	
2/8/93							West	
2/9/93		<1.0	<1.0				West	
2/10/93							West	Category 5 was taken off-line at 8:00 am.
7/28/93	<1.0	<1.0	<1.0	1			East	
8/4/93							East	
8/6/93		<1.0		<1.0			East	
8/10/93		<1.0		<1.0			East	
8/16/93							East	
8/17/93	<1.0	<1.0		<1.0			East	
8/23/93							East	
8/24/93	<1.0			<1.0		<1.0	East	
8/30/93		<1.0		<1.0			East	
9/7/93	<1.0	2		7			West	
9/13/93							West	
9/16/93		<1.0		48	13		West	
9/20/93		<1.0		5			West	
9/28/93		<1.0		4			West	
10/4/93	<1.0	<1.0		2			West	
10/11/93		<1.0		<1.0	<1.0		East	
10/18/93		<1.0		<1.0			East	
10/25/93		<1.0		<1.0			East	
11/1/93	<1.0	<1.0		<1.0			East	
11/8/93		<1.0		<1.0			East	
11/15/93		<1.0		1.5		<1.0	East	
11/22/93		<1.0		2			West	

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events. System effluent less than 1.0 ug/l on a 30-day average and all results less than 5.0 ug/l.

TABLE 14

CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Effluent	Lead Carbon Effluent	Cartridge Filter	System Influent	System Influent Duplicate	Blank	Containment Cell	Notes
11/23/93							West	
11/29/93		<1.0		11	4	<1.0	West	
12/6/93	<1.0	<1.0		22			West	
12/13/93		<1.0		7			West	
12/20/93		<1.0		1		<1.0	West	
12/27/93		<1.0		1			West	
1/3/94	<1.0	<1.0		1			West	
1/10/94		<1.0		1			West	
1/11/94							West	
1/17/94		<1.0		<1.0	<1.0	<1.0	West	
1/26/94	<1.0	<1.0		<1.0	<1.0	<1.0	West	
1/31/94	<1.0	<1.0		<1.0			West	
2/3/94							West	
2/7/94		<1.0		<1.0			West	
2/14/94		<1.0		<1.0	<1.0	<1.0	West	
2/21/94		<1.0		<1.0	<1.0	<1.0	West	
/25/94							West	
2/28/94		<1.0		<1.0			West	
3/7/94	<1.0	<1.0		<1.0			West	
3/15/94		<1.0		<1.0			West	
3/21/94		<1.0		<1.0			West	
3/28/94		<1.0		<1.0	<1.0	<1.0	West	
4/4/94	<1.0	<1.0		<1.0			West	
4/11/94		<1.0		1			West	
4/21/94		<1.0		<1.0	<1.0	<1.0	West	
4/25/94		<1.0		<1.0			West	
5/2/94	<1.0	<1.0		<1.0			West	
5/9/94		<1.0		<1.0			West	
5/17/94		<1.0		<1.0			West	
5/23/94		<1.0		<1.0	<1.0	<1.0	West	
5/31/94		<1.0		<1.0			West	
6/6/94	<1.0	<1.0		<1.0			West	
6/13/94		<1.0		<1.0			West	
6/20/94		<1.0		<1.0			West	
6/27/94							West	
7/5/94		<1.0		2			West	
7/6/94							West	
7/8/94	<1.0						West	

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events. System effluent less than 1.0 ug/l on a 30-day average and all results less than 5.0 ug/l.

TABLE 14

CATEGORY 5 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Effluent	Lead Carbon Effluent	Cartridge Filter	System Influent	System Influent Duplicate	Blank	Containment Cell	Notes
7/12/94	<1.0	<1.0		<1.0			West	
8/25/94	<1.0	<1.0		4			Slip No. 3	
9/1/94		<1.0		5			Slip No. 3	
9/7/94		<1.0		11	11	<1.0	Slip No. 3	
9/12/94	<1.0	<1.0		10			Slip No. 3	
10/20/94	<1.0	<1.0		6			Slip No. 3	
10/27/94		<1.0		8		<1.0	Slip No. 3	
11/3/94		<1.0		6	7		Slip No. 3	
11/10/94	<1.0	<1.0		14			Slip No. 3	
11/16/94		<1.0		11		<1.0	Slip No. 3	
11/21/94		<1.0		7			Slip No. 3	
11/30/94		<1.0		8	7		Slip No. 3	
12/8/94	<1.0	1		13			Slip No. 3	
12/15/94		<1.0		13		<1.0	Slip No. 3	
12/22/94		<1.0		6.7	6.7		Slip No. 3	
12/29/94		<1.0		10			Slip No. 3	
1/5/95	<1.0	<1.0		10			Slip No. 3	Category 5 shutdown at 8:00 am.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events. System effluent less than 1.0 ug/l on a 30-day average and all results less than 5.0 ug/l.

TABLE 15

UPPER HARBOR TURBIDITY RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Inside Silt Curtain		Outside Silt Curtain		500 Ft From Silt Curtain	
	10-Ft Depth	20-Ft Depth	10-Ft Depth	20-Ft Depth	10-Ft Depth	20-Ft Depth
12/18/91	71.8	83.1	7.1	7.3	7.5	10.5
12/19/91	64.3	55.5	7.5	16.6	8.1	8
12/20/91	51.2	47.8	10.08	10.68	12.5	11.85
1/3/92	8.38	8.8	3.99	4.13	3.5	3.6
1/4/92	5.81	5.5	4.29	4.21	3.64	3.23
1/5/92	3.25	3.21	3.46	2.07	1.89	2.85
1/6/92	6.88	6.79	4.41	4.82	3.42	4.3
1/7/92	7.4	5.75	2.96	3.14	3.12	4.48
1/8/92	8.12	14.81	4.58	3.95	4.78	5.01
1/9/92	6.25	5.94	4.72	4.76	4.64	4.88
1/10/92	7.11	7.5	5.2	5.67	4.9	4.96
1/11/92	6.84	7.03	4.63	4.91	5.06	5.11
1/13/92	5.36	5.6	3.5	2.96	2.53	2.61
1/14/92	7.51	7.99	5.09	6.12	4.23	4.86
1/15/92	12.67	10.72	11.19	10.28	11.9	10.5
1/16/92	9.61	10.01	8.13	7.61	7.23	7.88
1/17/92	14.37	13.38	10.05	9.43	10.53	9.43
1/18/92	12.56	11.81	9.84	9.95	10.04	9.93
1/19/92	10.34	11.2	7.53	8.46	7.31	7.48
1/20/92	10.13	11.03	8.2	8.25	7.93	7.64
1/21/92	12.46	12.27	12.01	15.3	11.89	10.9
1/22/92	19.48	21.5	10.66	10.8	11.84	11.49
1/23/92	16.63	16.4	10.75	11.03	10.94	10.03
1/27/92	9.93	7.17	9.83	7.16	9.88	8.34
1/28/92	15.18	17.2	8.01	8.98	8.2	7.98
1/30/92	11.98	10.82	10.32	10.05	11.31	10.8
1/31/92	11.22	10.93	8.73	9.01	9.53	9.42
2/1/92	7.39	7.61	6.42	5.65	8.17	4.8
2/3/92	10.21	9.51	8.42	7.96	8.49	9.13
2/4/92	10.43	11.01	9.11	9.28	8.93	8.8
2/5/92	16.27	15.25	10.8	10.13	10.04	9.98
2/6/92	14.21	15.18	10.16	10.41	10.1	9.79
2/7/92	14.85	14.44	7.72	6.9	8.37	6.84
2/8/92	13.19	13.62	8.68	8.49	8.31	7.87
2/10/92	11.02	13.08	8.56	7.91	9.32	9.56
2/11/92	21.5	22.5	11.36	8.95	12.5	7.76
2/12/92	13.65	14.27	9.31	9.1	8.73	8.91
2/13/92	22.6	23.5	14.4	13.69	9.92	12.6
2/14/92	16.1	13.72	8.74	8.58	9.07	9.42
2/15/92	13.21	12.49	9.13	8.98	8.62	8.87
2/18/92	21.4	21.7	13.4	12.15	10.95	11.27
2/19/92	18.27	19.53	12.83	11.16	13.63	12.75
2/20/92	17.64	16.82	12.71	12.46	11.81	12.02

TABLE 15

UPPER HARBOR TURBIDITY RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Inside Silt Curtain		Outside Silt Curtain		500 Ft From Silt Curtain	
	10-Ft Depth	20-Ft Depth	10-Ft Depth	20-Ft Depth	10-Ft Depth	20-Ft Depth
2/21/92	12.48	10.06	13.6	16.34	12.11	11.89
2/22/92	12.43	12.69	10.12	9.92	9.81	10.02
2/23/92	13.51	14.2	10.52	10.31	9.69	10.1
2/24/92	15.25	15.61	10.32	10.71	9.94	10.25
2/25/92	13.76	12.81	11.39	10.87	10.66	10.43

Notes:

1. All results are reported in nephelometric turbidity units.
2. Samples were taken during dredging operations in the upper harbor.

TABLE 16

CATEGORY 1 WATER TREATMENT SYSTEM EFFLUENT PCB ANALYTICAL RESULTS WAUKEGAN HARBOR REMEDIAL ACTION (Results in µg/l)

SAMPLE DATE	SYSTEM EFFLUENT	ACTION TAKEN
1/2/92	70	Backwashed sand filter
1/3/92	130	First day of dredging, installed silt screen around suction inlet
1/4/92	14	Increase frequency of backwash and tighten silt screen
1/5/92	6.4	Backwashed sand filters
1/6/92	9.5	Backwashed sand filters
1/7/92	3.4	Backwashed sand filters
1/8/92	9.3	Backwashed sand filters
1/9/92	7.2	Backwashed sand filters
1/10/92	5.1	Backwashed sand filters
1/11/92	5.3	Backwashed sand filters
1/12/92	4.9	Backwashed sand filters
1/13/92	6.2	Backwashed sand filters
1/14/92	4.2	Backwashed sand filters
1/15/92	7.5	Backwashed sand filters
1/16/92	2.5	Backwashed sand filters
1/17/92	13	Backwashed sand filters
1/18/92	9.1	Backwashed sand filters
1/19/92	6.4	Backwashed sand filters
1/20/92	6.5	Backwashed sand filters
1/21/92	3.9	Backwashed sand filters
1/22/92	4.9	Backwashed sand filters
1/23/92	4.5	Backwashed sand filters
1/24/92	6.8	Backwashed sand filters
1/25/92	2.4	Backwashed sand filters
1/26/92	4.0	Backwashed sand filters
1/27/92	3.4	Backwashed sand filters
1/28/92	5.0	Backwashed sand filters
1/29/92	6.4	Backwashed sand filters
1/30/92	5.9	Backwashed sand filters
1/31/92	6.4	Backwashed sand filters
2/1/92	5.9	Backwashed sand filters
2/2/92	7.3	Backwashed sand filters
2/3/92	15	Started checking influent turbidity visually to determine if shutdown is needed.
2/4/92	4.0	Backwashed sand filters
2/5/92	3.2	Backwashed sand filters
2/6/92	27	Suction lines raised and influent flow control valve cut to approximately 25%.
2/7/92	6.0	Backwashed sand filters
2/8/92	5.6	Backwashed sand filters
2/9/92	4.8	Backwashed sand filters
2/10/92	2.1	No longer pumping during dredging; pumping at 100%.

Discharge Standards: Less than effluent average to be 5 ug/l with discharge to be less than 15 ug/l.

TABLE 16

CATEGORY 1 WATER TREATMENT SYSTEM EFFLUENT PCB ANALYTICAL RESULTS WAUKEGAN HARBOR REMEDIAL ACTION (Results in µg/l)

SAMPLE DATE	SYSTEM EFFLUENT	ACTION TAKEN
2/11/92	3.8	Backwashed sand filters
2/12/92	3.2	Backwashed sand filters
2/13/92	6.0	Changed suction ends to draw from sides instead of bottom near silt.
2/14/92	3.3	Backwashed sand filters
2/15/92	3.2	Backwashed sand filters
2/16/92	4.6	Backwashed sand filters
2/17/92	2.7	Backwashed sand filters
2/18/92	2.3	Backwashed sand filters
2/19/92	2.7	Backwashed sand filters
2/20/92	3.7	Backwashed sand filters
2/21/92	6.8	Limit suction to elevation 583.0.
2/22/92		
2/23/92		
2/24/92		
2/25/92	<1.0	
2/26/92	3.2	
2/27/92	<1.0	
2/28/92		
2/29/92	1.8	
3/1/92	1.8	
3/2/92	3.4	
3/3/92	3.3	
3/4/92	3.5	
3/5/92		
3/6/92		
3/7/92	<1.0	
3/8/92		
3/9/92		
3/10/92		
3/11/92	<1.0	
3/12/92	<1.0	
3/13/92	<1.0	
3/14/92	<1.0	
3/15/92	<1.0	
3/16/92	<1.0	
3/17/92	<1.0	
3/18/92	<1.0	
3/19/92	<1.0	System shut down permanently.

Discharge Standards: Less than effluent average to be 5 ug/l with discharge to be less than 15 ug/l.

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
4/14/92					5.6			Started adding polymer 4/14/92.
4/17/92					<1.0	<1.0		
4/18/92					<1.0			
4/19/92					<1.0			
4/20/92					<1.0			
4/21/92					<1.0	1.5		Field blank 1.7 ppb.
4/22/92					1.9			
4/23/92					1.3			Backwashed lead carbon on 4/25/92.
4/24/92					15			
4/25/92					17			Backwashed lead and lag carbon on 4/27/92.
4/26/92					27			
4/27/92					25			
4/28/92					2.7			Backwashed lead and lag carbon on 4/29/92.
4/29/92					39	9.1		Sample collected before backwash.
4/30/92					<1.0	<1.0		
5/1/92					<1.0			
5/2/92					<1.0			
5/3/92					<1.0			
5/4/92					<1.0			System shutdown for cleaning.
5/30/92					<1.0			System back on-line to Upper Harbor. Sand and lead carbon
5/31/92					1.3			will be backwashed and the bag filter replaced daily during operation.
6/2/92					<1.0			
6/3/92					1.1			
6/4/92					<1.0			
6/6/92					2.7			
6/7/92					<1.0			
6/9/92					2.7	<1.0		
6/10/92					<1.0			
6/11/92					<1.0			
6/12/92					<1.0			
6/13/92					<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 17

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
6/14/92					1.5			
6/15/92					<1.0			
6/16/92					<1.0			
6/17/92					1.2	<1.0		
6/18/92					<1.0			
6/19/92					1.4			
6/20/92					<1.0			
6/21/92					<1.0			
6/22/92					<1.0			
6/23/92					<1.0			
6/24/92					1.7	<1.0		
6/25/92					<1.0			
6/26/92					<1.0			
6/27/92					<1.0			
6/28/92					<1.0			
6/29/92					<1.0			
6/30/92					<1.0			
7/1/92					<1.0	<1.0		
7/2/92					<1.0			
7/3/92					<1.0			
7/4/92					<1.0			
7/5/92								
7/6/92					<1.0			
7/7/92					<1.0			
7/8/92					<1.0	<1.0		
7/9/92					<1.0			
7/10/92					<1.0			
7/11/92					<1.0			
7/12/92					23			
7/13/92					48			
7/14/92								

Disch Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
Syste uent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
7/15/92								
7/16/92								
7/17/92								
7/18/92								
7/19/92								
7/20/92								
7/21/92								
7/22/92					<1.0	<1.0		
7/23/92					<1.0			
7/24/92					<1.0			
7/25/92					<1.0			
7/26/92					<1.0			
7/27/92					<1.0	<1.0		
7/28/92					<1.0			
7/29/92					<1.0			
7/30/92					<1.0			
7/31/92					<1.0			
8/1/92					<1.0			
8/2/92								
8/3/92								
8/4/92					<1.0	<1.0		
8/5/92					<1.0			
8/6/92					<1.0			
8/7/92					<1.0			
8/8/92					<1.0			
8/9/92					<1.0			
8/10/92					<1.0			
8/11/92					<1.0	<1.0		
8/12/92					<1.0			
8/13/92					<1.0			
8/14/92					1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 17

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
8/15/92					<1.0			
8/16/92					<1.0			
8/17/92					<1.0	<1.0		
8/18/92					<1.0			
8/19/92					<1.0			
8/20/92					<1.0			
8/21/92					<1.0			
8/22/92								Category 2 off-line for repairs.
8/23/92								Category 2 off-line for repairs.
8/24/92								Category 2 off-line for repairs.
8/25/92								Category 2 off-line for repairs.
8/26/92								
8/27/92								
8/28/92					<1.0	<1.0		
8/29/92					<1.0			
8/30/92					<1.0			
8/31/92					<1.0	<1.0		
9/1/92					<1.0			
9/2/92					<1.0			
9/3/92					<1.0			
9/4/92					<1.0			
9/5/92					<1.0			
9/6/92								
9/7/92								
9/8/92								
9/9/92					1.5	<1.0		
9/10/92					<1.0			
9/11/92					2.0			
9/12/92					<1.0			
9/13/92					<1.0			
9/14/92					<1.0	<1.0		

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
9/15/92					17			
9/16/92					<1.0			
9/17/92					<1.0			
9/18/92					7.2			
9/19/92					1.8			Category 2 shut down in the evening.
9/20/92								
9/21/92								
9/22/92								
9/23/92					<1.0			Category 2 on-line.
9/24/92					<1.0	<1.0		
9/25/92					<1.0			
9/26/92					<1.0			
9/27/92					<1.0			
9/28/92					<1.0			
9/29/92					<1.0			
9/30/92					<1.0	<1.0		
10/1/92					<1.0			
10/2/92					<1.0			
10/3/92					<1.0			
10/4/92					4.6			
10/5/92					<1.0			
10/6/92					<1.0	<1.0		
10/7/92					<1.0			
10/8/92					<1.0			
10/9/92					<1.0			
10/10/92					<1.0			
10/11/92					<1.0			
10/12/92					<1.0	<1.0		
10/13/92					<1.0			
10/14/92					<1.0			
10/15/92					<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 17

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
10/16/92					<1.0			
10/17/92					<1.0			
10/18/92					<1.0			
10/19/92					<1.0	<1.0		
10/20/92					<1.0			
10/21/92					<1.0			
10/22/92					<1.0			
10/23/92					<1.0			
10/24/92					<1.0			
10/25/92					<1.0			
10/26/92					<1.0	<1.0		
10/27/92					<1.0			
10/28/92					<1.0			
10/29/92					1.5			
10/30/92					<1.0			
10/31/92					<1.0			
11/1/92					<1.0			
11/2/92					<1.0			
11/3/92					<1.0	<1.0		
11/4/92					<1.0			
11/5/92					1.0			
11/6/92					<1.0			
11/7/92					<1.0			
11/8/92					<1.0			
11/9/92					<1.0			
11/10/92					1.0			
11/11/92					<1.0	<1.0		
11/12/92					<1.0			
11/13/92					<1.0			
11/14/92					<1.0			
11/15/92					1.3			

Disch[illegible] Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
Sys[illegible] luent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l. (

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
11/16/92					<1.0	<1.0		
11/17/92					<1.0			
11/18/92					1.2			
11/19/92					<1.0			
11/20/92					<1.0			
11/21/92					<1.0			
11/22/92					<1.0			
11/23/92					<1.0	<1.0		
11/24/92					<1.0			
11/25/92					<1.0			Category 2 shut down late in the day for the Holidays.
11/26/92								
11/27/92								
11/28/92								
11/29/92								
11/30/92					<1.0			Category 2 Plant back on-line.
12/1/92					1.0			
12/2/92					2.2			Category 2 was shut off late in the day due to an analytical lag.
12/3/92								Category 2 lead carbon was changed out.
12/4/92								
12/5/92					<1.0			Category 2 on-line.
12/6/92					<1.0			
12/7/92					<1.0			
12/8/92					<1.0			
12/9/92					<1.0			
12/10/92					<1.0			
12/11/92					<1.0			
12/12/92					<1.0			
12/13/92					<1.0			
12/14/92					<1.0	<1.0		
12/15/92								
12/16/92					<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 17

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
12/17/92					<1.0			
12/18/92					<1.0			
12/19/92					<1.0			
12/20/92					<1.0			
12/21/92					<1.0	<1.0		
12/22/92					<1.0			
12/23/92					<1.0			
12/24/92					<1.0			
12/25/92								
12/26/92								
12/27/92								
12/28/92					<1.0	<1.0		
12/29/92					<1.0			
12/30/92					<1.0			
12/31/92					<1.0			
1/1/93					<1.0			
1/2/93					<1.0			
1/3/93					<1.0			
1/4/93					<1.0	<1.0		
1/5/93					<1.0			
1/6/93					<1.0	<1.0		
1/7/93					<1.0			
1/8/93					<1.0			
1/9/93					<1.0			
1/10/93					<1.0			
1/11/93					<1.0			
1/12/93					<1.0	<1.0		
1/13/93					<1.0			
1/14/93								Category 2 off-line for replacement of Klensorb.
1/15/93								Category 2 off-line for replacement of Klensorb.
1/16/93								Category 2 off-line for replacement of Klensorb.

Disch[illegible]e Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
Sys[illegible] [illegible]luent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
1/17/93								Category 2 off-line for replacement of Klensorb.
1/18/93								Category 2 off-line for replacement of Klensorb.
1/19/93					<1.0			Surge tank and bag filter vessels at Category 2 were steam cleaned.
1/20/93					<1.0	<1.0		Category 2 on-line.
1/21/93					<1.0			
1/22/93					<1.0			
1/23/93					<1.0			
1/24/93					<1.0			
1/25/93					<1.0	<1.0		
1/26/93					<1.0			
1/27/93					<1.0			
1/28/93					<1.0			
1/29/93					<1.0			
1/30/93					<1.0			
1/31/93					<1.0			
2/1/93					<1.0	<1.0		
2/2/93					<1.0			
2/3/93					<1.0			
2/4/93					<1.0			
2/5/93					1.0			
2/6/93					<1.0			
2/7/93					<1.0			
2/8/93					<1.0	<1.0		
2/9/93					<1.0			
2/10/93					<1.0			
2/11/93					<1.0			
2/12/93					<1.0			
2/13/93					<1.0			
2/14/93					<1.0			
2/15/93								Category 2 off-line for Holiday.
2/16/93					<1.0	<1.0		

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 17

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
2/17/93					<1.0			
2/18/93					<1.0			
2/19/93					<1.0	<1.0		
2/20/93					<1.0			
2/21/93					<1.0			
2/22/93					<1.0	<1.0		
2/23/93					<1.0			
2/24/93					<1.0			
2/25/93					<1.0			
2/26/93					<1.0			
2/27/93					<1.0			
2/28/93					<1.0			
3/1/93					<1.0	<1.0		
3/2/93					<1.0			
3/3/93					<1.0			
3/4/93					<1.0			
3/5/93					<1.0			
3/6/93					<1.0			
3/7/93					<1.0			
3/8/93					<1.0	<1.0		
3/9/93					<1.0			
3/10/93					<1.0			
3/11/93					<1.0			
3/12/93					<1.0			
3/13/93					<1.0			
3/14/93					<1.0			
3/15/93					<1.0	<1.0		
3/16/93					<1.0			
3/17/93					<1.0			
3/18/93					<1.0			
3/19/93					<1.0			

Disch[illegible]e Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
Sy[illegible] fluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
3/20/93					<1.0			
3/21/93					<1.0			
3/22/93					<1.0	<1.0		
3/23/93					<1.0			
3/24/93					<1.0			Received verbal approval from EPA
3/25/93								to reduce Category 2 sampling frequency to weekly.
3/26/93								
3/27/93								
3/28/93								
3/29/93					<1.0	<1.0		
3/30/93								
3/31/93								
4/5/93	<100	41,688		21.4	1.9	<1.0		
4/12/93		115	233		3.83	1.9	<1.0	
4/22/93	17	55.6		11.9	<1.0	<1.0		
4/30/93		30.2	<1.0		<1.0	<1.0		
5/3/93		26.3			<1.0	<1.0	1.7	
5/6/93					<1.0	<1.0		
5/11/93		18	22		<1.0	<1.0		
5/18/93		13.9			<1.0	<1.0	<1.0	
5/24/93	43	19.5			1.0	<1.0	1.0	
6/2/93		16.7			13	<1.0		
6/3/93					<1.0		<1.0	
6/8/93	17	12		<1.0	<1.0	<1.0		
6/14/93		20	21.8		<1.0	<1.0		
6/22/93		8.2			<1.0	<1.0		
7/6/93	6.4	4.5			<1.0	<1.0		
7/12/93		<1.0			<1.0	<1.0		
7/19/93		7.4			<1.0	<1.0		
7/28/93		6			<1.0	<1.0		
8/4/93	32				<1.0	<1.0		

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 17

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
8/6/93								
8/10/93		9.7			<1.0	<1.0		
8/17/93		6			<1.0	<1.0		
8/23/93		7	10		<1.0	<1.0		
8/30/93		15	14		<1.0	<1.0		
9/7/93	320	16			<1.0	<1.0		
9/13/93		17			<1.0	<1.0		
9/20/93		17	20		<1.0	<1.0		
9/28/93		17			<1.0	<1.0		
10/4/93	900	15			<1.0	<1.0		
10/11/93		21			<1.0	<1.0		
10/18/93		24	24		<1.0	<1.0		
10/25/93		29			<1.0	<1.0		
11/1/93	2,000	28			<1.0	<1.0		
11/8/93		16	19		<1.0	<1.0		
11/15/93		23			<1.0	<1.0		
11/22/93								
11/23/93	24	21	22		<1.0	<1.0	<1.0	
11/29/93		24			<1.0	<1.0		
12/6/93	15	33			<1.0	<1.0		
12/13/93		23	23		<1.0	<1.0	<1.0	
12/20/93		28			<1.0	<1.0		
12/27/93		12	12	23	<1.0	<1.0	<1.0	
1/3/94	88	28			<1.0	<1.0	<1.0	
1/10/94								
1/11/94		22			8	<1.0		
1/17/94					<1.0	<1.0		
1/26/94		11			3.0	<1.0		
1/31/94	550	13			1.0	<1.0		
2/3/94				18	<1.0			
2/7/94		33			<1.0	<1.0		

Disc Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
Syst uent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

CATEGORY 2 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Klensorb Effluent	Klensorb Duplicate	Sand Filter Influent	Lead Carbon Effluent	System Effluent	Blank	Notes
2/14/94		34			11	<1.0		
2/21/94		29			<1.0	<1.0		
2/25/94					<1.0			
2/28/94		40			9	<1.0		
3/7/94	410	15			3	<1.0		
3/15/94		35			<1.0	1.0		
3/21/94		32	29		<1.0	<1.0	<1.0	
3/28/94		45			<1.0	<1.0		
4/4/94	22	6			<1.0	<1.0		
4/11/94		9			<1.0	<1.0		
4/21/94		43			<1.0	<1.0		
4/25/94		48	53		<1.0	<1.0	<1.0	
5/2/94	6	45			<1.0	<1.0		
5/9/94		48			<1.0	<1.0		
5/17/94		55	53		<1.0	<1.0	<1.0	
5/23/94		42			<1.0	<1.0		
5/31/94		111	107		<1.0	<1.0	<1.0	
6/6/94	6	46			<1.0	<1.0		
6/13/94		67			2.0	<1.0		
6/20/94		71	60		2.0	<1.0	<1.0	
6/27/94					<1.0			
7/5/94								
7/6/94	6	75				<1.0		
7/8/94					<1.0			
7/12/94		55			<1.0	<1.0		
7/18/94		85	71		1.0	<1.0	<1.0	
7/25/94		66			1.0	<1.0		
7/28/94					1.0			Category 2 plant shut down and decommissioned.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on a 30-day average with no results greater than 5.0 ug/l.

TABLE 18

SUMMARY OF LABORATORY GEOTECHNICAL TESTS
MAY 17, 1994 INVESTIGATION
SLIP NO. 3 CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

Boring Depth (ft)	Wet Unit Weight (pcf)	Initial Water Content (%)	Initial Void Ratio (e_o)	Compression Index (C_o)	Recompression Index (C_R)	Preconsolidation Pressure P_C (TSF)	Overburden Pressure P_o (TSF)	Silt (%)	Clay (%)
BH-1, 15 ft	95.7	81	2.11	0.63	0.05	0.5	0.6	25	52
BH-2, 19 ft	89	86	2.66	0.92	0.06	0.7	0.7	56	30

Atterberg Limits		
Liquid Limit	Plastic Limit	USCS Symbol
87	42	MH
88	37	CH

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
6/27/91					<1.0		
6/28/91					<1.0		
7/2/91					7.9		Backwashed carbon beds
7/8/91		<1.0			<1.0		Effluent Duplicate
7/9/91	11.6						
7/9/91					<1.0		
7/11/91					<1.0		
7/15/91					<1.0		
7/16/91					<1.0		
7/17/91					<1.0		
7/18/91					<1.0		
7/19/91					<1.0		
7/26/91					<1.0		
7/29/91					<1.0		
7/30/91					<1.0		
7/31/91					<1.0		
8/25/91					<1.0		
9/5/91		<1.0		<1.0	<1.0	<1.0	Field Blank, Effluent Duplicate
9/5/91				1.0			Backwashed carbon beds
9/6/91				9.3			Backwashed carbon beds
9/7/91	110,000			8.3			Backwashed carbon beds
9/8/91				3.0			Backwashed carbon beds
9/9/91				79			Backwashed carbon beds
9/10/91			46,000	91			Backwashed carbon beds
9/11/91	51,000		42,000	10,000	9.9		System Shut Down
9/13/91	770,000						Klensorb oil adsorption unit added to system
9/21/91				1,600	78		Cleaned out system and started recycling the effluent to the West Cell.
9/23/91				200			Cleaned and recycled to the West Containment Cell.
9/24/91				169	20		Cleaned and recycled to the West Containment Cell.
10/2/91				85	6.1		Cleaned and recycled to the West Containment Cell.
10/8/91				<1.0	2.9		Cleaned and recycled to the West Containment Cell.
10/9/91				<1.0			System put back on-line discharging to the North Ditch.
10/10/91				<1.0			
10/11/91				5.6			
10/12/91				<1.0	<1.0		
10/13/91				<1.0			
10/14/91				4.1			
10/15/91				<1.0			
10/16/91				2.1			
10/17/91				<1.0			
10/18/91				19	<1.0		
10/19/91				<1.0	<1.0		
10/20/91				13			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
10/21/91				1			
10/22/91				<1.0			
10/23/91				<1.0			
10/24/91				1.4	<1.0		
10/25/91				<1.0			
10/26/91				<1.0			
10/27/91				1.4			
10/28/91				2.6			Backwashed and rinsed carbon beds on 10-29-91.
10/29/91				<1.0			
10/30/91				<1.0	32		Data believed to be erroneous; resampled on 11-1-91.
10/31/91				2.1			
11/1/91				1.3	5.3		System off line and flushed 11-2 and 11-3-91.
11/4/91				4.3	1.4		Shut down 11-5 through 11-7-91 to change out lead carbon beds.
11/8/91				6.6	1.6		
11/9/91				<1.0			
11/10/91				1.9			
11/11/91				3.1			
11/12/91				<1.0	<1.0		
11/13/91				<1.0			Replaced the Klensorb with new material.
11/14/91				<1.0			
11/15/91				<1.0			
11/16/91				5			
11/17/91				5.6			Cleaned lead carbon beds on 11-18-91.
11/18/91				<1.0	<1.0		
11/19/91				<1.0			
11/20/91				<1.0			
11/21/91				<1.0			Started adding polymer to feed tank.
11/22/91				<1.0			
11/23/91				<1.0			
11/24/91				<1.0			
11/25/91				<1.0			
11/26/91				<1.0	<1.0		
11/27/91				<1.0			
11/28/91				<1.0			
11/29/91				<1.0			
11/30/91				<1.0			
12/1/91				<1.0			
12/2/91				<1.0			
12/3/91				<1.0			
12/4/91				<1.0	<1.0		
12/5/91				<1.0			
12/6/91				<1.0			
12/7/91				<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
12/8/91				<1.0			
12/9/91				<1.0	<1.0		
12/10/91				<1.0			
12/11/91				<1.0			
12/12/91				<1.0			
12/13/91				<1.0			
12/14/91				<1.0			
12/15/91				<1.0			
12/16/91				<1.0	<1.0		
12/17/91				<1.0			
12/18/91				<1.0			
12/19/91				<1.0			
12/20/91				<1.0	<1.0		Started treating water through newly constructed 100-gpm plant.
12/21/91				<1.0			
12/22/91				<1.0			
12/23/91				<1.0	<1.0		
12/24/91				<1.0			
2/25/91				<1.0			
12/26/91				<1.0			
12/27/91				<1.0			
12/28/91				6.6			
12/29/91				<1.0			
12/30/91				<1.0	<1.0		
12/31/91				<1.0			
1/1/92				<1.0			
1/2/92				<1.0			
1/3/92				<1.0			
1/4/92				<1.0			
1/5/92				<1.0			
1/6/92				<1.0			
1/7/92				<1.0	<1.0		
1/8/92				<1.0			
1/9/92				<1.0			
1/10/92				<1.0			
1/11/92				<1.0			
1/12/92				<1.0			
1/13/92				<1.0			
1/14/92				<1.0			
1/15/92				<1.0	<1.0		
1/16/92							Not operating due to electrical problem.
1/17/92							Not operating due to electrical problem.
1/18/92				<1.0			
1/19/92				<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
1/20/92				<1.0	<1.0		
1/21/92				<1.0			
1/22/92				<1.0			
1/23/92				<1.0			
1/24/92				<1.0			
1/25/92				<1.0			
1/26/92				25			Method blank contaminated. Attributed to glassware used for water
1/27/92				4.1	<1.0		and ordered new glassware for lab.
1/28/92				7.9			Kemron lead carbon split 12 ppb (calculated as 1248 instead of 1242).
1/29/92				3			Changed out Klensorb
1/30/92				<1.0			New glassware for water only put in use.
1/31/92				<1.0	3.3		
2/1/92				480			
2/2/92				2.1			
2/3/92				110	20		System shut down on receipt of sample result.
2/4/92				90			
2/5/92							Not operating. Lead carbon being changed out.
2/6/92				3	2.7		
2/7/92				8.9			
2/8/92				9.8			Backwashed lead carbon bed on 2-9-92.
2/9/92				2.8			
2/10/92				<1.0			
2/11/92				1.3	1.4		
2/12/92				<1.0			
2/13/92				2.9			
2/14/92				10			Backwashed lead carbon on 2-15-92.
2/15/92				1.7			
2/16/92				<1.0			
2/17/92				1.6			
2/18/92				1.6	4.5		Lag carbon was backwashed on 2-19-92.
2/19/92				4.4			
2/20/92				70			Changed lead carbon on 2-21-92.
2/21/92				4.1			Backwashed lead and lag carbon beds on 2-22-92.
2/22/92				54			Backwashed lead carbon bed on 2-23-92.
2/23/92				43			Backwashed lead carbon bed on 2-24-92.
2/24/92				43	<1.0		Backwashed lead carbon on 2-25-92.
2/25/92				8.5			Backwashed lead carbon bed on 2-26-92.
2/26/92				32	<1.0		
2/27/92				<1.0			
2/28/92				1.7	<1.0		
2/29/92				<1.0	<1.0		
3/1/92				5.6			
3/2/92				3			Backwashed lead carbon on 3-2-92.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
3/3/92				<1.0	<1.0		
3/4/92				<1.0			
3/5/92				<1.0			
3/6/92				2.5			
3/7/92				<1.0			
3/8/92				<1.0			
3/9/92				<1.0			
3/10/92				<1.0			
3/11/92				10	<1.0		Backwashed lead carbon bed on 3-13-92.
3/12/92				1.4			
3/13/92				<1.0			
3/14/92				<1.0			
3/15/92				<1.0			
3/16/92				<1.0			
3/17/92				<1.0	<1.0		
3/18/92				<1.0			
3/19/92				<1.0			
3/20/92				<1.0			
3/21/92							Plant down while separate Category 4 plant is built.
3/22/92							Plant down while separate Category 4 plant is built.
3/23/92							Changed out both lead and lag carbon beds due to phenol loading.
3/24/92							Plant down while separate Category 4 plant is built.
3/25/92							Plant down while separate Category 4 plant is built.
3/26/92							Plant down while separate Category 4 plant is built.
3/27/92							Plant down while separate Category 4 plant is built.
3/28/92							Plant down while separate Category 4 plant is built.
3/29/92							Plant down while separate Category 4 plant is built.
3/30/92							Plant down while separate Category 4 plant is built.
3/31/92							Plant down while separate Category 4 plant is built.
4/1/92				<1.0			
4/2/92				<1.0			
4/3/92				<1.0			
4/4/92				<1.0			
4/5/92				<1.0			
4/6/92				<1.0			
4/7/92				<1.0	<1.0		
4/8/92				<1.0			
4/9/92				<1.0			
4/17/92				3.6	<1.0		
4/18/92				<1.0			
4/19/92				<1.0			
4/20/92				<1.0			
4/21/92				2.3			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
4/22/92				1.5	2.1		
4/23/92				1			
4/24/92				<1.0			Backwashed lead carbon vessel.
4/25/92				<1.0			
5/1/92				<1.0			
5/2/92				<1.0			
5/3/92				<1.0			
5/4/92				<1.0			
5/7/92				<1.0	<1.0		
5/8/92				1.7			
5/9/92				4.1			Changed out lead carbon bed on 6-8-92.
6/10/92				<1.0	<1.0		Start daily backwash of sand and bag filter change-out. Lead carbon
6/11/92				<1.0			backwashed every third day.
6/12/92				<1.0			
6/13/92				<1.0			
6/14/92				<1.0			
6/15/92				<1.0			
6/16/92				<1.0	<1.0		
6/17/92				<1.0			
6/18/92				<1.0			
6/19/92				<1.0			
6/20/92				<1.0			
6/21/92				<1.0			
6/22/92				<1.0			
6/23/92				<1.0			
6/24/92				<1.0			
6/25/92				<1.0	<1.0		
6/26/92				<1.0			
6/27/92				<1.0			
6/28/92				<1.0			
6/29/92				<1.0			
6/30/92				<1.0	<1.0		
7/1/92				<1.0	<1.0		
7/2/92				<1.0			
7/3/92				<1.0			
7/4/92				<1.0			Plants offline.
7/5/92							Plants offline.
7/6/92				<1.0			Plants on line 1300.
7/7/92				<1.0	<1.0		
7/8/92				<1.0			
7/9/92				<1.0			
7/10/92				<1.0			
7/11/92				<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
7/12/92				<1.0			
7/13/92				<1.0			
7/14/92				<1.0	<1.0		
7/15/92				<1.0			
7/16/92				<1.0			
7/17/92				<1.0			
7/18/92				<1.0			
7/19/92				<1.0			
7/20/92				<1.0			
7/21/92				<1.0	<1.0		
7/22/92				<1.0			Started pumping RP.
7/23/92				<1.0			
7/24/92				<1.0			
7/25/92				<1.0			
7/26/92				<1.0			
7/27/92				<1.0	<1.0		
7/28/92				<1.0			
7/29/92				<1.0			
7/30/92				<1.0			RP off due to new rain.
7/31/92				<1.0			
8/1/92				<1.0			
8/2/92							Category 3 off for repairs.
8/3/92							Category 3 off for repairs.
8/4/92				<1.0			
8/5/92				<1.0	<1.0		
8/6/92				<1.0			
8/7/92				<1.0			
8/8/92				<1.0			
8/9/92				<1.0			
8/10/92				<1.0			
8/11/92				<1.0	<1.0		
8/12/92				<1.0			
8/13/92				<1.0			
8/14/92				<1.0			
8/15/92				<1.0			
8/16/92				<1.0			
8/17/92				<1.0			
8/18/92				<1.0	<1.0		
8/19/92				<1.0			
8/20/92				<1.0			
8/21/92				<1.0			
8/22/92				<1.0			
9/23/92				<1.0			

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 19

CATEGORY 3 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Influent	Duplicate	Sand Filter Effluent	Lead Carbon Effluent	System Effluent	Blank	Notes
8/24/92				<1.0			
8/25/92				<1.0	<1.0		
8/26/92				<1.0			
8/27/92				<1.0			
8/28/92				<1.0			
8/29/92				<1.0			
8/30/92				<1.0			
8/31/92				<1.0			
9/1/92				<1.0	<1.0		
9/2/92				<1.0			
9/3/92				<1.0			
9/4/92							Category 3 offline.
9/5/92							Category 3 offline.
9/6/92							Category 3 offline.
9/7/92							Category 3 offline.
9/8/92							Category 3 offline.
9/9/92							Category 3 offline.
9/10/92							Category 3 offline.
9/11/92							Category 3 offline.
9/12/92				<1.0			
9/13/92				<1.0			
9/14/92				<1.0	<1.0		
9/15/92				11			
9/16/92				<1.0			
9/17/92				37			
9/18/92				<1.0			
9/19/92				<1.0			
9/20/92				<1.0			
9/21/92				<1.0			
9/22/92				<1.0			
9/23/92				<1.0			
9/24/92				<1.0			
9/25/92				<1.0			
9/26/92				<1.0			
9/27/92				<1.0			
9/28/92				<1.0			Category 3 shut down and decommissioned.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 20

SLURRY WALL KEY DATA
WEST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
0+10	587.0	26.0	30.5	561.0	556.5
0+25	587.0	25.0	30.2	562.0	556.8
0+38	587.0	25.0	30.5	562.0	556.5
0+50	587.0	25.0	28.0	562.0	559.0
0+75	587.0	25.0	29.0	562.0	558.0
1+00	587.0	25.0	30.0	562.0	557.0
1+10	587.0	25.0	29.5	562.0	557.5
1+25	587.0	25.0	28.0	562.0	559.0
1+40	587.0	25.6	30.5	561.4	556.5
1+50	587.0	26.0	30.4	561.0	556.6
1+60	587.0	25.9	29.0	561.1	558.0
1+80	587.0	25.7	29.5	561.3	557.5
1+95	587.0	25.5	28.5	561.5	558.5
2+20	587.0	25.3	28.6	561.7	558.4
2+50	587.0	25.1	28.8	561.9	558.2
2+80	587.0	25.0	28.5	562.0	558.5
3+00	587.0	25.0	29.0	562.0	558.0
3+20	587.0	25.0	28.8	562.0	558.2
3+30	587.0	25.0	28.4	562.0	558.6
3+45	587.0	25.0	30.0	562.0	557.0
3+60	587.0	25.0	28.4	562.0	558.6
3+95	587.0	24.5	27.8	562.5	559.2
4+10	587.0	24.5	27.5	562.5	559.5
4+30	587.0	24.5	27.8	562.5	559.2
4+40	587.0	24.2	28.4	562.8	558.6
4+50	587.0	23.9	27.3	563.1	559.7
4+65	587.0	23.5	27.5	563.5	559.5
4+80	587.0	23.5	26.8	563.5	560.2
5+10	587.0	23.5	27.5	563.5	559.5
5+25	587.0	23.5	27.4	563.5	559.6
5+35	587.0	23.5	27.3	563.5	559.7
5+50	587.0	23.5	26.5	563.5	560.5
5+60	587.0	23.5	26.8	563.5	560.2
5+75	587.0	23.5	27.0	563.5	560.0
5+90	587.0	23.5	27.2	563.5	559.8
5+95	587.0	23.5	27.4	563.5	559.6
6+05	587.0	23.5	27.2	563.5	559.8
6+10	587.0	23.5	27.2	563.5	559.8
6+20	587.0	23.5	26.4	563.5	560.6
6+25	587.0	23.5	27.7	563.5	559.3

TABLE 20

SLURRY WALL KEY DATA
WEST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
6+30	587.0	23.5	27.5	563.5	559.5
6+40	587.0	23.5	28.7	563.5	558.3
6+50	587.0	23.5	28.5	563.5	558.5
6+70	587.0	23.5	26.7	563.5	560.3
6+80	587.0	23.2	27.3	563.8	559.7
7+00	587.0	22.5	27.1	564.5	559.9
7+10	587.0	22.2	26.3	564.8	560.7
7+25	587.0	21.8	26.2	565.2	560.8
7+50	587.0	21.0	25.5	566.0	561.5
7+60	587.0	21.1	25.2	565.9	561.8
7+70	587.0	21.2	24.6	565.8	562.4
8+00	587.0	21.3	24.5	565.7	562.5
8+10	587.0	21.4	25.6	565.6	561.4
8+20	587.0	21.8	24.6	565.2	562.4
8+30	587.0	22.2	27.3	564.8	559.7
8+50	587.0	23.0	27.1	564.0	559.9
8+60	587.0	23.1	27.4	563.9	559.6
8+70	587.0	23.3	26.8	563.7	560.2
8+90	587.0	23.5	26.5	563.5	560.5
9+10	587.0	23.5	27.2	563.5	559.8
9+20	587.0	23.5	27.7	563.5	559.3
9+30	587.0	23.5	27.1	563.5	559.9
9+40	587.0	23.5	27.3	563.5	559.7
9+50	587.0	23.5	27.6	563.5	559.4
9+60	587.0	23.7	28.2	563.3	558.8
9+80	587.0	24.2	26.9	562.8	560.1
10+10	587.0	25.0	29.3	562.0	557.7
10+20	587.0	25.0	27.9	562.0	559.1
10+30	587.0	25.2	28.2	561.8	558.8
10+40	587.0	25.4	29.3	561.6	557.7
10+50	587.0	25.6	28.7	561.4	558.3
10+70	587.0	25.2	29.8	561.8	557.2
10+80	587.0	25.0	29.2	562.0	557.8
10+90	587.0	24.8	30.3	562.2	556.7
11+05	587.0	24.5	28.8	562.5	558.2
11+10	587.0	24.5	29.7	562.5	557.3
11+20	587.0	24.5	28.3	562.5	558.7
11+30	587.0	24.5	28.1	562.5	558.9
11+40	587.0	24.5	27.8	562.5	559.2
11+50	587.0	24.7	28.0	562.3	559.0
11+60	587.0	25.0	29.7	562.0	557.3

TABLE 20

SLURRY WALL KEY DATA
WEST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
11+75	587.0	25.0	28.4	562.0	558.6
11+90	587.0	25.3	28.3	561.7	558.7
12+00	587.0	25.5	28.8	561.5	558.2
12+20	587.0	25.5	29.2	561.5	557.8
12+25	587.0	25.5	28.6	561.5	558.4
12+30	587.0	25.5	28.8	561.5	558.2
12+40	587.0	25.5	29.1	561.5	557.9
12+50	587.0	25.6	28.9	561.4	558.1
12+60	587.0	25.8	30.1	561.2	556.9
12+80	587.0	26.0	30.4	561.0	556.6
12+90	587.0	26.1	29.1	560.9	557.9
13+00	587.0	26.2	29.8	560.8	557.2
13+30	587.0	26.4	29.5	560.6	557.5
13+40	587.0	26.5	29.7	560.5	557.3
13+55	587.0	26.3	29.6	560.7	557.4
13+60	587.0	26.2	30.3	560.8	556.7
13+70	587.0	26.3	30.6	560.7	556.4
13+80	587.0	26.4	30.4	560.6	556.6
14+00	587.0	26.6	29.7	560.4	557.3
14+10	587.0	26.7	29.8	560.3	557.2
14+20	587.0	26.8	29.7	560.2	557.3
14+40	587.0	27.0	31.3	560.0	555.7
14+50	587.0	27.0	30.2	560.0	556.8
14+60	587.0	27.0	30.6	560.0	556.4
14+70	587.0	27.0	30.2	560.0	556.8
14+90	587.0	27.0	31.0	560.0	556.0
15+00	587.0	27.0	29.9	560.0	557.1
15+15	587.0	26.7	30.4	560.3	556.6
15+20	587.0	26.6	30.4	560.4	556.6
15+30	587.0	26.5	29.8	560.5	557.2
15+40	587.0	26.3	29.7	560.7	557.3
15+50	587.0	26.2	29.8	560.8	557.2

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/4/92	DEPTH	5.60	6.20	4.90	6.00	6.50	6.50	5.25	6.35		
	ELEV.	582.09	581.78	582.55	581.55	582.76	581.66	581.85	581.65		
	DIFF.	0.31		1.00		1.10		0.20			
12/17/92	DEPTH	5.41	7.10	4.85	6.90	6.47	7.83	5.00	6.66		
	ELEV.	582.28	580.88	582.60	580.65	582.79	580.33	582.10	581.34		
	DIFF.	1.40		1.95		2.46		0.76			
12/22/92	DEPTH	5.45	6.85	4.85	6.62	6.45	7.65	5.20	6.55		
	ELEV.	582.24	581.13	582.60	580.93	582.81	580.51	581.90	581.45		
	DIFF.	1.11		1.67		2.30		0.45			
12/29/92	DEPTH	5.50	7.00	4.80	6.70	6.55	7.90	5.50	6.70		
	ELEV.	582.19	580.98	582.65	580.85	582.71	580.26	581.60	581.30		
	DIFF.	1.21		1.80		2.45		0.30			
1/5/93	DEPTH	5.20	7.05	4.65	6.85	6.00	7.40	4.80	6.70		
	ELEV.	582.49	580.93	582.80	580.70	583.26	580.76	582.30	581.30		
	DIFF.	1.56		2.10		2.50		1.00			
1/8/93	DEPTH	6.35	7.05	4.65	6.70	6.80	7.35	5.00	6.65		
	ELEV.	581.34	580.93	582.80	580.85	582.46	580.81	582.10	581.35		
	DIFF.	0.41		1.95		1.65		0.75			
1/11/93	DEPTH	5.30	6.95	4.75	6.70	6.10	7.60	4.75	6.50		
	ELEV.	582.39	581.03	582.70	580.85	583.16	580.56	582.35	581.50		
	DIFF.	1.36		1.85		2.60		0.85			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/18/93	DEPTH	5.50	7.70	4.80	7.50	6.30	8.45	5.20	7.20		
	ELEV.	582.19	580.28	582.65	580.05	582.96	579.71	581.90	580.80		
	DIFF.	1.91		2.60		3.25		1.10			
1/25/93	DEPTH	5.30	7.70	4.70	7.50	6.00	8.50	4.95	7.15		
	ELEV.	582.39	580.28	582.75	580.05	583.26	579.66	582.15	580.85		
	DIFF.	2.11		2.70		3.60		1.30			
2/1/93	DEPTH	5.40	8.00	4.70	7.75	6.25	8.70	5.05	7.30		
	ELEV.	582.29	579.98	582.75	579.80	583.01	579.46	582.05	580.70		
	DIFF.	2.31		2.95		3.55		1.35			
2/8/93	DEPTH	5.40	8.00	4.75	7.80	6.25	8.75	5.00	7.35		
	ELEV.	582.29	579.98	582.70	579.75	583.01	579.41	582.10	580.65		
	DIFF.	2.31		2.95		3.60		1.45			
2/10/93	DEPTH	5.35	8.00	4.70	7.80	6.20	8.80	4.85	7.30	24.55	22.10
	ELEV.	582.34	579.98	582.75	579.75	583.06	579.36	582.25	580.70	579.24	579.38
	DIFF.	2.36		3.00		3.70		1.55			
2/11/93	DEPTH	5.20	7.80	4.70	7.50	6.10	8.55	4.50	7.10	24.10	21.80
	ELEV.	582.49	580.18	582.75	580.05	583.16	579.61	582.60	580.90	579.69	579.68
	DIFF.	2.31		2.70		3.55		1.70			
2/12/93	DEPTH	5.05	7.70	4.55	7.50	6.00	8.40	4.30	6.90	23.95	21.75
	ELEV.	582.64	580.28	582.90	580.05	583.26	579.76	582.80	581.10	579.84	579.73
	DIFF.	2.36		2.85		3.50		1.70			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/13/93	DEPTH	5.05	7.75	4.85	7.55	6.00	8.35	4.30	6.90	23.95	21.75
	ELEV.	582.64	580.23	582.60	580.00	583.26	579.81	582.80	581.10	579.84	579.73
	DIFF.	2.41		2.60		3.45		1.70			
2/14/93	DEPTH	5.00	7.70	4.60	7.50	6.00	8.30	4.30	6.90	23.90	21.70
	ELEV.	582.69	580.28	582.85	580.05	583.26	579.86	582.80	581.10	579.89	579.78
	DIFF.	2.41		2.80		3.40		1.70			
2/16/93	DEPTH	5.00	7.65	4.50	7.50	6.00	8.20	4.30	6.90	23.90	21.70
	ELEV.	582.69	580.33	582.95	580.05	583.26	579.96	582.80	581.10	579.89	579.78
	DIFF.	2.36		2.90		3.30		1.70			
2/17/93	DEPTH	5.10	7.70	4.60	7.50	6.05	8.20	4.30	6.95	23.80	21.80
	ELEV.	582.59	580.28	582.85	580.05	583.21	579.96	582.80	581.05	579.99	579.68
	DIFF.	2.31		2.80		3.25		1.75			
2/19/93	DEPTH	5.10	7.50	4.60	7.30	6.00	8.00	4.45	6.80	23.65	21.60
	ELEV.	582.59	580.48	582.85	580.25	583.26	580.16	582.65	581.20	580.14	579.88
	DIFF.	2.11		2.60		3.10		1.45			
2/20/93	DEPTH	5.10	7.50	4.60	7.30	6.78	8.00	4.45	6.80	23.60	21.00
	ELEV.	582.59	580.48	582.85	580.25	582.48	580.16	582.65	581.20	580.19	580.48
	DIFF.	2.11		2.60		2.32		1.45			
2/21/93	DEPTH	5.05	7.12	4.52	6.90	6.72	8.00	4.32	6.80	23.56	21.02
	ELEV.	582.64	580.86	582.93	580.65	582.54	580.16	582.78	581.20	580.23	580.46
	DIFF.	1.78		2.28		2.38		1.58			

TABLE .
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/22/93	DEPTH	5.06	7.65	4.56	7.48	6.10	8.10	4.40	6.88	23.76	21.73
	ELEV.	582.63	580.33	582.89	580.07	583.16	580.06	582.70	581.12	580.03	579.75
	DIFF.	2.30		2.82		3.10		1.58			
2/23/93	DEPTH	5.02	7.68	4.58	7.48	6.12	8.10	4.38	6.94	23.76	21.76
	ELEV.	582.67	580.30	582.87	580.07	583.14	580.06	582.72	581.06	580.03	579.72
	DIFF.	2.37		2.80		3.08		1.66			
2/24/93	DEPTH	5.06	7.68	4.58	7.48	6.12	8.60	4.40	6.94	23.72	21.74
	ELEV.	582.63	580.30	582.87	580.07	583.14	579.56	582.70	581.06	580.07	579.74
	DIFF.	2.33		2.80		3.58		1.64			
2/25/93	DEPTH	5.00	7.40	4.58	7.20	6.12	7.84	4.42	6.72	23.48	21.48
	ELEV.	582.69	580.58	582.87	580.35	583.14	580.32	582.68	581.28	580.31	580.00
	DIFF.	2.11		2.52		2.82		1.40			
2/26/93	DEPTH	5.04	7.56	4.60	7.36	6.10	7.98	4.44	6.84	23.60	21.54
	ELEV.	582.65	580.42	582.85	580.19	583.16	580.18	582.66	581.16	580.19	579.94
	DIFF.	2.23		2.66		2.98		1.50			
2/27/93	DEPTH	5.02	7.58	4.60	7.32	6.10	8.00	4.42	6.80	23.62	21.50
	ELEV.	582.67	580.40	582.85	580.23	583.16	580.16	582.68	581.20	580.17	579.98
	DIFF.	2.27		2.62		3.00		1.48			
2/28/93	DEPTH	5.02	7.38	4.60	7.18	6.08	7.80	--	6.70	23.44	21.44
	ELEV.	582.67	580.60	582.85	580.37	583.18	580.36	--	581.30	580.35	580.04
	DIFF.	2.07		2.48		2.82		--			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/1/93	DEPTH	4.80	7.22	4.58	7.00	6.06	7.64	4.62	6.54	23.28	21.24
	ELEV.	582.89	580.76	582.87	580.55	583.20	580.52	582.48	581.46	580.51	580.24
	DIFF.	2.13		2.32		2.68		1.02			
3/2/93	DEPTH	4.84	7.22	4.40	7.20	6.04	7.66	4.20	6.54	23.30	21.28
	ELEV.	582.85	580.76	583.05	580.35	583.22	580.50	582.90	581.46	580.49	580.20
	DIFF.	2.09		2.70		2.72		1.44			
3/3/93	DEPTH	4.68	7.30	4.14	7.12	6.00	7.70	4.18	6.56	23.34	21.36
	ELEV.	583.01	580.68	583.31	580.43	583.26	580.46	582.92	581.44	580.45	580.12
	DIFF.	2.33		2.88		2.80		1.48			
3/4/93	DEPTH	4.96	7.24	4.35	7.20	6.06	7.64	4.56	6.66	23.28	21.34
	ELEV.	582.73	580.74	583.10	580.35	583.20	580.52	582.54	581.34	580.51	580.14
	DIFF.	1.99		2.75		2.68		1.20			
3/5/93	DEPTH	5.00	7.28	4.48	7.12	6.06	7.70	4.46	6.66	23.36	21.36
	ELEV.	582.69	580.70	582.97	580.43	583.20	580.46	582.64	581.34	580.43	580.12
	DIFF.	1.99		2.54		2.74		1.30			
3/6/93	DEPTH	4.98	7.30	4.50	7.08	5.98	7.70	4.40	6.66	23.36	21.36
	ELEV.	582.71	580.68	582.95	580.47	583.28	580.46	582.70	581.34	580.43	580.12
	DIFF.	2.03		2.48		2.82		1.36			
3/7/93	DEPTH	5.10	7.20	4.48	6.96	6.18	7.54	4.50	6.70	23.20	21.22
	ELEV.	582.59	580.78	582.97	580.59	583.08	580.62	582.60	581.30	580.59	580.26
	DIFF.	1.81		2.38		2.46		1.30			

TABLE _ I
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/8/93	DEPTH	5.20	7.36	4.62	7.14	6.30	7.72	5.20	6.92	23.38	21.42
	ELEV.	582.49	580.62	582.83	580.41	582.96	580.44	581.90	581.08	580.41	580.06
	DIFF.	1.87		2.42		2.52		0.82			
3/9/93	DEPTH	5.24	7.40	4.66	7.14	6.32	7.72	5.18	6.98	23.38	21.48
	ELEV.	582.45	580.58	582.79	580.41	582.94	580.44	581.92	581.02	580.41	580.00
	DIFF.	1.87		2.38		2.50		0.90			
3/10/93	DEPTH	5.18	7.10	4.68	6.78	6.28	7.38	5.08	6.68	23.04	21.08
	ELEV.	582.51	580.88	582.77	580.77	582.98	580.78	582.02	581.32	580.75	580.40
	DIFF.	1.63		2.00		2.20		0.70			
3/11/93	DEPTH	5.20	7.44	4.64	6.14	6.38	7.74	5.16	7.00	23.40	21.48
	ELEV.	582.49	580.54	582.81	581.41	582.88	580.42	581.94	581.00	580.39	580.00
	DIFF.	1.95		1.40		2.46		0.94			
3/12/93	DEPTH	5.20	7.30	4.64	7.00	6.28	7.58	5.20	6.86	23.24	21.32
	ELEV.	582.49	580.68	582.81	580.55	582.98	580.58	581.90	581.14	580.55	580.16
	DIFF.	1.81		2.26		2.40		0.76			
3/13/93	DEPTH	5.22	7.10	4.26	7.20	6.36	7.42	5.10	6.70	23.30	21.14
	ELEV.	582.47	580.88	583.19	580.35	582.90	580.74	582.00	581.30	580.49	580.34
	DIFF.	1.59		2.84		2.16		0.70			
3/14/93	DEPTH	5.20	7.32	4.72	7.02	6.24	7.58	4.80	6.78	23.30	21.34
	ELEV.	582.49	580.66	582.73	580.53	583.02	580.58	582.30	581.22	580.49	580.14
	DIFF.	1.83		2.20		2.44		1.08			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/15/93	DEPTH	5.18	7.00	4.68	6.70	6.28	7.28	4.72	6.70	22.92	21.02
	ELEV.	582.51	580.98	582.77	580.85	582.98	580.88	582.38	581.30	580.87	580.46
	DIFF.	1.53		1.92		2.10		1.08			
3/16/93	DEPTH	4.96	7.12	4.40	6.84	6.14	7.44	4.76	6.64	23.10	21.18
	ELEV.	582.73	580.86	583.05	580.71	583.12	580.72	582.34	581.36	580.69	580.30
	DIFF.	1.87		2.34		2.40		0.98			
3/17/93	DEPTH	5.22	7.50	4.66	7.24	6.20	7.80	5.10	7.40	23.48	21.55
	ELEV.	582.47	580.48	582.79	580.31	583.06	580.36	582.00	580.60	580.31	579.93
	DIFF.	1.99		2.48		2.70		1.40			
3/18/93	DEPTH	5.34	7.28	4.74	6.98	6.30	7.58	5.24	6.90	23.22	21.30
	ELEV.	582.35	580.70	582.71	580.57	582.96	580.58	581.86	581.10	580.57	580.18
	DIFF.	1.65		2.14		2.38		0.76			
3/19/93	DEPTH	5.34	7.12	4.84	6.80	6.38	7.38	5.28	6.78	23.04	21.16
	ELEV.	582.35	580.86	582.61	580.75	582.88	580.78	581.82	581.22	580.75	580.32
	DIFF.	1.49		1.86		2.10		0.60			
3/20/93	DEPTH	5.36	7.16	4.76	6.86	6.44	7.40	5.32	6.84	23.10	21.20
	ELEV.	582.33	580.82	582.69	580.69	582.82	580.76	581.78	581.16	580.69	580.28
	DIFF.	1.51		2.00		2.06		0.62			
3/21/93	DEPTH	5.42	7.22	4.80	6.94	6.48	7.48	5.40	6.88	23.14	21.24
	ELEV.	582.27	580.76	582.65	580.61	582.78	580.68	581.70	581.12	580.65	580.24
	DIFF.	1.51		2.04		2.10		0.58			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/22/93	DEPTH	5.20	7.14	4.50	6.80	6.40	7.38	5.20	6.78	23.04	21.18
	ELEV.	582.49	580.84	582.95	580.75	582.86	580.78	581.90	581.22	580.75	580.30
	DIFF.	1.65		2.20		2.08		0.68			
3/23/93	DEPTH	5.00	7.00	4.40	6.68	6.20	7.28	4.64	6.54	22.94	21.06
	ELEV.	582.69	580.98	583.05	580.87	583.06	580.88	582.46	581.46	580.85	580.42
	DIFF.	1.71		2.18		2.18		1.00			
3/24/93	DEPTH	5.14	7.16	4.54	6.80	6.00	7.46	4.86	6.74	23.00	21.02
	ELEV.	582.55	580.82	582.91	580.75	583.26	580.70	582.24	581.26	580.79	580.46
	DIFF.	1.73		2.16		2.56		0.98			
3/25/93	DEPTH	5.24	7.20	4.60	6.90	5.40	7.44	4.78	6.60	23.10	21.10
	ELEV.	582.45	580.78	582.85	580.65	583.86	580.72	582.32	581.40	580.69	580.38
	DIFF.	1.67		2.20		3.14		0.92			
3/26/93	DEPTH	5.22	7.20	4.62	6.70	6.10	7.28	5.06	6.60	22.98	21.04
	ELEV.	582.47	580.78	582.83	580.85	583.16	580.88	582.04	581.40	580.81	580.44
	DIFF.	1.69		1.98		2.28		0.64			
4/2/93	DEPTH	4.98	7.10	4.20	6.80	5.74	7.34	4.56	6.56	23.00	21.14
	ELEV.	582.71	580.88	583.25	580.75	583.52	580.82	582.54	581.44	580.79	580.34
	DIFF.	1.83		2.50		2.70		1.10			
4/3/93	DEPTH	5.12	6.90	4.42	6.58	5.92	7.16	4.90	6.52	22.80	20.92
	ELEV.	582.57	581.08	583.03	580.97	583.34	581.00	582.20	581.48	580.99	580.56
	DIFF.	1.49		2.06		2.34		0.72			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/8/93	DEPTH	4.90	6.66	4.20	6.30	5.90	6.92	4.62	6.26	22.58	20.70
	ELEV.	582.79	581.32	583.25	581.25	583.36	581.24	582.48	581.74	581.21	580.78
	DIFF.	1.47		2.00		2.12		0.74			
4/10/93	DEPTH	5.14	6.94	4.44	6.60	5.90	7.20	4.90	6.56	22.86	21.00
	ELEV.	582.55	581.04	583.01	580.95	583.36	580.96	582.20	581.44	580.93	580.48
	DIFF.	1.51		2.06		2.40		0.76			
4/13/93	DEPTH	5.20	6.88	4.54	6.54	6.00	7.10	4.98	6.50	22.80	20.90
	ELEV.	582.49	581.10	582.91	581.01	583.26	581.06	582.12	581.50	580.99	580.58
	DIFF.	1.39		1.90		2.20		0.62			
4/15/93	DEPTH	4.66	6.38	4.09	6.04	5.54	6.66	4.10	5.94	22.30	20.40
	ELEV.	583.03	581.60	583.36	581.51	583.72	581.50	583.00	582.06	581.49	581.08
	DIFF.	1.43		1.85		2.22		0.94			
4/16/93	DEPTH	5.00	6.84	4.30	6.10	5.66	7.12	4.66	6.44	22.80	20.90
	ELEV.	582.69	581.14	583.15	581.45	583.60	581.04	582.44	581.56	580.99	580.58
	DIFF.	1.55		1.70		2.56		0.88			
4/19/93	DEPTH	5.14	6.64	4.44	6.28	5.88	6.88	4.90	6.34	22.58	20.86
	ELEV.	582.55	581.34	583.01	581.27	583.38	581.28	582.20	581.66	581.21	580.62
	DIFF.	1.21		1.74		2.10		0.54			
4/21/93	DEPTH	5.08	6.93	4.34	6.60	5.79	7.16	4.67	6.46	22.82	20.94
	ELEV.	582.61	581.05	583.11	580.95	583.47	581.00	582.43	581.54	580.97	580.54
	DIFF.	1.56		2.16		2.47		0.89			

TABLE - 1
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/23/93	DEPTH	5.14	6.56	4.42	6.20	5.88	6.80	4.84	6.24	22.50	20.58
	ELEV.	582.55	581.42	583.03	581.35	583.38	581.36	582.26	581.76	581.29	580.90
	DIFF.	1.13		1.68		2.02		0.50			
4/24/93	DEPTH	5.12	6.36	4.42	5.96	5.88	6.58	4.84	6.08	22.24	20.36
	ELEV.	582.57	581.62	583.03	581.59	583.38	581.58	582.26	581.92	581.55	581.12
	DIFF.	0.95		1.44		1.80		0.34			
4/27/93	DEPTH	5.24	6.72	4.60	6.36	6.06	6.94	4.96	6.40	22.60	20.74
	ELEV.	582.45	581.26	582.85	581.19	583.20	581.22	582.14	581.60	581.19	580.74
	DIFF.	1.19		1.66		1.98		0.54			
4/29/93	DEPTH	5.00	6.52	4.34	6.12	5.94	6.74	4.66	6.20	22.34	20.54
	ELEV.	582.69	581.46	583.11	581.43	583.32	581.42	582.44	581.80	581.45	580.94
	DIFF.	1.23		1.68		1.90		0.64			
5/1/93	DEPTH	5.20	6.62	4.58	6.22	6.02	6.80	4.96	6.20	22.50	20.62
	ELEV.	582.49	581.36	582.87	581.33	583.24	581.36	582.14	581.80	581.29	580.86
	DIFF.	1.13		1.54		1.88		0.34			
5/4/93	DEPTH	5.50	6.48	4.58	6.10	6.04	6.70	4.90	6.20	22.36	20.50
	ELEV.	582.19	581.50	582.87	581.45	583.22	581.46	582.20	581.80	581.43	580.98
	DIFF.	0.69		1.42		1.76		0.40			
5/7/93	DEPTH	5.26	6.48	4.64	6.08	6.12	6.68	4.96	6.20	22.36	20.00
	ELEV.	582.43	581.50	582.81	581.47	583.14	581.48	582.14	581.80	581.43	581.48
	DIFF.	0.93		1.34		1.66		0.34			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/9/93	DEPTH	5.26	6.52	4.68	6.12	6.12	6.72	4.92	6.22	22.40	20.02
	ELEV.	582.43	581.46	582.77	581.43	583.14	581.44	582.18	581.78	581.39	581.46
	DIFF.	0.97		1.34		1.70		0.40			
5/11/93	DEPTH	5.28	6.46	4.72	6.08	6.18	6.66	4.96	6.22	22.34	19.96
	ELEV.	582.41	581.52	582.73	581.47	583.08	581.50	582.14	581.78	581.45	581.52
	DIFF.	0.89		1.26		1.58		0.36			
5/17/93	DEPTH	5.02	6.52	4.80	6.12	6.38	6.70	5.16	6.34	22.36	20.00
	ELEV.	582.67	581.46	582.65	581.43	582.88	581.46	581.94	581.66	581.43	581.48
	DIFF.	1.21		1.22		1.42		0.28			
5/21/93	DEPTH	5.40	6.44	4.84	6.04	6.35	6.64	5.10	6.27	22.26	19.91
	ELEV.	582.29	581.54	582.61	581.51	582.91	581.52	582.00	581.73	581.53	581.57
	DIFF.	0.75		1.10		1.39		0.27			
5/24/93	DEPTH	5.30	6.31	4.71	5.90	6.35	6.50	5.00	6.12	22.11	19.77
	ELEV.	582.39	581.67	582.74	581.65	582.91	581.66	582.10	581.88	581.68	581.71
	DIFF.	0.72		1.09		1.25		0.22			
6/2/93	DEPTH	5.20	6.23	4.75	5.83	6.29	6.40	5.10	6.10	22.00	19.63
	ELEV.	582.49	581.75	582.70	581.72	582.97	581.76	582.00	581.90	581.79	581.85
	DIFF.	0.74		0.98		1.21		0.10			
6/9/93	DEPTH	5.12	6.24	4.45	5.74	6.07	6.34	4.77	5.95	22.00	19.64
	ELEV.	582.57	581.74	583.00	581.81	583.19	581.82	582.33	582.05	581.79	581.84
	DIFF.	0.83		1.19		1.37		0.28			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/14/93	DEPTH	5.00	6.07	4.60	5.63	6.12	6.24	4.95	5.90	21.75	19.55
	ELEV.	582.69	581.91	582.85	581.92	583.14	581.92	582.15	582.10	582.04	581.93
	DIFF.	0.78		0.93		1.22		0.05			
6/18/93	DEPTH	5.31	6.17	4.98	5.76	6.49	6.35	5.00	6.03	21.95	19.61
	ELEV.	582.38	581.81	582.47	581.79	582.77	581.81	582.10	581.97	581.84	581.87
	DIFF.	0.57		0.68		0.96		0.13			
6/22/93	DEPTH	5.38	6.15	5.00	5.75	6.45	6.33	5.02	6.03	21.95	19.60
	ELEV.	582.31	581.83	582.45	581.80	582.81	581.83	582.08	581.97	581.84	581.88
	DIFF.	0.48		0.65		0.98		0.11			
6/29/93	DEPTH	5.33	6.18	4.95	5.77	6.55	6.34	5.00	6.00	21.95	19.65
	ELEV.	582.36	581.80	582.50	581.78	582.71	581.82	582.10	582.00	581.84	581.83
	DIFF.	0.56		0.72		0.89		0.10			
7/9/93	DEPTH	5.23	5.87	4.70	5.43	5.92	6.02	4.73	5.71	21.75	19.33
	ELEV.	582.46	582.11	582.75	582.12	583.34	582.14	582.37	582.29	582.04	582.15
	DIFF.	0.35		0.63		1.20		0.08			
7/15/93	DEPTH	5.31	6.00	4.93	5.58	6.16	6.18	4.93	5.88	21.80	19.50
	ELEV.	582.38	581.98	582.52	581.97	583.10	581.98	582.17	582.12	581.99	581.98
	DIFF.	0.40		0.55		1.12		0.05			
7/20/93	DEPTH	5.25	6.03	4.82	5.62	6.11	6.19	4.90	5.95	21.83	19.48
	ELEV.	582.44	581.95	582.63	581.93	583.15	581.97	582.20	582.05	581.96	582.00
	DIFF.	0.49		0.70		1.18		0.15			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/5/93	DEPTH	5.58	5.90	5.15	5.47	6.63	6.06	5.11	5.85	21.70	19.37
	ELEV.	582.11	582.08	582.30	582.08	582.63	582.10	581.99	582.15	582.09	582.11
	DIFF.	0.03		0.22		0.53		-0.16			
8/10/93	DEPTH	5.50	5.82	5.11	5.37	6.60	5.96	4.92	5.73	21.62	19.27
	ELEV.	582.19	582.16	582.34	582.18	582.66	582.20	582.18	582.27	582.17	582.21
	DIFF.	0.03		0.16		0.46		-0.09			
8/10/93	DEPTH	5.50	5.82	5.11	5.37	6.60	5.96	4.92	5.73	21.62	19.27
	ELEV.	582.19	582.16	582.34	582.18	582.66	582.20	582.18	582.27	582.17	582.21
	DIFF.	0.03		0.16		0.46		-0.09			
8/10/93	DEPTH	5.50	5.82	5.11	5.37	6.60	5.96	4.92	5.73	21.62	19.27
	ELEV.	582.19	582.16	582.34	582.18	582.66	582.20	582.18	582.27	582.17	582.21
	DIFF.	0.03		0.16		0.46		-0.09			
8/10/93	DEPTH	5.50	5.82	5.11	5.37	6.60	5.96	4.92	5.73	21.62	19.27
	ELEV.	582.19	582.16	582.34	582.18	582.66	582.20	582.18	582.27	582.17	582.21
	DIFF.	0.03		0.16		0.46		-0.09			
8/31/93	DEPTH	5.40	5.88	5.00	5.46	6.58	6.03	4.82	5.74	21.70	19.37
	ELEV.	582.29	582.10	582.45	582.09	582.68	582.13	582.28	582.26	582.09	582.11
	DIFF.	0.19		0.36		0.55		0.02			
9/2/93	DEPTH	5.43	5.60	5.00	5.16	6.59	5.75	4.86	5.53	21.68	19.10
	ELEV.	582.26	582.38	582.45	582.39	582.67	582.41	582.24	582.47	582.11	582.38
	DIFF.	-0.12		0.06		0.26		-0.23			

TABLE 1
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/3/93	DEPTH	5.45	5.82	5.03	5.44	6.63	6.34	4.88	5.70	29.00	19.36
	ELEV.	582.24	582.16	582.42	582.11	582.63	581.82	582.22	582.30	574.79	582.12
	DIFF.	0.08		0.31		0.81		-0.08			
9/4/93	DEPTH	5.45	6.15	5.03	5.95	6.63	7.17	4.88	5.92	30.90	19.80
	ELEV.	582.24	581.83	582.42	581.60	582.63	580.99	582.22	582.08	572.89	581.68
	DIFF.	0.41		0.82		1.64		0.14			
9/7/93	DEPTH	5.47	6.76	5.08	6.70	6.68	8.02	4.90	6.33	31.40	20.43
	ELEV.	582.22	581.22	582.37	580.85	582.58	580.14	582.20	581.67	572.39	581.05
	DIFF.	1.00		1.52		2.44		0.53			
9/9/93	DEPTH	5.43	6.73	5.06	6.53	6.68	8.07	4.88	6.15	24.70	20.30
	ELEV.	582.26	581.25	582.39	581.02	582.58	580.09	582.22	581.85	579.09	581.18
	DIFF.	1.01		1.37		2.49		0.37			
9/10/93	DEPTH	5.49	7.20	5.10	7.13	6.73	8.80	4.97	6.63	23.68	20.93
	ELEV.	582.20	580.78	582.35	580.42	582.53	579.36	582.13	581.37	580.11	580.55
	DIFF.	1.42		1.93		3.17		0.76			
9/13/93	DEPTH	5.53	7.30	5.15	7.32	6.80	8.92	5.02	6.74	24.68	21.04
	ELEV.	582.16	580.68	582.30	580.23	582.46	579.24	582.08	581.26	579.11	580.44
	DIFF.	1.48		2.07		3.22		0.82			
9/14/93	DEPTH	5.37	7.16	4.90	7.14	6.73	8.48	4.82	6.58	23.40	20.87
	ELEV.	582.32	580.82	582.55	580.41	582.53	579.68	582.28	581.42	580.39	580.61
	DIFF.	1.50		2.14		2.85		0.86			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/15/93	DEPTH	5.39	7.54	5.02	7.49	6.69	8.66	4.79	6.84	24.20	21.20
	ELEV.	582.30	580.44	582.43	580.06	582.57	579.50	582.31	581.16	579.59	580.28
	DIFF.	1.86		2.37		3.07		1.15			
9/16/93	DEPTH	5.38	7.34	4.98	7.30	6.66	8.34	4.78	6.70	23.90	20.99
	ELEV.	582.31	580.64	582.47	580.25	582.60	579.82	582.32	581.30	579.89	580.49
	DIFF.	1.67		2.22		2.78		1.02			
9/19/93	DEPTH	6.30	7.70	5.36	7.30	6.96	8.12	5.57	7.09	23.76	26.00
	ELEV.	581.39	580.28	582.09	580.25	582.30	580.04	581.53	580.91	580.03	575.48
	DIFF.	1.11		1.84		2.26		0.62			
9/20/93	DEPTH	6.02	7.97	5.19	7.25	6.85	8.03	5.25	7.05	23.74	32.00
	ELEV.	581.67	580.01	582.26	580.30	582.41	580.13	581.85	580.95	580.05	569.48
	DIFF.	1.66		1.96		2.28		0.90			
9/21/93	DEPTH	5.85	8.40	5.28	7.55	6.82	8.28	5.15	7.30	24.03	32.55
	ELEV.	581.84	579.58	582.17	580.00	582.44	579.88	581.95	580.70	579.76	568.93
	DIFF.	2.26		2.17		2.56		1.25			
9/23/93	DEPTH	5.72	8.60	5.26	7.68	6.84	8.38	5.13	7.50	24.17	32.88
	ELEV.	581.97	579.38	582.19	579.87	582.42	579.78	581.97	580.50	579.62	568.60
	DIFF.	2.59		2.32		2.64		1.47			
9/24/93	DEPTH	5.70	8.65	5.24	7.64	6.84	8.34	5.10	7.48	24.14	33.82
	ELEV.	581.99	579.33	582.21	579.91	582.42	579.82	582.00	580.52	579.65	567.66
	DIFF.	2.66		2.30		2.60		1.48			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/25/93	DEPTH	5.66	8.52	5.22	7.50	6.84	8.20	5.08	7.40	24.00	32.00
	ELEV.	582.03	579.46	582.23	580.05	582.42	579.96	582.02	580.60	579.79	569.48
	DIFF.	2.57		2.18		2.46		1.42			
9/28/93	DEPTH	5.45	8.92	4.98	7.90	6.55	8.58	5.10	7.80	24.40	31.22
	ELEV.	582.24	579.06	582.47	579.65	582.71	579.58	582.00	580.20	579.39	570.26
	DIFF.	3.18		2.82		3.13		1.80			
9/30/93	DEPTH	5.48	9.07	5.03	8.06	6.58	8.74	5.04	7.92	24.54	31.00
	ELEV.	582.21	578.91	582.42	579.49	582.68	579.42	582.06	580.08	579.25	570.48
	DIFF.	3.30		2.93		3.26		1.98			
10/1/93	DEPTH	5.44	8.76	5.02	7.72	6.55	8.38	4.95	7.62	24.32	31.00
	ELEV.	582.25	579.22	582.43	579.83	582.71	579.78	582.15	580.38	579.47	570.48
	DIFF.	3.03		2.60		2.93		1.77			
10/2/93	DEPTH	5.45	8.86	5.04	8.10	6.59	8.79	4.96	7.84	24.52	22.34
	ELEV.	582.24	579.12	582.41	579.45	582.67	579.37	582.14	580.16	579.27	579.14
	DIFF.	3.12		2.96		3.30		1.98			
10/4/93	DEPTH	5.46	8.46	5.06	7.94	6.58	8.56	4.94	7.58	24.28	21.97
	ELEV.	582.23	579.52	582.39	579.61	582.68	579.60	582.16	580.42	579.51	579.51
	DIFF.	2.71		2.78		3.08		1.74			
10/5/93	DEPTH	5.47	8.60	5.07	8.15	6.63	8.78	4.95	7.69	24.45	22.10
	ELEV.	582.22	579.38	582.38	579.40	582.63	579.38	582.15	580.31	579.34	579.38
	DIFF.	2.84		2.98		3.25		1.84			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/7/93	DEPTH	5.46	8.26	5.07	7.86	6.64	8.45	4.94	7.42	24.14	21.76
	ELEV.	582.23	579.72	582.38	579.69	582.62	579.71	582.16	580.58	579.65	579.72
	DIFF.	2.51		2.69		2.91		1.58			
10/8/93	DEPTH	5.46	8.13	5.06	7.75	6.64	8.33	4.94	7.30	24.02	21.64
	ELEV.	582.23	579.85	582.39	579.80	582.62	579.83	582.16	580.70	579.77	579.84
	DIFF.	2.38		2.59		2.79		1.46			
10/9/93	DEPTH	5.12	8.34	4.76	7.95	6.47	8.58	4.54	7.41	24.24	21.85
	ELEV.	582.57	579.64	582.69	579.60	582.79	579.58	582.56	580.59	579.55	579.63
	DIFF.	2.93		3.09		3.21		1.97			
10/11/93	DEPTH	5.32	8.02	4.96	7.70	6.54	8.26	4.76	7.20	23.95	21.54
	ELEV.	582.37	579.96	582.49	579.85	582.72	579.90	582.34	580.80	579.84	579.94
	DIFF.	2.41		2.64		2.82		1.54			
10/12/93	DEPTH	5.36	8.09	5.00	7.77	6.57	8.34	4.80	7.26	24.02	21.61
	ELEV.	582.33	579.89	582.45	579.78	582.69	579.82	582.30	580.74	579.77	579.87
	DIFF.	2.44		2.67		2.87		1.56			
10/14/93	DEPTH	5.36	8.04	5.00	7.74	6.60	8.30	4.80	7.22	23.97	21.55
	ELEV.	582.33	579.94	582.45	579.81	582.66	579.86	582.30	580.78	579.82	579.93
	DIFF.	2.39		2.64		2.80		1.52			
10/15/93	DEPTH	5.37	8.02	5.00	7.72	6.60	8.30	4.81	7.22	23.96	21.54
	ELEV.	582.32	579.96	582.45	579.83	582.66	579.86	582.29	580.78	579.83	579.94
	DIFF.	2.36		2.62		2.80		1.51			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/16/93	DEPTH	5.31	7.84	4.92	7.55	6.58	8.12	4.75	7.08	23.78	21.37
	ELEV.	582.38	580.14	582.53	580.00	582.68	580.04	582.35	580.92	580.01	580.11
	DIFF.	2.24		2.53		2.64		1.43			
10/18/93	DEPTH	5.39	8.08	4.96	7.79	6.54	8.35	4.88	7.28	24.01	21.59
	ELEV.	582.30	579.90	582.49	579.76	582.72	579.81	582.22	580.72	579.78	579.89
	DIFF.	2.40		2.73		2.91		1.50			
10/19/93	DEPTH	5.40	7.98	4.97	7.69	6.54	8.25	4.91	7.22	23.91	21.49
	ELEV.	582.29	580.00	582.48	579.86	582.72	579.91	582.19	580.78	579.88	579.99
	DIFF.	2.29		2.62		2.81		1.41			
10/21/93	DEPTH	5.40	8.00	4.97	7.71	6.56	8.28	4.93	7.25	23.93	21.51
	ELEV.	582.29	579.98	582.48	579.84	582.70	579.88	582.17	580.75	579.86	579.97
	DIFF.	2.31		2.64		2.82		1.42			
10/22/93	DEPTH	5.43	8.11	5.00	7.81	6.58	8.37	4.95	7.36	24.04	21.63
	ELEV.	582.26	579.87	582.45	579.74	582.68	579.79	582.15	580.64	579.75	579.85
	DIFF.	2.39		2.71		2.89		1.51			
10/23/93	DEPTH	5.42	7.81	4.98	7.53	6.57	8.09	4.92	7.11	23.75	21.32
	ELEV.	582.27	580.17	582.47	580.02	582.69	580.07	582.18	580.89	580.04	580.16
	DIFF.	2.10		2.45		2.62		1.29			
10/25/93	DEPTH	5.41	7.78	5.00	7.48	6.59	8.06	4.95	7.08	23.71	21.28
	ELEV.	582.28	580.20	582.45	580.07	582.67	580.10	582.15	580.92	580.08	580.20
	DIFF.	2.08		2.38		2.57		1.23			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/26/93	DEPTH	5.42	7.77	5.02	7.48	6.60	8.05	4.93	7.08	23.70	21.26
	ELEV.	582.27	580.21	582.43	580.07	582.66	580.11	582.17	580.92	580.09	580.22
	DIFF.	2.06		2.36		2.55		1.25			
10/28/93	DEPTH	5.38	7.37	5.00	7.10	6.54	7.66	4.90	6.78	23.32	20.88
	ELEV.	582.31	580.61	582.45	580.45	582.72	580.50	582.20	581.22	580.47	580.60
	DIFF.	1.70		2.00		2.22		0.98			
10/29/93	DEPTH	5.46	7.89	5.05	7.58	6.65	8.16	4.98	7.21	23.83	21.40
	ELEV.	582.23	580.09	582.40	579.97	582.61	580.00	582.12	580.79	579.96	580.08
	DIFF.	2.14		2.43		2.61		1.33			
10/30/93	DEPTH	5.48	7.80	5.06	7.50	6.67	8.07	4.98	7.12	23.70	21.32
	ELEV.	582.21	580.18	582.39	580.05	582.59	580.09	582.12	580.88	580.09	580.16
	DIFF.	2.03		2.34		2.50		1.24			
11/1/93	DEPTH	5.46	7.92	5.07	7.62	6.66	8.18	4.90	7.21	23.84	21.44
	ELEV.	582.23	580.06	582.38	579.93	582.60	579.98	582.20	580.79	579.95	580.04
	DIFF.	2.17		2.45		2.62		1.41			
11/2/93	DEPTH	5.45	7.73	5.05	7.42	6.67	7.98	4.90	7.04	23.63	21.22
	ELEV.	582.24	580.25	582.40	580.13	582.59	580.18	582.20	580.96	580.16	580.26
	DIFF.	1.99		2.27		2.41		1.24			
11/4/93	DEPTH	5.39	7.44	5.02	7.18	6.65	7.76	4.86	6.83	23.40	20.96
	ELEV.	582.30	580.54	582.43	580.37	582.61	580.40	582.24	581.17	580.39	580.52
	DIFF.	1.76		2.06		2.21		1.07			

TABLE [illegible]
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/5/93	DEPTH	5.43	7.62	5.05	7.34	6.67	7.93	4.89	6.99	23.58	21.15
	ELEV.	582.26	580.36	582.40	580.21	582.59	580.23	582.21	581.01	580.21	580.33
	DIFF.	1.90		2.19		2.36		1.20			
11/6/93	DEPTH	5.25	7.80	4.87	7.51	6.56	8.08	4.67	7.60	23.74	21.32
	ELEV.	582.44	580.18	582.58	580.04	582.70	580.08	582.43	580.40	580.05	580.16
	DIFF.	2.26		2.54		2.62		2.03			
11/8/93	DEPTH	5.33	7.74	4.95	7.46	6.60	8.00	4.75	7.03	23.68	21.26
	ELEV.	582.36	580.24	582.50	580.09	582.66	580.16	582.35	580.97	580.11	580.22
	DIFF.	2.12		2.41		2.50		1.38			
11/9/93	DEPTH	5.37	7.80	4.98	7.52	6.62	8.06	4.79	7.08	23.73	21.30
	ELEV.	582.32	580.18	582.47	580.03	582.64	580.10	582.31	580.92	580.06	580.18
	DIFF.	2.14		2.44		2.54		1.39			
11/11/93	DEPTH	5.36	7.38	4.99	7.11	6.63	7.69	4.79	6.76	23.33	20.89
	ELEV.	582.33	580.60	582.46	580.44	582.63	580.47	582.31	581.24	580.46	580.59
	DIFF.	1.73		2.02		2.16		1.07			
11/12/93	DEPTH	5.41	7.70	5.04	7.43	6.66	8.00	4.84	7.03	23.64	21.22
	ELEV.	582.28	580.28	582.41	580.12	582.60	580.16	582.26	580.97	580.15	580.26
	DIFF.	2.00		2.29		2.44		1.29			
11/13/93	DEPTH	5.40	7.38	5.00	7.12	6.67	7.70	5.10	6.87	23.36	20.91
	ELEV.	582.29	580.60	582.45	580.43	582.59	580.46	582.00	581.13	580.43	580.57
	DIFF.	1.69		2.02		2.13		0.87			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/15/93	DEPTH	5.56	7.80	5.06	7.48	6.88	8.06	5.29	7.26	23.72	21.31
	ELEV.	582.13	580.18	582.39	580.07	582.38	580.10	581.81	580.74	580.07	580.17
	DIFF.	1.95		2.32		2.28		1.07			
11/16/93	DEPTH	5.57	7.65	5.10	7.33	6.88	7.88	5.24	7.12	23.54	21.15
	ELEV.	582.12	580.33	582.35	580.22	582.38	580.28	581.86	580.88	580.25	580.33
	DIFF.	1.79		2.13		2.10		0.98			
11/18/93	DEPTH	5.55	7.36	5.10	7.05	6.82	7.60	5.13	6.86	23.26	31.24
	ELEV.	582.14	580.62	582.35	580.50	582.44	580.56	581.97	581.14	580.53	570.24
	DIFF.	1.52		1.85		1.88		0.83			
11/19/93	DEPTH	5.53	7.82	5.09	7.06	6.80	7.64	5.11	7.00	23.36	30.14
	ELEV.	582.16	580.16	582.36	580.49	582.46	580.52	581.99	581.00	580.43	571.34
	DIFF.	2.00		1.87		1.94		0.99			
11/20/93	DEPTH	5.58	8.53	5.15	7.59	6.84	8.15	5.16	7.55	23.93	28.30
	ELEV.	582.11	579.45	582.30	579.96	582.42	580.01	581.94	580.45	579.86	573.18
	DIFF.	2.66		2.34		2.41		1.49			
11/22/93	DEPTH	5.63	8.84	5.18	7.90	6.87	8.45	5.20	7.84	24.26	28.00
	ELEV.	582.06	579.14	582.27	579.65	582.39	579.71	581.90	580.16	579.53	573.48
	DIFF.	2.92		2.62		2.68		1.74			
11/23/93	DEPTH	5.60	8.63	5.16	7.67	6.84	8.21	5.15	7.64	24.04	32.20
	ELEV.	582.09	579.35	582.29	579.88	582.42	579.95	581.95	580.36	579.75	569.28
	DIFF.	2.74		2.41		2.47		1.59			

TABLE .
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9 (ft)	P-9 (ft)	W-10 (ft)	P-10 (ft)	W-11 (ft)	P-11 (ft)	W-12 (ft)	P-12 (ft)	R-5 (ft)	R-6 (ft)
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
11/24/93	DEPTH	5.60	8.90	5.18	7.91	6.85	8.46	5.14	7.86	24.26	31.60
	ELEV.	582.09	579.08	582.27	579.64	582.41	579.70	581.96	580.14	579.53	569.88
	DIFF.	3.01		2.63		2.71		1.82			
11/27/93	DEPTH	5.20	9.00	4.80	7.96	6.52	8.52	4.62	7.80	24.34	31.92
	ELEV.	582.49	578.98	582.65	579.59	582.74	579.64	582.48	580.20	579.45	569.56
	DIFF.	3.51		3.06		3.10		2.28			
11/28/93	DEPTH	5.20	9.04	4.82	8.00	6.49	8.51	4.63	7.83	24.38	32.00
	ELEV.	582.49	578.94	582.63	579.55	582.77	579.65	582.47	580.17	579.41	569.48
	DIFF.	3.55		3.08		3.12		2.30			
11/29/93	DEPTH	5.24	9.40	4.84	8.36	6.50	8.90	4.65	8.12	24.75	30.56
	ELEV.	582.45	578.58	582.61	579.19	582.76	579.26	582.45	579.88	579.04	570.92
	DIFF.	3.87		3.42		3.50		2.57			
11/30/93	DEPTH	4.94	9.16	4.54	8.11	6.35	8.70	4.27	7.84	24.51	33.00
	ELEV.	582.75	578.82	582.91	579.44	582.91	579.46	582.83	580.16	579.28	568.48
	DIFF.	3.93		3.47		3.45		2.67			
12/2/93	DEPTH	4.94	9.16	4.54	8.11	6.35	8.70	4.27	7.84	24.51	33.00
	ELEV.	582.75	578.82	582.91	579.44	582.91	579.46	582.83	580.16	579.28	568.48
	DIFF.	3.93		3.47		3.45		2.67			
12/3/93	DEPTH	4.97	9.30	4.57	8.26	6.26	8.85	4.35	7.97	24.66	32.00
	ELEV.	582.72	578.68	582.88	579.29	583.00	579.31	582.75	580.03	579.13	569.48
	DIFF.	4.04		3.59		3.69		2.72			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/4/93	DEPTH	4.95	9.14	4.56	8.08	6.22	8.68	4.33	7.82	24.52	32.00
	ELEV.	582.74	578.84	582.89	579.47	583.04	579.48	582.77	580.18	579.27	569.48
	DIFF.	3.90		3.42		3.56		2.59			
12/6/93	DEPTH	5.00	9.40	4.62	8.36	6.24	8.94	4.43	8.03	24.75	32.50
	ELEV.	582.69	578.58	582.83	579.19	583.02	579.22	582.67	579.97	579.04	568.98
	DIFF.	4.11		3.64		3.80		2.70			
12/7/93	DEPTH	5.05	9.64	4.64	8.62	6.28	9.18	4.50	8.22	25.02	32.00
	ELEV.	582.64	578.34	582.81	578.93	582.98	578.98	582.60	579.78	578.77	569.48
	DIFF.	4.30		3.88		4.00		2.82			
12/9/93	DEPTH	5.04	9.33	4.67	8.28	6.30	8.88	4.50	8.00	24.72	33.70
	ELEV.	582.65	578.65	582.78	579.27	582.96	579.28	582.60	580.00	579.07	567.78
	DIFF.	4.00		3.51		3.68		2.60			
12/10/93	DEPTH	5.08	9.52	4.73	8.45	6.32	9.06	4.55	8.18	24.90	33.00
	ELEV.	582.61	578.46	582.72	579.10	582.94	579.10	582.55	579.82	578.89	568.48
	DIFF.	4.15		3.62		3.84		2.73			
12/11/93	DEPTH	5.13	9.86	4.74	8.83	6.36	9.40	4.57	8.43	25.56	32.60
	ELEV.	582.56	578.12	582.71	578.72	582.90	578.76	582.53	579.57	578.23	568.88
	DIFF.	4.44		3.99		4.14		2.96			
12/13/93	DEPTH	5.15	9.66	4.77	8.62	6.38	9.22	4.60	8.28	25.07	32.00
	ELEV.	582.54	578.32	582.68	578.93	582.88	578.94	582.50	579.72	578.72	569.48
	DIFF.	4.22		3.75		3.94		2.78			

TABLE .
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/14/93	DEPTH	5.15	9.68	4.78	9.10	6.39	9.22	4.60	8.28	25.08	32.30
	ELEV.	582.54	578.30	582.67	578.45	582.87	578.94	582.50	579.72	578.71	569.18
	DIFF.	4.24		4.22		3.93		2.78			
12/16/93	DEPTH	5.20	10.10	4.82	8.82	6.45	9.90	5.16	8.90	25.18	33.00
	ELEV.	582.49	577.88	582.63	578.73	582.81	578.26	581.94	579.10	578.61	568.48
	DIFF.	4.61		3.90		4.55		2.84			
12/17/93	DEPTH	5.24	9.67	4.70	8.77	6.39	9.40	4.67	8.37	25.11	32.80
	ELEV.	582.45	578.31	582.75	578.78	582.87	578.76	582.43	579.63	578.68	568.68
	DIFF.	4.14		3.97		4.11		2.80			
12/18/93	DEPTH	5.02	9.66	4.61	8.68	6.30	9.29	4.23	8.28	25.00	30.00
	ELEV.	582.67	578.32	582.84	578.87	582.96	578.87	582.87	579.72	578.79	571.48
	DIFF.	4.35		3.97		4.09		3.15			
12/20/93	DEPTH	5.03	9.79	4.70	8.78	6.17	9.40	4.52	8.38	25.13	32.00
	ELEV.	582.66	578.19	582.75	578.77	583.09	578.76	582.58	579.62	578.66	569.48
	DIFF.	4.47		3.98		4.33		2.96			
12/21/93	DEPTH	5.08	9.95	4.70	8.95	6.32	9.55	4.57	8.50	25.31	30.00
	ELEV.	582.61	578.03	582.75	578.60	582.94	578.61	582.53	579.50	578.48	571.48
	DIFF.	4.58		4.15		4.33		3.03			
12/22/93	DEPTH	4.93	9.96	4.69	9.00	6.36	9.60	4.45	8.55	25.30	31.60
	ELEV.	582.76	578.02	582.76	578.55	582.90	578.56	582.65	579.45	578.49	569.88
	DIFF.	4.74		4.21		4.34		3.20			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/23/93	DEPTH	5.20	10.09	4.77	9.15	6.35	9.74	4.65	8.65	25.48	31.00
	ELEV.	582.49	577.89	582.68	578.40	582.91	578.42	582.45	579.35	578.31	570.48
	DIFF.	4.60		4.28		4.49		3.10			
12/24/93	DEPTH	5.24	9.87	4.84	8.90	6.42	9.50	4.70	8.46	25.28	31.20
	ELEV.	582.45	578.11	582.61	578.65	582.84	578.66	582.40	579.54	578.51	570.28
	DIFF.	4.34		3.96		4.18		2.86			
12/26/93	DEPTH	5.41	9.75	4.89	9.28	6.49	9.76	4.85	8.78	25.72	31.33
	ELEV.	582.28	578.23	582.56	578.27	582.77	578.40	582.25	579.22	578.07	570.15
	DIFF.	4.05		4.29		4.37		3.03			
12/27/93	DEPTH	5.42	10.43	4.96	9.48	6.35	10.05	5.00	8.98	25.93	31.30
	ELEV.	582.27	577.55	582.49	578.07	582.91	578.11	582.10	579.02	577.86	570.18
	DIFF.	4.72		4.42		4.80		3.08			
12/28/93	DEPTH	5.42	10.35	5.08	9.41	6.63	9.95	4.96	8.93	25.71	33.04
	ELEV.	582.27	577.63	582.37	578.14	582.63	578.21	582.14	579.07	578.08	568.44
	DIFF.	4.64		4.23		4.42		3.07			
12/29/93	DEPTH	5.36	9.90	4.97	8.92	6.62	9.53	4.82	8.55	25.26	33.00
	ELEV.	582.33	578.08	582.48	578.63	582.64	578.63	582.28	579.45	578.53	568.48
	DIFF.	4.25		3.85		4.01		2.83			
12/30/93	DEPTH	5.53	10.10	5.06	9.14	6.68	9.73	5.00	8.72	25.47	33.10
	ELEV.	582.16	577.88	582.39	578.41	582.58	578.43	582.10	579.28	578.32	568.38
	DIFF.	4.28		3.98		4.15		2.82			

TABLE .
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/31/93	DEPTH	5.55	10.30	5.05	9.35	6.90	9.93	5.06	8.91	25.74	33.00
	ELEV.	582.14	577.68	582.40	578.20	582.36	578.23	582.04	579.09	578.05	568.48
	DIFF.	4.46		4.20		4.13		2.95			
1/2/94	DEPTH	5.52	10.50	5.20	9.59	6.76	10.12	5.51	9.05	25.86	33.00
	ELEV.	582.17	577.48	582.25	577.96	582.50	578.04	581.60	578.95	577.93	568.48
	DIFF.	4.69		4.29		4.46		2.64			
1/3/94	DEPTH	5.41	10.30	5.10	9.37	6.74	9.95	5.05	8.92	25.70	32.90
	ELEV.	582.28	577.68	582.35	578.18	582.52	578.21	582.05	579.08	578.09	568.58
	DIFF.	4.60		4.17		4.31		2.97			
1/4/94	DEPTH	5.47	10.40	5.11	9.47	6.78	10.03	5.07	9.00	25.79	33.00
	ELEV.	582.22	577.58	582.34	578.08	582.48	578.13	582.03	579.00	578.00	568.48
	DIFF.	4.64		4.26		4.35		3.03			
1/5/94	DEPTH	5.50	10.55	5.15	9.62	6.81	10.18	5.09	9.11	25.96	33.00
	ELEV.	582.19	577.43	582.30	577.93	582.45	577.98	582.01	578.89	577.83	568.48
	DIFF.	4.76		4.37		4.47		3.12			
1/7/94	DEPTH	5.58	10.53	5.15	9.61	6.84	10.17	5.09	9.11	25.94	32.50
	ELEV.	582.11	577.45	582.30	577.94	582.42	577.99	582.01	578.89	577.85	568.98
	DIFF.	4.66		4.36		4.43		3.12			
1/8/94	DEPTH	5.64	10.63	5.18	9.75	6.77	10.30	5.18	9.22	26.04	32.70
	ELEV.	582.05	577.35	582.27	577.80	582.49	577.86	581.92	578.78	577.75	568.78
	DIFF.	4.70		4.47		4.63		3.14			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/10/94	DEPTH	5.62	10.33	5.17	9.44	6.84	10.00	5.21	8.98	25.73	33.10
	ELEV.	582.07	577.65	582.28	578.11	582.42	578.16	581.89	579.02	578.06	568.38
	DIFF.	4.42		4.17		4.26		2.87			
1/11/94	DEPTH	5.70	10.48	5.13	9.70	6.80	10.24	5.22	9.19	26.00	33.25
	ELEV.	581.99	577.50	582.32	577.85	582.46	577.92	581.88	578.81	577.79	568.23
	DIFF.	4.49		4.47		4.54		3.07			
1/13/94	DEPTH	5.60	10.44	5.10	9.58	6.80	10.14	5.23	9.09	25.93	33.85
	ELEV.	582.09	577.54	582.35	577.97	582.46	578.02	581.87	578.91	577.86	567.63
	DIFF.	4.55		4.38		4.44		2.96			
1/14/94	DEPTH	5.58	10.64	5.20	9.78	6.98	10.33	5.28	9.25	26.10	33.40
	ELEV.	582.11	577.34	582.25	577.77	582.28	577.83	581.82	578.75	577.69	568.08
	DIFF.	4.77		4.48		4.45		3.07			
1/16/94	DEPTH	5.95	10.84	5.23	9.65	6.84	10.21	5.37	9.42	25.95	33.00
	ELEV.	581.74	577.14	582.22	577.90	582.42	577.95	581.73	578.58	577.84	568.48
	DIFF.	4.60		4.32		4.47		3.15			
1/17/94	DEPTH	5.77	10.70	5.28	9.78	7.02	10.36	5.42	9.30	26.13	33.15
	ELEV.	581.92	577.28	582.17	577.77	582.24	577.80	581.68	578.70	577.66	568.33
	DIFF.	4.64		4.40		4.44		2.98			
1/18/94	DEPTH	5.82	10.88	5.32	10.01	6.96	10.57	5.54	9.48	26.31	32.90
	ELEV.	581.87	577.10	582.13	577.54	582.30	577.59	581.56	578.52	577.48	568.58
	DIFF.	4.77		4.59		4.71		3.04			

TABLE 1
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/19/94	DEPTH	5.86	10.76	5.33	9.87	7.05	10.43	5.50	9.38	26.20	32.95
	ELEV.	581.83	577.22	582.12	577.68	582.21	577.73	581.60	578.62	577.59	568.53
	DIFF.	4.61		4.44		4.48		2.98			
1/20/94	DEPTH	5.86	10.90	5.28	10.00	7.00	10.58	5.55	9.52	26.36	33.05
	ELEV.	581.83	577.08	582.17	577.55	582.26	577.58	581.55	578.48	577.43	568.43
	DIFF.	4.75		4.62		4.68		3.07			
1/22/94	DEPTH	5.84	10.72	5.36	9.82	7.02	10.38	5.54	9.33	26.14	32.90
	ELEV.	581.85	577.26	582.09	577.73	582.24	577.78	581.56	578.67	577.65	568.58
	DIFF.	4.59		4.36		4.46		2.89			
1/24/94	DEPTH	5.42	11.00	5.28	10.09	7.09	10.67	5.44	9.58	26.43	33.06
	ELEV.	582.27	576.98	582.17	577.46	582.17	577.49	581.66	578.42	577.36	568.42
	DIFF.	5.29		4.71		4.68		3.24			
1/25/94	DEPTH	5.58	10.93	5.14	10.00	7.04	10.60	5.43	9.52	26.37	33.00
	ELEV.	582.11	577.05	582.31	577.55	582.22	577.56	581.67	578.48	577.42	568.48
	DIFF.	5.06		4.76		4.66		3.19			
1/26/94	DEPTH	5.77	11.10	5.24	10.20	7.09	10.78	5.46	9.65	26.50	33.05
	ELEV.	581.92	576.88	582.21	577.35	582.17	577.38	581.64	578.35	577.29	568.43
	DIFF.	5.04		4.86		4.79		3.29			
1/28/94	DEPTH	5.36	10.74	4.92	9.84	6.71	10.43	4.96	9.28	26.15	33.19
	ELEV.	582.33	577.24	582.53	577.71	582.55	577.73	582.14	578.72	577.64	568.29
	DIFF.	5.09		4.82		4.82		3.42			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/30/94	DEPTH	5.41	11.22	5.00	10.33	6.76	10.93	4.95	9.64	26.66	33.20
	ELEV.	582.28	576.76	582.45	577.22	582.50	577.23	582.15	578.36	577.13	568.28
	DIFF.	5.52		5.23		5.27		3.79			
1/31/94	DEPTH	5.45	11.10	5.05	10.22	6.79	10.82	5.02	9.57	26.52	33.00
	ELEV.	582.24	576.88	582.40	577.33	582.47	577.34	582.08	578.43	577.27	568.48
	DIFF.	5.36		5.07		5.13		3.65			
2/1/94	DEPTH	5.50	11.12	5.07	10.17	6.78	10.78	5.06	9.53	26.52	32.95
	ELEV.	582.19	576.86	582.38	577.38	582.48	577.38	582.04	578.47	577.27	568.53
	DIFF.	5.33		5.00		5.10		3.57			
2/3/94	DEPTH	5.56	11.20	5.12	10.30	6.83	10.91	frozen	9.63	26.65	33.10
	ELEV.	582.13	576.78	582.33	577.25	582.43	577.25	--	578.37	577.14	568.38
	DIFF.	5.35		5.08		5.18		--			
2/4/94	DEPTH	5.59	11.09	5.12	10.22	6.85	10.81	frozen	9.58	26.54	32.90
	ELEV.	582.10	576.89	582.33	577.33	582.41	577.35	--	578.42	577.25	568.58
	DIFF.	5.21		5.00		5.06		--			
2/5/94	DEPTH	5.45	10.98	5.11	10.12	6.84	10.71	frozen	9.49	26.45	33.00
	ELEV.	582.24	577.00	582.34	577.43	582.42	577.45	--	578.51	577.34	568.48
	DIFF.	5.24		4.91		4.97		--			
2/7/94	DEPTH	5.71	11.35	5.19	10.52	6.93	11.08	frozen	9.82	26.80	33.10
	ELEV.	581.98	576.63	582.26	577.03	582.33	577.08	--	578.18	576.99	568.38
	DIFF.	5.35		5.23		5.25		--			

TABLE _ ı
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/8/94	DEPTH	5.65	10.98	5.16	10.17	6.91	10.77	frozen	9.53	26.51	32.90
	ELEV.	582.04	577.00	582.29	577.38	582.35	577.39	--	578.47	577.28	568.58
	DIFF.	5.04		4.91		4.96		--			
2/10/94	DEPTH	5.74	11.35	5.20	10.52	6.98	11.10	frozen	9.84	26.93	32.85
	ELEV.	581.95	576.63	582.25	577.03	582.28	577.06	--	578.16	576.86	568.63
	DIFF.	5.32		5.22		5.22		--			
2/11/94	DEPTH	5.74	11.21	5.19	10.40	6.97	10.98	frozen	9.72	26.70	32.85
	ELEV.	581.95	576.77	582.26	577.15	582.29	577.18	--	578.28	577.09	568.63
	DIFF.	5.18		5.11		5.11		--			
2/12/94	DEPTH	5.60	10.96	5.19	10.14	6.88	10.75	frozen	9.53	26.38	33.00
	ELEV.	582.09	577.02	582.26	577.41	582.38	577.41	--	578.47	577.41	568.48
	DIFF.	5.07		4.85		4.97		--			
2/14/94	DEPTH	5.71	11.01	5.19	10.18	6.93	10.80	frozen	9.55	26.40	33.00
	ELEV.	581.98	576.97	582.26	577.37	582.33	577.36	--	578.45	577.39	568.48
	DIFF.	5.01		4.89		4.97		--			
2/15/94	DEPTH	5.74	11.42	5.22	10.61	6.92	11.19	frozen	9.89	26.95	32.95
	ELEV.	581.95	576.56	582.23	576.94	582.34	576.97	--	578.11	576.84	568.53
	DIFF.	5.39		5.29		5.37		--			
2/17/94	DEPTH	5.65	11.23	5.08	10.40	6.95	11.02	frozen	9.73	26.80	33.00
	ELEV.	582.04	576.75	582.37	577.15	582.31	577.14	--	578.27	576.99	568.48
	DIFF.	5.29		5.22		5.17		--			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/18/94	DEPTH	5.28	11.20	4.80	10.39	6.63	10.98	frozen	9.58	26.69	33.00
	ELEV.	582.41	576.78	582.65	577.16	582.63	577.18	--	578.42	577.10	568.48
	DIFF.	5.63		5.49		5.45		--			
2/20/94	DEPTH	5.06	11.47	4.49	10.68	5.87	11.27	frozen	9.78	26.97	32.90
	ELEV.	582.63	576.51	582.96	576.87	583.39	576.89	--	578.22	576.82	568.58
	DIFF.	6.12		6.09		6.50		--			
2/21/94	DEPTH	5.21	11.53	4.67	10.65	6.00	11.35	frozen	9.88	27.07	32.80
	ELEV.	582.48	576.45	582.78	576.90	583.26	576.81	--	578.12	576.72	568.68
	DIFF.	6.03		5.88		6.45		--			
2/24/94	DEPTH	5.40	11.37	4.88	10.68	6.10	11.28	frozen	9.83	26.98	32.75
	ELEV.	582.29	576.61	582.57	576.87	583.16	576.88	--	578.17	576.81	568.73
	DIFF.	5.68		5.70		6.28		--			
2/25/94	DEPTH	5.39	11.11	4.83	10.41	5.58	11.03	frozen	9.63	26.71	32.60
	ELEV.	582.30	576.87	582.62	577.14	583.68	577.13	--	578.37	577.08	568.88
	DIFF.	5.43		5.48		6.55		--			
2/26/94	DEPTH	5.50	11.76	4.92	11.04	6.22	11.67	frozen	10.13	27.37	32.90
	ELEV.	582.19	576.22	582.53	576.51	583.04	576.49	--	577.87	576.42	568.58
	DIFF.	5.97		6.02		6.55		--			
2/28/94	DEPTH	5.31	11.30	4.95	10.55	6.26	11.20	5.40	9.81	26.89	32.95
	ELEV.	582.38	576.68	582.50	577.00	583.00	576.96	581.70	578.19	576.90	568.53
	DIFF.	5.70		5.50		6.04		3.51			

TABLE
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9 (ft)	P-9 (ft)	W-10 (ft)	P-10 (ft)	W-11 (ft)	P-11 (ft)	W-12 (ft)	P-12 (ft)	R-5 (ft)	R-6 (ft)
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
3/1/94	DEPTH	5.55	11.37	4.95	10.58	6.28	11.27	5.40	9.88	26.85	32.85
	ELEV.	582.14	576.61	582.50	576.97	582.98	576.89	581.70	578.12	576.94	568.63
	DIFF.	5.53		5.53		6.09		3.58			
3/3/94	DEPTH	5.39	11.08	4.78	10.37	6.40	10.97	5.42	9.64	26.86	32.80
	ELEV.	582.30	576.90	582.67	577.18	582.86	577.19	581.68	578.36	576.93	568.68
	DIFF.	5.40		5.49		5.67		3.32			
3/4/94	DEPTH	5.44	11.28	4.82	10.55	6.40	11.17	5.33	9.82	26.90	32.76
	ELEV.	582.25	576.70	582.63	577.00	582.86	576.99	581.77	578.18	576.89	568.72
	DIFF.	5.55		5.63		5.87		3.59			
3/5/94	DEPTH	5.27	11.50	4.78	10.82	6.17	11.40	5.35	9.95	27.09	32.50
	ELEV.	582.42	576.48	582.67	576.73	583.09	576.76	581.75	578.05	576.70	568.98
	DIFF.	5.94		5.94		6.33		3.70			
3/7/94	DEPTH	5.16	11.50	4.63	10.73	5.91	11.42	5.09	9.93	27.10	32.55
	ELEV.	582.53	576.48	582.82	576.82	583.35	576.74	582.01	578.07	576.69	568.93
	DIFF.	6.05		6.00		6.61		3.94			
3/8/94	DEPTH	5.09	11.53	4.70	10.75	5.96	11.45	5.05	9.96	27.14	32.60
	ELEV.	582.60	576.45	582.75	576.80	583.30	576.71	582.05	578.04	576.65	568.88
	DIFF.	6.15		5.95		6.59		4.01			
3/10/94	DEPTH	5.27	11.40	4.72	10.67	5.97	11.39	5.07	9.86	27.03	32.50
	ELEV.	582.42	576.58	582.73	576.88	583.29	576.77	582.03	578.14	576.76	568.98
	DIFF.	5.84		5.85		6.52		3.89			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/12/94	DEPTH	5.19	11.24	4.71	10.59	5.98	11.25	5.13	9.78	26.88	32.40
	ELEV.	582.50	576.74	582.74	576.96	583.28	576.91	581.97	578.22	576.91	569.08
	DIFF.	5.76		5.78		6.37		3.75			
3/14/94	DEPTH	5.17	11.11	4.71	10.47	6.10	11.08	5.20	9.68	26.77	33.00
	ELEV.	582.52	576.87	582.74	577.08	583.16	577.08	581.90	578.32	577.02	568.48
	DIFF.	5.65		5.66		6.08		3.58			
3/15/94	DEPTH	5.29	11.47	4.74	10.80	5.98	11.38	5.27	9.92	27.06	33.10
	ELEV.	582.40	576.51	582.71	576.75	583.28	576.78	581.83	578.08	576.73	568.38
	DIFF.	5.89		5.96		6.50		3.75			
3/17/94	DEPTH	5.23	11.36	4.81	10.57	6.12	11.28	5.32	9.85	26.95	33.20
	ELEV.	582.46	576.62	582.64	576.98	583.14	576.88	581.78	578.15	576.84	568.28
	DIFF.	5.84		5.66		6.26		3.63			
3/18/94	DEPTH	5.34	11.35	4.85	10.57	6.12	11.28	5.32	9.85	26.95	33.20
	ELEV.	582.35	576.63	582.60	576.98	583.14	576.88	581.78	578.15	576.84	568.28
	DIFF.	5.72		5.62		6.26		3.63			
3/20/94	DEPTH	5.15	11.53	4.84	10.73	6.07	11.45	5.38	9.98	27.18	33.15
	ELEV.	582.54	576.45	582.61	576.82	583.19	576.71	581.72	578.02	576.61	568.33
	DIFF.	6.09		5.79		6.48		3.70			
3/21/94	DEPTH	5.09	11.58	4.64	10.61	6.02	11.44	5.07	9.95	27.14	33.00
	ELEV.	582.60	576.40	582.81	576.94	583.24	576.72	582.03	578.05	576.65	568.48
	DIFF.	6.20		5.87		6.52		3.98			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/22/94	DEPTH	5.27	11.47	4.71	10.78	6.00	11.38	5.27	9.94	27.07	32.95
	ELEV.	582.42	576.51	582.74	576.77	583.26	576.78	581.83	578.06	576.72	568.53
	DIFF.	5.91		5.97		6.48		3.77			
3/24/94	DEPTH	5.42	11.81	4.75	11.03	6.06	11.74	5.38	10.24	27.46	32.80
	ELEV.	582.27	576.17	582.70	576.52	583.20	576.42	581.72	577.76	576.33	568.68
	DIFF.	6.10		6.18		6.78		3.96			
3/25/94	DEPTH	5.41	11.85	4.89	11.16	6.25	11.78	5.45	10.27	27.50	32.70
	ELEV.	582.28	576.13	582.56	576.39	583.01	576.38	581.65	577.73	576.29	568.78
	DIFF.	6.15		6.17		6.63		3.92			
3/27/94	DEPTH	5.30	11.47	4.81	10.48	6.18	11.43	5.30	9.95	27.45	33.00
	ELEV.	582.39	576.51	582.64	577.07	583.08	576.73	581.80	578.05	576.34	568.48
	DIFF.	5.88		5.57		6.35		3.75			
3/28/94	DEPTH	5.39	11.64	4.87	10.95	5.96	11.57	5.37	10.09	27.31	32.90
	ELEV.	582.30	576.34	582.58	576.60	583.30	576.59	581.73	577.91	576.48	568.58
	DIFF.	5.96		5.98		6.71		3.82			
3/29/94	DEPTH	5.40	11.78	4.83	11.06	6.29	11.75	5.43	10.22	27.42	32.80
	ELEV.	582.29	576.20	582.62	576.49	582.97	576.41	581.67	577.78	576.37	568.68
	DIFF.	6.09		6.13		6.56		3.89			
3/31/94	DEPTH	5.37	11.57	4.91	10.88	6.32	11.51	5.44	10.02	27.20	32.95
	ELEV.	582.32	576.41	582.54	576.67	582.94	576.65	581.66	577.98	576.59	568.53
	DIFF.	5.91		5.87		6.29		3.68			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/1/94	DEPTH	5.55	11.58	4.92	10.93	6.13	11.52	5.46	10.03	27.22	32.82
	ELEV.	582.14	576.40	582.53	576.62	583.13	576.64	581.64	577.97	576.57	568.66
	DIFF.	5.74		5.91		6.49		3.67			
4/2/94	DEPTH	5.47	11.51	4.95	10.83	6.35	11.44	5.42	9.97	27.13	32.75
	ELEV.	582.22	576.47	582.50	576.72	582.91	576.72	581.68	578.03	576.66	568.73
	DIFF.	5.75		5.78		6.19		3.65			
4/4/94	DEPTH	5.48	11.54	4.96	10.92	6.25	11.52	5.40	10.00	27.22	32.90
	ELEV.	582.21	576.44	582.49	576.63	583.01	576.64	581.70	578.00	576.57	568.58
	DIFF.	5.77		5.86		6.37		3.70			
4/5/94	DEPTH	5.55	11.76	4.98	11.10	6.35	11.70	5.21	10.14	27.35	32.80
	ELEV.	582.14	576.22	582.47	576.45	582.91	576.46	581.89	577.86	576.44	568.68
	DIFF.	5.92		6.02		6.45		4.03			
4/7/94	DEPTH	5.53	11.82	4.93	11.23	6.30	11.80	5.02	10.15	27.55	32.70
	ELEV.	582.16	576.16	582.52	576.32	582.96	576.36	582.08	577.85	576.24	568.78
	DIFF.	6.00		6.20		6.60		4.23			
4/8/94	DEPTH	5.38	11.64	4.93	11.02	6.22	11.63	4.97	9.95	27.42	32.75
	ELEV.	582.31	576.34	582.52	576.53	583.04	576.53	582.13	578.05	576.37	568.73
	DIFF.	5.97		5.99		6.51		4.08			
4/10/94	DEPTH	5.34	11.87	4.96	11.15	6.30	11.85	4.97	10.11	27.55	27.00
	ELEV.	582.35	576.11	582.49	576.40	582.96	576.31	582.13	577.89	576.24	574.48
	DIFF.	6.24		6.09		6.65		4.24			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/11/94	DEPTH	5.38	11.70	4.95	11.11	6.28	11.80	4.97	10.03	27.45	32.80
	ELEV.	582.31	576.28	582.50	576.44	582.98	576.36	582.13	577.97	576.34	568.68
	DIFF.	6.03		6.06		6.62		4.16			
4/12/94	DEPTH	5.23	11.20	4.58	10.67	6.08	11.27	4.80	9.56	27.40	32.70
	ELEV.	582.46	576.78	582.87	576.88	583.18	576.89	582.30	578.44	576.39	568.78
	DIFF.	5.68		5.99		6.29		3.86			
4/14/94	DEPTH	5.30	11.55	4.89	11.00	6.03	11.58	4.98	9.87	27.74	32.60
	ELEV.	582.39	576.43	582.56	576.55	583.23	576.58	582.12	578.13	576.05	568.88
	DIFF.	5.96		6.01		6.65		3.99			
4/15/94	DEPTH	5.16	11.37	4.80	10.85	5.76	11.40	4.93	9.71	27.11	32.45
	ELEV.	582.53	576.61	582.65	576.70	583.50	576.76	582.17	578.29	576.68	569.03
	DIFF.	5.92		5.95		6.74		3.88			
4/17/94	DEPTH	5.30	11.82	4.92	11.28	6.19	11.90	5.05	10.08	27.49	32.40
	ELEV.	582.39	576.16	582.53	576.27	583.07	576.26	582.05	577.92	576.30	569.08
	DIFF.	6.23		6.26		6.81		4.13			
4/19/94	DEPTH	5.46	11.71	4.82	11.19	5.98	11.81	5.06	10.02	27.45	25.20
	ELEV.	582.23	576.27	582.63	576.36	583.28	576.35	582.04	577.98	576.34	576.28
	DIFF.	5.96		6.27		6.93		4.06			
4/20/94	DEPTH	5.24	11.63	4.87	11.19	6.05	11.82	5.01	10.00	27.39	25.13
	ELEV.	582.45	576.35	582.58	576.36	583.21	576.34	582.09	578.00	576.40	576.35
	DIFF.	6.10		6.22		6.87		4.09			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/21/94	DEPTH	5.42	11.58	4.98	11.13	6.07	11.70	5.08	9.92	27.40	32.45
	ELEV.	582.27	576.40	582.47	576.42	583.19	576.46	582.02	578.08	576.39	569.03
	DIFF.	5.87		6.05		6.73		3.94			
4/23/94	DEPTH	5.48	11.55	4.98	10.98	6.36	11.56	5.10	9.84	27.26	32.50
	ELEV.	582.21	576.43	582.47	576.57	582.90	576.60	582.00	578.16	576.53	568.98
	DIFF.	5.78		5.90		6.30		3.84			
4/25/94	DEPTH	5.39	11.63	4.98	11.00	6.34	11.60	5.07	9.90	27.28	32.65
	ELEV.	582.30	576.35	582.47	576.55	582.92	576.56	582.03	578.10	576.51	568.83
	DIFF.	5.95		5.92		6.36		3.93			
4/26/94	DEPTH	5.43	11.60	4.96	10.98	6.35	11.58	5.04	9.85	27.26	32.60
	ELEV.	582.26	576.38	582.49	576.57	582.91	576.58	582.06	578.15	576.53	568.88
	DIFF.	5.88		5.92		6.33		3.91			
4/28/94	DEPTH	5.55	11.96	5.06	11.34	6.42	11.93	5.10	10.16	27.60	32.85
	ELEV.	582.14	576.02	582.39	576.21	582.84	576.23	582.00	577.84	576.19	568.63
	DIFF.	6.12		6.18		6.61		4.16			
4/29/94	DEPTH	5.41	11.94	4.97	11.28	6.36	11.90	4.95	10.10	27.58	32.90
	ELEV.	582.28	576.04	582.48	576.27	582.90	576.26	582.15	577.90	576.21	568.58
	DIFF.	6.24		6.21		6.64		4.25			
5/1/94	DEPTH	5.25	11.89	4.87	11.23	6.25	11.85	4.77	9.96	27.53	32.75
	ELEV.	582.44	576.09	582.58	576.32	583.01	576.31	582.33	578.04	576.26	568.73
	DIFF.	6.35		6.26		6.70		4.29			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/2/94	DEPTH	5.36	11.90	4.90	11.27	6.28	11.87	4.85	9.98	27.55	32.70
	ELEV.	582.33	576.08	582.55	576.28	582.98	576.29	582.25	578.02	576.24	568.78
	DIFF.	6.25		6.27		6.69		4.23			
5/3/94	DEPTH	5.32	11.84	4.84	11.19	6.23	11.80	4.87	9.95	27.52	32.60
	ELEV.	582.37	576.14	582.61	576.36	583.03	576.36	582.23	578.05	576.27	568.88
	DIFF.	6.23		6.25		6.67		4.18			
5/5/94	DEPTH	5.34	11.68	4.91	11.09	6.10	11.70	4.82	9.84	27.37	32.58
	ELEV.	582.35	576.30	582.54	576.46	583.16	576.46	582.28	578.16	576.42	568.90
	DIFF.	6.05		6.08		6.70		4.12			
5/6/94	DEPTH	5.36	11.85	4.87	11.16	6.22	11.85	4.92	9.96	27.55	32.60
	ELEV.	582.33	576.13	582.58	576.39	583.04	576.31	582.18	578.04	576.24	568.88
	DIFF.	6.20		6.19		6.73		4.14			
5/8/94	DEPTH	5.33	11.74	4.93	11.14	6.29	11.75	4.87	9.85	27.48	32.75
	ELEV.	582.36	576.24	582.52	576.41	582.97	576.41	582.23	578.15	576.31	568.73
	DIFF.	6.12		6.11		6.56		4.08			
5/9/94	DEPTH	5.40	11.78	4.95	11.21	6.27	11.80	4.68	9.91	27.54	32.70
	ELEV.	582.29	576.20	582.50	576.34	582.99	576.36	582.42	578.09	576.25	568.78
	DIFF.	6.09		6.16		6.63		4.33			
5/11/94	DEPTH	5.26	11.57	4.87	11.00	6.31	11.59	4.86	9.93	27.31	32.60
	ELEV.	582.43	576.41	582.58	576.55	582.95	576.57	582.24	578.07	576.48	568.88
	DIFF.	6.02		6.03		6.38		4.17			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/12/94	DEPTH	5.42	12.00	5.00	11.44	6.33	12.00	4.80	10.07	27.73	32.70
	ELEV.	582.27	575.98	582.45	576.11	582.93	576.16	582.30	577.93	576.06	568.78
	DIFF.	6.29		6.34		6.77		4.37			
5/13/94	DEPTH	5.33	11.86	4.98	11.30	6.29	11.90	4.81	9.98	27.58	32.60
	ELEV.	582.36	576.12	582.47	576.25	582.97	576.26	582.29	578.02	576.21	568.88
	DIFF.	6.24		6.22		6.71		4.27			
5/14/94	DEPTH	5.36	11.65	4.97	11.07	6.34	11.68	4.87	9.80	27.52	32.70
	ELEV.	582.33	576.33	582.48	576.48	582.92	576.48	582.23	578.20	576.27	568.78
	DIFF.	6.00		6.00		6.44		4.03			
5/17/94	DEPTH	5.46	11.98	5.02	11.36	6.30	12.02	4.92	10.04	27.70	32.60
	ELEV.	582.23	576.00	582.43	576.19	582.96	576.14	582.18	577.96	576.09	568.88
	DIFF.	6.23		6.24		6.82		4.22			
5/18/94	DEPTH	5.49	11.88	5.02	11.34	6.43	11.93	4.98	9.96	27.61	32.50
	ELEV.	582.20	576.10	582.43	576.21	582.83	576.23	582.12	578.04	576.18	568.98
	DIFF.	6.10		6.22		6.60		4.08			
5/19/94	DEPTH	5.38	11.83	5.03	11.30	6.43	11.88	4.98	9.93	27.56	32.45
	ELEV.	582.31	576.15	582.42	576.25	582.83	576.28	582.12	578.07	576.23	569.03
	DIFF.	6.16		6.17		6.55		4.05			
5/20/94	DEPTH	5.43	11.78	5.03	11.21	6.41	11.83	4.91	9.92	27.54	32.30
	ELEV.	582.26	576.20	582.42	576.34	582.85	576.33	582.19	578.08	576.25	569.18
	DIFF.	6.06		6.08		6.52		4.11			

TABLE - 1
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/21/94	DEPTH	5.49	11.75	5.05	11.25	6.45	11.82	5.02	9.90	27.50	31.00
	ELEV.	582.20	576.23	582.40	576.30	582.81	576.34	582.08	578.10	576.29	570.48
	DIFF.	5.97		6.10		6.47		3.98			
5/23/94	DEPTH	5.49	11.58	5.04	11.15	6.40	11.74	5.06	9.80	27.41	30.60
	ELEV.	582.20	576.40	582.41	576.40	582.86	576.42	582.04	578.20	576.38	570.88
	DIFF.	5.80		6.01		6.44		3.84			
5/24/94	DEPTH	5.10	11.50	4.99	11.10	6.38	11.66	4.98	9.74	27.37	30.45
	ELEV.	582.59	576.48	582.46	576.45	582.88	576.50	582.12	578.26	576.42	571.03
	DIFF.	6.11		6.01		6.38		3.86			
5/26/94	DEPTH	5.50	11.72	5.09	11.21	6.53	11.87	5.07	9.91	27.53	30.00
	ELEV.	582.19	576.26	582.36	576.34	582.73	576.29	582.03	578.09	576.26	571.48
	DIFF.	5.93		6.02		6.44		3.94			
5/27/94	DEPTH	5.46	11.80	5.10	11.30	6.54	11.97	5.07	9.98	27.63	29.90
	ELEV.	582.23	576.18	582.35	576.25	582.72	576.19	582.03	578.02	576.16	571.58
	DIFF.	6.05		6.10		6.53		4.01			
5/29/94	DEPTH	5.66	11.48	5.13	11.10	6.67	11.65	5.44	9.83	27.41	29.70
	ELEV.	582.03	576.50	582.32	576.45	582.59	576.51	581.66	578.17	576.38	571.78
	DIFF.	5.53		5.87		6.08		3.49			
5/31/94	DEPTH	5.70	11.52	5.20	11.14	6.70	11.70	5.53	9.94	27.30	29.50
	ELEV.	581.99	576.46	582.25	576.41	582.56	576.46	581.57	578.06	576.49	571.98
	DIFF.	5.53		5.84		6.10		3.51			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/2/94	DEPTH	5.80	11.62	5.25	11.25	6.87	11.80	5.57	9.98	27.41	30.75
	ELEV.	581.89	576.36	582.20	576.30	582.39	576.36	581.53	578.02	576.38	570.73
	DIFF.	5.53		5.90		6.03		3.51			
6/3/94	DEPTH	5.74	11.55	5.27	11.14	6.88	11.73	5.54	9.92	27.35	30.80
	ELEV.	581.95	576.43	582.18	576.41	582.38	576.43	581.56	578.08	576.44	570.68
	DIFF.	5.52		5.77		5.95		3.48			
6/4/94	DEPTH	5.71	11.47	5.28	10.86	6.86	11.60	5.52	9.86	27.28	31.47
	ELEV.	581.98	576.51	582.17	576.69	582.40	576.56	581.58	578.14	576.51	570.01
	DIFF.	5.47		5.48		5.84		3.44			
6/6/94	DEPTH	5.72	11.35	5.19	11.00	6.88	11.57	5.40	9.80	27.25	32.29
	ELEV.	581.97	576.63	582.26	576.55	582.38	576.59	581.70	578.20	576.54	569.19
	DIFF.	5.34		5.71		5.79		3.50			
6/7/94	DEPTH	5.75	11.52	5.23	11.19	6.87	11.65	5.45	9.70	27.30	32.06
	ELEV.	581.94	576.46	582.22	576.36	582.39	576.51	581.65	578.30	576.49	569.42
	DIFF.	5.48		5.86		5.88		3.35			
6/9/94	DEPTH	5.70	11.62	5.21	11.15	6.83	11.74	5.42	9.92	27.37	32.07
	ELEV.	581.99	576.36	582.24	576.40	582.43	576.42	581.68	578.08	576.42	569.41
	DIFF.	5.63		5.84		6.01		3.60			
6/10/94	DEPTH	5.79	11.60	5.29	11.11	6.91	11.67	5.45	9.87	27.32	32.05
	ELEV.	581.90	576.38	582.16	576.44	582.35	576.49	581.65	578.13	576.47	569.43
	DIFF.	5.52		5.72		5.86		3.52			

TABLE 1
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/12/94	DEPTH	5.74	11.55	5.32	11.08	6.91	11.65	5.38	9.84	27.29	32.00
	ELEV.	581.95	576.43	582.13	576.47	582.35	576.51	581.72	578.16	576.50	569.48
	DIFF.	5.52		5.66		5.84		3.56			
6/13/94	DEPTH	5.60	11.45	5.15	11.00	6.92	11.54	5.35	9.75	27.21	32.80
	ELEV.	582.09	576.53	582.30	576.55	582.34	576.62	581.75	578.25	576.58	568.68
	DIFF.	5.56		5.75		5.72		3.50			
6/14/94	DEPTH	5.70	11.53	5.22	11.09	6.92	11.67	5.38	9.85	27.30	32.50
	ELEV.	581.99	576.45	582.23	576.46	582.34	576.49	581.72	578.15	576.49	568.98
	DIFF.	5.54		5.77		5.85		3.57			
6/16/94	DEPTH	5.79	11.66	5.30	11.24	6.95	11.80	5.48	9.95	27.45	32.00
	ELEV.	581.90	576.32	582.15	576.31	582.31	576.36	581.62	578.05	576.34	569.48
	DIFF.	5.58		5.84		5.95		3.57			
6/17/94	DEPTH	5.82	11.61	5.31	11.17	6.98	11.74	5.51	9.92	27.40	32.85
	ELEV.	581.87	576.37	582.14	576.38	582.28	576.42	581.59	578.08	576.39	568.63
	DIFF.	5.50		5.76		5.86		3.51			
6/19/94	DEPTH	5.86	11.62	5.33	11.18	6.96	11.73	5.57	9.93	27.38	32.60
	ELEV.	581.83	576.36	582.12	576.37	582.30	576.43	581.53	578.07	576.41	568.88
	DIFF.	5.47		5.75		5.87		3.46			
6/20/94	DEPTH	5.75	11.51	5.04	11.06	7.05	11.62	5.40	9.81	27.27	32.50
	ELEV.	581.94	576.47	582.41	576.49	582.21	576.54	581.70	578.19	576.52	568.98
	DIFF.	5.47		5.92		5.67		3.51			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/21/94	DEPTH	5.77	11.55	5.28	11.07	7.05	11.63	5.45	9.84	27.32	32.38
	ELEV.	581.92	576.43	582.17	576.48	582.21	576.53	581.65	578.16	576.47	569.10
	DIFF.	5.49		5.69		5.68		3.49			
6/23/94	DEPTH	5.72	11.32	5.32	10.97	6.98	11.56	5.52	9.75	27.20	32.15
	ELEV.	581.97	576.66	582.13	576.58	582.28	576.60	581.58	578.25	576.59	569.33
	DIFF.	5.31		5.55		5.68		3.33			
6/24/94	DEPTH	5.18	11.37	4.67	10.90	6.50	11.48	4.64	9.52	27.13	32.00
	ELEV.	582.51	576.61	582.78	576.65	582.76	576.68	582.46	578.48	576.66	569.48
	DIFF.	5.90		6.13		6.08		3.98			
6/26/94	DEPTH	5.33	11.53	4.79	11.11	6.27	11.66	4.92	9.67	27.22	32.20
	ELEV.	582.36	576.45	582.66	576.44	582.99	576.50	582.18	578.33	576.57	569.28
	DIFF.	5.91		6.22		6.49		3.85			
6/27/94	DEPTH	5.45	11.66	4.93	11.25	6.18	11.84	5.19	9.84	27.49	30.42
	ELEV.	582.24	576.32	582.52	576.30	583.08	576.32	581.91	578.16	576.30	571.06
	DIFF.	5.92		6.22		6.76		3.75			
6/28/94	DEPTH	5.49	11.30	4.95	10.90	6.49	11.45	5.26	9.57	27.02	33.05
	ELEV.	582.20	576.68	582.50	576.65	582.77	576.71	581.84	578.43	576.77	568.43
	DIFF.	5.52		5.85		6.06		3.41			
6/29/94	DEPTH	5.51	11.42	5.00	11.00	6.47	11.55	5.30	9.68	27.22	--
	ELEV.	582.18	576.56	582.45	576.55	582.79	576.61	581.80	578.32	576.57	--
	DIFF.	5.62		5.90		6.18		3.48			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/30/94	DEPTH	5.56	11.65	4.99	11.23	6.55	11.80	5.36	9.88	27.41	--
	ELEV.	582.13	576.33	582.46	576.32	582.71	576.36	581.74	578.12	576.38	--
	DIFF.	5.80		6.14		6.35		3.62			
7/1/94	DEPTH	5.48	11.49	5.00	11.00	6.58	11.60	5.35	9.72	27.15	32.50
	ELEV.	582.21	576.49	582.45	576.55	582.68	576.56	581.75	578.28	576.64	568.98
	DIFF.	5.72		5.90		6.12		3.47			
7/2/94	DEPTH	5.56	11.72	5.07	11.23	6.61	11.85	5.39	9.95	27.54	32.67
	ELEV.	582.13	576.26	582.38	576.32	582.65	576.31	581.71	578.05	576.25	568.81
	DIFF.	5.87		6.06		6.34		3.66			
7/5/94	DEPTH	5.22	11.61	4.80	11.08	6.32	11.67	5.01	9.69	27.37	32.57
	ELEV.	582.47	576.37	582.65	576.47	582.94	576.49	582.09	578.31	576.42	568.91
	DIFF.	6.10		6.18		6.45		3.78			
7/6/94	DEPTH	5.45	11.58	4.85	11.00	6.27	11.70	5.17	9.76	27.37	30.55
	ELEV.	582.24	576.40	582.60	576.55	582.99	576.46	581.93	578.24	576.42	570.93
	DIFF.	5.84		6.05		6.53		3.69			
7/8/94	DEPTH	5.35	11.50	4.92	10.90	6.35	11.59	5.23	9.68	27.28	32.88
	ELEV.	582.34	576.48	582.53	576.65	582.91	576.57	581.87	578.32	576.51	568.60
	DIFF.	5.86		5.88		6.34		3.55			
7/9/94	DEPTH	5.51	11.63	4.92	11.04	6.39	11.72	5.29	9.83	27.42	33.90
	ELEV.	582.18	576.35	582.53	576.51	582.87	576.44	581.81	578.17	576.37	567.58
	DIFF.	5.83		6.02		6.43		3.64			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/11/94	DEPTH	5.60	11.60	5.00	11.15	6.40	11.72	5.28	9.80	27.38	32.80
	ELEV.	582.09	576.38	582.45	576.40	582.86	576.44	581.82	578.20	576.41	568.68
	DIFF.	5.71		6.05		6.42		3.62			
7/14/94 9:45	DEPTH	5.56	11.56	4.99	11.09	6.39	11.66	5.25	9.74	27.35	32.80
	ELEV.	582.13	576.42	582.46	576.46	582.87	576.50	581.85	578.26	576.44	568.68
	DIFF.	5.71		6.00		6.37		3.59			
7/14/94 16:00	DEPTH	5.56	11.54	5.00	10.98	6.27	11.66	5.25	9.75	27.33	24.90
	ELEV.	582.13	576.44	582.45	576.57	582.99	576.50	581.85	578.25	576.46	576.58
	DIFF.	5.69		5.88		6.49		3.60			
7/15/94 9:00	DEPTH	5.60	11.62	5.04	11.24	6.51	11.80	5.31	9.83	27.45	25.08
	ELEV.	582.09	576.36	582.41	576.31	582.75	576.36	581.79	578.17	576.34	576.40
	DIFF.	5.73		6.10		6.39		3.62			
7/15/94 16:00	DEPTH	5.55	11.54	5.04	11.19	6.52	11.74	5.35	9.80	27.40	25.00
	ELEV.	582.14	576.44	582.41	576.36	582.74	576.42	581.75	578.20	576.39	576.48
	DIFF.	5.70		6.05		6.32		3.55			
7/17/94 8:00	DEPTH	5.62	11.34	5.08	11.03	6.46	11.56	5.31	9.64	27.22	24.81
	ELEV.	582.07	576.64	582.37	576.52	582.80	576.60	581.79	578.36	576.57	576.67
	DIFF.	5.43		5.85		6.20		3.43			
7/17/94 15:30	DEPTH	5.62	11.26	5.06	10.98	6.52	11.53	5.36	9.60	27.18	24.70
	ELEV.	582.07	576.72	582.39	576.57	582.74	576.63	581.74	578.40	576.61	576.78
	DIFF.	5.35		5.82		6.11		3.34			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/18/94 8:00	DEPTH	5.60	11.35	5.07	11.05	6.56	11.59	5.36	9.67	27.26	24.78
	ELEV.	582.09	576.63	582.38	576.50	582.70	576.57	581.74	578.33	576.53	576.70
	DIFF.	5.46		5.88		6.13		3.41			
7/18/94 16:20	DEPTH	5.62	11.26	5.06	10.97	6.49	11.51	5.37	9.60	27.18	24.71
	ELEV.	582.07	576.72	582.39	576.58	582.77	576.65	581.73	578.40	576.61	576.77
	DIFF.	5.35		5.81		6.12		3.33			
7/20/94 8:45	DEPTH	5.60	11.22	4.96	10.93	6.62	11.48	5.31	9.55	27.13	24.65
	ELEV.	582.09	576.76	582.49	576.62	582.64	576.68	581.79	578.45	576.66	576.83
	DIFF.	5.33		5.87		5.96		3.34			
7/20/94 16:00	DEPTH	5.63	11.23	5.08	10.95	6.63	11.49	5.35	9.58	27.15	24.68
	ELEV.	582.06	576.75	582.37	576.60	582.63	576.67	581.75	578.42	576.64	576.80
	DIFF.	5.31		5.77		5.96		3.33			
7/21/94 8:30	DEPTH	5.63	11.15	5.04	10.89	6.63	11.43	5.38	9.53	26.96	24.64
	ELEV.	582.06	576.83	582.41	576.66	582.63	576.73	581.72	578.47	576.83	576.84
	DIFF.	5.23		5.75		5.90		3.25			
7/21/94 16:00	DEPTH	5.53	11.07	5.08	10.78	6.65	11.32	5.40	9.46	26.88	24.60
	ELEV.	582.16	576.91	582.37	576.77	582.61	576.84	581.70	578.54	576.91	576.88
	DIFF.	5.25		5.60		5.77		3.16			
7/22/94 9:00	DEPTH	5.60	11.12	5.05	10.86	6.64	11.41	5.35	9.49	27.04	24.65
	ELEV.	582.09	576.86	582.40	576.69	582.62	576.75	581.75	578.51	576.75	576.83
	DIFF.	5.23		5.71		5.87		3.24			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/22/94 16:00	DEPTH	5.54	11.13	5.08	10.85	6.67	11.37	5.39	9.52	27.08	24.67
	ELEV.	582.15	576.85	582.37	576.70	582.59	576.79	581.71	578.48	576.71	576.81
	DIFF.	5.30		5.67		5.80		3.23			
7/24/94 8:30	DEPTH	5.60	11.18	5.14	10.92	6.72	11.45	5.47	9.58	27.10	24.67
	ELEV.	582.09	576.80	582.31	576.63	582.54	576.71	581.63	578.42	576.69	576.81
	DIFF.	5.29		5.68		5.83		3.21			
7/24/94 15:30	DEPTH	5.62	11.13	5.13	10.90	6.72	11.43	5.48	9.55	27.08	24.64
	ELEV.	582.07	576.85	582.32	576.65	582.54	576.73	581.62	578.45	576.71	576.84
	DIFF.	5.22		5.67		5.81		3.17			
7/25/94 8:15	DEPTH	5.72	11.07	5.15	10.80	6.75	11.34	5.48	9.48	26.98	24.54
	ELEV.	581.97	576.91	582.30	576.75	582.51	576.82	581.62	578.52	576.81	576.94
	DIFF.	5.06		5.55		5.69		3.10			
7/25/94 16:00	DEPTH	5.48	11.00	5.15	10.75	6.73	11.28	5.49	9.46	26.90	24.50
	ELEV.	582.21	576.98	582.30	576.80	582.53	576.88	581.61	578.54	576.89	576.98
	DIFF.	5.23		5.50		5.65		3.07			
7/26/94 8:30	DEPTH	5.76	11.10	5.17	10.83	6.77	11.37	5.51	9.52	27.02	24.57
	ELEV.	581.93	576.88	582.28	576.72	582.49	576.79	581.59	578.48	576.77	576.91
	DIFF.	5.05		5.56		5.70		3.11			
7/26/94 13:20	DEPTH	5.74	11.06	5.16	10.82	6.77	11.36	5.52	9.53	27.00	24.57
	ELEV.	581.95	576.92	582.29	576.73	582.49	576.80	581.58	578.47	576.79	576.91
	DIFF.	5.03		5.56		5.69		3.11			

TA..E 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/28/94 7:00	DEPTH	5.80	11.12	5.21	10.87	6.80	11.39	5.50	9.55	27.04	24.60
	ELEV.	581.89	576.86	582.24	576.68	582.46	576.77	581.60	578.45	576.75	576.88
	DIFF.	5.03		5.56		5.69		3.15			
7/28/94 15:35	DEPTH	5.79	11.11	5.20	10.87	6.81	11.41	5.50	9.55	27.03	24.60
	ELEV.	581.90	576.87	582.25	576.68	582.45	576.75	581.60	578.45	576.76	576.88
	DIFF.	5.03		5.57		5.70		3.15			
7/29/94 8:30	DEPTH	5.80	11.12	5.22	10.89	6.83	11.43	5.48	9.55	27.07	24.60
	ELEV.	581.89	576.86	582.23	576.66	582.43	576.73	581.62	578.45	576.72	576.88
	DIFF.	5.03		5.57		5.70		3.17			
7/29/94 14:00	DEPTH	5.80	11.08	5.22	10.85	6.82	11.40	5.49	9.52	27.03	24.57
	ELEV.	581.89	576.90	582.23	576.70	582.44	576.76	581.61	578.48	576.76	576.91
	DIFF.	4.99		5.53		5.68		3.13			
7/31/94 11:30	DEPTH	5.82	10.95	5.23	10.73	6.85	11.27	5.54	9.43	26.90	24.44
	ELEV.	581.87	577.03	582.22	576.82	582.41	576.89	581.56	578.57	576.89	577.04
	DIFF.	4.84		5.40		5.52		2.99			
8/1/94 8:15	DEPTH	5.82	10.92	5.18	10.68	6.92	11.24	5.54	9.41	26.87	24.38
	ELEV.	581.87	577.06	582.27	576.87	582.34	576.92	581.56	578.59	576.92	577.10
	DIFF.	4.81		5.40		5.42		2.97			
8/1/94 16:00	DEPTH	5.82	10.83	5.20	10.65	6.90	11.21	5.56	9.40	26.86	24.36
	ELEV.	581.87	577.15	582.25	576.90	582.36	576.95	581.54	578.60	576.93	577.12
	DIFF.	4.72		5.35		5.41		2.94			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/2/94 8:00	DEPTH	5.84	11.00	5.25	10.79	6.92	11.32	5.56	9.48	26.95	24.47
	ELEV.	581.85	576.98	582.20	576.76	582.34	576.84	581.54	578.52	576.84	577.01
	DIFF.	4.87		5.44		5.50		3.02			
8/2/94 14:30	DEPTH	5.83	10.95	5.23	10.74	6.91	11.27	5.53	9.44	26.90	24.43
	ELEV.	581.86	577.03	582.22	576.81	582.35	576.89	581.57	578.56	576.89	577.05
	DIFF.	4.83		5.41		5.46		3.01			
8/5/94 7:30	DEPTH	5.61	11.07	5.15	10.87	6.82	11.42	5.11	9.42	27.03	24.57
	ELEV.	582.08	576.91	582.30	576.68	582.44	576.74	581.99	578.58	576.76	576.91
	DIFF.	5.17		5.62		5.70		3.41			
8/5/94 17:30	DEPTH	5.62	10.96	5.12	10.78	6.80	11.28	5.17	9.35	26.96	24.45
	ELEV.	582.07	577.02	582.33	576.77	582.46	576.88	581.93	578.65	576.83	577.03
	DIFF.	5.05		5.56		5.58		3.28			
8/6/94 9:00	DEPTH	5.64	10.90	5.19	10.70	6.84	11.23	5.21	9.32	26.87	24.38
	ELEV.	582.05	577.08	582.26	576.85	582.42	576.93	581.89	578.68	576.92	577.10
	DIFF.	4.97		5.41		5.49		3.21			
8/6/94 16:40	DEPTH	5.60	10.80	5.13	10.58	6.85	11.15	5.20	9.21	26.67	24.17
	ELEV.	582.09	577.18	582.32	576.97	582.41	577.01	581.90	578.79	577.12	577.31
	DIFF.	4.91		5.35		5.40		3.11			
8/7/94 12:00	DEPTH	5.54	10.77	5.15	10.54	6.83	11.08	5.23	9.23	26.71	24.15
	ELEV.	582.15	577.21	582.30	577.01	582.43	577.08	581.87	578.77	577.08	577.33
	DIFF.	4.94		5.29		5.35		3.10			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/7/94 19:30	DEPTH	5.57	10.75	5.18	10.53	6.85	11.07	5.30	9.19	26.70	24.13
	ELEV.	582.12	577.23	582.27	577.02	582.41	577.09	581.80	578.81	577.09	577.35
	DIFF.	4.89		5.25		5.32		2.99			
8/8/94 8:15	DEPTH	5.65	10.72	5.18	10.52	6.86	11.07	5.25	9.17	26.66	24.20
	ELEV.	582.04	577.26	582.27	577.03	582.40	577.09	581.85	578.83	577.13	577.28
	DIFF.	4.78		5.24		5.31		3.02			
8/8/94 16:30	DEPTH	5.67	10.88	5.19	10.73	6.92	11.30	5.25	9.34	27.00	24.42
	ELEV.	582.02	577.10	582.26	576.82	582.34	576.86	581.85	578.66	576.79	577.06
	DIFF.	4.92		5.44		5.48		3.19			
8/9/94 7:15	DEPTH	5.70	10.97	5.24	10.78	6.87	11.30	5.27	9.38	26.95	24.45
	ELEV.	581.99	577.01	582.21	576.77	582.39	576.86	581.83	578.62	576.84	577.03
	DIFF.	4.98		5.44		5.53		3.21			
8/9/94 16:45	DEPTH	5.67	10.88	5.19	10.73	6.92	11.30	5.25	9.34	27.00	24.42
	ELEV.	582.02	577.10	582.26	576.82	582.34	576.86	581.85	578.66	576.79	577.06
	DIFF.	4.92		5.44		5.48		3.19			
8/10/94 7:30	DEPTH	5.66	10.78	5.23	10.61	6.88	11.13	5.24	9.23	26.80	24.27
	ELEV.	582.03	577.20	582.22	576.94	582.38	577.03	581.86	578.77	576.99	577.21
	DIFF.	4.83		5.28		5.35		3.09			
8/10/94 17:00	DEPTH	5.69	10.74	5.23	10.57	6.84	11.10	5.23	9.19	26.70	24.24
	ELEV.	582.00	577.24	582.22	576.98	582.42	577.06	581.87	578.81	577.09	577.24
	DIFF.	4.76		5.24		5.36		3.06			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/11/94 7:30	DEPTH	5.35	10.67	4.84	10.52	6.68	11.05	4.85	9.08	26.68	24.16
	ELEV.	582.34	577.31	582.61	577.03	582.58	577.11	582.25	578.92	577.11	577.32
	DIFF.	5.03		5.58		5.47		3.33			
8/11/94 17:30	DEPTH	5.44	10.75	5.03	10.58	6.73	11.11	4.98	9.18	26.82	24.27
	ELEV.	582.25	577.23	582.42	576.97	582.53	577.05	582.12	578.82	576.97	577.21
	DIFF.	5.02		5.45		5.48		3.30			
8/12/94 8:00	DEPTH	5.48	10.75	5.07	10.52	6.68	11.08	5.00	9.14	26.67	23.91
	ELEV.	582.21	577.23	582.38	577.03	582.58	577.08	582.10	578.86	577.12	577.57
	DIFF.	4.98		5.35		5.50		3.24			
8/13/94 9:30	DEPTH	5.24	10.53	4.95	10.37	6.53	10.93	4.79	8.95	26.55	23.97
	ELEV.	582.45	577.45	582.50	577.18	582.73	577.23	582.31	579.05	577.24	577.51
	DIFF.	5.00		5.32		5.50		3.26			
8/13/94 19:00	DEPTH	5.37	10.58	5.09	10.44	6.25	10.96	5.10	9.00	26.56	23.95
	ELEV.	582.32	577.40	582.36	577.11	583.01	577.20	582.00	579.00	577.23	577.53
	DIFF.	4.92		5.25		5.81		3.00			
8/14/94 11:00	DEPTH	5.49	10.87	5.05	10.59	6.60	11.15	5.30	9.24	26.74	24.20
	ELEV.	582.20	577.11	582.40	576.96	582.66	577.01	581.80	578.76	577.05	577.28
	DIFF.	5.09		5.44		5.65		3.04			
8/14/94 16:30	DEPTH	5.46	10.73	4.88	10.60	6.61	11.11	5.31	9.20	26.70	24.13
	ELEV.	582.23	577.25	582.57	576.95	582.65	577.05	581.79	578.80	577.09	577.35
	DIFF.	4.98		5.62		5.60		2.99			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/15/94 7:30	DEPTH	5.59	10.75	5.05	10.60	6.68	11.07	5.41	9.25	26.75	24.25
	ELEV.	582.10	577.23	582.40	576.95	582.58	577.09	581.69	578.75	577.04	577.23
	DIFF.	4.87		5.45		5.49		2.94			
8/15/94 15:00	DEPTH	5.49	10.71	5.04	10.50	6.55	11.08	5.42	9.24	26.66	24.23
	ELEV.	582.20	577.27	582.41	577.05	582.71	577.08	581.68	578.76	577.13	577.25
	DIFF.	4.93		5.36		5.63		2.92			
8/16/94 8:00	DEPTH	5.63	10.68	5.07	10.52	6.70	11.07	5.44	9.19	26.70	24.19
	ELEV.	582.06	577.30	582.38	577.03	582.56	577.09	581.66	578.81	577.09	577.29
	DIFF.	4.76		5.35		5.47		2.85			
8/16/94 16:06	DEPTH	5.65	10.59	5.04	10.44	6.71	10.99	5.40	9.20	26.57	23.95
	ELEV.	582.04	577.39	582.41	577.11	582.55	577.17	581.70	578.80	577.22	577.53
	DIFF.	4.65		5.30		5.38		2.90			
8/17/94 8:10	DEPTH	5.66	10.68	5.09	10.48	6.72	11.00	5.43	9.28	26.65	24.07
	ELEV.	582.03	577.30	582.36	577.07	582.54	577.16	581.67	578.72	577.14	577.41
	DIFF.	4.73		5.29		5.38		2.95			
8/17/94 17:00	DEPTH	5.67	10.61	5.07	10.44	6.70	11.00	5.43	9.21	26.52	23.81
	ELEV.	582.02	577.37	582.38	577.11	582.56	577.16	581.67	578.79	577.27	577.67
	DIFF.	4.65		5.27		5.40		2.88			
8/18/94 7:15	DEPTH	5.66	10.61	5.11	10.42	6.75	10.97	5.41	9.16	26.61	24.09
	ELEV.	582.03	577.37	582.34	577.13	582.51	577.19	581.69	578.84	577.18	577.39
	DIFF.	4.66		5.21		5.32		2.85			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/18/94 17:00	DEPTH	5.63	10.55	5.06	10.40	6.71	10.93	5.43	9.18	26.52	23.09
	ELEV.	582.06	577.43	582.39	577.15	582.55	577.23	581.67	578.82	577.27	578.39
	DIFF.	4.63		5.24		5.32		2.85			
8/19/94 9:00	DEPTH	5.70	10.53	5.10	10.35	6.78	10.88	5.40	9.17	26.55	23.88
	ELEV.	581.99	577.45	582.35	577.20	582.48	577.28	581.70	578.83	577.24	577.60
	DIFF.	4.54		5.15		5.20		2.87			
8/19/94 16:30	DEPTH	5.61	10.37	5.13	10.21	6.26	10.76	5.44	9.05	26.37	23.90
	ELEV.	582.08	577.61	582.32	577.34	583.00	577.40	581.66	578.95	577.42	577.58
	DIFF.	4.47		4.98		5.60		2.71			
8/20/94 14:00	DEPTH	5.53	10.51	5.07	10.36	6.18	10.92	5.43	9.12	26.50	24.00
	ELEV.	582.16	577.47	582.38	577.19	583.08	577.24	581.67	578.88	577.29	577.48
	DIFF.	4.69		5.19		5.84		2.79			
8/20/94 17:00	DEPTH	5.54	10.53	5.07	10.37	6.19	10.95	5.40	9.15	26.52	24.05
	ELEV.	582.15	577.45	582.38	577.18	583.07	577.21	581.70	578.85	577.27	577.43
	DIFF.	4.70		5.20		5.86		2.85			
8/21/94 10:00	DEPTH	5.68	10.70	5.11	10.54	6.28	11.04	5.36	9.26	26.68	24.17
	ELEV.	582.01	577.28	582.34	577.01	582.98	577.12	581.74	578.74	577.11	577.31
	DIFF.	4.73		5.33		5.86		3.00			
8/21/94 14:00	DEPTH	5.68	10.71	5.12	10.53	6.27	11.04	5.36	9.26	26.69	24.16
	ELEV.	582.01	577.27	582.33	577.02	582.99	577.12	581.74	578.74	577.10	577.32
	DIFF.	4.74		5.31		5.87		3.00			

TA 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/22/94 7:30	DEPTH	5.65	10.70	5.13	10.54	6.80	11.06	5.34	9.25	26.70	24.21
	ELEV.	582.04	577.28	582.32	577.01	582.46	577.10	581.76	578.75	577.09	577.27
	DIFF.	4.76		5.31		5.36		3.01			
8/22/94 18:00	DEPTH	5.65	10.62	5.11	10.44	6.77	10.97	5.31	9.16	26.61	24.13
	ELEV.	582.04	577.36	582.34	577.11	582.49	577.19	581.79	578.84	577.18	577.35
	DIFF.	4.68		5.23		5.30		2.95			
8/23/94 8:30	DEPTH	5.66	10.63	5.13	10.47	6.67	11.00	5.31	9.17	26.59	24.12
	ELEV.	582.03	577.35	582.32	577.08	582.59	577.16	581.79	578.83	577.20	577.36
	DIFF.	4.68		5.24		5.43		2.96			
8/23/94 17:00	DEPTH	5.61	10.51	5.09	10.36	6.78	10.91	5.28	9.09	26.55	24.10
	ELEV.	582.08	577.47	582.36	577.19	582.48	577.25	581.82	578.91	577.24	577.38
	DIFF.	4.61		5.17		5.23		2.91			
8/24/94 7:20	DEPTH	5.58	10.49	5.13	10.34	6.78	10.88	5.30	9.10	26.50	24.03
	ELEV.	582.11	577.49	582.32	577.21	582.48	577.28	581.80	578.90	577.29	577.45
	DIFF.	4.62		5.11		5.20		2.90			
8/24/94 17:00	DEPTH	5.60	10.47	5.12	10.34	6.79	10.84	5.25	9.05	26.47	24.00
	ELEV.	582.09	577.51	582.33	577.21	582.47	577.32	581.85	578.95	577.32	577.48
	DIFF.	4.58		5.12		5.15		2.90			
8/25/94 8:15	DEPTH	5.60	10.55	5.14	10.40	6.82	10.93	5.30	9.15	26.56	24.05
	ELEV.	582.09	577.43	582.31	577.15	582.44	577.23	581.80	578.85	577.23	577.43
	DIFF.	4.66		5.16		5.21		2.95			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/25/94 15:00	DEPTH	5.61	10.47	5.16	10.30	6.82	10.84	5.31	9.06	26.47	23.97
	ELEV.	582.08	577.51	582.29	577.25	582.44	577.32	581.79	578.94	577.32	577.51
	DIFF.	4.57		5.04		5.12		2.85			
8/26/94 7:30	DEPTH	5.57	10.48	5.20	10.31	6.85	10.95	5.28	9.07	26.43	23.90
	ELEV.	582.12	577.50	582.25	577.24	582.41	577.21	581.82	578.93	577.36	577.58
	DIFF.	4.62		5.01		5.20		2.89			
8/26/94 15:00	DEPTH	5.43	10.41	5.13	10.27	6.85	10.83	5.31	9.06	26.40	24.02
	ELEV.	582.26	577.57	582.32	577.28	582.41	577.33	581.79	578.94	577.39	577.46
	DIFF.	4.69		5.04		5.08		2.85			
8/27/94 8:00	DEPTH	5.49	10.47	5.13	10.32	6.83	10.87	5.33	9.10	26.48	23.90
	ELEV.	582.20	577.51	582.32	577.23	582.43	577.29	581.77	578.90	577.31	577.58
	DIFF.	4.69		5.09		5.14		2.87			
8/27/94 18:30	DEPTH	5.68	10.35	5.12	10.28	6.85	10.72	5.30	9.00	26.25	23.70
	ELEV.	582.01	577.63	582.33	577.27	582.41	577.44	581.80	579.00	577.54	577.78
	DIFF.	4.38		5.06		4.97		2.80			
8/28/94 9:30	DEPTH	5.73	10.46	5.28	10.30	6.96	10.83	5.35	9.05	26.45	23.80
	ELEV.	581.96	577.52	582.17	577.25	582.30	577.33	581.75	578.95	577.34	577.68
	DIFF.	4.44		4.92		4.97		2.80			
8/28/94 19:30	DEPTH	5.70	10.51	5.20	10.25	6.94	10.90	5.34	9.10	26.48	24.00
	ELEV.	581.99	577.47	582.25	577.30	582.32	577.26	581.76	578.90	577.31	577.48
	DIFF.	4.52		4.95		5.06		2.86			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/29/94 8:00	DEPTH	5.73	10.56	5.21	10.28	6.92	10.92	5.42	9.11	26.51	24.02
	ELEV.	581.96	577.42	582.24	577.27	582.34	577.24	581.68	578.89	577.28	577.46
	DIFF.	4.54		4.97		5.10		2.79			
8/29/94 15:00	DEPTH	5.75	10.41	5.23	10.26	6.93	10.77	5.43	9.05	26.43	23.94
	ELEV.	581.94	577.57	582.22	577.29	582.33	577.39	581.67	578.95	577.36	577.54
	DIFF.	4.37		4.93		4.94		2.72			
8/30/94 8:00	DEPTH	5.75	10.41	5.23	10.26	6.93	10.77	5.43	9.05	26.43	23.94
	ELEV.	581.94	577.57	582.22	577.29	582.33	577.39	581.67	578.95	577.36	577.54
	DIFF.	4.37		4.93		4.94		2.72			
8/30/94 14:30	DEPTH	5.72	10.18	5.13	10.07	6.93	10.62	5.41	9.08	26.38	23.97
	ELEV.	581.97	577.80	582.32	577.48	582.33	577.54	581.69	578.92	577.41	577.51
	DIFF.	4.17		4.84		4.79		2.77			
8/31/94 9:00	DEPTH	5.70	10.50	5.23	10.36	6.96	10.90	5.36	9.11	26.50	24.02
	ELEV.	581.99	577.48	582.22	577.19	582.30	577.26	581.74	578.89	577.29	577.46
	DIFF.	4.51		5.03		5.04		2.85			
8/31/94 17:00	DEPTH	5.68	10.60	5.27	10.46	6.97	11.00	5.41	9.22	26.58	24.12
	ELEV.	582.01	577.38	582.18	577.09	582.29	577.16	581.69	578.78	577.21	577.36
	DIFF.	4.63		5.09		5.13		2.91			
9/1/94 7:30	DEPTH	5.72	10.67	5.27	10.50	6.95	11.05	5.21	9.20	26.62	24.16
	ELEV.	581.97	577.31	582.18	577.05	582.31	577.11	581.89	578.80	577.17	577.32
	DIFF.	4.66		5.13		5.20		3.09			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/2/94 7:20	DEPTH	5.65	10.52	5.24	10.37	6.90	10.90	5.20	9.08	26.51	24.00
	ELEV.	582.04	577.46	582.21	577.18	582.36	577.26	581.90	578.92	577.28	577.48
	DIFF.	4.58		5.03		5.10		2.98			
9/2/94 18:00	DEPTH	5.65	10.42	5.24	10.26	6.92	10.80	5.20	9.00	26.41	23.96
	ELEV.	582.04	577.56	582.21	577.29	582.34	577.36	581.90	579.00	577.38	577.52
	DIFF.	4.48		4.92		4.98		2.90			
9/4/94 13:00	DEPTH	5.68	10.34	5.24	10.13	6.93	10.67	5.26	8.91	26.28	23.80
	ELEV.	582.01	577.64	582.21	577.42	582.33	577.49	581.84	579.09	577.51	577.68
	DIFF.	4.37		4.79		4.84		2.75			
9/4/94 16:30	DEPTH	5.67	10.34	5.24	10.12	6.93	10.67	5.24	8.93	26.28	23.79
	ELEV.	582.02	577.64	582.21	577.43	582.33	577.49	581.86	579.07	577.51	577.69
	DIFF.	4.38		4.78		4.84		2.79			
9/6/94 8:00	DEPTH	5.74	10.31	5.26	10.16	6.96	10.68	5.29	8.92	26.30	23.80
	ELEV.	581.95	577.67	582.19	577.39	582.30	577.48	581.81	579.08	577.49	577.68
	DIFF.	4.28		4.80		4.82		2.73			
9/6/94 18:30	DEPTH	5.73	10.22	5.25	10.15	6.97	10.69	5.37	8.94	26.29	23.78
	ELEV.	581.96	577.76	582.20	577.40	582.29	577.47	581.73	579.06	577.50	577.70
	DIFF.	4.20		4.80		4.82		2.67			
9/7/94 7:20	DEPTH	5.79	10.41	5.29	10.23	7.00	10.76	5.40	9.01	26.35	23.87
	ELEV.	581.90	577.57	582.16	577.32	582.26	577.40	581.70	578.99	577.44	577.61
	DIFF.	4.33		4.84		4.86		2.71			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/7/94 18:00	DEPTH	5.76	10.38	5.30	10.12	7.00	10.68	5.40	8.98	26.30	23.84
	ELEV.	581.93	577.60	582.15	577.43	582.26	577.48	581.70	579.02	577.49	577.64
	DIFF.	4.33		4.72		4.78		2.68			
9/8/94 8:00	DEPTH	5.82	10.33	5.32	10.19	7.09	10.73	5.45	8.98	26.26	23.77
	ELEV.	581.87	577.65	582.13	577.36	582.17	577.43	581.65	579.02	577.53	577.71
	DIFF.	4.22		4.77		4.74		2.63			
9/8/94 17:00	DEPTH	5.80	10.24	5.32	10.10	7.05	10.65	5.43	8.91	26.20	23.66
	ELEV.	581.89	577.74	582.13	577.45	582.21	577.51	581.67	579.09	577.59	577.82
	DIFF.	4.15		4.68		4.70		2.58			
9/9/94 9:20	DEPTH	5.80	10.34	5.31	10.18	7.08	10.72	5.45	9.00	26.28	23.71
	ELEV.	581.89	577.64	582.14	577.37	582.18	577.44	581.65	579.00	577.51	577.77
	DIFF.	4.25		4.77		4.74		2.65			
9/9/94 15:00	DEPTH	5.81	10.44	5.32	10.23	7.06	10.82	5.50	9.05	26.33	23.82
	ELEV.	581.88	577.54	582.13	577.32	582.20	577.34	581.60	578.95	577.46	577.66
	DIFF.	4.34		4.81		4.86		2.65			
9/10/94 9:00	DEPTH	5.64	10.35	5.15	10.22	6.92	10.25	5.15	9.00	26.31	23.78
	ELEV.	582.05	577.63	582.30	577.33	582.34	577.91	581.95	579.00	577.48	577.70
	DIFF.	4.42		4.97		4.43		2.95			
9/10/94 17:00	DEPTH	5.53	10.32	5.15	10.19	6.88	10.68	5.13	8.96	26.28	23.72
	ELEV.	582.16	577.66	582.30	577.36	582.38	577.48	581.97	579.04	577.51	577.76
	DIFF.	4.50		4.94		4.90		2.93			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/12/94 10:00	DEPTH	5.71	10.28	5.15	10.05	6.97	10.69	5.20	8.98	26.27	23.70
	ELEV.	581.98	577.70	582.30	577.50	582.29	577.47	581.90	579.02	577.52	577.78
	DIFF.	4.28		4.80		4.82		2.88			
9/12/94 18:00	DEPTH	5.65	10.19	5.18	10.00	7.01	10.55	5.26	8.86	26.25	23.64
	ELEV.	582.04	577.79	582.27	577.55	582.25	577.61	581.84	579.14	577.54	577.84
	DIFF.	4.25		4.72		4.64		2.70			
9/13/94 7:30	DEPTH	5.64	10.16	5.20	10.03	6.96	10.57	5.25	8.84	26.30	23.68
	ELEV.	582.05	577.82	582.25	577.52	582.30	577.59	581.85	579.16	577.49	577.80
	DIFF.	4.23		4.73		4.71		2.69			
9/13/94 16:30	DEPTH	5.70	10.08	5.19	9.95	6.90	10.47	5.30	8.90	26.20	23.64
	ELEV.	581.99	577.90	582.26	577.60	582.36	577.69	581.80	579.10	577.59	577.84
	DIFF.	4.09		4.66		4.67		2.70			
9/14/94 7:30	DEPTH	5.74	10.18	5.23	10.03	7.00	10.65	5.33	8.90	26.19	23.70
	ELEV.	581.95	577.80	582.22	577.52	582.26	577.51	581.77	579.10	577.60	577.78
	DIFF.	4.15		4.70		4.75		2.67			
9/14/94 18:00	DEPTH	5.72	10.09	5.20	10.00	6.95	10.60	5.31	8.87	26.21	23.62
	ELEV.	581.97	577.89	582.25	577.55	582.31	577.56	581.79	579.13	577.58	577.86
	DIFF.	4.08		4.70		4.75		2.66			
9/15/94 8:00	DEPTH	5.53	10.18	5.24	10.00	7.00	10.54	5.35	8.88	26.10	23.55
	ELEV.	582.16	577.80	582.21	577.55	582.26	577.62	581.75	579.12	577.69	577.93
	DIFF.	4.36		4.66		4.64		2.63			

TA. _E 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/15/94 17:30	DEPTH	5.60	10.11	5.21	9.90	7.00	10.48	5.36	8.80	26.08	23.58
	ELEV.	582.09	577.87	582.24	577.65	582.26	577.68	581.74	579.20	577.71	577.90
	DIFF.	4.22		4.59		4.58		2.54			
9/16/94 9:40	DEPTH	5.80	10.24	5.28	9.95	7.05	10.50	5.40	8.90	26.15	23.60
	ELEV.	581.89	577.74	582.17	577.60	582.21	577.66	581.70	579.10	577.64	577.88
	DIFF.	4.15		4.57		4.55		2.60			
9/16/94 16:00	DEPTH	5.66	10.11	5.29	9.96	7.05	10.49	5.45	8.88	26.13	23.55
	ELEV.	582.03	577.87	582.16	577.59	582.21	577.67	581.65	579.12	577.66	577.93
	DIFF.	4.16		4.57		4.54		2.53			
9/17/94 6:30	DEPTH	5.80	10.21	5.31	10.06	7.08	10.60	5.48	8.96	26.19	23.71
	ELEV.	581.89	577.77	582.14	577.49	582.18	577.56	581.62	579.04	577.60	577.77
	DIFF.	4.12		4.65		4.62		2.58			
9/17/94 14:45	DEPTH	5.74	10.22	5.30	10.06	7.09	10.60	5.47	8.93	26.20	23.72
	ELEV.	581.95	577.76	582.15	577.49	582.17	577.56	581.63	579.07	577.59	577.76
	DIFF.	4.19		4.66		4.61		2.56			
9/18/94 12:30	DEPTH	5.75	10.23	5.32	10.08	7.10	10.61	5.45	8.92	26.22	23.73
	ELEV.	581.94	577.75	582.13	577.47	582.16	577.55	581.65	579.08	577.57	577.75
	DIFF.	4.19		4.66		4.61		2.57			
9/18/94 14:00	DEPTH	5.73	10.21	5.28	10.04	7.07	10.60	5.48	8.92	26.21	23.70
	ELEV.	581.96	577.77	582.17	577.51	582.19	577.56	581.62	579.08	577.58	577.78
	DIFF.	4.19		4.66		4.63		2.54			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/19/94 6:45	DEPTH	5.80	10.20	5.37	10.03	7.14	10.57	5.55	8.95	26.22	23.72
	ELEV.	581.89	577.78	582.08	577.52	582.12	577.59	581.55	579.05	577.57	577.76
	DIFF.	4.11		4.56		4.53		2.50			
9/19/94 16:45	DEPTH	5.90	10.12	5.47	9.90	7.16	10.47	5.59	8.90	26.10	23.58
	ELEV.	581.79	577.86	581.98	577.65	582.10	577.69	581.51	579.10	577.69	577.90
	DIFF.	3.93		4.33		4.41		2.41			
9/20/94 8:00	DEPTH	5.58	10.15	5.38	9.95	7.15	10.56	5.51	8.95	26.25	23.60
	ELEV.	582.11	577.83	582.07	577.60	582.11	577.60	581.59	579.05	577.54	577.88
	DIFF.	4.28		4.47		4.51		2.54			
9/20/94 16:30	DEPTH	5.85	10.00	5.39	9.85	7.19	10.47	5.55	8.79	26.12	23.51
	ELEV.	581.84	577.98	582.06	577.70	582.07	577.69	581.55	579.21	577.67	577.97
	DIFF.	3.86		4.36		4.38		2.34			
9/21/94 16:40	DEPTH	5.90	9.97	5.35	9.78	7.16	10.35	5.51	8.76	26.09	23.46
	ELEV.	581.79	578.01	582.10	577.77	582.10	577.81	581.59	579.24	577.70	578.02
	DIFF.	3.78		4.33		4.29		2.35			
9/22/94 7:45	DEPTH	5.92	9.95	5.40	9.80	7.17	10.35	5.56	8.80	26.15	23.48
	ELEV.	581.77	578.03	582.05	577.75	582.09	577.81	581.54	579.20	577.64	578.00
	DIFF.	3.74		4.30		4.28		2.34			
9/22/94 15:30	DEPTH	5.92	9.95	5.40	9.80	7.18	10.35	5.55	8.80	26.17	23.46
	ELEV.	581.77	578.03	582.05	577.75	582.08	577.81	581.55	579.20	577.62	578.02
	DIFF.	3.74		4.30		4.27		2.35			

T/. _E 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/23/94 8:25	DEPTH	5.85	10.03	5.35	9.85	7.20	10.43	5.55	8.82	26.19	23.51
	ELEV.	581.84	577.95	582.10	577.70	582.06	577.73	581.55	579.18	577.60	577.97
	DIFF.	3.89		4.40		4.33		2.37			
9/23/94 16:15	DEPTH	5.87	10.05	5.35	9.89	7.21	10.46	5.57	8.85	26.21	23.53
	ELEV.	581.82	577.93	582.10	577.66	582.05	577.70	581.53	579.15	577.58	577.95
	DIFF.	3.89		4.44		4.35		2.38			
9/24/94 17:00	DEPTH	5.83	10.07	5.29	9.86	7.18	10.45	5.45	8.83	26.21	23.50
	ELEV.	581.86	577.91	582.16	577.69	582.08	577.71	581.65	579.17	577.58	577.98
	DIFF.	3.95		4.47		4.37		2.48			
9/25/94 9:00	DEPTH	5.80	10.05	5.25	9.83	7.15	10.40	5.40	8.80	26.18	23.52
	ELEV.	581.89	577.93	582.20	577.72	582.11	577.76	581.70	579.20	577.61	577.96
	DIFF.	3.96		4.48		4.35		2.50			
9/25/94 16:00	DEPTH	5.82	9.96	5.26	9.70	7.15	10.31	5.42	8.71	26.09	23.37
	ELEV.	581.87	578.02	582.19	577.85	582.11	577.85	581.68	579.29	577.70	578.11
	DIFF.	3.85		4.34		4.26		2.39			
9/26/94 7:30	DEPTH	5.78	9.92	5.22	9.72	7.10	10.28	5.40	8.72	26.10	23.39
	ELEV.	581.91	578.06	582.23	577.83	582.16	577.88	581.70	579.28	577.69	578.09
	DIFF.	3.85		4.40		4.28		2.42			
9/26/94 17:00	DEPTH	5.75	9.96	5.22	9.78	7.10	10.34	5.40	8.80	26.15	23.45
	ELEV.	581.94	578.02	582.23	577.77	582.16	577.82	581.70	579.20	577.64	578.03
	DIFF.	3.92		4.46		4.34		2.50			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/27/94 9:00	DEPTH	5.73	10.05	5.20	9.87	7.08	10.40	5.35	8.82	26.25	23.51
	ELEV.	581.96	577.93	582.25	577.68	582.18	577.76	581.75	579.18	577.54	577.97
	DIFF.	4.03		4.57		4.42		2.57			
9/28/94 10:00	DEPTH	5.78	10.05	5.28	9.88	7.15	10.44	5.42	8.90	26.05	23.60
	ELEV.	581.91	577.93	582.17	577.67	582.11	577.72	581.68	579.10	577.74	577.88
	DIFF.	3.98		4.50		4.39		2.58			
9/29/94 16:00	DEPTH	5.84	10.05	5.28	9.88	7.12	10.41	5.42	8.82	26.04	23.60
	ELEV.	581.85	577.93	582.17	577.67	582.14	577.75	581.68	579.18	577.75	577.88
	DIFF.	3.92		4.50		4.39		2.50			
9/30/94 7:30	DEPTH	5.88	10.02	5.31	9.87	7.20	10.41	5.50	8.85	26.02	23.45
	ELEV.	581.81	577.96	582.14	577.68	582.06	577.75	581.60	579.15	577.77	578.03
	DIFF.	3.85		4.46		4.31		2.45			
10/1/94 5:30	DEPTH	5.82	10.02	5.35	9.87	7.13	10.41	5.32	8.82	26.01	23.44
	ELEV.	581.87	577.96	582.10	577.68	582.13	577.75	581.78	579.18	577.78	578.04
	DIFF.	3.91		4.42		4.38		2.60			
10/2/94 4:30	DEPTH	5.73	9.92	5.28	9.77	7.00	10.31	5.26	8.75	25.95	23.40
	ELEV.	581.96	578.06	582.17	577.78	582.26	577.85	581.84	579.25	577.84	578.08
	DIFF.	3.90		4.39		4.41		2.59			
10/3/94 7:30	DEPTH	5.86	10.13	5.43	9.96	7.15	10.46	5.37	8.90	26.09	23.60
	ELEV.	581.83	577.85	582.02	577.59	582.11	577.70	581.73	579.10	577.70	577.88
	DIFF.	3.98		4.43		4.41		2.63			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/4/94 7:20	DEPTH	5.77	10.10	5.47	9.95	7.23	10.49	5.43	8.89	26.09	23.60
	ELEV.	581.92	577.88	581.98	577.60	582.03	577.67	581.67	579.11	577.70	577.88
	DIFF.	4.04		4.38		4.36		2.56			
10/5/94 8:00	DEPTH	5.89	9.98	5.34	9.82	7.25	10.31	5.45	8.78	25.96	23.47
	ELEV.	581.80	578.00	582.11	577.73	582.01	577.85	581.65	579.22	577.83	578.01
	DIFF.	3.80		4.38		4.16		2.43			
10/6/94 7:00	DEPTH	5.90	9.93	5.49	9.77	7.25	10.34	5.50	8.86	25.98	23.50
	ELEV.	581.79	578.05	581.96	577.78	582.01	577.82	581.60	579.14	577.81	577.98
	DIFF.	3.74		4.18		4.19		2.46			
10/7/94 7:00	DEPTH	5.88	9.90	5.48	9.72	7.34	10.34	5.57	8.84	25.95	23.46
	ELEV.	581.81	578.08	581.97	577.83	581.92	577.82	581.53	579.16	577.84	578.02
	DIFF.	3.73		4.14		4.10		2.37			
10/9/94 11:00	DEPTH	5.76	10.10	5.34	9.88	7.17	10.41	5.30	8.82	25.99	23.53
	ELEV.	581.93	577.88	582.11	577.67	582.09	577.75	581.80	579.18	577.80	577.95
	DIFF.	4.05		4.44		4.34		2.62			
10/10/94 7:00	DEPTH	5.89	10.18	5.47	9.98	7.30	10.52	5.43	8.90	26.07	23.64
	ELEV.	581.80	577.80	581.98	577.57	581.96	577.64	581.67	579.10	577.72	577.84
	DIFF.	4.00		4.41		4.32		2.57			
10/11/94 7:10	DEPTH	5.75	9.95	5.28	9.75	7.15	10.30	5.34	8.72	25.92	23.63
	ELEV.	581.94	578.03	582.17	577.80	582.11	577.86	581.76	579.28	577.87	577.85
	DIFF.	3.91		4.37		4.25		2.48			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/13/94 10:00	DEPTH	5.80	9.81	5.32	9.63	7.14	10.18	5.41	8.66	25.80	23.31
	ELEV.	581.89	578.17	582.13	577.92	582.12	577.98	581.69	579.34	577.99	578.17
	DIFF.	3.72		4.21		4.14		2.35			
10/14/94 7:30	DEPTH	5.85	9.85	5.32	9.65	7.15	10.22	5.47	8.72	25.82	23.33
	ELEV.	581.84	578.13	582.13	577.90	582.11	577.94	581.63	579.28	577.97	578.15
	DIFF.	3.71		4.23		4.17		2.35			
10/15/94 7:30	DEPTH	5.85	9.86	5.35	9.62	7.17	10.16	5.50	8.68	25.77	23.30
	ELEV.	581.84	578.12	582.10	577.93	582.09	578.00	581.60	579.32	578.02	578.18
	DIFF.	3.72		4.17		4.09		2.28			
10/16/94 8:30	DEPTH	5.84	9.84	5.33	9.60	7.15	10.13	5.50	8.68	25.76	23.30
	ELEV.	581.85	578.14	582.12	577.95	582.11	578.03	581.60	579.32	578.03	578.18
	DIFF.	3.71		4.17		4.08		2.28			
10/17/94 7:30	DEPTH	5.89	9.70	5.37	9.50	7.22	10.08	5.48	8.66	25.70	23.24
	ELEV.	581.80	578.28	582.08	578.05	582.04	578.08	581.62	579.34	578.09	578.24
	DIFF.	3.52		4.03		3.96		2.28			
10/18/94 9:00	DEPTH	5.77	9.65	5.27	9.44	7.15	10.00	5.43	8.55	25.60	23.12
	ELEV.	581.92	578.33	582.18	578.11	582.11	578.16	581.67	579.45	578.19	578.36
	DIFF.	3.59		4.07		3.95		2.22			
10/19/94 7:30	DEPTH	5.78	9.64	5.28	9.50	7.14	10.04	5.46	8.60	25.65	23.15
	ELEV.	581.91	578.34	582.17	578.05	582.12	578.12	581.64	579.40	578.14	578.33
	DIFF.	3.57		4.12		4.00		2.24			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/20/94 16:30	DEPTH	5.81	9.68	5.27	9.51	7.18	10.06	5.50	8.68	25.62	23.17
	ELEV.	581.88	578.30	582.18	578.04	582.08	578.10	581.60	579.32	578.17	578.31
	DIFF.	3.58		4.14		3.98		2.28			
10/21/94 10:20	DEPTH	5.90	9.72	5.30	9.52	7.21	10.07	5.56	8.67	25.60	23.21
	ELEV.	581.79	578.26	582.15	578.03	582.05	578.09	581.54	579.33	578.19	578.27
	DIFF.	3.53		4.12		3.96		2.21			
10/23/94 12:45	DEPTH	5.88	9.77	5.32	9.55	7.22	10.07	5.58	8.69	25.63	23.23
	ELEV.	581.81	578.21	582.13	578.00	582.04	578.09	581.52	579.31	578.16	578.25
	DIFF.	3.60		4.13		3.95		2.21			
10/24/94 10:30	DEPTH	5.92	9.69	5.34	9.50	7.23	10.01	5.62	8.65	25.58	23.18
	ELEV.	581.77	578.29	582.11	578.05	582.03	578.15	581.48	579.35	578.21	578.30
	DIFF.	3.48		4.06		3.88		2.13			
10/25/94 10:30	DEPTH	5.99	9.76	5.41	9.57	7.27	10.14	5.70	8.73	25.73	23.25
	ELEV.	581.70	578.22	582.04	577.98	581.99	578.02	581.40	579.27	578.06	578.23
	DIFF.	3.48		4.06		3.97		2.13			
10/26/94 14:20	DEPTH	5.98	9.72	5.39	9.52	7.25	10.06	5.68	8.73	25.70	23.22
	ELEV.	581.71	578.26	582.06	578.03	582.01	578.10	581.42	579.27	578.09	578.26
	DIFF.	3.45		4.03		3.91		2.15			
10/27/94 8:30	DEPTH	5.96	9.66	5.37	9.46	7.22	10.01	5.70	8.67	25.66	23.18
	ELEV.	581.73	578.32	582.08	578.09	582.04	578.15	581.40	579.33	578.13	578.30
	DIFF.	3.41		3.99		3.89		2.07			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/29/94 14:00	DEPTH	6.00	9.66	5.41	9.43	7.30	10.00	5.73	8.70	25.60	23.15
	ELEV.	581.69	578.32	582.04	578.12	581.96	578.16	581.37	579.30	578.19	578.33
	DIFF.	3.37		3.92		3.80		2.07			
10/31/94 14:00	DEPTH	5.20	9.60	5.05	9.40	6.78	9.94	5.00	8.62	25.66	23.22
	ELEV.	582.49	578.38	582.40	578.15	582.48	578.22	582.10	579.38	578.13	578.26
	DIFF.	4.11		4.25		4.26		2.72			
11/1/94 9:00	DEPTH	5.34	9.55	4.81	9.33	6.68	9.86	4.80	8.40	25.50	23.00
	ELEV.	582.35	578.43	582.64	578.22	582.58	578.30	582.30	579.60	578.29	578.48
	DIFF.	3.92		4.42		4.28		2.70			
11/3/94 7:30	DEPTH	5.45	9.60	5.00	9.40	6.60	9.93	4.92	8.44	25.55	22.98
	ELEV.	582.24	578.38	582.45	578.15	582.66	578.23	582.18	579.56	578.24	578.50
	DIFF.	3.86		4.30		4.43		2.62			
11/4/94 7:35	DEPTH	5.38	9.55	4.90	9.31	6.58	9.88	4.80	8.38	25.50	23.00
	ELEV.	582.31	578.43	582.55	578.24	582.68	578.28	582.30	579.62	578.29	578.48
	DIFF.	3.88		4.31		4.40		2.68			
11/6/94 16:30	DEPTH	5.30	9.89	4.65	9.68	6.02	10.22	4.86	8.63	25.86	23.06
	ELEV.	582.39	578.09	582.80	577.87	583.24	577.94	582.24	579.37	577.93	578.42
	DIFF.	4.30		4.93		5.30		2.87			
11/7/94 8:00	DEPTH	5.33	9.74	4.71	9.55	6.03	10.10	4.77	8.52	25.73	22.94
	ELEV.	582.36	578.24	582.74	578.00	583.23	578.06	582.33	579.48	578.06	578.54
	DIFF.	4.12		4.74		5.17		2.85			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/8/94 8:30	DEPTH	5.33	9.39	4.73	9.18	6.03	9.75	4.50	8.20	25.37	22.78
	ELEV.	582.36	578.59	582.72	578.37	583.23	578.41	582.60	579.80	578.42	578.70
	DIFF.	3.77		4.35		4.82		2.80			
11/10/94 8:00	DEPTH	5.24	9.75	4.73	9.56	5.95	10.10	4.78	8.80	25.70	23.25
	ELEV.	582.45	578.23	582.72	577.99	583.31	578.06	582.32	579.20	578.09	578.23
	DIFF.	4.22		4.73		5.25		3.12			
11/11/94 8:00	DEPTH	5.43	9.55	4.82	9.36	6.13	9.90	5.27	8.47	25.50	23.07
	ELEV.	582.26	578.43	582.63	578.19	583.13	578.26	581.83	579.53	578.29	578.41
	DIFF.	3.83		4.44		4.87		2.30			
11/12/94 14:30	DEPTH	5.45	9.44	4.85	9.20	6.20	9.75	5.26	8.34	25.36	22.98
	ELEV.	582.24	578.54	582.60	578.35	583.06	578.41	581.84	579.66	578.43	578.50
	DIFF.	3.70		4.25		4.65		2.18			
11/14/94 9:00	DEPTH	5.46	9.45	4.85	9.25	6.32	9.81	5.30	8.46	25.41	23.06
	ELEV.	582.23	578.53	582.60	578.30	582.94	578.35	581.80	579.54	578.38	578.42
	DIFF.	3.70		4.30		4.59		2.26			
11/16/94 8:00	DEPTH	5.53	9.45	4.95	9.23	6.34	9.80	5.33	8.50	25.40	23.00
	ELEV.	582.16	578.53	582.50	578.32	582.92	578.36	581.77	579.50	578.39	578.48
	DIFF.	3.63		4.18		4.56		2.27			
11/20/94 11:30	DEPTH	5.50	9.22	4.90	8.92	6.42	9.52	5.10	8.19	25.10	22.61
	ELEV.	582.19	578.76	582.55	578.63	582.84	578.64	582.00	579.81	578.69	578.87
	DIFF.	3.43		3.92		4.20		2.19			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/21/94 9:30	DEPTH	5.43	9.03	4.91	8.83	6.38	9.39	5.08	8.10	25.00	22.49
	ELEV.	582.26	578.95	582.54	578.72	582.88	578.77	582.02	579.90	578.79	578.99
	DIFF.	3.31		3.82		4.11		2.12			
11/23/94 11:00	DEPTH	5.47	9.38	5.00	9.20	6.43	9.78	5.10	8.40	25.30	22.83
	ELEV.	582.22	578.60	582.45	578.35	582.83	578.38	582.00	579.60	578.49	578.65
	DIFF.	3.62		4.10		4.45		2.40			
11/25/94 16:00	DEPTH	5.51	9.37	5.00	9.15	6.43	9.70	5.11	8.35	25.24	22.78
	ELEV.	582.18	578.61	582.45	578.40	582.83	578.46	581.99	579.65	578.55	578.70
	DIFF.	3.57		4.05		4.37		2.34			
11/27/94 16:00	DEPTH	5.40	9.30	4.90	9.08	6.40	9.66	5.00	8.29	25.19	22.70
	ELEV.	582.29	578.68	582.55	578.47	582.86	578.50	582.10	579.71	578.60	578.78
	DIFF.	3.61		4.08		4.36		2.39			
11/28/94 16:00	DEPTH	5.42	9.35	4.85	9.15	6.35	9.70	4.96	8.34	25.22	22.76
	ELEV.	582.27	578.63	582.60	578.40	582.91	578.46	582.14	579.66	578.57	578.72
	DIFF.	3.64		4.20		4.45		2.48			
11/29/94 10:00	DEPTH	5.50	9.58	4.90	9.40	6.30	9.93	5.06	8.60	25.54	23.08
	ELEV.	582.19	578.40	582.55	578.15	582.96	578.23	582.04	579.40	578.25	578.40
	DIFF.	3.79		4.40		4.73		2.64			
11/30/94 8:30	DEPTH	5.78	9.54	4.92	9.30	6.30	9.85	5.22	8.53	25.50	23.02
	ELEV.	581.91	578.44	582.53	578.25	582.96	578.31	581.88	579.47	578.29	578.46
	DIFF.	3.47		4.28		4.65		2.41			

TA__E 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/1/94 15:00	DEPTH	5.75	9.10	4.90	8.87	6.29	9.44	5.21	8.20	25.11	23.69
	ELEV.	581.94	578.88	582.55	578.68	582.97	578.72	581.89	579.80	578.68	577.79
	DIFF.	3.06		3.87		4.25		2.09			
12/2/94 15:15	DEPTH	5.85	9.19	4.99	8.95	6.33	9.50	5.19	8.24	25.18	22.74
	ELEV.	581.84	578.79	582.46	578.60	582.93	578.66	581.91	579.76	578.61	578.74
	DIFF.	3.05		3.86		4.27		2.15			
12/4/94 12:30	DEPTH	5.80	9.23	4.95	8.98	6.41	9.52	5.30	8.32	25.20	22.70
	ELEV.	581.89	578.75	582.50	578.57	582.85	578.64	581.80	579.68	578.59	578.78
	DIFF.	3.14		3.93		4.21		2.12			
12/5/94 7:30	DEPTH	5.85	9.20	5.00	8.93	6.40	9.50	5.24	8.23	25.15	22.60
	ELEV.	581.84	578.78	582.45	578.62	582.86	578.66	581.86	579.77	578.64	578.88
	DIFF.	3.06		3.83		4.20		2.09			
12/6/94 14:45	DEPTH	5.57	9.19	4.95	8.98	6.40	9.48	5.25	8.30	25.14	22.60
	ELEV.	582.12	578.79	582.50	578.57	582.86	578.68	581.85	579.70	578.65	578.88
	DIFF.	3.33		3.93		4.18		2.15			
12/7/94 8:20	DEPTH	5.13	9.17	4.56	9.00	6.25	9.55	5.20	8.20	25.20	22.55
	ELEV.	582.56	578.81	582.89	578.55	583.01	578.61	581.90	579.80	578.59	578.93
	DIFF.	3.75		4.34		4.40		2.10			
12/9/94 15:30	DEPTH	5.28	9.15	4.85	9.00	6.30	9.54	5.24	8.24	25.18	22.54
	ELEV.	582.41	578.83	582.60	578.55	582.96	578.62	581.86	579.76	578.61	578.94
	DIFF.	3.58		4.05		4.34		2.10			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/10/94 9:30	DEPTH	5.34	9.06	4.81	8.83	6.22	9.38	5.07	8.13	25.10	22.39
	ELEV.	582.35	578.92	582.64	578.72	583.04	578.78	582.03	579.87	578.69	579.09
	DIFF.	3.43		3.92		4.26		2.16			
12/12/94 13:45	DEPTH	5.75	9.08	4.90	8.87	6.29	9.41	5.15	8.19	25.15	22.43
	ELEV.	581.94	578.90	582.55	578.68	582.97	578.75	581.95	579.81	578.64	579.05
	DIFF.	3.04		3.87		4.22		2.14			
12/13/94 10:30	DEPTH	5.50	9.15	4.90	8.87	6.30	9.50	5.20	8.25	25.20	22.50
	ELEV.	582.19	578.83	582.55	578.68	582.96	578.66	581.90	579.75	578.59	578.98
	DIFF.	3.36		3.87		4.30		2.15			
12/15/94 13:00	DEPTH	5.50	9.01	4.91	8.78	6.33	9.32	5.14	8.12	25.08	22.41
	ELEV.	582.19	578.97	582.54	578.77	582.93	578.84	581.96	579.88	578.71	579.07
	DIFF.	3.22		3.77		4.09		2.08			
12/16/94 9:30	DEPTH	5.50	9.05	4.92	8.74	6.34	9.29	5.10	8.05	25.10	22.37
	ELEV.	582.19	578.93	582.53	578.81	582.92	578.87	582.00	579.95	578.69	579.11
	DIFF.	3.26		3.72		4.05		2.05			
12/18/94 12:30	DEPTH	5.40	9.23	4.85	8.95	6.41	9.51	5.10	8.26	25.29	22.63
	ELEV.	582.29	578.75	582.60	578.60	582.85	578.65	582.00	579.74	578.50	578.85
	DIFF.	3.54		4.00		4.20		2.26			
12/20/94 8:00	DEPTH	5.41	9.03	4.87	8.78	6.25	9.34	5.10	8.13	25.05	22.50
	ELEV.	582.28	578.95	582.58	578.77	583.01	578.82	582.00	579.87	578.74	578.98
	DIFF.	3.33		3.81		4.19		2.13			

TA E 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/22/94 14:00	DEPTH	5.48	8.90	4.85	8.70	6.20	9.25	5.07	8.07	25.00	22.42
	ELEV.	582.21	579.08	582.60	578.85	583.06	578.91	582.03	579.93	578.79	579.06
	DIFF.	3.13		3.75		4.15		2.10			
12/23/94 11:30	DEPTH	5.45	9.02	4.91	8.80	6.23	9.31	5.12	8.17	25.09	22.31
	ELEV.	582.24	578.96	582.54	578.75	583.03	578.85	581.98	579.83	578.70	579.17
	DIFF.	3.28		3.79		4.18		2.15			
12/24/94 8:30	DEPTH	5.45	8.90	4.90	8.70	6.20	9.25	5.10	8.10	25.05	22.28
	ELEV.	582.24	579.08	582.55	578.85	583.06	578.91	582.00	579.90	578.74	579.20
	DIFF.	3.16		3.70		4.15		2.10			
12/27/94 8:30	DEPTH	5.50	8.88	4.91	8.65	6.26	9.21	5.12	8.05	25.00	22.25
	ELEV.	582.19	579.10	582.54	578.90	583.00	578.95	581.98	579.95	578.79	579.23
	DIFF.	3.09		3.64		4.05		2.03			
12/28/94 13:30	DEPTH	5.50	9.03	4.90	8.75	6.30	9.33	5.10	8.12	25.13	22.37
	ELEV.	582.19	578.95	582.55	578.80	582.96	578.83	582.00	579.88	578.66	579.11
	DIFF.	3.24		3.75		4.13		2.12			
12/29/94 11:30	DEPTH	5.48	9.11	4.94	8.88	6.30	9.42	5.10	8.25	25.25	22.47
	ELEV.	582.21	578.87	582.51	578.67	582.96	578.74	582.00	579.75	578.54	579.01
	DIFF.	3.34		3.84		4.22		2.25			
12/31/94 10:30	DEPTH	5.48	9.13	4.96	8.90	6.29	9.45	5.15	8.27	25.30	22.49
	ELEV.	582.21	578.85	582.49	578.65	582.97	578.71	581.95	579.73	578.49	578.99
	DIFF.	3.36		3.84		4.26		2.22			

TABLE 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/2/95 12:45	DEPTH	5.50	9.10	5.00	8.87	6.31	9.40	5.10	8.20	25.15	22.45
	ELEV.	582.19	578.88	582.45	578.68	582.95	578.76	582.00	579.80	578.64	579.03
	DIFF.	3.31		3.77		4.19		2.20			
1/3/95 9:00	DEPTH	5.50	9.00	5.05	8.70	6.30	9.30	5.13	8.12	24.90	22.45
	ELEV.	582.19	578.98	582.40	578.85	582.96	578.86	581.97	579.88	578.89	579.03
	DIFF.	3.21		3.55		4.10		2.09			
1/4/95 14:00	DEPTH	5.60	9.00	5.03	8.74	6.35	9.30	5.17	8.15	24.87	22.47
	ELEV.	582.09	578.98	582.42	578.81	582.91	578.86	581.93	579.85	578.92	579.01
	DIFF.	3.11		3.61		4.05		2.08			
1/5/95 14:00	DEPTH	5.57	8.61	5.02	8.35	6.30	8.95	5.12	7.84	24.51	22.12
	ELEV.	582.12	579.37	582.43	579.20	582.96	579.21	581.98	580.16	579.28	579.36
	DIFF.	2.75		3.23		3.75		1.82			
3/13/95 0:00	DEPTH	5.45	8.04	4.50	8.38	6.09	8.37	4.35	7.19	23.60	21.40
	ELEV.	582.24	579.94	582.95	579.17	583.17	579.79	582.75	580.81	580.19	580.08
	DIFF.	2.30		3.78		3.38		1.94			
3/24/95 0:00	DEPTH	5.46	8.17	4.89	7.90	6.29	8.46	5.25	7.59		
	ELEV.	582.23	579.81	582.56	579.65	582.97	579.70	581.85	580.41	603.79	601.48
	DIFF.	2.42		2.91		3.27		1.44			
5/25/95 0:00	DEPTH	5.43	7.47	4.56	7.11	5.81	7.71	5.19	7.03	23.28	20.94
	ELEV.	582.26	580.51	582.89	580.44	583.45	580.45	581.91	580.97	580.51	580.54
	DIFF.	1.75		2.45		3.00		0.94			

TA .E 21
(Continued)
WEST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-9	P-9	W-10	P-10	W-11	P-11	W-12	P-12	R-5	R-6
	T.O.R.	587.69	587.98	587.45	587.55	589.26	588.16	587.10	588.00	603.79	601.48
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/7/95 0:00	DEPTH	5.65	7.14	5.00	6.78	6.48	7.35	5.49	6.85	22.99	20.62
	ELEV.	582.04	580.84	582.45	580.77	582.78	580.81	581.61	581.15	580.80	580.86
	DIFF.	1.20		1.68		1.97		0.46			
7/24/95 0:00	DEPTH	5.83	8.02	5.15	7.22	6.90	7.77	5.65	7.43	23.51	32.43
	ELEV.	581.86	579.96	582.30	580.33	582.36	580.39	581.45	580.57	580.28	569.05
	DIFF.	1.90		1.97		1.97		0.88			
8/4/95 0:00	DEPTH	5.39	7.90	4.87	7.37	6.31	7.94	5.50	7.19	23.62	32.90
	ELEV.	582.30	580.08	582.58	580.18	582.95	580.22	581.60	580.81	580.17	568.58
	DIFF.	2.22		2.40		2.73		0.79			
8/10/95 0:00	DEPTH	5.38	8.43	4.90	7.62	6.32	8.17	5.01	7.52	23.89	33.20
	ELEV.	582.31	579.55	582.55	579.93	582.94	579.99	582.09	580.48	579.90	568.28
	DIFF.	2.76		2.62		2.95		1.61			
8/21/95 0:00	DEPTH	5.51	8.25	4.88	7.80	6.25	8.36	5.23	7.53	24.02	33.40
	ELEV.	582.18	579.73	582.57	579.75	583.01	579.80	581.87	580.47	579.77	568.08
	DIFF.	2.45		2.82		3.21		1.40			
8/28/95 0:00	DEPTH	5.65	8.25	4.97	7.85	6.40	8.40	5.40	7.70		
	ELEV.	582.04	579.73	582.48	579.70	582.86	579.76	581.70	580.30	603.79	601.48
	DIFF.	2.31		2.78		3.10		1.40			

TABLE 22

ATP PRODUCTION AND PCB ANALYTICAL RESULTS
SELECT SOILS THERMAL TREATMENT
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Production (a) (tons)	Feed Soil (b) (mg/kg)	Treated Soil (b) (mg/kg)	Daily PCB Removal Efficiency (c)
01/22/92	14.20	11,000	2.2	99.98%
01/23/92	209.20	23,000	2.2	99.99%
01/24/92	195.70	15,000	4.5	99.97%
01/25/92	175.70	13,000	5.9	99.95%
01/26/92	169.50	8,500	7.4	99.91%
01/27/92	226.50	9,600	8.9	99.91%
01/28/92	240.40	9,600	1.2	99.99%
01/29/92	218.75	2,400	1.5	99.94%
01/30/92	242.00	9,600	3.9	99.96%
01/31/92	236.20	12,000	5.9	99.95%
02/01/92	231.70	13,000	3.7	99.97%
02/02/92	239.90	8,600	1.6	99.98%
02/03/92	178.40	14,000	3.5	99.98%
02/04/92	172.40	15,000	2.1	99.99%
02/05/92	174.80	10,000	2.5	99.98%
02/06/92	180.00	12,000	1.5	99.99%
02/07/92	173.40	12,000	1.5	99.99%
02/08/92	155.60	10,000	2	99.98%
02/09/92	155.90	12,000	1.8	99.99%
02/10/92	192.10	14,000	1.2	99.99%
02/11/92	182.90	14,000	2.3	99.98%
02/12/92	179.72	12,000	3.9	99.97%
02/13/92	132.16	13,000	2.4	99.98%
02/14/92	219.20	14,000	2.9	99.98%
02/15/92	215.81	13,000	3.8	99.97%
02/16/92	215.43	11,000	2.1	99.98%
02/17/92	202.64	9,200	4.1	99.96%
02/18/92	207.61	9,000	1.4	99.98%
02/19/92	218.60	9,500	1.5	99.98%
02/20/92	235.10	10,000	2.5	99.98%
02/21/92	250.80	11,000	2.2	99.98%
02/22/92	253.50	7,300	1.3	99.98%
02/23/92	253.61	6,900	1.8	99.97%
02/24/92	218.48	7,300	1.6	99.98%
02/28/92	0.00	6,400	0.98	99.98%
02/29/92	169.50	7,500	0.99	99.99%
03/01/92	188.60	7,900	0.86	99.99%
03/02/92	185.90	6,400	0.43	99.99%
03/03/92	168.30	8,100	0.51	99.99%
03/04/92	190.70	6,600	0.61	99.99%
03/05/92	158.30	6,300	0.53	99.99%
03/17/92	105.50	9,900	1.4	99.99%
03/18/92	154.30	10,000	3.8	99.96%

TABLE 22

ATP PRODUCTION AND PCB ANALYTICAL RESULTS
SELECT SOILS THERMAL TREATMENT
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Production (a) (tons)	Feed Soil (b) (mg/kg)	Treated Soil (b) (mg/kg)	Daily PCB Removal Efficiency (c)
04/07/92	0.00	6,600	4.6	99.93%
04/08/92	150.00	9,200	1.5	99.98%
04/09/92	218.28	8,600	1	99.99%
04/10/92	143.62	9,000	1.1	99.99%
04/12/92	30.12	8,700	1.4	99.98%
04/13/92	194.90	11,000	0.93	99.99%
04/14/92	168.00	14,000	2.3	99.98%
04/15/92	108.75	14,000	1.3	99.99%
04/16/92	125.78	21,000	1.2	99.99%
05/12/92	107.60	5,400	0.95	99.98%
05/13/92	195.65	10,000	2	99.98%
05/14/92	97.00	11,000	1.2	99.99%
05/30/92	49.40	12,000	0.69	99.99%
05/31/92	206.90	9,200	0.57	99.99%
06/01/92	216.00	12,000	0.72	99.99%
06/02/92	197.40	12,000	1.3	99.99%
06/03/92	207.30	10,000	0.82	99.99%
06/04/92	201.00	9,200	0.4	100.00%
06/05/92	148.75	11,000	0.43	100.00%
06/06/92	183.60	10,000	7.1	99.93%
06/07/92	197.30	9,400	3.1	99.97%
06/08/92	185.24	8,000	1.3	99.98%
06/09/92	192.57	8,900	1.1	99.99%
06/10/92	136.00	11,000	1.8	99.98%
06/11/92	162.90	9,700	0.61	99.99%
06/12/92	185.50	9,700	1.4	99.99%
06/15/92	96.24	10,000	1.6	99.98%
06/16/92	191.80	10,000	0.71	99.99%
06/17/92	187.70	8,600	1	99.99%
06/18/92	200.40	10,000	1.7	99.98%
06/19/92	203.30	11,000	0.75	99.99%
06/20/92	60.70	9,900	2.6	99.97%
06/21/92	171.30	9,800	4.8	99.95%

Notes:

(a) Production is based on midnight-to-midnight feed totals.
(b) Feed and treated soil concentrations are based on composite generated from 8.00 am on the corresponding date to 8:00 am the next morning.
(c) Daily PCB removal efficiency = $\frac{\text{Feed Soil - Treated Soil}}{\text{Feed Soil}}$

TABLE 23

SUMMARY OF STACK TEST RESULTS
SELECT SOILS THERMAL TREATMENT
WAUKEGAN HARBOR REMEDIAL ACTION

Test Number	A	B	C	D	E	F	G
Test Date	1/28/92	2/4/92	2/10/92	2/18/92	3/4/92	3/5/92	3/5/92
Soil Feed Rate (lb/hr)	20,000	14,367	15,241	17,301	16,000	16,000	16,000
PCB Concentration (ppm)	9,600	15,000	14,000	9,000	6,600	6,300	6,300
PCB Feed Rate (lb/hr)	19.25	215.5	213.4	155.7	105.6	100.8	100.8
PCB Stack Emission Rate (lb/hr)	0.0144	0.0932	0.0623	0.00876	0.00397	0.00148	0.00077
PCB DRE (%)	99.9925	99.9568	99.9708	99.9944	99.9962	99.9985	99.9992
Dioxin/Furans (ng/cu m @ 7% O_2)	1,031.70	19.66 (a)	661.6	289.8	109.4	71.43	31.84

Note:

(a) Dioxin/furan data for this test failed to pass quality assurance criteria.

TABLE 24

PARTICULATE EMISSIONS STACK GAS SAMPLES
SELECT SOILS THERMAL TREATMENT
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Particulate Emissions (lb/hr)
1/28/92	0.294
2/4/92	0.1
2/11/92	0.025
2/18/92	0.036
3/2/92	0.053

TABLE 25

CATEGORY 4 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	Lead Carbon Effluent	System Effluent	Notes
8/1/92			
8/2/92			
8/3/92			
8/4/92			
8/5/92			
8/6/92			
8/7/92			
8/8/92	<1.0	<1.0	Category 4 on-line. Effluent being stored on-site.
8/9/92			
8/10/92			
8/11/92	<1.0		Effluent from Category 4 being stored on-site.
8/12/92	<1.0		Effluent from Category 4 being stored on-site.
8/13/92	<1.0		Effluent from Category 4 being stored on-site.
8/14/92	<1.0		Effluent from Category 4 being stored on-site.
8/15/92			
8/16/92	<1.0		Effluent from Category 4 being stored on-site.
8/17/92			
8/18/92			
8/19/92			
8/20/92			
8/21/92			
8/22/92			
8/23/92			
8/24/92			
8/25/92			
8/26/92			
8/27/92			
8/28/92			
8/29/92	<1.0		Category 4 water stored on-site.
8/30/92	<1.0	<1.0	Category 4 effluent stored on-site.
8/31/92	<1.0		Category 4 effluent stored on-site.
9/1/92	<1.0		Category 4 effluent stored on-site.
9/2/92			
9/3/92			
9/4/92			
9/5/92			
9/8/92	<1.0		Category 4 effluent stored on-site.
9/9/92	<1.0	<1.0	Category 4 effluent stored on-site.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average, with system effluent result greater than 5.0 ug/l.

TABLE 25

CATEGORY 4 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	Lead Carbon Effluent	System Effluent	Notes
9/10/92	<1.0		Category 4 effluent stored on-site.
9/11/92	<1.0		Category 4 effluent stored on-site.
9/12/92	<1.0		Category 4 effluent stored on-site.
9/13/92	<1.0		Category 4 effluent stored on-site.
9/14/92	<1.0		Category 4 effluent stored on-site.
9/15/92	<1.0		Category 4 effluent stored on-site.
9/16/92	<1.0		Category 4 effluent stored on-site.
9/17/92	<1.0	2.1	
9/18/92	<1.0		
9/19/92	<1.0		
9/20/92			
9/21/92	<1.0	<1.0	
9/22/92	<1.0		
9/23/92			
9/24/92			
9/25/92	<1.0	<1.0	
9/26/92	<1.0		
9/27/92	<1.0		Category 4 plant shut down and decommissioned.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average, with system effluent result greater than 5.0 ug/l.

TABLE 26

DATA SUMMARY
TANKS C1 THROUGH C6
WAUKEGAN HARBOR REMEDIAL ACTION

Analyte	Permit Limits (mg/l)	Tank C1 (mg/l)	Tank C2 (mg/l)	Tank C3 (mg/l)	Tank C4 (mg/l)	Tank C5 (mg/l)	Tank C6 (mg/l)
BOD	≤600	94	96	190	440	24	310
COD	≤1,900	230	110	350	490	38	140
Iron	≤50	0.48	0.3	2.4	2.8	2.0	0.1
Acetone	≤2	<0.1	<0.1	0.2	0.76	0.87	0.091
PCBs	≤0.005	0.0013	<0.0005	<0.0005	2.1	<0.0005	<0.0005
Arsenic	1.0	0.29	0.015	<0.004	<0.004	<0.004	<0.004
Mercury	0.003	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002
Zinc	2.0	0.02	<0.01	0.03	0.01	0.57	0.02
Oil and Grease	75.0	<1	<1	<1	<1	<1	<1
Phenolics	4.0	0.007	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone	--	0.11	<0.1	<0.1	<0.1	<0.1	<0.1
Methylene Chloride	--	<0.005	<0.005	<0.005	<0.005	0.006	<0.005

TABLE 27

PCB OIL SHIPMENT/DISPOSAL SUMMARY
WAUKEGAN HARBOR REMEDIAL ACTION

Date	Manifest #	Quantity (kg)	Quantity (gal)
5/28/93	595378	1200	350
6/1/93	373162	17109	5000
6/4/93	449637	17618	5000
6/4/93	345373	16554	4800
6/9/93	373161	17600	5000
6/11/93	345378	15918	4600
6/11/93	345376	15482	4500
6/14/93	345377	16172	4600
6/14/93	345373	16554	4800
6/15/93	345379	17154	5000
6/18/93	345380	17563	5000
6/21/93	345382	3864	1100
8/26/92	345388	5603	1600
9/17/93	345383	10100	3000
9/24/93	345387	7755	2300
12/20/93	345381	4827	1400
12/20/93	345378	15918	5000

Notes:

1. Oils shipped to Rollins Environmental Services, Deer Park, Texas for incineration.

2. The oil was assumed to have a specific gravity of 1.35.

TABLE 28

CATEGORY 6 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	Lead Carbon Effluent	System Effluent	Notes
11/6/92	<1.0	<1.0	
11/7/92	<1.0		
11/8/92	<1.0		
11/9/92	<1.0		
11/10/92	<1.0	<1.0	
11/11/92	<1.0		
11/12/92	<1.0		
11/13/92	<1.0		
11/14/92	<1.0		
11/15/92	<1.0		
11/16/92	<1.0	<1.0	
11/17/92	<1.0		
11/18/92	<1.0		
11/19/92	<1.0		
11/20/92	<1.0		
11/21/92	<1.0		
11/22/92	<1.0		
11/23/92	<1.0	<1.0	
11/24/92	<1.0		
11/25/92	<1.0		
11/26/92	-		Down for Holidays
11/27/92	-		Down for Holidays
11/28/92	-		Down for Holidays
11/29/92	-		Down for Holidays
11/30/92	<1.0	<1.0	On-line

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 28

CATEGORY 6 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	Lead Carbon Effluent	System Effluent	Notes
12/1/92	<1.0		
12/2/92	<1.0		
12/3/92	<1.0		
12/4/92	<1.0		
12/5/92	<1.0		
12/6/92	<1.0		
12/7/92	<1.0		
12/8/92	<1.0		
12/9/92	<1.0	<1.0	
12/10/92			
12/11/92	<1.0		Shut down due to lack of water.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent less than 1.0 ug/l on 30-day average with no system effluent result greater than 5.0 ug/l.

TABLE 29

METAL RESULTS
UNKNOWN PIPE GROUND WATER SAMPLE
WAUKEGAN HARBOR REMEDIAL ACTION
RESULTS IN MG/L (PPM)

Metal	Result	Acute Standard (a)	Chronic Standard (a)
Antimony	ND/0.02	NS	NS
Arsenic	0.007	0.36	0.19
Beryllium	ND/0.01	NS	NS
Cadmium	ND/0.02	0.3	0.003
Chromium (Total)	ND/0.02	1.0 (b)	0.5
Copper	ND/0.02	0.05	0.03
Lead	0.008	0.1	NA
Mercury	ND/0.0002	0.0005	NA
Nickel	ND/0.04	1.0	1.0
Selenium	0.004	1.0	1.0
Silver	ND/0.01	5.0	5.0
Thallium	ND/0.05	NS	NS
Zinc	0.03	1.0	1.0

Notes:

(a) Standards are from 35 IAC 302.208.
(b) Technology-based standard in 35 IAC 304.124 governs.
ND/0.02 - Nondetectable at a detection limit of 0.02.
NS - No standard listed in 35 IAC 302.208.
NA - Not Applied.

TABLE 30

SLURRY WALL KEY DATA
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
0+00	587.0	28.0	31.5	559.0	555.5
0+10	587.0	28.0	32.0	559.0	555.0
0+20	587.0	27.5	29.5	559.5	557.5
0+30	587.0	28.5	31.5	558.5	555.5
0+40	587.0	30.0	33.0	557.0	554.0
0+50	587.0	30.0	32.5	557.0	554.5
0+60	587.0	30.0	33.0	557.0	554.0
0+70	587.0	30.0	33.0	557.0	554.0
0+80	587.0	30.0	33.5	557.0	553.5
0+90	587.0	30.0	33.0	557.0	554.0
1+00	587.0	31.5	33.5	555.5	553.5
1+10	587.0	30.5	34.0	556.5	553.0
1+20	587.0	30.0	34.5	557.0	552.5
1+30	587.0	30.0	34.5	557.0	552.5
1+40	587.0	30.0	34.5	557.0	552.5
1+50	587.0	31.5	34.5	555.5	552.5
1+60	587.0	31.0	35.0	556.0	552.0
1+70	587.0	30.5	34.5	556.5	552.5
1+80	587.0	31.0	35.0	556.0	552.0
1+90	587.0	31.0	34.5	556.0	552.5
2+00	587.0	31.0	34.5	556.0	552.5
2+10	587.0	31.0	34.0	556.0	553.0
2+20	587.0	30.5	33.5	556.5	553.5
2+30	587.0	30.5	34.5	556.5	552.5
2+40	587.0	31.0	34.0	556.0	553.0
2+50	587.0	30.5	34.0	556.5	553.0
2+60	587.0	31.0	34.0	556.0	553.0
2+70	587.0	32.0	35.0	555.0	552.0
2+80	587.0	32.0	35.0	555.0	552.0
2+90	587.0	32.0	35.0	555.0	552.0
3+00	587.0	31.0	34.5	556.0	552.5
3+10	587.0	31.5	35.0	555.5	552.0
3+20	587.0	31.5	34.5	555.5	552.5
3+30	587.0	32.0	35.0	555.0	552.0
3+40	587.0	32.0	35.0	555.0	552.0
3+50	587.0	31.0	35.0	556.0	552.0
3+60	587.0	30.5	33.5	556.5	553.5
3+68	587.0	30.0	35.5	557.0	551.5
3+70	587.0	29.5	33.0	557.5	554.0
3+80	587.0	31.5	34.5	555.5	552.5

TABLE 30

SLURRY WALL KEY DATA
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
3+90	587.0	31.5	34.0	555.5	553.0
3+91	587.0	30.5	34.0	556.5	553.0
4+00	587.0	30.5	35.0	556.5	552.0
4+10	587.0	30.5	35.5	556.5	551.5
4+20	587.0	30.5	35.5	556.5	551.5
4+28	587.0	30.5	35.0	556.5	552.0
4+35	587.0	30.5	34.5	556.5	552.5
4+50	587.0	30.0	35.5	557.0	551.5
4+60	587.0	30.0	35.5	557.0	551.5
4+68	587.0	30.0	35.5	557.0	551.5
4+80	587.0	30.0	35.0	557.0	552.0
4+90	587.0	30.0	35.0	557.0	552.0
5+00	587.0	30.0	34.5	557.0	552.5
5+05	587.0	31.0	34.0	556.0	553.0
5+10	587.0	31.0	34.3	556.0	552.7
5+20	587.0	30.5	34.5	556.5	552.5
5+30	587.0	31.0	34.5	556.0	552.5
5+40	587.0	31.5	35.5	555.5	551.5
5+50	587.0	31.5	35.5	555.5	551.5
5+60	587.0	32.0	35.5	555.0	551.5
5+70	587.0	30.0	35.0	557.0	552.0
5+80	587.0	30.0	34.5	557.0	552.5
5+90	587.0	31.5	35.0	555.5	552.0
6+00	587.0	30.5	34.5	556.5	552.5
6+10	587.0	31.0	35.0	556.0	552.0
6+20	587.0	31.0	35.0	556.0	552.0
6+30	587.0	30.5	36.0	556.5	551.0
6+40	587.0	31.0	36.5	556.0	550.5
6+50	587.0	31.0	36.5	556.0	550.5
6+60	587.0	31.0	35.5	556.0	551.5
6+70	587.0	31.5	36.0	555.5	551.0
6+80	587.0	31.5	35.5	555.5	551.5
6+90	587.0	31.0	35.0	556.0	552.0
7+00	587.0	31.5	35.5	555.5	551.5
7+10	587.0	31.0	36.0	556.0	551.0
7+20	587.0	31.5	36.0	555.5	551.0
7+30	587.0	31.5	35.5	555.5	551.5
7+40	587.0	30.5	35.5	556.5	551.5
7+50	587.0	31.5	37.0	555.5	550.0
7+60	587.0	31.0	35.5	556.0	551.5

TABLE 30

SLURRY WALL KEY DATA
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
7+70	587.0	31.5	35.0	555.5	552.0
7+80	587.0	30.5	34.0	556.5	553.0
7+90	587.0	30.5	36.0	556.5	551.0
8+00	587.0	31.0	35.0	556.0	552.0
8+10	587.0	31.0	35.0	556.0	552.0
8+20	587.0	31.5	37.5	555.5	549.5
8+30	587.0	31.5	36.0	555.5	551.0
8+40	587.0	32.5	35.0	554.5	552.0
8+50	587.0	31.0	35.0	556.0	552.0
8+60	587.0	32.0	35.0	555.0	552.0
8+70	587.0	31.0	36.0	556.0	551.0
8+80	587.0	31.0	34.5	556.0	552.5
8+90	587.0	31.0	34.5	556.0	552.5
9+00	587.0	31.5	34.5	555.5	552.5
9+10	587.0	31.5	35.0	555.5	552.0
9+20	587.0	31.0	34.5	556.0	552.5
9+30	587.0	31.5	35.5	555.5	551.5
9+40	587.0	31.0	34.5	556.0	552.5
9+50	587.0	31.0	35.0	556.0	552.0
9+60	587.0	31.5	35.0	555.5	552.0
9+70	587.0	31.0	35.0	556.0	552.0
9+80	587.0	31.0	34.0	556.0	553.0
9+90	587.0	30.5	35.5	556.5	551.5
10+00	587.0	31.0	34.5	556.0	552.5
10+10	587.0	31.0	35.0	556.0	552.0
10+20	587.0	31.5	35.0	555.5	552.0
10+30	587.0	31.5	35.5	555.5	551.5
10+40	587.0	31.0	35.0	556.0	552.0
10+50	587.0	32.5	35.5	554.5	551.5
10+60	587.0	31.0	35.5	556.0	551.5
10+70	587.0	32.0	36.0	555.0	551.0
10+80	587.0	32.0	36.5	555.0	550.5
10+90	587.0	32.0	36.5	555.0	550.5
10+92	587.0	32.0	36.5	555.0	550.5
11+00	587.0	32.5	36.5	554.5	550.5
11+10	587.0	31.5	36.0	555.5	551.0
11+20	587.0	32.5	37.0	554.5	550.0
11+30	587.0	32.0	36.0	555.0	551.0
11+40	587.0	32.0	36.0	555.0	551.0
11+45	587.0	30.5	35.5	556.5	551.5

TABLE 30

SLURRY WALL KEY DATA
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
11+50	587.0	31.5	35.0	555.5	552.0
11+60	587.0	30.5	35.5	556.5	551.5
11+65	587.0	30.5	35.0	556.5	552.0
11+80	587.0	30.5	34.8	556.5	552.2
11+90	587.0	30.5	36.0	556.5	551.0
11+95	587.0	30.5	34.0	556.5	553.0
12+00	587.0	30.5	36.0	556.5	551.0
12+10	587.0	32.0	35.0	555.0	552.0
12+20	587.0	31.5	36.5	555.5	550.5
12+30	587.0	31.5	36.5	555.5	550.5
12+40	587.0	31.5	35.0	555.5	552.0
12+50	587.0	31.0	36.0	556.0	551.0
12+60	587.0	31.0	36.0	556.0	551.0
12+70	587.0	31.5	36.0	555.5	551.0
12+80	587.0	31.5	35.5	555.5	551.5
12+90	587.0	31.0	36.5	556.0	550.5
13+00	587.0	31.5	36.5	555.5	550.5
13+10	587.0	30.5	35.0	556.5	552.0
13+20	587.0	31.0	35.0	556.0	552.0
13+30	587.0	31.0	35.0	556.0	552.0
13+40	587.0	31.5	35.0	555.5	552.0
13+50	587.0	32.0	35.5	555.0	551.5
13+60	587.0	32.0	35.0	555.0	552.0
13+70	587.0	30.0	35.0	557.0	552.0
13+80	587.0	30.0	34.0	557.0	553.0
13+90	587.0	30.0	34.0	557.0	553.0
14+00	587.0	31.0	35.5	556.0	551.5
14+10	587.0	30.5	35.5	556.5	551.5
14+20	587.0	29.0	34.0	558.0	553.0
14+30	587.0	29.0	33.5	558.0	553.5
14+40	587.0	29.0	36.0	558.0	551.0
14+50	587.0	30.0	35.5	557.0	551.5
14+60	587.0	29.0	36.0	558.0	551.0
14+70	587.0	31.0	35.5	556.0	551.5
14+80	587.0	29.0	33.5	558.0	553.5
14+90	587.0	30.0	34.0	557.0	553.0
15+00	587.0	29.0	35.0	558.0	552.0
15+10	587.0	31.0	35.5	556.0	551.5
15+20	587.0	30.0	36.0	557.0	551.0
15+30	587.0	30.5	34.0	556.5	553.0

TABLE 30

SLURRY WALL KEY DATA
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
15+40	587.0	30.0	35.0	557.0	552.0
15+50	587.0	30.0	35.0	557.0	552.0
15+60	587.0	30.0	34.5	557.0	552.5
15+70	587.0	30.5	34.5	556.5	552.5
15+80	587.0	31.0	34.5	556.0	552.5
15+90	587.0	31.0	34.5	556.0	552.5
16+00	587.0	30.5	34.5	556.5	552.5
16+10	587.0	30.0	34.0	557.0	553.0
16+20	587.0	31.0	35.0	556.0	552.0
16+30	587.0	30.0	35.0	557.0	552.0
16+40	587.0	30.5	34.5	556.5	552.5
16+50	587.0	30.0	34.0	557.0	553.0
16+60	587.0	30.5	34.5	556.5	552.5
16+70	587.0	30.5	34.5	556.5	552.5
16+80	587.0	30.0	35.5	557.0	551.5
16+90	587.0	30.0	34.0	557.0	553.0
17+00	587.0	30.0	34.0	557.0	553.0
17+10	587.0	30.0	33.5	557.0	553.5
17+20	587.0	30.5	34.0	556.5	553.0
17+30	587.0	30.5	34.0	556.5	553.0
17+40	587.0	30.5	34.0	556.5	553.0
17+50	587.0	30.5	34.0	556.5	553.0
17+60	587.0	30.0	34.0	557.0	553.0
17+70	587.0	30.5	35.0	556.5	552.0
17+80	587.0	30.5	34.0	556.5	553.0
17+90	587.0	30.0	33.5	557.0	553.5
18+00	587.0	31.0	34.5	556.0	552.5
18+10	587.0	31.5	35.5	555.5	551.5
18+20	587.0	32.0	35.5	555.0	551.5
18+30	587.0	31.0	34.5	556.0	552.5
18+40	587.0	30.5	34.0	556.5	553.0
18+50	587.0	31.0	36.0	556.0	551.0
18+60	587.0	31.0	36.0	556.0	551.0
18+70	587.0	29.5	33.0	557.5	554.0
18+80	587.0	30.0	34.0	557.0	553.0
18+90	587.0	31.0	34.5	556.0	552.5
19+00	587.0	30.5	34.0	556.5	553.0
19+10	587.0	30.0	34.0	557.0	553.0
19+20	587.0	31.0	35.0	556.0	552.0
19+30	587.0	31.0	34.5	556.0	552.5

TABLE 30

SLURRY WALL KEY DATA
EAST CONTAINMENT CELL
WAUKEGAN HARBOR REMEDIAL ACTION

STATION	PLATFORM ELEV. (ft)	DEPTH TO CLAY (ft)	DEPTH TO KEY (ft)	ELEV. OF CLAY (ft)	ELEV. OF KEY (ft)
19+40	587.0	30.0	34.5	557.0	552.5
19+50	587.0	31.0	34.5	556.0	552.5
19+60	587.0	30.5	34.5	556.5	552.5
19+70	587.0	30.0	35.0	557.0	552.0
19+80	587.0	30.0	35.0	557.0	552.0
19+90	587.0	29.5	33.0	557.5	554.0
20+00	587.0	28.5	33.0	558.5	554.0
20+10	587.0	30.5	34.0	556.5	553.0
20+20	587.0	31.0	34.0	556.0	553.0
20+30	587.0	30.5	35.5	556.5	551.5
20+40	587.0	30.5	34.0	556.5	553.0
20+50	587.0	28.5	33.0	558.5	554.0
20+60	587.0	28.5	32.0	558.5	555.0
20+70	587.0	30.0	34.0	557.0	553.0
20+80	587.0	30.0	33.5	557.0	553.5
20+90	587.0	30.0	34.5	557.0	552.5
21+00	587.0	30.0	33.5	557.0	553.5
21+10	587.0	29.5	34.0	557.5	553.0
21+15	587.0	30.0	34.0	557.0	553.0
21+20	587.0	30.0	36.0	557.0	551.0
21+30	587.0	31.0	35.0	556.0	552.0
21+40	587.0	31.0	34.5	556.0	552.5
21+50	587.0	31.0	34.0	556.0	553.0
21+60	587.0	31.0	34.5	556.0	552.5
21+71	587.0	30.0	33.5	557.0	553.5

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/9/93 0:00	DEPTH	5.85	4.85	5.32	4.80	5.53	4.00	4.95	4.80	9.22	9.00
	ELEV.	583.04	583.22	582.98	583.28	581.03	583.20	581.69	583.07	582.76	582.98
	DIFF.	-0.18		-0.30		-2.17		-1.38			
6/14/93 0:00	DEPTH	6.27	5.02	5.73	5.16	4.73	4.20	5.13	4.95	9.40	9.16
	ELEV.	582.62	583.05	582.57	582.92	581.83	583.00	581.51	582.92	582.58	582.82
	DIFF.	-0.43		-0.35		-1.17		-1.41			
6/22/93 0:00	DEPTH	6.53	5.00	6.03	5.17	5.02	4.32	5.15	4.83	9.34	9.27
	ELEV.	582.36	583.07	582.27	582.91	581.54	582.88	581.49	583.04	582.64	582.71
	DIFF.	-0.71		-0.64		-1.34		-1.55			
6/23/93 0:00	DEPTH	6.60	4.97	6.02	5.16	4.80	4.27	4.94	4.90	9.34	9.10
	ELEV.	582.29	583.10	582.28	582.92	581.76	582.93	581.70	582.97	582.64	582.88
	DIFF.	-0.81		-0.64		-1.17		-1.27			
6/25/93 0:00	DEPTH	6.65	4.92	6.03	5.16	4.96	4.25	5.05	4.85	9.30	9.20
	ELEV.	582.24	583.15	582.27	582.92	581.60	582.95	581.59	583.02	582.68	582.78
	DIFF.	-0.91		-0.65		-1.35		-1.43			
6/26/93 0:00	DEPTH	6.84	4.90	6.08	5.08	5.09	4.20	5.42	4.85	9.21	9.13
	ELEV.	582.05	583.17	582.22	583.00	581.47	583.00	581.22	583.02	582.77	582.85
	DIFF.	-1.12		-0.78		-1.53		-1.80			
6/28/93 0:00	DEPTH	6.61	4.95	6.00	5.17	4.95	4.28	5.03	4.90	9.32	9.25
	ELEV.	582.28	583.12	582.30	582.91	581.61	582.92	581.61	582.97	582.66	582.73
	DIFF.	-0.84		-0.61		-1.31		-1.36			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/29/93 0:00	DEPTH	6.75	5.00	6.02	5.18	4.76	4.32	4.90	4.95	9.38	9.25
	ELEV.	582.14	583.07	582.28	582.90	581.80	582.88	581.74	582.92	582.60	582.73
	DIFF.	-0.93		-0.62		-1.08		-1.18			
7/1/93 0:00	DEPTH	5.90	4.88	5.76	5.11	4.76	4.13	4.65	4.80	9.22	9.12
	ELEV.	582.99	583.19	582.54	582.97	581.80	583.07	581.99	583.07	582.76	582.86
	DIFF.	-0.20		-0.43		-1.27		-1.08			
7/2/93 0:00	DEPTH	6.05	4.82	5.88	4.93	4.80	4.09	4.80	4.73	9.18	9.03
	ELEV.	582.84	583.25	582.42	583.15	581.76	583.11	581.84	583.14	582.80	582.95
	DIFF.	-0.41		-0.73		-1.35		-1.30			
7/3/93 0:00	DEPTH	6.21	4.88	5.95	5.03	4.90	4.19	5.03	4.85	9.25	9.08
	ELEV.	582.68	583.19	582.35	583.05	581.66	583.01	581.61	583.02	582.73	582.90
	DIFF.	-0.51		-0.70		-1.35		-1.41			
7/6/93 0:00	DEPTH	6.37	4.90	5.95	4.75	4.87	4.11	5.12	4.82	9.26	9.05
	ELEV.	582.52	583.17	582.35	583.33	581.69	583.09	581.52	583.05	582.72	582.93
	DIFF.	-0.65		-0.98		-1.40		-1.53			
7/7/93 0:00	DEPTH	6.37	4.90	5.96	4.95	4.90	4.12	5.16	4.82	9.05	9.25
	ELEV.	582.52	583.17	582.34	583.13	581.66	583.08	581.48	583.05	582.93	582.73
	DIFF.	-0.65		-0.79		-1.42		-1.57			
7/9/93 0:00	DEPTH	5.40	4.63	5.51	4.72	4.65	3.90	4.36	4.57	8.85	9.00
	ELEV.	583.49	583.44	582.79	583.36	581.91	583.30	582.28	583.30	583.13	582.98
	DIFF.	0.05		-0.57		-1.39		-1.02			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/12/93 0:00	DEPTH	6.19	4.75	5.86	4.83	4.77	3.98	5.03	4.67	8.90	9.12
	ELEV.	582.70	583.32	582.44	583.25	581.79	583.22	581.61	583.20	583.08	582.86
	DIFF.	-0.62		-0.81		-1.43		-1.59			
7/13/93 0:00	DEPTH	6.31	4.78	5.92	4.85	4.72	3.97	5.03	4.70	8.93	9.13
	ELEV.	582.58	583.29	582.38	583.23	581.84	583.23	581.61	583.17	583.05	582.85
	DIFF.	-0.71		-0.85		-1.39		-1.56			
7/14/93 0:00	DEPTH	6.32	4.82	5.98	4.93	4.75	4.08	5.02	4.78	8.80	8.85
	ELEV.	582.57	583.25	582.32	583.15	581.81	583.12	581.62	583.09	583.18	583.13
	DIFF.	-0.68		-0.83		-1.31		-1.47			
7/15/93 0:00	DEPTH	6.45	4.87	6.00	4.97	4.80	4.12	5.12	4.80	8.84	8.85
	ELEV.	582.44	583.20	582.30	583.11	581.76	583.08	581.52	583.07	583.14	583.13
	DIFF.	-0.76		-0.81		-1.32		-1.55			
7/17/93 0:00	DEPTH	6.48	4.78	5.98	4.85	4.75	4.00	5.00	4.65	8.74	8.77
	ELEV.	582.41	583.29	582.32	583.23	581.81	583.20	581.64	583.22	583.24	583.21
	DIFF.	-0.88		-0.91		-1.39		-1.58			
7/20/93 0:00	DEPTH	6.27	4.81	5.89	4.91	4.83	4.04	5.11	4.73	8.80	8.81
	ELEV.	582.62	583.26	582.41	583.17	581.73	583.16	581.53	583.14	583.18	583.17
	DIFF.	-0.64		-0.76		-1.43		-1.61			
7/22/93 0:00	DEPTH	6.42	4.81	5.98	4.93	4.60	4.08	4.78	4.74	8.81	8.83
	ELEV.	582.47	583.26	582.32	583.15	581.96	583.12	581.86	583.13	583.17	583.15
	DIFF.	-0.79		-0.83		-1.16		-1.27			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/27/93 0:00	DEPTH	6.58	4.60	6.60	4.70	4.87	3.87	5.13	4.48	8.58	8.63
	ELEV.	582.31	583.47	581.70	583.38	581.69	583.33	581.51	583.39	583.40	583.35
	DIFF.	-1.16		-1.68		-1.64		-1.88			
7/30/93 0:00	DEPTH	6.74	5.14	6.64	5.10	4.95	4.26	5.02	5.00	8.98	9.10
	ELEV.	582.15	582.93	581.66	582.98	581.61	582.94	581.62	582.87	583.00	582.88
	DIFF.	-0.78		-1.32		-1.33		-1.25			
8/2/93 0:00	DEPTH	6.95	6.92	6.13	5.78	4.80	4.95	5.25	6.93	9.74	20.93
	ELEV.	581.94	581.15	582.17	582.30	581.76	582.25	581.39	580.94	582.24	571.05
	DIFF.	0.79		-0.13		-0.49		0.45			
8/3/93 0:00	DEPTH	7.00	7.06	6.15	6.07	4.89	5.26	5.13	7.05	10.00	18.98
	ELEV.	581.89	581.01	582.15	582.01	581.67	581.94	581.51	580.82	581.98	573.00
	DIFF.	0.88		0.14		-0.27		0.69			
8/4/93 0:00	DEPTH	7.05	7.15	6.18	6.38	4.85	5.53	5.05	7.13	10.31	18.22
	ELEV.	581.84	580.92	582.12	581.70	581.71	581.67	581.59	580.74	581.67	573.76
	DIFF.	0.92		0.42		0.04		0.85			
8/5/93 0:00	DEPTH	7.06	7.00	6.14	6.26	4.81	5.40	4.93	6.96	10.13	19.30
	ELEV.	581.83	581.07	582.16	581.82	581.75	581.80	581.71	580.91	581.85	572.68
	DIFF.	0.76		0.34		-0.05		0.80			
8/6/93 0:00	DEPTH	6.95	6.96	6.08	6.15	4.73	5.39	4.90	6.95	10.05	18.92
	ELEV.	581.94	581.11	582.22	581.93	581.83	581.81	581.74	580.92	581.93	573.06
	DIFF.	0.83		0.29		0.02		0.82			

TABL_ 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/9/93 0:00	DEPTH	6.83	7.40	6.00	6.40	4.46	5.53	4.65	7.38	10.30	22.07
	ELEV.	582.06	580.67	582.30	581.68	582.10	581.67	581.99	580.49	581.68	569.91
	DIFF.	1.39		0.62		0.43		1.50			
8/10/93 0:00	DEPTH	6.75	7.34	5.95	6.42	4.45	5.56	4.59	7.35	10.34	25.60
	ELEV.	582.14	580.73	582.35	581.66	582.11	581.64	582.05	580.52	581.64	566.38
	DIFF.	1.41		0.69		0.47		1.53			
8/11/93 0:00	DEPTH	6.86	7.83	5.98	6.57	4.43	5.70	4.59	7.75	10.32	20.44
	ELEV.	582.03	580.24	582.32	581.51	582.13	581.50	582.05	580.12	581.66	571.54
	DIFF.	1.79		0.81		0.63		1.93			
8/12/93 0:00	DEPTH	6.86	8.04	5.98	6.62	4.46	5.76	4.58	7.91	10.60	28.15
	ELEV.	582.03	580.03	582.32	581.46	582.10	581.44	582.06	579.96	581.38	563.83
	DIFF.	2.00		0.86		0.66		2.10			
8/13/93 0:00	DEPTH	6.86	8.25	6.00	6.88	4.48	6.04	4.59	8.12	10.90	28.13
	ELEV.	582.03	579.82	582.30	581.20	582.08	581.16	582.05	579.75	581.08	563.85
	DIFF.	2.21		1.10		0.92		2.30			
8/14/93 0:00	DEPTH	6.87	8.36	6.03	6.91	4.45	6.06	4.60	8.24	10.85	27.92
	ELEV.	582.02	579.71	582.27	581.17	582.11	581.14	582.04	579.63	581.13	564.06
	DIFF.	2.31		1.10		0.97		2.41			
8/16/93 0:00	DEPTH	6.53	8.50	5.81	7.07	4.20	6.27	4.30	8.39	20.50	27.22
	ELEV.	582.36	579.57	582.49	581.01	582.36	580.93	582.34	579.48	571.48	564.76
	DIFF.	2.79		1.48		1.43		2.86			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/17/93 0:00	DEPTH	6.50	8.78	5.87	7.62	4.42	6.83	4.54	8.60	21.10	27.25
	ELEV.	582.39	579.29	582.43	580.46	582.14	580.37	582.10	579.27	570.88	564.73
	DIFF.	3.10		1.97		1.77		2.83			
8/18/93 0:00	DEPTH	6.77	8.92	6.05	7.77	4.77	6.98	4.93	8.77	21.37	27.30
	ELEV.	582.12	579.15	582.25	580.31	581.79	580.22	581.71	579.10	570.61	564.68
	DIFF.	2.97		1.94		1.57		2.61			
8/19/93 0:00	DEPTH	6.87	9.01	6.06	7.79	4.64	6.97	4.81	8.88	19.38	29.25
	ELEV.	582.02	579.06	582.24	580.29	581.92	580.23	581.83	578.99	572.60	562.73
	DIFF.	2.96		1.95		1.69		2.84			
8/20/93 0:00	DEPTH	6.91	9.23	6.11	7.95	4.66	7.15	4.82	9.07	18.00	29.88
	ELEV.	581.98	578.84	582.19	580.13	581.90	580.05	581.82	578.80	573.98	562.10
	DIFF.	3.14		2.06		1.85		3.02			
8/21/93 0:00	DEPTH	6.77	9.27	5.88	7.94	4.19	7.17	4.36	9.14	18.10	28.55
	ELEV.	582.12	578.80	582.42	580.14	582.37	580.03	582.28	578.73	573.88	563.43
	DIFF.	3.32		2.28		2.34		3.55			
8/23/93 0:00	DEPTH	6.68	9.15	5.92	7.72	4.29	6.90	4.15	9.02	17.30	29.30
	ELEV.	582.21	578.92	582.38	580.36	582.27	580.30	582.49	578.85	574.68	562.68
	DIFF.	3.29		2.02		1.97		3.64			
8/24/93 0:00	DEPTH	6.62	9.46	5.89	7.93	4.25	7.10	4.38	9.30	14.40	30.06
	ELEV.	582.27	578.61	582.41	580.15	582.31	580.10	582.26	578.57	577.58	561.92
	DIFF.	3.66		2.26		2.21		3.69			

TABLE 51
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/26/93 0:00	DEPTH	6.75	9.45	5.97	7.92	4.43	7.04	4.45	9.40	13.73	20.75
	ELEV.	582.14	578.62	582.33	580.16	582.13	580.16	582.19	578.47	578.25	571.23
	DIFF.	3.52		2.17		1.97		3.72			
8/27/93 0:00	DEPTH	6.80	9.48	6.00	7.81	4.48	6.89	4.52	9.36	13.60	28.00
	ELEV.	582.09	578.59	582.30	580.27	582.08	580.31	582.12	578.51	578.38	563.98
	DIFF.	3.50		2.03		1.77		3.61			
8/31/93 0:00	DEPTH	5.96	10.00	5.74	8.28	4.35	7.46	4.26	9.88	17.52	30.12
	ELEV.	582.93	578.07	582.56	579.80	582.21	579.74	582.38	577.99	574.46	561.86
	DIFF.	4.86		2.76		2.47		4.39			
9/1/93 0:00	DEPTH	6.43	9.25	5.90	8.06	4.45	7.20	4.46	9.24	17.00	13.24
	ELEV.	582.46	578.82	582.40	580.02	582.11	580.00	582.18	578.63	574.98	578.74
	DIFF.	3.64		2.38		2.11		3.55			
9/3/93 0:00	DEPTH	6.46	9.23	5.90	8.08	4.45	7.22	4.46	9.22	17.23	13.28
	ELEV.	582.43	578.84	582.40	580.00	582.11	579.98	582.18	578.65	574.75	578.70
	DIFF.	3.59		2.40		2.13		3.53			
9/4/93 0:00	DEPTH	6.48	8.92	5.90	7.95	4.41	7.06	4.45	8.94	16.95	12.92
	ELEV.	582.41	579.15	582.40	580.13	582.15	580.14	582.19	578.93	575.03	579.06
	DIFF.	3.26		2.27		2.01		3.26			
9/7/93 0:00	DEPTH	6.60	8.70	5.95	8.00	4.43	7.10	4.48	8.70	16.86	12.70
	ELEV.	582.29	579.37	582.35	580.08	582.13	580.10	582.16	579.17	575.12	579.28
	DIFF.	2.92		2.27		2.03		2.99			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/9/93 0:00	DEPTH	6.62	8.16	5.89	7.56	4.42	6.68	4.48	8.16	16.50	12.15
	ELEV.	582.27	579.91	582.41	580.52	582.14	580.52	582.16	579.71	575.48	579.83
	DIFF.	2.36		1.89		1.62		2.45			
9/14/93 0:00	DEPTH	6.44	8.27	5.85	7.98	4.30	7.08	4.32	8.21	17.00	12.28
	ELEV.	582.45	579.80	582.45	580.10	582.26	580.12	582.32	579.66	574.98	579.70
	DIFF.	2.65		2.35		2.14		2.66			
9/16/93 0:00	DEPTH	6.48	8.52	5.78	8.45	4.20	7.54	4.23	8.45	29.05	12.53
	ELEV.	582.41	579.55	582.52	579.63	582.36	579.66	582.41	579.42	562.93	579.45
	DIFF.	2.86		2.89		2.70		2.99			
9/19/94 0:00	DEPTH	6.80	8.43	6.78	8.56	5.10	7.71	5.18	8.36	28.00	12.46
	ELEV.	582.09	579.64	581.52	579.52	581.46	579.49	581.46	579.51	563.98	579.52
	DIFF.	2.45		2.00		1.97		1.95			
9/20/93 0:00	DEPTH	6.56	8.21	6.37	8.42	4.34	7.60	4.38	8.17	29.00	12.21
	ELEV.	582.33	579.86	581.93	579.66	582.22	579.60	582.26	579.70	562.98	579.77
	DIFF.	2.47		2.27		2.62		2.56			
9/21/93 0:00	DEPTH	6.55	8.45	6.16	8.68	4.36	7.76	4.35	8.36	29.10	12.30
	ELEV.	582.34	579.62	582.14	579.40	582.20	579.44	582.29	579.51	562.88	579.68
	DIFF.	2.72		2.74		2.76		2.78			
9/23/93 0:00	DEPTH	6.62	8.46	6.10	8.82	4.44	7.92	4.43	8.36	29.00	12.48
	ELEV.	582.27	579.61	582.20	579.26	582.12	579.28	582.21	579.51	562.98	579.50
	DIFF.	2.66		2.94		2.84		2.70			

TABLE 51
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/24/93 0:00	DEPTH	6.64	8.45	6.12	8.86	4.46	7.96	4.47	8.37	28.50	12.48
	ELEV.	582.25	579.62	582.18	579.22	582.10	579.24	582.17	579.50	563.48	579.50
	DIFF.	2.63		2.96		2.86		2.67			
9/25/93 0:00	DEPTH	6.66	8.10	6.09	8.55	4.48	7.66	4.48	8.03	28.20	12.14
	ELEV.	582.23	579.97	582.21	579.53	582.08	579.54	582.16	579.84	563.78	579.84
	DIFF.	2.26		2.68		2.54		2.32			
9/28/93 0:00	DEPTH	6.23	8.42	5.94	8.93	5.02	8.02	5.07	8.30	28.00	12.45
	ELEV.	582.66	579.65	582.36	579.15	581.54	579.18	581.57	579.57	563.98	579.53
	DIFF.	3.01		3.21		2.36		2.00			
10/2/93 0:00	DEPTH	6.50	9.21	5.94	9.29	4.46	8.39	4.53	9.02	30.56	24.45
	ELEV.	582.39	578.86	582.36	578.79	582.10	578.81	582.11	578.85	561.42	567.53
	DIFF.	3.53		3.57		3.29		3.26			
10/4/93 0:00	DEPTH	6.56	9.50	5.96	9.32	4.46	8.42	4.50	9.30	29.30	25.20
	ELEV.	582.33	578.57	582.34	578.76	582.10	578.78	582.14	578.57	562.68	566.78
	DIFF.	3.76		3.58		3.32		3.57			
10/5/93 0:00	DEPTH	6.58	9.89	5.97	7.70	4.46	8.70	4.50	9.66	29.50	25.15
	ELEV.	582.31	578.18	582.33	580.38	582.10	578.50	582.14	578.21	562.48	566.83
	DIFF.	4.13		1.95		3.60		3.93			
10/7/93 0:00	DEPTH	6.60	9.78	5.95	9.48	4.46	8.50	4.49	9.62	30.10	28.00
	ELEV.	582.29	578.29	582.35	578.60	582.10	578.70	582.15	578.25	561.88	563.98
	DIFF.	4.00		3.75		3.40		3.90			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/8/93 0:00	DEPTH	6.63	9.90	5.95	9.48	4.46	8.50	4.52	9.74	30.50	28.50
	ELEV.	582.26	578.17	582.35	578.60	582.10	578.70	582.12	578.13	561.48	563.48
	DIFF.	4.09		3.75		3.40		3.99			
10/9/93 0:00	DEPTH	6.35	10.30	5.60	9.80	3.90	8.90	3.96	10.10	30.60	28.65
	ELEV.	582.54	577.77	582.70	578.28	582.66	578.30	582.68	577.77	561.38	563.33
	DIFF.	4.77		4.42		4.36		4.91			
10/11/93 0:00	DEPTH	6.42	10.34	5.77	9.75	4.20	8.72	4.22	10.16	30.00	28.70
	ELEV.	582.47	577.73	582.53	578.33	582.36	578.48	582.42	577.71	561.98	563.28
	DIFF.	4.74		4.20		3.88		4.71			
10/12/93 0:00	DEPTH	6.45	10.49	5.81	9.80	4.25	8.83	4.24	10.29	30.10	28.75
	ELEV.	582.44	577.58	582.49	578.28	582.31	578.37	582.40	577.58	561.88	563.23
	DIFF.	4.86		4.21		3.94		4.82			
10/14/93 0:00	DEPTH	6.48	10.72	5.84	9.98	4.25	9.00	4.24	10.55	29.98	28.80
	ELEV.	582.41	577.35	582.46	578.10	582.31	578.20	582.40	577.32	562.00	563.18
	DIFF.	5.06		4.36		4.11		5.08			
10/15/93 0:00	DEPTH	6.49	10.76	5.84	9.98	4.24	9.03	4.25	10.58	30.00	28.85
	ELEV.	582.40	577.31	582.46	578.10	582.32	578.17	582.39	577.29	561.98	563.13
	DIFF.	5.09		4.36		4.15		5.10			
10/16/93 0:00	DEPTH	6.40	10.73	5.77	9.85	4.18	8.82	4.20	10.53	30.15	29.00
	ELEV.	582.49	577.34	582.53	578.23	582.38	578.38	582.44	577.34	561.83	562.98
	DIFF.	5.15		4.30		4.00		5.10			

TABLE 51
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/18/93 0:00	DEPTH	6.26	11.18	5.84	10.26	4.48	9.28	4.43	10.96	29.30	29.30
	ELEV.	582.63	576.89	582.46	577.82	582.08	577.92	582.21	576.91	562.68	562.68
	DIFF.	5.74		4.64		4.16		5.30			
10/19/93 0:00	DEPTH	6.35	11.11	5.88	10.22	4.51	9.20	4.48	10.92	28.85	27.80
	ELEV.	582.54	576.96	582.42	577.86	582.05	578.00	582.16	576.95	563.13	564.18
	DIFF.	5.58		4.56		4.05		5.21			
10/21/93 0:00	DEPTH	6.42	11.28	5.90	10.24	4.53	9.24	4.53	11.10	28.50	29.00
	ELEV.	582.47	576.79	582.40	577.84	582.03	577.96	582.11	576.77	563.48	562.98
	DIFF.	5.68		4.56		4.07		5.34			
10/22/93 0:00	DEPTH	6.50	11.53	5.94	10.45	4.54	9.46	4.53	11.33	26.00	28.95
	ELEV.	582.39	576.54	582.36	577.63	582.02	577.74	582.11	576.54	565.98	563.03
	DIFF.	5.85		4.73		4.28		5.57			
10/23/93 0:00	DEPTH	6.50	11.30	5.91	10.20	4.50	9.18	4.53	11.11	26.50	29.00
	ELEV.	582.39	576.77	582.39	577.88	582.06	578.02	582.11	576.76	565.48	562.98
	DIFF.	5.62		4.51		4.04		5.35			
10/25/93 0:00	DEPTH	6.56	11.30	5.94	10.14	4.50	9.14	4.54	11.15	26.00	29.00
	ELEV.	582.33	576.77	582.36	577.94	582.06	578.06	582.10	576.72	565.98	562.98
	DIFF.	5.56		4.42		4.00		5.38			
10/26/93 0:00	DEPTH	6.61	11.38	5.95	10.16	4.50	9.18	4.54	11.22	26.50	29.50
	ELEV.	582.28	576.69	582.35	577.92	582.06	578.02	582.10	576.65	565.48	562.48
	DIFF.	5.59		4.43		4.04		5.45			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/28/93 0:00	DEPTH	6.63	11.15	5.91	9.84	4.48	8.82	4.53	11.02	26.00	29.40
	ELEV.	582.26	576.92	582.39	578.24	582.08	578.38	582.11	576.85	565.98	562.58
	DIFF.	5.34		4.15		3.70		5.26			
10/29/93 0:00	DEPTH	6.70	11.74	6.00	10.36	4.55	9.38	4.55	11.57	26.50	29.50
	ELEV.	582.19	576.33	582.30	577.72	582.01	577.82	582.09	576.30	565.48	562.48
	DIFF.	5.86		4.58		4.19		5.79			
10/30/93 0:00	DEPTH	6.71	11.82	6.00	10.48	4.54	9.45	4.54	11.68	25.50	29.00
	ELEV.	582.18	576.25	582.30	577.60	582.02	577.75	582.10	576.19	566.48	562.98
	DIFF.	5.93		4.70		4.27		5.91			
11/1/93 0:00	DEPTH	6.66	11.90	5.96	10.68	4.40	9.68	4.35	11.82	26.00	29.50
	ELEV.	582.23	576.17	582.34	577.40	582.16	577.52	582.29	576.05	565.98	562.48
	DIFF.	6.06		4.94		4.64		6.24			
11/2/93 0:00	DEPTH	6.63	11.89	5.94	10.52	4.38	9.50	4.37	11.78	25.83	29.30
	ELEV.	582.26	576.18	582.36	577.56	582.18	577.70	582.27	576.09	566.15	562.68
	DIFF.	6.08		4.80		4.48		6.18			
11/4/93 0:00	DEPTH	6.59	11.66	5.86	10.20	4.34	9.20	4.37	11.58	27.00	29.50
	ELEV.	582.30	576.41	582.44	577.88	582.22	578.00	582.27	576.29	564.98	562.48
	DIFF.	5.89		4.56		4.22		5.98			
11/5/93 0:00	DEPTH	6.62	11.92	5.87	10.42	4.40	9.44	4.37	11.82	27.00	29.50
	ELEV.	582.27	576.15	582.43	577.66	582.16	577.76	582.27	576.05	564.98	562.48
	DIFF.	6.12		4.77		4.40		6.22			

TABL. 1
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/6/93 0:00	DEPTH	6.49	12.29	5.73	10.80	4.80	9.79	4.07	12.20	26.50	29.52
	ELEV.	582.40	575.78	582.57	577.28	581.76	577.41	582.57	575.67	565.48	562.46
	DIFF.	6.62		5.29		4.35		6.90			
11/8/93 0:00	DEPTH	6.49	12.45	5.82	10.90	4.18	9.88	4.16	12.35	26.00	29.40
	ELEV.	582.40	575.62	582.48	577.18	582.38	577.32	582.48	575.52	565.98	562.58
	DIFF.	6.78		5.30		5.06		6.96			
11/8/93 0:00	DEPTH	6.49	12.45	5.82	10.90	4.18	9.88	4.16	12.35	26.00	29.40
	ELEV.	582.40	575.62	582.48	577.18	582.38	577.32	582.48	575.52	565.98	562.58
	DIFF.	6.78		5.30		5.06		6.96			
11/8/93 0:00	DEPTH	6.49	12.45	5.82	10.90	4.18	9.88	4.16	12.35	26.00	29.40
	ELEV.	582.40	575.62	582.48	577.18	582.38	577.32	582.48	575.52	565.98	562.58
	DIFF.	6.78		5.30		5.06		6.96			
11/8/93 0:00	DEPTH	6.49	12.45	5.82	10.90	4.18	9.88	4.16	12.35	26.00	29.40
	ELEV.	582.40	575.62	582.48	577.18	582.38	577.32	582.48	575.52	565.98	562.58
	DIFF.	6.78		5.30		5.06		6.96			
11/13/93 0:00	DEPTH	6.47	12.27	5.93	10.95	5.04	9.58	5.12	12.20	27.00	28.00
	ELEV.	582.42	575.80	582.37	577.13	581.52	577.62	581.52	575.67	564.98	563.98
	DIFF.	6.62		5.24		3.90		5.85			
11/15/93 0:00	DEPTH	6.71	12.86	6.10	11.20	5.14	10.17	5.25	12.77	26.90	27.30
	ELEV.	582.18	575.21	582.20	576.88	581.42	577.03	581.39	575.10	565.08	564.68
	DIFF.	6.97		5.32		4.39		6.29			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/16/93 0:00	DEPTH	6.80	12.84	6.12	11.20	4.98	10.19	5.06	12.78	26.00	27.50
	ELEV.	582.09	575.23	582.18	576.88	581.58	577.01	581.58	575.09	565.98	564.48
	DIFF.	6.86		5.30		4.57		6.49			
11/18/93 8:55	DEPTH	6.87	12.84	6.13	11.14	4.83	10.10	4.88	12.76	28.50	28.90
	ELEV.	582.02	575.23	582.17	576.94	581.73	577.10	581.76	575.11	563.48	563.08
	DIFF.	6.79		5.23		4.63		6.65			
11/18/93 16:18	DEPTH	6.84	12.42	6.08	10.86	4.79	9.85	4.86	12.38	28.70	16.58
	ELEV.	582.05	575.65	582.22	577.22	581.77	577.35	581.78	575.49	563.28	575.40
	DIFF.	6.40		5.00		4.42		6.29			
11/19/93 8:49	DEPTH	6.84	11.96	6.07	10.62	4.76	9.60	4.82	11.97	29.00	16.03
	ELEV.	582.05	576.11	582.23	577.46	581.80	577.60	581.82	575.90	562.98	575.95
	DIFF.	5.94		4.77		4.20		5.92			
11/20/93 9:20	DEPTH	6.91	12.20	6.14	11.04	4.79	10.00	4.81	12.18	28.90	16.22
	ELEV.	581.98	575.87	582.16	577.04	581.77	577.20	581.83	575.69	563.08	575.76
	DIFF.	6.11		5.12		4.57		6.14			
11/20/93 14:30	DEPTH	6.87	12.08	6.13	10.97	4.79	9.96	4.80	12.06	28.94	16.10
	ELEV.	582.02	575.99	582.17	577.11	581.77	577.24	581.84	575.81	563.04	575.88
	DIFF.	6.03		5.06		4.53		6.03			
11/22/93 8:30	DEPTH	6.94	12.09	6.17	11.18	4.80	10.18	4.82	12.05	28.50	16.07
	ELEV.	581.95	575.98	582.13	576.90	581.76	577.02	581.82	575.82	563.48	575.91
	DIFF.	5.97		5.23		4.74		6.00			

TABLE 1
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/23/93 8:35	DEPTH	6.91	11.76	6.15	10.98	4.75	9.93	4.77	11.72	24.50	15.74
	ELEV.	581.98	576.31	582.15	577.10	581.81	577.27	581.87	576.15	567.48	576.24
	DIFF.	5.67		5.05		4.54		5.72			
11/23/93 15:15	DEPTH	6.90	11.66	6.12	10.90	4.72	9.87	4.75	11.62	24.00	15.63
	ELEV.	581.99	576.41	582.18	577.18	581.84	577.33	581.89	576.25	567.98	576.35
	DIFF.	5.58		5.00		4.51		5.64			
11/24/93 7:15	DEPTH	6.92	11.78	6.15	11.07	4.68	10.03	4.69	11.74	24.30	15.75
	ELEV.	581.97	576.29	582.15	577.01	581.88	577.17	581.95	576.13	567.68	576.23
	DIFF.	5.68		5.14		4.71		5.82			
11/24/93 13:00	DEPTH	6.90	11.79	6.13	11.10	4.62	10.07	4.64	11.75	24.35	15.76
	ELEV.	581.99	576.28	582.17	576.98	581.94	577.13	582.00	576.12	567.63	576.22
	DIFF.	5.71		5.19		4.81		5.88			
11/27/93 11:00	DEPTH	6.28	11.44	5.62	11.00	4.04	9.94	4.00	11.38	28.40	15.46
	ELEV.	582.61	576.63	582.68	577.08	582.52	577.26	582.64	576.49	563.58	576.52
	DIFF.	5.98		5.60		5.26		6.15			
11/27/93 16:40	DEPTH	6.28	11.42	5.64	10.98	4.04	9.92	4.02	11.38	28.44	15.40
	ELEV.	582.61	576.65	582.66	577.10	582.52	577.28	582.62	576.49	563.54	576.58
	DIFF.	5.96		5.56		5.24		6.13			
11/28/93 15:15	DEPTH	6.29	11.39	5.64	11.00	4.05	9.96	4.03	11.32	26.35	15.38
	ELEV.	582.60	576.68	582.66	577.08	582.51	577.24	582.61	576.55	565.63	576.60
	DIFF.	5.92		5.58		5.27		6.06			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/29/93 9:30	DEPTH	6.29	11.68	5.70	11.36	4.09	10.30	4.04	11.61	26.30	15.68
	ELEV.	582.60	576.39	582.60	576.72	582.47	576.90	582.60	576.26	565.68	576.30
	DIFF.	6.21		5.88		5.57		6.34			
11/29/93 16:15	DEPTH	6.28	11.76	5.70	11.46	4.08	10.43	4.05	11.70	26.00	15.77
	ELEV.	582.61	576.31	582.60	576.62	582.48	576.77	582.59	576.17	565.98	576.21
	DIFF.	6.30		5.98		5.71		6.42			
11/30/93 8:40	DEPTH	6.29	11.85	5.71	11.61	4.12	10.56	4.07	11.78	25.70	15.86
	ELEV.	582.60	576.22	582.59	576.47	582.44	576.64	582.57	576.09	566.28	576.12
	DIFF.	6.38		6.12		5.80		6.48			
11/30/93 16:03	DEPTH	6.28	11.75	5.69	11.54	4.10	10.48	4.06	11.68	25.76	15.76
	ELEV.	582.61	576.32	582.61	576.54	582.46	576.72	582.58	576.19	566.22	576.22
	DIFF.	6.29		6.07		5.74		6.39			
12/2/93 8:30	DEPTH	5.86	11.24	5.31	11.04	3.78	10.00	3.77	11.06	29.73	15.23
	ELEV.	583.03	576.83	582.99	577.04	582.78	577.20	582.87	576.81	562.25	576.75
	DIFF.	6.20		5.95		5.58		6.06			
12/2/93 16:00	DEPTH	5.94	11.30	5.32	11.16	3.77	10.10	3.78	11.24	28.60	15.30
	ELEV.	582.95	576.77	582.98	576.92	582.79	577.10	582.86	576.63	563.38	576.68
	DIFF.	6.18		6.06		5.69		6.23			
12/3/93 8:35	DEPTH	6.01	11.41	5.36	11.22	3.81	10.16	3.80	11.24	28.30	15.31
	ELEV.	582.88	576.66	582.94	576.86	582.75	577.04	582.84	576.63	563.68	576.67
	DIFF.	6.22		6.08		5.71		6.21			

TABLE
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/3/93 16:00	DEPTH	6.00	11.32	5.36	11.22	3.81	10.16	3.80	11.24	28.30	15.31
	ELEV.	582.89	576.75	582.94	576.86	582.75	577.04	582.84	576.63	563.68	576.67
	DIFF.	6.14		6.08		5.71		6.21			
12/4/93 9:45	DEPTH	6.02	11.10	5.36	11.02	3.82	10.00	3.81	11.30	29.50	15.10
	ELEV.	582.87	576.97	582.94	577.06	582.74	577.20	582.83	576.57	562.48	576.88
	DIFF.	5.90		5.88		5.54		6.26			
12/6/93 8:30	DEPTH	6.06	11.16	5.43	11.15	3.87	10.10	3.84	11.08	22.80	15.16
	ELEV.	582.83	576.91	582.87	576.93	582.69	577.10	582.80	576.79	569.18	576.82
	DIFF.	5.92		5.94		5.59		6.01			
12/6/93 15:45	DEPTH	6.10	11.40	5.48	11.42	3.91	10.36	3.86	11.32	22.70	15.42
	ELEV.	582.79	576.67	582.82	576.66	582.65	576.84	582.78	576.55	569.28	576.56
	DIFF.	6.12		6.16		5.81		6.23			
12/7/93 8:30	DEPTH	6.13	11.50	5.51	11.55	3.93	10.48	3.89	11.42	23.30	15.51
	ELEV.	582.76	576.57	582.79	576.53	582.63	576.72	582.75	576.45	568.68	576.47
	DIFF.	6.19		6.26		5.91		6.30			
12/7/93 15:25	DEPTH	6.09	11.30	5.46	11.34	3.90	10.30	3.83	11.22	23.00	15.31
	ELEV.	582.80	576.77	582.84	576.74	582.66	576.90	582.81	576.65	568.98	576.67
	DIFF.	6.03		6.10		5.76		6.16			
12/9/93 8:30	DEPTH	6.14	11.12	5.50	11.20	3.95	10.14	3.92	11.04	23.00	15.12
	ELEV.	582.75	576.95	582.80	576.88	582.61	577.06	582.72	576.83	568.98	576.86
	DIFF.	5.80		5.92		5.55		5.89			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/9/93 16:10	DEPTH	6.13	10.98	5.49	11.10	3.95	10.06	3.93	10.92	22.92	15.00
	ELEV.	582.76	577.09	582.81	576.98	582.61	577.14	582.71	576.95	569.06	576.98
	DIFF.	5.67		5.83		5.47		5.76			
12/10/93 8:35	DEPTH	6.18	11.07	5.54	11.19	3.98	10.10	3.95	10.99	23.00	15.08
	ELEV.	582.71	577.00	582.76	576.89	582.58	577.10	582.69	576.88	568.98	576.90
	DIFF.	5.71		5.87		5.48		5.81			
12/10/93 15:45	DEPTH	6.21	11.32	5.58	11.43	4.00	10.40	3.96	11.22	28.20	15.34
	ELEV.	582.68	576.75	582.72	576.65	582.56	576.80	582.68	576.65	563.78	576.64
	DIFF.	5.93		6.07		5.76		6.03			
12/11/93 9:30	DEPTH	6.25	11.64	5.61	11.81	4.00	10.73	3.96	11.53	29.30	15.64
	ELEV.	582.64	576.43	582.69	576.27	582.56	576.47	582.68	576.34	562.68	576.34
	DIFF.	6.21		6.42		6.09		6.34			
12/11/93 14:30	DEPTH	6.23	11.53	5.60	12.20	3.98	10.66	3.96	11.44	29.35	15.55
	ELEV.	582.66	576.54	582.70	575.88	582.58	576.54	582.68	576.43	562.63	576.43
	DIFF.	6.12		6.82		6.04		6.25			
12/13/93 8:30	DEPTH	6.23	11.18	5.60	11.40	4.02	10.30	4.00	11.08	29.68	15.18
	ELEV.	582.66	576.89	582.70	576.68	582.54	576.90	582.64	576.79	562.30	576.80
	DIFF.	5.77		6.02		5.64		5.85			
12/13/93 15:45	DEPTH	6.22	11.15	5.58	11.38	4.02	10.33	4.00	11.06	29.60	15.16
	ELEV.	582.67	576.92	582.72	576.70	582.54	576.87	582.64	576.81	562.38	576.82
	DIFF.	5.75		6.02		5.67		5.83			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/14/93 8:30	DEPTH	6.23	11.14	5.58	11.40	4.02	10.32	4.00	11.06	29.00	15.16
	ELEV.	582.66	576.93	582.72	576.68	582.54	576.88	582.64	576.81	562.98	576.82
	DIFF.	5.73		6.04		5.66		5.83			
12/14/93 15:55	DEPTH	6.23	11.13	5.59	11.56	4.02	10.78	4.50	11.04	29.30	15.14
	ELEV.	582.66	576.94	582.71	576.52	582.54	576.42	582.14	576.83	562.68	576.84
	DIFF.	5.72		6.19		6.12		5.31			
12/16/93 8:20	DEPTH	6.83	11.47	5.68	11.80	4.08	11.18	4.05	11.37	28.00	15.50
	ELEV.	582.06	576.60	582.62	576.28	582.48	576.02	582.59	576.50	563.98	576.48
	DIFF.	5.46		6.34		6.46		6.09			
12/16/93 15:50	DEPTH	6.29	11.49	5.66	11.78	4.10	10.70	4.06	11.32	28.50	15.44
	ELEV.	582.60	576.58	582.64	576.30	582.46	576.50	582.58	576.55	563.48	576.54
	DIFF.	6.02		6.34		5.96		6.03			
12/17/93 8:30	DEPTH	6.33	11.36	5.70	11.39	4.11	10.64	4.10	11.27	33.50	15.30
	ELEV.	582.56	576.71	582.60	576.69	582.45	576.56	582.54	576.60	558.48	576.68
	DIFF.	5.85		5.91		5.89		5.94			
12/17/93 15:30	DEPTH	6.20	11.25	5.60	11.60	4.10	10.52	4.07	11.16	34.00	15.26
	ELEV.	582.69	576.82	582.70	576.48	582.46	576.68	582.57	576.71	557.98	576.72
	DIFF.	5.87		6.22		5.78		5.86			
12/18/93 9:00	DEPTH	5.97	11.10	5.45	11.45	3.95	10.39	3.93	11.00	29.38	15.10
	ELEV.	582.92	576.97	582.85	576.63	582.61	576.81	582.71	576.87	562.60	576.88
	DIFF.	5.95		6.22		5.80		5.84			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/18/93 14:30	DEPTH	5.93	11.13	5.34	11.48	3.83	10.43	3.87	11.03	29.90	15.14
	ELEV.	582.96	576.94	582.96	576.60	582.73	576.77	582.77	576.84	562.08	576.84
	DIFF.	6.02		6.36		5.96		5.93			
12/20/93 8:55	DEPTH	6.11	11.10	5.48	11.47	3.92	10.39	3.94	10.98	32.50	15.10
	ELEV.	582.78	576.97	582.82	576.61	582.64	576.81	582.70	576.89	559.48	576.88
	DIFF.	5.81		6.21		5.83		5.81			
12/20/93 16:00	DEPTH	6.14	11.09	5.45	11.48	3.87	10.40	3.92	11.00	32.60	15.11
	ELEV.	582.75	576.98	582.85	576.60	582.69	576.80	582.72	576.87	559.38	576.87
	DIFF.	5.77		6.25		5.89		5.85			
12/21/93 8:25	DEPTH	6.18	11.24	5.52	11.66	3.98	10.57	3.98	11.15	32.68	15.26
	ELEV.	582.71	576.83	582.78	576.42	582.58	576.63	582.66	576.72	559.30	576.72
	DIFF.	5.88		6.36		5.95		5.94			
12/21/93 15:30	DEPTH	6.17	11.24	5.49	11.67	3.96	10.58	3.95	11.13	32.70	15.22
	ELEV.	582.72	576.83	582.81	576.41	582.60	576.62	582.69	576.74	559.28	576.76
	DIFF.	5.89		6.40		5.98		5.95			
12/22/93 8:30	DEPTH	6.22	11.27	5.55	11.71	3.92	10.64	3.98	11.18	29.65	15.28
	ELEV.	582.67	576.80	582.75	576.37	582.64	576.56	582.66	576.69	562.33	576.70
	DIFF.	5.87		6.38		6.08		5.97			
12/23/93 8:30	DEPTH	6.33	11.48	5.70	11.95	4.10	10.87	4.04	11.37	29.70	15.48
	ELEV.	582.56	576.59	582.60	576.13	582.46	576.33	582.60	576.50	562.28	576.50
	DIFF.	5.97		6.47		6.13		6.10			

TABLE 1
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/23/93 15:30	DEPTH	6.28	11.41	5.70	11.90	4.08	10.82	4.05	11.32	29.00	15.45
	ELEV.	582.61	576.66	582.60	576.18	582.48	576.38	582.59	576.55	562.98	576.53
	DIFF.	5.95		6.42		6.10		6.04			
12/24/93 14:30	DEPTH	6.33	11.16	5.65	11.64	4.15	10.54	4.08	11.05	29.50	15.18
	ELEV.	582.56	576.91	582.65	576.44	582.41	576.66	582.56	576.82	562.48	576.80
	DIFF.	5.65		6.21		5.75		5.74			
12/26/93 11:30	DEPTH	6.53	11.37	6.12	11.92	4.32	10.18	4.19	11.30	29.65	15.36
	ELEV.	582.36	576.70	582.18	576.16	582.24	577.02	582.45	576.57	562.33	576.62
	DIFF.	5.66		6.02		5.22		5.88			
12/27/93 9:00	DEPTH	6.53	11.70	5.98	12.26	4.36	11.17	4.32	11.61	30.00	15.72
	ELEV.	582.36	576.37	582.32	575.82	582.20	576.03	582.32	576.26	561.98	576.26
	DIFF.	5.99		6.50		6.17		6.06			
12/27/93 16:30	DEPTH	6.52	11.70	6.07	12.19	4.32	11.12	4.20	11.58	16.13	15.70
	ELEV.	582.37	576.37	582.23	575.89	582.24	576.08	582.44	576.29	575.85	576.28
	DIFF.	6.00		6.34		6.16		6.15			
12/28/93 8:30	DEPTH	6.65	11.62	6.11	12.06	4.48	11.00	4.36	11.50	15.95	15.62
	ELEV.	582.24	576.45	582.19	576.02	582.08	576.20	582.28	576.37	576.03	576.36
	DIFF.	5.79		6.17		5.88		5.91			
12/28/93 15:30	DEPTH	6.60	11.41	6.08	11.87	4.47	10.78	4.35	11.31	15.73	15.45
	ELEV.	582.29	576.66	582.22	576.21	582.09	576.42	582.29	576.56	576.25	576.53
	DIFF.	5.63		6.01		5.67		5.73			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/29/93 8:30	DEPTH	6.66	10.97	6.00	11.31	4.35	10.23	4.32	10.86	15.17	14.97
	ELEV.	582.23	577.10	582.30	576.77	582.21	576.97	582.32	577.01	576.81	577.01
	DIFF.	5.13		5.53		5.24		5.31			
12/29/93 11:30	DEPTH	6.66	10.98	6.00	11.32	4.35	10.24	4.32	10.85	15.18	14.97
	ELEV.	582.23	577.09	582.30	576.76	582.21	576.96	582.32	577.02	576.80	577.01
	DIFF.	5.14		5.54		5.25		5.30			
12/30/93 8:30	DEPTH	6.63	11.34	6.12	11.68	4.54	10.60	4.44	11.22	15.56	15.37
	ELEV.	582.26	576.73	582.18	576.40	582.02	576.60	582.20	576.65	576.42	576.61
	DIFF.	5.53		5.78		5.42		5.55			
12/30/93 16:00	DEPTH	6.72	11.07	6.09	11.42	4.52	10.35	4.43	10.98	15.28	15.10
	ELEV.	582.17	577.00	582.21	576.66	582.04	576.85	582.21	576.89	576.70	576.88
	DIFF.	5.17		5.55		5.19		5.32			
12/31/93 9:00	DEPTH	6.77	11.22	6.16	11.54	4.58	10.46	4.46	11.13	15.40	15.23
	ELEV.	582.12	576.85	582.14	576.54	581.98	576.74	582.18	576.74	576.58	576.75
	DIFF.	5.27		5.60		5.24		5.44			
12/31/93 12:45	DEPTH	6.70	11.18	6.10	11.49	4.55	10.41	4.45	11.06	15.36	15.17
	ELEV.	582.19	576.89	582.20	576.59	582.01	576.79	582.19	576.81	576.62	576.81
	DIFF.	5.30		5.61		5.22		5.38			
1/2/94 11:36	DEPTH	6.79	11.35	6.08	11.62	4.55	10.57	4.51	11.23	15.57	15.35
	ELEV.	582.10	576.72	582.22	576.46	582.01	576.63	582.13	576.64	576.41	576.63
	DIFF.	5.38		5.76		5.38		5.49			

TABLE . .
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/3/94 8:40	DEPTH	6.71	11.16	6.05	11.41	4.53	10.37	4.51	11.08	15.30	15.19
	ELEV.	582.18	576.91	582.25	576.67	582.03	576.83	582.13	576.79	576.68	576.79
	DIFF.	5.27		5.58		5.20		5.34			
1/3/94 16:00	DEPTH	6.78	11.10	5.95	11.35	4.57	10.28	4.53	11.00	15.22	15.11
	ELEV.	582.11	576.97	582.35	576.73	581.99	576.92	582.11	576.87	576.76	576.87
	DIFF.	5.14		5.62		5.07		5.24			
1/4/94 8:30	DEPTH	6.76	11.20	6.09	11.44	4.60	10.38	4.55	11.11	15.31	15.21
	ELEV.	582.13	576.87	582.21	576.64	581.96	576.82	582.09	576.76	576.67	576.77
	DIFF.	5.26		5.57		5.14		5.33			
1/4/94 15:30	DEPTH	6.81	11.16	6.08	11.40	4.57	10.33	4.55	11.05	15.27	15.18
	ELEV.	582.08	576.91	582.22	576.68	581.99	576.87	582.09	576.82	576.71	576.80
	DIFF.	5.17		5.54		5.12		5.27			
1/5/94 8:40	DEPTH	6.83	11.37	6.14	11.60	4.67	10.55	4.58	11.28	15.50	15.39
	ELEV.	582.06	576.70	582.16	576.48	581.89	576.65	582.06	576.59	576.48	576.59
	DIFF.	5.36		5.68		5.24		5.47			
1/5/94 15:30	DEPTH	6.82	11.17	6.07	11.45	4.62	10.38	4.59	11.09	15.32	15.20
	ELEV.	582.07	576.90	582.23	576.63	581.94	576.82	582.05	576.78	576.66	576.78
	DIFF.	5.17		5.60		5.12		5.27			
1/5/94 8:40	DEPTH	6.83	11.37	6.14	11.60	4.67	10.55	4.58	11.28	15.50	15.39
	ELEV.	582.06	576.70	582.16	576.48	581.89	576.65	582.06	576.59	576.48	576.59
	DIFF.	5.36		5.68		5.24		5.47			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/5/94 15:30	DEPTH	6.82	11.17	6.07	11.45	4.62	10.38	4.59	11.09	15.32	15.20
	ELEV.	582.07	576.90	582.23	576.63	581.94	576.82	582.05	576.78	576.66	576.78
	DIFF.	5.17		5.60		5.12		5.27			
1/7/94 8:45	DEPTH	6.87	11.25	6.18	11.48	4.68	10.43	4.58	11.15	15.35	15.27
	ELEV.	582.02	576.82	582.12	576.60	581.88	576.77	582.06	576.72	576.63	576.71
	DIFF.	5.20		5.52		5.11		5.34			
1/7/94 16:00	DEPTH	6.88	11.30	6.18	11.50	4.68	10.45	4.63	11.20	15.40	15.30
	ELEV.	582.01	576.77	582.12	576.58	581.88	576.75	582.01	576.67	576.58	576.68
	DIFF.	5.24		5.54		5.13		5.34			
1/8/94 9:00	DEPTH	6.93	11.35	6.23	11.58	4.72	10.53	4.67	11.26	15.46	15.38
	ELEV.	581.96	576.72	582.07	576.50	581.84	576.67	581.97	576.61	576.52	576.60
	DIFF.	5.24		5.57		5.17		5.36			
1/8/94 15:30	DEPTH	6.95	11.40	6.25	11.61	4.77	10.57	4.68	11.30	15.50	15.40
	ELEV.	581.94	576.67	582.05	576.47	581.79	576.63	581.96	576.57	576.48	576.58
	DIFF.	5.27		5.58		5.16		5.39			
1/10/94 9:00	DEPTH	6.98	11.25	6.27	11.47	4.80	10.40	4.76	11.16	15.33	15.27
	ELEV.	581.91	576.82	582.03	576.61	581.76	576.80	581.88	576.71	576.65	576.71
	DIFF.	5.09		5.42		4.96		5.17			
1/10/94 16:00	DEPTH	6.97	11.06	6.24	11.25	4.79	10.20	4.74	10.95	15.11	15.06
	ELEV.	581.92	577.01	582.06	576.83	581.77	577.00	581.90	576.92	576.87	576.92
	DIFF.	4.91		5.23		4.77		4.98			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/11/94 16:00	DEPTH	6.96	11.30	6.21	11.48	4.83	10.43	4.76	11.18	15.33	15.29
	ELEV.	581.93	576.77	582.09	576.60	581.73	576.77	581.88	576.69	576.65	576.69
	DIFF.	5.16		5.49		4.96		5.19			
1/13/94 9:30	DEPTH	7.00	11.02	6.25	11.17	4.84	10.13	4.80	10.93	15.07	15.00
	ELEV.	581.89	577.05	582.05	576.91	581.72	577.07	581.84	576.94	576.91	576.98
	DIFF.	4.84		5.14		4.65		4.90			
1/13/94 15:30	DEPTH	7.02	11.00	6.24	11.15	4.84	10.11	4.77	10.89	15.00	14.98
	ELEV.	581.87	577.07	582.06	576.93	581.72	577.09	581.87	576.98	576.98	577.00
	DIFF.	4.80		5.13		4.63		4.89			
1/14/94 8:45	DEPTH	7.07	11.18	6.32	11.34	4.89	10.33	4.84	11.09	15.22	15.17
	ELEV.	581.82	576.89	581.98	576.74	581.67	576.87	581.80	576.78	576.76	576.81
	DIFF.	4.93		5.24		4.80		5.02			
1/14/94 15:30	DEPTH	7.07	11.17	6.30	11.28	4.89	10.24	4.82	11.08	15.23	15.16
	ELEV.	581.82	576.90	582.00	576.80	581.67	576.96	581.82	576.79	576.75	576.82
	DIFF.	4.92		5.20		4.71		5.03			
1/16/94 11:30	DEPTH	7.15	11.13	6.34	11.32	4.95	10.28	4.95	11.03	15.18	15.12
	ELEV.	581.74	576.94	581.96	576.76	581.61	576.92	581.69	576.84	576.80	576.86
	DIFF.	4.80		5.20		4.69		4.85			
1/17/94 8:30	DEPTH	7.18	10.95	6.40	11.11	5.02	10.08	4.96	10.95	15.00	14.96
	ELEV.	581.71	577.12	581.90	576.97	581.54	577.12	581.68	576.92	576.98	577.02
	DIFF.	4.59		4.93		4.42		4.76			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-5 (ft)	P-5 (ft)	W-6 (ft)	P-6 (ft)	W-7 (ft)	P-7 (ft)	W-8 (ft)	P-8 (ft)	R-3 (ft)	R-4 (ft)
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
1/17/94 15:35	DEPTH	7.25	11.09	6.58	11.22	5.12	10.20	4.98	11.00	15.10	15.10
	ELEV.	581.64	576.98	581.72	576.86	581.44	577.00	581.66	576.87	576.88	576.88
	DIFF.	4.66		4.86		4.44		4.79			
1/18/94 14:00	DEPTH	7.28	11.32	6.46	11.51	5.28	10.48	5.01	11.27	15.42	15.37
	ELEV.	581.61	576.75	581.84	576.57	581.28	576.72	581.63	576.60	576.56	576.61
	DIFF.	4.86		5.27		4.56		5.03			
1/19/94 16:15	DEPTH	7.29	11.25	6.43	11.42	5.10	10.36	5.03	11.17	15.29	15.25
	ELEV.	581.60	576.82	581.87	576.66	581.46	576.84	581.61	576.70	576.69	576.73
	DIFF.	4.78		5.21		4.62		4.91			
1/20/94 9:00	DEPTH	7.31	11.42	6.51	11.59	5.15	10.56	5.06	11.32	15.45	15.42
	ELEV.	581.58	576.65	581.79	576.49	581.41	576.64	581.58	576.55	576.53	576.56
	DIFF.	4.93		5.30		4.77		5.03			
1/20/94 15:45	DEPTH	7.33	11.38	6.41	11.55	5.15	10.51	5.07	11.30	15.44	15.37
	ELEV.	581.56	576.69	581.89	576.53	581.41	576.69	581.57	576.57	576.54	576.61
	DIFF.	4.87		5.36		4.72		5.00			
1/22/94 9:30	DEPTH	7.32	11.05	6.48	11.20	5.17	10.17	5.11	10.98	15.07	15.07
	ELEV.	581.57	577.02	581.82	576.88	581.39	577.03	581.53	576.89	576.91	576.91
	DIFF.	4.55		4.94		4.36		4.64			
1/22/94 15:45	DEPTH	7.32	10.94	6.44	11.09	5.11	10.06	5.08	10.85	14.94	14.96
	ELEV.	581.57	577.13	581.86	576.99	581.45	577.14	581.56	577.02	577.04	577.02
	DIFF.	4.44		4.87		4.31		4.54			

TABLE 3
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/24/94 8:20	DEPTH	7.26	11.09	6.42	11.23	5.12	10.20	5.03	11.01	15.11	15.10
	ELEV.	581.63	576.98	581.88	576.85	581.44	577.00	581.61	576.86	576.87	576.88
	DIFF.	4.65		5.03		4.44		4.75			
1/25/94 8:40	DEPTH	7.30	11.13	6.34	11.26	5.09	10.22	5.06	11.03	15.12	15.11
	ELEV.	581.59	576.94	581.96	576.82	581.47	576.98	581.58	576.84	576.86	576.87
	DIFF.	4.65		5.14		4.49		4.74			
1/25/94 16:10	DEPTH	7.22	11.13	6.44	11.24	5.09	10.22	5.06	11.02	15.13	15.11
	ELEV.	581.67	576.94	581.86	576.84	581.47	576.98	581.58	576.85	576.85	576.87
	DIFF.	4.73		5.02		4.49		4.73			
1/26/94 9:00	DEPTH	7.19	11.37	6.50	11.51	5.13	10.47	5.05	11.26	15.40	15.32
	ELEV.	581.70	576.70	581.80	576.57	581.43	576.73	581.59	576.61	576.58	576.66
	DIFF.	5.00		5.23		4.70		4.98			
1/26/94 16:00	DEPTH	7.27	11.23	6.43	11.36	5.12	10.33	5.05	11.13	15.24	15.22
	ELEV.	581.62	576.84	581.87	576.72	581.44	576.87	581.59	576.74	576.74	576.76
	DIFF.	4.78		5.15		4.57		4.85			
1/28/94 8:45	DEPTH	6.84	10.68	6.01	10.76	4.30	9.72	4.18	10.57	14.64	14.66
	ELEV.	582.05	577.39	582.29	577.32	582.26	577.48	582.46	577.30	577.34	577.32
	DIFF.	4.66		4.97		4.78		5.16			
1/28/94 4:00	DEPTH	6.69	10.87	5.94	10.95	4.32	9.89	4.21	10.78	14.85	14.85
	ELEV.	582.20	577.20	582.36	577.13	582.24	577.31	582.43	577.09	577.13	577.13
	DIFF.	5.00		5.23		4.93		5.34			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1/30/94 15:00	DEPTH	6.67	11.36	6.10	11.48	4.46	10.45	frozen	11.28	15.39	15.37
	ELEV.	582.22	576.71	582.20	576.60	582.10	576.75	--	576.59	576.59	576.61
	DIFF.	5.51		5.60		5.35		--			
1/31/94 8:48	DEPTH	6.60	11.23	6.08	11.38	4.50	10.34	frozen	11.46	15.28	15.24
	ELEV.	582.29	576.84	582.22	576.70	582.06	576.86	--	576.41	576.70	576.74
	DIFF.	5.45		5.52		5.20		--			
1/31/94 16:00	DEPTH	6.68	11.17	6.11	11.30	4.51	10.25	frozen	11.07	15.18	15.17
	ELEV.	582.21	576.90	582.19	576.78	582.05	576.95	--	576.80	576.80	576.81
	DIFF.	5.31		5.41		5.10		--			
2/1/94 8:40	DEPTH	6.69	11.19	6.15	11.25	4.58	10.23	frozen	11.06	15.16	15.15
	ELEV.	582.20	576.88	582.15	576.83	581.98	576.97	--	576.81	576.82	576.83
	DIFF.	5.32		5.32		5.01		--			
2/1/94 15:38	DEPTH	6.79	11.10	6.12	11.21	4.62	10.17	frozen	11.00	15.09	15.10
	ELEV.	582.10	576.97	582.18	576.87	581.94	577.03	--	576.87	576.89	576.88
	DIFF.	5.13		5.31		4.91		--			
2/3/94 8:45	DEPTH	6.87	11.10	6.20	11.20	frozen	10.16	frozen	11.03	15.10	15.11
	ELEV.	582.02	576.97	582.10	576.88	--	577.04	--	576.84	576.88	576.87
	DIFF.	5.05		5.22		--		--			
2/3/94 16:00	DEPTH	6.92	11.12	6.20	11.23	frozen	10.18	frozen	11.05	15.10	15.11
	ELEV.	581.97	576.95	582.10	576.85	--	577.02	--	576.82	576.88	576.87
	DIFF.	5.02		5.25		--		--			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/4/94 8:50	DEPTH	6.93	11.12	6.21	11.25	frozen	10.20	frozen	11.06	15.11	15.13
	ELEV.	581.96	576.95	582.09	576.83	--	577.00	--	576.81	576.87	576.85
	DIFF.	5.01		5.26		--		--			
2/4/94 15:45	DEPTH	6.93	11.08	6.22	11.17	frozen	10.13	frozen	11.04	15.05	15.05
	ELEV.	581.96	576.99	582.08	576.91	--	577.07	--	576.83	576.93	576.93
	DIFF.	4.97		5.17		--		--			
2/5/94 9:30	DEPTH	7.00	10.90	6.22	11.00	frozen	9.95	frozen	10.82	14.87	14.90
	ELEV.	581.89	577.17	582.08	577.08	--	577.25	--	577.05	577.11	577.08
	DIFF.	4.72		5.00		--		--			
2/5/94 16:00	DEPTH	7.03	10.92	6.24	11.01	frozen	9.98	frozen	10.83	14.92	14.91
	ELEV.	581.86	577.15	582.06	577.07	--	577.22	--	577.04	577.06	577.07
	DIFF.	4.71		4.99		--		--			
2/7/94 8:00	DEPTH	7.14	11.47	6.40	11.58	frozen	10.54	frozen	11.39	15.46	15.46
	ELEV.	581.75	576.60	581.90	576.50	--	576.66	--	576.48	576.52	576.52
	DIFF.	5.15		5.40		--		--			
2/7/94 15:55	DEPTH	7.15	11.40	6.37	11.49	frozen	10.45	frozen	11.28	15.38	15.37
	ELEV.	581.74	576.67	581.93	576.59	--	576.75	--	576.59	576.60	576.61
	DIFF.	5.07		5.34		--		--			
2/8/94 9:00	DEPTH	7.15	10.96	6.30	11.09	frozen	10.03	frozen	10.90	14.94	14.97
	ELEV.	581.74	577.11	582.00	576.99	--	577.17	--	576.97	577.04	577.01
	DIFF.	4.63		5.01		--		--			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/8/94 16:30	DEPTH	7.15	10.88	6.30	10.94	frozen	9.93	frozen	10.81	14.83	14.84
	ELEV.	581.74	577.19	582.00	577.14	--	577.27	--	577.06	577.15	577.14
	DIFF.	4.55		4.86		--		--			
2/10/94 9:00	DEPTH	7.24	11.34	6.41	11.48	frozen	10.43	frozen	11.25	15.35	15.35
	ELEV.	581.65	576.73	581.89	576.60	--	576.77	--	576.62	576.63	576.63
	DIFF.	4.92		5.29		--		--			
2/10/94 16:00	DEPTH	7.22	11.20	6.40	11.31	frozen	10.27	frozen	11.10	15.20	15.18
	ELEV.	581.67	576.87	581.90	576.77	--	576.93	--	576.77	576.78	576.80
	DIFF.	4.80		5.13		--		--			
2/11/94 9:00	DEPTH	7.25	11.13	6.40	11.24	frozen	10.20	frozen	11.05	15.11	15.12
	ELEV.	581.64	576.94	581.90	576.84	--	577.00	--	576.82	576.87	576.86
	DIFF.	4.70		5.06		--		--			
2/11/94 16:00	DEPTH	7.26	11.08	6.40	11.20	frozen	10.16	frozen	11.00	15.06	15.08
	ELEV.	581.63	576.99	581.90	576.88	--	577.04	--	576.87	576.92	576.90
	DIFF.	4.64		5.02		--		--			
2/12/94 10:00	DEPTH	7.23	10.87	6.37	10.97	frozen	9.92	frozen	10.72	14.84	14.86
	ELEV.	581.66	577.20	581.93	577.11	--	577.28	--	577.15	577.14	577.12
	DIFF.	4.46		4.82		--		--			
2/12/94 16:00	DEPTH	7.24	10.77	6.37	10.86	frozen	9.85	frozen	10.61	14.72	14.77
	ELEV.	581.65	577.30	581.93	577.22	--	577.35	--	577.26	577.26	577.21
	DIFF.	4.35		4.71		--		--			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/14/94 8:40	DEPTH	7.28	10.90	6.40	11.01	frozen	9.97	frozen	10.72	14.90	14.92
	ELEV.	581.61	577.17	581.90	577.07	--	577.23	--	577.15	577.08	577.06
	DIFF.	4.44		4.83		--		--			
2/14/94 16:00	DEPTH	7.26	10.73	6.38	10.89	frozen	9.84	frozen	10.69	14.74	14.79
	ELEV.	581.63	577.34	581.92	577.19	--	577.36	--	577.18	577.24	577.19
	DIFF.	4.29		4.73		--		--			
2/15/94 8:40	DEPTH	7.27	11.08	6.46	11.17	frozen	10.13	frozen	11.00	15.06	15.08
	ELEV.	581.62	576.99	581.84	576.91	--	577.07	--	576.87	576.92	576.90
	DIFF.	4.63		4.93		--		--			
2/15/94 16:40	DEPTH	7.28	11.20	6.47	11.32	frozen	10.28	frozen	11.14	15.18	15.21
	ELEV.	581.61	576.87	581.83	576.76	--	576.92	--	576.73	576.80	576.77
	DIFF.	4.74		5.07		--		--			
2/17/94 8:45	DEPTH	7.20	11.02	6.39	11.12	frozen	10.09	frozen	10.96	15.02	15.09
	ELEV.	581.69	577.05	581.91	576.96	--	577.11	--	576.91	576.96	576.89
	DIFF.	4.64		4.95		--		--			
2/17/94 15:45	DEPTH	7.12	10.95	6.27	11.07	frozen	10.04	frozen	10.89	14.95	14.98
	ELEV.	581.77	577.12	582.03	577.01	--	577.16	--	576.98	577.03	577.00
	DIFF.	4.65		5.02		--		--			
2/18/94 8:30	DEPTH	6.95	11.00	6.08	11.09	frozen	10.05	frozen	10.92	14.97	15.00
	ELEV.	581.94	577.07	582.22	576.99	--	577.15	--	576.95	577.01	576.98
	DIFF.	4.87		5.23		--		--			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/18/94 16:00	DEPTH	6.67	10.87	5.80	10.96	frozen	9.90	frozen	10.78	14.83	14.86
	ELEV.	582.22	577.20	582.50	577.12	--	577.30	--	577.09	577.15	577.12
	DIFF.	5.02		5.38		--		--			
2/20/94 9:10	DEPTH	5.65	10.97	5.70	11.03	frozen	10.01	frozen	10.88	14.94	14.98
	ELEV.	583.24	577.10	582.60	577.05	--	577.19	--	576.99	577.04	577.00
	DIFF.	6.14		5.55		--		--			
2/20/94 15:30	DEPTH	5.72	11.09	5.77	11.15	frozen	10.12	frozen	11.00	15.04	15.09
	ELEV.	583.17	576.98	582.53	576.93	--	577.08	--	576.87	576.94	576.89
	DIFF.	6.19		5.60		--		--			
2/21/94 8:45	DEPTH	5.93	11.29	5.94	11.35	frozen	10.32	5.02	11.20	15.26	15.29
	ELEV.	582.96	576.78	582.36	576.73	--	576.88	581.62	576.67	576.72	576.69
	DIFF.	6.18		5.63		--		4.95			
2/21/94 15:45	DEPTH	5.95	11.27	5.94	11.38	frozen	10.33	5.06	11.20	15.28	15.28
	ELEV.	582.94	576.80	582.36	576.70	--	576.87	581.58	576.67	576.70	576.70
	DIFF.	6.14		5.66		--		4.91			
2/24/94 8:30	DEPTH	6.37	10.90	6.12	10.98	5.16	9.96	5.55	10.78	14.87	14.86
	ELEV.	582.52	577.17	582.18	577.10	581.40	577.24	581.09	577.09	577.11	577.12
	DIFF.	5.35		5.08		4.16		4.00			
2/24/94 18:00	DEPTH	6.40	11.04	6.15	11.12	5.30	10.08	5.56	10.94	15.01	15.00
	ELEV.	582.49	577.03	582.15	576.96	581.26	577.12	581.08	576.93	576.97	576.98
	DIFF.	5.46		5.19		4.14		4.15			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
2/25/94 8:55	DEPTH	6.37	10.85	6.09	10.93	5.16	9.90	5.63	10.77	14.78	14.84
	ELEV.	582.52	577.22	582.21	577.15	581.40	577.30	581.01	577.10	577.20	577.14
	DIFF.	5.30		5.06		4.10		3.91			
2/25/94 16:00	DEPTH	6.48	10.85	6.15	10.82	5.20	9.88	5.47	10.73	14.86	14.83
	ELEV.	582.41	577.22	582.15	577.26	581.36	577.32	581.17	577.14	577.12	577.15
	DIFF.	5.19		4.89		4.04		4.03			
2/26/94 9:00	DEPTH	6.58	11.49	6.28	11.55	5.26	10.55	5.61	11.42	15.42	15.50
	ELEV.	582.31	576.58	582.02	576.53	581.30	576.65	581.03	576.45	576.56	576.48
	DIFF.	5.73		5.49		4.65		4.58			
2/26/94 15:30	DEPTH	6.63	11.44	6.23	11.50	5.28	10.48	5.68	11.35	15.40	15.46
	ELEV.	582.26	576.63	582.07	576.58	581.28	576.72	580.96	576.52	576.58	576.52
	DIFF.	5.63		5.49		4.56		4.44			
2/28/94 8:40	DEPTH	6.63	11.02	6.20	11.13	5.40	10.10	5.91	10.95	15.00	15.05
	ELEV.	582.26	577.05	582.10	576.95	581.16	577.10	580.73	576.92	576.98	576.93
	DIFF.	5.21		5.15		4.06		3.81			
2/28/94 16:00	DEPTH	6.73	10.99	6.24	11.05	5.39	10.06	5.85	10.90	14.96	14.98
	ELEV.	582.16	577.08	582.06	577.03	581.17	577.14	580.79	576.97	577.02	577.00
	DIFF.	5.08		5.03		4.03		3.82			
3/1/94 8:45	DEPTH	6.78	11.00	6.26	11.10	5.43	10.09	5.89	10.96	14.99	15.02
	ELEV.	582.11	577.07	582.04	576.98	581.13	577.11	580.75	576.91	576.99	576.96
	DIFF.	5.04		5.06		4.02		3.84			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/1/94 15:30	DEPTH	6.78	10.94	6.24	11.03	5.39	10.03	5.88	10.84	14.92	14.94
	ELEV.	582.11	577.13	582.06	577.05	581.17	577.17	580.76	577.03	577.06	577.04
	DIFF.	4.98		5.01		4.00		3.73			
3/3/94 8:50	DEPTH	6.80	10.65	6.21	10.75	5.43	9.74	5.85	10.56	14.64	14.66
	ELEV.	582.09	577.42	582.09	577.33	581.13	577.46	580.79	577.31	577.34	577.32
	DIFF.	4.67		4.76		3.67		3.48			
3/3/94 16:00	DEPTH	6.78	10.60	6.18	10.69	5.39	9.67	5.90	10.50	14.55	14.58
	ELEV.	582.11	577.47	582.12	577.39	581.17	577.53	580.74	577.37	577.43	577.40
	DIFF.	4.64		4.73		3.64		3.37			
3/4/94 8:45	DEPTH	6.68	10.66	6.12	10.79	5.38	9.76	5.85	10.57	14.64	14.67
	ELEV.	582.21	577.41	582.18	577.29	581.18	577.44	580.79	577.30	577.34	577.31
	DIFF.	4.80		4.89		3.74		3.49			
3/7/94 9:00	DEPTH	5.85	11.09	5.76	11.19	5.18	10.17	5.63	11.03	15.09	15.10
	ELEV.	583.04	576.98	582.54	576.89	581.38	577.03	581.01	576.84	576.89	576.88
	DIFF.	6.06		5.65		4.35		4.17			
3/7/94 16:00	DEPTH	5.73	11.04	5.69	11.10	5.14	10.10	5.65	10.93	15.00	15.03
	ELEV.	583.16	577.03	582.61	576.98	581.42	577.10	580.99	576.94	576.98	576.95
	DIFF.	6.13		5.63		4.32		4.05			
3/8/94 8:40	DEPTH	5.93	11.15	5.82	11.23	5.23	10.22	5.83	11.07	15.12	15.14
	ELEV.	582.96	576.92	582.48	576.85	581.33	576.98	580.81	576.80	576.86	576.84
	DIFF.	6.04		5.63		4.35		4.01			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/8/94 16:00	DEPTH	5.92	11.16	5.83	11.22	5.25	10.23	5.81	11.07	15.14	15.16
	ELEV.	582.97	576.91	582.47	576.86	581.31	576.97	580.83	576.80	576.84	576.82
	DIFF.	6.06		5.61		4.34		4.03			
3/10/94 9:00	DEPTH	6.32	10.93	5.93	11.03	5.26	10.03	5.75	10.86	14.93	14.94
	ELEV.	582.57	577.14	582.37	577.05	581.30	577.17	580.89	577.01	577.05	577.04
	DIFF.	5.43		5.32		4.13		3.88			
3/10/94 16:10	DEPTH	6.37	11.00	5.96	11.09	5.28	10.07	5.87	10.91	14.98	14.99
	ELEV.	582.52	577.07	582.34	576.99	581.28	577.13	580.77	576.96	577.00	576.99
	DIFF.	5.45		5.35		4.15		3.81			
3/12/94 9:00	DEPTH	6.54	10.94	6.00	11.01	5.30	10.01	5.93	10.86	14.92	14.96
	ELEV.	582.35	577.13	582.30	577.07	581.26	577.19	580.71	577.01	577.06	577.02
	DIFF.	5.22		5.23		4.07		3.70			
3/12/94 16:00	DEPTH	6.51	10.85	5.94	10.92	5.22	9.92	5.90	10.72	14.83	14.84
	ELEV.	582.38	577.22	582.36	577.16	581.34	577.28	580.74	577.15	577.15	577.14
	DIFF.	5.16		5.20		4.06		3.59			
3/14/94 9:00	DEPTH	6.46	10.58	5.87	10.71	5.25	9.67	6.00	10.52	14.55	14.60
	ELEV.	582.43	577.49	582.43	577.37	581.31	577.53	580.64	577.35	577.43	577.38
	DIFF.	4.94		5.06		3.78		3.29			
3/14/94 16:00	DEPTH	6.55	10.40	5.83	10.53	5.23	9.52	5.91	10.32	14.33	14.42
	ELEV.	582.34	577.67	582.47	577.55	581.33	577.68	580.73	577.55	577.65	577.56
	DIFF.	4.67		4.92		3.65		3.18			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/15/94 9:00	DEPTH	6.64	10.74	5.91	10.88	5.27	9.86	6.00	10.67	14.75	14.75
	ELEV.	582.25	577.33	582.39	577.20	581.29	577.34	580.64	577.20	577.23	577.23
	DIFF.	4.92		5.19		3.95		3.44			
3/15/94 16:00	DEPTH	6.67	10.94	5.94	11.03	5.31	10.03	5.91	10.83	14.94	14.94
	ELEV.	582.22	577.13	582.36	577.05	581.25	577.17	580.73	577.04	577.04	577.04
	DIFF.	5.09		5.31		4.08		3.69			
3/17/94 9:00	DEPTH	6.78	10.88	6.00	10.98	5.32	9.97	5.88	10.81	14.86	14.88
	ELEV.	582.11	577.19	582.30	577.10	581.24	577.23	580.76	577.06	577.12	577.10
	DIFF.	4.92		5.20		4.01		3.70			
3/17/94 16:00	DEPTH	6.74	10.61	5.98	10.72	5.24	9.72	5.82	10.56	14.60	14.58
	ELEV.	582.15	577.46	582.32	577.36	581.32	577.48	580.82	577.31	577.38	577.40
	DIFF.	4.69		4.96		3.84		3.51			
3/18/94 9:00	DEPTH	6.80	10.60	6.00	10.74	5.34	9.70	5.80	10.54	14.58	14.60
	ELEV.	582.09	577.47	582.30	577.34	581.22	577.50	580.84	577.33	577.40	577.38
	DIFF.	4.62		4.96		3.72		3.51			
3/20/94 9:00	DEPTH	6.88	10.91	6.05	11.00	5.32	10.00	5.82	10.85	14.90	14.90
	ELEV.	582.01	577.16	582.25	577.08	581.24	577.20	580.82	577.02	577.08	577.08
	DIFF.	4.85		5.17		4.04		3.80			
3/20/94 15:00	DEPTH	6.87	10.81	6.00	10.91	5.29	9.00	5.80	10.74	14.85	14.87
	ELEV.	582.02	577.26	582.30	577.17	581.27	578.20	580.84	577.13	577.13	577.11
	DIFF.	4.76		5.13		3.07		3.71			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/21/94 9:00	DEPTH	6.52	10.80	5.82	10.89	5.13	9.89	5.60	10.72	14.80	14.81
	ELEV.	582.37	577.27	582.48	577.19	581.43	577.31	581.04	577.15	577.18	577.17
	DIFF.	5.10		5.29		4.12		3.89			
3/21/94 16:00	DEPTH	6.59	10.93	5.83	11.00	5.22	10.00	5.78	10.87	14.90	14.95
	ELEV.	582.30	577.14	582.47	577.08	581.34	577.20	580.86	577.00	577.08	577.03
	DIFF.	5.16		5.39		4.14		3.86			
3/22/94 9:00	DEPTH	6.70	10.93	5.83	11.00	5.22	10.00	5.78	10.87	14.90	14.95
	ELEV.	582.19	577.14	582.47	577.08	581.34	577.20	580.86	577.00	577.08	577.03
	DIFF.	5.05		5.39		4.14		3.86			
3/22/94 16:00	DEPTH	6.73	10.82	5.86	10.91	5.28	9.91	5.80	10.73	14.78	14.81
	ELEV.	582.16	577.25	582.44	577.17	581.28	577.29	580.84	577.14	577.20	577.17
	DIFF.	4.91		5.27		3.99		3.70			
3/24/94 8:30	DEPTH	6.92	11.08	6.04	11.14	5.40	10.15	5.85	11.00	15.06	15.07
	ELEV.	581.97	576.99	582.26	576.94	581.16	577.05	580.79	576.87	576.92	576.91
	DIFF.	4.98		5.32		4.11		3.92			
3/24/94 15:45	DEPTH	6.93	11.17	6.05	11.24	5.38	10.25	5.79	11.13	15.14	15.15
	ELEV.	581.96	576.90	582.25	576.84	581.18	576.95	580.85	576.74	576.84	576.83
	DIFF.	5.06		5.41		4.23		4.11			
3/25/94 8:00	DEPTH	6.97	11.26	6.10	11.35	5.41	10.35	5.80	11.18	15.25	15.28
	ELEV.	581.92	576.81	582.20	576.73	581.15	576.85	580.84	576.69	576.73	576.70
	DIFF.	5.11		5.47		4.30		4.15			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/25/94 15:30	DEPTH	6.97	11.18	6.12	11.28	5.37	10.28	5.77	11.11	15.19	15.20
	ELEV.	581.92	576.89	582.18	576.80	581.19	576.92	580.87	576.76	576.79	576.78
	DIFF.	5.03		5.38		4.27		4.11			
3/27/94 9:00	DEPTH	6.84	10.80	5.90	10.94	5.30	9.94	5.71	10.54	14.80	14.81
	ELEV.	582.05	577.27	582.40	577.14	581.26	577.26	580.93	577.33	577.18	577.17
	DIFF.	4.78		5.26		4.00		3.60			
3/27/94 15:30	DEPTH	6.87	10.76	5.93	10.87	5.32	9.86	5.73	10.67	14.73	14.74
	ELEV.	582.02	577.31	582.37	577.21	581.24	577.34	580.91	577.20	577.25	577.24
	DIFF.	4.71		5.16		3.90		3.71			
3/28/94 9:00	DEPTH	6.97	10.94	6.02	11.02	5.39	10.02	5.82	10.86	14.92	14.94
	ELEV.	581.92	577.13	582.28	577.06	581.17	577.18	580.82	577.01	577.06	577.04
	DIFF.	4.79		5.22		3.99		3.81			
3/28/94 16:00	DEPTH	7.00	10.95	6.07	11.02	5.41	10.05	5.85	10.88	14.94	14.96
	ELEV.	581.89	577.12	582.23	577.06	581.15	577.15	580.79	576.99	577.04	577.02
	DIFF.	4.77		5.17		4.00		3.80			
3/29/94 9:00	DEPTH	7.03	11.11	6.13	11.19	5.44	10.19	5.86	11.02	15.09	15.10
	ELEV.	581.86	576.96	582.17	576.89	581.12	577.01	580.78	576.85	576.89	576.88
	DIFF.	4.90		5.28		4.11		3.93			
3/29/94 15:45	DEPTH	7.04	11.13	6.12	11.23	5.43	10.23	5.86	11.07	15.13	15.15
	ELEV.	581.85	576.94	582.18	576.85	581.13	576.97	580.78	576.80	576.85	576.83
	DIFF.	4.91		5.33		4.16		3.98			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/31/94 9:00	DEPTH	7.08	10.88	6.15	10.97	5.47	9.99	5.89	10.80	14.83	14.89
	ELEV.	581.81	577.19	582.15	577.11	581.09	577.21	580.75	577.07	577.15	577.09
	DIFF.	4.62		5.04		3.88		3.68			
3/31/94 16:00	DEPTH	7.08	10.72	6.12	10.83	5.44	9.83	5.89	10.66	14.73	14.74
	ELEV.	581.81	577.35	582.18	577.25	581.12	577.37	580.75	577.21	577.25	577.24
	DIFF.	4.46		4.93		3.75		3.54			
4/1/94 9:00	DEPTH	7.12	10.77	6.17	10.86	5.45	9.89	5.90	10.71	14.75	14.75
	ELEV.	581.77	577.30	582.13	577.22	581.11	577.31	580.74	577.16	577.23	577.23
	DIFF.	4.47		4.91		3.80		3.58			
4/1/94 15:45	DEPTH	7.12	10.72	6.15	10.81	5.46	9.85	5.90	10.65	14.74	14.74
	ELEV.	581.77	577.35	582.15	577.27	581.10	577.35	580.74	577.22	577.24	577.24
	DIFF.	4.42		4.88		3.75		3.52			
4/2/94 9:00	DEPTH	7.13	10.68	6.15	10.77	5.46	9.76	5.82	10.58	14.65	14.57
	ELEV.	581.76	577.39	582.15	577.31	581.10	577.44	580.82	577.29	577.33	577.41
	DIFF.	4.37		4.84		3.66		3.53			
4/2/94 16:00	DEPTH	7.15	10.70	6.17	10.78	5.43	9.79	5.80	10.60	14.65	14.56
	ELEV.	581.74	577.37	582.13	577.30	581.13	577.41	580.84	577.27	577.33	577.42
	DIFF.	4.37		4.83		3.72		3.57			
4/4/94 9:00	DEPTH	7.18	10.77	6.21	10.89	5.46	9.89	5.83	10.70	14.78	14.78
	ELEV.	581.71	577.30	582.09	577.19	581.10	577.31	580.81	577.17	577.20	577.20
	DIFF.	4.41		4.90		3.79		3.64			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/4/94 16:00	DEPTH	7.16	10.62	6.15	10.70	5.45	9.72	5.74	10.52	14.55	14.50
	ELEV.	581.73	577.45	582.15	577.38	581.11	577.48	580.90	577.35	577.43	577.48
	DIFF.	4.28		4.77		3.63		3.55			
4/5/94 9:00	DEPTH	7.23	10.88	6.22	10.97	4.98	9.98	5.07	10.80	14.85	14.90
	ELEV.	581.66	577.19	582.08	577.11	581.58	577.22	581.57	577.07	577.13	577.08
	DIFF.	4.47		4.97		4.36		4.50			
4/5/94 15:30	DEPTH	7.17	10.92	6.20	11.01	4.79	10.00	5.00	10.78	14.93	14.93
	ELEV.	581.72	577.15	582.10	577.07	581.77	577.20	581.64	577.09	577.05	577.05
	DIFF.	4.57		5.03		4.57		4.55			
4/7/94 9:00	DEPTH	6.98	11.14	6.17	11.21	4.66	10.20	4.64	11.05	15.12	15.15
	ELEV.	581.91	576.93	582.13	576.87	581.90	577.00	582.00	576.82	576.86	576.83
	DIFF.	4.98		5.26		4.90		5.18			
4/7/94 16:00	DEPTH	6.93	11.07	6.11	11.15	4.64	10.13	4.63	10.95	15.05	15.06
	ELEV.	581.96	577.00	582.19	576.93	581.92	577.07	582.01	576.92	576.93	576.92
	DIFF.	4.96		5.26		4.85		5.09			
4/8/94 9:00	DEPTH	6.89	10.90	6.09	10.98	4.61	9.95	4.60	10.83	14.83	14.92
	ELEV.	582.00	577.17	582.21	577.10	581.95	577.25	582.04	577.04	577.15	577.06
	DIFF.	4.83		5.11		4.70		5.00			
4/8/94 16:00	DEPTH	6.85	10.66	6.03	10.75	4.57	9.70	4.57	10.60	14.60	14.64
	ELEV.	582.04	577.41	582.27	577.33	581.99	577.50	582.07	577.27	577.38	577.34
	DIFF.	4.63		4.94		4.49		4.80			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/10/94 9:30	DEPTH	6.86	11.04	6.11	11.11	4.57	10.09	4.53	10.92	15.00	15.03
	ELEV.	582.03	577.03	582.19	576.97	581.99	577.11	582.11	576.95	576.98	576.95
	DIFF.	5.00		5.22		4.88		5.16			
4/10/94 15:30	DEPTH	6.84	11.00	6.09	11.08	4.56	10.07	4.51	10.88	14.98	15.00
	ELEV.	582.05	577.07	582.21	577.00	582.00	577.13	582.13	576.99	577.00	576.98
	DIFF.	4.98		5.21		4.87		5.14			
4/11/94 9:00	DEPTH	6.85	11.05	6.10	11.13	4.58	10.10	4.53	10.48	15.03	15.06
	ELEV.	582.04	577.02	582.20	576.95	581.98	577.10	582.11	577.39	576.95	576.92
	DIFF.	5.02		5.25		4.88		4.72			
4/11/94 16:00	DEPTH	6.84	10.95	6.05	11.05	4.57	10.00	4.52	10.87	14.94	14.95
	ELEV.	582.05	577.12	582.25	577.03	581.99	577.20	582.12	577.00	577.04	577.03
	DIFF.	4.93		5.22		4.79		5.12			
4/12/94 9:00	DEPTH	6.70	10.50	5.94	10.54	4.27	9.55	4.43	10.44	14.47	14.52
	ELEV.	582.19	577.57	582.36	577.54	582.29	577.65	582.21	577.43	577.51	577.46
	DIFF.	4.62		4.82		4.64		4.78			
4/12/94 15:30	DEPTH	6.43	10.34	5.71	10.46	4.29	9.38	4.35	10.26	14.30	14.34
	ELEV.	582.46	577.73	582.59	577.62	582.27	577.82	582.29	577.61	577.68	577.64
	DIFF.	4.73		4.97		4.45		4.68			
4/14/94 9:00	DEPTH	6.67	10.72	5.93	10.83	4.83	9.81	4.80	10.64	14.70	14.75
	ELEV.	582.22	577.35	582.37	577.25	581.73	577.39	581.84	577.23	577.28	577.23
	DIFF.	4.87		5.12		4.34		4.61			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/14/94 15:45	DEPTH	6.70	10.72	5.93	10.81	4.83	9.79	4.80	10.65	14.69	14.72
	ELEV.	582.19	577.35	582.37	577.27	581.73	577.41	581.84	577.22	577.29	577.26
	DIFF.	4.84		5.10		4.32		4.62			
4/15/94 9:00	DEPTH	6.64	10.53	5.90	10.65	4.80	9.62	4.78	10.44	14.52	14.54
	ELEV.	582.25	577.54	582.40	577.43	581.76	577.58	581.86	577.43	577.46	577.44
	DIFF.	4.71		4.97		4.18		4.43			
4/15/94 16:00	DEPTH	6.68	10.63	5.91	10.73	4.75	9.70	4.79	10.51	14.63	14.65
	ELEV.	582.21	577.44	582.39	577.35	581.81	577.50	581.85	577.36	577.35	577.33
	DIFF.	4.77		5.04		4.31		4.49			
4/17/94 9:30	DEPTH	6.87	11.11	6.12	11.20	4.89	10.19	4.85	11.03	15.10	15.12
	ELEV.	582.02	576.96	582.18	576.88	581.67	577.01	581.79	576.84	576.88	576.86
	DIFF.	5.06		5.30		4.66		4.95			
4/17/94 16:00	DEPTH	6.90	11.05	6.06	11.12	4.82	10.12	4.78	10.98	15.05	15.08
	ELEV.	581.99	577.02	582.24	576.96	581.74	577.08	581.86	576.89	576.93	576.90
	DIFF.	4.97		5.28		4.66		4.97			
4/19/94 9:30	DEPTH	6.91	11.00	6.17	11.08	4.90	10.05	4.82	10.92	14.95	15.00
	ELEV.	581.98	577.07	582.13	577.00	581.66	577.15	581.82	576.95	577.03	576.98
	DIFF.	4.91		5.13		4.51		4.87			
4/19/94 16:00	DEPTH	6.98	10.90	6.14	10.96	4.86	9.95	4.77	10.83	14.85	14.88
	ELEV.	581.91	577.17	582.16	577.12	581.70	577.25	581.87	577.04	577.13	577.10
	DIFF.	4.74		5.04		4.45		4.83			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/20/94 9:00	DEPTH	7.04	11.06	6.22	11.15	4.90	10.12	4.89	10.98	15.04	15.06
	ELEV.	581.85	577.01	582.08	576.93	581.66	577.08	581.75	576.89	576.94	576.92
	DIFF.	4.84		5.15		4.58		4.86			
4/20/94 16:18	DEPTH	7.05	10.97	6.23	11.08	4.87	10.02	4.88	10.90	14.95	14.96
	ELEV.	581.84	577.10	582.07	577.00	581.69	577.18	581.76	576.97	577.03	577.02
	DIFF.	4.74		5.07		4.51		4.79			
4/21/94 9:00	DEPTH	7.07	10.95	6.24	11.04	4.91	10.02	4.89	10.87	14.92	14.96
	ELEV.	581.82	577.12	582.06	577.04	581.65	577.18	581.75	577.00	577.06	577.02
	DIFF.	4.70		5.02		4.47		4.75			
4/21/94 16:00	DEPTH	7.08	10.90	6.26	10.98	4.90	9.95	4.88	10.85	14.88	14.90
	ELEV.	581.81	577.17	582.04	577.10	581.66	577.25	581.76	577.02	577.10	577.08
	DIFF.	4.64		4.94		4.41		4.74			
4/23/94 9:30	DEPTH	7.15	10.72	6.28	10.80	4.91	9.74	4.90	10.64	14.65	14.75
	ELEV.	581.74	577.35	582.02	577.28	581.65	577.46	581.74	577.23	577.33	577.23
	DIFF.	4.39		4.74		4.19		4.51			
4/23/94 16:00	DEPTH	7.10	10.62	6.28	10.71	4.88	9.70	4.89	10.53	14.51	14.62
	ELEV.	581.79	577.45	582.02	577.37	581.68	577.50	581.75	577.34	577.47	577.36
	DIFF.	4.34		4.65		4.18		4.41			
4/25/94 9:00	DEPTH	7.16	10.60	6.29	10.68	4.87	9.65	4.87	10.51	14.57	14.60
	ELEV.	581.73	577.47	582.01	577.40	581.69	577.55	581.77	577.36	577.41	577.38
	DIFF.	4.26		4.61		4.14		4.41			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
4/25/94 15:45	DEPTH	7.16	10.58	6.28	10.66	4.84	9.65	4.86	10.50	14.56	14.58
	ELEV.	581.73	577.49	582.02	577.42	581.72	577.55	581.78	577.37	577.42	577.40
	DIFF.	4.24		4.60		4.17		4.41			
4/26/94 9:00	DEPTH	7.11	10.58	6.24	10.66	4.79	9.64	4.78	10.51	14.54	14.58
	ELEV.	581.78	577.49	582.06	577.42	581.77	577.56	581.86	577.36	577.44	577.40
	DIFF.	4.29		4.64		4.21		4.50			
4/26/94 16:00	DEPTH	7.15	10.58	6.24	10.65	4.78	9.63	4.77	10.50	14.50	14.55
	ELEV.	581.74	577.49	582.06	577.43	581.78	577.57	581.87	577.37	577.48	577.43
	DIFF.	4.25		4.63		4.21		4.50			
4/28/94 9:00	DEPTH	7.18	11.06	6.31	11.16	4.78	10.09	4.77	11.00	15.00	15.04
	ELEV.	581.71	577.01	581.99	576.92	581.78	577.11	581.87	576.87	576.98	576.94
	DIFF.	4.70		5.07		4.67		5.00			
4/28/94 16:00	DEPTH	7.16	10.96	6.29	11.02	4.76	9.99	4.77	10.90	14.90	14.94
	ELEV.	581.73	577.11	582.01	577.06	581.80	577.21	581.87	576.97	577.08	577.04
	DIFF.	4.62		4.95		4.59		4.90			
4/29/94 9:00	DEPTH	6.98	10.94	6.15	11.02	4.57	10.00	4.56	10.88	14.92	14.94
	ELEV.	581.91	577.13	582.15	577.06	581.99	577.20	582.08	576.99	577.06	577.04
	DIFF.	4.78		5.09		4.79		5.09			
4/29/94 16:00	DEPTH	6.98	10.94	6.15	11.02	4.57	10.00	4.56	10.88	14.92	14.94
	ELEV.	581.91	577.13	582.15	577.06	581.99	577.20	582.08	576.99	577.06	577.04
	DIFF.	4.78		5.09		4.79		5.09			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/1/94 9:00	DEPTH	6.74	10.85	5.96	10.92	4.41	9.90	4.34	10.77	14.83	14.85
	ELEV.	582.15	577.22	582.34	577.16	582.15	577.30	582.30	577.10	577.15	577.13
	DIFF.	4.93		5.18		4.85		5.20			
5/1/94 15:00	DEPTH	6.72	10.83	5.97	10.92	4.41	9.91	4.33	10.75	14.83	14.84
	ELEV.	582.17	577.24	582.33	577.16	582.15	577.29	582.31	577.12	577.15	577.14
	DIFF.	4.93		5.17		4.86		5.19			
5/2/94 9:00	DEPTH	6.78	10.90	6.00	10.96	4.44	9.95	4.40	10.80	14.87	14.90
	ELEV.	582.11	577.17	582.30	577.12	582.12	577.25	582.24	577.07	577.11	577.08
	DIFF.	4.94		5.18		4.87		5.17			
5/2/94 0:00	DEPTH	6.80	10.85	6.00	10.95	4.42	9.92	4.42	10.84	14.82	14.85
	ELEV.	582.09	577.22	582.30	577.13	582.14	577.28	582.22	577.03	577.16	577.13
	DIFF.	4.87		5.17		4.86		5.19			
5/3/94 9:00	DEPTH	6.84	10.85	6.03	10.92	4.43	9.88	4.42	10.76	14.82	14.85
	ELEV.	582.05	577.22	582.27	577.16	582.13	577.32	582.22	577.11	577.16	577.13
	DIFF.	4.83		5.11		4.81		5.11			
5/3/94 16:00	DEPTH	6.85	10.72	6.04	10.84	4.42	9.80	4.43	10.68	14.70	14.74
	ELEV.	582.04	577.35	582.26	577.24	582.14	577.40	582.21	577.19	577.28	577.24
	DIFF.	4.69		5.02		4.74		5.02			
5/5/94 8:30	DEPTH	6.87	10.65	6.07	10.74	4.44	9.70	4.43	10.57	14.62	14.65
	ELEV.	582.02	577.42	582.23	577.34	582.12	577.50	582.21	577.30	577.36	577.33
	DIFF.	4.60		4.89		4.62		4.91			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/5/94 16:00	DEPTH	6.02	10.70	6.06	10.76	4.45	9.72	4.45	10.57	14.60	14.62
	ELEV.	582.87	577.37	582.24	577.32	582.11	577.48	582.19	577.30	577.38	577.36
	DIFF.	5.50		4.92		4.63		4.89			
5/6/94 8:30	DEPTH	6.94	10.82	6.13	10.91	4.47	9.90	4.44	10.74	14.79	14.82
	ELEV.	581.95	577.25	582.17	577.17	582.09	577.30	582.20	577.13	577.19	577.16
	DIFF.	4.70		5.00		4.79		5.07			
5/6/94 16:00	DEPTH	6.97	10.80	6.13	10.86	4.47	9.84	4.48	10.69	14.75	14.78
	ELEV.	581.92	577.27	582.17	577.22	582.09	577.36	582.16	577.18	577.23	577.20
	DIFF.	4.65		4.95		4.73		4.98			
5/8/94 9:30	DEPTH	6.91	10.69	6.08	10.77	4.38	9.72	4.40	10.62	14.67	14.70
	ELEV.	581.98	577.38	582.22	577.31	582.18	577.48	582.24	577.25	577.31	577.28
	DIFF.	4.60		4.91		4.70		4.99			
5/8/94 15:30	DEPTH	6.95	10.67	6.09	10.75	4.37	9.70	4.38	10.60	14.64	14.68
	ELEV.	581.94	577.40	582.21	577.33	582.19	577.50	582.26	577.27	577.34	577.30
	DIFF.	4.54		4.88		4.69		4.99			
5/9/94 8:30	DEPTH	6.95	10.70	6.10	10.78	4.42	9.73	4.37	10.61	14.65	14.69
	ELEV.	581.94	577.37	582.20	577.30	582.14	577.47	582.27	577.26	577.33	577.29
	DIFF.	4.57		4.90		4.67		5.01			
5/9/94 16:00	DEPTH	6.97	10.74	6.09	10.82	4.40	9.77	4.43	10.68	14.70	14.72
	ELEV.	581.92	577.33	582.21	577.26	582.16	577.43	582.21	577.19	577.28	577.26
	DIFF.	4.59		4.95		4.73		5.02			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/11/94 9:30	DEPTH	6.96	10.54	6.10	10.61	4.40	9.58	4.42	10.44	14.43	14.54
	ELEV.	581.93	577.53	582.20	577.47	582.16	577.62	582.22	577.43	577.55	577.44
	DIFF.	4.40		4.73		4.54		4.79			
5/11/94 16:10	DEPTH	6.98	10.49	6.08	10.56	4.38	9.53	4.40	10.40	14.40	14.48
	ELEV.	581.91	577.58	582.22	577.52	582.18	577.67	582.24	577.47	577.58	577.50
	DIFF.	4.33		4.70		4.51		4.77			
5/12/94 9:00	DEPTH	6.98	10.94	6.17	11.00	4.44	9.98	4.45	10.83	14.90	14.93
	ELEV.	581.91	577.13	582.13	577.08	582.12	577.22	582.19	577.04	577.08	577.05
	DIFF.	4.78		5.05		4.90		5.15			
5/12/94 16:30	DEPTH	7.02	10.90	6.15	10.96	4.45	9.94	4.47	10.80	14.85	14.87
	ELEV.	581.87	577.17	582.15	577.12	582.11	577.26	582.17	577.07	577.13	577.11
	DIFF.	4.70		5.03		4.85		5.10			
5/13/94 9:00	DEPTH	7.05	10.86	6.18	10.96	4.47	9.90	4.38	10.77	14.77	14.86
	ELEV.	581.84	577.21	582.12	577.12	582.09	577.30	582.26	577.10	577.21	577.12
	DIFF.	4.63		5.00		4.79		5.16			
5/13/94 16:00	DEPTH	7.06	10.73	6.13	10.82	4.46	9.77	4.36	10.65	14.69	14.73
	ELEV.	581.83	577.34	582.17	577.26	582.10	577.43	582.28	577.22	577.29	577.25
	DIFF.	4.49		4.91		4.67		5.06			
5/14/94 9:30	DEPTH	7.05	10.61	6.15	10.69	4.47	9.64	4.44	10.52	14.54	14.62
	ELEV.	581.84	577.46	582.15	577.39	582.09	577.56	582.20	577.35	577.44	577.36
	DIFF.	4.38		4.76		4.53		4.85			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/14/94 15:30	DEPTH	7.07	10.58	6.18	10.65	4.48	9.60	4.43	10.48	14.50	14.58
	ELEV.	581.82	577.49	582.12	577.43	582.08	577.60	582.21	577.39	577.48	577.40
	DIFF.	4.33		4.69		4.48		4.82			
5/17/94 9:00	DEPTH	7.08	11.00	6.23	11.07	4.52	10.00	4.52	10.91	14.93	14.98
	ELEV.	581.81	577.07	582.07	577.01	582.04	577.20	582.12	576.96	577.05	577.00
	DIFF.	4.74		5.06		4.84		5.16			
5/17/94 15:30	DEPTH	7.07	10.92	6.20	10.99	4.49	9.95	4.53	10.82	14.85	14.92
	ELEV.	581.82	577.15	582.10	577.09	582.07	577.25	582.11	577.05	577.13	577.06
	DIFF.	4.67		5.01		4.82		5.06			
5/18/94 9:00	DEPTH	7.11	10.85	6.25	10.93	4.55	9.90	4.55	10.78	14.81	14.87
	ELEV.	581.78	577.22	582.05	577.15	582.01	577.30	582.09	577.09	577.17	577.11
	DIFF.	4.56		4.90		4.71		5.00			
5/18/94 16:20	DEPTH	7.13	10.79	6.23	10.87	4.55	9.84	4.54	10.72	14.74	14.80
	ELEV.	581.76	577.28	582.07	577.21	582.01	577.36	582.10	577.15	577.24	577.18
	DIFF.	4.48		4.86		4.65		4.95			
5/19/94 10:00	DEPTH	7.14	10.78	6.26	10.85	4.57	9.83	4.55	10.68	14.73	14.78
	ELEV.	581.75	577.29	582.04	577.23	581.99	577.37	582.09	577.19	577.25	577.20
	DIFF.	4.46		4.81		4.62		4.90			
5/19/94 16:10	DEPTH	7.13	10.69	6.23	10.77	4.56	9.73	4.53	10.59	14.62	14.68
	ELEV.	581.76	577.38	582.07	577.31	582.00	577.47	582.11	577.28	577.36	577.30
	DIFF.	4.38		4.76		4.53		4.83			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/20/94 10:00	DEPTH	7.12	10.70	6.27	10.79	4.58	9.76	4.58	10.62	14.66	14.70
	ELEV.	581.77	577.37	582.03	577.29	581.98	577.44	582.06	577.25	577.32	577.28
	DIFF.	4.40		4.74		4.54		4.81			
5/20/94 16:00	DEPTH	7.14	10.62	6.24	10.72	4.59	9.69	4.58	10.55	14.60	14.62
	ELEV.	581.75	577.45	582.06	577.36	581.97	577.51	582.06	577.32	577.38	577.36
	DIFF.	4.30		4.70		4.46		4.74			
5/21/94 12:00	DEPTH	7.16	10.68	6.25	10.75	4.61	9.73	4.61	10.61	14.65	14.69
	ELEV.	581.73	577.39	582.05	577.33	581.95	577.47	582.03	577.26	577.33	577.29
	DIFF.	4.34		4.72		4.48		4.77			
5/23/94 10:00	DEPTH	7.02	10.70	6.32	10.78	4.67	9.75	4.68	10.62	14.65	14.71
	ELEV.	581.87	577.37	581.98	577.30	581.89	577.45	581.96	577.25	577.33	577.27
	DIFF.	4.50		4.68		4.44		4.71			
5/23/94 16:00	DEPTH	7.03	10.60	6.29	10.68	4.67	9.66	4.67	10.53	14.55	14.61
	ELEV.	581.86	577.47	582.01	577.40	581.89	577.54	581.97	577.34	577.43	577.37
	DIFF.	4.39		4.61		4.35		4.63			
5/24/94 9:00	DEPTH	7.13	10.51	6.20	10.62	4.58	9.61	4.60	10.47	14.48	14.57
	ELEV.	581.76	577.56	582.10	577.46	581.98	577.59	582.04	577.40	577.50	577.41
	DIFF.	4.20		4.64		4.39		4.64			
5/24/94 16:00	DEPTH	7.13	10.45	6.19	10.55	4.58	9.50	4.58	10.39	14.37	14.46
	ELEV.	581.76	577.62	582.11	577.53	581.98	577.70	582.06	577.48	577.61	577.52
	DIFF.	4.14		4.58		4.28		4.58			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/26/94 10:00	DEPTH	7.18	10.75	6.33	10.82	4.61	9.81	4.64	10.64	14.70	14.75
	ELEV.	581.71	577.32	581.97	577.26	581.95	577.39	582.00	577.23	577.28	577.23
	DIFF.	4.39		4.71		4.56		4.77			
5/26/94 16:00	DEPTH	7.20	10.87	6.33	10.92	4.62	9.91	4.65	10.77	14.81	14.86
	ELEV.	581.69	577.20	581.97	577.16	581.94	577.29	581.99	577.10	577.17	577.12
	DIFF.	4.49		4.81		4.65		4.89			
5/27/94 8:00	DEPTH	7.18	10.94	6.34	11.02	4.64	9.99	4.61	10.83	14.90	14.94
	ELEV.	581.71	577.13	581.96	577.06	581.92	577.21	582.03	577.04	577.08	577.04
	DIFF.	4.58		4.90		4.71		4.99			
5/27/94 16:00	DEPTH	7.18	10.85	6.32	10.92	4.62	9.90	4.58	10.75	14.81	14.84
	ELEV.	581.71	577.22	581.98	577.16	581.94	577.30	582.06	577.12	577.17	577.14
	DIFF.	4.49		4.82		4.64		4.94			
5/29/94 8:30	DEPTH	7.35	10.67	6.46	10.76	5.41	9.75	5.63	10.58	14.61	14.63
	ELEV.	581.54	577.40	581.84	577.32	581.15	577.45	581.01	577.29	577.37	577.35
	DIFF.	4.14		4.52		3.70		3.72			
5/29/94 15:00	DEPTH	7.36	10.60	6.45	10.70	5.41	9.70	5.62	10.51	14.52	14.55
	ELEV.	581.53	577.47	581.85	577.38	581.15	577.50	581.02	577.36	577.46	577.43
	DIFF.	4.06		4.47		3.65		3.66			
5/31/94 8:00	DEPTH	7.52	10.70	6.53	10.76	5.43	9.78	5.64	10.62	14.65	14.70
	ELEV.	581.37	577.37	581.77	577.32	581.13	577.42	581.00	577.25	577.33	577.28
	DIFF.	4.00		4.45		3.71		3.75			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5/31/94 16:00	DEPTH	7.54	10.65	6.53	10.73	5.39	9.73	5.63	10.57	14.60	14.64
	ELEV.	581.35	577.42	581.77	577.35	581.17	577.47	581.01	577.30	577.38	577.34
	DIFF.	3.93		4.42		3.70		3.71			
6/2/94 8:00	DEPTH	7.63	10.88	6.61	10.93	5.37	9.95	5.51	10.80	14.84	14.88
	ELEV.	581.26	577.19	581.69	577.15	581.19	577.25	581.13	577.07	577.14	577.10
	DIFF.	4.07		4.54		3.94		4.06			
6/3/94 8:30	DEPTH	7.64	10.78	6.63	10.85	5.35	9.85	5.45	10.70	14.78	14.74
	ELEV.	581.25	577.29	581.67	577.23	581.21	577.35	581.19	577.17	577.20	577.24
	DIFF.	3.96		4.44		3.86		4.02			
6/4/94 11:21	DEPTH	7.67	10.63	6.63	10.71	5.32	9.71	5.43	10.54	14.58	14.63
	ELEV.	581.22	577.44	581.67	577.37	581.24	577.49	581.21	577.33	577.40	577.35
	DIFF.	3.78		4.30		3.75		3.88			
6/6/94 10:30	DEPTH	7.59	10.51	6.56	10.58	5.19	9.60	5.25	10.43	14.47	14.51
	ELEV.	581.30	577.56	581.74	577.50	581.37	577.60	581.39	577.44	577.51	577.47
	DIFF.	3.74		4.24		3.77		3.95			
6/7/94 9:36	DEPTH	7.65	10.67	6.20	10.74	5.22	9.74	5.26	10.59	14.63	14.67
	ELEV.	581.24	577.40	582.10	577.34	581.34	577.46	581.38	577.28	577.35	577.31
	DIFF.	3.84		4.76		3.88		4.10			
6/9/94 9:30	DEPTH	7.58	10.74	6.35	10.83	5.12	9.83	5.12	10.67	14.72	14.77
	ELEV.	581.31	577.33	581.95	577.25	581.44	577.37	581.52	577.20	577.26	577.21
	DIFF.	3.98		4.70		4.07		4.32			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/10/94 8:20	DEPTH	7.60	10.70	6.68	10.76	5.15	9.77	5.15	10.63	14.67	14.71
	ELEV.	581.29	577.37	581.62	577.32	581.41	577.43	581.49	577.24	577.31	577.27
	DIFF.	3.92		4.30		3.98		4.25			
6/12/94 9:37	DEPTH	7.58	10.58	6.65	10.65	5.10	9.69	5.10	10.52	14.57	14.55
	ELEV.	581.31	577.49	581.65	577.43	581.46	577.51	581.54	577.35	577.41	577.43
	DIFF.	3.82		4.22		3.95		4.19			
6/13/94 9:30	DEPTH	7.54	10.53	6.61	10.59	5.06	9.60	5.09	10.42	14.46	14.51
	ELEV.	581.35	577.54	581.69	577.49	581.50	577.60	581.55	577.45	577.52	577.47
	DIFF.	3.81		4.20		3.90		4.10			
6/14/94 9:00	DEPTH	7.59	10.64	6.63	10.75	5.10	9.75	5.11	10.55	14.64	14.65
	ELEV.	581.30	577.43	581.67	577.33	581.46	577.45	581.53	577.32	577.34	577.33
	DIFF.	3.87		4.34		4.01		4.21			
6/16/94 9:20	DEPTH	7.67	10.83	6.70	10.92	5.18	9.92	5.20	10.74	14.80	14.82
	ELEV.	581.22	577.24	581.60	577.16	581.38	577.28	581.44	577.13	577.18	577.16
	DIFF.	3.98		4.44		4.10		4.31			
6/17/94 9:15	DEPTH	7.70	10.75	6.72	10.84	5.21	9.84	5.27	10.66	14.72	14.76
	ELEV.	581.19	577.32	581.58	577.24	581.35	577.36	581.37	577.21	577.26	577.22
	DIFF.	3.87		4.34		3.99		4.16			
6/19/94 10:45	DEPTH	7.75	10.70	6.76	10.77	5.27	9.78	5.33	10.62	14.66	14.71
	ELEV.	581.14	577.37	581.54	577.31	581.29	577.42	581.31	577.25	577.32	577.27
	DIFF.	3.77		4.23		3.87		4.06			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

DATE		W-5 (ft)	P-5 (ft)	W-6 (ft)	P-6 (ft)	W-7 (ft)	P-7 (ft)	W-8 (ft)	P-8 (ft)	R-3 (ft)	R-4 (ft)
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
6/20/94 9:45	DEPTH	7.64	10.56	6.68	10.62	5.14	9.62	5.16	10.47	14.50	14.57
	ELEV.	581.25	577.51	581.62	577.46	581.42	577.58	581.48	577.40	577.48	577.41
	DIFF.	3.74		4.16		3.84		4.08			
6/21/94 9:30	DEPTH	7.66	10.54	6.64	10.61	5.16	9.60	5.20	10.44	14.48	14.53
	ELEV.	581.23	577.53	581.66	577.47	581.40	577.60	581.44	577.43	577.50	577.45
	DIFF.	3.70		4.19		3.80		4.01			
6/23/94 9:20	DEPTH	7.64	10.41	6.63	10.50	5.13	9.50	5.14	10.31	14.37	14.41
	ELEV.	581.25	577.66	581.67	577.58	581.43	577.70	581.50	577.56	577.61	577.57
	DIFF.	3.59		4.09		3.73		3.94			
6/24/94 8:30	DEPTH	6.62	10.33	6.13	10.38	4.72	9.37	4.60	10.23	14.28	14.33
	ELEV.	582.27	577.74	582.17	577.70	581.84	577.83	582.04	577.64	577.70	577.65
	DIFF.	4.53		4.47		4.01		4.40			
6/26/94 11:00	DEPTH	6.68	10.62	6.19	10.70	5.07	9.71	5.00	10.53	14.60	14.62
	ELEV.	582.21	577.45	582.11	577.38	581.49	577.49	581.64	577.34	577.38	577.36
	DIFF.	4.76		4.73		4.00		4.30			
6/27/94 8:52	DEPTH	6.85	10.82	6.25	10.87	5.20	9.90	5.31	10.71	14.80	14.82
	ELEV.	582.04	577.25	582.05	577.21	581.36	577.30	581.33	577.16	577.18	577.16
	DIFF.	4.79		4.84		4.06		4.17			
6/28/94 16:20	DEPTH	7.00	10.47	6.30	10.54	5.23	9.54	5.45	10.37	14.44	14.46
	ELEV.	581.89	577.60	582.00	577.54	581.33	577.66	581.19	577.50	577.54	577.52
	DIFF.	4.29		4.46		3.67		3.69			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
6/29/94 10:30	DEPTH	7.07	10.55	6.34	10.63	5.27	9.63	5.45	10.45	14.50	14.54
	ELEV.	581.82	577.52	581.96	577.45	581.29	577.57	581.19	577.42	577.48	577.44
	DIFF.	4.30		4.51		3.72		3.77			
6/30/94 9:30	DEPTH	7.16	10.80	6.42	10.88	5.30	9.90	5.43	10.70	14.78	14.80
	ELEV.	581.73	577.27	581.88	577.20	581.26	577.30	581.21	577.17	577.20	577.18
	DIFF.	4.46		4.68		3.96		4.04			
7/1/94 11:30	DEPTH	7.12	10.59	6.43	10.67	5.29	9.72	5.50	10.50	14.56	14.60
	ELEV.	581.77	577.48	581.87	577.41	581.27	577.48	581.14	577.37	577.42	577.38
	DIFF.	4.29		4.46		3.79		3.77			
7/2/94 8:30	DEPTH	7.30	10.78	6.48	10.85	5.30	9.87	5.44	10.70	14.74	14.74
	ELEV.	581.59	577.29	581.82	577.23	581.26	577.33	581.20	577.17	577.24	577.24
	DIFF.	4.30		4.59		3.93		4.03			
7/5/94 13:00	DEPTH	6.55	10.56	6.13	10.69	5.09	9.68	5.08	10.49	14.54	14.60
	ELEV.	582.34	577.51	582.17	577.39	581.47	577.52	581.56	577.38	577.44	577.38
	DIFF.	4.83		4.78		3.95		4.18			
7/6/94 11:30	DEPTH	6.77	10.57	6.19	10.67	5.22	9.68	5.33	10.47	14.58	14.58
	ELEV.	582.12	577.50	582.11	577.41	581.34	577.52	581.31	577.40	577.40	577.40
	DIFF.	4.62		4.70		3.82		3.91			
7/8/94 16:00	DEPTH	6.97	10.47	6.31	10.55	5.15	9.56	5.30	10.37	14.47	14.58
	ELEV.	581.92	577.60	581.99	577.53	581.41	577.64	581.34	577.50	577.51	577.40
	DIFF.	4.32		4.46		3.77		3.84			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/9/94 7:30	DEPTH	7.04	10.59	6.35	10.69	5.28	9.69	5.46	10.49	14.55	14.59
	ELEV.	581.85	577.48	581.95	577.39	581.28	577.51	581.18	577.38	577.43	577.39
	DIFF.	4.37		4.56		3.77		3.80			
7/11/94 10:50	DEPTH	7.19	10.60	6.42	10.69	5.28	9.71	5.47	10.55	14.58	14.60
	ELEV.	581.70	577.47	581.88	577.39	581.28	577.49	581.17	577.32	577.40	577.38
	DIFF.	4.23		4.49		3.79		3.85			
7/14/94 10:20	DEPTH	7.22	10.49	6.36	10.60	5.15	9.58	5.24	10.41	14.46	14.52
	ELEV.	581.67	577.58	581.94	577.48	581.41	577.62	581.40	577.46	577.52	577.46
	DIFF.	4.09		4.46		3.79		3.94			
7/15/94 9:25	DEPTH	7.27	10.65	6.42	10.75	5.20	9.75	5.32	10.57	14.64	14.64
	ELEV.	581.62	577.42	581.88	577.33	581.36	577.45	581.32	577.30	577.34	577.34
	DIFF.	4.20		4.55		3.91		4.02			
7/17/94 8:45	DEPTH	7.35	10.53	6.46	10.62	5.25	9.63	5.38	10.47	14.50	14.53
	ELEV.	581.54	577.54	581.84	577.46	581.31	577.57	581.26	577.40	577.48	577.45
	DIFF.	4.00		4.38		3.74		3.86			
7/18/94 8:40	DEPTH	7.39	10.57	6.48	10.67	5.25	9.67	5.37	10.47	14.55	14.58
	ELEV.	581.50	577.50	581.82	577.41	581.31	577.53	581.27	577.40	577.43	577.40
	DIFF.	4.00		4.41		3.78		3.87			
7/20/94 9:20	DEPTH	7.35	10.48	6.48	10.58	5.20	9.60	5.29	10.40	14.45	14.50
	ELEV.	581.54	577.59	581.82	577.50	581.36	577.60	581.35	577.47	577.53	577.48
	DIFF.	3.95		4.32		3.76		3.88			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/21/94 9:00	DEPTH	7.41	10.47	6.45	10.55	5.22	9.56	5.39	10.39	14.43	14.47
	ELEV.	581.48	577.60	581.85	577.53	581.34	577.64	581.25	577.48	577.55	577.51
	DIFF.	3.88		4.32		3.70		3.77			
7/22/94 9:30	DEPTH	7.36	10.47	6.42	10.54	5.23	9.55	5.38	10.37	14.43	14.46
	ELEV.	581.53	577.60	581.88	577.54	581.33	577.65	581.26	577.50	577.55	577.52
	DIFF.	3.93		4.34		3.68		3.76			
7/24/94 9:00	DEPTH	7.50	10.60	6.52	10.70	5.30	9.71	5.43	10.51	14.62	14.58
	ELEV.	581.39	577.47	581.78	577.38	581.26	577.49	581.21	577.36	577.36	577.40
	DIFF.	3.92		4.40		3.77		3.85			
7/25/94 8:45	DEPTH	7.54	10.51	6.54	10.62	5.27	9.62	5.42	10.42	14.47	14.52
	ELEV.	581.35	577.56	581.76	577.46	581.29	577.58	581.22	577.45	577.51	577.46
	DIFF.	3.79		4.30		3.71		3.77			
7/26/94 9:00	DEPTH	7.57	10.56	6.57	10.63	5.31	9.66	5.46	10.46	14.53	14.57
	ELEV.	581.32	577.51	581.73	577.45	581.25	577.54	581.18	577.41	577.45	577.41
	DIFF.	3.81		4.28		3.71		3.77			
7/28/94 7:30	DEPTH	7.62	10.65	6.63	10.71	5.20	9.72	5.26	10.55	14.64	14.66
	ELEV.	581.27	577.42	581.67	577.37	581.36	577.48	581.38	577.32	577.34	577.32
	DIFF.	3.85		4.30		3.88		4.06			
7/29/94 1:30	DEPTH	7.60	10.66	6.63	10.76	5.20	9.77	5.23	10.57	14.63	14.65
	ELEV.	581.29	577.41	581.67	577.32	581.36	577.43	581.41	577.30	577.35	577.33
	DIFF.	3.88		4.35		3.93		4.11			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
7/31/94 12:00	DEPTH	7.63	10.55	6.65	10.60	5.27	9.64	5.40	10.47	14.52	14.55
	ELEV.	581.26	577.52	581.65	577.48	581.29	577.56	581.24	577.40	577.46	577.43
	DIFF.	3.74		4.17		3.73		3.84			
8/1/94 8:50	DEPTH	7.65	10.52	6.67	10.60	5.28	9.62	5.38	10.44	14.49	14.53
	ELEV.	581.24	577.55	581.63	577.48	581.28	577.58	581.26	577.43	577.49	577.45
	DIFF.	3.69		4.15		3.70		3.83			
8/2/94 8:45	DEPTH	7.67	10.62	6.68	10.75	5.28	9.72	5.33	10.53	14.59	14.62
	ELEV.	581.22	577.45	581.62	577.33	581.28	577.48	581.31	577.34	577.39	577.36
	DIFF.	3.77		4.29		3.80		3.97			
8/4/94 9:30	DEPTH	7.40	10.43	6.54	10.50	5.00	9.51	5.03	10.35	14.39	14.42
	ELEV.	581.49	577.64	581.76	577.58	581.56	577.69	581.61	577.52	577.59	577.56
	DIFF.	3.85		4.18		3.87		4.09			
8/5/94 8:00	DEPTH	7.23	10.72	6.38	10.84	4.67	9.82	4.65	10.65	14.74	14.74
	ELEV.	581.66	577.35	581.92	577.24	581.89	577.38	581.99	577.22	577.24	577.24
	DIFF.	4.31		4.68		4.51		4.77			
8/6/94 9:30	DEPTH	7.25	10.64	6.45	10.71	4.82	9.70	4.80	10.53	14.60	14.64
	ELEV.	581.64	577.43	581.85	577.37	581.74	577.50	581.84	577.34	577.38	577.34
	DIFF.	4.21		4.48		4.24		4.50			
8/7/94 12:40	DEPTH	7.25	10.48	6.46	10.59	4.85	9.58	4.83	10.40	14.44	14.50
	ELEV.	581.64	577.59	581.84	577.49	581.71	577.62	581.81	577.47	577.54	577.48
	DIFF.	4.05		4.35		4.09		4.34			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/8/94 8:45	DEPTH	7.28	10.45	6.46	10.53	4.87	9.50	4.87	10.35	14.40	14.44
	ELEV.	581.61	577.62	581.84	577.55	581.69	577.70	581.77	577.52	577.58	577.54
	DIFF.	3.99		4.29		3.99		4.25			
8/9/94 7:45	DEPTH	7.32	10.72	6.52	10.83	4.80	9.81	4.76	10.65	14.72	14.74
	ELEV.	581.57	577.35	581.78	577.25	581.76	577.39	581.88	577.22	577.26	577.24
	DIFF.	4.22		4.53		4.37		4.66			
8/10/94 8:00	DEPTH	7.25	10.60	6.49	10.67	4.80	9.67	4.77	10.50	14.56	14.59
	ELEV.	581.64	577.47	581.81	577.41	581.76	577.53	581.87	577.37	577.42	577.39
	DIFF.	4.17		4.40		4.23		4.50			
8/11/94 7:50	DEPTH	6.87	10.46	6.22	10.56	4.62	9.56	4.52	10.38	14.46	14.50
	ELEV.	582.02	577.61	582.08	577.52	581.94	577.64	582.12	577.49	577.52	577.48
	DIFF.	4.41		4.56		4.30		4.63			
8/12/94 8:20	DEPTH	6.05	10.55	6.26	10.62	4.60	9.58	4.66	10.42	14.52	14.54
	ELEV.	582.84	577.52	582.04	577.46	581.96	577.62	581.98	577.45	577.46	577.44
	DIFF.	5.32		4.58		4.34		4.53			
8/13/94 10:00	DEPTH	6.58	10.36	6.08	10.43	4.67	9.45	4.46	10.28	14.31	14.36
	ELEV.	582.31	577.71	582.22	577.65	581.89	577.75	582.18	577.59	577.67	577.62
	DIFF.	4.60		4.57		4.14		4.59			
8/14/94 16:00	DEPTH	6.80	10.58	6.10	10.61	5.23	9.70	5.39	10.42	14.56	14.64
	ELEV.	582.09	577.49	582.20	577.47	581.33	577.50	581.25	577.45	577.42	577.34
	DIFF.	4.60		4.73		3.83		3.80			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/15/94 8:00	DEPTH	7.00	10.64	6.31	10.72	5.34	9.68	5.51	10.51	14.58	14.63
	ELEV.	581.89	577.43	581.99	577.36	581.22	577.52	581.13	577.36	577.40	577.35
	DIFF.	4.46		4.63		3.70		3.77			
8/16/94 8:30	DEPTH	7.12	10.55	6.38	10.67	5.31	9.67	5.43	10.45	14.55	14.58
	ELEV.	581.77	577.52	581.92	577.41	581.25	577.53	581.21	577.42	577.43	577.40
	DIFF.	4.25		4.51		3.72		3.79			
8/17/94 8:00	DEPTH	7.18	10.52	6.40	10.65	5.31	9.64	5.36	10.43	14.54	14.65
	ELEV.	581.71	577.55	581.90	577.43	581.25	577.56	581.28	577.44	577.44	577.33
	DIFF.	4.16		4.47		3.69		3.84			
8/18/94 7:45	DEPTH	7.20	10.50	6.43	10.59	5.27	9.60	5.37	10.42	14.50	14.53
	ELEV.	581.69	577.57	581.87	577.49	581.29	577.60	581.27	577.45	577.48	577.45
	DIFF.	4.12		4.38		3.69		3.82			
8/19/94 9:20	DEPTH	7.30	10.40	6.43	10.49	5.23	9.48	5.33	10.32	14.46	14.44
	ELEV.	581.59	577.67	581.87	577.59	581.33	577.72	581.31	577.55	577.52	577.54
	DIFF.	3.92		4.28		3.61		3.76			
8/20/94 14:30	DEPTH	7.28	10.36	6.35	10.48	5.26	9.47	5.38	10.26	14.34	14.38
	ELEV.	581.61	577.71	581.95	577.60	581.30	577.73	581.26	577.61	577.64	577.60
	DIFF.	3.90		4.35		3.57		3.65			
8/21/94 10:45	DEPTH	7.26	10.62	6.38	10.71	5.06	9.68	5.11	10.51	14.58	14.63
	ELEV.	581.63	577.45	581.92	577.37	581.50	577.52	581.53	577.36	577.40	577.35
	DIFF.	4.18		4.55		3.98		4.17			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/22/94 8:20	DEPTH	7.25	10.66	6.41	10.76	5.02	9.75	5.03	10.57	14.63	14.66
	ELEV.	581.64	577.41	581.89	577.32	581.54	577.45	581.61	577.30	577.35	577.32
	DIFF.	4.23		4.57		4.09		4.31			
8/23/94 9:00	DEPTH	7.25	10.63	6.42	10.71	5.02	9.72	5.02	10.57	14.61	14.65
	ELEV.	581.64	577.44	581.88	577.37	581.54	577.48	581.62	577.30	577.37	577.33
	DIFF.	4.20		4.51		4.06		4.32			
8/24/94 7:45	DEPTH	7.26	10.55	6.44	10.61	4.98	9.61	5.03	10.45	14.50	14.53
	ELEV.	581.63	577.52	581.86	577.47	581.58	577.59	581.61	577.42	577.48	577.45
	DIFF.	4.11		4.39		3.99		4.19			
8/25/94 8:40	DEPTH	7.27	10.58	6.45	10.66	5.00	9.66	5.01	10.48	14.54	14.58
	ELEV.	581.62	577.49	581.85	577.42	581.56	577.54	581.63	577.39	577.44	577.40
	DIFF.	4.13		4.43		4.02		4.24			
8/26/94 8:00	DEPTH	7.29	10.51	6.49	10.55	5.00	9.62	5.00	10.42	14.48	14.57
	ELEV.	581.60	577.56	581.81	577.53	581.56	577.58	581.64	577.45	577.50	577.41
	DIFF.	4.04		4.28		3.98		4.19			
8/27/94 8:30	DEPTH	7.28	10.55	6.47	10.59	5.03	9.64	5.06	10.44	14.47	14.56
	ELEV.	581.61	577.52	581.83	577.49	581.53	577.56	581.58	577.43	577.51	577.42
	DIFF.	4.09		4.34		3.97		4.15			
8/28/94 10:00	DEPTH	7.27	10.40	6.45	10.49	5.18	9.46	5.02	10.33	14.38	14.51
	ELEV.	581.62	577.67	581.85	577.59	581.38	577.74	581.62	577.54	577.60	577.47
	DIFF.	3.95		4.26		3.64		4.08			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
8/29/94 8:30	DEPTH	7.35	10.56	6.54	10.67	5.08	9.63	5.01	10.46	14.53	14.55
	ELEV.	581.54	577.51	581.76	577.41	581.48	577.57	581.63	577.41	577.45	577.43
	DIFF.	4.03		4.35		3.91		4.22			
8/30/94 8:30	DEPTH	7.41	10.47	6.54	10.61	5.11	9.57	5.13	10.39	14.46	14.48
	ELEV.	581.48	577.60	581.76	577.47	581.45	577.63	581.51	577.48	577.52	577.50
	DIFF.	3.88		4.29		3.82		4.03			
8/31/94 11:30	DEPTH	7.32	10.60	6.57	10.68	4.98	9.68	4.98	10.53	14.57	14.59
	ELEV.	581.57	577.47	581.73	577.40	581.58	577.52	581.66	577.34	577.41	577.39
	DIFF.	4.10		4.33		4.06		4.32			
9/1/94 8:00	DEPTH	7.23	10.78	6.40	10.88	4.58	9.83	4.56	10.69	14.74	14.76
	ELEV.	581.66	577.29	581.90	577.20	581.98	577.37	582.08	577.18	577.24	577.22
	DIFF.	4.37		4.70		4.61		4.90			
9/2/94 7:45	DEPTH	7.16	10.70	6.43	10.78	4.68	9.74	4.64	10.57	14.65	14.68
	ELEV.	581.73	577.37	581.87	577.30	581.88	577.46	582.00	577.30	577.33	577.30
	DIFF.	4.36		4.57		4.42		4.70			
9/4/94 14:00	DEPTH	7.30	10.47	6.48	10.55	4.87	9.53	4.80	10.37	14.42	14.45
	ELEV.	581.59	577.60	581.82	577.53	581.69	577.67	581.84	577.50	577.56	577.53
	DIFF.	3.99		4.29		4.02		4.34			
9/6/94 8:30	DEPTH	7.22	10.43	6.52	10.52	4.94	9.52	4.88	10.32	14.40	14.40
	ELEV.	581.67	577.64	581.78	577.56	581.62	577.68	581.76	577.55	577.58	577.58
	DIFF.	4.03		4.22		3.94		4.21			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/7/94 8:00	DEPTH	7.29	10.57	6.60	10.63	5.00	9.64	4.95	10.45	14.52	14.56
	ELEV.	581.60	577.50	581.70	577.45	581.56	577.56	581.69	577.42	577.46	577.42
	DIFF.	4.10		4.25		4.00		4.27			
9/8/94 9:00	DEPTH	7.39	10.56	6.61	10.58	5.02	9.60	5.08	10.47	14.45	14.52
	ELEV.	581.50	577.51	581.69	577.50	581.54	577.60	581.56	577.40	577.53	577.46
	DIFF.	3.99		4.19		3.94		4.16			
9/9/94 9:45	DEPTH	7.48	10.55	6.61	10.60	5.04	9.61	5.09	10.43	14.47	14.53
	ELEV.	581.41	577.52	581.69	577.48	581.52	577.59	581.55	577.44	577.51	577.45
	DIFF.	3.89		4.21		3.93		4.11			
9/10/94 9:30	DEPTH	7.00	10.50	6.30	10.66	4.78	9.75	4.58	10.50	14.54	14.64
	ELEV.	581.89	577.57	582.00	577.42	581.78	577.45	582.06	577.37	577.44	577.34
	DIFF.	4.32		4.58		4.33		4.69			
9/12/94 10:30	DEPTH	7.18	10.52	6.41	10.61	4.75	9.60	4.60	10.40	14.50	14.59
	ELEV.	581.71	577.55	581.89	577.47	581.81	577.60	582.04	577.47	577.48	577.39
	DIFF.	4.16		4.42		4.21		4.57			
9/13/94 8:00	DEPTH	7.19	10.40	6.44	10.50	4.74	9.55	4.85	10.34	14.35	14.44
	ELEV.	581.70	577.67	581.86	577.58	581.82	577.65	581.79	577.53	577.63	577.54
	DIFF.	4.03		4.28		4.17		4.26			
9/14/94 8:00	DEPTH	7.27	10.40	6.46	10.45	4.97	9.46	4.96	10.30	14.33	14.40
	ELEV.	581.62	577.67	581.84	577.63	581.59	577.74	581.68	577.57	577.65	577.58
	DIFF.	3.95		4.21		3.85		4.11			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/15/94 8:30	DEPTH	7.25	10.35	6.55	10.45	5.00	9.43	4.95	10.25	14.34	14.39
	ELEV.	581.64	577.72	581.75	577.63	581.56	577.77	581.69	577.62	577.64	577.59
	DIFF.	3.92		4.12		3.79		4.07			
9/16/94 10:00	DEPTH	7.29	10.32	6.54	10.41	5.15	9.44	5.10	10.25	14.31	14.37
	ELEV.	581.60	577.75	581.76	577.67	581.41	577.76	581.54	577.62	577.67	577.61
	DIFF.	3.85		4.09		3.65		3.92			
9/17/94 7:00	DEPTH	7.42	10.49	6.61	10.56	5.13	9.58	5.00	10.38	14.43	14.48
	ELEV.	581.47	577.58	581.69	577.52	581.43	577.62	581.64	577.49	577.55	577.50
	DIFF.	3.89		4.17		3.81		4.15			
9/18/94 13:30	DEPTH	7.47	10.50	6.59	10.57	5.12	9.60	5.15	10.39	14.41	14.50
	ELEV.	581.42	577.57	581.71	577.51	581.44	577.60	581.49	577.48	577.57	577.48
	DIFF.	3.85		4.20		3.84		4.01			
9/19/94 16:54	DEPTH	7.50	10.52	6.78	10.60	5.18	9.60	5.21	10.41	14.42	14.54
	ELEV.	581.39	577.55	581.52	577.48	581.38	577.60	581.43	577.46	577.56	577.44
	DIFF.	3.84		4.04		3.78		3.97			
9/20/94 8:30	DEPTH	7.52	10.50	6.70	10.57	5.25	9.60	5.18	10.40	14.51	14.50
	ELEV.	581.37	577.57	581.60	577.51	581.31	577.60	581.46	577.47	577.47	577.48
	DIFF.	3.80		4.09		3.71		3.99			
9/21/94 17:00	DEPTH	7.50	10.28	6.65	10.35	5.20	9.40	5.23	10.18	14.21	14.35
	ELEV.	581.39	577.79	581.65	577.73	581.36	577.80	581.41	577.69	577.77	577.63
	DIFF.	3.60		3.92		3.56		3.72			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
9/22/94 8:00	DEPTH	7.50	10.29	6.65	10.35	5.22	9.35	5.20	10.15	14.20	14.25
	ELEV.	581.39	577.78	581.65	577.73	581.34	577.85	581.44	577.72	577.78	577.73
	DIFF.	3.61		3.92		3.49		3.72			
9/23/94 8:30	DEPTH	7.51	10.32	6.63	10.40	5.19	9.40	5.20	10.22	14.26	14.31
	ELEV.	581.38	577.75	581.67	577.68	581.37	577.80	581.44	577.65	577.72	577.67
	DIFF.	3.63		3.99		3.57		3.79			
9/24/94 17:30	DEPTH	7.39	10.35	6.60	10.41	5.10	9.41	5.10	10.25	14.35	14.36
	ELEV.	581.50	577.72	581.70	577.67	581.46	577.79	581.54	577.62	577.63	577.62
	DIFF.	3.78		4.03		3.67		3.92			
9/25/94 9:15	DEPTH	7.35	10.37	6.60	10.43	5.05	9.45	5.05	10.30	14.35	14.38
	ELEV.	581.54	577.70	581.70	577.65	581.51	577.75	581.59	577.57	577.63	577.60
	DIFF.	3.84		4.05		3.76		4.02			
9/26/94 8:00	DEPTH	7.32	10.28	6.55	10.28	5.01	9.40	5.00	10.16	14.22	14.26
	ELEV.	581.57	577.79	581.75	577.80	581.55	577.80	581.64	577.71	577.76	577.72
	DIFF.	3.78		3.95		3.75		3.93			
9/28/94 10:30	DEPTH	7.30	10.39	6.50	10.50	4.97	9.52	4.94	10.26	14.46	14.45
	ELEV.	581.59	577.68	581.80	577.58	581.59	577.68	581.70	577.61	577.52	577.53
	DIFF.	3.91		4.22		3.91		4.09			
9/30/94 8:00	DEPTH	7.38	10.54	6.66	10.63	5.16	9.63	5.03	10.44	14.51	14.54
	ELEV.	581.51	577.53	581.64	577.45	581.40	577.57	581.61	577.43	577.47	577.44
	DIFF.	3.98		4.19		3.83		4.18			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/2/94 4:00	DEPTH	7.16	10.47	6.43	10.50	4.92	9.50	4.60	10.40	14.44	14.47
	ELEV.	581.73	577.60	581.87	577.58	581.64	577.70	582.04	577.47	577.54	577.51
	DIFF.	4.13		4.29		3.94		4.57			
10/4/94 7:45	DEPTH	7.24	10.68	6.60	10.76	4.85	9.76	4.79	10.59	14.66	14.67
	ELEV.	581.65	577.39	581.70	577.32	581.71	577.44	581.85	577.28	577.32	577.31
	DIFF.	4.26		4.38		4.27		4.57			
10/6/94 7:30	DEPTH	7.26	10.41	6.67	10.52	5.00	9.50	4.93	10.31	14.43	14.41
	ELEV.	581.63	577.66	581.63	577.56	581.56	577.70	581.71	577.56	577.55	577.57
	DIFF.	3.97		4.07		3.86		4.15			
10/9/94 11:20	DEPTH	7.17	10.62	6.47	10.80	4.86	9.67	4.81	10.50	14.62	14.60
	ELEV.	581.72	577.45	581.83	577.28	581.70	577.53	581.83	577.37	577.36	577.38
	DIFF.	4.27		4.55		4.17		4.46			
10/11/94 7:45	DEPTH	7.15	10.57	6.45	10.65	4.92	9.65	4.88	10.50	14.55	14.57
	ELEV.	581.74	577.50	581.85	577.43	581.64	577.55	581.76	577.37	577.43	577.41
	DIFF.	4.24		4.42		4.09		4.39			
10/13/94 10:30	DEPTH	7.20	10.35	6.55	10.43	5.00	9.43	4.80	10.22	14.34	14.36
	ELEV.	581.69	577.72	581.75	577.65	581.56	577.77	581.84	577.65	577.64	577.62
	DIFF.	3.97		4.10		3.79		4.19			
10/15/94 8:00	DEPTH	7.31	10.40	6.61	10.47	5.08	9.47	5.07	10.30	14.40	14.36
	ELEV.	581.58	577.67	581.69	577.61	581.48	577.73	581.57	577.57	577.58	577.62
	DIFF.	3.91		4.08		3.75		4.00			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
10/17/94 7:55	DEPTH	7.25	10.30	6.60	10.37	5.02	9.37	4.97	10.18	14.30	14.25
	ELEV.	581.64	577.77	581.70	577.71	581.54	577.83	581.67	577.69	577.68	577.73
	DIFF.	3.87		3.99		3.71		3.98			
10/20/94 16:00	DEPTH	7.36	10.37	6.62	10.45	5.14	9.45	5.03	10.22	14.34	14.38
	ELEV.	581.53	577.70	581.68	577.63	581.42	577.75	581.61	577.65	577.64	577.60
	DIFF.	3.83		4.05		3.67		3.96			
10/23/94 1:15	DEPTH	7.42	10.38	6.65	10.46	5.19	9.46	5.11	10.19	14.39	14.34
	ELEV.	581.47	577.69	581.65	577.62	581.37	577.74	581.53	577.68	577.59	577.64
	DIFF.	3.78		4.03		3.63		3.85			
10/25/94 11:00	DEPTH	7.52	10.47	6.71	10.54	5.26	9.55	5.27	10.36	14.42	14.46
	ELEV.	581.37	577.60	581.59	577.54	581.30	577.65	581.37	577.51	577.56	577.52
	DIFF.	3.77		4.05		3.65		3.86			
10/27/94 9:00	DEPTH	7.55	10.42	6.74	10.49	5.28	9.50	5.30	10.31	14.38	14.42
	ELEV.	581.34	577.65	581.56	577.59	581.28	577.70	581.34	577.56	577.60	577.56
	DIFF.	3.69		3.97		3.58		3.78			
10/29/94 14:30	DEPTH	7.56	10.34	6.78	10.43	5.33	9.43	5.32	10.24	14.30	14.34
	ELEV.	581.33	577.73	581.52	577.65	581.23	577.77	581.32	577.63	577.68	577.64
	DIFF.	3.60		3.87		3.46		3.69			
11/1/94 9:30	DEPTH	6.48	10.18	6.07	10.26	4.48	9.25	4.34	10.08	14.15	14.20
	ELEV.	582.41	577.89	582.23	577.82	582.08	577.95	582.30	577.79	577.83	577.78
	DIFF.	4.52		4.41		4.13		4.51			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/3/94 8:00	DEPTH	6.56	10.35	6.08	10.45	4.40	9.38	4.30	10.25	14.31	14.34
	ELEV.	582.33	577.72	582.22	577.63	582.16	577.82	582.34	577.62	577.67	577.64
	DIFF.	4.61		4.59		4.34		4.72			
11/6/94 17:00	DEPTH	6.60	10.73	5.85	10.78	4.55	9.75	4.33	10.57	14.70	14.77
	ELEV.	582.29	577.34	582.45	577.30	582.01	577.45	582.31	577.30	577.28	577.21
	DIFF.	4.95		5.15		4.56		5.01			
11/8/94 9:00	DEPTH	6.25	10.22	5.86	10.29	4.41	9.22	4.23	10.13	14.20	14.23
	ELEV.	582.64	577.85	582.44	577.79	582.15	577.98	582.41	577.74	577.78	577.75
	DIFF.	4.79		4.65		4.17		4.67			
11/10/94 8:30	DEPTH	6.23	10.65	5.83	10.71	4.41	9.65	4.52	10.55	14.62	14.66
	ELEV.	582.66	577.42	582.47	577.37	582.15	577.55	582.12	577.32	577.36	577.32
	DIFF.	5.24		5.10		4.60		4.80			
11/12/94 14:50	DEPTH	6.55	10.24	6.12	10.30	5.23	9.30	5.45	10.13	14.21	14.25
	ELEV.	582.34	577.83	582.18	577.78	581.33	577.90	581.19	577.74	577.77	577.73
	DIFF.	4.51		4.40		3.43		3.45			
11/14/94 9:20	DEPTH	6.64	10.28	6.16	10.35	5.27	9.35	5.56	10.20	14.24	14.30
	ELEV.	582.25	577.79	582.14	577.73	581.29	577.85	581.08	577.67	577.74	577.68
	DIFF.	4.46		4.41		3.44		3.41			
11/16/94 8:30	DEPTH	6.80	10.38	6.28	10.47	5.20	9.47	5.38	10.30	14.36	14.40
	ELEV.	582.09	577.69	582.02	577.61	581.36	577.73	581.26	577.57	577.62	577.58
	DIFF.	4.40		4.41		3.63		3.69			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11/20/94 12:00	DEPTH	6.84	10.13	6.30	10.20	4.87	9.20	4.92	10.03	14.08	14.12
	ELEV.	582.05	577.94	582.00	577.88	581.69	578.00	581.72	577.84	577.90	577.86
	DIFF.	4.11		4.12		3.69		3.88			
11/23/94 12:00	DEPTH	6.87	10.43	6.30	10.51	4.79	9.52	4.79	10.40	14.38	14.42
	ELEV.	582.02	577.64	582.00	577.57	581.77	577.68	581.85	577.47	577.60	577.56
	DIFF.	4.38		4.43		4.09		4.38			
11/25/94 15:00	DEPTH	6.80	10.34	6.32	10.45	4.80	9.43	4.80	10.35	14.31	14.35
	ELEV.	582.09	577.73	581.98	577.63	581.76	577.77	581.84	577.52	577.67	577.63
	DIFF.	4.36		4.35		3.99		4.32			
11/27/94 16:30	DEPTH	6.85	10.30	6.35	10.41	4.84	9.39	4.82	10.31	14.26	14.30
	ELEV.	582.04	577.77	581.95	577.67	581.72	577.81	581.82	577.56	577.72	577.68
	DIFF.	4.27		4.28		3.91		4.26			
11/28/94 16:30	DEPTH	6.82	10.28	6.35	10.28	5.02	9.27	4.93	10.12	14.23	14.28
	ELEV.	582.07	577.79	581.95	577.80	581.54	577.93	581.71	577.75	577.75	577.70
	DIFF.	4.28		4.15		3.61		3.96			
11/30/94 8:30	DEPTH	6.73	10.64	6.22	10.72	5.09	9.73	5.11	10.55	14.58	14.63
	ELEV.	582.16	577.43	582.08	577.36	581.47	577.47	581.53	577.32	577.40	577.35
	DIFF.	4.73		4.72		4.00		4.21			
12/5/94 8:00	DEPTH	6.95	10.23	6.30	10.30	5.08	9.30	5.05	10.18	14.20	14.23
	ELEV.	581.94	577.84	582.00	577.78	581.48	577.90	581.59	577.69	577.78	577.75
	DIFF.	4.10		4.22		3.58		3.90			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/7/94 9:00	DEPTH	6.33	10.34	5.81	10.39	4.23	9.38	4.19	10.24	14.32	14.34
	ELEV.	582.56	577.73	582.49	577.69	582.33	577.82	582.45	577.63	577.66	577.64
	DIFF.	4.83		4.80		4.51		4.82			
12/10/94 10:00	DEPTH	6.45	10.16	5.90	10.25	4.87	9.24	4.90	10.10	14.13	14.16
	ELEV.	582.44	577.91	582.40	577.83	581.69	577.96	581.74	577.77	577.85	577.82
	DIFF.	4.53		4.57		3.73		3.97			
12/12/94 14:17	DEPTH	7.23	10.27	6.20	10.37	4.98	9.35	4.98	10.20	14.25	14.28
	ELEV.	581.66	577.80	582.10	577.71	581.58	577.85	581.66	577.67	577.73	577.70
	DIFF.	3.86		4.39		3.73		3.99			
12/13/94 11:30	DEPTH	7.27	10.33	6.25	10.40	4.96	9.38	4.94	10.25	14.30	14.34
	ELEV.	581.62	577.74	582.05	577.68	581.60	577.82	581.70	577.62	577.68	577.64
	DIFF.	3.88		4.37		3.78		4.08			
12/15/94 13:30	DEPTH	6.87	10.15	6.21	10.24	4.95	9.23	4.98	10.05	14.11	14.15
	ELEV.	582.02	577.92	582.09	577.84	581.61	577.97	581.66	577.82	577.87	577.83
	DIFF.	4.10		4.25		3.64		3.84			
12/18/94 13:00	DEPTH	6.84	10.40	6.18	10.44	4.90	9.45	4.96	10.26	14.35	14.40
	ELEV.	582.05	577.67	582.12	577.64	581.66	577.75	581.68	577.61	577.63	577.58
	DIFF.	4.38		4.48		3.91		4.07			
12/20/94 8:30	DEPTH	6.90	10.25	6.18	10.33	4.93	9.30	5.00	10.15	14.21	14.25
	ELEV.	581.99	577.82	582.12	577.75	581.63	577.90	581.64	577.72	577.77	577.73
	DIFF.	4.17		4.37		3.73		3.92			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
12/22/94 14:30	DEPTH	6.94	10.21	6.22	10.25	4.91	9.25	5.01	10.08	14.18	14.21
	ELEV.	581.95	577.86	582.08	577.83	581.65	577.95	581.63	577.79	577.80	577.77
	DIFF.	4.09		4.25		3.70		3.84			
12/24/94 9:00	DEPTH	6.96	10.15	6.20	10.21	4.89	9.20	4.95	10.04	14.11	14.15
	ELEV.	581.93	577.92	582.10	577.87	581.67	578.00	581.69	577.83	577.87	577.83
	DIFF.	4.01		4.23		3.67		3.86			
12/27/94 9:00	DEPTH	6.98	10.13	6.30	10.18	4.91	9.19	5.01	10.01	14.09	14.13
	ELEV.	581.91	577.94	582.00	577.90	581.65	578.01	581.63	577.86	577.89	577.85
	DIFF.	3.97		4.10		3.64		3.77			
12/29/94 12:00	DEPTH	6.94	10.47	6.32	10.53	4.85	9.53	4.95	10.34	14.43	14.48
	ELEV.	581.95	577.60	581.98	577.55	581.71	577.67	581.69	577.53	577.55	577.50
	DIFF.	4.35		4.43		4.04		4.16			
12/31/94 11:00	DEPTH	6.90	10.40	6.30	10.45	4.84	9.44	4.90	10.29	14.37	14.41
	ELEV.	581.99	577.67	582.00	577.63	581.72	577.76	581.74	577.58	577.61	577.57
	DIFF.	4.32		4.37		3.96		4.16			
1/3/95 9:30	DEPTH	7.07	10.31	6.42	10.39	4.85	9.39	4.83	10.22	14.28	14.32
	ELEV.	581.82	577.76	581.88	577.69	581.71	577.81	581.81	577.65	577.70	577.66
	DIFF.	4.06		4.19		3.90		4.16			
1/5/95 14:30	DEPTH	7.14	10.04	6.48	10.11	4.95	9.11	4.90	9.94	13.99	14.03
	ELEV.	581.75	578.03	581.82	577.97	581.61	578.09	581.74	577.93	577.99	577.95
	DIFF.	3.72		3.85		3.52		3.81			

TABLE 31
(Continued)
EAST CONTAINMENT GROUND WATER DATA
WAUKEGAN HARBOR REMEDIAL ACTION

		W-5	P-5	W-6	P-6	W-7	P-7	W-8	P-8	R-3	R-4
	T.O.R.	588.89	588.07	588.30	588.08	586.56	587.20	586.64	587.87	591.98	591.98
DATE		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
3/13/95 0:00	DEPTH	6.14	9.83	5.44	9.95	3.95	8.59	3.87	9.73	13.65	13.83
	ELEV.	582.75	578.24	582.86	578.13	582.61	578.61	582.77	578.14	578.33	578.15
	DIFF.	4.51		4.73		4.00		4.63			
3/24/95 0:00	DEPTH	6.69	10.18	6.14	10.19	5.12	9.23	5.09	10.08		
	ELEV.	582.20	577.89	582.16	577.89	581.44	577.97	581.55	577.79	591.98	591.98
	DIFF.	4.31		4.27		3.47		3.76			
5/25/95 0:00	DEPTH	6.73	9.86	6.06	9.95	5.05	8.99	5.35	9.77	13.83	13.83
	ELEV.	582.16	578.21	582.24	578.13	581.51	578.21	581.29	578.10	578.15	578.15
	DIFF.	3.95		4.11		3.30		3.19			
7/7/95 0:00	DEPTH	7.15	9.78	6.37	9.87	5.45	8.92	6.70	9.68	13.77	13.78
	ELEV.	581.74	578.29	581.93	578.21	581.11	578.28	579.94	578.19	578.21	578.20
	DIFF.	3.45		3.72		2.83		1.75			
8/3/95 0:00	DEPTH	6.92	9.55	6.20	9.72	5.43	8.78	5.71	9.54	13.60	13.65
	ELEV.	581.97	578.52	582.10	578.36	581.13	578.42	580.93	578.33	578.38	578.33
	DIFF.	3.45		3.74		2.71		2.60			
8/7/95 0:00	DEPTH	7.12	9.59	6.22	9.68	5.19	8.74	5.23	9.50	13.58	13.60
	ELEV.	581.77	578.48	582.08	578.40	581.37	578.46	581.41	578.37	578.40	578.38
	DIFF.	3.29		3.68		2.91		3.04			
8/29/95 0:00	DEPTH	6.92	9.50	6.31	9.69	5.42	8.75	5.35	9.50	13.58	13.60
	ELEV.	581.97	578.57	581.99	578.39	581.14	578.45	581.29	578.37	578.40	578.38
	DIFF.	3.40		3.60		2.69		2.92			

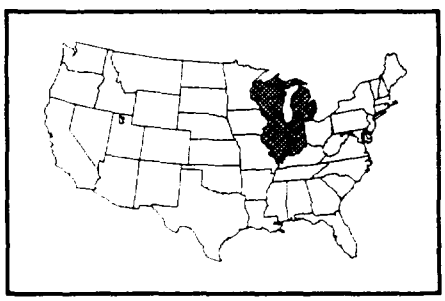
TABLE 32

CATEGORY 7 WATER TREATMENT
PCB ANALYTICAL RESULTS
WAUKEGAN HARBOR REMEDIAL ACTION
(Results in µg/l)

Sample Date	System Effluent	Lead Carbon Effluent	Cartridge Filter	System Influent	System Influent Duplicate	Blank	Notes
7/6/93							
7/12/93							
7/19/93							
7/28/93							
8/4/93							
8/6/93							
8/10/93							
8/16/93	<1.0	<1.0	<1.0	<1.0			
8/17/93							
8/23/93							
8/24/93		<1.0		<1.0	<1.0		
8/30/93		<1.0		<1.0	<1.0		
9/7/93	<1.0	<1.0		<1.0			
9/13/93		<1.0		<1.0		<1.0	
9/16/93							
9/20/93		<1.0		<1.0			
9/28/93		<1.0		<1.0	<1.0	<1.0	
10/4/93	<1.0	<1.0		<1.0			
10/11/93		<1.0		<1.0		<1.0	
10/18/93		<1.0		<1.0			
10/25/93		<1.0		<1.0	<1.0	<1.0	
11/1/93	<1.0	<1.0		<1.0			
11/8/93		<1.0		<1.0	<1.0		
11/15/93		<1.0		<1.0			
11/22/93		<1.0		<1.0			
11/23/93							
11/29/93		<1.0		<1.0			
12/6/93	<1.0	<1.0		<1.0	<1.0		
12/13/93		<1.0		<1.0	<1.0		
12/20/93		<1.0		<1.0			Category 7 plant shut down and decommissioned.

Discharge Standards: Lead carbon effluent less than 1.0 ug/l for consecutive sampling events.
System effluent to be less than 1.0 ug/l on a 30-day average with no result greater than 5.0 ug/l.

DRAWING NUMBER 87-126-A566



SITE LOCATION MAP
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

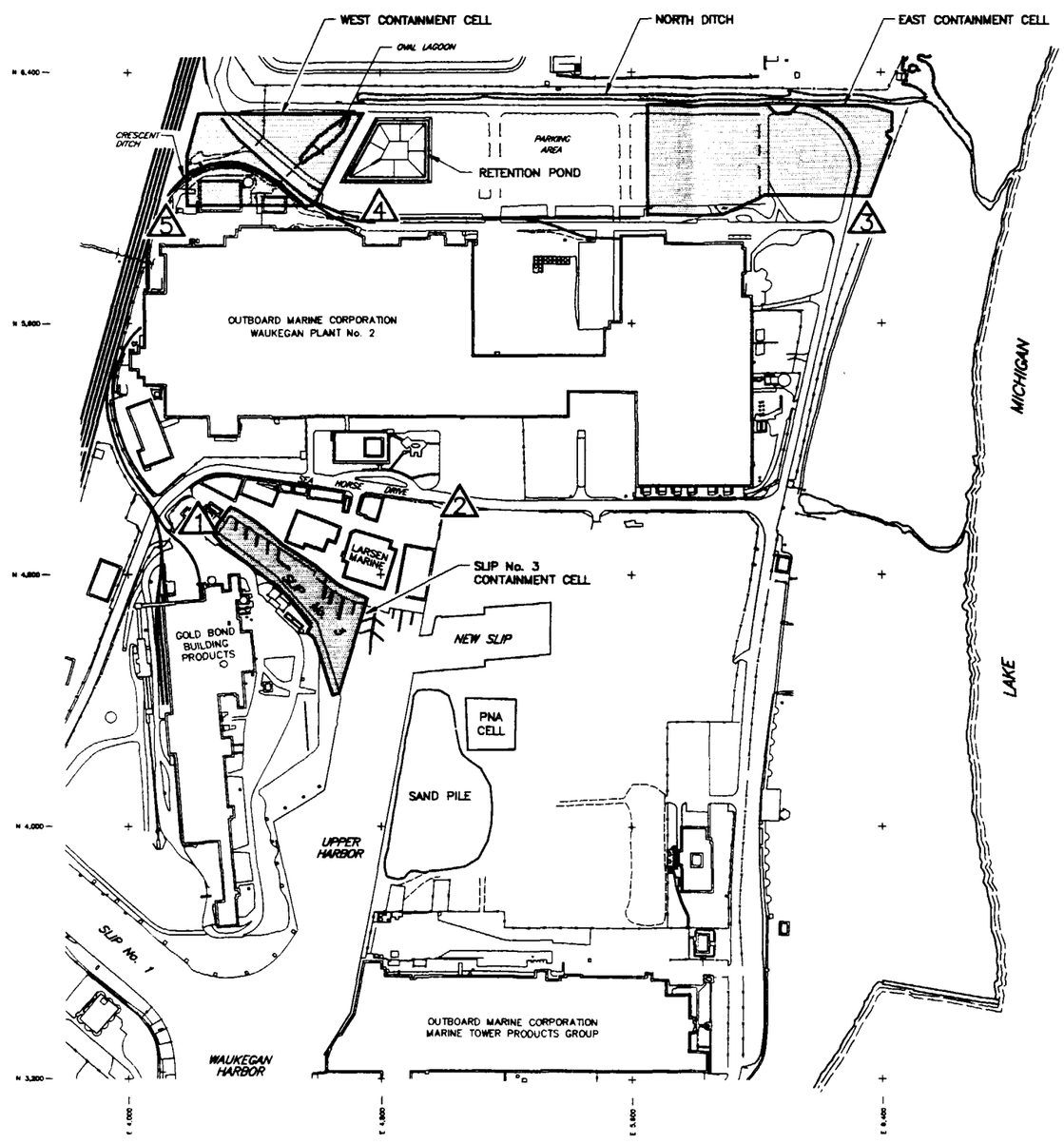
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY	DATE 5-14-96 SCALE N.T.S.	FIGURE 1	DRAWING NUMBER 87-126-A566
1	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD			

1

DRAWING NUMBER 87-126-E567

N



LEGEND:

1 AIR MONITORING STATION

SCALE
200 0 200 400 FEET

GENERAL SITE PLAN AND
AIR MONITORING STATION LAYOUT
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
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WAUKEGAN HARBOR TRUST

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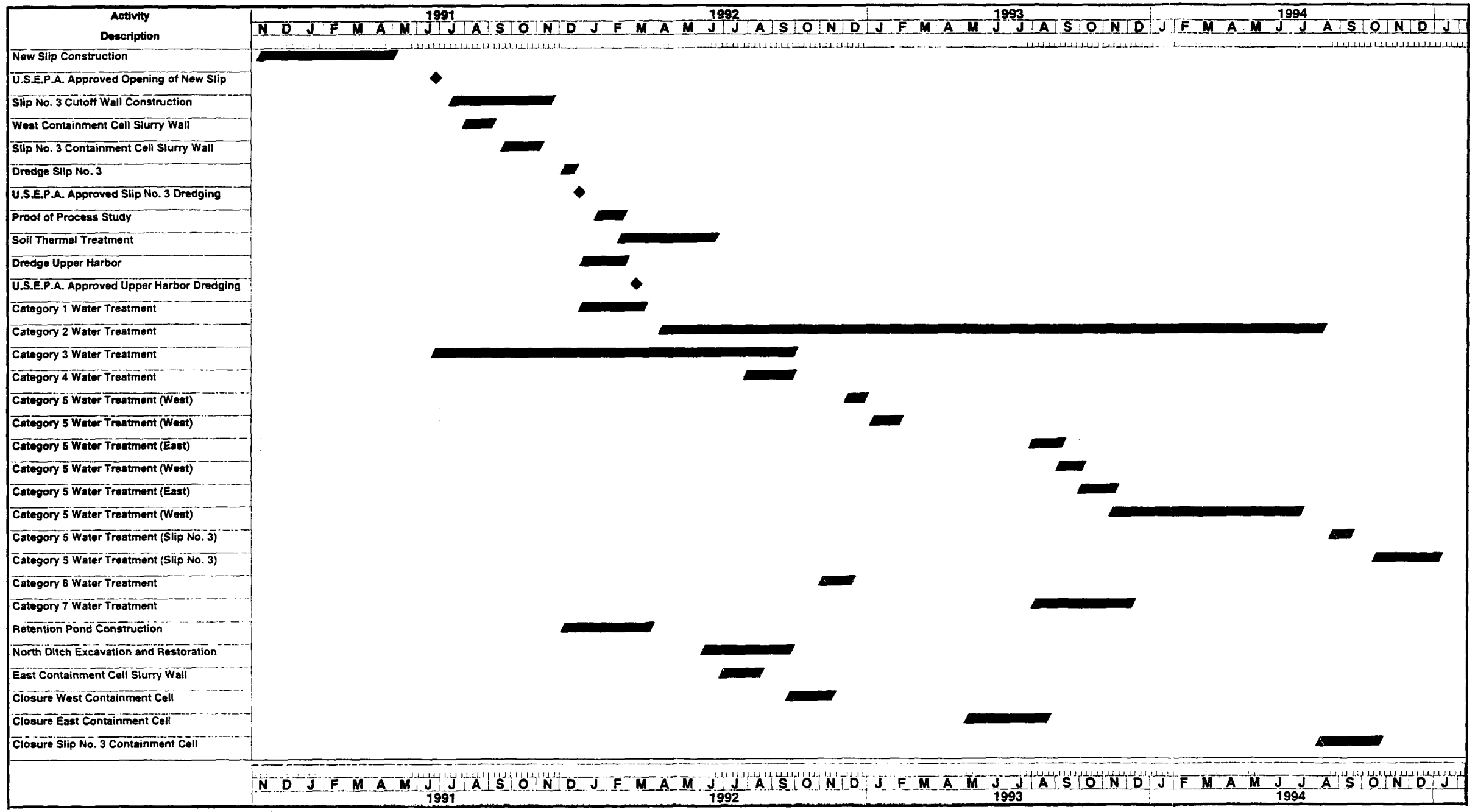
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD

REFERENCES:
-TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-26-88.

DATE: 5-14-96	FIGURE 2	DRAWING NUMBER 87-126-E567	1
SCALE: AS SHOWN			

DRAWING NUMBER 87-126-B574



NOTE:

1. CLOSURE OF THE CONTAINMENT CELL IS CONSIDERED TO START WITH THE PLACEMENT OF THE SIX INCH SOIL LAYER BENEATH THE LINER AND COMPLETED WITH THE HYDROSEEDING OF THE CONTAINMENT CELL.

CONSTRUCTION TIME LINE
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

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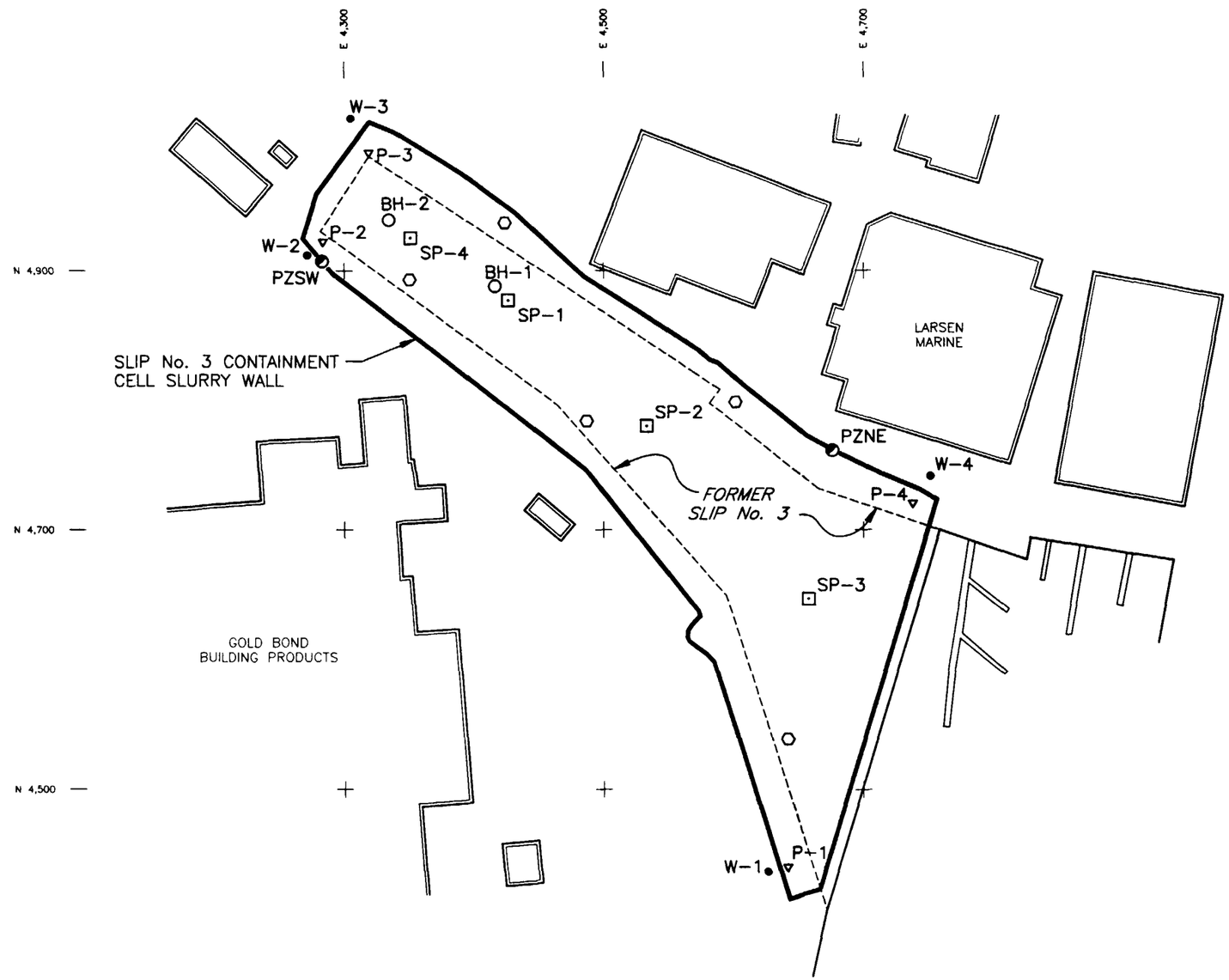
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	6-24-96	ISSUED FINAL	M.A.M	KMB	SD

DATE: 6-11-96	FIGURE 3	DRAWING NUMBER
SCALE: NONE		87-126-B574

1

DRAWING NUMBER 87-126-B552

N



LEGEND:

- ⊡ SETTLEMENT PLATE
- ○ TEMPORARY PIEZOMETER
- ○ TEMPORARY RECOVERY WELL
- ◐ OBSERVATION WELL INSTALLED AT CENTER LINE OF SLURRY WALL FOR INSITU PERMEABILITY TESTS (REMOVED PRIOR TO FINAL CAP)

SCALE

100 0 100 FEET

SITE PLAN
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

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No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
2	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD
1	11-17-95	ISSUED DRAFT TO CLIENT	J.D.J.	KMB	TJH

DATE: 11-17-95	FIGURE 4	DRAWING NUMBER 87-126-B552
SCALE: AS SHOWN		

2

DRAWING NUMBER 87-126-B504

N

SEA HORSE DRIVE

584.1
584.1
583.25
583.3
583.6
583.2
582.8
583.5
583.0
582.7
582.8
583.9
584.7
584.4
584.8
585.2
584.8
584.8
584.3
584.0
583.5
584.0
584.0
584.0

ASPHALT

GRAVEL

CB-1
RIM EL. 582.83

CB-2
RIM EL. 583.07

CB-3
RIM EL. 583.5

CB-4
RIM EL. 583.59

CB-5
RIM EL. 583.85

SEE NOTE 2

C
C'

A
A'

B
B'

MAST BUILDING

T/SLAB
584.7

T/SLAB
584.2

LARSEN MARINE MAIN BUILDING

VEGETATION COVER

VEGETATION COVER

VEGETATION COVER

VEGETATION COVER

VEGETATION COVER

55'

100'

SLIP No. 3 CONTAINMENT CELL

SLIP No. 3 CUTOFF WALL

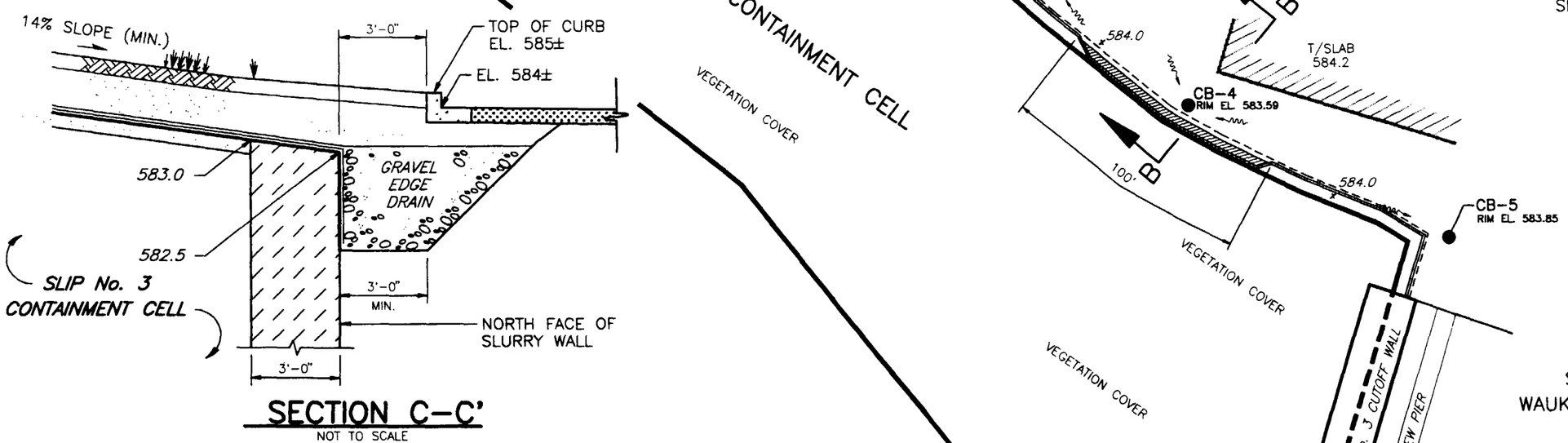
NEW PIER

LEGEND:

- PROPOSED CURB
- UTILITY POLE
- SLURRY WALL
- CB — CATCH BASIN
- SURFACE RUNOFF
- PROPOSED CONCRETE SLAB

NOTES:

1. SEE DRAWING 87-126-B505 FOR SECTION A-A'. SEE DRAWING 87-126-B506 FOR SECTION B-B'.
2. STANDARD STREET CURB IS LOCATED 3 FEET FROM NORTH FACE OF SLURRY WALL. SEE SECTIONS A-A' AND B-B' FOR CURB LOCATION ON CONCRETE SLAB.



SECTION C-C'

NOT TO SCALE

SCALE

50 0 50 FEET

NORTH PERIMETER DRAINAGE
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

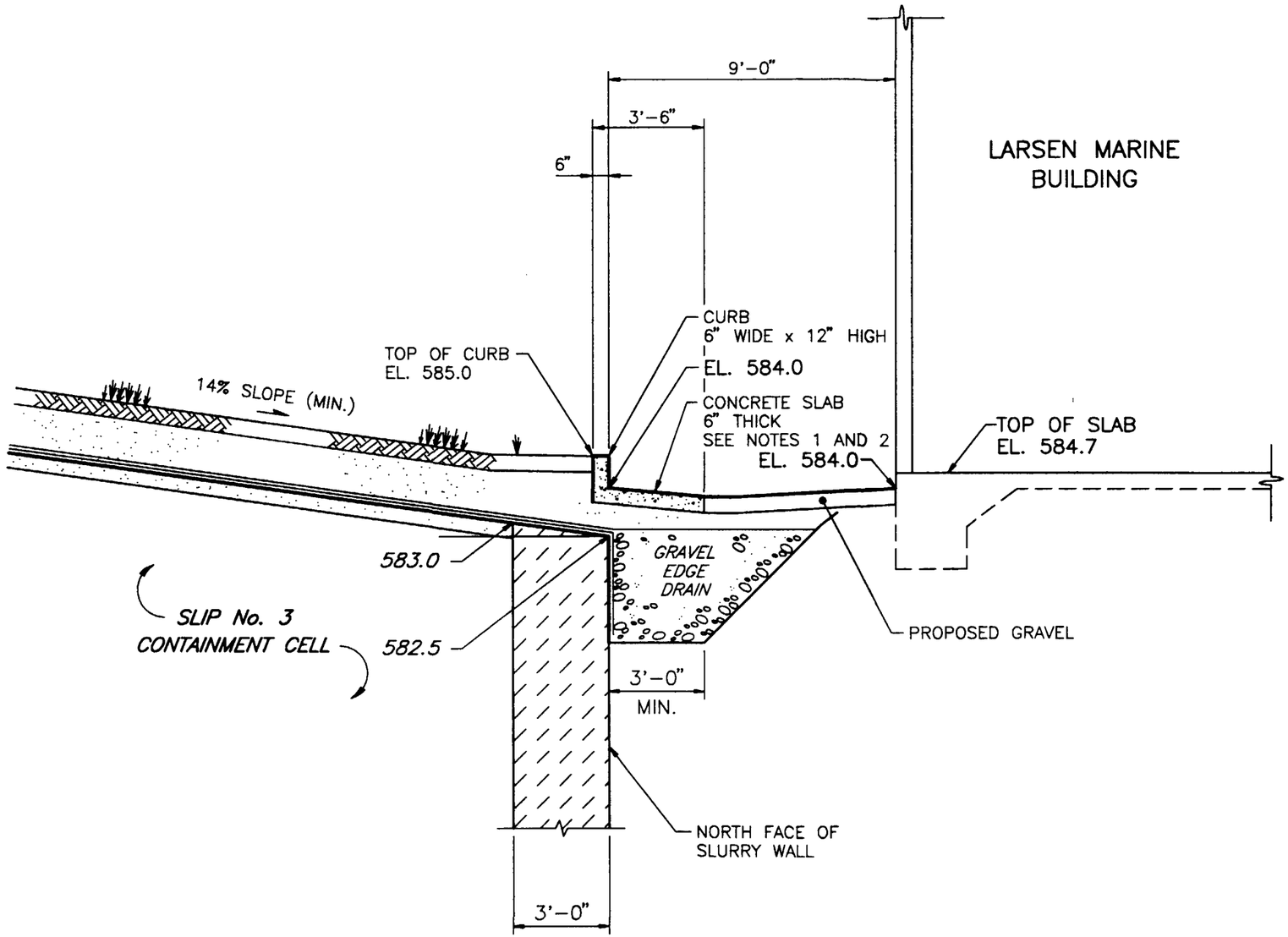
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
4	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD
3	11-21-94	CHANGED CURB DIMENSION	SAK	KMB	KMB

DATE: 8-31-94	FIGURE 5	DRAWING NUMBER 87-126-B504
SCALE: AS SHOWN		

4

DRAWING NUMBER 87-126-B505



SECTION A–A'

NOTES:

1. CONCRETE SLAB SHALL BE REINFORCED WITH 2 LAYERS OF 4 x 4 – W4 x W4 WELDED WIRE FABRIC. ONE LAYER 1" BELOW TOP OF CONCRETE AND SECOND LAYER 2" FROM BOTTOM OF CONCRETE. CONCRETE SHALL BE PLACED OVER A POLYVINYL SHEET.
2. CONCRETE SHALL BE SLOPED TOWARD CATCH BASINS AND CENTER OF SWALE.

SCALE

4'-0" 0 4'-0"

SECTION A–A'
NORTH PERIMETER DRAINAGE
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

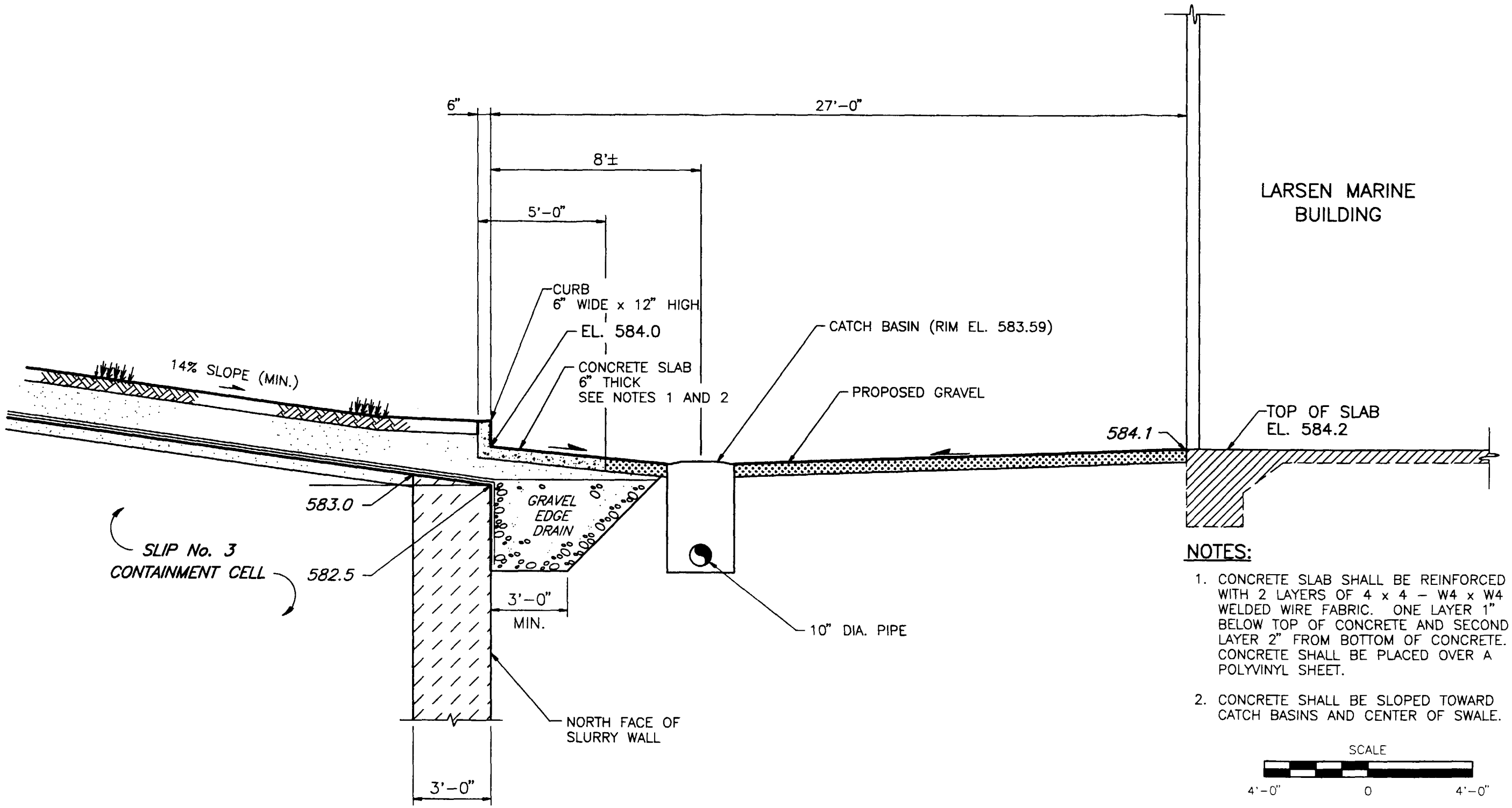
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
3	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD
2	10-19-94	ADDED CONCRETE SLAB AND NOTE 2, CHANGED NOTE 1	SAK	KMB	KMB
1	9-2-94	ISSUED TO AGENCY	M_A_M	KMB	KMB

DATE: 9-1-94	FIGURE 6	DRAWING NUMBER
SCALE: AS SHOWN		87-126-B505

3

DRAWING NUMBER 87-126-B506



SECTION B-B'

NOTES:

1. CONCRETE SLAB SHALL BE REINFORCED WITH 2 LAYERS OF 4 x 4 – W4 x W4 WELDED WIRE FABRIC. ONE LAYER 1" BELOW TOP OF CONCRETE AND SECOND LAYER 2" FROM BOTTOM OF CONCRETE. CONCRETE SHALL BE PLACED OVER A POLYVINYL SHEET.
2. CONCRETE SHALL BE SLOPED TOWARD CATCH BASINS AND CENTER OF SWALE.

SCALE

4'-0" 0 4'-0"

SECTION B-B'
NORTH PERIMETER DRAINAGE
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

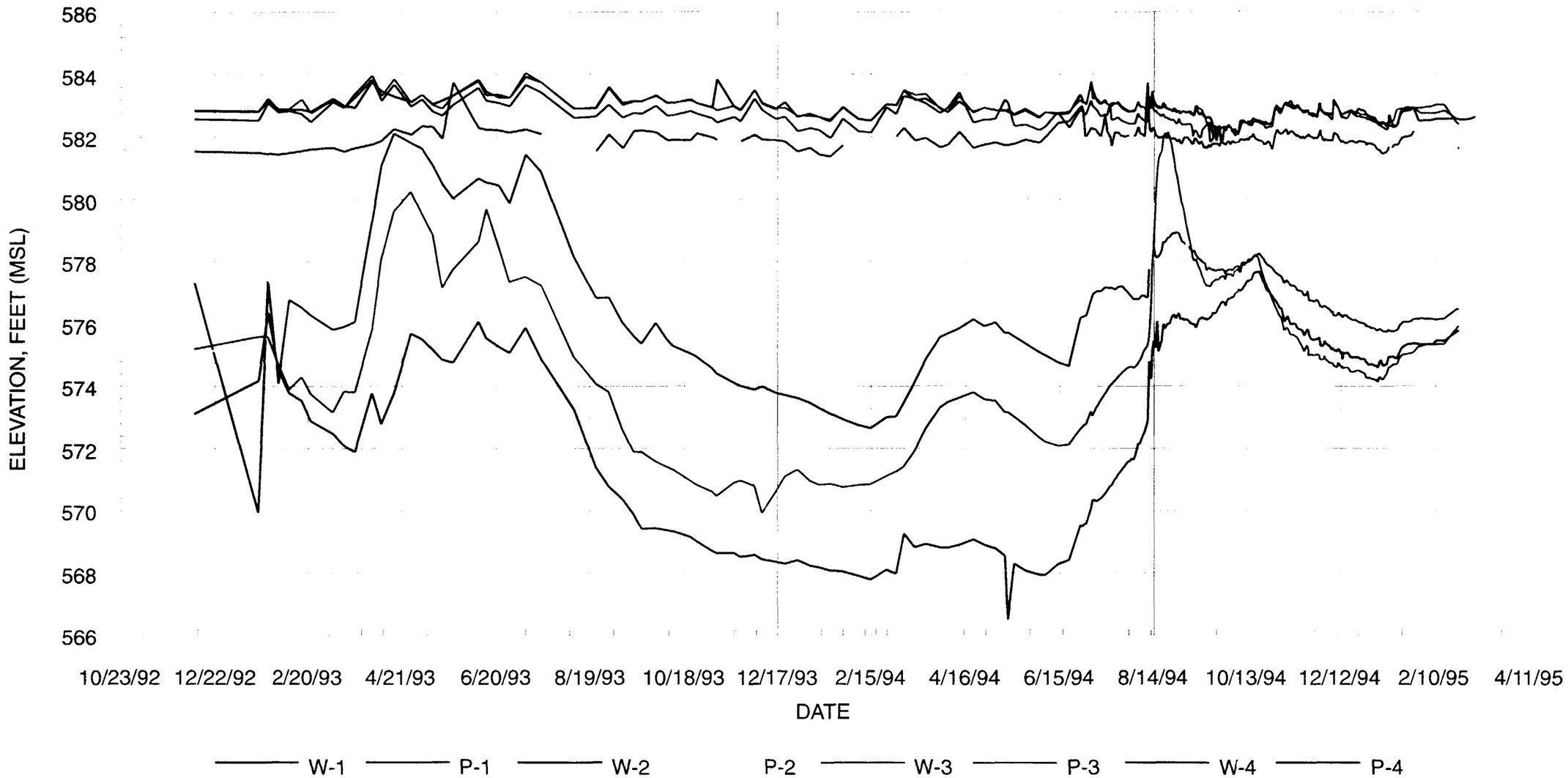
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
3	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD
2	10-19-94	ADDED CONCRETE SLAB AND NOTE 2, CHANGED NOTE 1	SAK	KMB	KMB
1	9-2-94	ISSUED TO AGENCY	M_A_M	KMB	KMB

DATE: 8-31-94	FIGURE 7	DRAWING NUMBER 87-126-B506
SCALE: AS SHOWN		

3

DRAWING NUMBER 87-126-B571



GROUND WATER ELEVATION vs. TIME
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

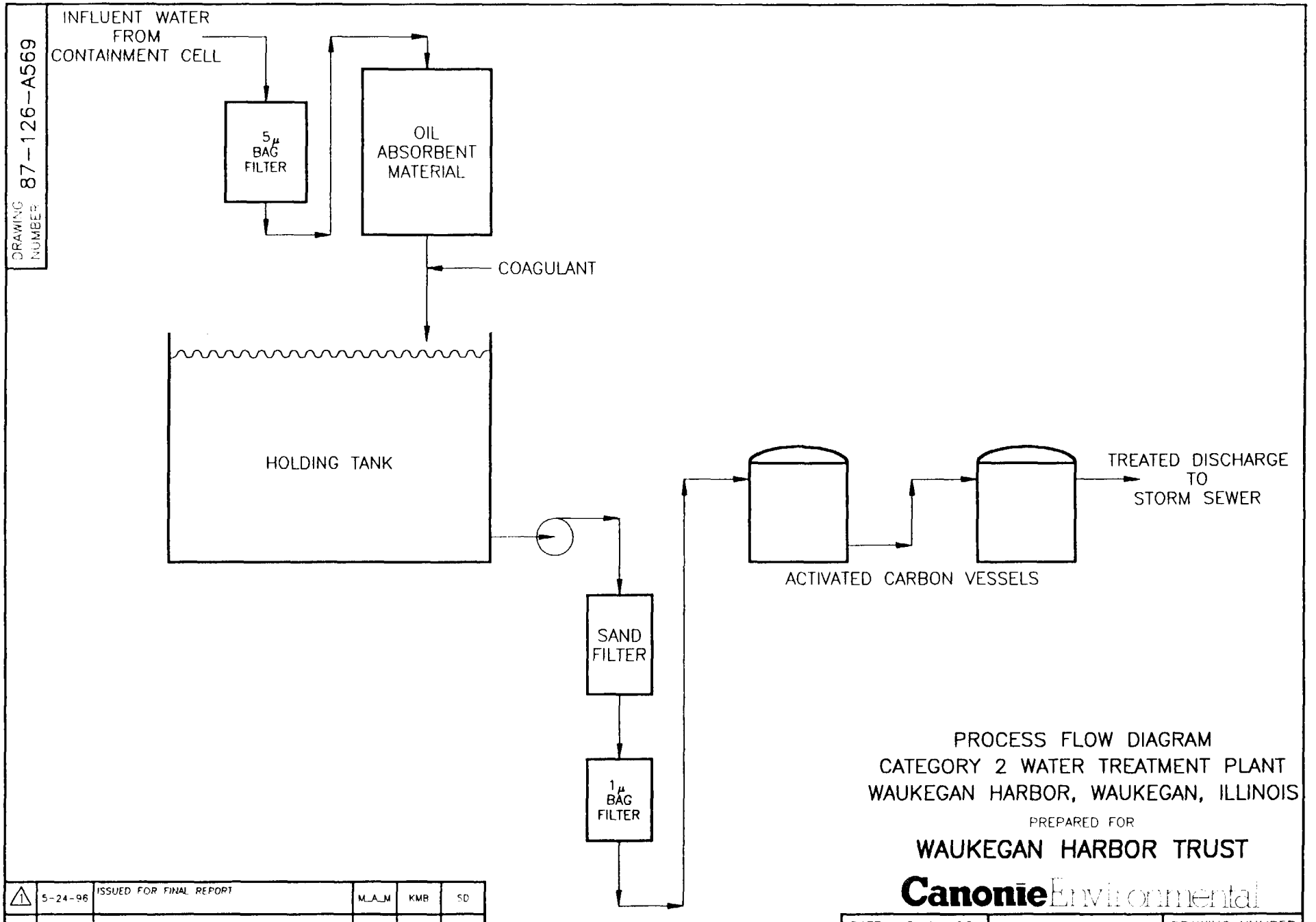
WAUKEGAN HARBOR TRUST

Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD

DATE: 5-24-96	**FIGURE 8**	DRAWING NUMBER 87-126-B571
SCALE: NONE		

1



PROCESS FLOW DIAGRAM
CATEGORY 2 WATER TREATMENT PLANT
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

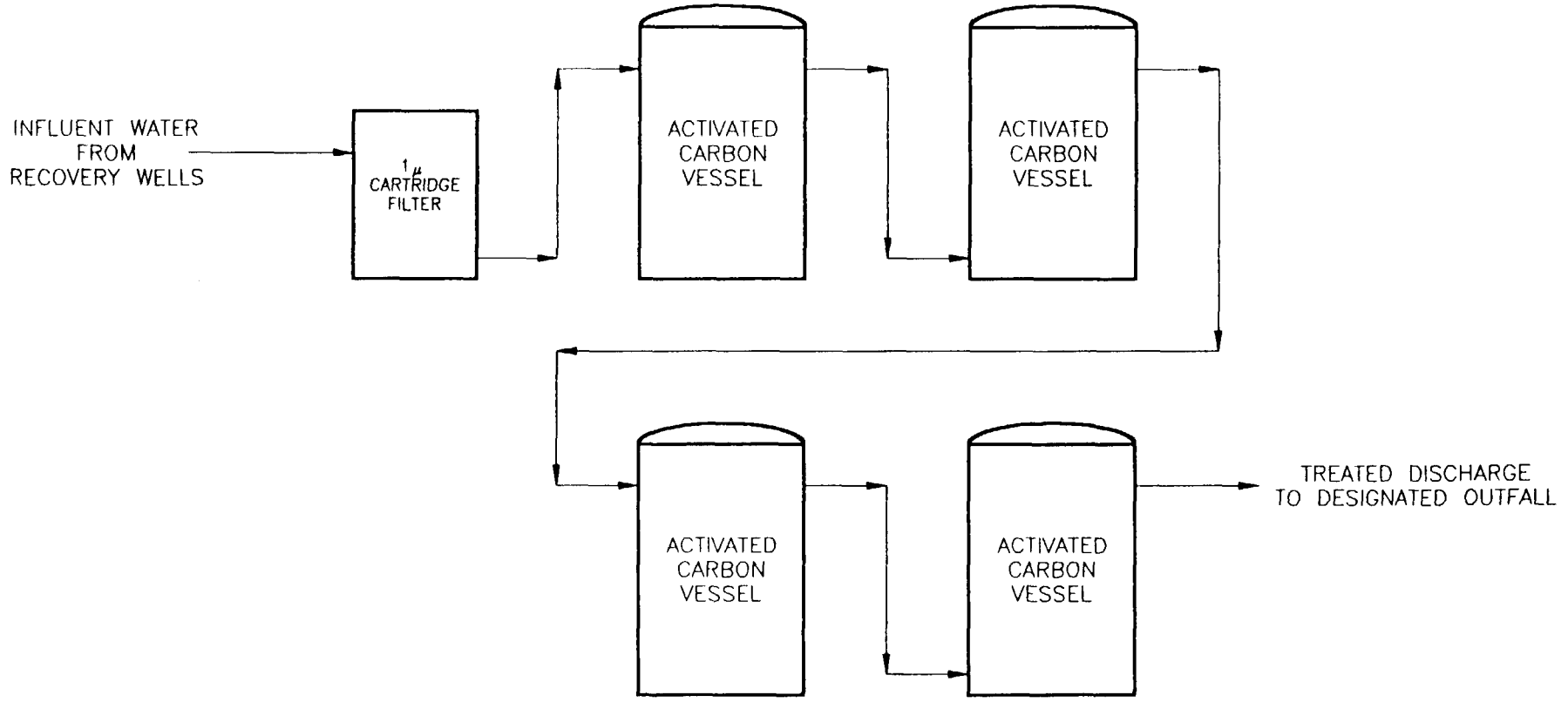
Canonie Environmental

No	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD

DATE: 5-14-96	FIGURE 10	DRAWING NUMBER 87-126-A569
SCALE: NONE		

1

DRAWING NUMBER 87-126-A568



PROCESS FLOW DIAGRAM
CATEGORY 5 WATER TREATMENT PLANT
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

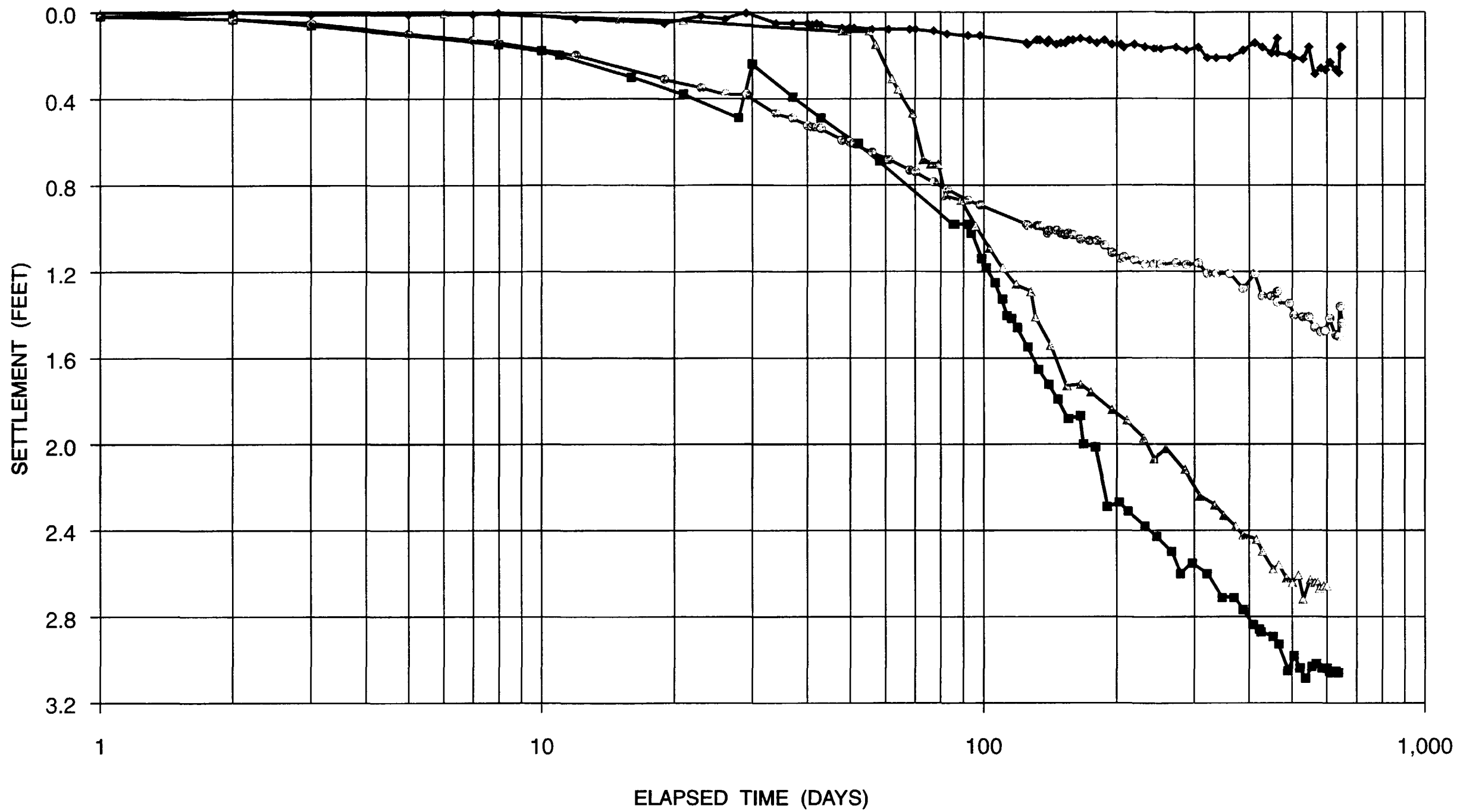
Canonie Environmental

No	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD

DATE: 11-17-95	FIGURE 9	DRAWING NUMBER 87-126-A568
SCALE: NONE		

1

DRAWING NUMBER 87-126-B553



LEGEND:

- ■ SETTLING PLATE 1 INSTALLED 9-14-92
- ○ SETTLING PLATE 2 INSTALLED 8-5-92
- ◆ SETTLING PLATE 3 INSTALLED 8-5-92
- △ SETTLING PLATE 4 INSTALLED 10-21-92

NOTES:

1. HEAVY EQUIPMENT WAS OPERATED NEAR SETTLING PLATE 1 ON OCTOBER 13, 1992 (DAY 29 FOR PLATE 1) DURING PLACEMENT OF CLEAN SAND OVER THE SLIP.
2. THE WESTERN PORTION OF THE SLIP WAS SURCHARGED WITH CLEAN SAND ON DECEMBER 9, 1992 (DAY 86 FOR PLATE 1 AND DAY 49 FOR PLATE 4).

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
2	5-24-96	ISSUED FOR FINAL REPORT	M-A-M	KMB	SD
1	11-17-95	ISSUED DRAFT TO CLIENT	SJM	SJM	KMB

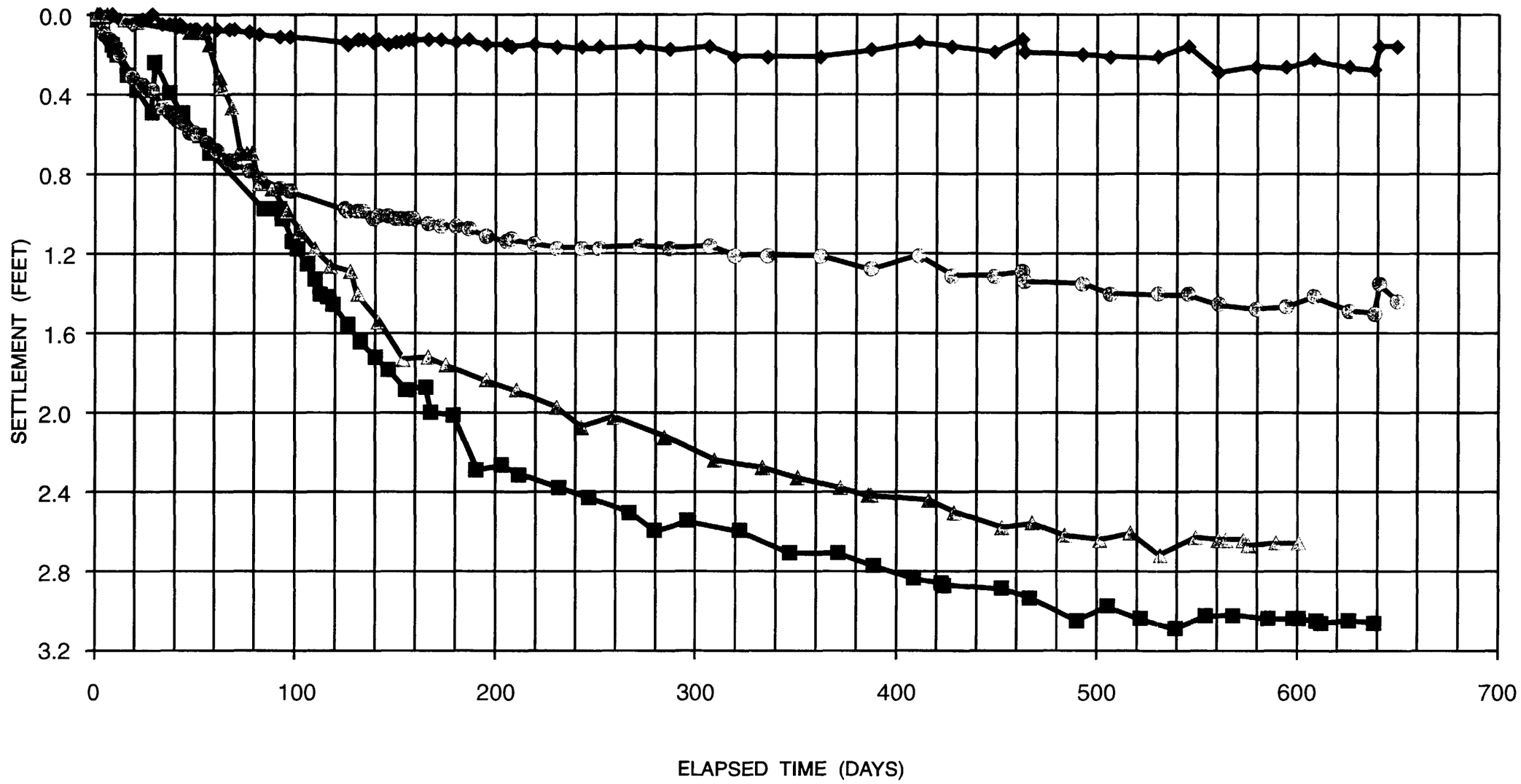
SEMI-LOG PLOT
SETTLING PLATE DATA
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 6-21-94	FIGURE 11	DRAWING NUMBER
SCALE: NONE		87-126-B553

2

DRAWING NUMBER 87-126-B554



LEGEND:

- ■ SETTLING PLATE 1 INSTALLED 9-14-92
- ◉ SETTLING PLATE 2 INSTALLED 8-5-92
- ◆ SETTLING PLATE 3 INSTALLED 8-5-92
- △ SETTLING PLATE 4 INSTALLED 10-21-92

NOTES:

1. HEAVY EQUIPMENT WAS OPERATED NEAR SETTLING PLATE 1 ON OCTOBER 13, 1992 (DAY 29 FOR PLATE 1) DURING PLACEMENT OF CLEAN SAND OVER THE SLIP.
2. THE WESTERN PORTION OF THE SLIP WAS SURCHARGED WITH CLEAN SAND ON DECEMBER 9, 1992 (DAY 86 FOR PLATE 1 AND DAY 49 FOR PLATE 4).

LINEAR PLOT
SETTLING PLATE DATA
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

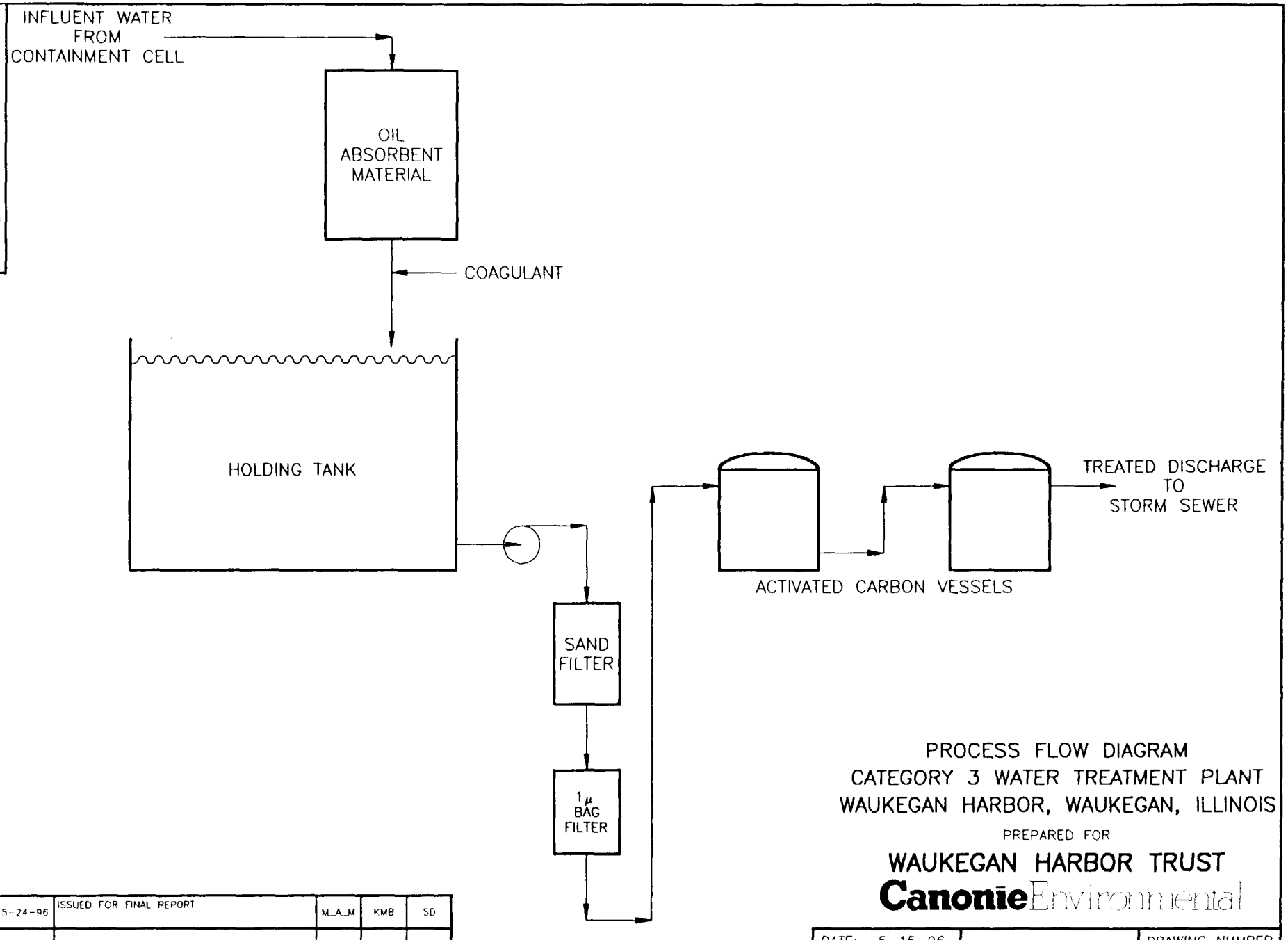
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
2	5-24-96	ISSUED FOR FINAL REPORT	M-A-M	KMB	SD
1	11-17-95	ISSUED DRAFT TO CLIENT	SJM	SJM	KMB

DATE: 6-21-94	FIGURE 12	DRAWING NUMBER
SCALE: NONE		87-126-B554

2

DRAWING NUMBER 87-126-A570



PROCESS FLOW DIAGRAM
CATEGORY 3 WATER TREATMENT PLANT
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

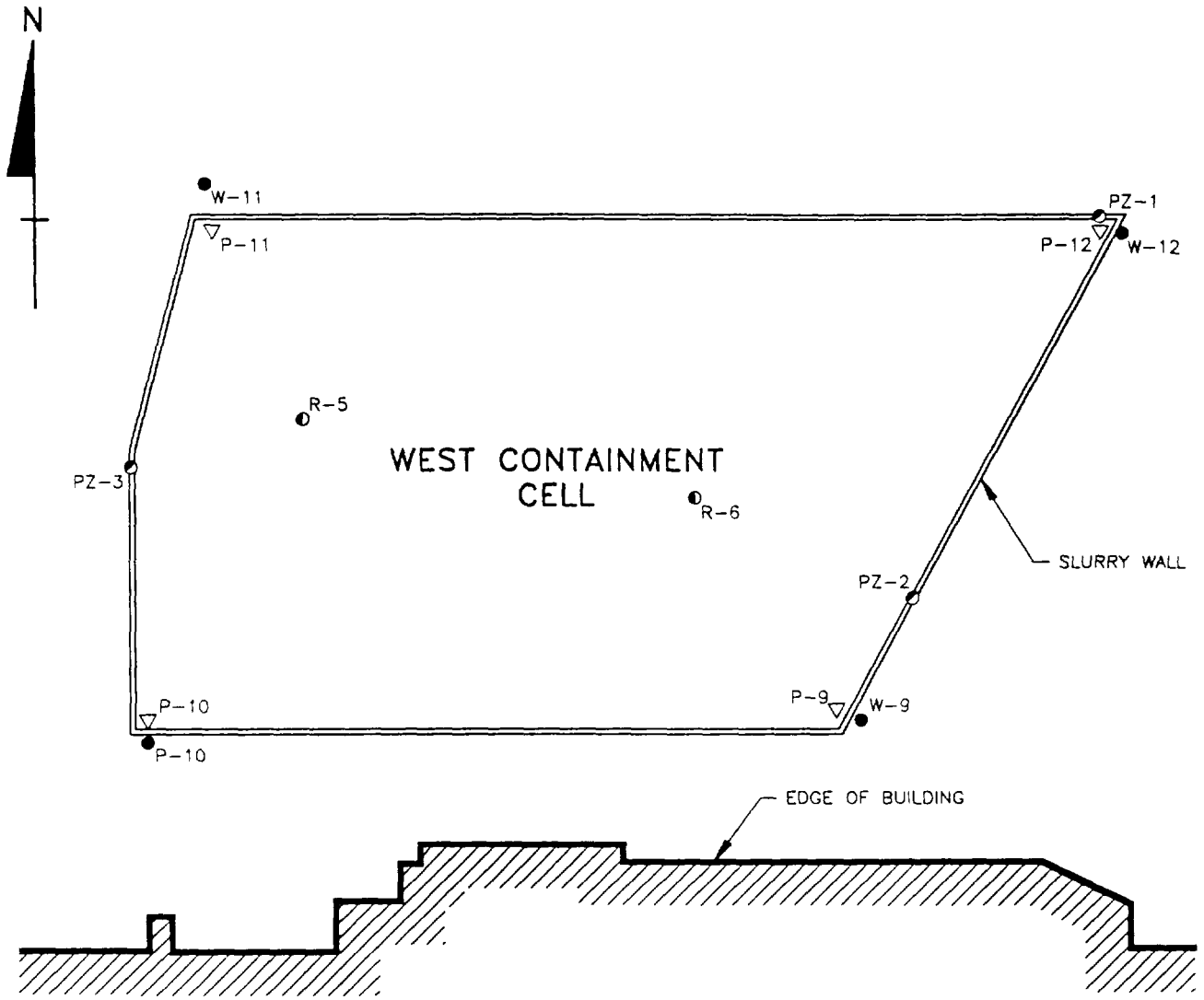
Canonie Environmental

No	DATE	ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD

DATE: 5-15-96	FIGURE 13	DRAWING NUMBER 87-126-A570
SCALE: NONE		

1

DRAWING NUMBER 87-126-A511



OUTBOARD MARINE CORPORATION
WAUKEGAN PLANT No. 2

LEGEND:

- ◐ RECOVERY WELL
- ● MONITORING WELL
- ▽ PIEZOMETER
- ◐ OBSERVATION WELL INSTALLED AT CENTER LINE OF SLURRY WALL FOR INSITU PERMEABILITY TESTS (REMOVED PRIOR TO FINAL CAP)

SCALE

100 0 100 FEET

SITE PLAN
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

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No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD

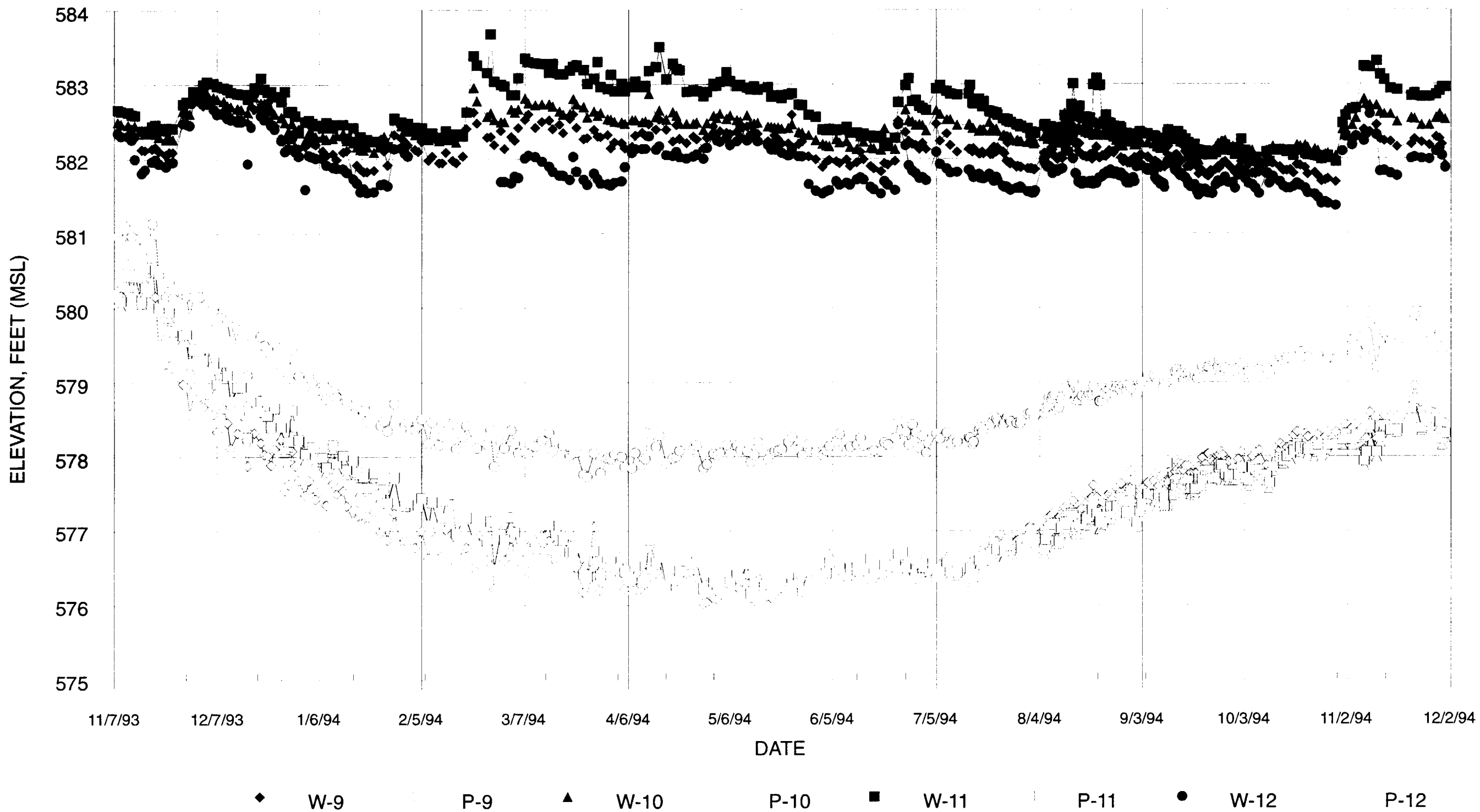
DATE: 9-19-94
SCALE: AS SHOWN

FIGURE 14

DRAWING NUMBER 87-126-A511

1

DRAWING NUMBER 87-126-B572



GROUND WATER ELEVATION vs. TIME
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

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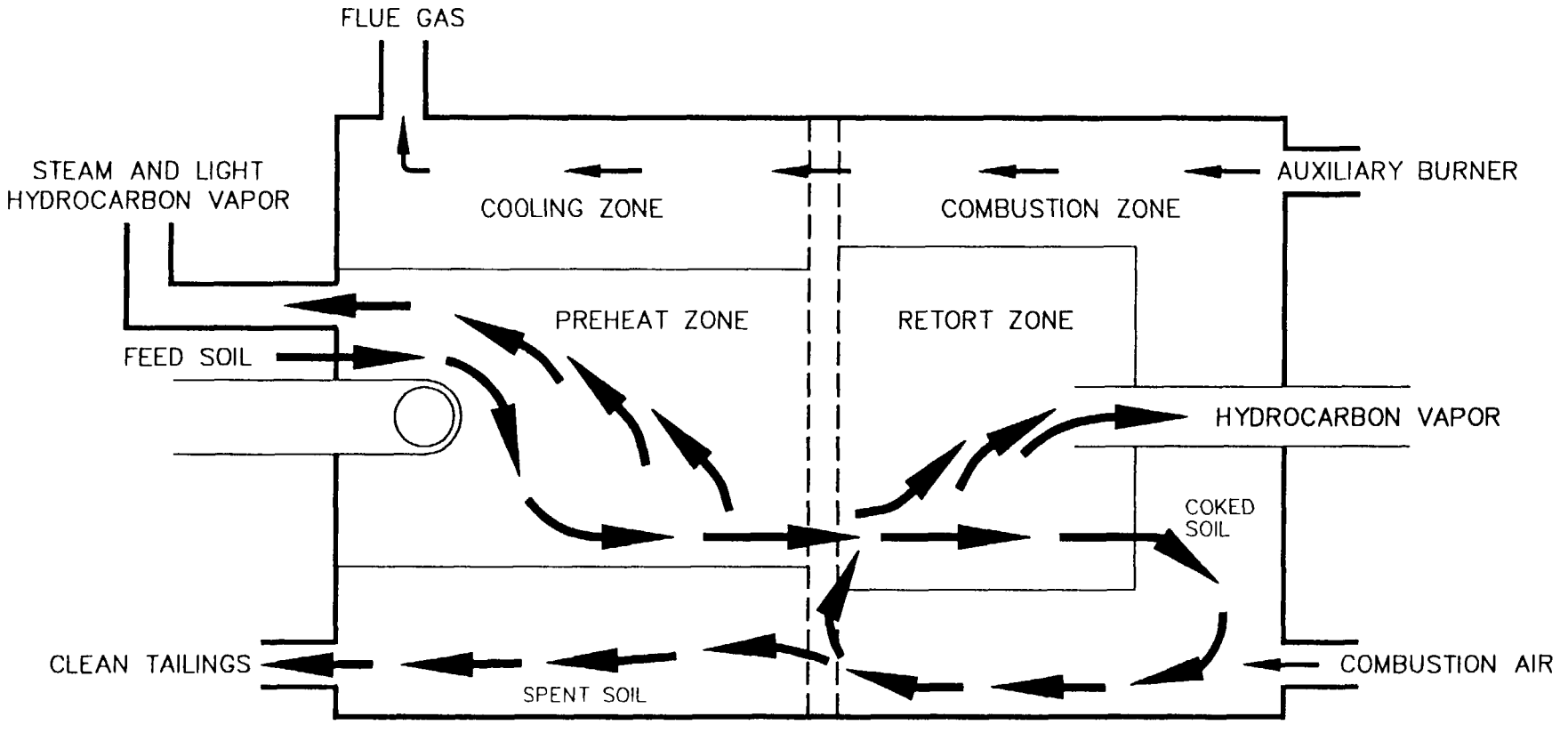
1	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD

DATE: 5-24-96	**FIGURE 15**	DRAWING NUMBER
SCALE: NONE		87-126-B572

1

DRAWING NUMBER 87-126-A141



ANAEROBIC THERMAL PROCESSOR
INTERNAL FLOW DIAGRAM
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

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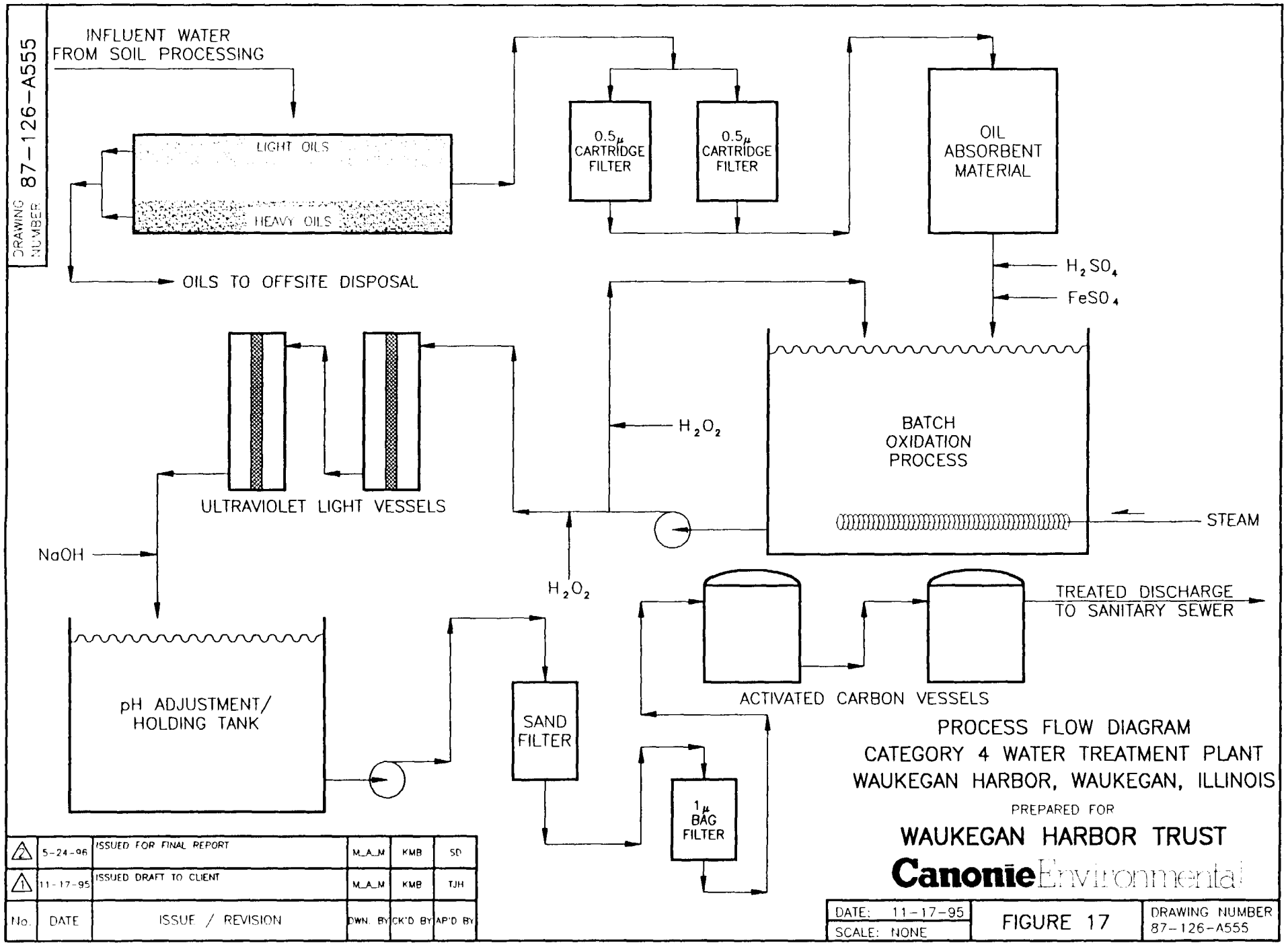
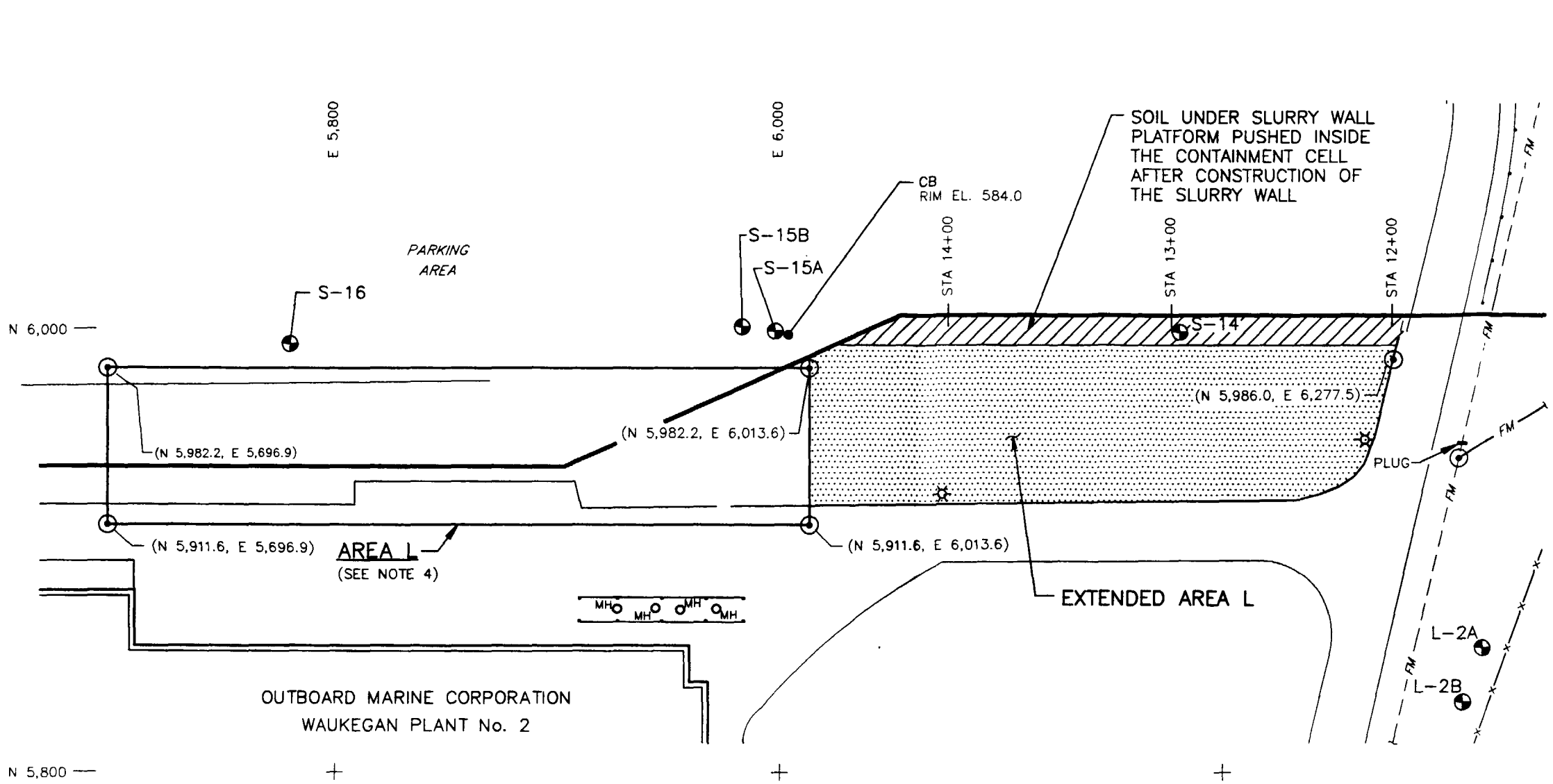
1	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD

DATE: 5-15-96	FIGURE 16	DRAWING NUMBER 87-126-A141
SCALE: N.T.S.		

1


DRAWING NUMBER 87-126-A555
INFLUENT WATER FROM SOIL PROCESSING
LIGHT OILS
HEAVY OILS
OILS TO OFFSITE DISPOSAL
0.5μ CARTRIDGE FILTER
0.5μ CARTRIDGE FILTER
OIL ABSORBENT MATERIAL
H_2SO_4
$FeSO_4$
BATCH OXIDATION PROCESS
STEAM
H_2O_2
ULTRAVIOLET LIGHT VESSELS
NaOH
H_2O_2
TREATED DISCHARGE TO SANITARY SEWER
ACTIVATED CARBON VESSELS
pH ADJUSTMENT/ HOLDING TANK
SAND FILTER
1μ BAG FILTER
PROCESS FLOW DIAGRAM
CATEGORY 4 WATER TREATMENT PLANT
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
Canonie Environmental
2 | 5-24-96 | ISSUED FOR FINAL REPORT | M_A_M | KMB | SD
1 | 11-17-95 | ISSUED DRAFT TO CLIENT | M_A_M | KMB | TJH
No. | DATE | ISSUE / REVISION | DWN. BY | CK'D BY | AP'D BY
DATE: 11-17-95
SCALE: NONE
FIGURE 17
DRAWING NUMBER 87-126-A555
2

DRAWING NUMBER 87-126-B556



LEGEND:

- SLURRY WALL
- SOIL BORING
- FENCE
- CATCH BASIN
- MAN HOLE

SCALE

60 0 60 FEET

EXTENDED AREA L EXCAVATION
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

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WAUKEGAN HARBOR TRUST

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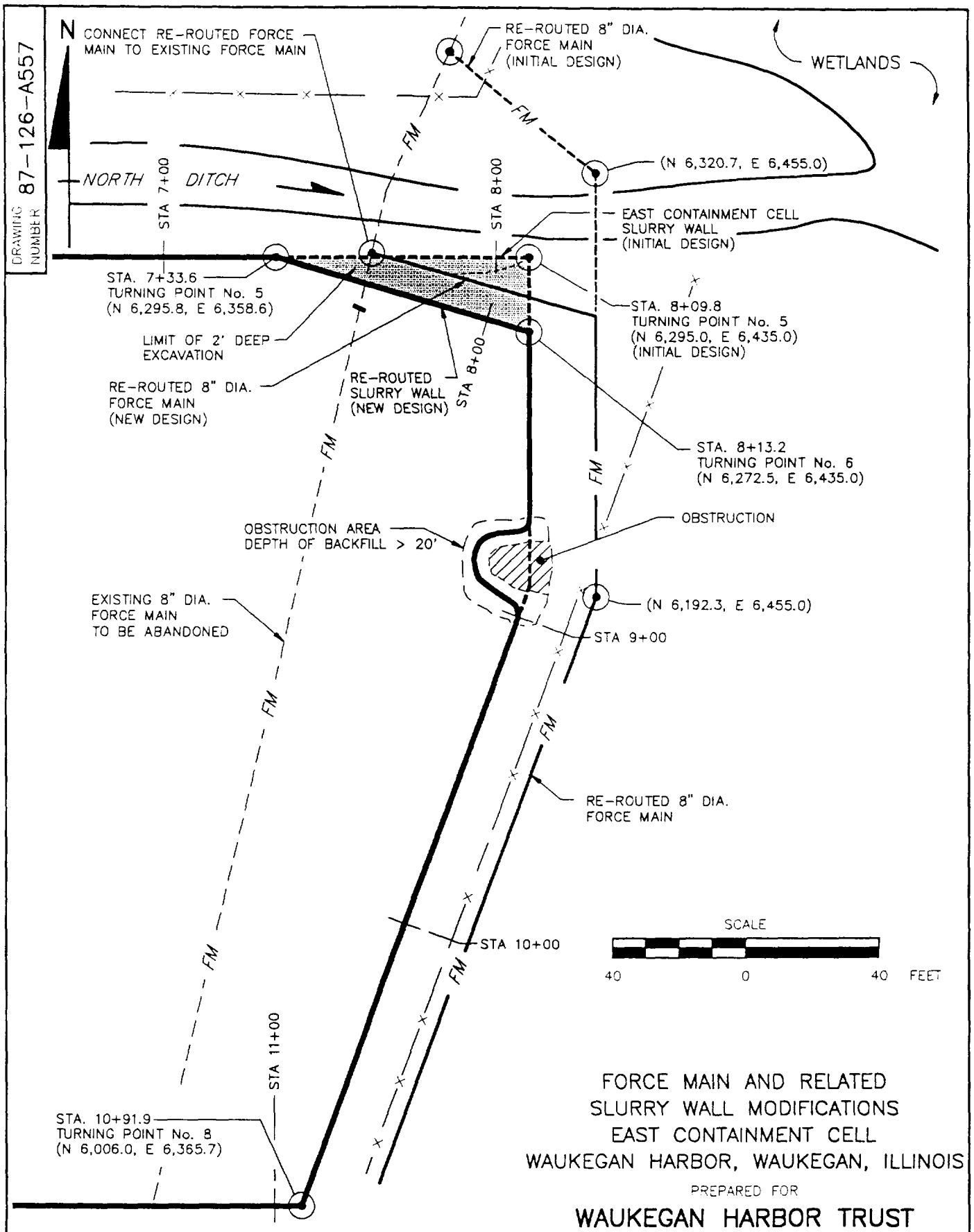
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD

DATE: 11-17-95	FIGURE 18	DRAWING NUMBER 87-126-B556
SCALE: AS SHOWN		

1



FORCE MAIN AND RELATED
SLURRY WALL MODIFICATIONS
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

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WAUKEGAN HARBOR TRUST

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No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	MJM	KMB	SD

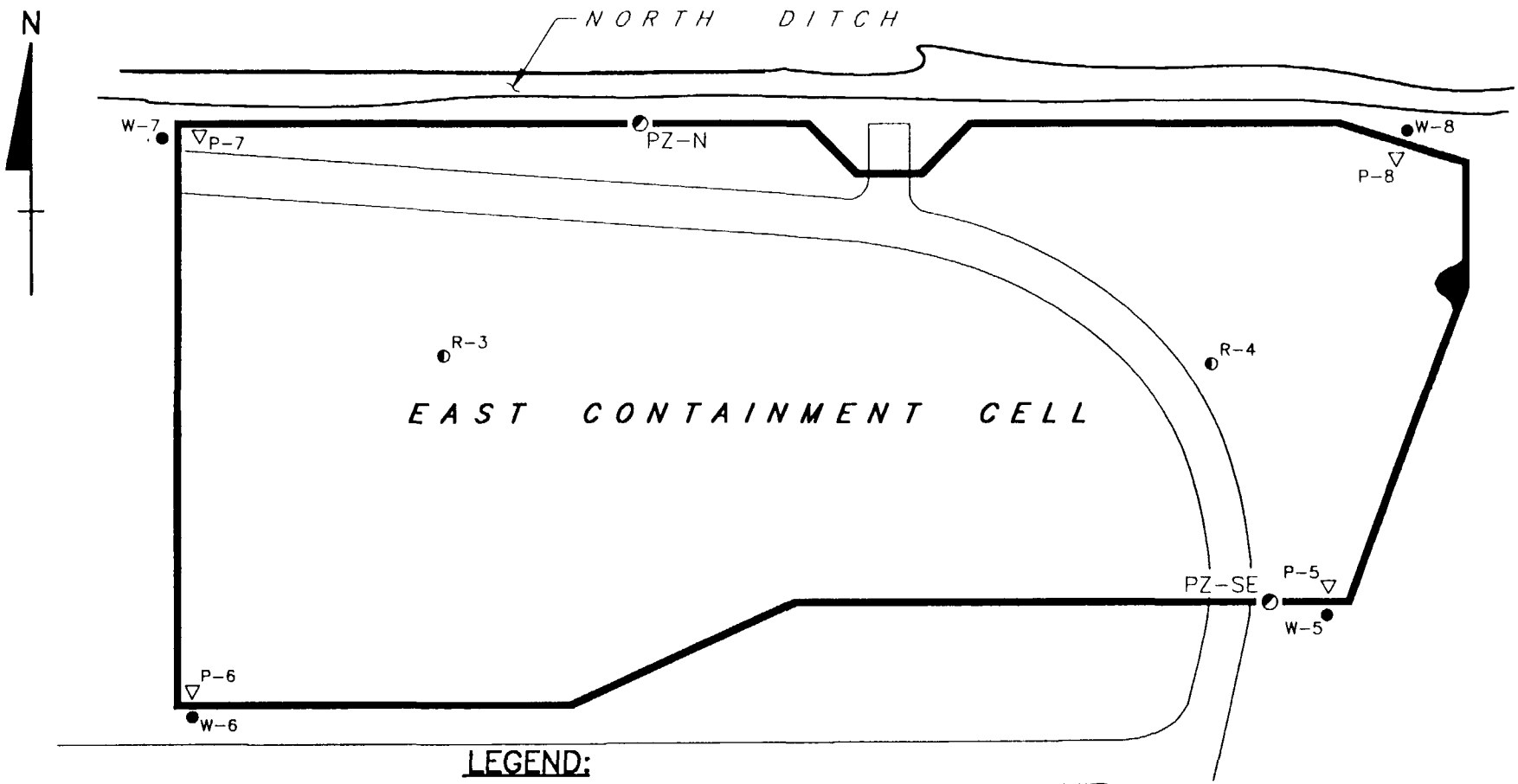
DATE: 11-17-95
SCALE: AS SHOWN

FIGURE 19

DRAWING NUMBER 87-126-A557

1

DRAWING NUMBER 87-126-A558



LEGEND:

- SLURRY WALL
- ● MONITORING WELL
- ▽ PIEZOMETER
- ◐ RECOVERY WELL
- ◐ OBSERVATION WELL INSTALLED AT CENTER LINE OF SLURRY WALL FOR INSITU PERMEABILITY TESTS (REMOVED PRIOR TO FINAL CAP)

SCALE

100 0 100 FEET

SITE PLAN
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

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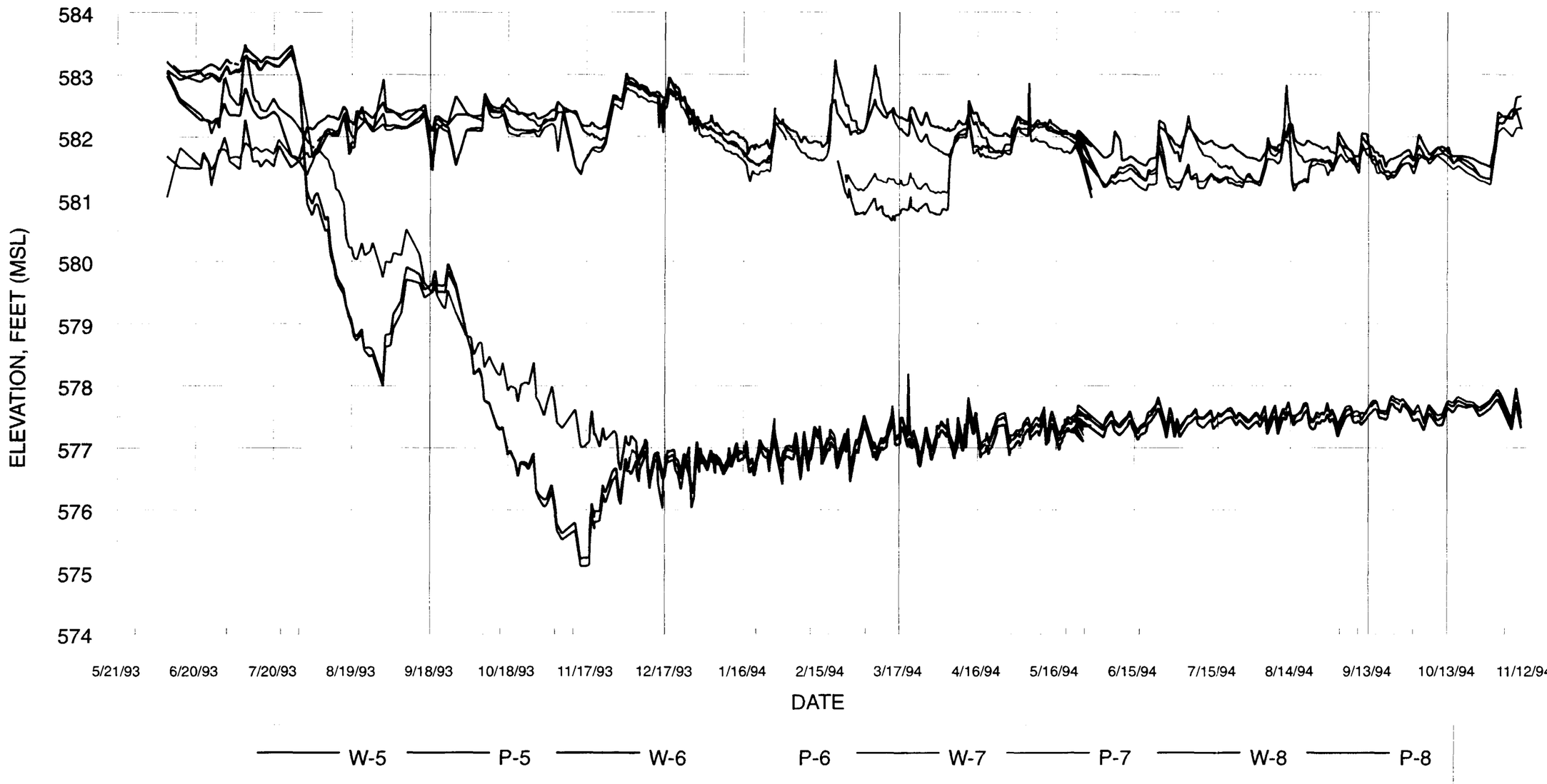
No	DATE	ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY
2	5-24-96	ISSUED FOR FINAL REPORT	M_A_M	KMB	SD
1	11-17-95	ISSUED DRAFT TO CLIENT	M_A_M	KMB	TJH

DATE: 11-17-95	FIGURE 20	DRAWING NUMBER 87-126-A558
SCALE: AS SHOWN		

2

DRAWING NUMBER 87-126-B573



GROUND WATER ELEVATION vs. TIME
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

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WAUKEGAN HARBOR TRUST

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No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-96	ISSUED FOR FINAL REPORT	M.A.M	KMB	SD

DATE: 5-24-96	**FIGURE 21**	DRAWING NUMBER
SCALE: NONE		87-126-B573

1

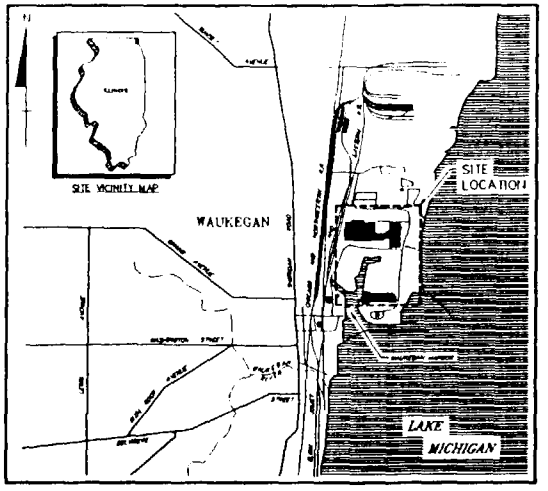
RECORD OF CONSTRUCTION DRAWINGS

WAUKEGAN HARBOR REMEDIATION

WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST



SITE LOCATION MAP
NOT TO SCALE

SHEET NUMBER	DRAWING NUMBER	TITLE
MISCELLANEOUS		
M-1	87-126-E113	RECORD OF CONSTRUCTION SITE PLAN
M-2	87-126-E107	RECORD OF CONSTRUCTION TYPICAL COVER AND SHALE DETAILS
M-3	87-126-E103	RECORD OF CONSTRUCTION RECOVERY WELL, MONITORING WELL, AND PIEZOMETER DETAILS
SLIP No. 3 CONTAINMENT CELL		
S-1	87-126-E47	RECORD OF CONSTRUCTION SLURRY WALL ALIGNMENT, UTILITIES, AND PRECONSTRUCTION SURFACE CONTOURS SLIP No. 3 CONTAINMENT CELL
S-2	87-126-E84	RECORD OF CONSTRUCTION COVER PLAN SLIP No. 3 CONTAINMENT CELL
S-3	87-126-E102	RECORD OF CONSTRUCTION PLAN OF CUTOFF WALL SLIP No. 3 CONTAINMENT CELL
S-4	87-126-E82	RECORD OF CONSTRUCTION CUTOFF WALL SECTION SLIP No. 3 CONTAINMENT CELL
S-5	87-126-E150	RECORD OF CONSTRUCTION CUTOFF WALL NORTH CONNECTION DETAILS SLIP No. 3 CONTAINMENT CELL
S-6	87-126-E151	RECORD OF CONSTRUCTION CUTOFF WALL SOUTH CONNECTION DETAILS SLIP No. 3 CONTAINMENT CELL
S-7	87-126-E48	RECORD OF CONSTRUCTION SOIL PROFILE ALONG ℄ OF SLURRY WALL STATION 0+00 TO STATION 8+50 SLIP No. 3 CONTAINMENT CELL
S-8	87-126-E49	RECORD OF CONSTRUCTION SOIL PROFILE ALONG ℄ OF SLURRY WALL STATION 8+50 TO STATION 0+00/16+00.2 SLIP No. 3 CONTAINMENT CELL
S-9	87-126-E50	RECORD OF CONSTRUCTION CUTOFF WALL PROFILE SLIP No. 3 CONTAINMENT CELL
S-10	87-126-E260	RECORD OF CONSTRUCTION REROUTING OF THE SLIP No. 3 STORMWATER SYSTEM
WEST CONTAINMENT CELL		
W-1	87-126-E40	RECORD OF CONSTRUCTION SLURRY WALL ALIGNMENT WEST CONTAINMENT CELL
W-2	87-126-E73	RECORD OF CONSTRUCTION UTILITY LOCATION PLAN WEST CONTAINMENT CELL
W-3	87-126-E74	RECORD OF CONSTRUCTION COVER PLAN WEST CONTAINMENT CELL
WEST CONTAINMENT CELL (continued)		
W-4	87-126-E97	RECORD OF CONSTRUCTION LIMITS OF EXCAVATION WEST CONTAINMENT CELL
W-5	87-126-E104	RECORD OF CONSTRUCTION CRESCENT DITCH EXCAVATION PROFILES WEST CONTAINMENT CELL
W-6	87-126-E103	RECORD OF CONSTRUCTION OVAL LAGOON EXCAVATION PROFILES WEST CONTAINMENT CELL
W-7	87-126-E105	RECORD OF CONSTRUCTION SETTLING POND LOCATION PLAN WEST CONTAINMENT CELL
W-8	87-126-E44	RECORD OF CONSTRUCTION SOIL PROFILE ALONG ℄ OF SLURRY WALL STATION 5+23.9 TO STATION 13+00 WEST CONTAINMENT CELL
W-9	87-126-E45	RECORD OF CONSTRUCTION SOIL PROFILE ALONG ℄ OF SLURRY WALL STATION 13+00 TO STATION 5+23.9 WEST CONTAINMENT CELL
NORTH DITCH EXCAVATION		
N-1	87-126-E117	RECORD OF CONSTRUCTION NORTH DITCH EXCAVATION STATIONS E 0+00 TO E 9+00
N-2	87-126-E118	RECORD OF CONSTRUCTION NORTH DITCH EXCAVATION STATIONS E 9+00 TO E 19+00
N-3	87-126-E181	RECORD OF CONSTRUCTION NORTH DITCH EXCAVATION CROSS SECTIONS STATION 1+00, STATION 3+00, AND STATION 9+00
N-4	87-126-E180	RECORD OF CONSTRUCTION NORTH DITCH EXCAVATION CROSS SECTIONS STATION 14+00, STATION 16+00, AND STATION 11+00
N-5	87-126-E179	RECORD OF CONSTRUCTION NORTH DITCH EXCAVATION CROSS SECTIONS STATION 13+00, STATION 15+00, AND STATION 17+00
EAST CONTAINMENT CELL		
E-1	87-126-E84	RECORD OF CONSTRUCTION PRECONSTRUCTION SURFACE CONTOUR MAP EAST CONTAINMENT CELL
E-2	87-126-E38	RECORD OF CONSTRUCTION SLURRY WALL ALIGNMENT AND UTILITY LOCATION PLAN EAST CONTAINMENT CELL
E-3	87-126-E83	RECORD OF CONSTRUCTION COVER PLAN EAST CONTAINMENT CELL COVER
E-4	87-126-E42	RECORD OF CONSTRUCTION SOIL PROFILE ALONG ℄ OF SLURRY WALL STATION 0+00 TO STATION 10+40 EAST CONTAINMENT CELL
EAST CONTAINMENT CELL (continued)		
E-5	87-126-E43	RECORD OF CONSTRUCTION SOIL PROFILE ALONG ℄ OF SLURRY WALL STATION 10+40 TO STATION 0+00/21+15.8 EAST CONTAINMENT CELL
DREDGING		
D-1	87-126-E59	RECORD OF CONSTRUCTION MUCK AND SAND CONTOURS PRIOR TO DREDGING SLIP No. 3 AND UPPER HARBOR
D-2	87-126-E57	RECORD OF CONSTRUCTION UPPER HARBOR, LIMITS OF DREDGING
D-3	86-126-E54	RECORD OF CONSTRUCTION SELECT SOIL DREDGING, SLIP No. 3
D-4	87-126-E106	RECORD OF CONSTRUCTION AREA 'W' AND 'W' EXCAVATION PLAN SLIP No. 3 CONTAINMENT CELL
D-5	87-126-E108	RECORD OF CONSTRUCTION ROUTE OF SLIP No. 3 DREDGING PIPELINES
D-6	87-126-E60	RECORD OF CONSTRUCTION UPPER HARBOR, MUCK AND SAND PROFILES STATIONS S 0+00, S 0+30, AND S 1+25
D-7	87-126-E61	RECORD OF CONSTRUCTION UPPER HARBOR, MUCK AND SAND PROFILES STATIONS S 2+25, S 3+25, AND S 4+25
D-8	87-126-E62	RECORD OF CONSTRUCTION UPPER HARBOR, MUCK AND SAND PROFILES STATIONS S 5+25, S 6+25, AND S 7+25
D-9	87-126-E88	RECORD OF CONSTRUCTION UPPER HARBOR, MUCK AND SAND PROFILES STATIONS S 8+25 AND S 9+25
D-10	87-126-E89	RECORD OF CONSTRUCTION UPPER HARBOR, MUCK AND SAND PROFILES STATIONS S 9+75, S 10+25, AND S 10+75
D-11	87-126-E79	RECORD OF CONSTRUCTION SLIP No. 3, MUCK AND SAND PROFILES STATIONS E 0+00, E 0+70, E 1+30, E 2+25
D-12	87-126-E80	RECORD OF CONSTRUCTION SLIP No. 3, MUCK AND SAND PROFILES STATIONS E 2+40, E 3+00, AND E 3+25
D-13	87-126-E87	RECORD OF CONSTRUCTION SLIP No. 3, MUCK AND SAND PROFILES STATIONS E 3+75 AND E 4+00
D-14	87-126-E111	RECORD OF CONSTRUCTION SECTION A-A' AND SECTION B-B' SLIP No. 3 CONTAINMENT CELL

REFERENCES:
- USGS 7.5 MIN SERIES QUADRANGLE WAUKEGAN, ILL. 1980 PHOTOREVISED 1977 AND 1980.
- USGS 7.5 MIN SERIES QUADRANGLE ZION, ILL.-WIS. 1980

No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
1	9-21-90	RECORD OF CONSTRUCTION	M.A.M.	KMB	SO
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohrer	SLO	CC

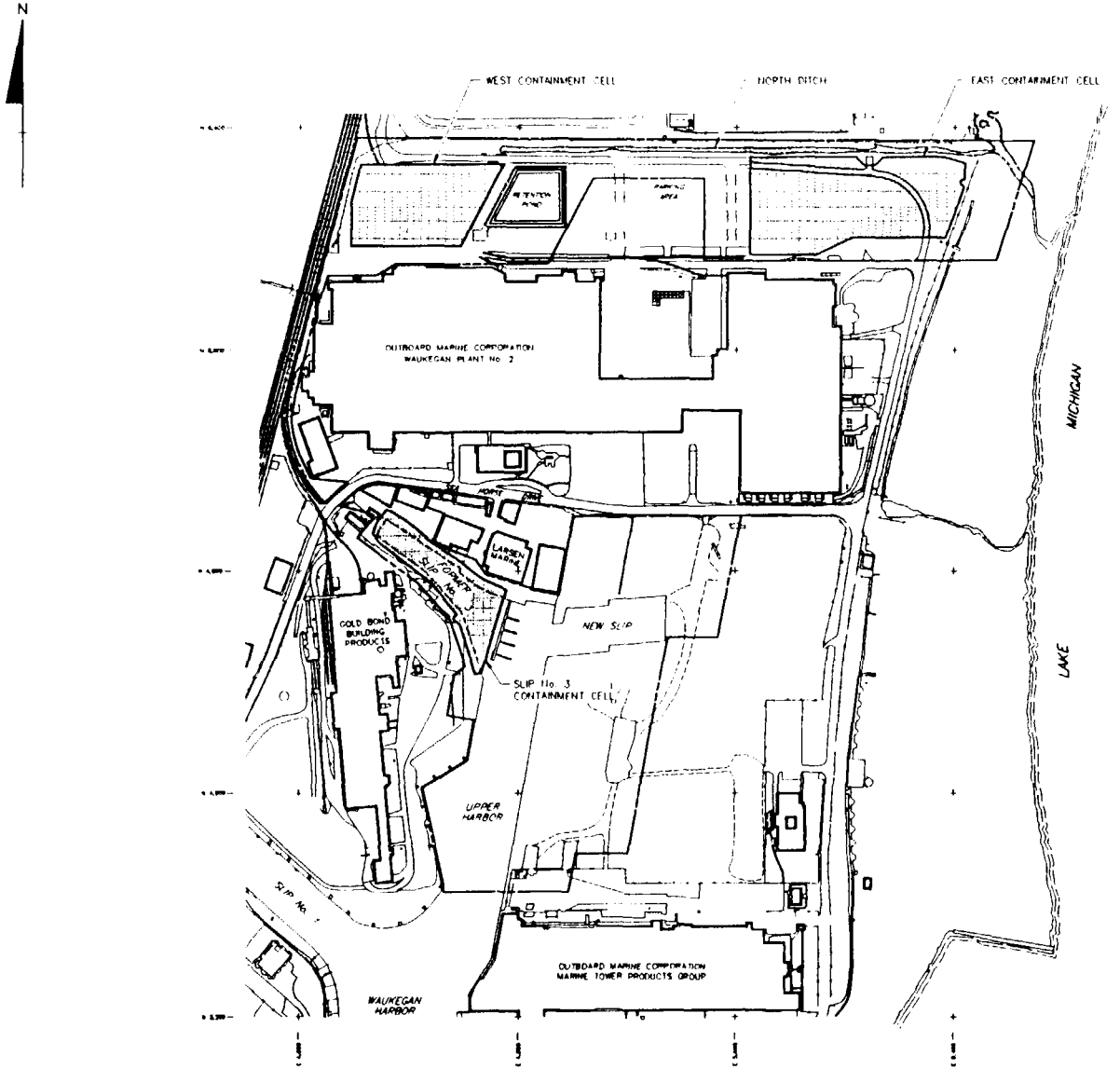
RECORD OF CONSTRUCTION
TITLE SHEET
WAUKEGAN HARBOR REMEDIATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 2-3-90		DRAWING NUMBER
SCALE: AS SHOWN		87-126-E191 ⚠1

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M.A.M. 2-3-90	SLO 2-18-91	CC 2-18-91	87-126-E191

REVISIONS NO. DATE



LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- RAILROAD
- GUARD RAIL
- CONTAINMENT CELL BOUNDARY
- CONTAINMENT CELL
- SITE BOUNDARY LIMITS

SCALE
200 0 200 400 FEET

RECORD OF CONSTRUCTION
SITE PLAN
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

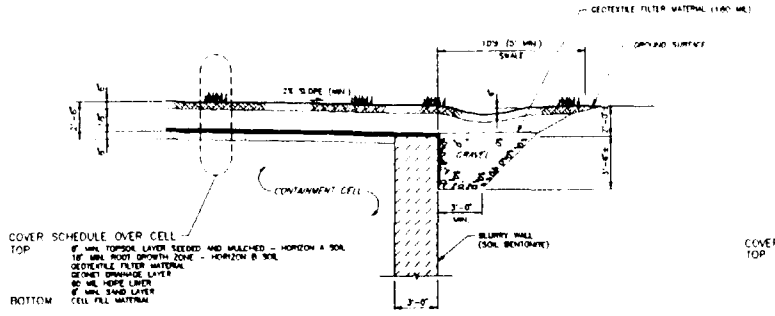
DATE: 10-10-89	M-1	DRAWING NUMBER 87-126-E113
SCALE: AS SHOWN		

No	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-89	RECORD OF CONSTRUCTION	M. A. M	FMB	SD
0	2-15-91	ISSUED FOR CONSTRUCTION DESIGN REPORT: ISSUED FOR AGENCY REVIEW	G. Bahnke	SLG	CC

REFERENCES:
-TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88.

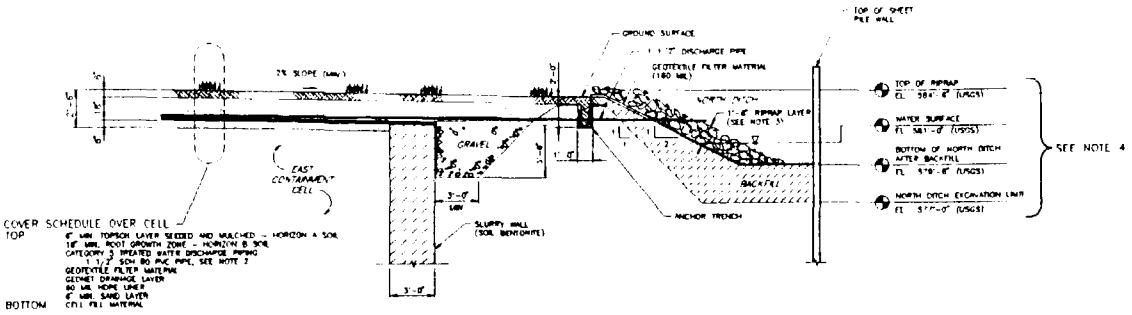
REVISIONS	NO.	DATE

DRAWN BY	DRE	CHECKED BY	SLG	2-15-91	DRAWING NUMBER 87-126-E113
	10-10-89	APPROVED BY	CC	2-15-91	



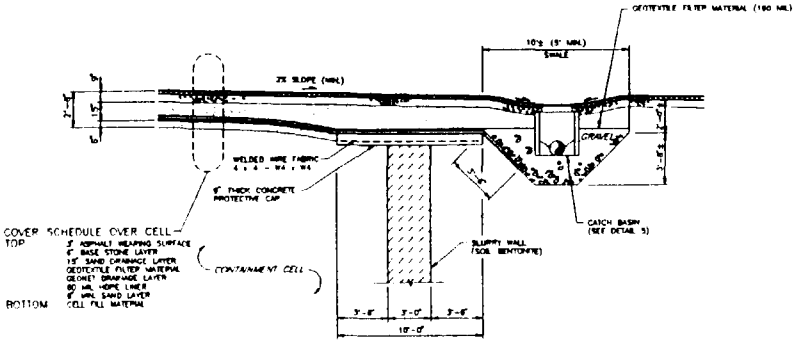
TYPE 'A'
VEGETATION COVER WITH SWALE

DETAIL 1



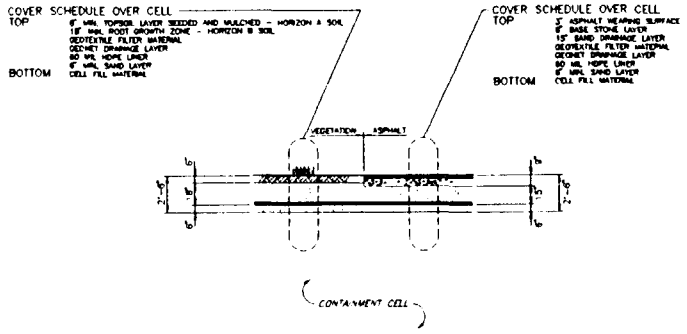
TYPE 'C'
VEGETATION COVER

DETAIL 3



TYPE 'B'
ASPHALT COVER WITH SWALE

DETAIL 2



TYPICAL VEGETATIVE COVER/ASPHALT COVER INTERFACE

DETAIL 4

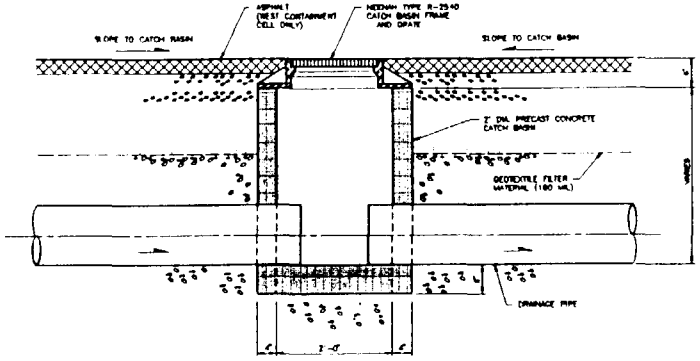
NOTES:

1. SEE DRAWINGS 87-126-E74, 87-126-E83, AND 87-126-E84 FOR DETAIL LOCATIONS.
2. CATEGORY 5 TREATED WATER DISCHARGE PIPING IS SLOPED TO PREVENT ACCUMULATION OF WATER IN PIPE
3. THE 2x9 RIPRAP MEETS THE FOLLOWING GRADATION AND WEIGHT:

2x9 RIPRAP SIZE	PERCENT
9" -	100.0%
6" -	75.5%
4 1/2" -	36.0%
4" -	20.0%
3" -	2.5%
2 1/2" -	1.0%

2x9 RIPRAP BY WEIGHT SIZE	POUNDS/PIECE
9" -	83 - 85
6" -	18 - 20
4" -	3 - 5
3" -	2 - 3

4. ELEVATIONS ARE APPROXIMATE AND VARY OVER THE LENGTH OF THE NORTH DITCH.



TYPICAL CATCH BASIN SECTION

DETAIL 5

SCALE: 1"=1'-0"

SCALE: 4'-0" 0 4'-0" 8'-0" FEET

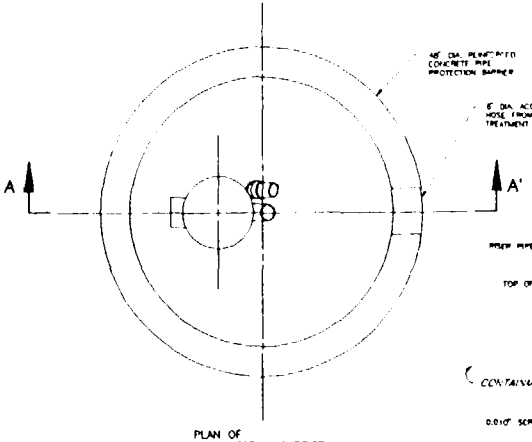
No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
1	5-24-88	RECORD OF CONSTRUCTION, UPDATED DETAIL 5 AND NOTES	[illegible]	KMB	SD
0	2-15-81	ISSUED FOR CONSTRUCTION	DRE	SLG	CC

RECORD OF CONSTRUCTION
TYPICAL COVER AND SWALE DETAILS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 9-25-89	M-2	DRAWING NUMBER 87-126-E107	1
SCALE: AS SHOWN			

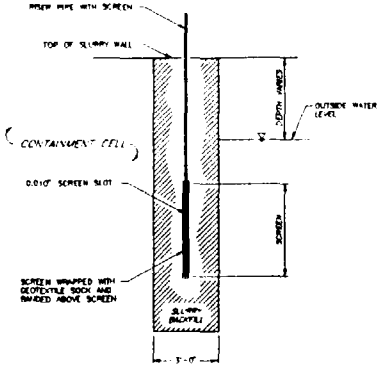
REVISIONS NO.	DATE	DRAWN BY	DRE	CHECKED BY	SLG	DRAWING NUMBER	87-126-E107
		9-25-89	APPROVED BY	CC	2-18-91	2-18-91	



PLAN OF
RECOVERY WELL PROTECTION BARRIER

DETAIL 1

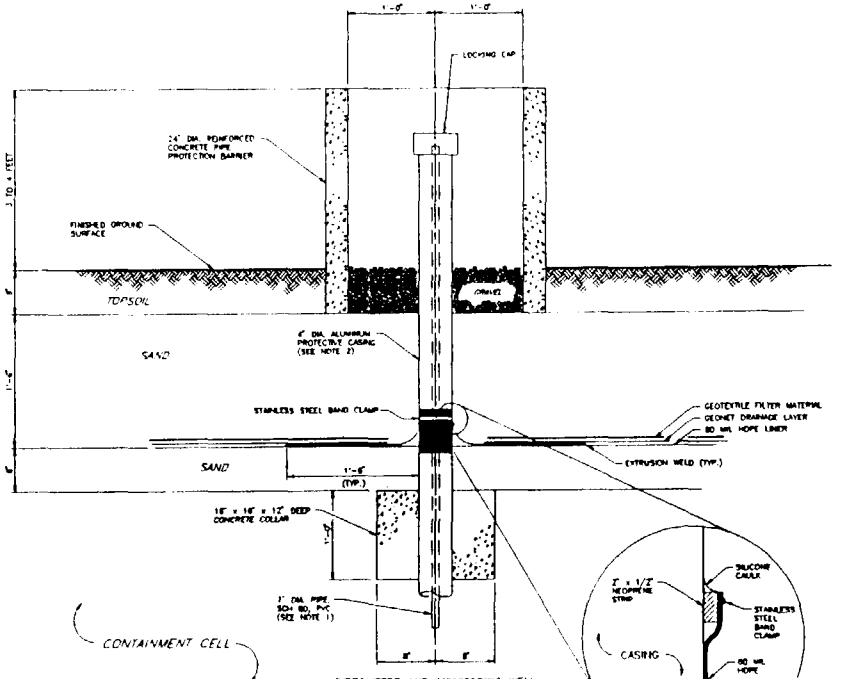
NOT TO SCALE



SLURRY WALL OBSERVATION WELL
(SEE NOTE 3)

DETAIL 4

NOT TO SCALE
(SEE NOTE 3)



PIEZOMETER AND MONITORING WELL
ELEVATION

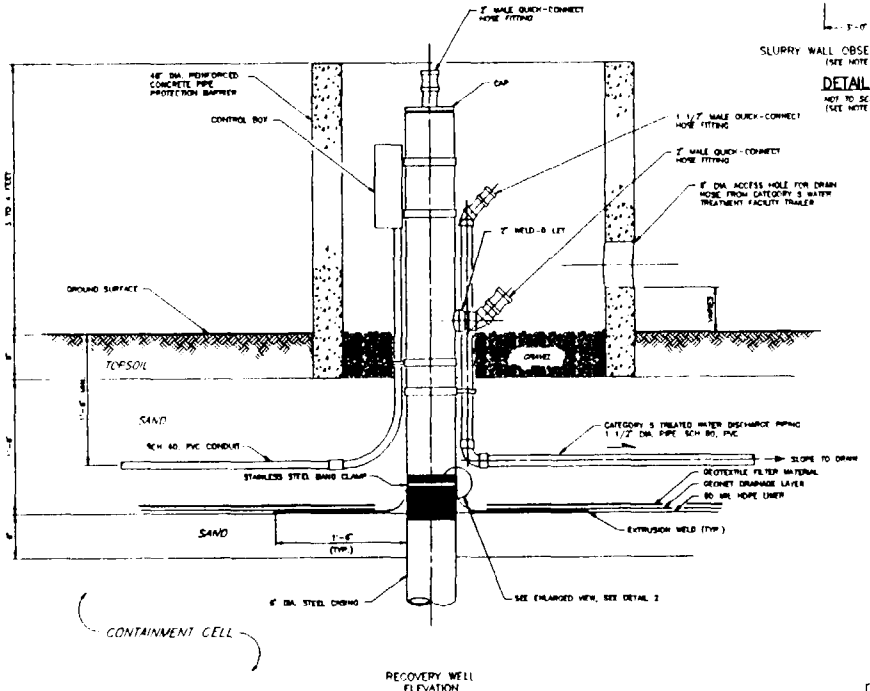
DETAIL 2

SCALE 1 1/2" = 1'-0"

TYPICAL FOR ALL PIEZOMETER, RECOVERY, AND MONITORING WELL PENETRATIONS

ENLARGED VIEW

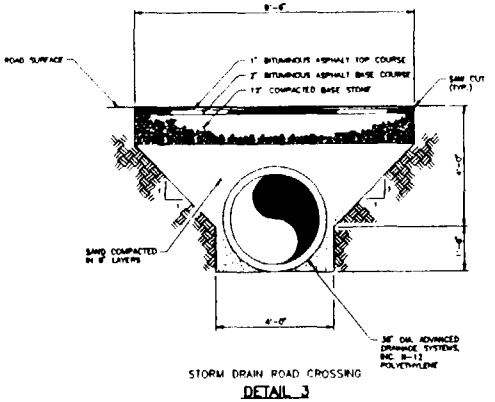
NOT TO SCALE



RECOVERY WELL
ELEVATION

SECTION A-A'

NOT TO SCALE



STORM DRAIN ROAD CROSSING

DETAIL 3

SCALE: 1/2" = 1'-0"

NOTES:

1. 1" DIA. PIPE, SCH 80, PVC FOR PIEZOMETER
   2" DIA. PIPE, SCH 5, TYPE 316, STAINLESS STEEL FOR MONITORING WELL.
2. THE ALUMINUM PROTECTIVE CASINGS FOR W-2, W-3 AND P-4 WERE REPLACED WITH STEEL PROTECTIVE CASINGS.
3. OBSERVATION WELL INSTALLED AT CENTER LINE OF SLURRY WALL FOR INSITU PERMEABILITY TESTS (REMOVED PRIOR TO FINAL CAP).

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APV'D BY
1	5-24-94	RECORD OF CONSTRUCTION, UPDATED SECTION A-A', NOTES, DETAIL 1, AND DETAIL 2	M.A.M.	RWB	SD
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bakinas	SLG	CC

RECORD OF CONSTRUCTION
RECOVERY WELL, MONITORING WELL,
AND OBSERVATION WELL DETAILS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

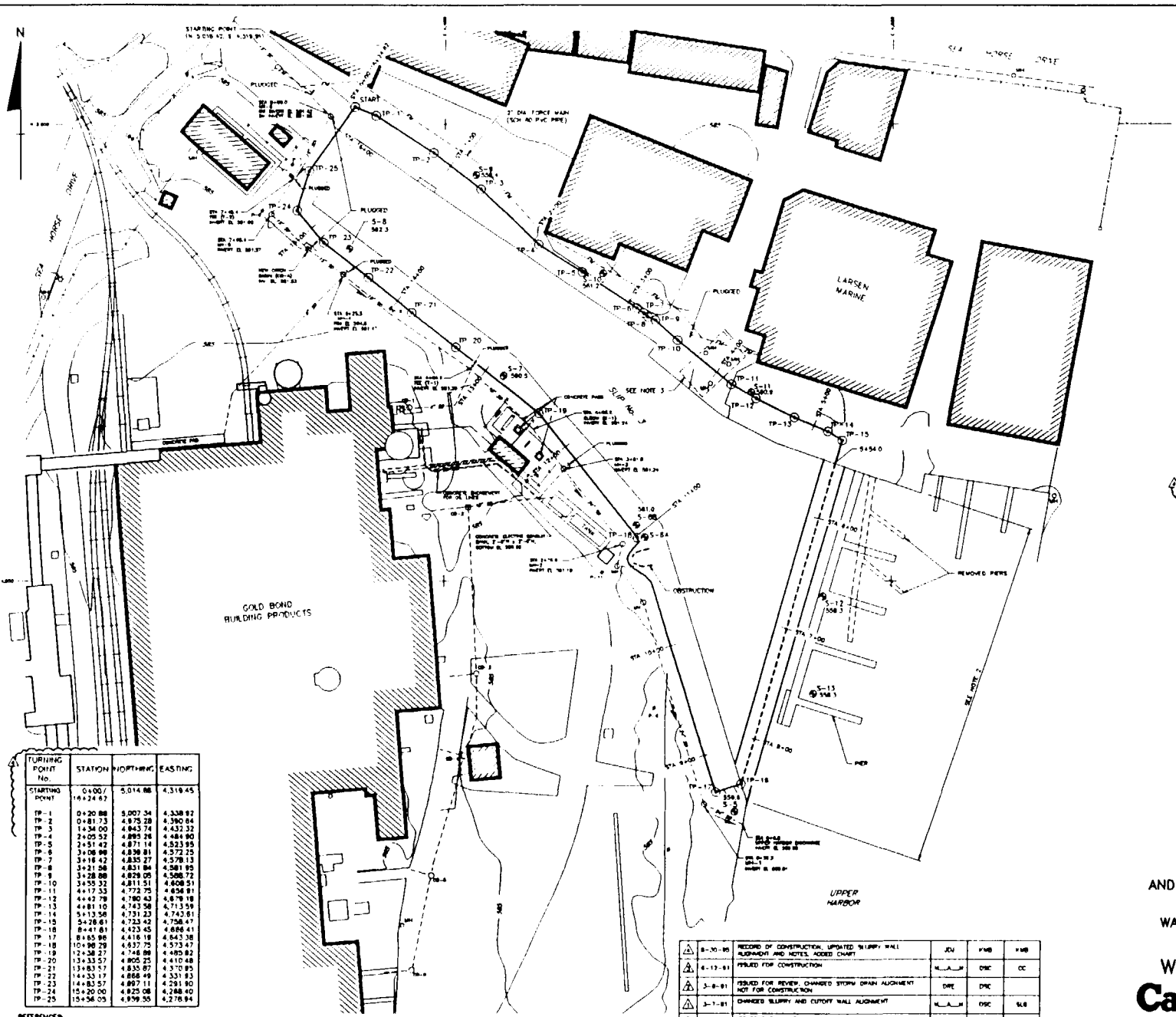
CanonieEnvironmental

DATE: 2-1-90	M-3	DRAWING NUMBER 87-126-E183	1
SCALE: AS NOTED			

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M.A.M. 2-1-90	SLG 2-18-91	CC 2-18-91	87-126-E183

REVISIONS

NO.	DATE



LEGEND:

- FENCE
- RAILROAD
- UTILITY POLE
- LIGHT POLE
- MANHOLE
- CATCH BASIN
- CATCH BASIN
- SLURRY WALL
- DESIGN PHASE SOIL BORING
- TOP ELEVATION (USGS) OF HARD SILTY CLAY (HARDPAN)
- DIRECTION OF FLOW
- TOPOGRAPHIC CONTOUR (USGS)
- FORCE MAIN
- STORM DRAIN
- TURNING POINT

NOTES:

1. FOR PROFILES ALONG CENTER LINE OF SLURRY WALL, SEE DRAWING 87-126-E40 AND 87-126-E49
2. THE SLIP No. 3 CUTOFF WALL CONSISTS OF TWO ROWS OF STEEL SHEET PILING 20 FEET APART WITH SOIL-BENTONITE BACKFILL IN BETWEEN THE SHEET PILE ROWS
3. REMOVED UNDERGROUND STORAGE TANKS AND MANHOLES PRIOR TO SLURRY WALL CONSTRUCTION
4. STORMWATER PIPES ARE ADS N-12 POLYETHYLENE PIPES. TEES ARE ADS N-12 FABRICATED TEE FITTINGS. ELBOWS ARE ADS N-12 FABRICATED ELBOW FITTINGS, AND MANHOLES ARE CONCRETE MANHOLES
5. FABRICATED TEE FITTINGS FOR 4" STORM DRAIN INLETS TO MAIN STORM SEWER LINE INCLUDE CLEANOUT RISERS TO ACCESS 4" LINES
6. SEE DWG 87-126-E260 FOR STORM SEWER DETAILS

TURNING POINT No.	STATION	NORTHING	EASTING
STARTING POINT	0+00/ 16+24.67	5,014.88	4,319.45
TP-1	0+20.88	5,007.34	4,338.92
TP-2	0+81.73	4,975.28	4,390.64
TP-3	1+34.00	4,943.74	4,432.32
TP-4	2+05.52	4,895.26	4,484.90
TP-5	2+51.42	4,871.14	4,523.95
TP-6	3+06.98	4,839.81	4,572.25
TP-7	3+16.42	4,835.27	4,578.13
TP-8	3+31.58	4,831.84	4,581.95
TP-9	3+28.88	4,829.05	4,588.72
TP-10	3+55.32	4,811.51	4,608.51
TP-11	4+17.33	4,772.75	4,654.91
TP-12	4+42.79	4,760.43	4,679.18
TP-13	4+81.10	4,743.58	4,713.59
TP-14	5+13.58	4,731.23	4,743.61
TP-15	5+28.61	4,723.42	4,758.47
TP-16	8+41.61	4,423.45	4,686.41
TP-17	8+65.96	4,416.19	4,643.38
TP-18	10+96.29	4,637.75	4,573.47
TP-19	12+38.27	4,748.89	4,485.82
TP-20	13+33.57	4,805.23	4,410.48
TP-21	13+83.57	4,835.87	4,370.95
TP-22	14+33.17	4,868.49	4,331.93
TP-23	14+83.57	4,897.11	4,291.90
TP-24	15+20.00	4,925.08	4,268.40
TP-25	15+56.05	4,959.55	4,278.94

REFERENCES

- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-20-88

No.	DATE	CONSTRUCTION ISSUE / REVISION	DRWN BY	CK'D BY	APP'D BY
4	8-30-89	RECORD OF CONSTRUCTION, UPDATED SLURRY WALL ALIGNMENT AND NOTES, ADDED CHART	JCV	KMB	KMB
3	6-13-89	ISSUED FOR CONSTRUCTION	M.A.M	DSC	CC
2	3-8-89	ISSUED FOR REVIEW, CHANGED STORM DRAIN ALIGNMENT NOT FOR CONSTRUCTION	DRE	DSC	
1	3-7-89	CHANGED SLURRY AND CUTOFF WALL ALIGNMENT	M.A.M	DSC	SLG
0	2-1-89	ISSUED FOR CONSTRUCTION	G. Bahnke	SLG	CC

SCALE

60 0 60 80 FEET

RECORD OF CONSTRUCTION
SLURRY WALL ALIGNMENT, UTILITIES
AND PRECONSTRUCTION SURFACE CONTOURS
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

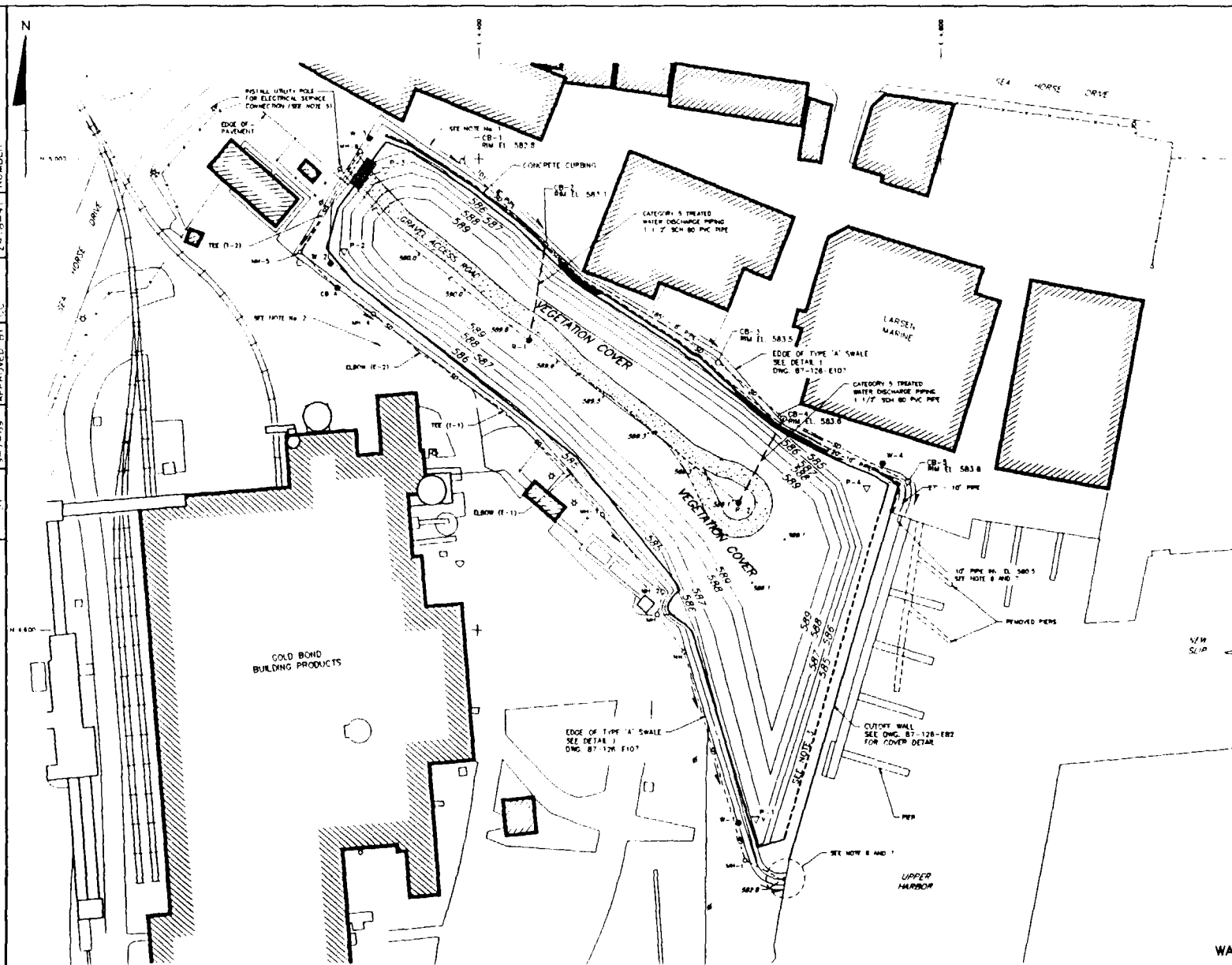
CanonieEnvironmental

DATE: 7-24-89	S-1	DRAWING NUMBER 87-126-E41	4
SCALE: AS SHOWN			

DRAWN BY	M.A.M	CHECKED BY	SLG	DRAWING NUMBER	87-126-E41
	7-24-89	APPROVED BY	CC		2-18-91

REVISIONS

NO	DATE



LEGEND:

- FENCE
- RAILROAD
- UTILITY POLE
- LIGHT POLE
- SLURRY WALL
- SLURRY WALL WITH PROTECTIVE CONCRETE CAP
- 586 COVER ELEVATION CONTOUR (USGS) (SEE NOTE No. 1)
- CB CATCH BASIN
- R-1 RECOVERY WELL
- P-1 PIEZOMETER
- W-1 MONITORING WELL
- POWER LINE (UNDERGROUND)
- DIRECTION OF FLOW
- STORM DRAIN
- MH MANHOLE (4' DIAMETER)

NOTES:

1. AVERAGE GRADE ELEVATION NORTH OF SLIP No. 3 IS EL. 584' USGS
2. AVERAGE GRADE ELEVATION SOUTH OF SLIP No. 3 IS EL. 584' USGS
3. THE ENTIRE 20 FOOT WIDTH OF THE CUTOFF WALL WALL FILLED WITH SOIL-BENTONITE BACKFILL
4. GROUND WATER EXTRACTED FROM R-1 AND R-2 WAS TREATED PRIOR TO DISCHARGE THROUGH THE TREATED WATER DISCHARGE PIPING LOCATED IN THE CELL COVER. THE PIPING IS SLOPED TO PREVENT THE ACCUMULATION OF WATER. SEE DRAWING 87-126-E107 FOR DETAILS OF PIPING PLACEMENT IN COVER. SEE DRAWING 87-126-E183 FOR PIPING DETAILS AT RECOVERY WELL
5. UTILITY POLE AND FUSE BOX WAS INSTALLED TO SUPPLY 30 AMPS/115 VOLTS SERVICE TO EACH RECOVERY WELL. CONNECTION WAS MADE TO AN ELECTRICAL SERVICE FOR RESIDENTIAL HOUSE PREVIOUSLY AT THIS LOCATION.
6. TOP OF PILINGS WERE TRIMMED TO CONFORM TO SWALE PROFILE IN ORDER TO ENCOURAGE SURFACE RUNOFF WATER TO FLOW INTO THE UPPER HARBOR.
7. A HOLE WAS BURNED IN SHEET PILING TO ALLOW THE PASSAGE OF A STORM DRAIN PIPE TO OUTLET INTO THE UPPER HARBOR.

SCALE
40 0 40 80 FEET

RECORD OF CONSTRUCTION
COVER PLAN
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

CanonieEnvironmental

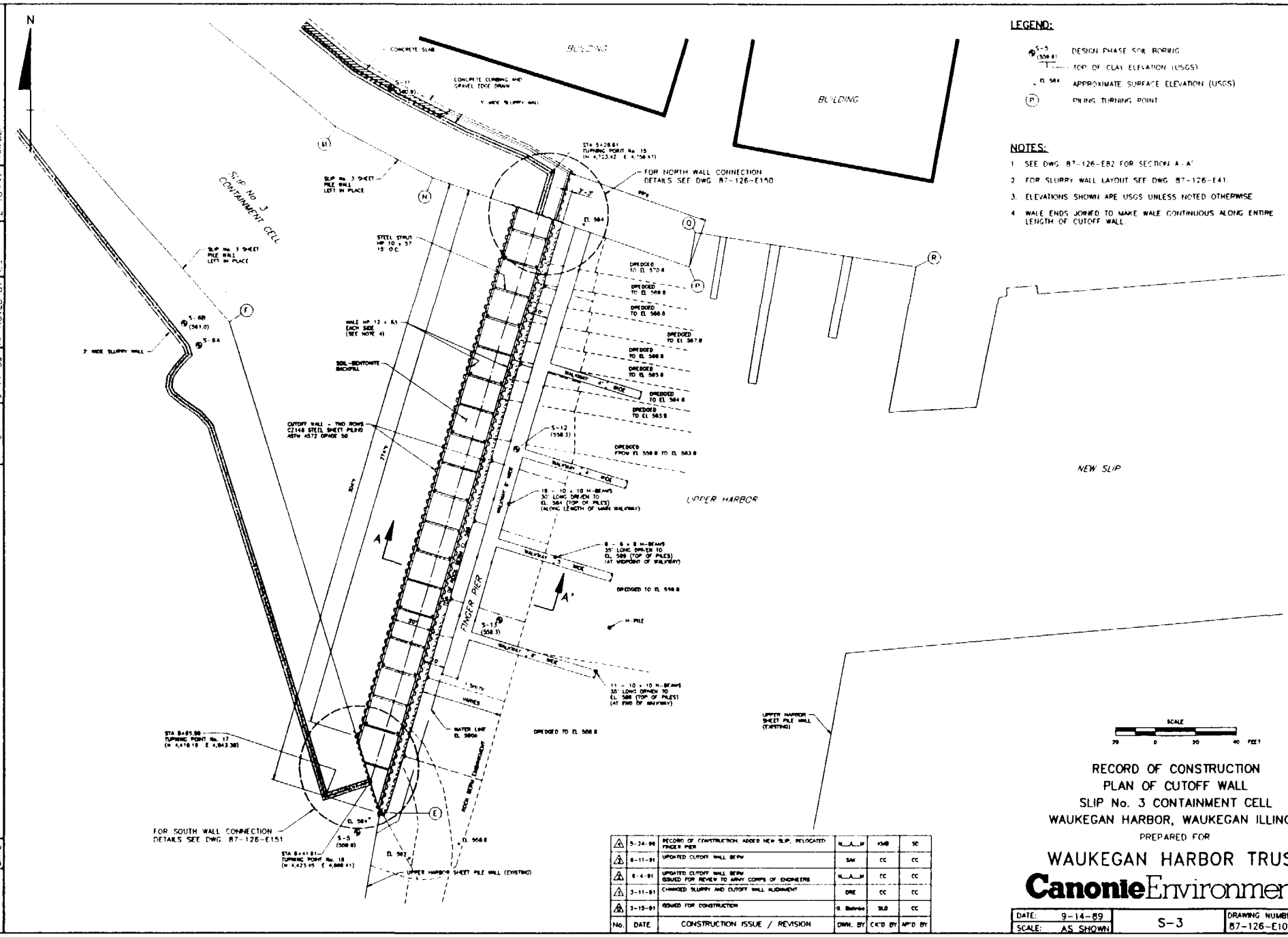
No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY
4	5-24-96	RECORD OF CONSTRUCTION, UPDATED LEGEND, NOTES, SLURRY WALL AND STORM DRAIN PIPING	M_A_M	KMB	SD
3	6-12-91	CHANGED STORM DRAIN LAYOUT	M_A_M	DBC	CC
2	4-29-91	ADDED CATCH BASINS AND PIPING ALONG NORTH SIDE OF CELL	DRE	DSC	CC
1	3-11-91	CHANGED SLURRY AND CUTOFF WALL ALIGNMENT	M_A_M	CC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	M_A_M	SLO	CC

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-29-88

DATE: 9-7-89	S-2	DRAWING NUMBER 87-126-E84	4
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	M_A_M	CHECKED BY	SLG	2-18-91	DRAWING NUMBER 87-126-E84
	9-7-89	APPROVED BY	CC	2-18-91	



LEGEND:

- S-5 (559.8) — DESIGN PHASE SOIL BORING
- TOP OF CLAY ELEVATION (USGS)
- EL 584 — APPROXIMATE SURFACE ELEVATION (USGS)
- (P) — PILING TURNING POINT

NOTES:

1. SEE DWG. 87-126-E82 FOR SECTION A-A'
2. FOR SLURRY WALL LAYOUT SEE DWG. 87-126-E41.
3. ELEVATIONS SHOWN ARE USGS UNLESS NOTED OTHERWISE
4. WALE ENDS JOINED TO MAKE WALE CONTINUOUS ALONG ENTIRE LENGTH OF CUTOFF WALL.

No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
4	5-24-96	RECORD OF CONSTRUCTION, ADDED NEW SLIP, RELOCATED FINGER PIER	M.A.M.	KMB	SD
3	6-11-91	UPDATED CUTOFF WALL BERM	SAK	CC	CC
2	6-4-91	UPDATED CUTOFF WALL BERM ISSUED FOR REVIEW TO ARMY CORPS OF ENGINEERS	M.A.M.	CC	CC
1	3-11-91	CHANGED SLURRY AND CUTOFF WALL ALIGNMENT	DRE	CC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bishnoi	SLG	CC

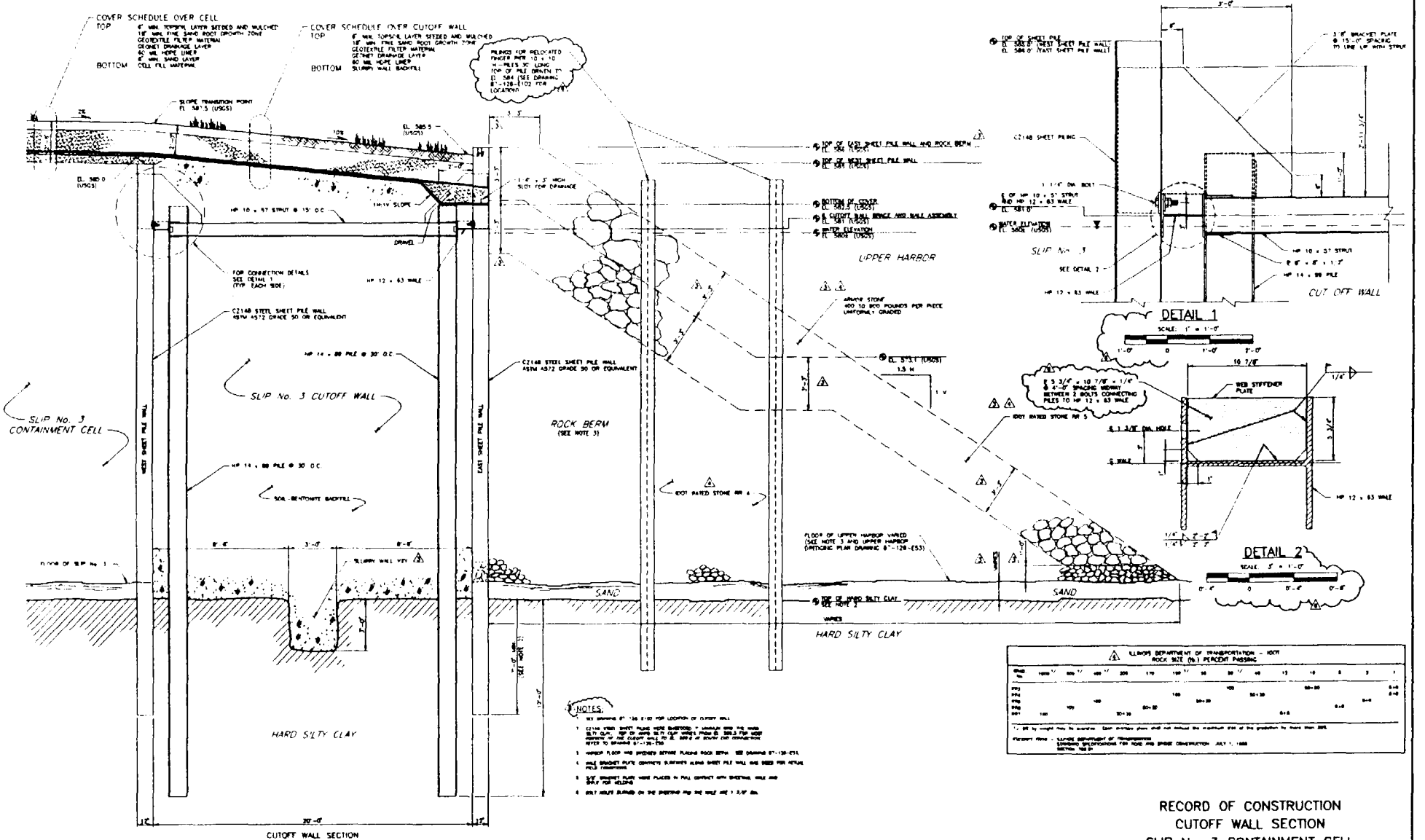
RECORD OF CONSTRUCTION
PLAN OF CUTOFF WALL
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 9-14-89	S-3	DRAWING NUMBER 87-126-E102	4
SCALE: AS SHOWN			

REVISIONS	NO	DATE

DRAWN BY	KHM	9-14-89	CHECKED BY	SLG	2-18-91	DRAWING NUMBER	87-126-E102
			APPROVED BY	CC	2-18-91		



NOTES:

1. SEE DRAWING 87-126-E102 FOR LOCATION OF CUTOFF WALL.
2. C2148 STEEL SHEET PILING WERE SHORTENED TO MINIMIZE SEEP THE WEST SILTY CLAY. TOP OF HARD SILTY CLAY VARIES FROM EL. 569.3 FOR MOST PORTION OF THE CUTOFF WALL TO EL. 569.0 AT SOUTH END CONNECTION REFER TO DRAWING 87-126-E53.
3. HARBOR FLOOR WAS DREDGED BEFORE PLACING ROCK BERM. SEE DRAWING 87-126-E53.
4. WALE BRACKET PLATE CONTACTS SLURRY WALL SHEET PILE WALL WAS USED FOR RETAINS FIELD CONNECTIONS.
5. 3/8" BRACKET PLATE WERE PLACED IN FULL CONTACT WITH SHEETING WALE AND SHIM FOR WELDING.
6. BOLT HOLES DRILLED ON THE SHEETING AND THE WALE ARE 1 3/8" DIA.

⚠ SLIP No. 3 CUTOFF WALL CONSTRUCTION SEQUENCE

1. AFTER INSTALLATION OF CUTOFF WALL SHEETING AND CROSS BRACING, THE AREA WITHIN SHEETING WAS DREDGED AND KEY INSTALLED. DREDGED MATERIAL WAS PLACED INTO SLIP No. 3 IMMEDIATELY BEHIND CUTOFF WALL WEST SHEETING.
2. CUTOFF WALL WAS BACKFILLED WITH SOIL-BENTONITE MIX TO APPROXIMATELY ELEVATION 583.
3. UPPER HARBOR UNDER ROCK BERM AREA WAS DREDGED. DREDGED MATERIAL WAS PLACED IN SLIP No. 3 BEHIND THE CUTOFF WALL WEST SHEETING.
4. ROCK BERM PLACED TO ELEVATION 575.
5. SLIP No. 3 FILLED TO FINAL STATE.
6. ROCK BERM COMPLETED TO FINAL ELEVATION 580.
7. SLIP No. 3 CONTAINMENT CELL CAP INSTALLED.

⚠ ILLINOIS DEPARTMENT OF TRANSPORTATION - ROOT ROCK SIZE (% PERCENT PASSING

SIEVE No.	1000 1/	500 1/	400 1/	200	170	120 1/	50	40	20 1/	40	13	10	5	3	1
2T2								100							0-10
2T3						100									0-10
2T4			100				50+30								
2T5		100				50+30						50+30			
2T6															0-10
2T7	100			50+30	50+30					0-10			0-10		

1/ SEE the weight tests for accuracy. Each sieve shown shall not exceed the maximum size of the gradation by more than 20%.

STANDARD REF. - ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION JULY 1, 1988 SECTION 106.01

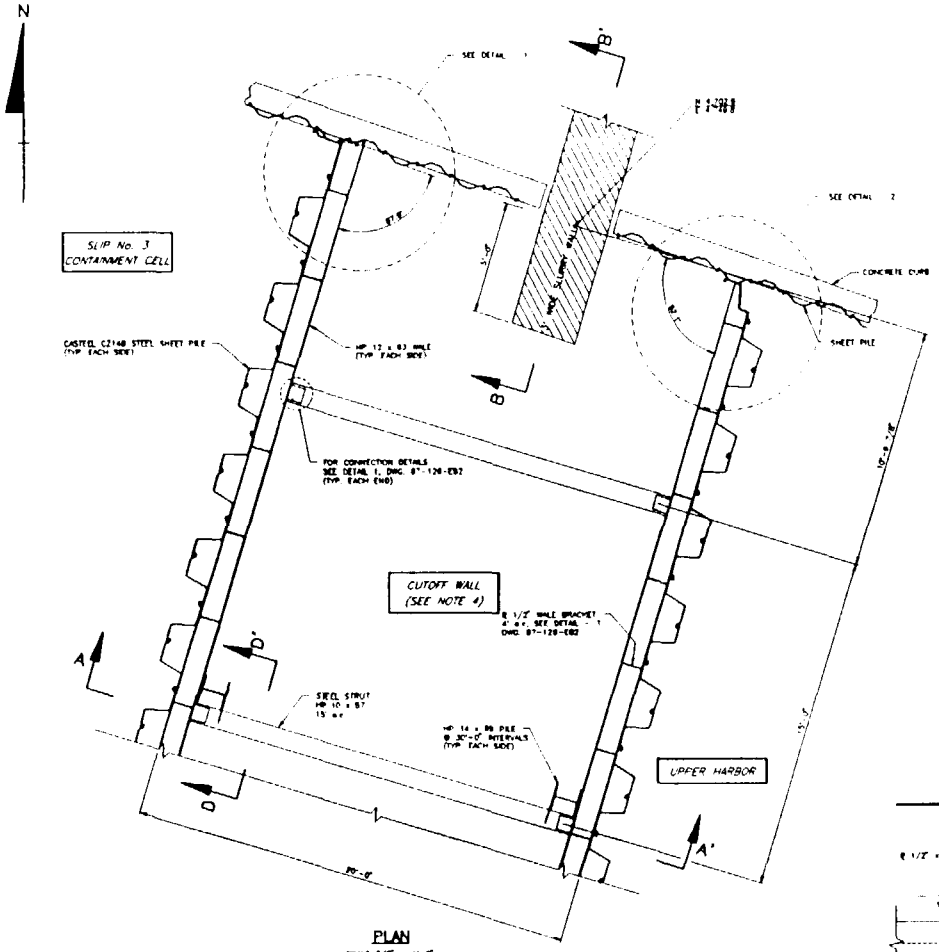
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
4	5-24-88	RECORD OF CONSTRUCTION, ADDED FINGER PIER SUPPORT UPDATED CONNECTION DETAILS AND NOTES, REDRAWN	M.A.M	KMB	SD
3	8-12-81	CHANGED NOTICE	SAH	CC	CC
2	5-31-81	UPDATED ROCK BERM AGGREGATE SIZES	DWB	SD	CC
1	5-22-81	RAISED TOP OF ROCK BERM FROM EL. 570 TO 580 ADDED ARMOR RIP RAP. 3' x 3' SLURRY WALL KEY UPDATED SLURRY WALL BACKFILL NOTICE ADDED SHEETING PILING NOTE	DWB	CC	TJH
0	4-29-81	ADDED CUTOFF WALL BACKFILL NOTICE	DPR	DSC	CC

RECORD OF CONSTRUCTION
CUTOFF WALL SECTION
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

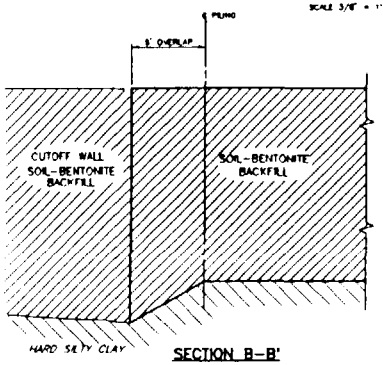
CanonieEnvironmental

DATE: 9-12-89	S-4	DRAWING NUMBER 87-126-E82 ⚠
SCALE: AS NOTED		

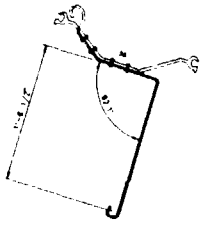
REVISIONS	NO.	DATE	DRAWN BY	M.A.M	CHECKED BY	SLC	DRAWING NUMBER	87-126-E82
				9-12-89	APPROVED BY	SD		
						2-18-41		
						2-18-41		



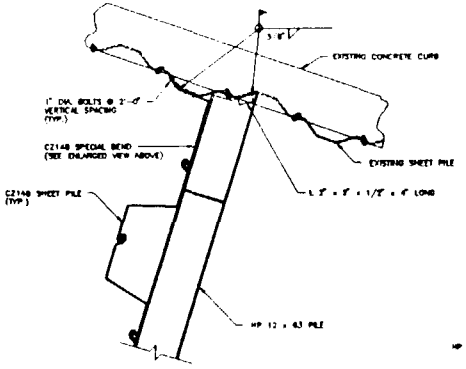
PLAN
SCALE 3/8" = 1'-0"



SECTION B-B'
NOT TO SCALE

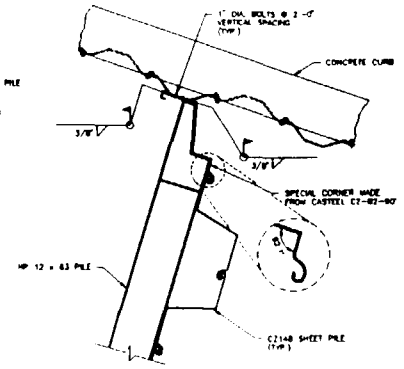


CZ148 SPECIAL BEND
SCALE 1 1/2" = 1'-0"



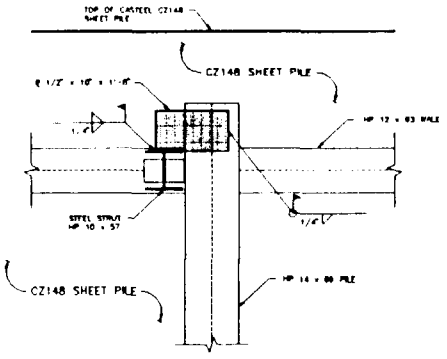
NORTHWEST CUTOFF WALL CONNECTION

DETAIL - 1
SCALE 3/8" = 1'-0"



NORTHEAST CUTOFF WALL CONNECTION

DETAIL - 2
SCALE 3/8" = 1'-0"



SECTION D-D'
SCALE 3/8" = 1'-0"

NOTES:

1. SEE DWG. 87-126-E102 FOR LOCATION OF CUTOFF WALL
2. SEE DWG 87-126-E151 FOR CUTOFF WALL SOUTH CONNECTION DETAILS
3. FOR SECTION A-A' SEE DWG. 87-126-E82
4. THE CUTOFF WALL WAS FILLED WITH SOIL-BENTONITE BACKFILL

No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
4	5-24-94	RECORD OF CONSTRUCTION	M.A.M	KWB	SD
3	3-11-91	REDRAW	M.A.M	CC	CC
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Belvins	SLG	CC

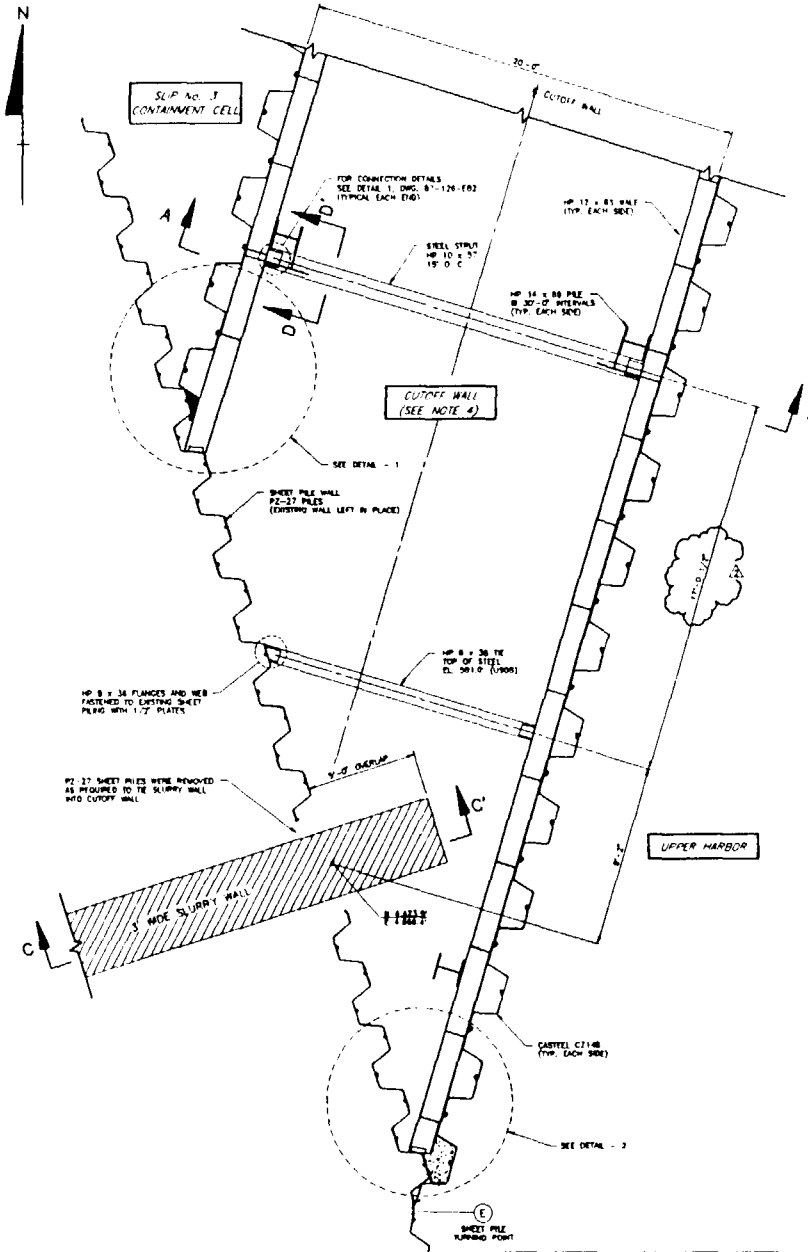
RECORD OF CONSTRUCTION
CUTOFF WALL NORTH CONNECTION DETAILS
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

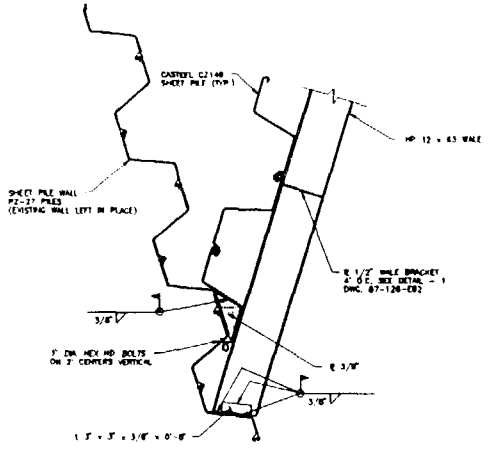
DATE: 12-12-89	S-5	DRAWING NUMBER 87-126-E150	4
SCALE: AS NOTED			

REVISIONS	NO.	DATE

DRAWN BY	SAK	12-12-89	CHECKED BY	SLG	2-18-91	DRAWING NUMBER	87-126-E150
			APPROVED BY	CC	2-18-91		

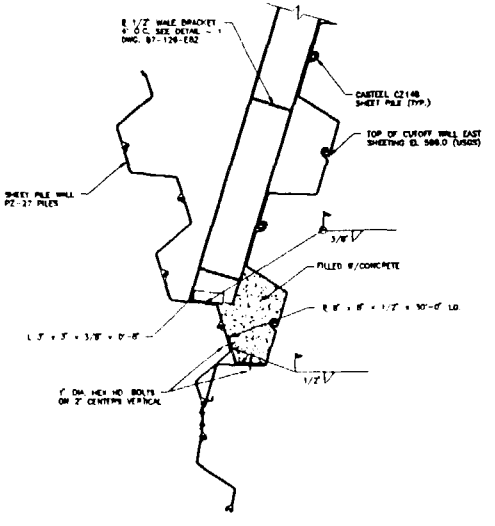


PLAN
SCALE 3/8" = 1'-0"



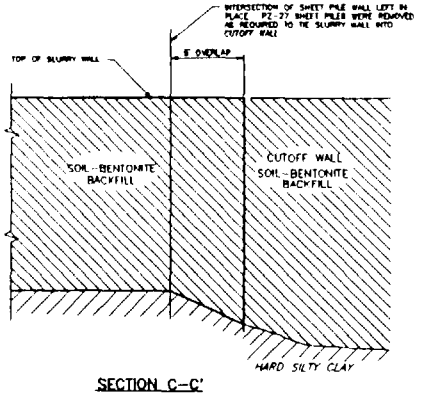
SOUTHWEST CUTOFF WALL CONNECTION

DETAIL - 1
SCALE 3/4" = 1'-0"



SOUTHEAST CUTOFF WALL CONNECTION

DETAIL - 2
SCALE 3/4" = 1'-0"



SECTION C-C'
NOT TO SCALE

NOTES:

1. SEE DWG. 87-126-E102 FOR LOCATION OF CUTOFF WALL
2. SEE DWG. 87-126-E150 FOR CUTOFF WALL NORTH CONNECTION DETAILS.
3. FOR SECTION A-A' SEE DWG. 87-126-E82
   FOR SECTION D-D' SEE DWG. 87-126-E150
4. THE CUTOFF WALL WAS FILLED WITH SOIL-BENTONITE BACKFILL

REFERENCES:
- NATIONAL GYPSUM CO., BUFFALO, N.Y., W.O. 1823, DWG. MO-17, REV. 1, DATED 10-27-81

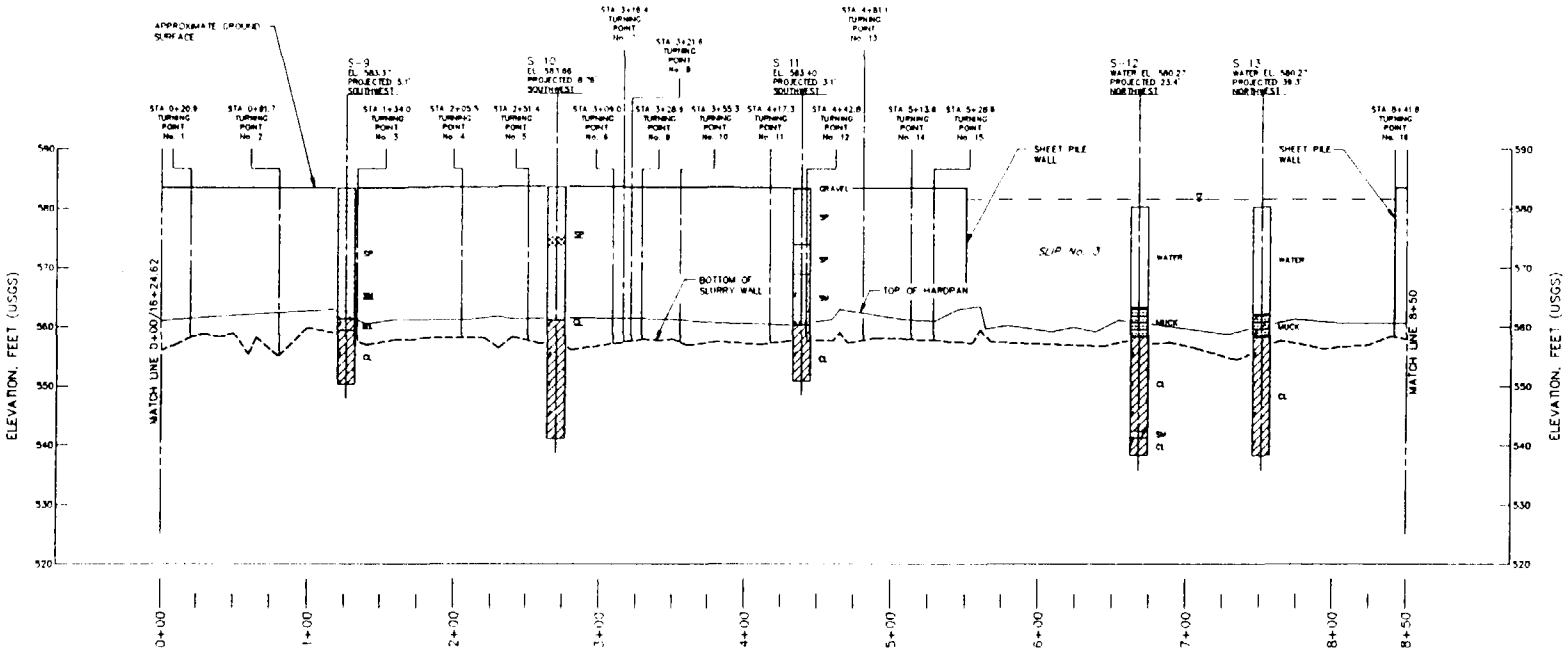
No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
2	5-24-96	RECORD OF CONSTRUCTION	M.A.M.	KWB	SD
1	3-11-91	REDRAW	M.A.M.	CC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

RECORD OF CONSTRUCTION
CUTOFF WALL SOUTH CONNECTION DETAILS
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 12-12-89	S-6	DRAWING NUMBER 87-126-E151	2
SCALE: AS NOTED			

REVISIONS	NO.	DATE	DRAWN BY	SAK	12-12-89	CHECKED BY	SLG	2-18-91	APPROVED BY	CC	2-18-91	DRAWING NUMBER	87-126-E151



LEGEND:

- SAND
- GRAVEL
- CLAY
- SILT
- MUCK
- WATER LEVEL
- UNDERLINING INDICATES LABORATORY TEST AT DEPICTED DEPTH

NOTES:

1. FOR SOIL PROFILE LOCATION PLAN, SEE DRAWING 87-126-E41

VERTICAL SCALE: 10 0 10 20 FEET

HORIZONTAL SCALE: 40 0 40 80 FEET

VERTICAL EXAGGERATION = 4x

RECORD OF CONSTRUCTION
SOIL PROFILE
ALONG ℄ OF SLURRY WALL
STATION 0+00 TO STATION 8+50
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

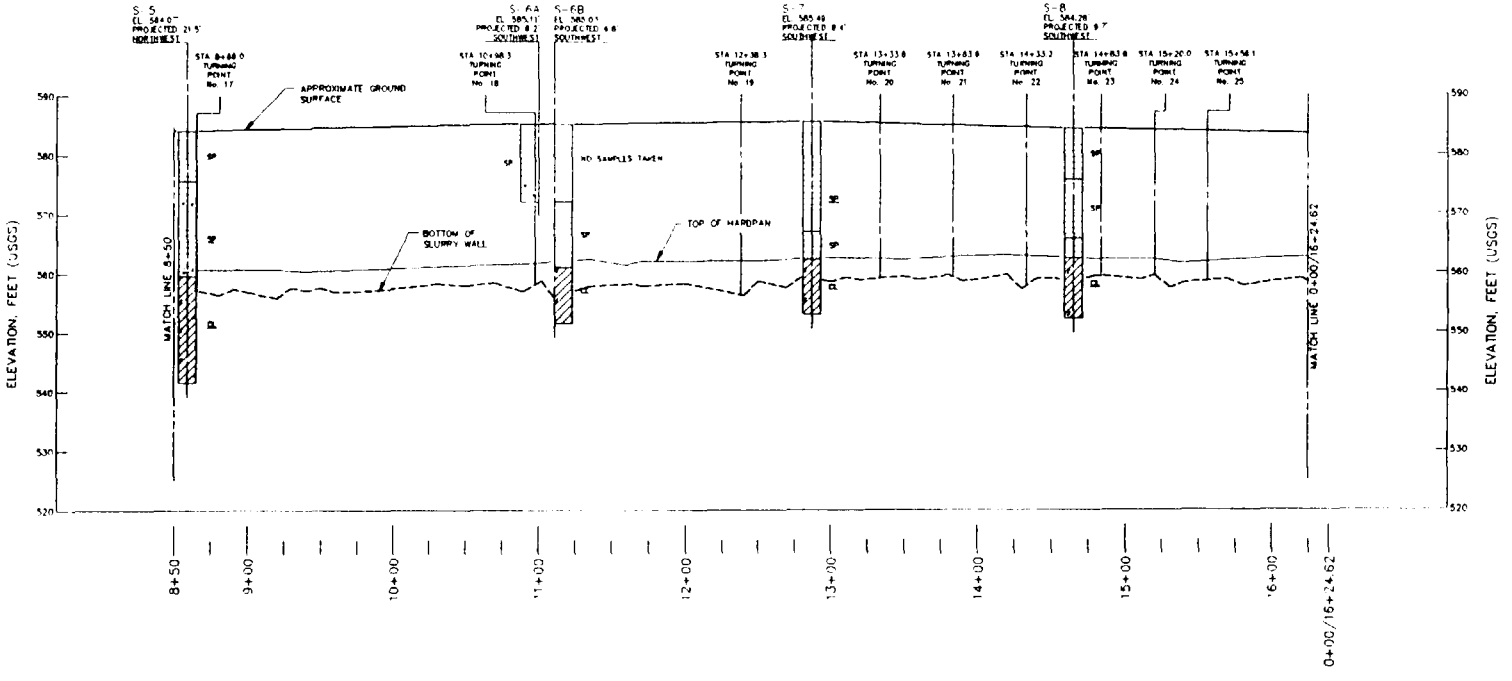
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	5-24-94	RECORD OF CONSTRUCTION	M_A_M	KMB	SD
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

DATE: 7-25-89	S-7	DRAWING NUMBER 87-126-E48	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M_A_M 7-25-89	SLG 2-18-91	CC 2-18-91	87-126-E48



LEGEND:

- SAND
- GRAVEL
- CLAY
- SILT
- UNDERLINING INDICATES LABORATORY TEST AT DEPICTED DEPTH

NOTES:

1. FOR SOIL PROFILE LOCATION PLAN, SEE DRAWING 87-126-E41.

VERTICAL SCALE
10 0 10 20 FEET

HORIZONTAL SCALE
40 0 40 80 FEET

VERTICAL EXAGGERATION = 4x

RECORD OF CONSTRUCTION
SOIL PROFILE
ALONG ℄ OF SLURRY WALL
STATION 8+50 TO STATION 0+00/16+24.62
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

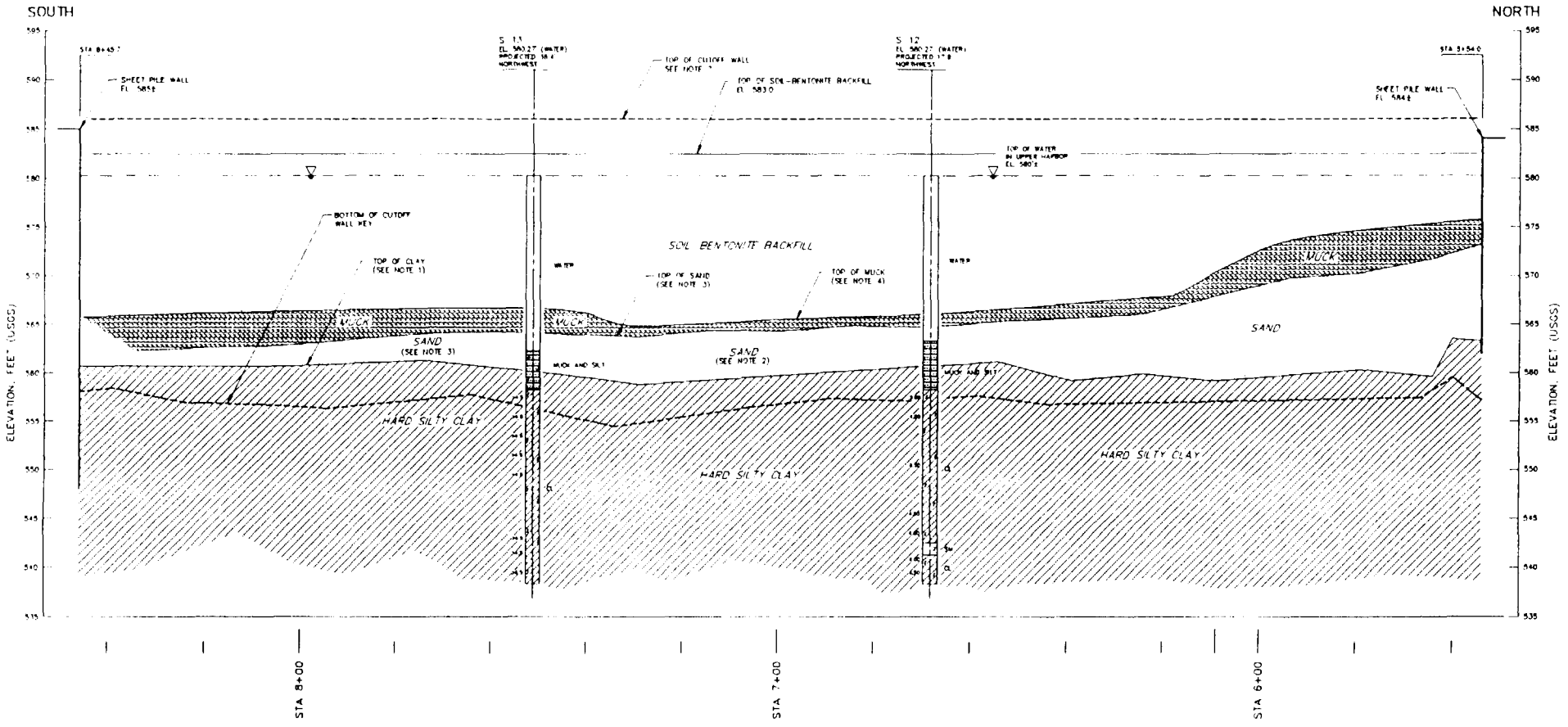
CanonieEnvironmental

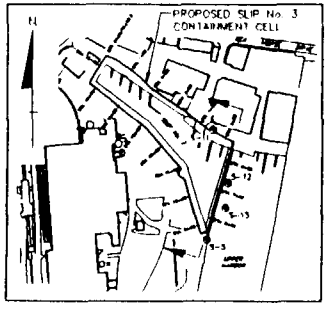
No.	DATE	ISSUE / REVISION	DWN. BY	CH'D BY	APP'D BY
1	5-24-86	RECORD OF CONSTRUCTION	M. A. M	KWB	SO
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Behrens	SLG	CC

DATE: 7-25-89	S-8	DRAWING NUMBER 87-126-E49	2
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M. A. M. 7-25-89	SLG 2-18-91	CC 2-19-91	87-126-E49





KEY SITE PLAN

SCALE
300 0 300 FEET

NOTES:

1. THE TOP OF THE HARD SILTY CLAY LAYER IS BASED ON OCTOBER 3, 1991 SOUNDINGS BY CANONIE, AFTER REMOVAL OF THE MUCK AND SAND LAYERS.
2. THE ELEVATIONS OF THE SILT AND MUCK LAYERS SHOWN AT SOIL BORINGS S-12 AND S-13 ARE BASED ON THE FIELD EXPERIENCE OF THE DRILLERS DURING THE DRILLING OF THESE BORINGS. SAMPLES OF THE SILT AND MUCK LAYERS WERE NOT RECOVERED. THE DRILLING EQUIPMENT USED DOES NOT PROVIDE THE SENSITIVITY TO DISTINGUISH THE INITIAL CONTACT OF THE MUCK AND SAND LAYERS.
3. THE TOP OF SAND LAYER IS BASED ON 9-17-91 SOUNDING DATA BY CANONIE.
4. THE TOP OF MUCK LAYER IS BASED ON 1987 SOUNDING DATA BY CANONIE (SEE REFERENCE).
5. THE CUTOFF WALL CONSISTS OF DOUBLE SHEET PILING PLUS SLURRY WALL IN BETWEEN.
6. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
7. FOR TYPICAL CROSS SECTION OF CUTOFF WALL SEE DWG. 87-126-E82

LEGEND:

- SAND
- CLAY
- SILT
- MUCK
- WATER LEVEL
- UNCONFINED COMPRESSIVE STRENGTH (qu) BY PENETROMETER (TSF)

VERTICAL SCALE
5 0 5 10 FEET

HORIZONTAL SCALE
10 0 10 20 FEET

VERTICAL EXAGGERATION = 2x

RECORD OF CONSTRUCTION
CUTOFF WALL PROFILE
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

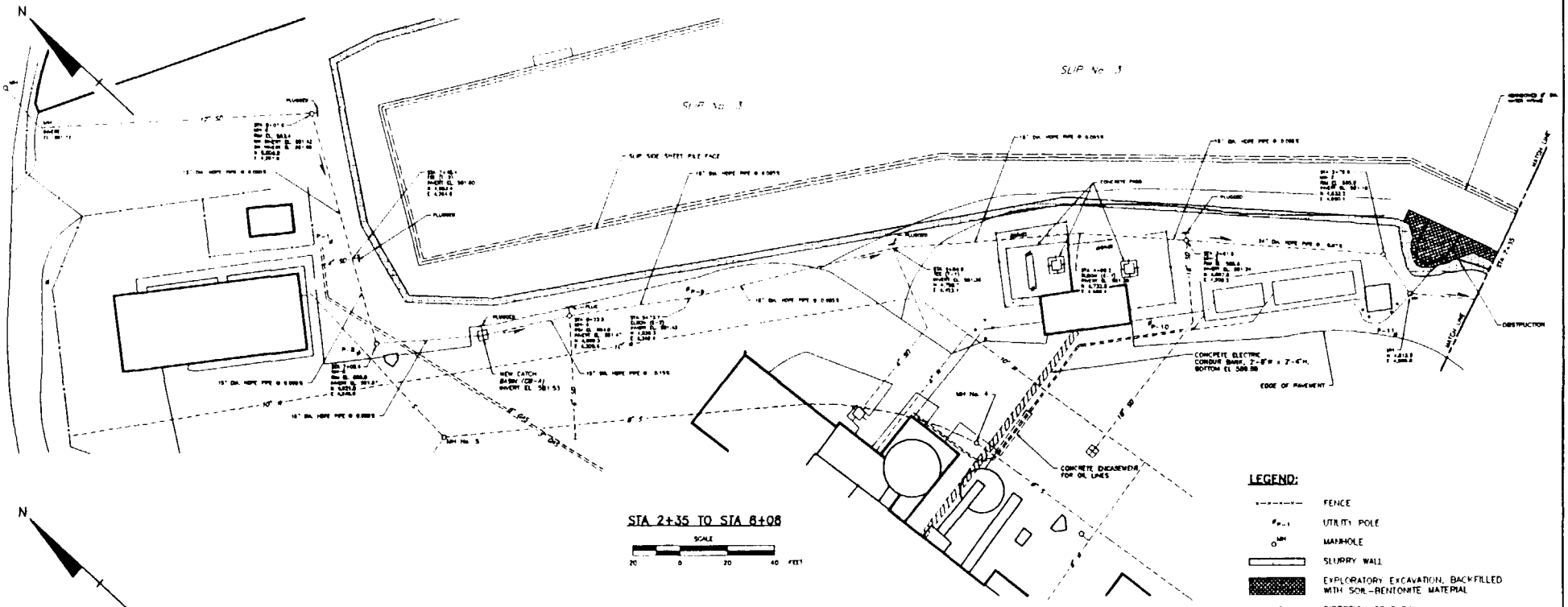
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-30-95	RECORD OF CONSTRUCTION, GENERAL UPDATE	JDJ	KMB	KMB
0	2-19-91	ISSUED FOR CONSTRUCTION	G. Behnke	SLG	CC

DATE: 7-27-89	S-9	DRAWING NUMBER 87-126-E50	1
SCALE: AS SHOWN			

REFERENCES:
- MASON & HANGER, SILAS MASON CO. JOB No. 808 SHEET No. C-2 "BOTTOM OF MUCK (TOP OF SAND) LAYER"
- CANONIE, INC. DRAWING No. A87-097 "WAUKEGAN HARBOR CONTOURS" 11-30-87

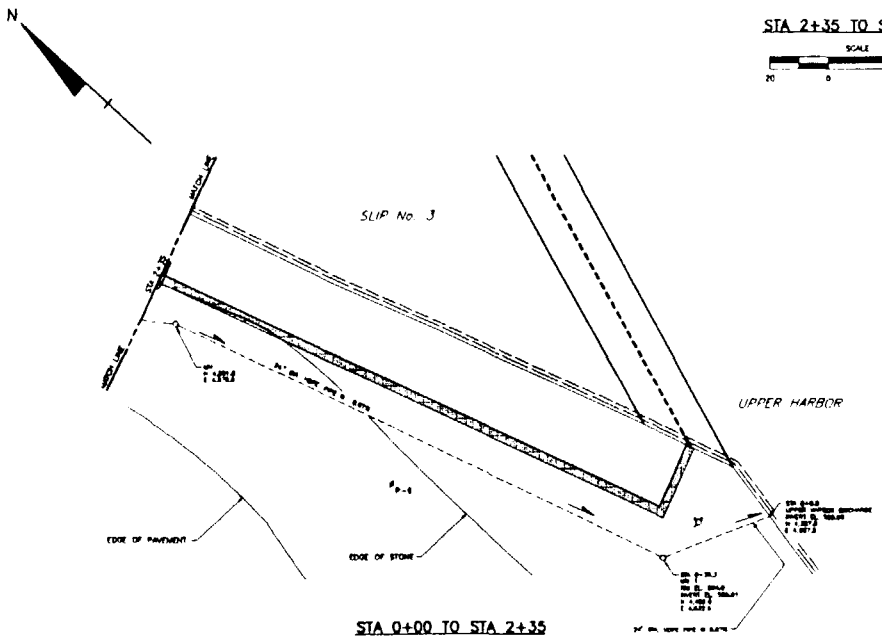
REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M. A. M. 7-27-89	SLG 2-18-91	CC 2-18-91	87-126-E50



STA 2+35 TO STA 6+08

SCALE 20 0 20 40 FEET



STA 0+00 TO STA 2+35

SCALE 20 0 20 40 FEET

LEGEND:

- FENCE
- UTILITY POLE
- MANHOLE
- SLURRY WALL
- EXPLORATORY EXCAVATION, BACKFILLED WITH SOIL-BENTONITE MATERIAL
- DIRECTION OF FLOW
- FIRE HYDRANT
- CATCH BASIN
- FORCE MAIN
- STORM DRAIN
- GAS LINE
- WATER LINE
- SANITARY SEWER

NOTES:

1. STORMWATER PIPES ARE ADS N-12 POLYETHYLENE PIPES. TEES ARE ADS N-12 FABRICATED TEE FITTINGS, ELBOWS ARE ADS N-12 FABRICATED ELBOW FITTINGS, AND MANHOLES ARE CONCRETE MANHOLES.
2. FABRICATED TEE FITTINGS FOR 4" STORM DRAIN INLETS TO MAIN STORM SEWER LINE INCLUDE CLEANOUT RISERS TO ACCESS 4" LINES.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
1	5-24-96	RECORD OF CONSTRUCTION, SHOWED SLURRY WALL OBSTRUCTION, REMOVED NOTES	M.A.M	HMB	SD
0	6-12-91	ISSUED FOR CONSTRUCTION	M.A.M	DSC	CC

RECORD OF CONSTRUCTION
REROUTING OF THE
SLIP No. 3 STORMWATER SYSTEM
GOLD BOND PROPERTY
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

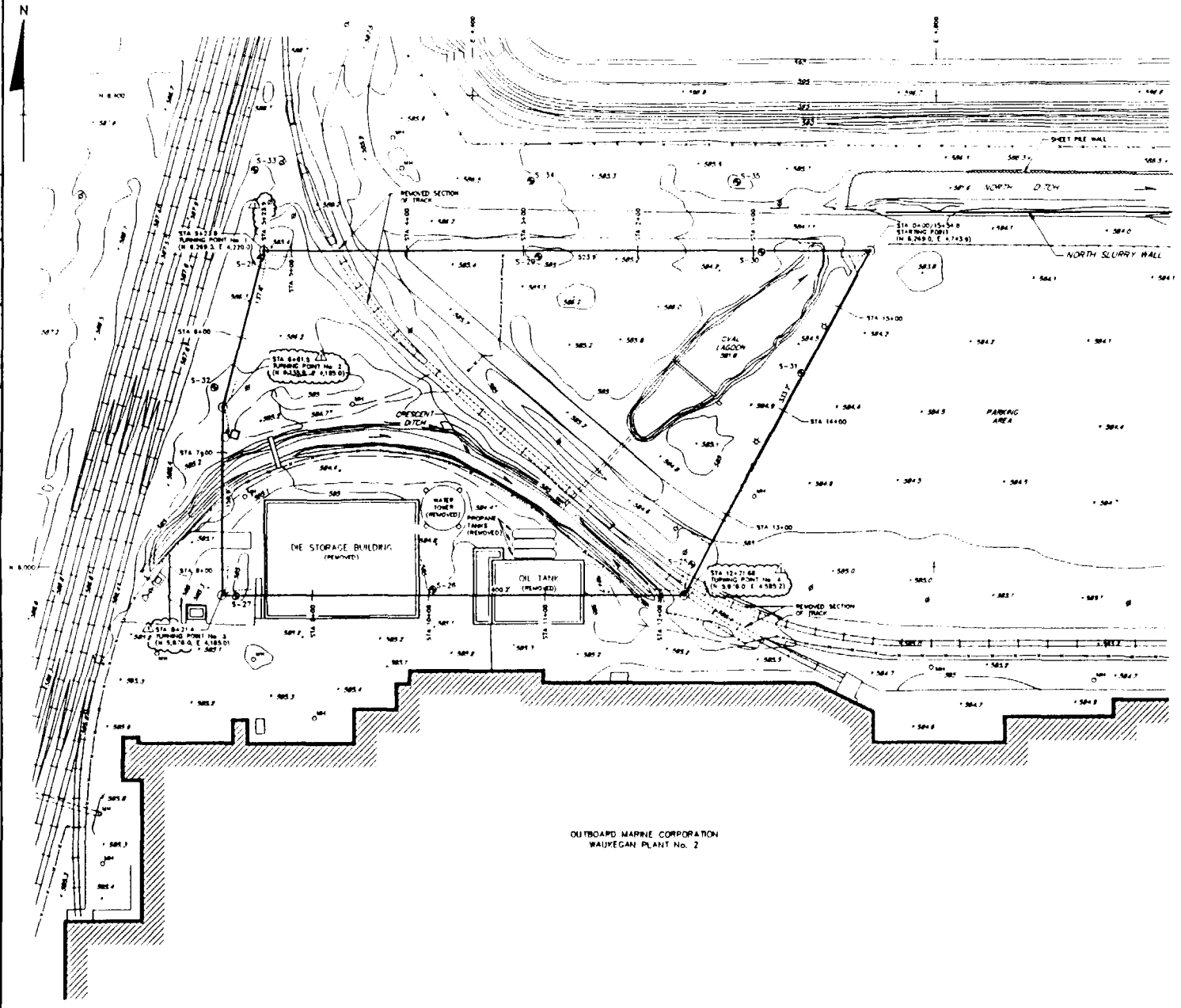
CanonieEnvironmental

DATE: 3-4-91	S-10	DRAWING NUMBER 87-126-E260	1
SCALE: AS SHOWN			

DRAWN BY	M.A.M	3-4-91	
CHECKED BY	DSC	6-11-91	
APPROVED BY	CC	6-11-91	
DRAWING NUMBER	87-126-E260		

REVISIONS

NO.	DATE



LEGEND:

- FENCE
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- MANHOLE
- SOIL BORING
- SLURRY WALL
- TOPOGRAPHIC CONTOUR (USGS)
- SPOT ELEVATION (USGS)

NOTES:

1. FOR PROFILES ALONG CENTER LINE OF SLURRY WALL, SEE DRAWING 87-126-E44 AND 87-126-E45.

SCALE 40 0 40 80 FEET

RECORD OF CONSTRUCTION
SLURRY WALL ALIGNMENT
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

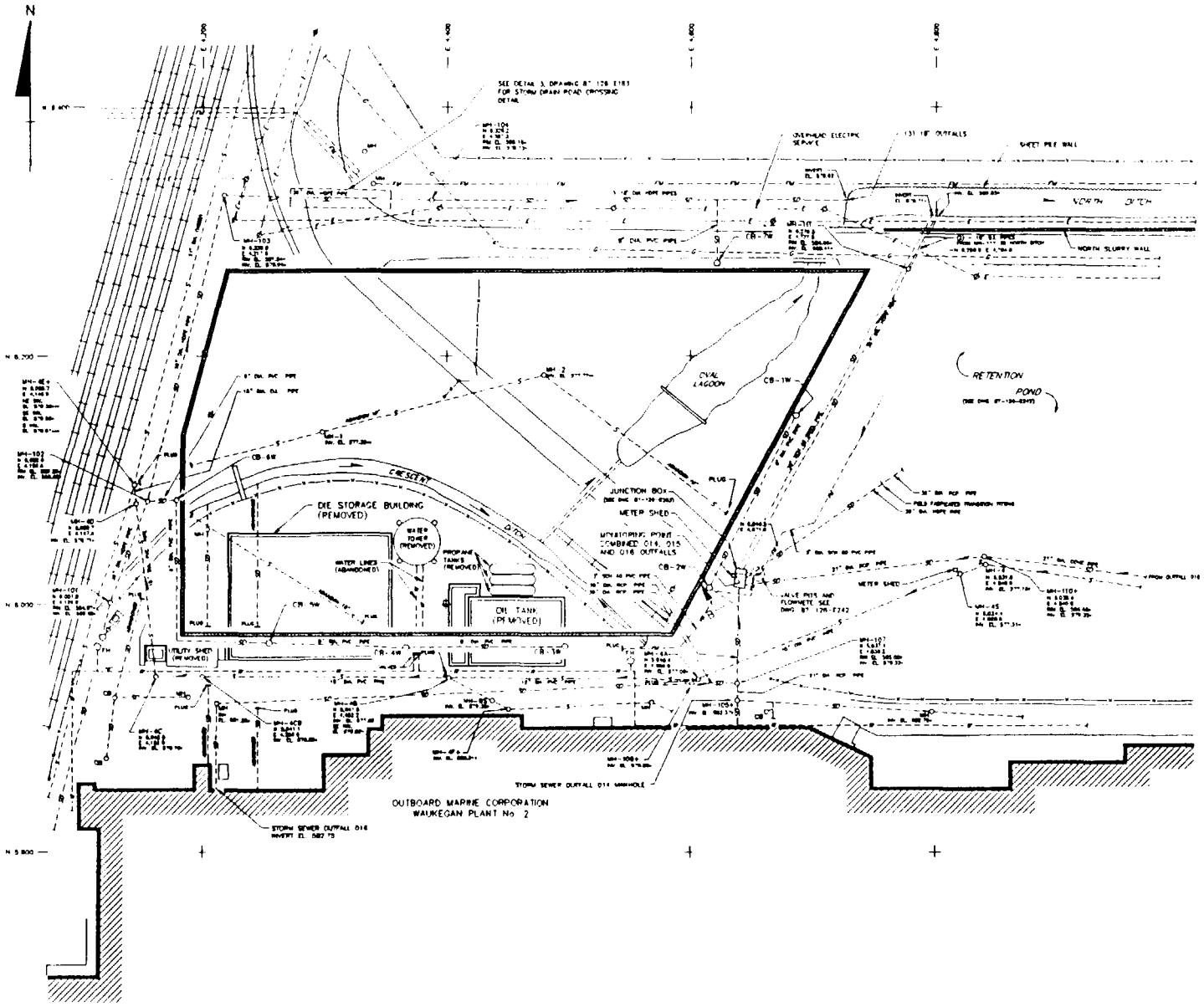
Canonie Environmental

DATE: 7-14-89	W-1	DRAWING NUMBER 87-126-E40
SCALE: AS SHOWN		

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-26-88

No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY
1	5-24-90	RECORD OF CONTRUCTION, UPDATED SLURRY WALL	M.A.M	KMB	SD
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Behnke	SLG	CC

REVISIONS	NO.	DATE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
			M.A.M	SLG	CC	87-126-E40
			7-14-89	2-18-91	2-18-91	



LEGEND:

- FENCE
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- SOIL BORING
- SLURRY WALL
- FORCE MAIN
- H.P. GAS LINE
- STORM DRAIN
- POWER LINE
- SANITARY SEWER
- WATER LINE

NOTES:

1. FOR SLURRY WALL PROFILE SEE DRAWING 87-126-E44 AND 87-126-E45
2. DIE STORAGE BUILDING, UTILITY SHED, WATER TOWER, OIL TANKS, AND PROPANE TANKS WERE REMOVED BEFORE STARTING WORK ON WEST CONTAINMENT CELL
3. * -ELEVATIONS WERE SURVEYED IN THE FIELD BY CANONIE OR MID AMERICA SURVEYING CO.
   ** -ELEVATIONS FROM METZ TRAIN OLSEN & YOUNGREN DRAWING
   *** -ELEVATIONS FROM MASON & HANGER SILAS MASON CO. DRAWING
   \+ -CANONIE ASSIGNED MANHOLE DESIGNATIONS TO EXISTING MANHOLES

SCALE
40 0 40 80 FEET

RECORD OF CONSTRUCTION
UTILITY LOCATION PLAN
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

CanonieEnvironmental

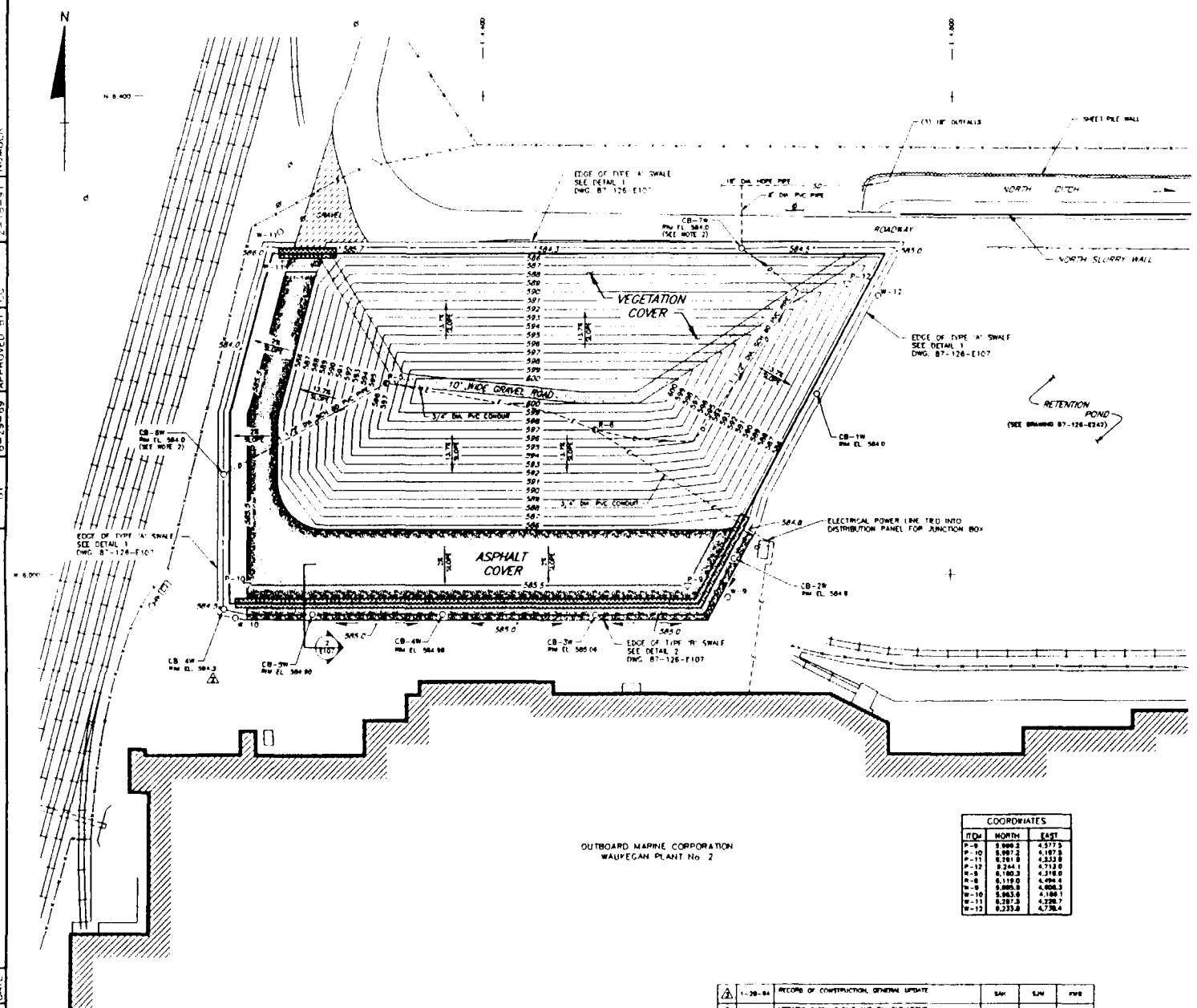
No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
4	1-28-94	RECORD OF CONSTRUCTION, GENERAL UPDATE	EAK	SJM	KMB
3	7-28-92	UPDATED STORM DRAIN LAYOUT, ADDED NOTES 7 AND 8	M.A.M	KMB	CC
2	1-9-92	ISSUED TO CLIENT	DRE	KMB	TJH
1	4-29-91	UPDATED CATCH BASINS AND RIM ELEVATIONS	DRE	DSC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Schmitz	SLG	CC

DATE: 9-5-89	W-2	DRAWING NUMBER 87-126-E73	4
SCALE: AS SHOWN			

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA, DATE OF PHOTOGRAPHY 11-28-89

REVISIONS	NO.	DATE

DRAWN BY	KHM	9-5-89
CHECKED BY	SLG	2-18-91
APPROVED BY	CC	2-18-91
DRAWING NUMBER	87-126-E73	



LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- RAILROAD
- GUARDRAIL
- UTILITY POLE
- DIRECTION OF SURFACE WATER FLOW
- SLURRY WALL
- SLURRY WALL WITH PROTECTIVE CONCRETE CAP
- ASPHALT AREA
- COVER ELEVATION CONTOUR (USGS)
- CB-1R CATCH BASIN
- R-5 RECOVERY WELL
- P-9 PIEZOMETER
- W-9 MONITORING WELL
- POWER LINE (UNDERGROUND)
- 584.3 SURFACE SPOT ELEVATION
- CATEGORY 5 WATER TREATMENT PLANT EFFLUENT DISCHARGE LINE (UNDERGROUND)
- STORM DRAIN

NOTES:

1. MONITORING WELLS AND PIEZOMETERS ARE LOCATED ACROSS FROM EACH OTHER OUTSIDE AND INSIDE OF SLURRY WALL, RESPECTIVELY, SEE TABLE THIS DRAWING FOR COORDINATES.
2. CATEGORY 5 TREATED WATER DISCHARGES INTO CATCH BASIN.

SCALE: 40 0 40 80 FEET

COORDINATES		
ITEM	NORTH	EAST
P-9	5,999.2	4,577.5
P-10	5,997.2	4,187.5
P-11	6,281.8	4,233.8
P-12	6,244.1	4,713.0
R-5	6,180.3	4,316.0
R-6	6,119.0	4,494.4
W-9	5,985.8	4,606.3
W-10	5,963.6	4,186.1
W-11	6,287.5	4,228.7
W-12	6,233.8	4,738.4

REFERENCES:
TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-29-88

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
3	1-29-94	RECORD OF CONSTRUCTION, GENERAL UPDATE	SAH	SJM	KMB
2	7-29-92	UPDATED CATCH BASINS AND RIM ELEVATIONS MOVED RECOVERY WELLS R-5 AND R-6; ADDED NOTE 5	M_A_M	KMB	CC
1	4-29-91	UPDATED CATCH BASINS AND RIM ELEVATIONS	DRE	DSC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	D. Behnke	SLG	CC

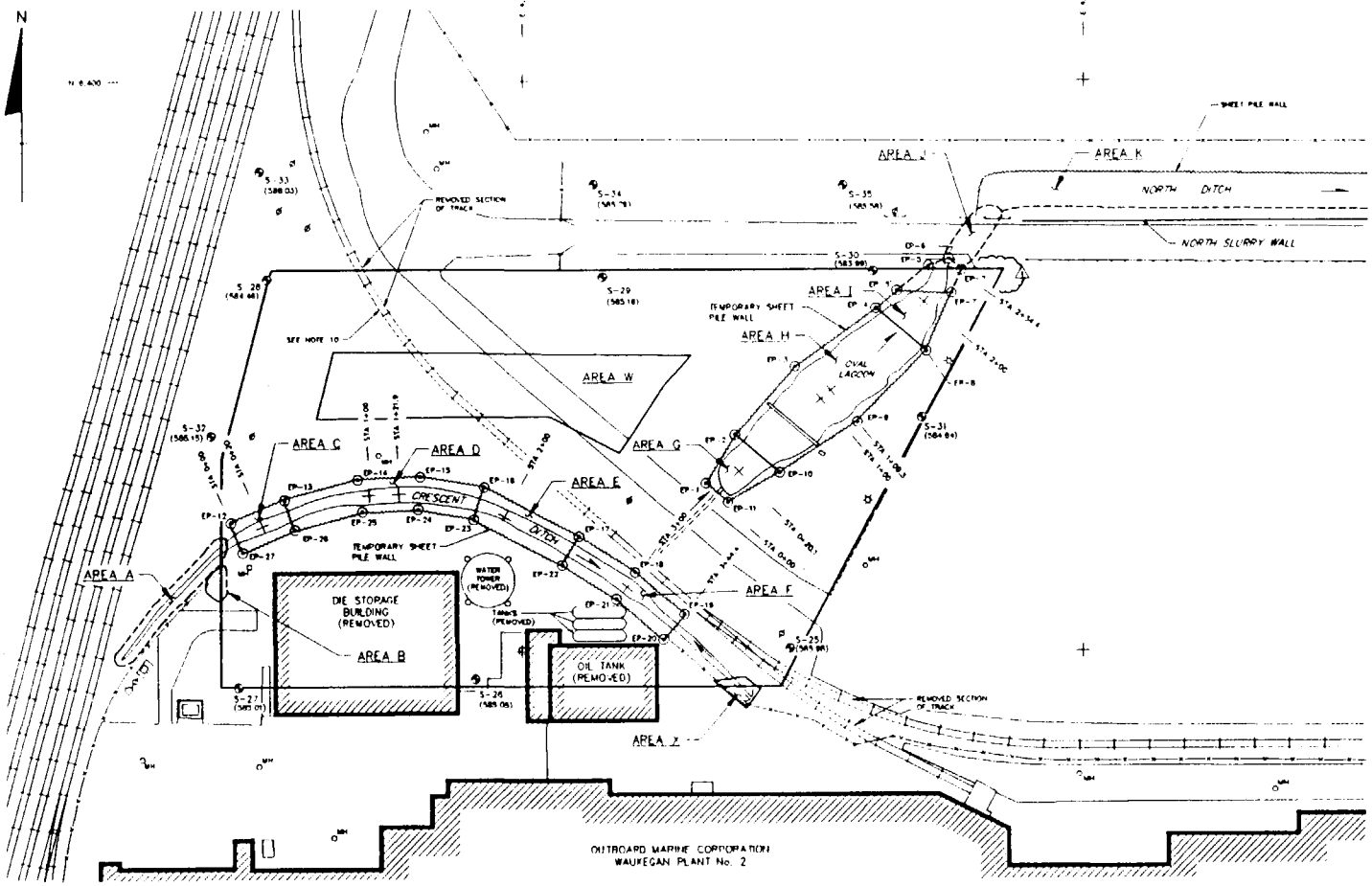
RECORD OF CONSTRUCTION
COVER PLAN
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 8-29-89	W-3	DRAWING NUMBER 87-126-E74	3
SCALE: AS SHOWN			

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M_A_M 8-29-89	SLG 2-18-91	CC 2-18-91	87-126-E74

REVISIONS: NO. DATE



LEGEND:

- FENCE
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- MANHOLE
- S-33 (588.03) SOIL BORING — GROUND SURFACE ELEVATION (USGS)
- SLURRY WALL (SEE NOTE 6)
- EP-11 COORDINATE POINT OF TEMPORARY SHEET PILE WALL

NOTES:

1. AREA A AND AREA X SOILS WERE EXCAVATED, PLACED INSIDE THE WEST CONTAINMENT CELL SLURRY WALL BOUNDARY, AND BACKFILLED WITH CLEAN SAND PRIOR TO INSTALLING SLURRY WALL. AREAS A AND X WERE EXCAVATED FROM TOP OF BANK TO DEPTH USING 1:1 SIDE SLOPE.
2. SOIL WAS EXCAVATED TO A DEPTH OF 2 FEET, PLACED INSIDE THE WEST CONTAINMENT CELL SLURRY WALL BOUNDARY, AND BACKFILLED WITH CLEAN SAND PRIOR TO INSTALLING THE SLURRY WALL.
3. AREA I NORTH OF EP-5' AND EP-7' WAS EXCAVATED AND BACK-FILLED WITH CLEAN SAND PRIOR TO THE CONSTRUCTION OF THE SLURRY WALL. THE EXCAVATED MATERIAL WAS PLACED IN THE SOUTHERN PORTION OF AREA I.
4. SETTLING POND IN AREA 'W' WAS CONSTRUCTED AS SHOWN ON DRAWING 87-126-E105
5. STORM DRAINS WERE RE-ROUTED PRIOR TO EXCAVATING AREA X. SEE DWG. 87-126-E73 FOR RE-ROUTED STORM DRAIN AND ALL OTHER RE-ROUTED UTILITIES NEAR THE WEST CONTAINMENT CELL
6. SEE DWG. 87-126-E40 FOR SLURRY WALL ALIGNMENT AND DETAILS.
7. AREAS C, D, E, F, G, H, AND I WERE EXCAVATED AND TREATED ON-SITE
8. EXCAVATED NORTH DITCH SOILS FROM TOP OF EXISTING BANK TO DEPTH USING 1:1 SIDE SLOPE WHERE NO SHEETING WAS PRESENT. WIDTH OF NORTH DITCH EXCAVATION VARIED AS SHOWN ON DRAWINGS 87-126-E179, E180, AND E181
9. FOR OVAL LAGOON AND CRESCENT DITCH CROSS SECTIONS, SEE DWGS. 87-126-E103 AND 87-126-E104.
10. RAILROAD TRACKS WERE ABANDONED AND LEFT WITHIN THE SLURRY WALL.
11. AREAS WERE EXCAVATED TO THE DEPTHS SHOWN OR DEEPER

OVAL LAGOON COORDINATES OF TEMPORARY SHEET PILE WALL

POINT DESIGNATION	NORTHING	EASTING
EP-1	6118.7	4531.3
EP-2	6153.1	4552.3
EP-3	6201.1	4585.4
EP-4	6241.9	4653.1
EP-5	6271.3	4690.4
EP-5'	6254.0	4648.4
EP-6	6278.3	4704.8
EP-7	6268.0	4714.0
EP-7'	6252.3	4708.8
EP-8	6211.7	4688.0
EP-9	6182.0	4640.1
EP-10	6126.2	4584.9
EP-11	6105.2	4547.4

CRESCENT DITCH COORDINATES OF TEMPORARY SHEET PILE WALL

POINT DESIGNATION	NORTHING	EASTING
EP-12	6091.1	4191.7
EP-13	6107.1	4279.6
EP-14	6131.5	4282.4
EP-15	6133.3	4327.6
EP-16	6116.0	4373.4
EP-17	6081.0	4440.3
EP-18	6055.8	4480.1
EP-19	6026.4	4519.4
EP-20	6008.6	4501.0
EP-21	6037.1	4488.7
EP-22	6061.0	4428.4
EP-23	6082.9	4388.0
EP-24	6100.3	4328.2
EP-25	6098.5	4285.8
EP-26	6085.9	4237.1
EP-27	6070.0	4200.2

EXCAVATION DEPTHS OF AREAS SHOWN (SEE NOTE 11)

AREA	DEPTH (USGS)	REMARKS
A	575.0	SEE NOTE 1
B	583.0	SEE NOTE 2
C	575.0	
D		EXCAVATED TO CLAY TILL
E	573.0	
F	580.0	
G	572.0	

EXCAVATION DEPTHS OF AREAS SHOWN (SEE NOTE 11)

AREA	DEPTH (USGS)	REMARKS
H	573.0	
I	575.0	SEE NOTE 3
J	575.0	EXCAVATED EXISTING CULVERT, PLACED SOILS AND CULVERT INSIDE WEST CONTAINMENT CELL BOUNDARY, AND BACKFILLED WITH CLEAN SAND PRIOR TO SLURRY WALL INSTALLATION
K	577.0	EXCAVATED SOILS, PLACED INSIDE WEST CONTAINMENT CELL, AND BACKFILLED WITH CLEAN SAND (SEE NOTE 9)
W	578.00	SEE DRAWING 87-126-E105
X	578.0	SEE NOTE 1

SCALE: 40 0 40 80 FEET

RECORD OF CONSTRUCTION LIMITS OF EXCAVATION WEST CONTAINMENT CELL WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

CanonieEnvironmental

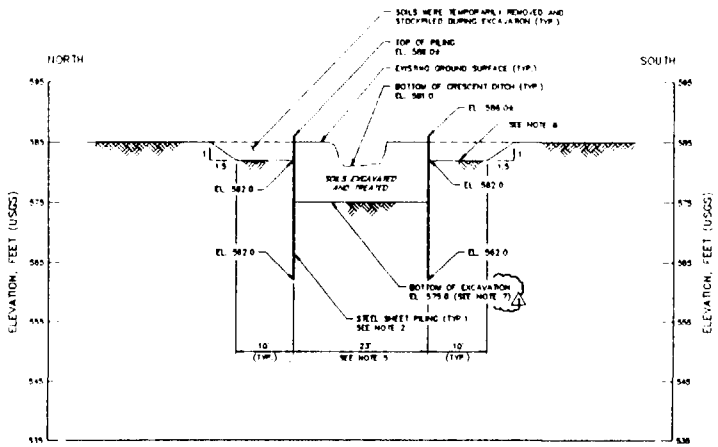
DATE: 8-15-89	W-4	DRAWING NUMBER 87-126-E57	1
SCALE: AS SHOWN			

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-20-88

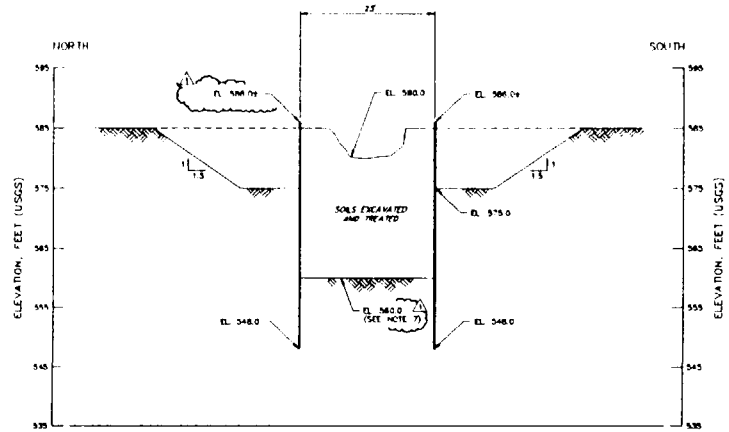
No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	APV'D BY
1	1-26-94	RECORD OF CONSTRUCTION, UPDATED SLURRY WALL, REMOVED UTILITY AND LIGHT POLES, CHANGED TABLE	SJW	SJW	KMB
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohdan	SLG	CC

DRAWN BY	KHM	CHECKED BY	SLG	DRAWING NUMBER	87-126-E57
	8-15-89	APPROVED BY	CC		
			2-18-91		2-18-91

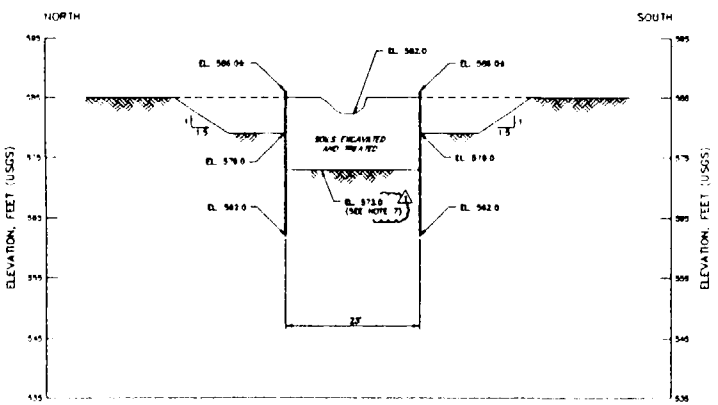
REVISIONS



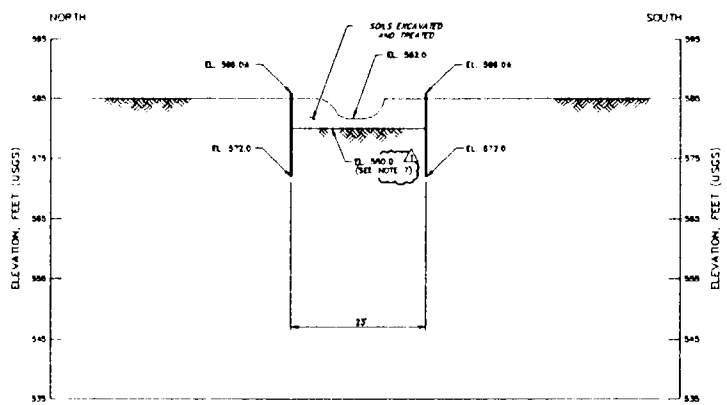
CRESCENT DITCH AREA C
STATION 0+20



CRESCENT DITCH AREA D
STATION 1+21.9



CRESCENT DITCH AREA E
STATION 2+00



CRESCENT DITCH AREA F
STATION 3+00

NOTES:

1. ALL ELEVATIONS ARE USGS.
2. CASTEEL CZ114 SHEET PILING.
3. FOR CROSS SECTION LOCATION PLAN, SEE DRAWING 87-126-E57.
4. TOP OF HARD CLAY IS AT ELEVATION 560±. SAND LAYER EXISTS FROM ELEVATION 560± TO GROUND SURFACE ELEVATION 585±
5. DISTANCE BETWEEN TEMPORARY SHEET PILE WALLS WAS MEASURED FROM CENTER TO CENTER OF SHEET PILINGS.
6. ALL SHEET PILING WAS REMOVED AND AREAS WERE BACKFILLED
7. AREA D WAS EXCAVATED TO TOP OF CLAY TILL.
8. AREAS WERE TO THE DEPTH SHOWN OR DEEPER

HORIZONTAL AND VERTICAL SCALE
10 0 10 20 FEET

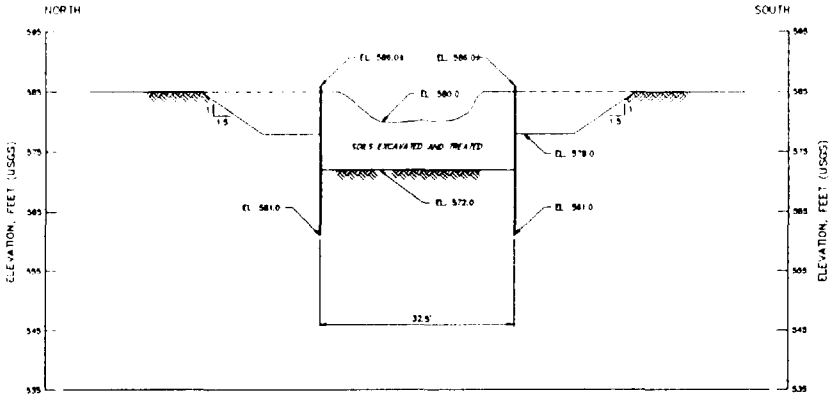
RECORD OF CONSTRUCTION
CRESCENT DITCH EXCAVATION PROFILES
WEST CONTAINMENT CELL
PREPARED FOR
WAUKEGAN HARBOR TRUST
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-28-94	RECORD OF CONSTRUCTION CHANGED ELEVATIONS AND NOTES	M.A.M	SJW	KMB
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Behnke	SLG	CC

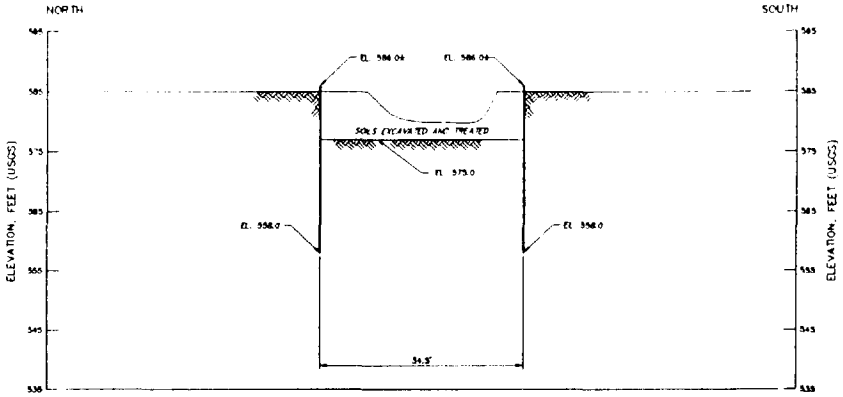
DATE: 9-20-89	W-5	DRAWING NUMBER 87-126-E104	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

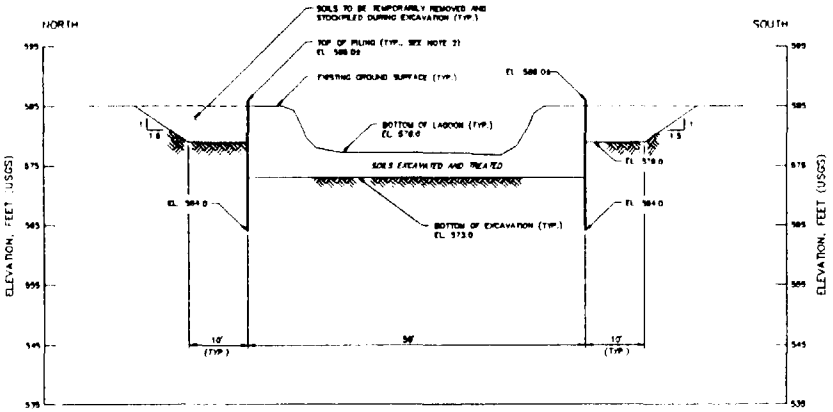
DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M.A.M 9-20-89	SLG 2-18-91	CC 2-18-91	87-126-E104



OVAL LAGOON AREA G
STATION 0+20.1



OVAL LAGOON AREA I
STATION 2+00



OVAL LAGOON AREA H
STATION 1+09.3

NOTES:

1. ALL ELEVATIONS ARE USGS.
2. CZ114 SHEET PILING.
3. FOR CROSS SECTION LOCATION PLAN, SEE DRAWING 87-126-E57.
4. DISTANCE BETWEEN TEMPORARY SHEET PILE WALLS WAS MEASURED FROM CENTER TO CENTER OF WALLS.
5. ALL SHEET PILING WAS REMOVED AND AREAS WERE BACKFILLED.
6. AREAS WERE EXCAVATED TO THE DEPTHS SHOWN OR DEEPER.

HORIZONTAL AND VERTICAL SCALE
10 0 10 20 FEET

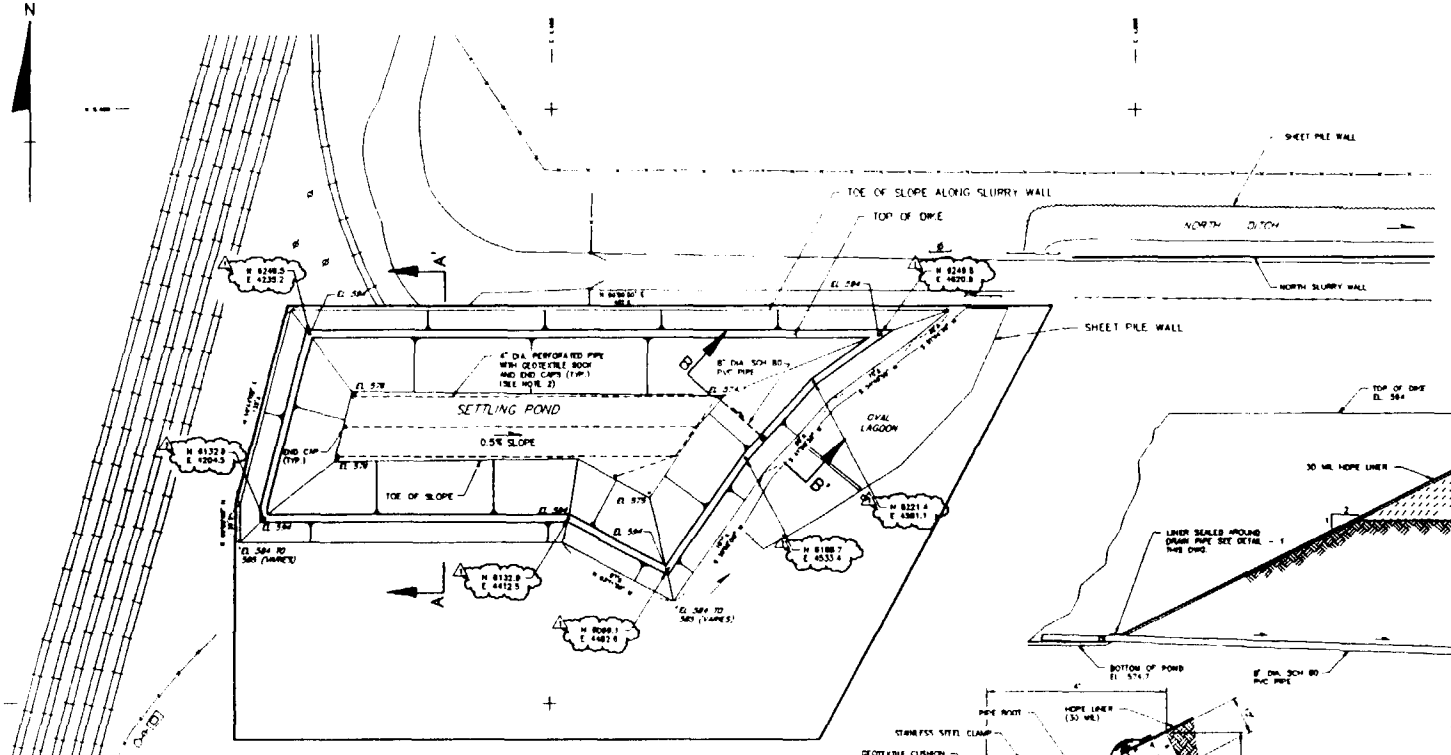
RECORD OF CONSTRUCTION
OVAL LAGOON EXCAVATION PROFILES
WEST CONTAINMENT CELL
PREPARED FOR
WAUKEGAN HARBOR TRUST
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-30-84	RECORD OF CONSTRUCTION	M.A.M.	SJM	KMB
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnen	SLG	CC

DATE: 9-20-89	W-6	DRAWING NUMBER 87-126-E103	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	M.A.M.	9-20-89
CHECKED BY	SLG	2-18-91
APPROVED BY	CC	2-18-91
DRAWING NUMBER	87-126-E103	



PLAN

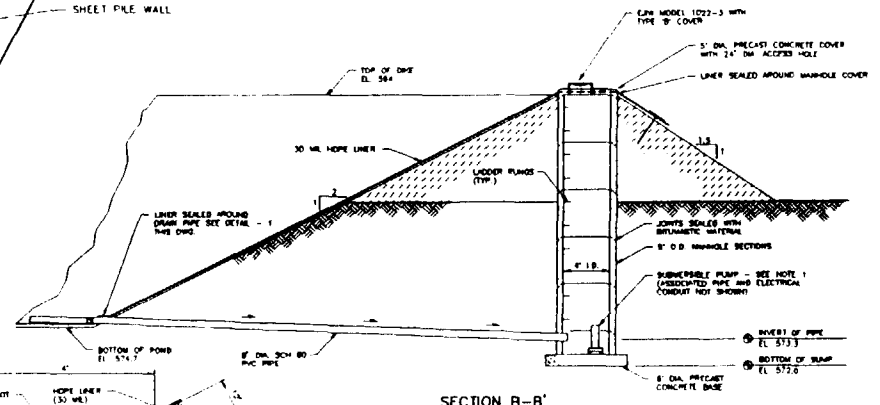
SETTLING POND LOCATION

SCALE

40 0 40 FEET

LEGEND:

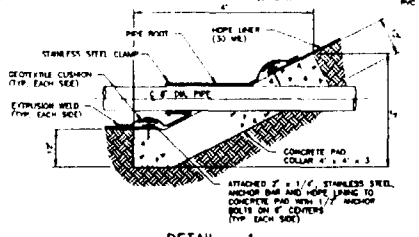
- FENCE
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- SLURRY WALL
- MANHOLE
- "EL 584" SPOT ELEVATION



SECTION B-B'

SCALE

5 0 5 FEET

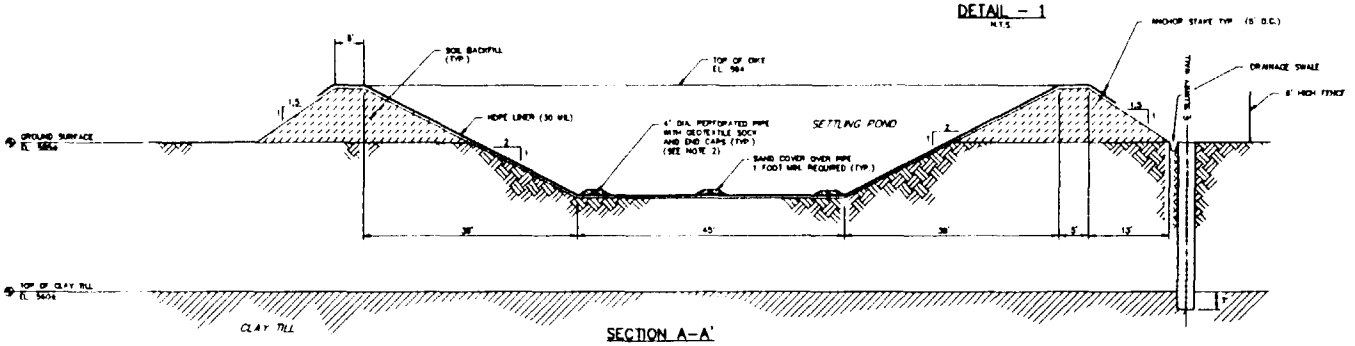


DETAIL - 1

N.T.S.

NOTES:

1. SUBMERSIBLE PUMP PROVIDED 20 GPM FLOW TO CATEGORY 3 WATER TREATMENT FACILITY.
2. AFTER TREATMENT OF SOILS IN SETTLING POND, POND AREA WAS BACKFILLED AND GRADED. SEE DRAWING 87-126-E74.
3. ALL EXCAVATED SOILS DESIGNATED FOR THERMAL TREATMENT WERE STOCKPILED WITHIN THE OVAL LAGOON SHEETING DURING THE CONSTRUCTION OF THE SETTLING POND. AFTER THE COMPLETION OF THE SETTLING POND, THE OVAL LAGOON AREA WAS EXCAVATED TO THE ELAVATION SHOWN ON DRAWING 87-126-E57.



SECTION A-A'

CROSS SECTION OF SETTLING POND

SCALE

10 0 10 FEET

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-26-88.

No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	1-28-94	RECORD OF CONSTRUCTION	M.A.M.	SJM	HMB
0	2-15-91	ISSUED FOR CONSTRUCTION	M.A.M.	SLG	CC

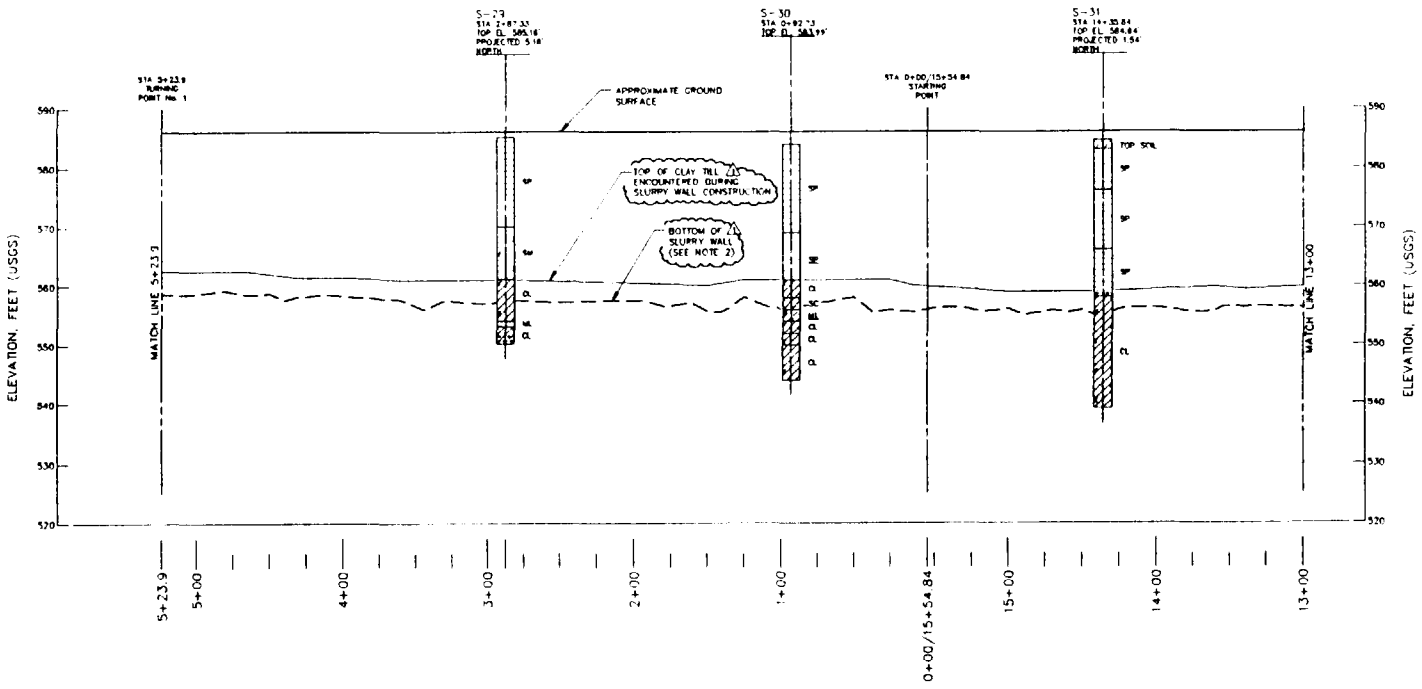
RECORD OF CONSTRUCTION
SETTLING POND LOCATION PLAN
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 9-21-89	W-7	DRAWING NUMBER 87-126-E105	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M.A.M. 9-21-89	SLG 2-15-91	CC 2-15-91	87-126-E105



LEGEND:

- SAND
- GRAVEL
- CLAY
- SILT
- UNDERLINING INDICATES LABORATORY TEST AT DEPICTED DEPTH

NOTES:

1. FOR SOIL PROFILE LOCATION PLAN, SEE DRAWING 87-126-E40
2. THE SLURRY WALL WAS EMBEDDED A MINIMUM OF 3 FEET INTO HARD SILTY CLAY (HARDPAN).

VERTICAL SCALE: 10 0 10 20 FEET

HORIZONTAL SCALE: 40 0 40 80 FEET

VERTICAL EXAGGERATION = 4x

RECORD OF CONSTRUCTION
SOIL PROFILE
ALONG ℄ OF SLURRY WALL
STATION 5+23.9 TO STATION 13+00
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

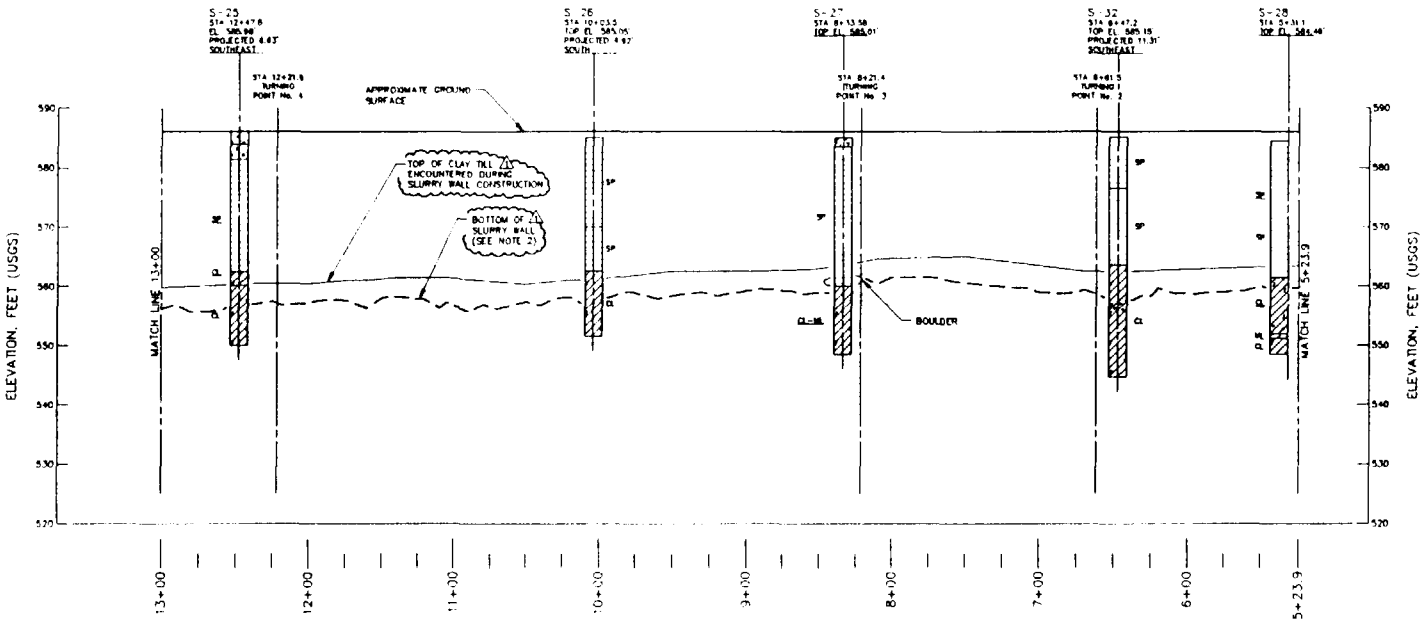
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	1-28-94	RECORD OF CONSTRUCTION, UPDATED BOTTOM OF SLURRY WALL, ADDED TOP OF CLAY TILL	SAK	SJM	FMB
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Bodnes	SLG	CC

DATE: 7-24-89	W-8	DRAWING NUMBER 87-126-E44	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M A M	SLG	CC	87-126-E44
7-24-89	2-18-91	2-18-91	



LEGEND:

- SAND
- GRAVEL
- CLAY
- SILT
- UNDERLINING INDICATES LABORATORY TEST AT DEPICTED DEPTH

NOTES:

1. FOR SOIL PROFILE LOCATION PLAN, SEE DRAWING 87-126-E40.
2. THE SLURRY WALL WAS EMBEDDED A MINIMUM OF 3 FEET INTO HARD SILTY CLAY (HARDPAN).

VERTICAL SCALE: 10 0 10 20 FEET

HORIZONTAL SCALE: 40 0 40 80 FEET

VERTICAL EXAGGERATION = 4x

RECORD OF CONSTRUCTION
SOIL PROFILE
ALONG ℄ OF SLURRY WALL
STATION 13+00 TO STATION 5+23.9
WEST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

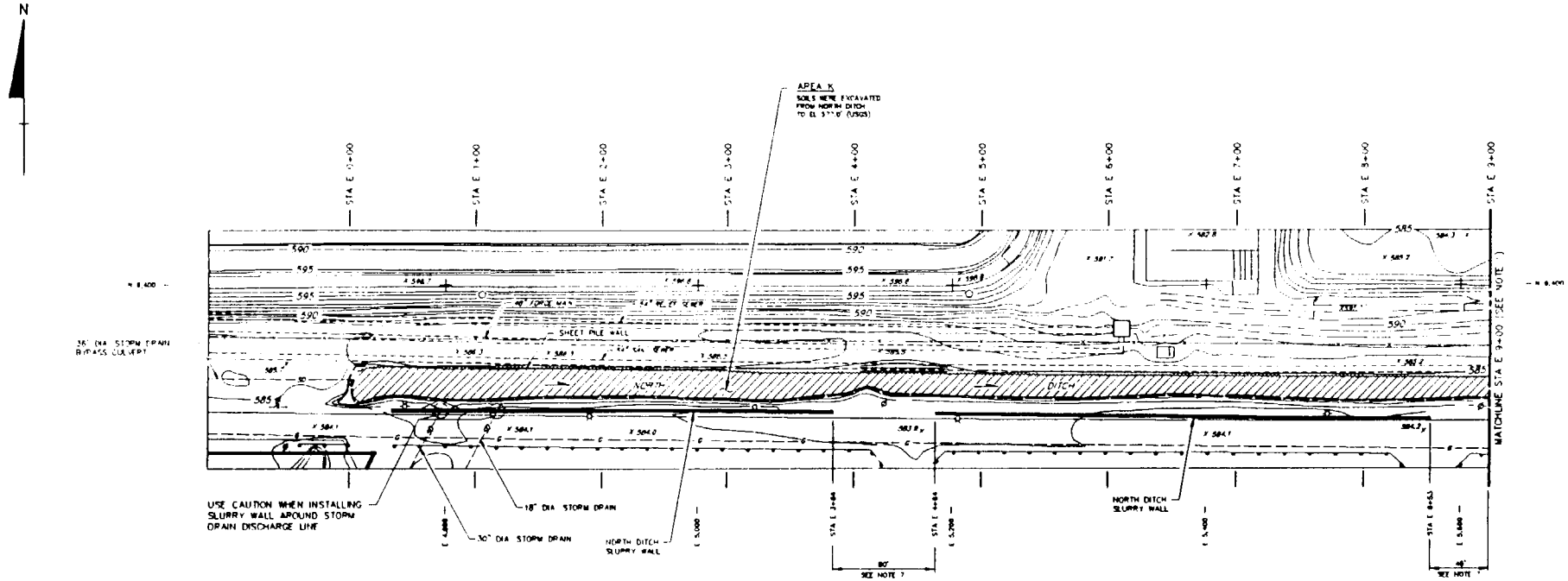
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY
1	1-26-84	RECORD OF CONSTRUCTION, UPDATED BOTTOM OF SLURRY WALL, ADDED TOP OF CLAY TILL	SAK	SJM	KMB
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

DATE: 7-25-89	W-9	DRAWING NUMBER 87-126-E45	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M. A. M. 7-25-89	SLG 2-18-91	CC 2-18-91	87-126-E45



LEGEND:

- FIRE HYDRANT
- LIGHT
- ELECTRICAL POLE
- SPOT ELEVATION
- GROUND CONTOUR (FT. USGS)
- SLURRY WALL
- GUARD RAIL
- UNIMPROVED ROAD
- FENCE
- H.P. GAS LINE
- STORM DRAIN
- NORTH DITCH AREA EXCAVATED
- DIRECTION OF FLOW

NOTES:

1. SEE DWG. 87-126-E118 FOR STATIONS E 9+00 TO E 19+00.
2. SEE DWG. 87-126-E113 FOR NORTH DITCH LOCATION.
3. SEE DRAWING 87-126-E181 FOR NORTH DITCH EXCAVATION CROSS SECTIONS AT STATIONS E 1+00, E 3+00 AND E 5+00. SEE DRAWING 87-126-E180 FOR NORTH DITCH EXCAVATION CROSS SECTIONS AT STATIONS E 7+00 AND E 9+00.
4. STATIONS E 0+00 TO E 9+00 WERE ISOLATED FROM NORTH DITCH IN SECTIONS WITH TEMPORARY SHEET PILING AND WATER WAS REMOVED PRIOR TO EXCAVATION. WATER WAS DISCHARGED INTO A WEST CONTAINMENT CELL RECHARGE ZONE. A TEMPORARY BYPASS AROUND AREA OF EXCAVATION WAS PROVIDED FOR NORMAL NORTH DITCH FLOW BY SUMPING WATER THROUGH A TEMPORARY ON GRADE PIPELINE.
5. NORTH DITCH SOILS WERE EXCAVATED TO EL 577 USING SIDE SLOPES OF 1:1. EXCAVATION BEGAN 2 FEET BACK FROM EDGE OF BANK AND AT EDGE OF EXISTING SHEET PILE WALL. EXCAVATED SOILS WERE PLACED IN THE WEST CONTAINMENT CELL. THE NORTH DITCH WAS BACKFILLED TO APPROXIMATELY EL 579.5 USING CLEAN SAND.
6. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
7. A TEMPORARY SHEET PILE WALL WAS INSTALLED FROM STA. E 3+84 TO STA. E 4+84 AND FROM STA. 8+53 TO STA. E 9+25 TO ISOLATE NORTH DITCH FOR DEWATERING AND EXCAVATION. THE WALL WAS REMOVED AFTER COMPLETION OF DEWATERING AND EXCAVATION.
8. INSTALLED NORTH DITCH SLURRY WALL DOWN TO TOP OF CLAY. THE SLURRY WALL FUNCTIONED AS A GROUND WATER FLOW BARRIER DURING DEWATERING AND EXCAVATION OF THE NORTH DITCH SOILS. AFTER COMPLETION OF THE NORTH DITCH, 4 FOOT WIDE BY 10 FOOT DEEP SECTIONS OF THE SLURRY WALL WERE EXCAVATED EVERY 200 FEET. THE EXCAVATED SLURRY WALL SECTIONS WERE BACKFILLED WITH GRAVEL.

SCALE
60 0 40 80 FEET

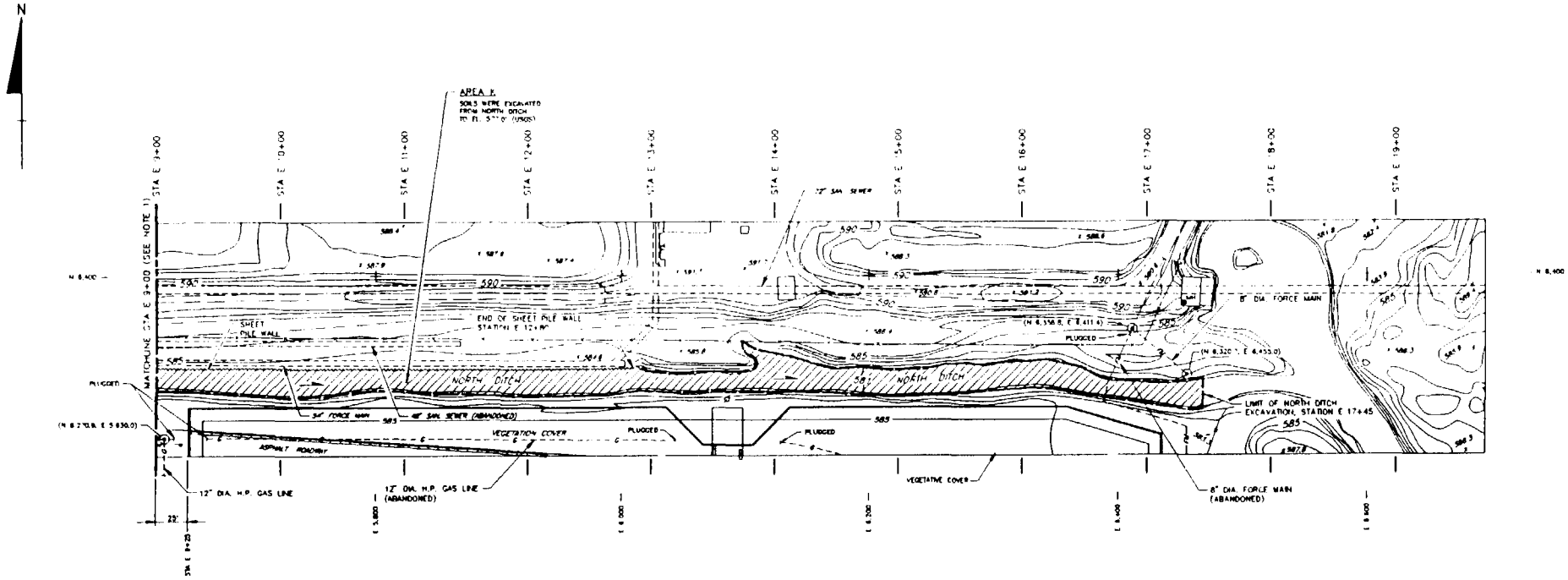
RECORD OF CONSTRUCTION
NORTH DITCH EXCAVATION
STATIONS E 0+00 TO E 9+00
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-84	RECORD OF CONSTRUCTION, UPDATED LEGEND AND NOTES	SAK	KWB	TJH
2	2-15-91	ISSUED FOR CONSTRUCTION	[illegible]	BLO	CC

DATE: 10-12-89	N-1	DRAWING NUMBER 87-126-E117	2
SCALE: AS SHOWN			

REVISIONS	NO.	DATE	DRAWN BY	KHM/DRE	10-12-89	CHECKED BY	SLO	2-18-91	APPROVED BY	CC	2-18-91	DRAWING NUMBER	87-126-E117



LEGEND:

- LIGHT
- ELECTRICAL POLE
- SPOT ELEVATION
- GROUND CONTOUR (FT., USGS)
- SLURRY WALL
- UNIMPROVED ROAD
- FENCE
- H.P. GAS LINE
- FORCE MAIN
- STORM DRAIN
- NORTH DITCH AREA TO BE EXCAVATED
- DIRECTION OF FLOW

NOTES:

1. SEE DWG. 87-126-E117 FOR STATIONS E 0+00 TO E 9+00.
2. SEE DWG. 87-126-E113 FOR NORTH DITCH LOCATION.
3. SEE DRAWING 87-126-E180 FOR NORTH DITCH EXCAVATION CROSS SECTIONS AT STATIONS E 9+00 AND E 11+00. SEE DRAWING 87-126-E179 FOR NORTH DITCH EXCAVATION CROSS SECTIONS AT STATIONS E 13+00, E 15+00 AND E 17+00.
4. STATIONS E 9+00 TO E 12+80 WERE ISOLATED FROM NORTH DITCH IN SECTIONS WITH TEMPORARY SHEET PILING AND WATER WAS REMOVED PRIOR TO EXCAVATION. WATER WAS DISCHARGED INTO A WEST CONTAINMENT CELL RECHARGE ZONE. A TEMPORARY BYPASS WAS PROVIDED AROUND AREA OF EXCAVATION FOR NORMAL NORTH DITCH FLOW BY SUMPING WATER THROUGH A TEMPORARY ON GRADE PIPELINE.
5. STATIONS E 12+80 TO E 17+45 WERE ISOLATED FROM NORTH DITCH IN SECTIONS WITH TEMPORARY SHEET PILING, EXCAVATED IN THE WET. ALL SURFACE WATER WAS PUMPED FROM EXCAVATED AREA TO A WEST CONTAINMENT CELL RECHARGE ZONE THEN BACKFILLED. A TEMPORARY BYPASS WAS PROVIDED AROUND AREA OF EXCAVATION FOR NORMAL NORTH DITCH FLOW.
6. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
7. A TEMPORARY SHEET PILE WALL WAS INSTALLED FROM STA. E 3+84 TO STA. E 4+64 AND FROM STA. 8+53 TO STA. E 9+25 TO ISOLATE NORTH DITCH FOR DEWATERING AND EXCAVATION. THE WALL WAS REMOVED AFTER COMPLETION OF DEWATERING AND EXCAVATION.

SCALE
40 0 40 80 FEET

RECORD OF CONSTRUCTION
NORTH DITCH EXCAVATION
STATIONS E 9+00 TO E 19+00
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

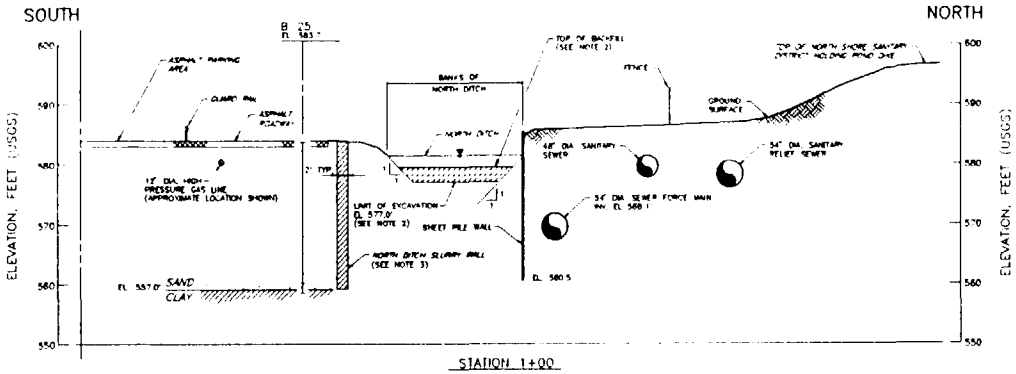
CanonieEnvironmental

No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-84	RECORD OF CONSTRUCTION, UPDATED LEGEND AND NOTES	SAK	KMB	TJH
0	2-1-91	ISSUED FOR CONSTRUCTION	M_A_M	SLG	CC

DATE: 10-12-89	N-2	DRAWING NUMBER 87-126-E118	1
SCALE: AS SHOWN			

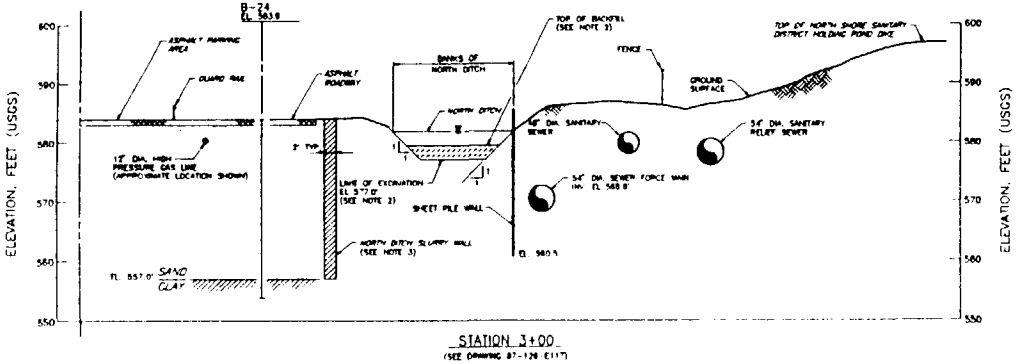
REVISIONS	NO.	DATE

DRAWN BY	KHM/DRE	CHECKED BY	SLG	2-18-91	DRAWING NUMBER 87-126-E118
	10-12-89	APPROVED BY	CC	2-18-91	



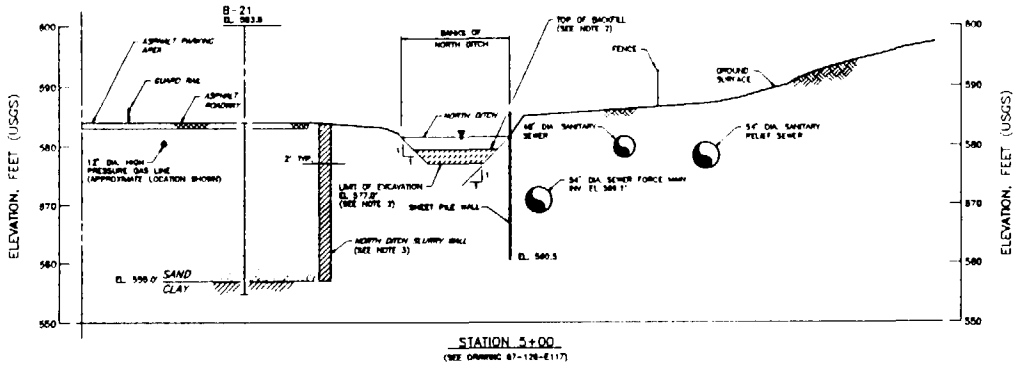
STATION 1+00

(SEE DRAWING 87-126-E117)



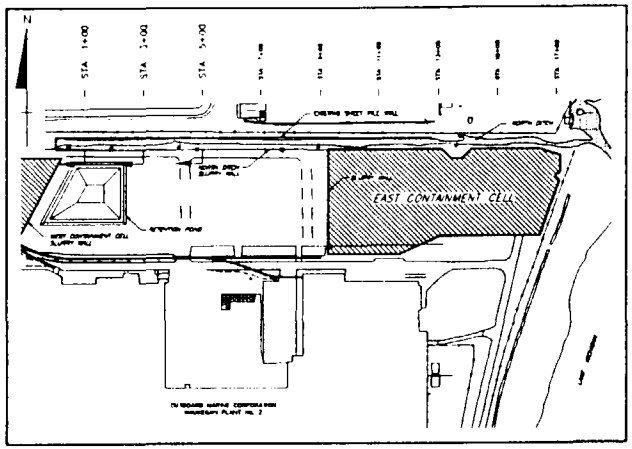
STATION 3+00

(SEE DRAWING 87-126-E117)



STATION 5+00

(SEE DRAWING 87-126-E117)



NORTH DITCH
KEY SITE PLAN

SCALE
200 0 200 FEET

LEGEND:

- WATER SURFACE
- CLEAN SAND BACKFILL
- B-25 EL 583.7 — DESIGN PHASE SOIL BORING

NOTES:

1. FOR LOCATION PLAN OF EAST CONTAINMENT CELL SLURRY WALL, SEE DRAWING 87-126-E39
2. NORTH DITCH SOILS WERE EXCAVATED TO A MAXIMUM ELEVATION OF 577.0 USING SIDE SLOPES OF 1H:1V. EXCAVATION BEGAN APPROXIMATELY 2 FEET BACK FROM EDGE OF BANK. SEE DRAWING 87-126-E117 FOR PLAN OF EXCAVATION. EXCAVATED SOILS WERE PLACED IN THE WEST CONTAINMENT CELL. NORTH DITCH WAS BACKFILLED TO APPROXIMATELY EL 579.52 FEET USING CLEAN SAND.
3. INSTALLED NORTH DITCH SLURRY WALL DOWN TO TOP OF CLAY. THE SLURRY WALL FUNCTIONED AS A GROUND WATER FLOW BARRIER DURING DEWATERING AND EXCAVATION OF THE NORTH DITCH SOILS. AFTER COMPLETION OF THE NORTH DITCH, 4 FOOT WIDE BY 10 FOOT DEEP SECTIONS OF THE SLURRY WALL WERE EXCAVATED EVERY 200 FEET. THE EXCAVATED SLURRY WALL SECTIONS WERE BACKFILLED WITH GRAVEL.

VERTICAL SCALE
10 0 10 20 FEET

HORIZONTAL SCALE
10 0 10 20 FEET

RECORD OF CONSTRUCTION
NORTH DITCH EXCAVATION CROSS SECTIONS
STATION 1+00, STATION 3+00,
AND STATION 5+00
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

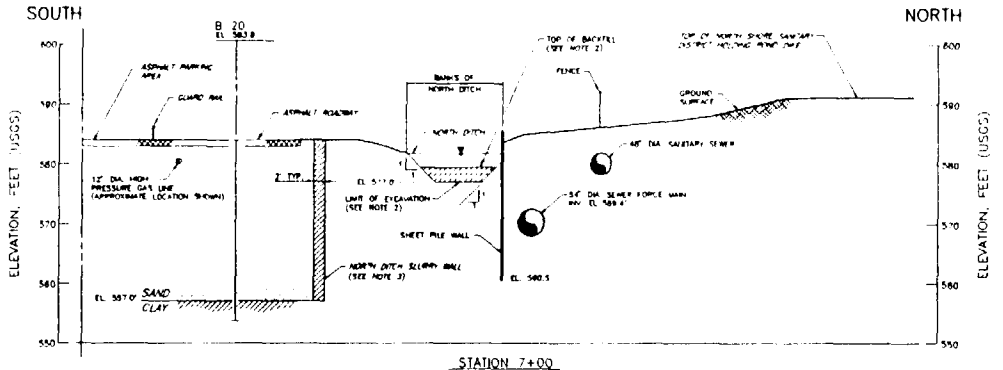
CanonieEnvironmental

DATE:	1-18-90	N-3	DRAWING NUMBER 87-126-E181	3
SCALE:	AS SHOWN			

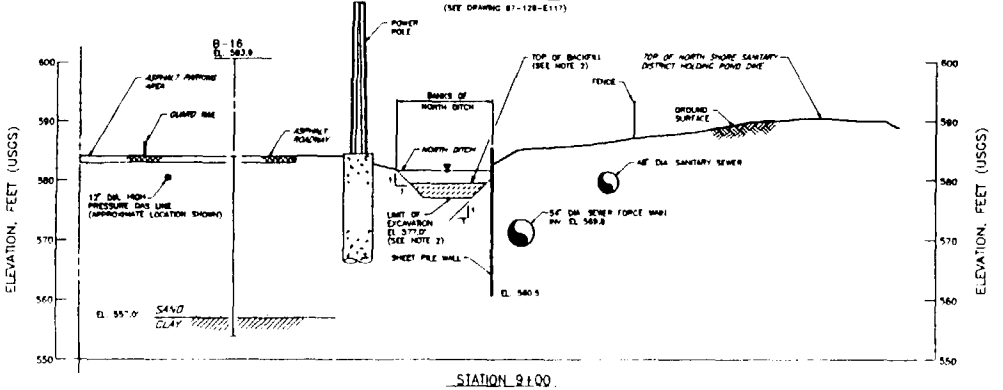
REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11 28 88
- MASON & HANGAR, SILAS MASON CO.; LEXINGTON, KENTUCKY JOB No. 606 SHEET No. C-2 "SUBSURFACE INVESTIGATION NORTH DITCH AREA", SHEET 1 AND 2 of 2
- GREELEY AND HANSON ENGINEERS; CHICAGO, ILLINOIS; "PLANS FOR THE CONSTRUCTION OF DIVISION F-3 WAUKEGAN EFFLUENT FORCE MAIN" SHEET 27 & 28 of 42 REVISION 0 DATED FEBRUARY, 1975

No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
3	8-17-94	RECORD OF CONSTRUCTION, UPDATED STATION CROSS SECTIONS, LEGEND AND NOTES	SAK	KWB	TJH
2	2-19-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC
1	1-18-90				

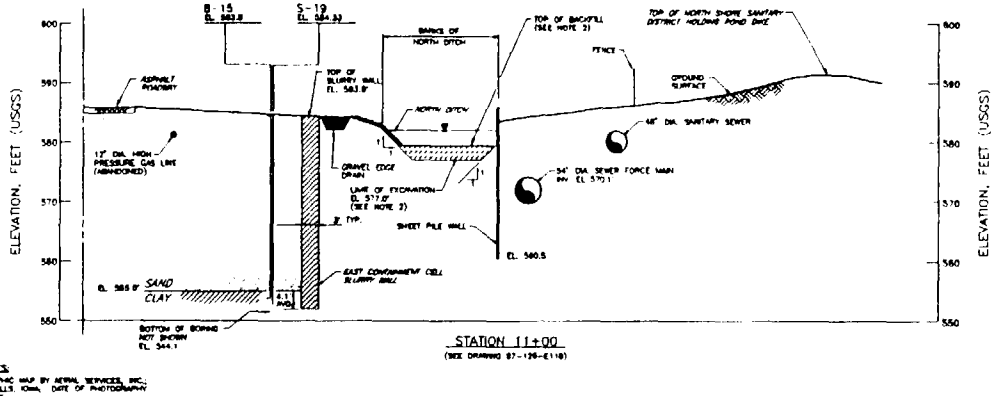
REVISIONS	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
NO. / DATE	M. A. M 1-18-90	SLG 2-18-91	CC 2-18-91	87-126-E181



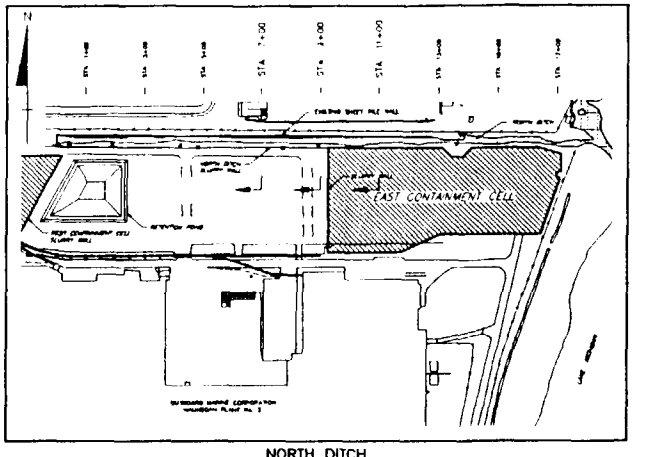
STATION 7+00
(SEE DRAWING 87-126-E117)



STATION 9+00
(SEE DRAWING 87-126-E117)



STATION 11+00
(SEE DRAWING 87-126-E118)



NORTH DITCH
KEY SITE PLAN

SCALE
200 0 200 FEET

LEGEND:

WATER SURFACE

CLEAN SAND BACKFILL

B-20
EL 583.8
DESIGN PHASE SOIL BORING

NOTES:

1. FOR LOCATION PLAN OF EAST CONTAINMENT CELL SLURRY WALL, SEE DRAWING 87-126-E39.
2. NORTH DITCH SOILS WERE EXCAVATED TO A MAXIMUM ELEVATION OF 577.0 USING SIDE SLOPES OF 1H:1V. EXCAVATION BEGAN APPROXIMATELY 2 FEET BACK FROM EDGE OF BANK. SEE DRAWINGS 87-126-E117 AND 87-126-E118 FOR PLAN OF EXCAVATION. EXCAVATED SOILS WERE PLACED IN THE WEST CONTAINMENT CELL. NORTH DITCH WAS BACKFILLED TO APPROXIMATELY EL. 579.52 FEET USING CLEAN SAND.
3. INSTALLED NORTH DITCH SLURRY WALL DOWN TO TOP OF CLAY. THE SLURRY WALL FUNCTIONED AS A GROUND WATER FLOW BARRIER DURING DEWATERING AND EXCAVATION OF THE NORTH DITCH SOILS. AFTER COMPLETION OF THE NORTH DITCH, 4 FOOT WIDE BY 10 FOOT DEEP SECTIONS OF THE SLURRY WALL WERE REMOVED EVERY 200 FEET. THE SLURRY WALL SECTIONS WHICH WERE REMOVED WERE BACKFILLED WITH GRAVEL.

VERTICAL SCALE
10 0 10 20 FEET

HORIZONTAL SCALE
10 0 10 20 FEET

RECORD OF CONSTRUCTION
NORTH DITCH EXCAVATION CROSS SECTIONS
STATION 7+00, STATION 9+00,
AND STATION 11+00
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 1-16-90	N-4	DRAWING NUMBER 87-126-E180	1
SCALE: AS SHOWN			

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA, DATE OF PHOTOGRAPHY 11 28 86.

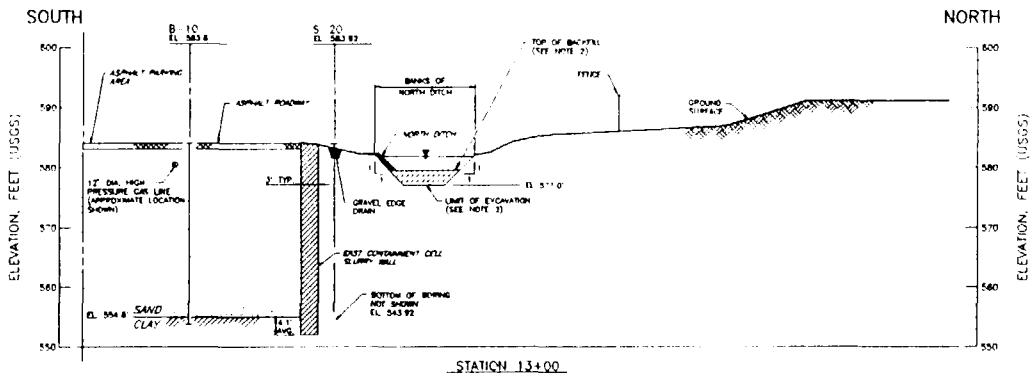
MASON & HANGAR, SILAS MASON CO.; LEXINGTON, KENTUCKY:
JOB No. 604 SHEET No. C-2
SUBSURFACE INVESTIGATION NORTH DITCH AREA: SHEET 1 AND 2 of 2

OPTEELY AND HANSEN ENGINEERS; CHICAGO, ILLINOIS:
PLANS FOR THE CONSTRUCTION OF DIVISION F-3 WAUKEGAN EFFLUENT FORCE MAIN
SHEET 17 & 28 of 42 REVISION 0.
DATED FEBRUARY, 1975

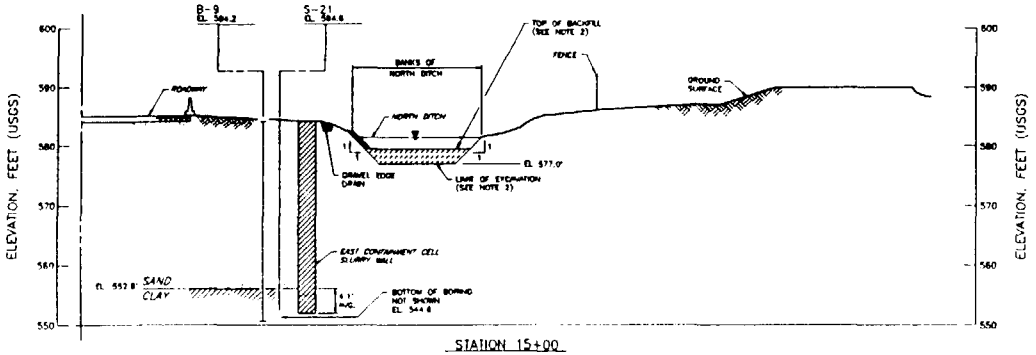
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-94	RECORD OF CONSTRUCTION, UPDATED CROSS SECTIONS, LEGEND AND NOTES	SAK	PWB	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	D. Behnke	SLG	CC

REVISIONS	NO.	DATE

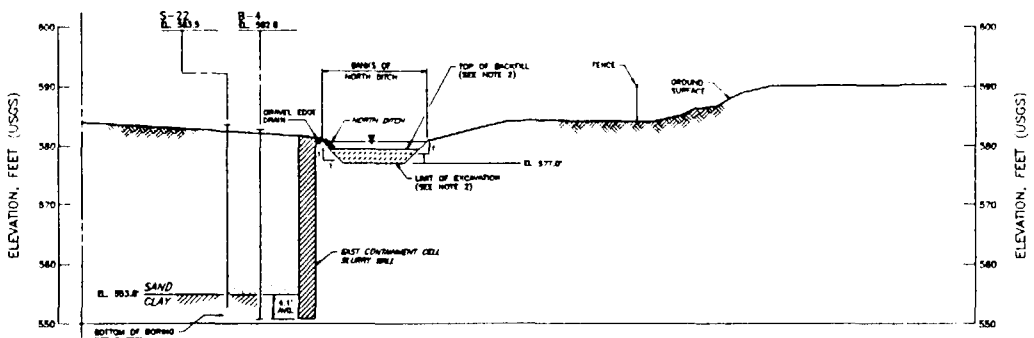
DRAWN BY	M. A. M. 1-16-90	CHECKED BY	SLG 2-18-91	DRAWING NUMBER	87-126-E180
		APPROVED BY	CC 2-18-91		



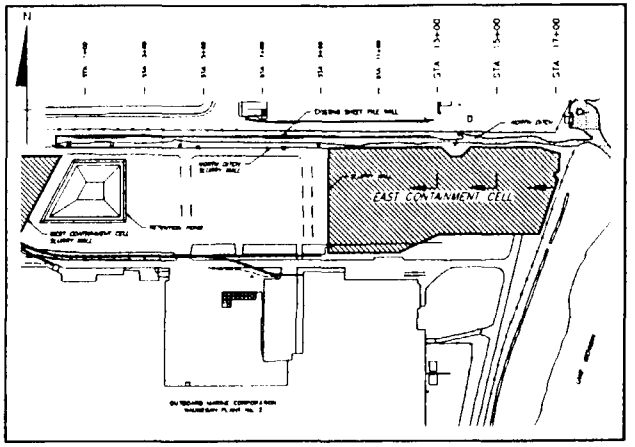
STATION 13+00
(SEE DRAWING 87-126-E118)



STATION 15+00
(SEE DRAWING 87-126-E118)



STATION 17+00
(SEE DRAWING 87-126-E118)



NORTH DITCH
KEY SITE PLAN

SCALE
200 0 200 FEET

LEGEND:

WATER SURFACE

CLEAN SAND BACKFILL

B-20
EL. 583.8
DESIGN PHASE SOIL BORING

1. FOR LOCATION PLAN OF EAST CONTAINMENT CELL SLURRY WALL, SEE DRAWING 87-126-E39
2. NORTH DITCH SOILS WERE EXCAVATED TO A MAXIMUM ELEVATION OF 577.0 USING SIDE SLOPES OF 1H:1V. EXCAVATION BEGAN APPROXIMATELY 2 FEET BACK FROM EDGE OF BANK. SEE DRAWING 87-126-E118 FOR PLAN OF EXCAVATION. EXCAVATED SOILS WERE PLACED IN THE WEST CONTAINMENT CELL. NORTH DITCH WAS BACKFILLED TO APPROXIMATELY EL 579.52 FEET USING CLEAN SAND.

VERTICAL SCALE
10 0 10 20 FEET

HORIZONTAL SCALE
10 0 10 20 FEET

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88.
- MASON & HANGAR, SILAS MASON CO.; LEXINGTON, KENTUCKY. JOB No. 606 SHEET No. C-2 "SUBSURFACE INVESTIGATION NORTH DITCH AREA"; SHEET 1 AND 2 of 2
- GREELEY AND HANSEN ENGINEERS; CHICAGO, ILLINOIS; "PLANS FOR THE CONSTRUCTION OF DIVISION F-3 WAUKEGAN EFFLUENT FORCE MAIN" SHEET 27 & 28 of 42 REVISION 0. DATED: FEBRUARY, 1975

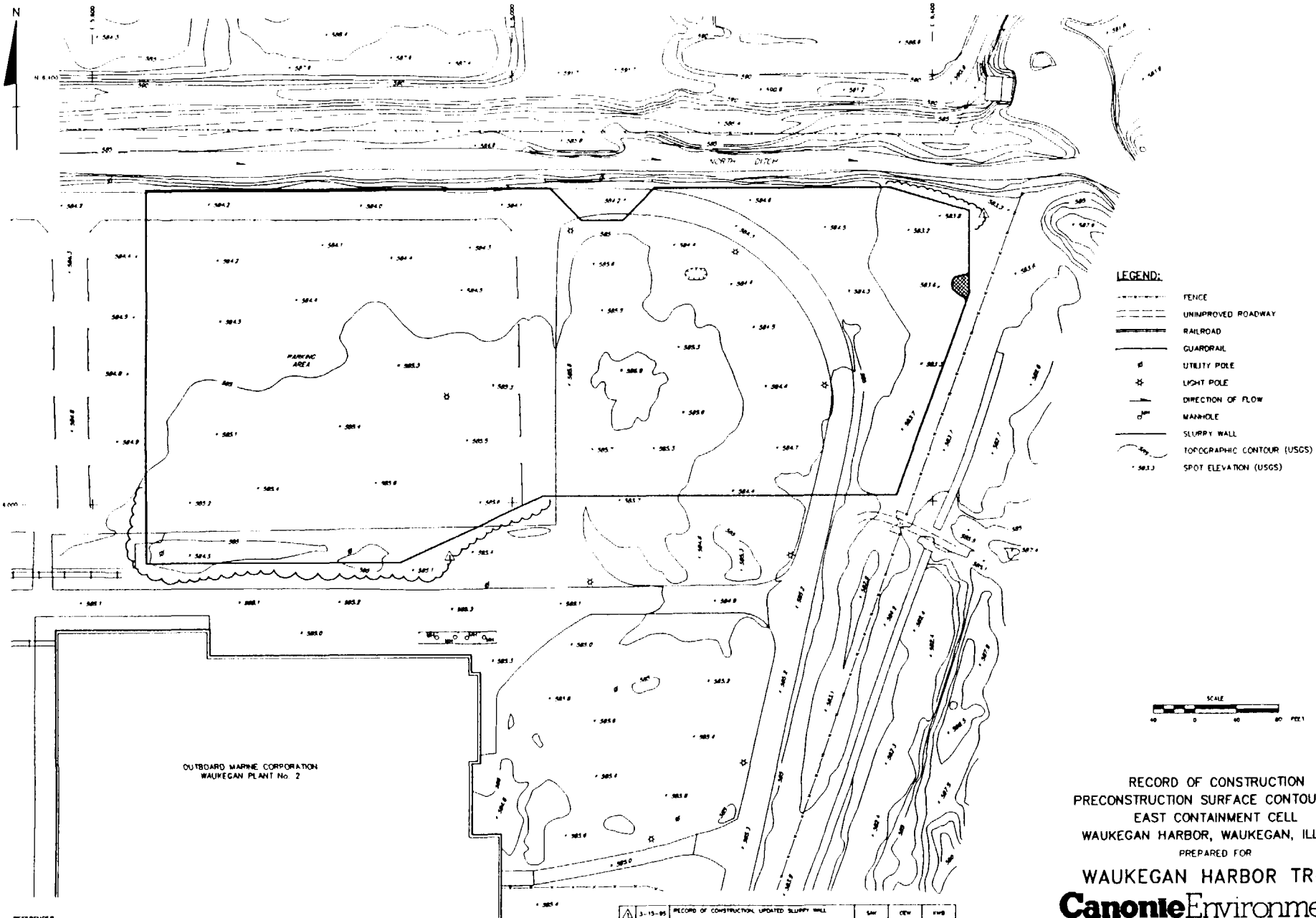
No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY
1	8-17-94	RECORD OF CONSTRUCTION, UPDATED CROSS SECTIONS, LEGEND AND NOTES	SAK	KMB	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Behnke	SLG	CC

RECORD OF CONSTRUCTION
NORTH DITCH EXCAVATION CROSS SECTIONS
STATION 13+00, STATION 15+00,
AND STATION 17+00
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
CanonieEnvironmental

DATE: 1-16-90	N-5	DRAWING NUMBER 87-126-E179	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	M. A. M.	CHECKED BY	SLG	2-18-91	DRAWING NUMBER	87-126-E179
	1-16-90	APPROVED BY	CC	2-18-91		



REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-19-88

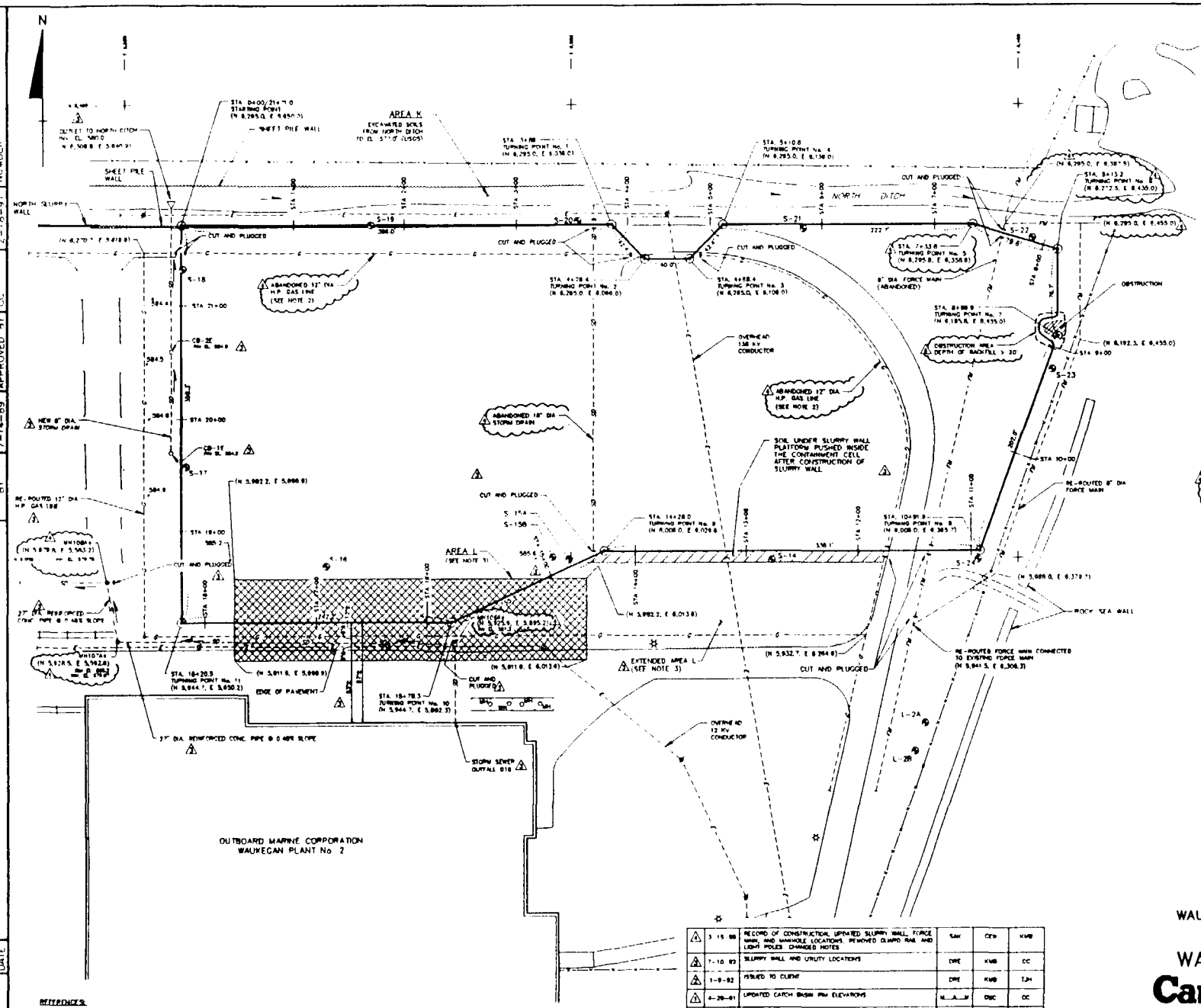
No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
1	3-15-89	RECORD OF CONSTRUCTION, UPDATED SLURRY WALL	SAV	CEW	KWB
2	7-19-81	ISSUED FOR CONSTRUCTION	G. Bielvine	SLG	CC

RECORD OF CONSTRUCTION
PRECONSTRUCTION SURFACE CONTOUR MAP
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 8-30-89	E-1	DRAWING NUMBER 87-126-E64	1
SCALE: AS SHOWN			

REVISIONS		DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
NO.	DATE	M. A. M. 8-30-89	SLG 2-18-41	CC 2-18-41	87-126-E64



REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA, DATE OF PHOTOGRAPHY 11-26-88

LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- RAILROAD
- GUARDRAIL
- UTILITY POLE
- LIGHT POLE
- DIRECTION OF FLOW
- CATCH BASIN
- MANHOLE
- SOIL BORING (DESIGN PHASE)
- SLURRY WALL
- FORCE MAIN
- H.P. GAS LINE
- STORM DRAIN
- POWER LINE
- SPOT ELEVATION

NOTES:

1. FOR PROFILES ALONG CENTER LINE OF SLURRY WALL, SEE DRAWING 87-126-E42 AND 87-126-E43.
2. THE 12" DIA HIGH PRESSURE GAS LINE WAS RELOCATED BY NORTH SHORE GAS COMPANY.
3. SOILS EXCAVATED TO A DEPTH OF 2 FEET AND PLACED INSIDE WEST CONTAINMENT CELL AREA WERE BACKFILLED WITH CLEAN SAND.

SCALE: 40 0 40 80 FEET

RECORD OF CONSTRUCTION
SLURRY WALL ALIGNMENT
AND UTILITY LOCATION PLAN
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

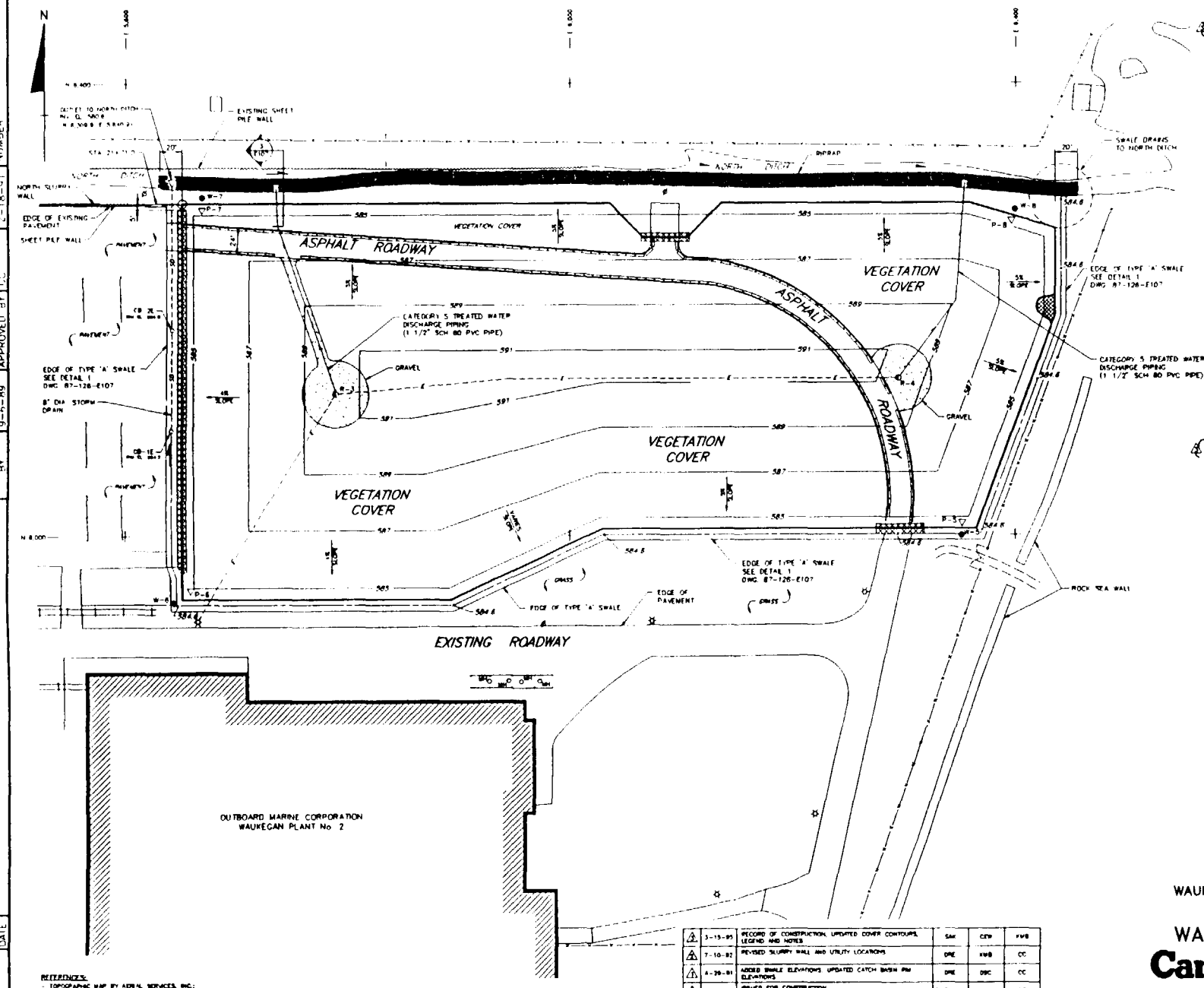
CanonieEnvironmental

DATE: 7-14-89	E-2	DRAWING NUMBER 87-126-E39	4
SCALE: AS SHOWN			

No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
4	3-15-88	RECORD OF CONSTRUCTION, UPDATED SLURRY WALL, FORCE MAIN, AND MANHOLE LOCATIONS, REMOVED GUARD RAIL AND LIGHT POLES, CHANGED NOTES	KAK	CEV	KMB
3	7-10-92	SLURRY WALL AND UTILITY LOCATIONS	DRE	KMB	CC
2	1-9-92	ISSUED TO CLIENT	DRE	KMB	TJH
1	4-20-91	UPDATED CATCH BASIN RIM ELEVATIONS	M.A.M.	DRC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	O. Bahaba	SLG	CC

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M.A.M. 7-14-89	SLG 2-18-91	CC 2-18-91	87-126-E39

REVISIONS



LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- LIGHT POLE
- DIRECTION OF SURFACE WATER FLOW
- MANHOLE
- SLURRY WALL
- SLURRY WALL WITH PROTECTIVE CONCRETE CAP
- COVER ELEVATION CONTOUR (USGS)
- CATCH BASIN
- RECOVERY WELL
- PIEZOMETER
- MONITORING WELL
- POWER LINE (UNDERGROUND)
- SURFACE SPOT ELEVATION
- CONCRETE BARRIERS

NOTES:

1. GROUND WATER FROM R-3 AND R-4 TO BE TREATED PRIOR TO DISCHARGE THROUGH THE TREATED WATER DISCHARGE PIPING LOCATED IN THE CELL COVER. THE DISCHARGE PIPING IS SLOPED TO PREVENT THE ACCUMULATION OF WATER.
2. GEOTEXTILE FABRIC (160 MIL) AND 2x90 STONE LAYER (1'-6" MIN. THICKNESS) WERE PLACED ON SOUTH SHORE OF NORTH DITCH ALONG EAST CONTAINMENT CELL SLURRY WALL. GEOTEXTILE FABRIC AND STONE WERE PLACED AFTER NORTH DITCH EXCAVATION AND BACKFILLING WAS COMPLETE. SEE DWG 87-126-E107.
3. NO STRUCTURES ARE ALLOWED WITHIN THE LIMITS OF THE CONTAINMENT CELL.

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-29-88

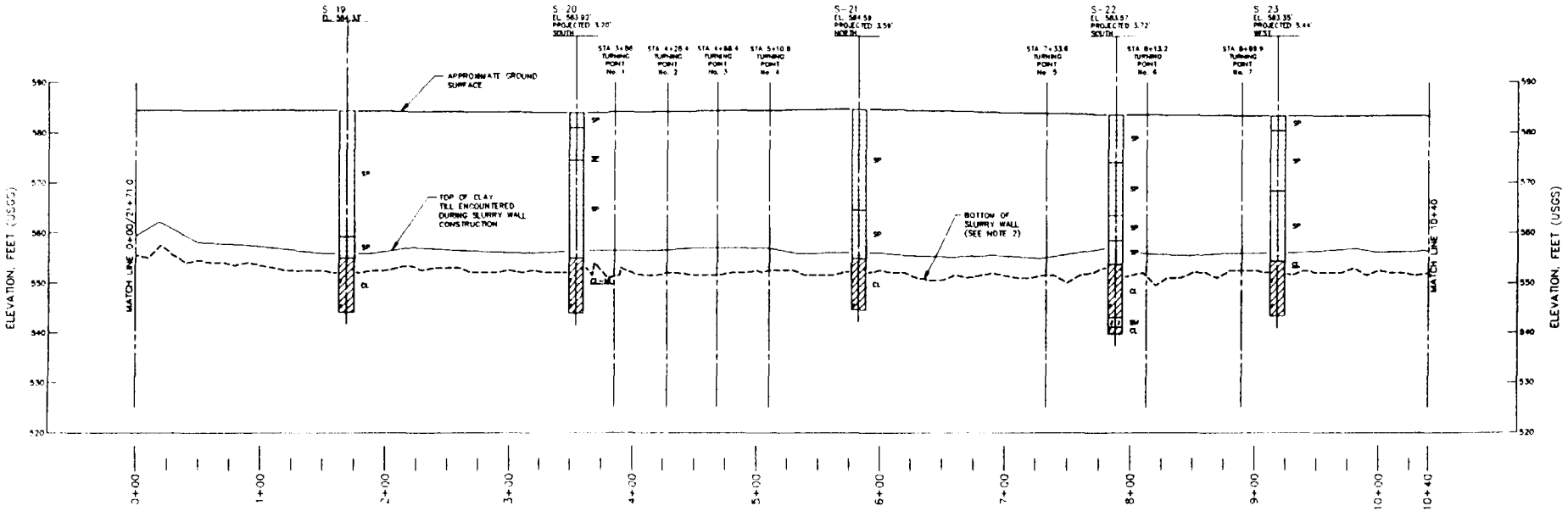
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
3	3-15-95	RECORD OF CONSTRUCTION, UPDATED COVER CONTOURS, LEGEND AND NOTES	SAK	CEW	KMB
2	7-10-92	REVISED SLURRY WALL AND UTILITY LOCATIONS	DRE	KMB	CC
1	4-29-91	ADDED SWALE ELEVATIONS, UPDATED CATCH BASIN RIM ELEVATIONS	DRE	DBC	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnes	SLG	CC

RECORD OF CONSTRUCTION
COVER PLAN
EAST CONTAINMENT CELL COVER
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 9-6-89	E-3	DRAWING NUMBER 87-126-E83
SCALE: AS SHOWN		

DRAWING NUMBER 87-126-E83
CHECKED BY SLG 2-18-91
APPROVED BY CC 2-18-91
DRAWN BY M A M 9-6-89
REVISIONS NO. DATE



LEGEND:

- SAND
- GRAVEL
- CLAY
- SILT
- CL-ML UNDERLINING INDICATES LABORATORY TEST AT DEPICTED DEPTH

NOTES:

1. FOR SOIL PROFILE LOCATION PLAN, SEE DRAWING 87-126-E39.
2. THE SLURRY WALL WAS EMBEDDED A MINIMUM OF 3 FEET INTO HARD SILTY CLAY (HARDPAN).

VERTICAL SCALE: 10 0 10 20 FEET

HORIZONTAL SCALE: 40 0 40 80 FEET

VERTICAL EXAGGERATION = 4x

RECORD OF CONSTRUCTION
SOIL PROFILE
ALONG ℄ OF SLURRY WALL
STATION 0+00 TO STATION 10+40
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

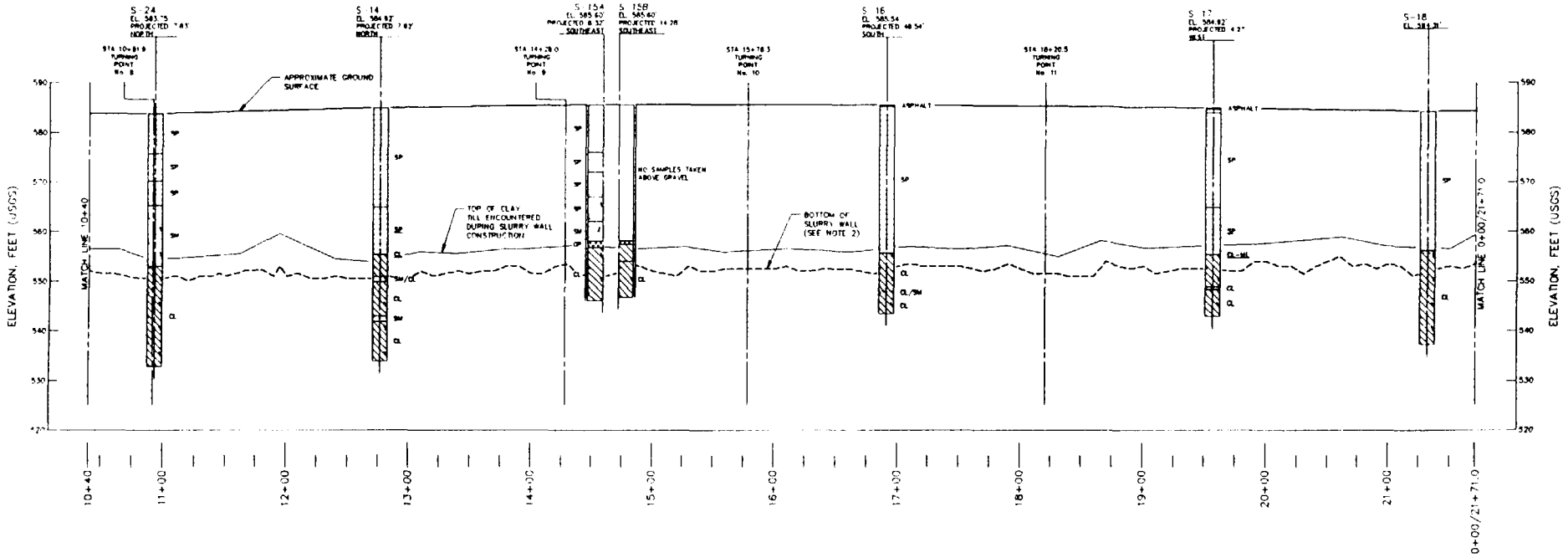
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	3-15-95	RECORD OF CONSTRUCTION, GENERAL UPDATE	SAK	CEW	KMB
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

DATE: 7-17-89	E-4	DRAWING NUMBER 87-126-E42	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M_A_M 7-17-89	SLG 2-18-91	CC 2-18-91	87-126-E42



LEGEND:

- SAND
- GRAVEL
- CLAY
- SILT
- CL-ML UNDERLINING INDICATES LABORATORY TEST AT DEPICTED DEPTH

NOTES:

1. FOR SOIL PROFILE LOCATION PLAN, SEE DRAWING 87-126-E39.
2. THE SLURRY WALL WAS EMBEDDED A MINIMUM OF 3 FEET INTO HARD SILTY CLAY (HARDPAN).

VERTICAL SCALE: 10 0 10 20 FEET

HORIZONTAL SCALE: 40 0 40 80 FEET

VERTICAL EXAGGERATION = 4x

RECORD OF CONSTRUCTION
SOIL PROFILE
ALONG ℄ OF SLURRY WALL
STATION 10+40 TO STATION 0+00/21+71.0
EAST CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

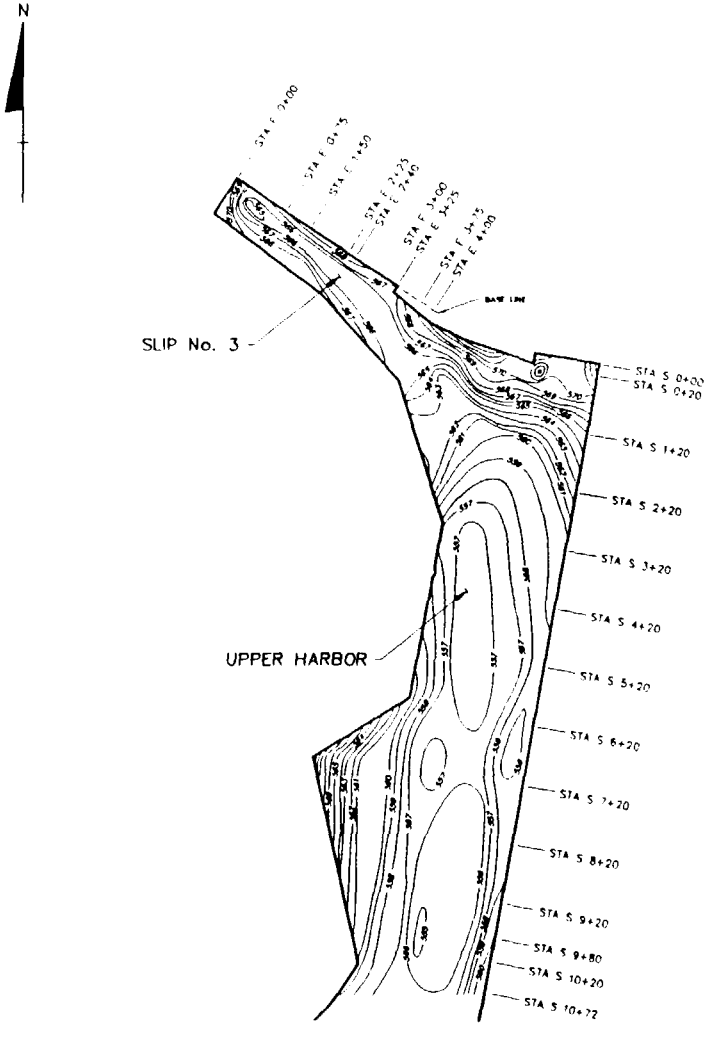
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	3-15-89	RECORD OF CONSTRUCTION, GENERAL UPDATE	SAH	CEW	KWB
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Behnke	SLG	CC

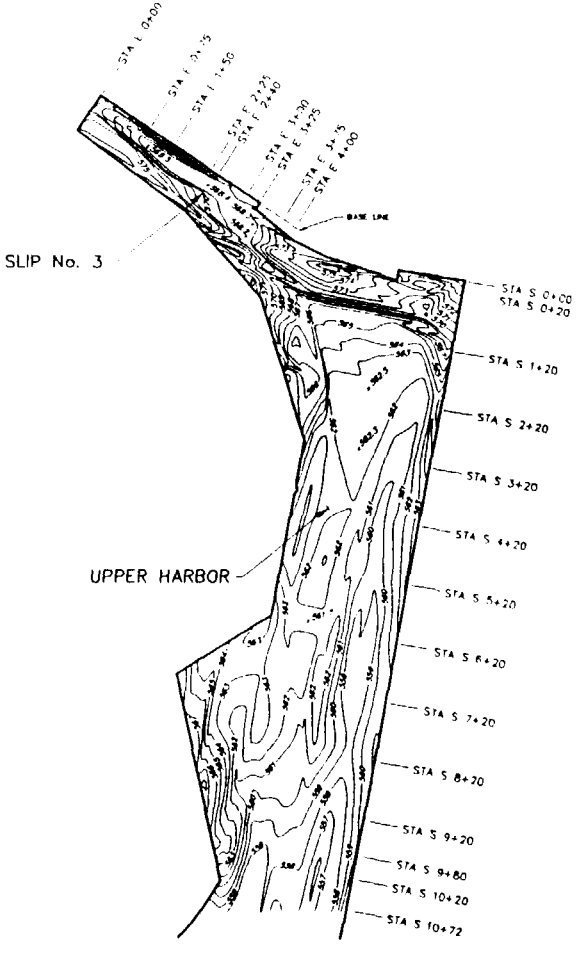
DATE: 7-17-89	E-5	DRAWING NUMBER 87-126-E43	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	SLG	CC	DRAWING NUMBER
M_A_M	7-17-89		2-18-91	2-18-91	87-126-E43



TOP OF SAND CONTOURS



TOP OF MUCK CONTOURS

NOTES:

1. CONTOURS ARE IGL ELEVATIONS
2. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
3. TOP OF SAND SOUNDINGS WERE MADE IN NOVEMBER, 1980. SEE REFERENCE No. 2
4. TOP OF MUCK SOUNDINGS WERE MADE IN NOVEMBER, 1987. SEE REFERENCE No. 3

SCALE
100 0 100 200 FEET

REFERENCES:

1. TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-20-88
2. MASON & HANGER, SILAS MASON CO JOB No. 908 SHEET No. C-2 "BOTTOM OF MUCK (TOP OF SAND) LAYER"
3. CANONIE, INC. DRAWING No. 87-097 "WAUKEGAN HARBOR CONTOURS" 11-30-87

No	DATE	ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
1	8-17-94	RECORD OF CONSTRUCTION	SAK	KWB	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	G. BARNARD	SLG	CC

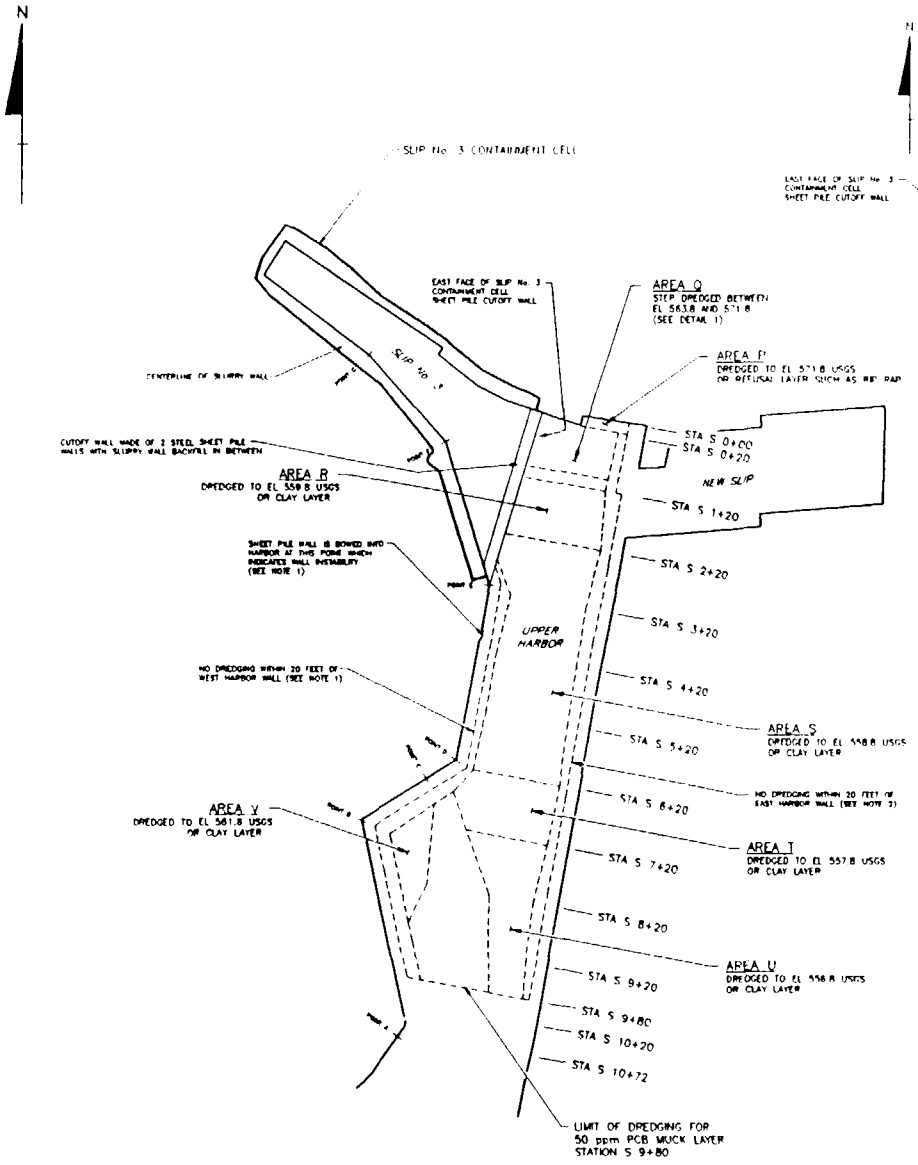
RECORD OF CONSTRUCTION
MUCK AND SAND CONTOURS
PRIOR TO DREDGING SLIP No. 3
AND UPPER HARBOR
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 8-23-89	D-1	DRAWING NUMBER 87-126-E58	1
SCALE: AS SHOWN			

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
W. A. M.	SLG	CC	87-126-E58
8-23-89	2-18-91	2-18-91	

REVISIONS
NO. DATE

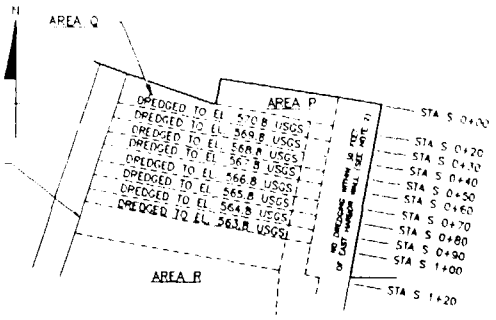


UPPER HARBOR PLAN

LIMITS OF DREDGING

SCALE

100 0 100 FEET

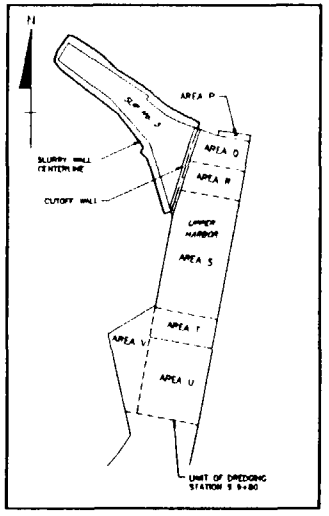


DETAIL 1

AREA Q DREDGING LIMITS

SCALE

40 0 40 FEET



KEY SITE PLAN

LIMITS OF DREDGING

SCALE

200 0 200 FEET

LEGEND:

POINT A — SHEET PILE WALL TURNING POINT (SEE NOTE 8)

NOTES:

1. MAXIMUM DESIGN DREDGE LINE ALONG WEST BANK OF UPPER HARBOR IS 570.0 USGS PER ORIGINAL DESIGN OF EXISTING SHEET PILE WALL (NATIONAL GYPSUM CO., BUFFALO, N.Y., SHEET PILE BULKHEAD PLAN OF SECTION F TO G AND MISC. DETAILS, DWG. No. WID 18, 9-8-61). EXISTING SOUNDING CONTOURS (NOV., 1987) INDICATE ELEVATIONS VARY FROM EL 564 TO EL 569 USGS ALONG WEST WALL AND THE WALL IS SHOWING SIGNS OF TILTING. TO PROTECT THE INTEGRITY OF THE WEST WALL, DREDGING DID NOT OCCUR WITHIN 20 FEET FROM THE FACE OF THE WALL.
2. DESIGN DETAILS FOR THE EAST WALL OF THE UPPER HARBOR ARE NOT KNOWN. TO PROTECT THE STABILITY OF THE EAST WALL, DREDGING DID NOT OCCUR WITHIN 20 FEET FROM THE FACE OF THE WALL.
3. IGL DATUM + 1.8 FEET = USGS DATUM
4. NO BOAT TRAFFIC OCCURRED IN THE UPPER HARBOR DURING THE DREDGING ACTIVITIES PERIOD
5. THESE AREAS WERE DREDGED ON A SLOPE TO PROVIDE A TRANSITION BETWEEN AREAS WITH DIFFERENT FINAL ELEVATIONS.
6. FOR DREDGING PROFILES FROM STATION S 0+00 TO S 9+80, SEE DWGS 87-126-E60, E61, E62, E68, AND E69
7. SHEET PILE WALL TURNING POINT DESIGNATIONS ARE REFERENCED FROM NATIONAL GYPSUM CONSTRUCTION DRAWINGS WID-17 AND WID-18.

REFERENCES:

- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC. CEDAR FALLS, IOWA, DATE OF PHOTOGRAPHY 11-28-88.

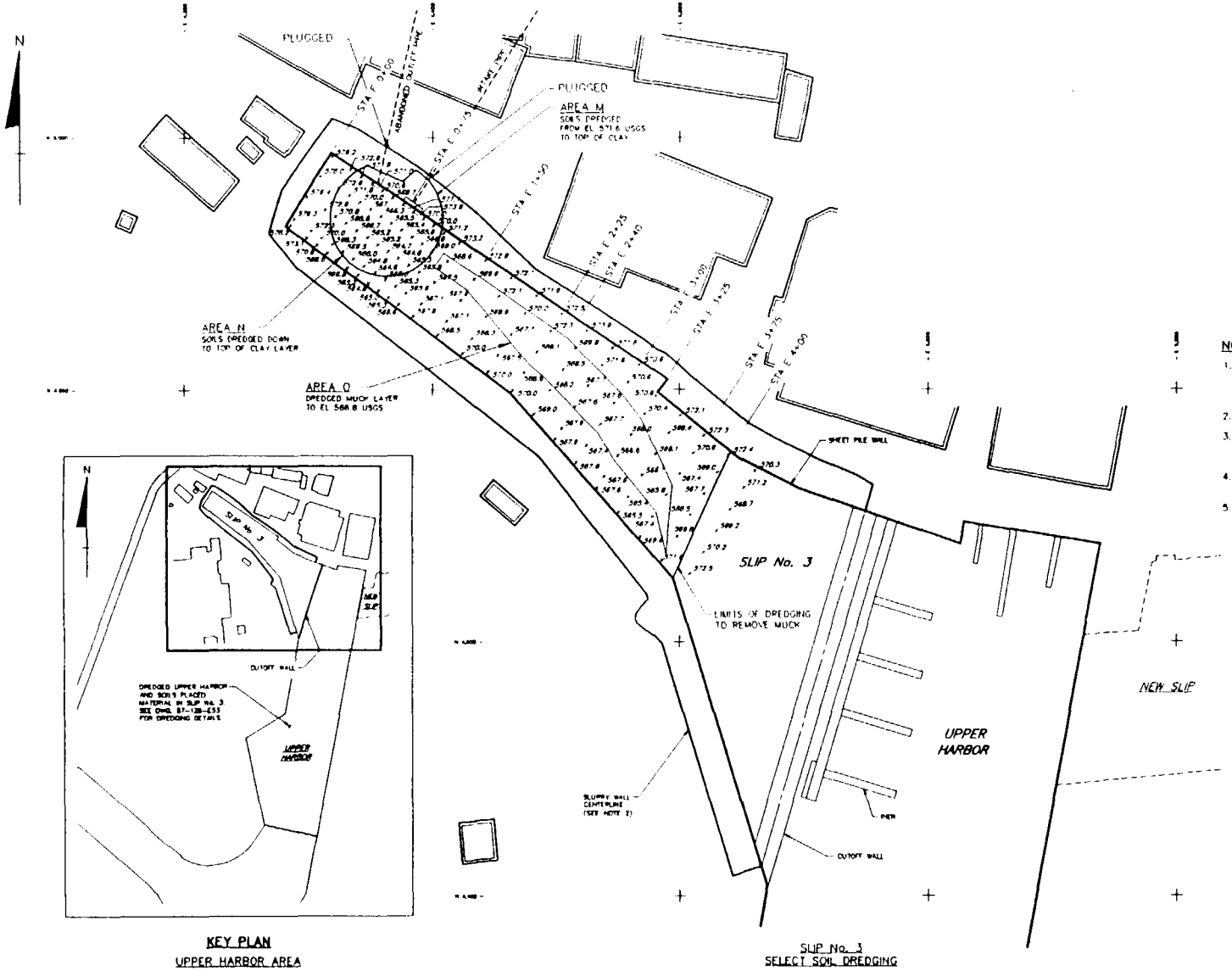
No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
2	6-17-94	RECORD OF CONSTRUCTION, ADDED SPOT ELEVATIONS OF COMPLETED DREDGING	M.A.M	KMB	TJM
1	5-31-94	UPDATED NOTES 1 AND 2	M.A.M	SD	CC
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bolinko	SLG	CC

RECORD OF CONSTRUCTION
UPPER HARBOR
LIMITS OF DREDGING
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 8-7-89	D-2	DRAWING NUMBER 87-126-E53	2
SCALE: AS SHOWN			

REVISIONS	DRAWN BY	KHM	CHECKED BY	SLG	DRAWING NUMBER	87-126-E53
NO.	DATE	8-7-89	APPROVED BY	CC	2-18-91	2-18-91



KEY PLAN

UPPER HARBOR AREA

NOT TO SCALE

SLIP No. 3

SELECT SOIL DREDGING

SITE PLAN

SCALE

40 0 40 80 FEET

NOTES:

1. VERTICAL EXTENT OF SLIP No. 3 DREDGING WAS BASED ON 1980 TOP OF SAND CONTOURS, SEE MASON AND HANGER REPORT, EPA JOB No. 608, "DREDGING AND WATER TREATMENT FOR REMOVAL OF PCB CONTAMINATION IN WAUKEGAN HARBOR".
2. SEE DWG. 87-126-E41 FOR SLURRY WALL DETAILS
3. THE DESIGNATED SOILS IN AREAS 'M', 'N', AND 'O' ARE SELECT SOILS AND WERE DREDGED INTO THE SETTLING POND IN THE WEST CONTAINMENT CELL.
4. AREA WITHIN DREDGING LIMITS BUT OUTSIDE AREAS 'N' AND 'O' WERE DREDGED TO TOP OF SAND.
5. FOR DREDGING PROFILES FROM STATION E 0+00 TO E 4+00, SEE DWGS. 87-126-E79, E80, AND E81.

RECORD OF CONSTRUCTION
SELECT SOIL DREDGING
SLIP No. 3
WAUKEGAN HARBOR, WAUKEGAN ILLINIOS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

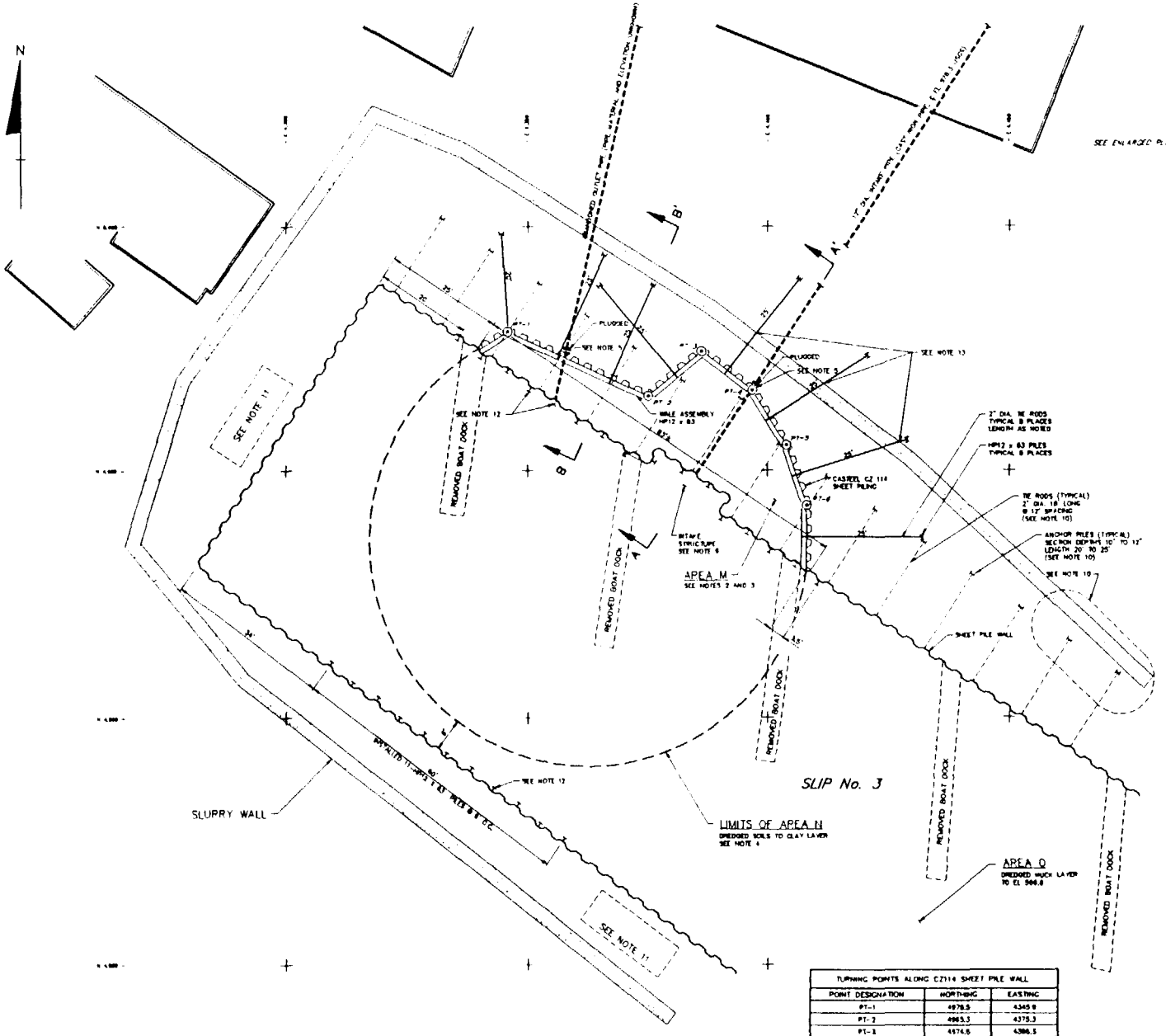
DATE: 8-8-89	D-3	DRAWING NUMBER 87-126-E54	1
SCALE: AS SHOWN			

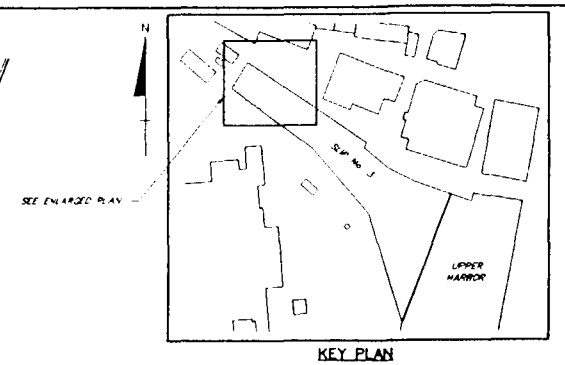
REFERENCES:
TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA DATE OF PHOTOGRAPHY 11-29-88.

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-84	RECORD OF CONSTRUCTION, ADDED SPOT ELEVATIONS OF COMPLETED DREDGING, REMOVED LEGEND	G. Bohnke	KHM	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

REVISIONS	NO.	DATE

DRAWN BY	KHM	CHECKED BY	SLG	DRAWING NUMBER
	8-8-89	APPROVED BY	CC	87-126-E54
			2-18-91	2-18-91





KEY PLAN
UPPER HARBOR AREA
NOT TO SCALE

NOTES:

1. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
2. TIE RODS ENCOUNTERED WITHIN AREA "M" WERE REMOVED.
3. EXCAVATED SOILS TO EL 571.8 WERE STOCKPILED AND SOILS FROM EL 571.8 TO CLAY LAYER WERE EXCAVATED AND DREDGED TO THE SETTLING POND IN THE WEST CONTAINMENT CELL.
4. MUCK AND SAND SOILS WERE DREDGED FROM AREA N WERE TREATED AND PUMPED TO THE SETTLING POND IN THE WEST CONTAINMENT CELL.
5. DURING THE INSTALLATION OF THE CZ114 SHEET PILE WALL, THE OUTLET PIPE BETWEEN POINTS PT-1 AND PT-2 AND THE INTAKE PIPE AT PT-4 WERE ENCOUNTERED. THESE PORTIONS OF PIPE WERE REMOVED BEFORE PILES WERE DRIVEN.
6. THE WATER INTAKE AND ITS SUPPORTING STRUCTURES WERE REMOVED AND STOPED.
7. PT-1 THROUGH PT-8 WERE THE TURNING POINTS FOR SHEET PILING INSTALLATIONS. SEE TABLE BELOW FOR TURNING POINT COORDINATES.
8. SEE DRAWING 87-126-E41 FOR SLURRY WALL LOCATION AND DETAILS.
9. SEE DRAWING 87-126-E111 FOR SECTION A-A' AND SECTION B-B'.
10. THE SIZES OF THE ANCHOR PILES AND TIE RODS WERE INCONSISTENT. THE LOCATIONS SHOWN ARE APPROXIMATE.
11. LOCATION OF EXISTING ANCHOR PILES AND TIE RODS NOT SHOWN.
12. SOLDIER PILES WERE INSTALLED TO PREVENT FAILURE OF THE DOCKWALL DURING EXCAVATION OF AREA M AND THE DREDGING OF AREA N.
13. 2" DIA. TIE RODS WERE REMOVED PRIOR TO SLURRY WALL CONSTRUCTION.

TURNING POINTS ALONG CZ114 SHEET PILE WALL		
POINT DESIGNATION	NORTHING	EASTING
PT-1	4978.5	4345.0
PT-2	4965.3	4375.3
PT-3	4974.6	4386.5
PT-4	4996.8	4388.0
PT-5	4950.3	4403.0
PT-6	4942.0	4408.1

SCALE
10 0 10 20 FEET

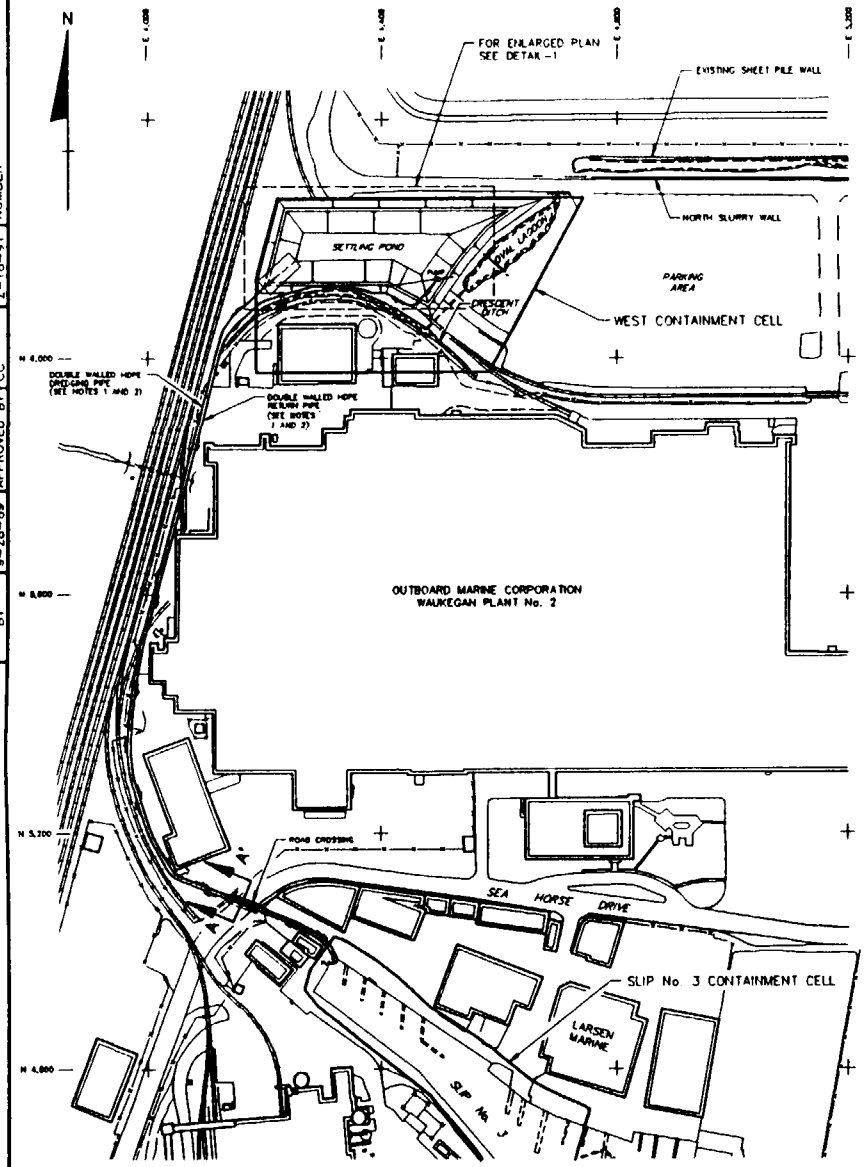
RECORD OF CONSTRUCTION
AREA 'M' AND 'N' EXCAVATION PLAN
SLIP No. 3 CONTAINMENT CELL
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
CanonieEnvironmental

DATE: 9-22-89	D-4	DRAWING NUMBER 87-126-E106	3
SCALE: AS SHOWN			

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA: DATE OF PHOTOGRAPHY 11-28-88.

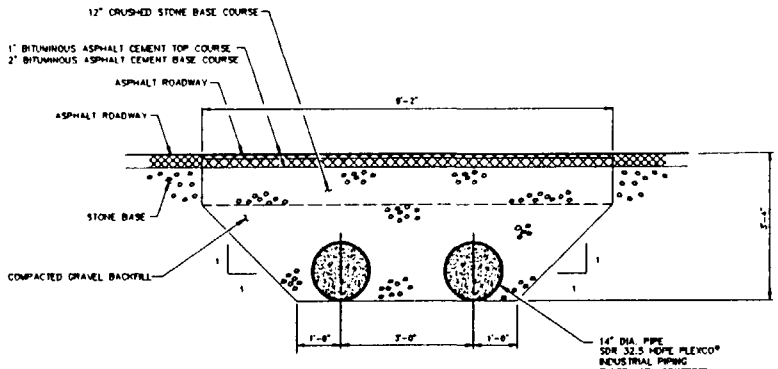
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
3	8-17-89	RECORD OF CONSTRUCTION	SAK	KMB	TJH
2	2-15-89	ISSUED FOR CONSTRUCTION	G. Bulmbro	SLG	CC

REVISIONS	NO	DATE	DRAWN BY	DRE 9-22-89	CHECKED BY	APPROVED BY	DRAWING NUMBER 87-126-E106
					SLG	CC	



PLAN OF PIPING LAYOUT

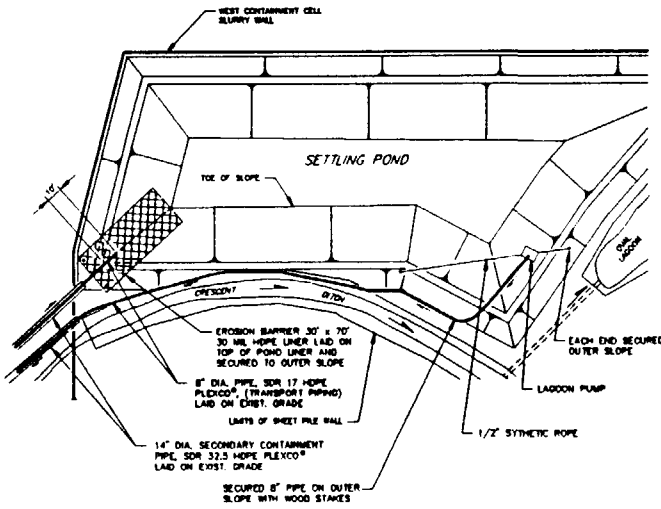
SCALE 100 0 100 200 FEET



ROAD CROSSING

SECTION A-A'

SCALE 3/4"=1'-0"



ENLARGED PLAN

DETAIL - 1

SCALE 40 0 40 FEET

LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- RAILROAD
- GUARD RAIL
- DIRECTION OF FLOW
- SLURRY WALL

NOTES:

1. ALL PIPING WAS LAID ON EXISTING GRADE EXCEPT AT ROAD CROSSING.
2. THE INNER PIPE, OF THE SECTIONS LAID ON THE GROUND, WAS PLACED IN THE SLIP No. 3 CONTAINMENT CELL. THE OUTER PIPE WAS DECONTAMINATED AND TAKEN OFFSITE.

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88

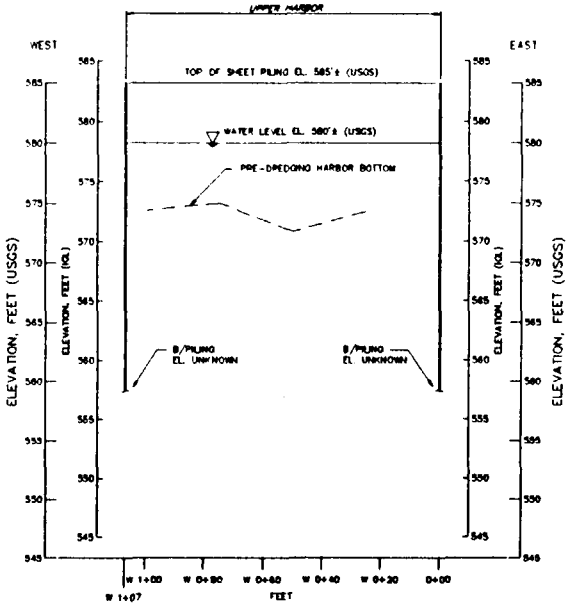
RECORD OF CONSTRUCTION
ROUTE OF SLIP No. 3
DREDGING PIPELINES
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

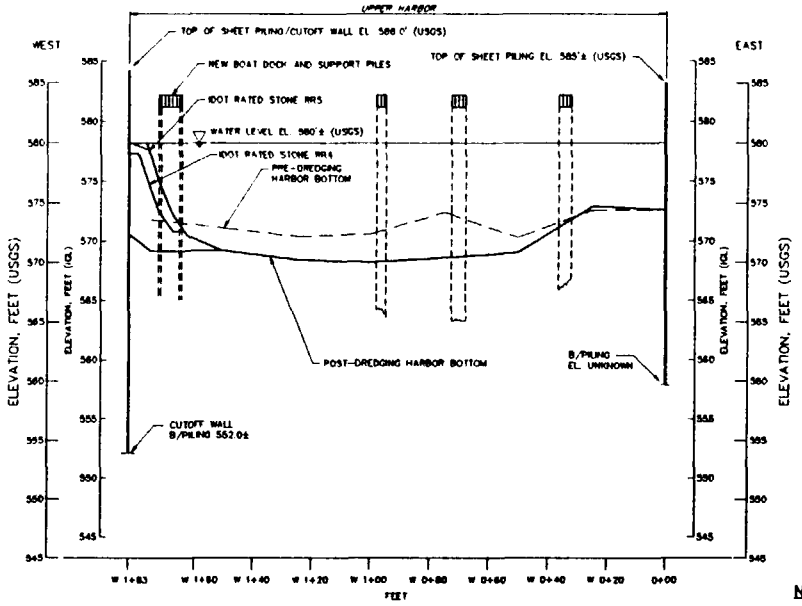
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-94	RECORD OF CONSTRUCTION	SAK	KWB	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bolinko	SLG	CC

DATE: 9-28-89	D-5	DRAWING NUMBER 87-126-E108	1
SCALE: AS SHOWN			

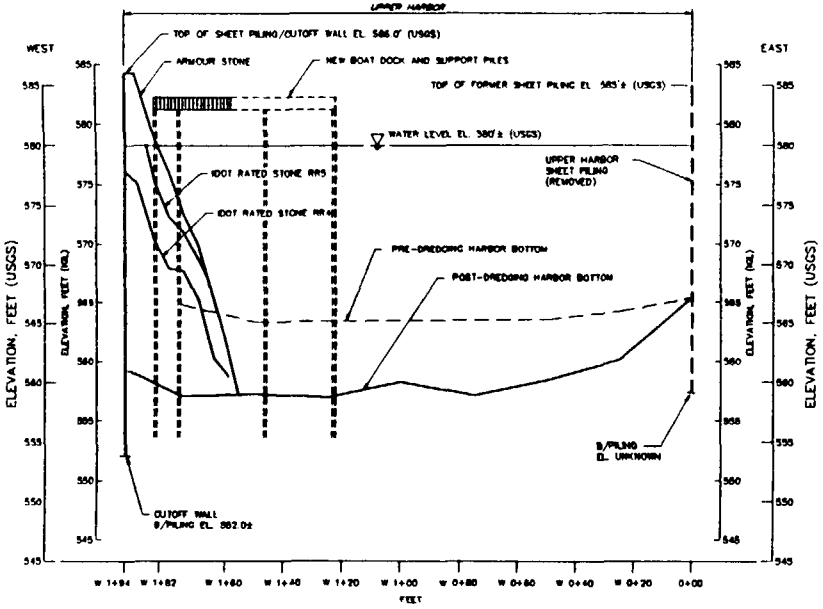
REVISIONS	NO.	DATE
DRAWN BY	M_A_M	9-28-89
CHECKED BY	SLG	2-18-91
APPROVED BY	CC	2-18-91
DRAWING NUMBER	87-126-E108	



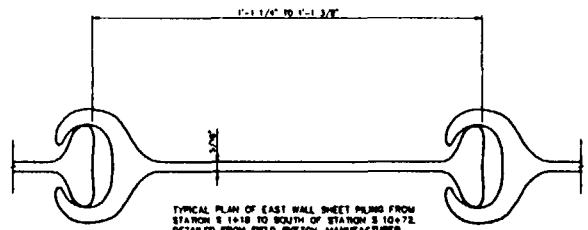
STATION S 0+00



STATION S 0+30



STATION S 1+25

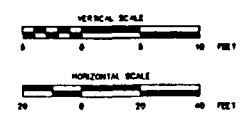


TYPICAL PLAN OF EAST WALL SHEET PILING FROM STATION S 1+18 TO SOUTH OF STATION S 10+72. DETAILED FROM FIELD SKETCH, MANUFACTURER UNKNOWN

DETAIL – 1
SCALE 8" = 1'-0"

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. PRE-DREDGE SOUNDINGS WERE MADE ON DECEMBER 13, 1991.
3. FOR PLAN VIEW OF UPPER HARBOR SEE DWGS 87-126-E58 87-126-E53, AND 87-126-E54.



VERTICAL EXAGGERATION = 4X

RECORD OF CONSTRUCTION
UPPER HARBOR
MUCK AND SAND PROFILES
STATIONS S 0+00, S 0+30, AND S 1+25
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

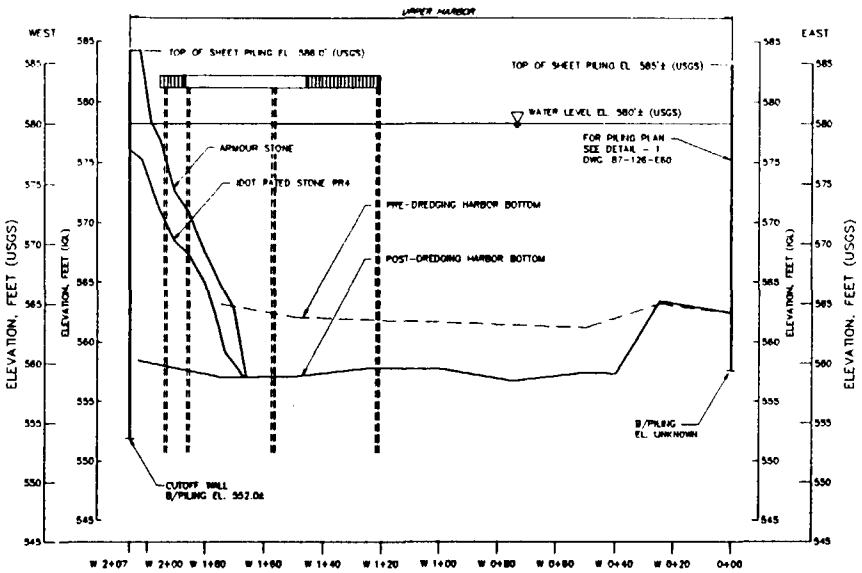
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	8-17-94	RECORD OF CONSTRUCTION, REMOVED NOTE	G. Bohnke	KMB	TJH
2	2-18-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

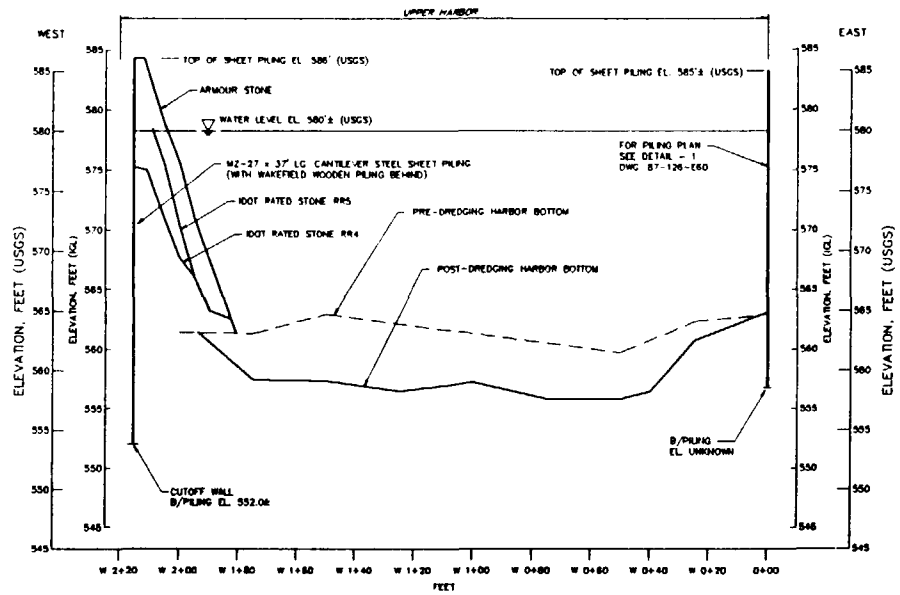
DATE: 8-28-89	D-6	DRAWING NUMBER 87-126-E60	1
SCALE: AS SHOWN			

DRAWN BY: SAK 8-28-89
CHECKED BY: SLG 2-18-91
APPROVED BY: CC 2-18-91
DRAWING NUMBER: 87-126-E60

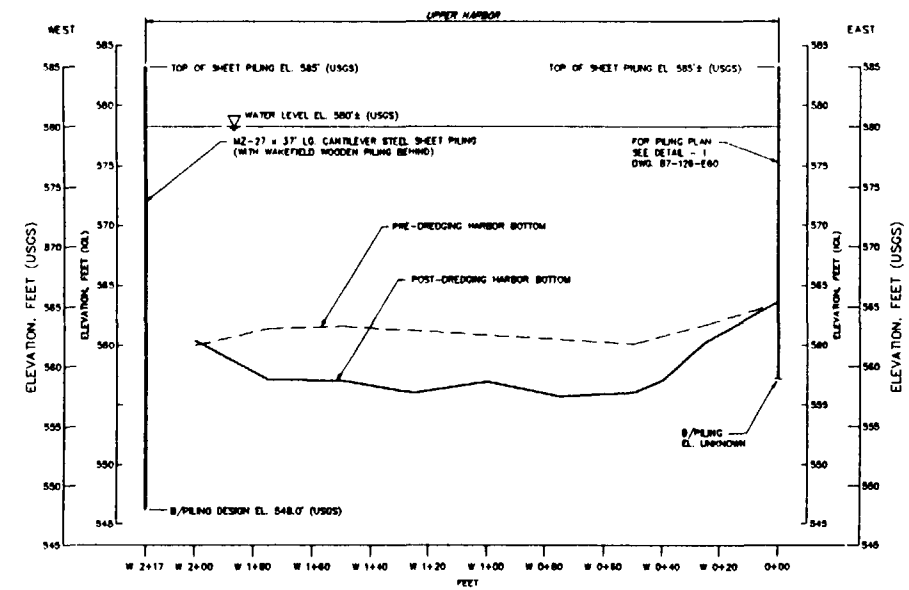
REVISIONS
NO. DATE



STATION S 2+25



STATION S 3+25



STATION S 4+25

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. PRE-DREDGE SOUNDINGS WERE MADE ON DECEMBER 13, 1991.
3. FOR PLAN VIEW OF UPPER HARBOR SEE DWGS 87-126-E58 87-126-E53, AND 87-126-E54.

VERTICAL SCALE
5 0 5 10 FEET

HORIZONTAL SCALE
20 0 20 40 FEET

VERTICAL EXAGGERATION = 4X

RECORD OF CONSTRUCTION
UPPER HARBOR
MUCK AND SAND PROFILES
STATIONS S 2+25, S 3+25, AND S 4+25
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

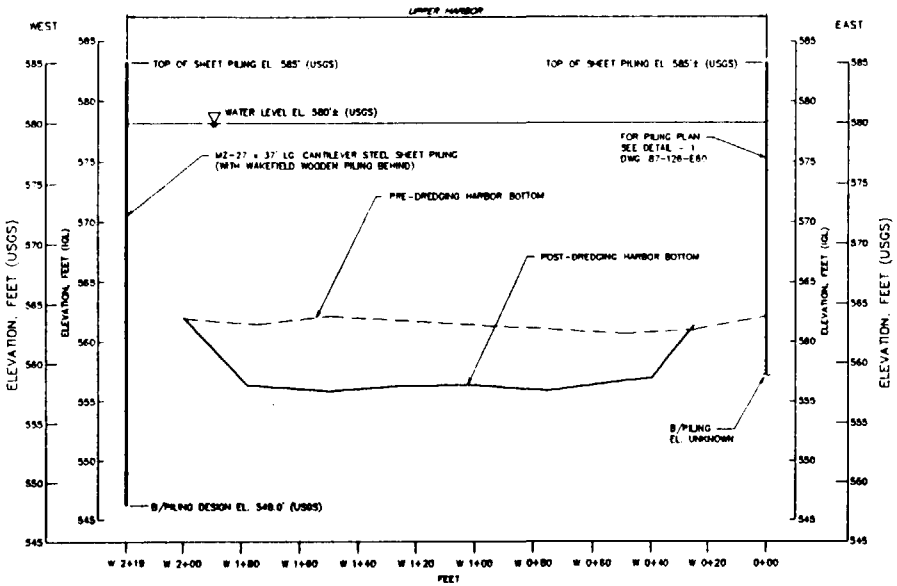
CanonieEnvironmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	8-17-94	RECORD OF CONSTRUCTION, REMOVES NOTES	G. Bohnke	KMB	TJH
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

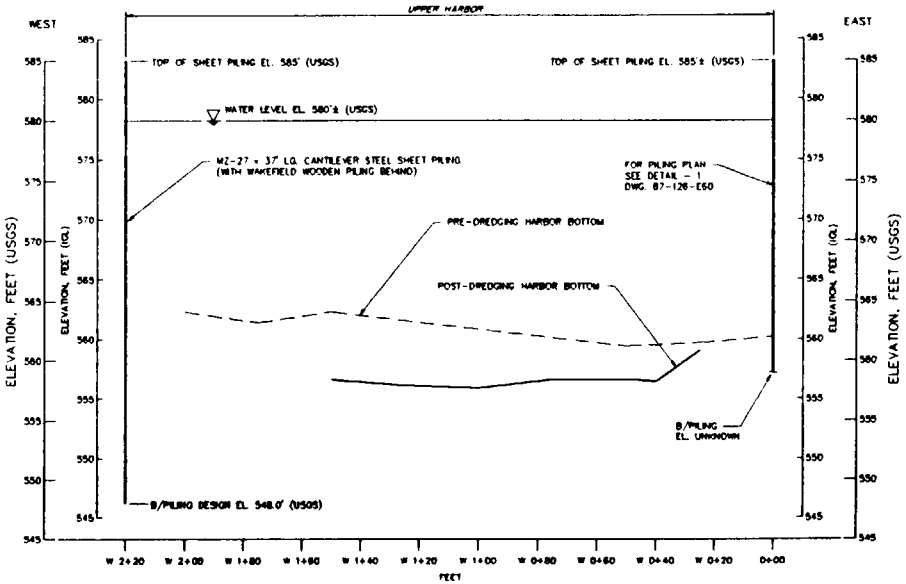
DATE: 8-28-89	D-7	DRAWING NUMBER 87-126-E61	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

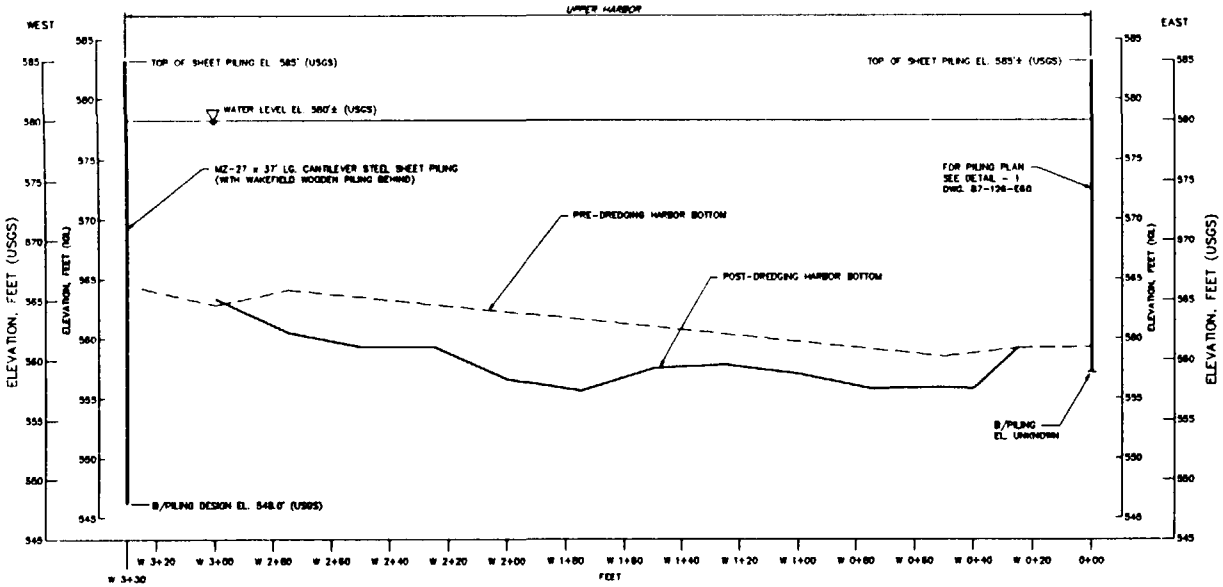
DRAWN BY	SAK	CHECKED BY	SLG	2-18-91	DRAWING NUMBER 87-126-E61
	8-28-89	APPROVED BY	CC	2-18-91	



STATION S 5+25



STATION S 6+25



STATION S 7+25

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. PRE-DREDGE SOUNDINGS WERE MADE ON DECEMBER 13, 1991.
3. FOR PLAN VIEW OF UPPER HARBOR SEE DWGS 87-126-E58 AND 87-126-E53.

VERTICAL SCALE

HORIZONTAL SCALE

VERTICAL EXAGGERATION = 4X

RECORD OF CONSTRUCTION
UPPER HARBOR
MUCK AND SAND PROFILES
STATIONS S 5+25, S 6+25, AND S 7+25
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

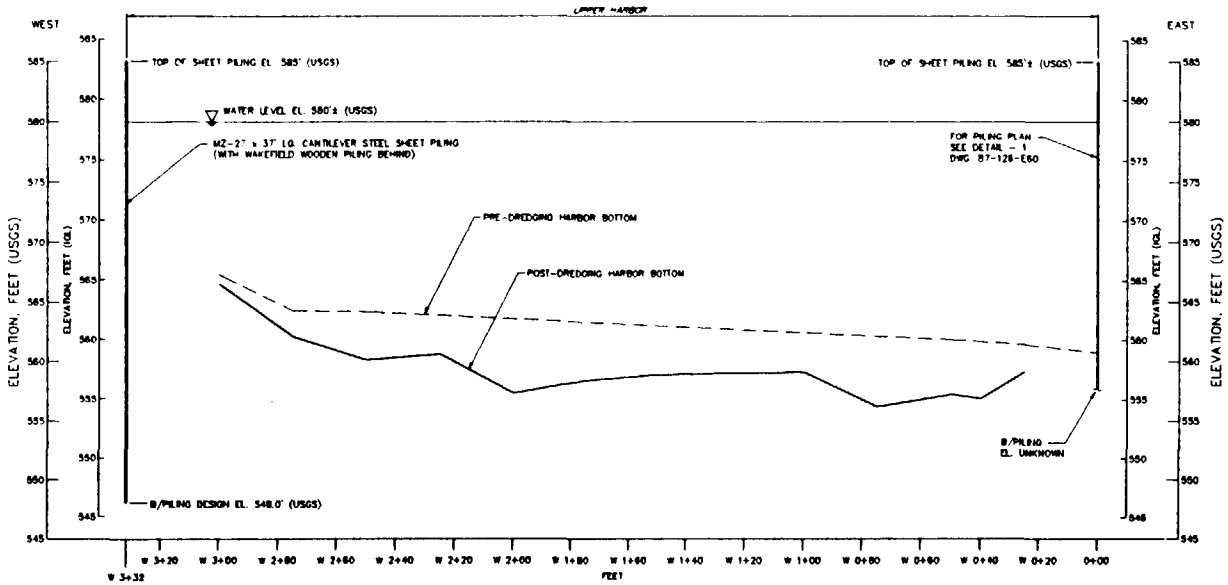
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-94	RECORD OF CONSTRUCTION, REMOVED NOTE	G. Bohnke	KWB	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

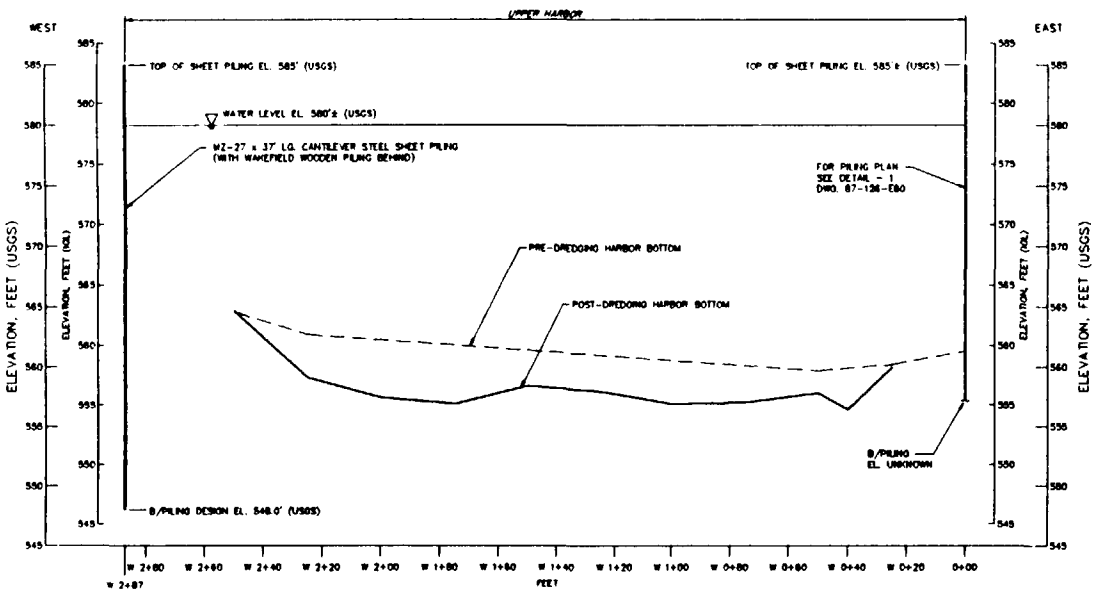
DATE: 8-30-89	D-8	DRAWING NUMBER 87-126-E62	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	SAK	CHECKED BY	SLG	2-18-91	DRAWING NUMBER 87-126-E62
	8-30-89	APPROVED BY	CC	2-18-91	



STATION S 8+25



STATION S 9+25

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. PRE-DREDGE SOUNDINGS WERE MADE ON DECEMBER 13, 1991.
3. FOR PLAN VIEW OF UPPER HARBOR SEE DWGS 87-126-E58 AND 87-126-E53.

VERTICAL SCALE
5 0 5 10 FEET

HORIZONTAL SCALE
20 0 20 40 FEET

VERTICAL EXAGGERATION = 4X

RECORD OF CONSTRUCTION
UPPER HARBOR
MUCK AND SAND PROFILES
STATIONS S 8+25 AND S 9+25
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

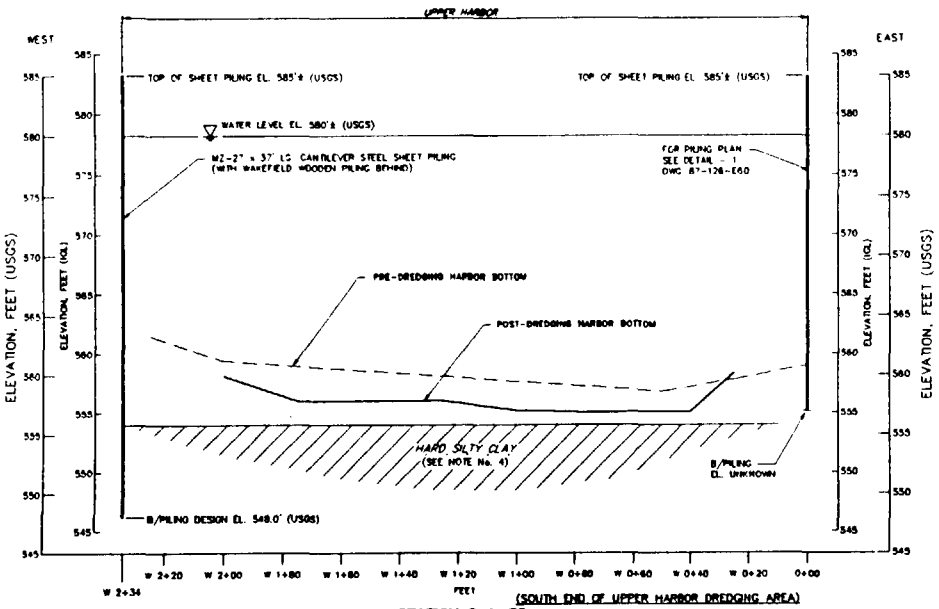
Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	6-17-94	RECORD OF CONSTRUCTION, REMOVED NOTE	G. Bohnke	RMB	TJH
2	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

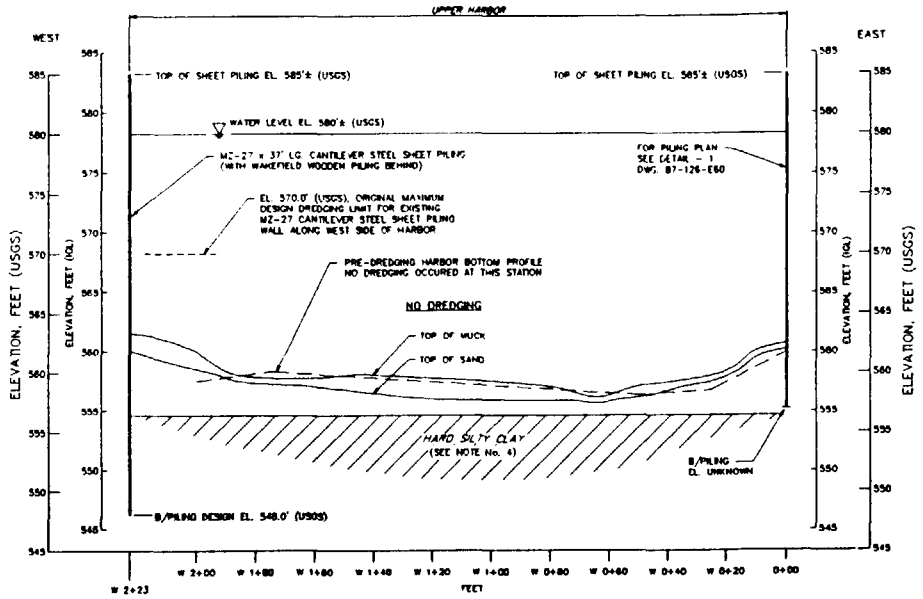
DATE: 8-30-89	D-9	DRAWING NUMBER 87-126-E68	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

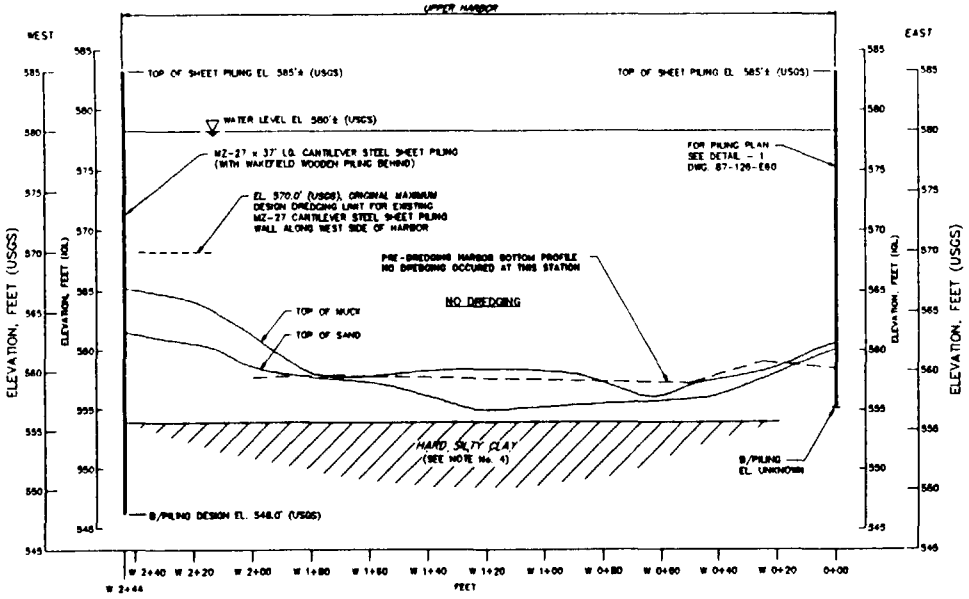
DRAWN BY	SAK	8-30-89
CHECKED BY	SLG	2-18-91
APPROVED BY	CC	2-18-91
DRAWING NUMBER	87-126-E68	



STATION S 9+75



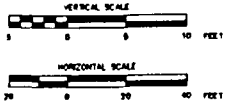
STATION S 10+75



STATION S 10+25

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. TOP OF SAND SOUNDINGS WERE MADE IN NOVEMBER, 1980. SEE REFERENCE No. 1.
3. TOP OF MUCK SOUNDINGS WERE MADE IN NOVEMBER, 1987. SEE REFERENCE No. 2.
4. HARD SILTY CLAY ELEVATION UNKNOWN, ASSUMED TO BE ONE FOOT BELOW LOWEST TOP OF SAND ELEVATION AT EACH STATION.
5. FOR PLAN VIEW OF UPPER HARBOR SEE DWGS 87-126-E58 AND 87-126-E53.
6. PRE-DREDGE SOUNDINGS WERE MADE ON DECEMBER 13, 1991.



VERTICAL EXAGGERATION = 4X

REFERENCES:

1. MASON & HANGER, SILAS MASON CO. JOB No. 600 SHEET No. C-2 "BOTTOM OF MUCK (TOP OF SAND) LAYER"
2. CANONIE, INC. DRAWING No. 87-087 "WAUKEGAN HARBOR CONTOURS" 11-30-87.

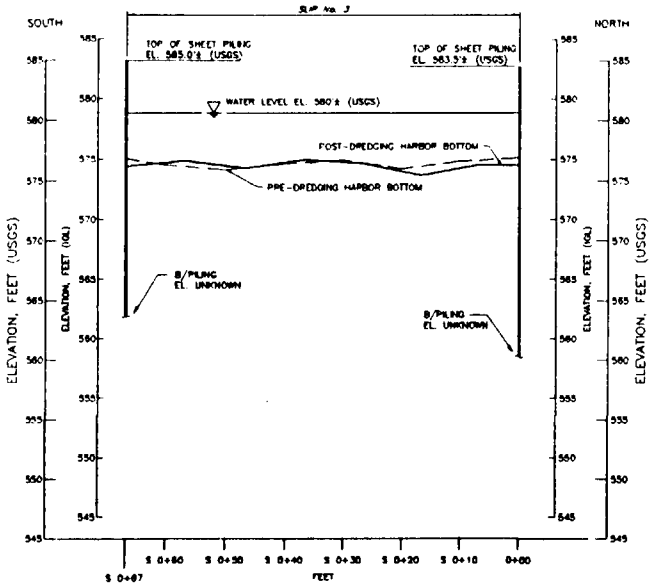
NO.	DATE	REVISIONS	DRAWN BY	SAK	CHECKED BY	SLG	DRAWING NUMBER	87-126-E69
				8-30-89	APPROVED BY	CC	2-18-91	2-18-91

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
1	6-17-94	RECORD OF CONSTRUCTION	G. Bulinko	HMB	TJH
2	2-19-91	ISSUED FOR CONSTRUCTION	G. Bulinko	SLG	CC

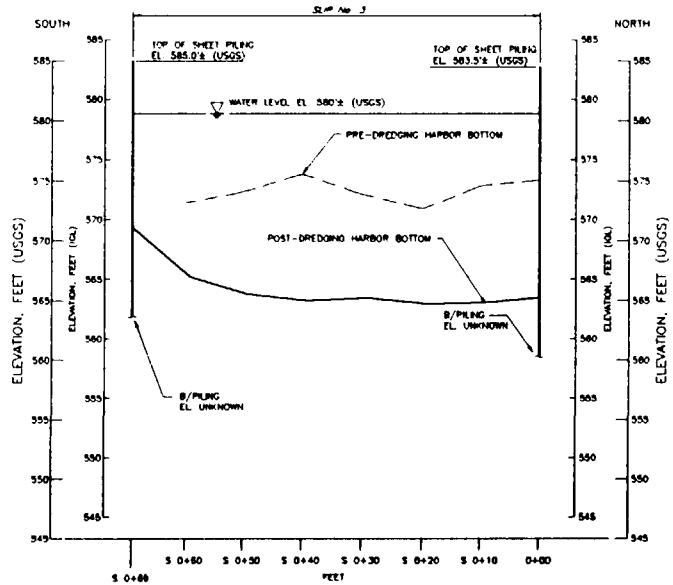
RECORD OF CONSTRUCTION
UPPER HARBOR
MUCK AND SAND PROFILES
STATIONS S 9+75, S 10+25, AND S 10+75
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

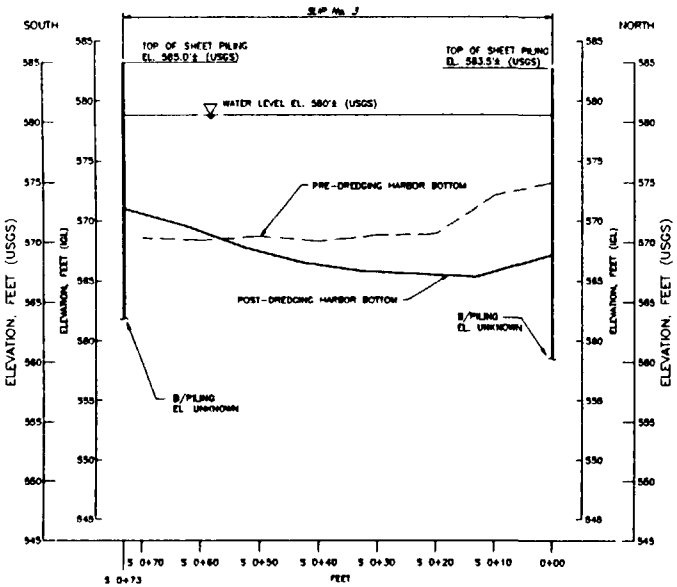
DATE: 8-30-89	D-10	DRAWING NUMBER 87-126-E69	2
SCALE: AS SHOWN			



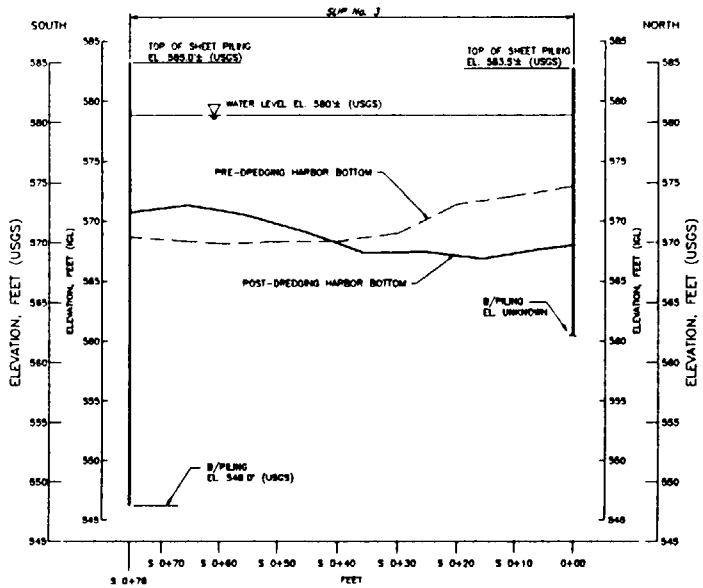
STATION E 0+00



STATION E 0+70



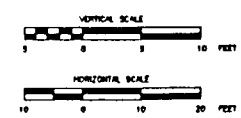
STATION E 1+50



STATION E 2+25

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. PRE-DREDGE SOUNDINGS WERE MADE ON DECEMBER 5,1991.
3. FOR PLAN VIEW OF SLIP No. 3 SEE DWGS 87-126-E58 AND 87-126-E53.



VERTICAL EXAGGERATION = 2X

RECORD OF CONSTRUCTION
SLIP No. 3
MUCK AND SAND PROFILES
STATIONS E 0+00, E 0+70, E 1+50, E 2+25
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE:	9-27-89	D-11	DRAWING NUMBER 87-126-E79	△
SCALE:	AS SHOWN			

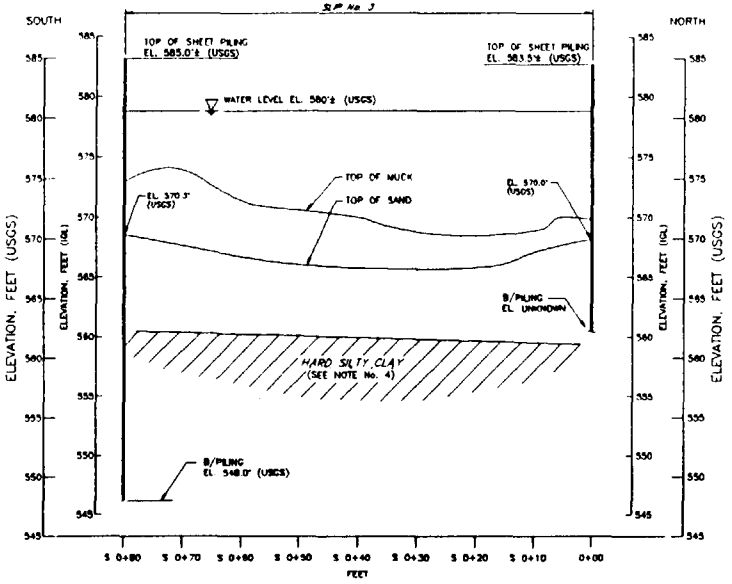
REFERENCES:

1. MASON & HANGER, SILAS MASON CO. JOB No. 806 SHEET No. C-2 "BOTTOM OF MUCK (TOP OF SAND) LAYER"
2. CANONIE, INC. DRAWING No. 87-097 "WAUKEGAN HARBOR CONTOURS" 11-30-87.

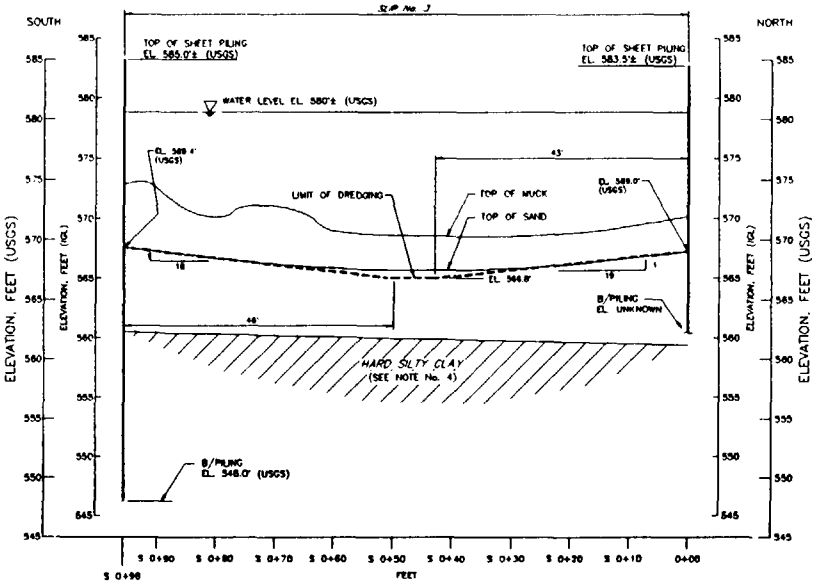
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
△	6-17-94	RECORD OF CONSTRUCTION, UPDATED NOTES	M.A.M.	KWB	TJH
△	2-15-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

REVISIONS	NO.	DATE

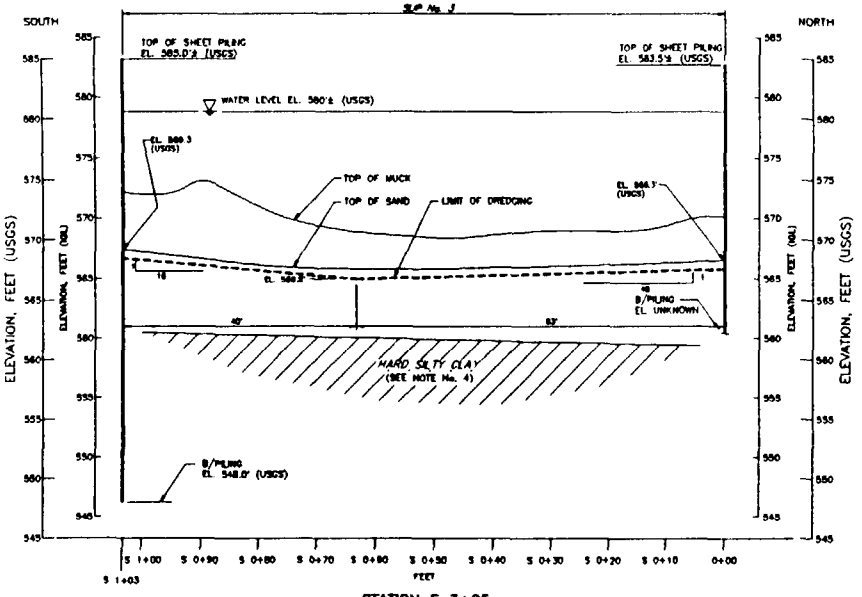
DRAWN BY	SAK	CHECKED BY	SLG	2-18-91	DRAWING NUMBER 87-126-E79
	9-27-89	APPROVED BY	CC	2-18-91	



STATION E 2+40



STATION E 3+00



STATION E 3+25

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. TOP OF SAND SOUNDINGS WERE MADE IN NOVEMBER, 1980. SEE REFERENCE No. 1.
3. TOP OF MUCK SOUNDINGS WERE MADE IN NOVEMBER, 1987. SEE REFERENCE No. 2.
4. HARD SILTY CLAY ELEVATION BASED ON BORINGS S-7 AND S-10.
5. FOR PLAN VIEW OF SLIP No. 3 SEE DWGS 87-126-E58 AND 87-126-E53.

VERTICAL SCALE

HORIZONTAL SCALE

VERTICAL EXAGGERATION = 2X

RECORD OF CONSTRUCTION
SLIP No. 3
MUCK AND SAND PROFILES
STATIONS E 2+40, E 3+00, E 3+25
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

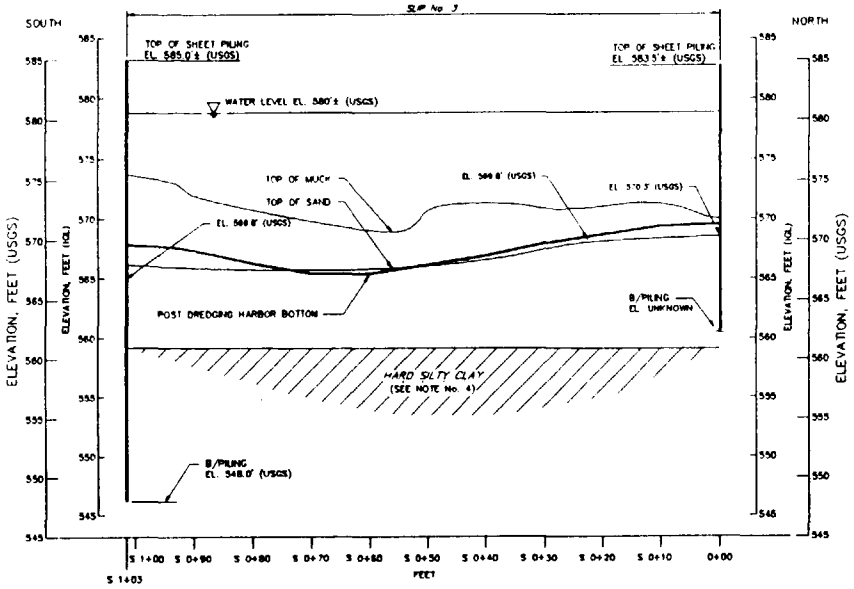
DATE:	9-27-89	D-12	DRAWING NUMBER 87-126-E80	△1
SCALE:	AS SHOWN			

REFERENCES:
1. MASON & HANGER, SILAS MASON CO. JOB No. 606 SHEET No. C-2 "BOTTOM OF MUCK (TOP OF SAND) LAYER"
2. CANONIE, INC. DRAWING No. A87-087 "WAUKEGAN HARBOR CONTOURS" 11-30-87.

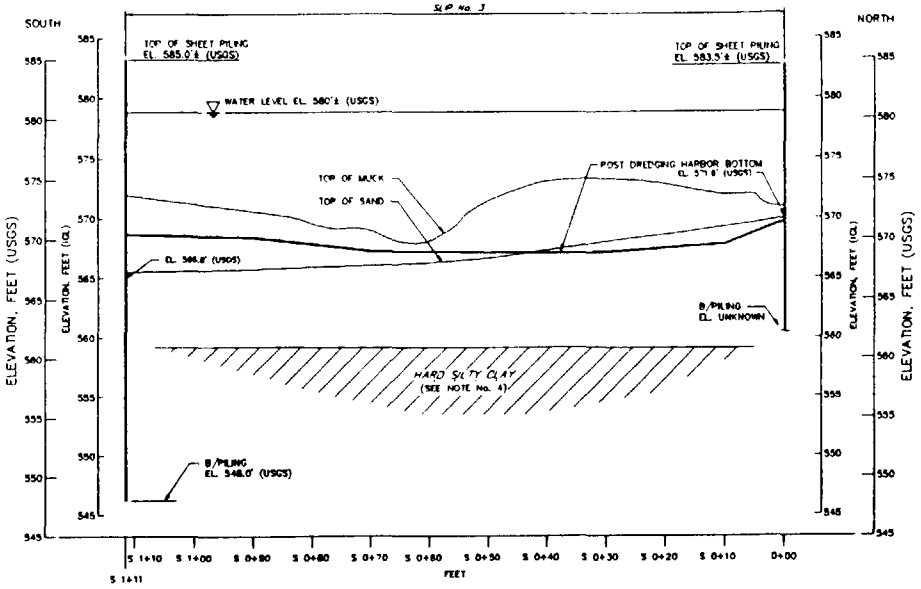
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	APP'D BY
△1	6-17-94	RECORD OF CONSTRUCTION, UPDATED NOTES	SAK	KMB	TJH
△2	2-19-91	ISSUED FOR CONSTRUCTION	G. Bohnke	SLG	CC

REVISIONS	NO.	DATE

DRAWN BY	SAK	9-27-89	CHECKED BY	SLG	2-18-91	DRAWING NUMBER	87-126-E80
			APPROVED BY	CC	2-18-91		



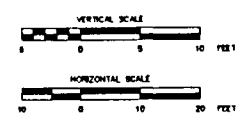
STATION E 3+75



STATION E 4+00

NOTES:

1. ADD 1.8 FEET TO IGL ELEVATIONS TO CONVERT TO USGS ELEVATIONS.
2. TOP OF SAND SOUNDINGS WERE MADE IN NOVEMBER, 1980. SEE REFERENCE No. 1.
3. TOP OF MUCK SOUNDINGS WERE MADE IN NOVEMBER, 1987. SEE REFERENCE No. 2.
4. HARD SILTY CLAY ELEVATION BASED ON BORINGS S-6B AND S-11.
5. FOR PLAN VIEW OF SLIP No. 3 SEE DWGS 87-126-E58 AND 87-126-E53.



VERTICAL EXAGGERATION = 2X

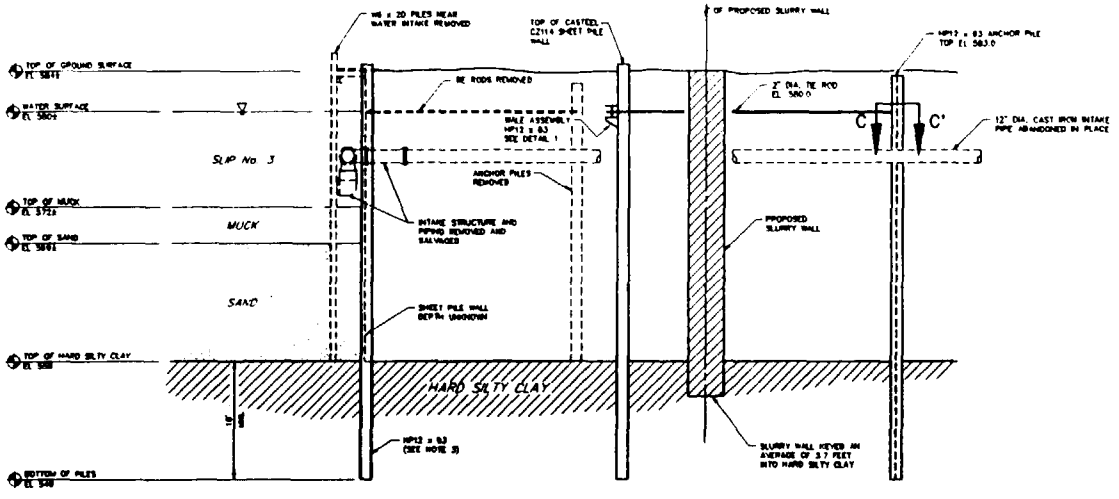
SLIP No. 3
MUCK AND SAND PROFILES
STATIONS E 3+75, E 4+00
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
Canonie Environmental

REFERENCES:
1. MASON & HANGER, SILAS MASON CO. JOB No. 605 SHEET No. C-2 "BOTTOM OF MUCK (TOP OF SAND) LAYER"
2. CANONIE, INC. DRAWING No. A87-087 "WAUKEGAN HARBOR CONTOURS" 11-30-87.

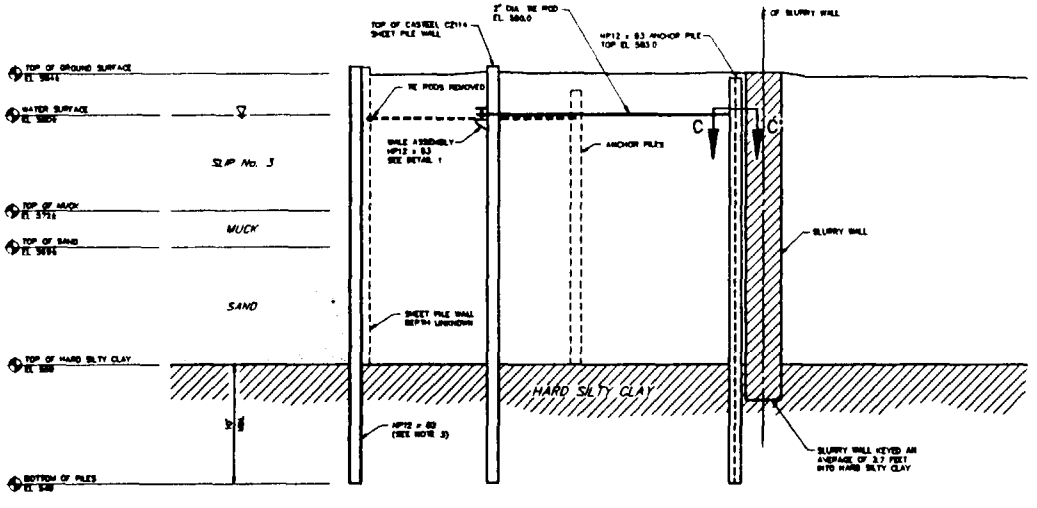
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
0	8-24-96	RECORD OF CONSTRUCTION	[illegible]	[illegible]	[illegible]

DATE: 11-17-95	D-13	DRAWING NUMBER 87-126-E81	0
SCALE: AS SHOWN			

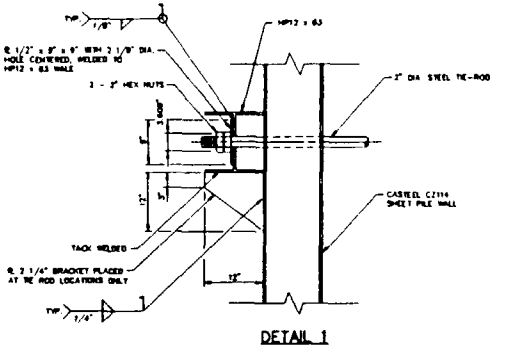
DRAWING NUMBER 87-126-E81
CHECKED BY
APPROVED BY
DRAWN BY SAK 11-17-95
REVISIONS NO. DATE



SECTION A-A'

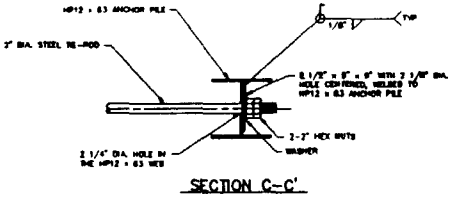


SECTION B-B'



DETAIL 1

SCALE: 1"=1'-0"



SECTION C-C'

SCALE: 1"=1'-0"

NOTES:

1. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
2. FOR SECTION A-A' AND B-B' LOCATIONS, SEE DRAWING 87-126-E106.
3. HP12 x 63 PILES WERE DRIVEN IN FRONT OF SHEET PILES FOR STABILIZATION PRIOR TO THE REMOVAL OF THE EXISTING TIES AND ANCHOR PILES.

SCALE

5 0 5 10 FEET

RECORD OF CONSTRUCTION
SECTION A-A' AND SECTION B-B'
SLIP No. 3 CONTAINMENT AREA
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

Canonie Environmental

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	6-17-94	RECORD OF CONSTRUCTION, REMOVED NOTE 4	SAK	KWB	TJH
0	2-15-91	ISSUED FOR CONSTRUCTION	G. Bulinko	SLG	CC

DATE: 10-11-89	D-14	DRAWING NUMBER 87-126-E111	1
SCALE: AS NOTED			

REVISIONS	NO.	DATE

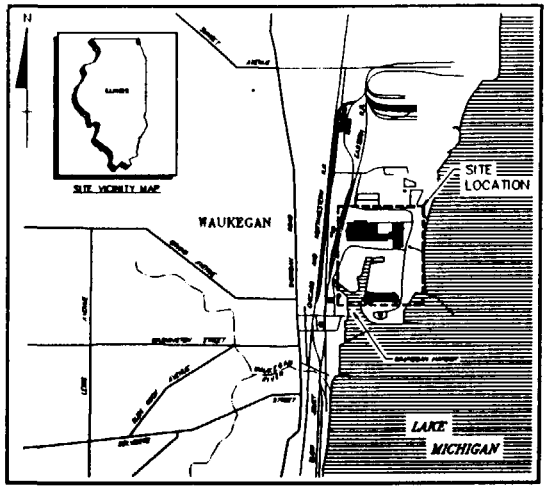
DRAWN BY	MAM	10-11-89
CHECKED BY	SLG	2-18-91
APPROVED BY	CC	2-18-91
DRAWING NUMBER	87-126-E111	

WAUKEGAN HARBOR REMEDIATION

WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST



SITE LOCATION MAP
NOT TO SCALE

LIST OF NEW SLIP CONFIGURATION DRAWINGS

FIGURE	TITLE	DRAWING NUMBER
NS-1	EXISTING SURFACE CONTOUR MAP	87-126-E72
NS-2	SOIL STOCKPILE LOCATION PLAN	87-126-E183
NS-3	GENERAL LAYOUT	87-126-E7
NS-4	ACCESSORIES AND IMPROVEMENTS	87-126-E17
NS-5	CROSS SECTIONS A-A, B-B, AND F-F'	87-126-E9
NS-6	CROSS SECTIONS D-D AND E-E'	87-126-E10
NS-7	WATER INTAKE	87-126-E11
NS-8	PENINSULA TIE-BACK WALL CONSTRUCTION DETAILS	87-126-E20
NS-9	PROCESS COOLING WATER INTAKE PLAN	87-126-E32
NS-10	UNDERGROUND FUEL STORAGE TANKS	87-126-E26
NS-11	LAUNCHING PIER PLAN AND DETAILS	87-126-E35
NS-12	NEW SLIP SOUTH WALL PARTIAL PLAN	87-126-E46
NS-13	CONSTRUCTION DETAILS	87-126-E12
NS-14	CONSTRUCTION DETAILS	87-126-E14
NS-15	CONSTRUCTION DETAILS	87-126-E58
NS-16	ELECTRICAL BLOCK DIAGRAM	87-126-E184
NS-17	DESIGNATED SOIL STOCKPILE PLAN AND SECTIONS	87-126-E221
NS-18	ELECTRICAL CONDUIT SCHEMATIC	87-126-E259

REFERENCES:
- USGS 7.5 MIN SERIES QUADRANGLE WAUKEGAN, ILL. 1949 PHOTOREVISED 1972 AND 1980
- USGS 7.5 MIN SERIES QUADRANGLE ZION, ILL.-WIS. 1980

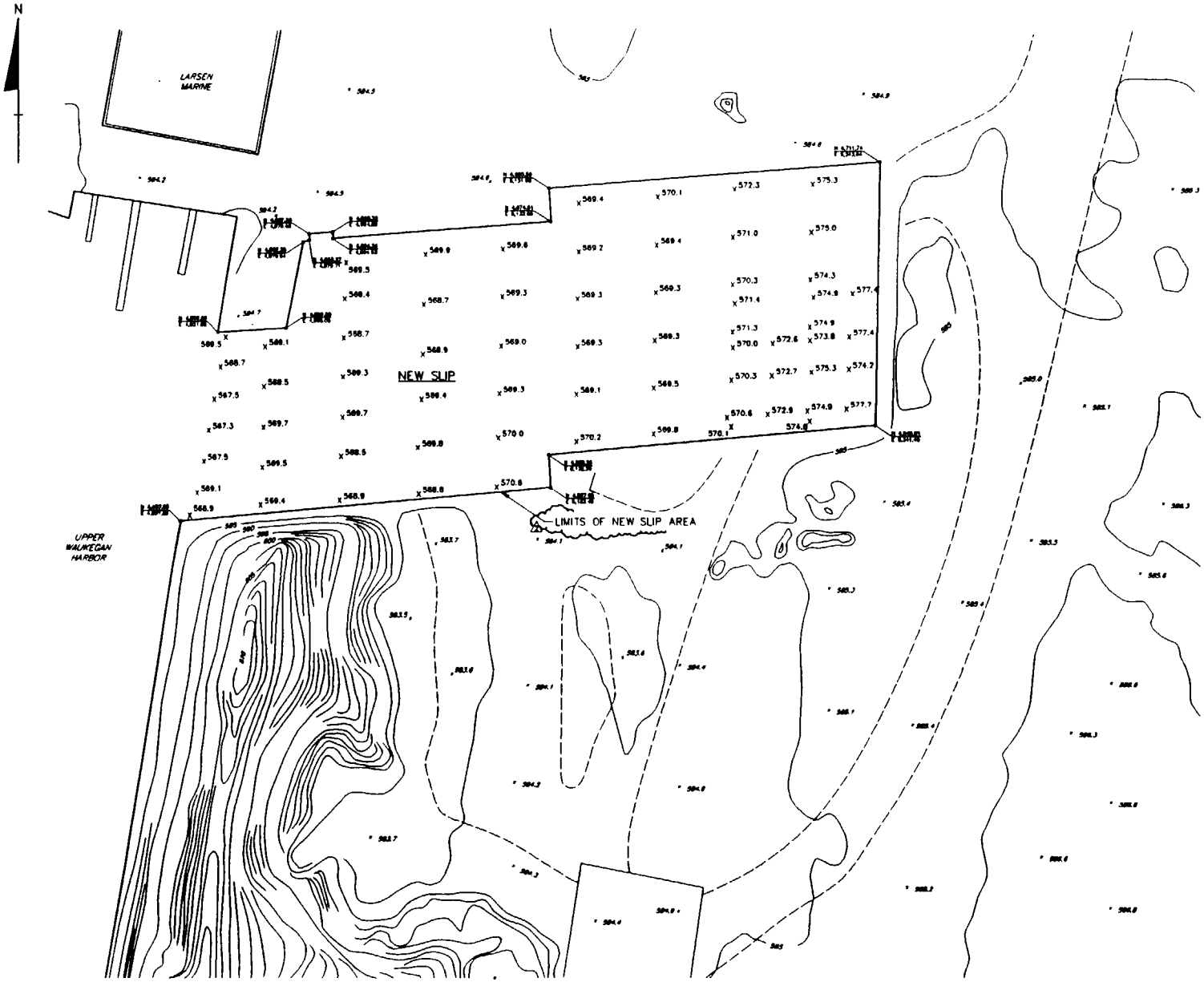
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	8-16-93	RECORD OF CONSTRUCTION	M_A_M	MMB	CC
2	6-14-91	ADDED DRAWING 87-126-E258	DRE	CC	CC
1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	M_A_M	SD	CC

RECORD OF CONSTRUCTION
TITLE SHEET
WAUKEGAN HARBOR REMEDIATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 10-17-89		DRAWING NUMBER 87-126-E123
SCALE: AS SHOWN		3

REVISIONS	NO.	DATE
DRAWN BY	M_A_M	10-17-89
CHECKED BY	PRS	10-19-90
APPROVED BY	CC	11-20-90
DRAWING NUMBER	87-126-E123	



LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- TOPOGRAPHIC CONTOUR (USGS)
- SPOT ELEVATION (USGS)
- NEW SLIP BOTTOM ELEVATION (USGS) (SEE NOTE 1)

NOTES:

1. NEW SLIP BOTTOM ELEVATIONS SHOWN ARE FROM SOUNDINGS TAKEN ON THE FOLLOWING DATES:
   4-15-91
   4-18-91
   7-11-91
2. THE WATER LEVEL IN THE UPPER HARBOR WAS AT EL. 580.50 (USGS) ON DEC. 21, 1990.

SCALE: 30 0 30 60 FEET

RECORD OF CONSTRUCTION
EXISTING SURFACE CONTOUR MAP
NEW SLIP AREA
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

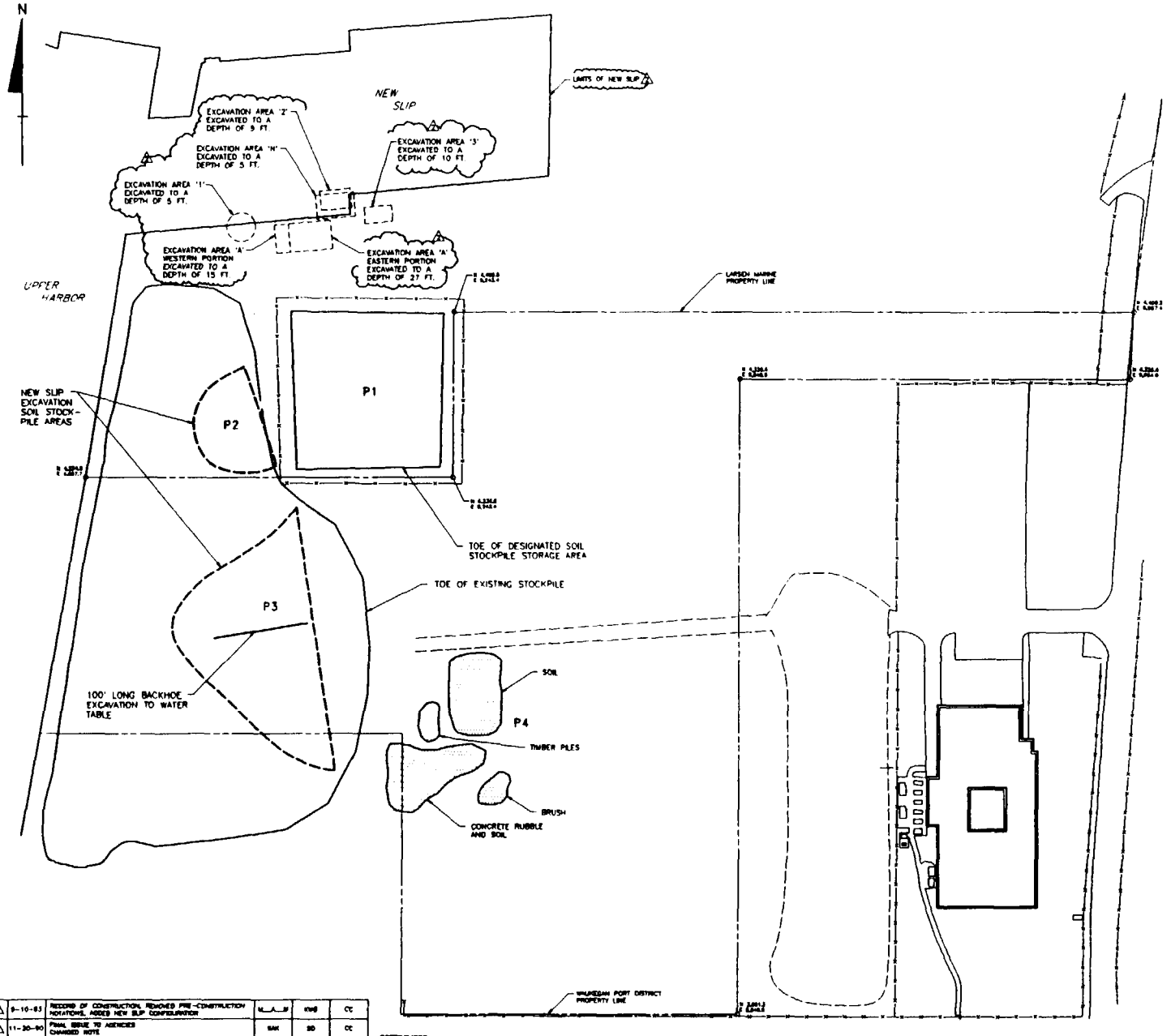
Canonie Environmental

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	9-10-93	RECORD OF CONSTRUCTION, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS, UPDATED NEW SLIP, ADDED BOTTOM ELEVATIONS, ADDED NOTE 2	DRE	KWB	CC
1	11-20-90	FINAL ISSUE TO AGENCIES	MAK	SD	CC
2	10-19-90	ISSUED FOR CONSTRUCTION	M_A_M	SD	CC

DATE: 9-5-89	NS-1	DRAWING NUMBER 87-126-E72	3
SCALE: AS SHOWN			

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA. DATE OF PHOTOGRAPHY 11-20-90

REVISIONS	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
NO. / DATE	M_A_M 9-5-89	PRS	CC	87-126-E72
		10-19-90	11-20-90	



LEGEND:

FENCE (EXISTING)

UNIMPROVED ROADWAY

NOTES:

1. EXCAVATED SOILS FROM NEW SLIP SOUTH TIE-BACK WALL AREAS 1, 2, 3, A, AND N WITH A CARCINOGENIC PNAs CONCENTRATION GREATER THAN 6 PPM WERE PLACED IN DESIGNATED SOIL STOCKPILE AREA P1.
2. EXCAVATED SOILS FROM NEW SLIP AND SOUTH TIE-BACK WALL AREAS 1, 2, 3, A AND N WITH A CARCINOGENIC PNAs CONCENTRATION LESS THAN 6 PPM WERE PLACED IN THE SOIL STOCKPILE AREAS P2 AND P3.
3. SEE DRAWING 87-126-E221 (NS-17) FOR DESIGNATED SOIL STOCKPILE AREA P1 DETAILS.
4. REMOVED TIMBER PILES, CONCRETE PILE CAP, SOILS BRUSHES AT THE NEW SLIP ENTRANCE WERE PLACED IN THE AREA P4.
5. SIZES OF STOCKPILE AREAS P2, P3, AND P4 AS SHOWN ARE APPROXIMATE.

SCALE

50 0 50 100 FEET

RECORD OF CONSTRUCTION
SOIL STOCKPILE LOCATION PLAN
NEW SLIP AREA
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 12-28-89	NS-2	DRAWING NUMBER 87-126-E163
SCALE: AS SHOWN		

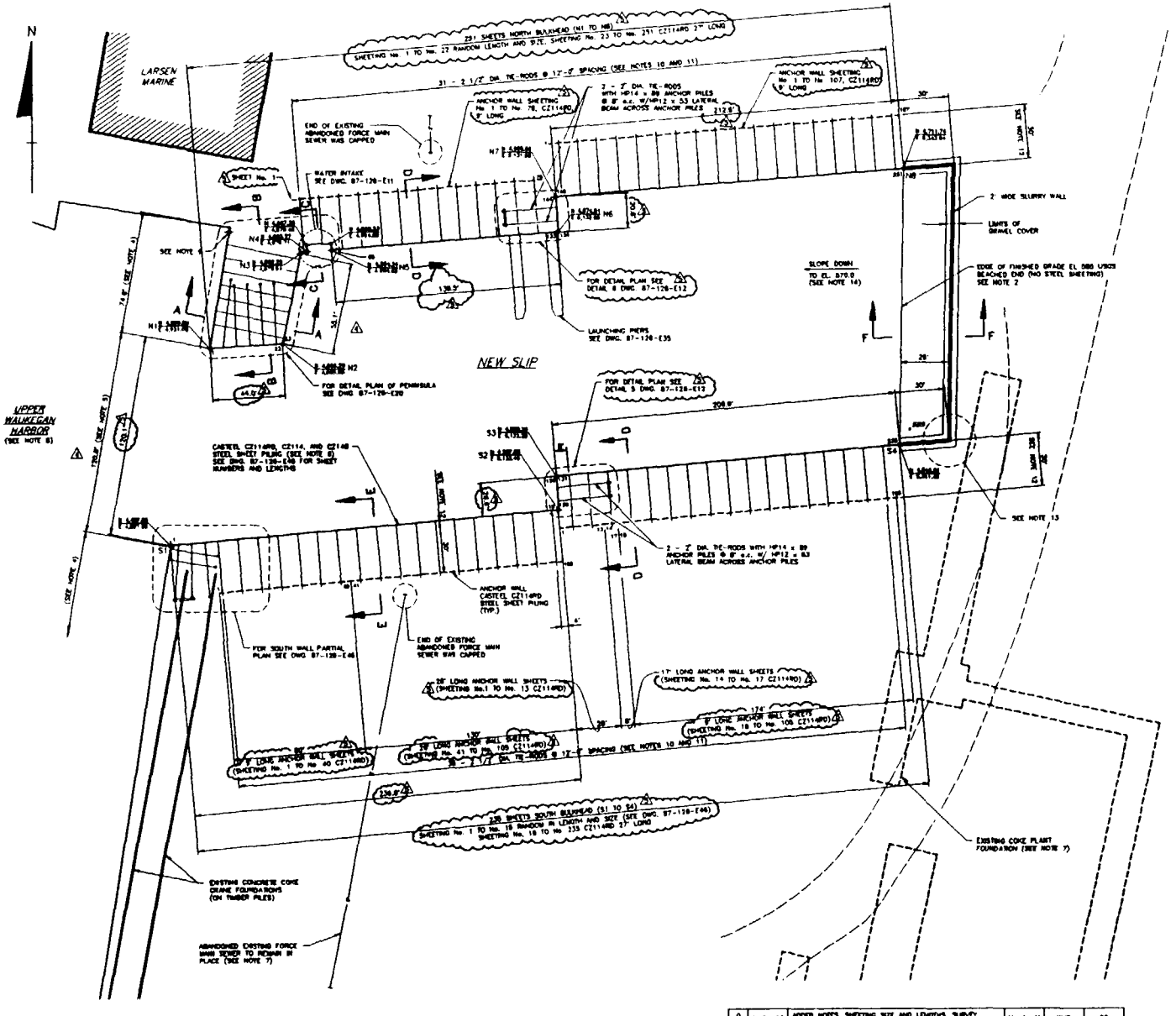
REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-20-88.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
2	9-10-93	RECORD OF CONSTRUCTION, REMOVED PRE-CONSTRUCTION NOTATIONS, ADDED NEW SLIP CONFIGURATION	M_A_M	KWB	CC
1	11-30-90	FINAL ISSUE TO AGENCIES CHANGED NOTE	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	SAK	SD	CC

REVISIONS

NO.	DATE

DRAWN BY	CHECKED BY	APPROVED BY	PRS	TJH	DRAWING NUMBER
M_A_M	12-28-89		9-19-90	9-19-90	87-126-E163



LEGEND:

- EXISTING UNIMPROVED ROADWAY
- EXISTING SEWER LINE (SEE NOTE 7)
- ABANDONED COKE PLANT FOUNDATION (SEE NOTE 7)
- BENCHMARK
- S1 SURVEY POINT
- B1 SHEET PILE No.

NOTES:

1. ALL ELEVATIONS SHOWN ARE USGS ELEVATIONS. IGL (INTERNATIONAL GREAT LAKES) ELEVATION = USGS ELEVATION - 1.8 FEET.
2. FINISHED GRADE ELEVATION AROUND NEW SLIP IS 585 (USGS). EXISTING GROUND SURFACE IS 584.5± (USGS).
3. FOR CROSS SECTIONS A-A, B-B, AND F-F SEE DWG. 87-126-E9. FOR CROSS SECTION C-C, SEE DWG. 87-126-E11. FOR CROSS SECTIONS D-D AND E-E SEE DWG. 87-126-E10.
4. EXISTING TIE-BACK WALL TO REMAIN IN PLACE.
5. △1 120.75' EXISTING TIE-BACK WALL AND COKE CRANE FOUNDATION (ON TIMBER PILES) WAS DISMANTLED AND REMOVED FOR THE NEW SLIP ENTRANCE.
6. △1 STEEL SHEET PILE MINIMUM REQUIREMENTS: ASTM A328 MINIMUM YIELD POINT: 38,500 psi, MINIMUM TENSILE STRENGTH: 60,000 psi.
7. APPROXIMATE LOCATIONS OF EXISTING SEWER LINE AND ABANDONED COKE PLANT FOUNDATIONS WERE TAKEN FROM "THACKER ENGINEERING OFFICE" DWG. No. 22-45-12, OCT. 12, 1971.
8. THE WATER LEVEL IN THE UPPER HARBOR WAS AT EL. 580.50 (USGS), ON DEC. 21, 1990
9. A BENCHMARK WAS ESTABLISHED AT THE NORTHEAST CORNER OF THE UPPER HARBOR PRIOR TO BEGINNING CONSTRUCTION.
10. TIE-RODS, WASHERS, AND HEX NUTS ARE GALVANIZED TO REDUCE CORROSION.
11. DIAMETER OF TIE-RODS AS NOTED. NO UPSET ENDS.
12. DIMENSIONS SHOWN ARE TO THE INSIDE FACE TO INSIDE FACE OF SHEET PILINGS.
13. FIELD INVESTIGATION OF NEW SLIP SLURRY WALL ALIGNMENT REVEALED COKE FOUNDATION HAD BEEN REMOVED.
14. △4 FOR ELEVATION OF THE NEW SLIP FLOOR SEE DWG. 87-126-E72.
15. △5 THE SHEET PILING AND TIE BACKS FOR THE NEW SLIP WERE INSTALLED BETWEEN DEC. 1990 AND APRIL 1991.
16. △6 FOR LOCATION OF SURVEY CORNER WITH COORDINATES SHOWN SEE EACH INDIVIDUAL CIRCLED DETAIL.

SCALE: 30 0 30 60 FEET

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
△6	8-31-93	ADDED NOTES, SHEETING SIZE AND LENGTHS, SURVEY POINTS AND DETAIL REFERENCES	M_A_M	HMB	CC
△5	11-8-91	RECORD OF CONSTRUCTION, UPDATED NEW SLIP CONFIGURATION AND DIMENSIONS, ADDED NOTE 14	DRE	HMB	CC
△4	3-4-91	ISSUED TO CLIENT AND AGENCY	SAK	SLB	CC
△3	2-5-91	REDRAW, ISSUED FOR CONSTRUCTION	M_A_M	SLB	CC
△1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC

△ RECORD OF CONSTRUCTION
GENERAL LAYOUT
NEW SLIP CONFIGURATION

WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

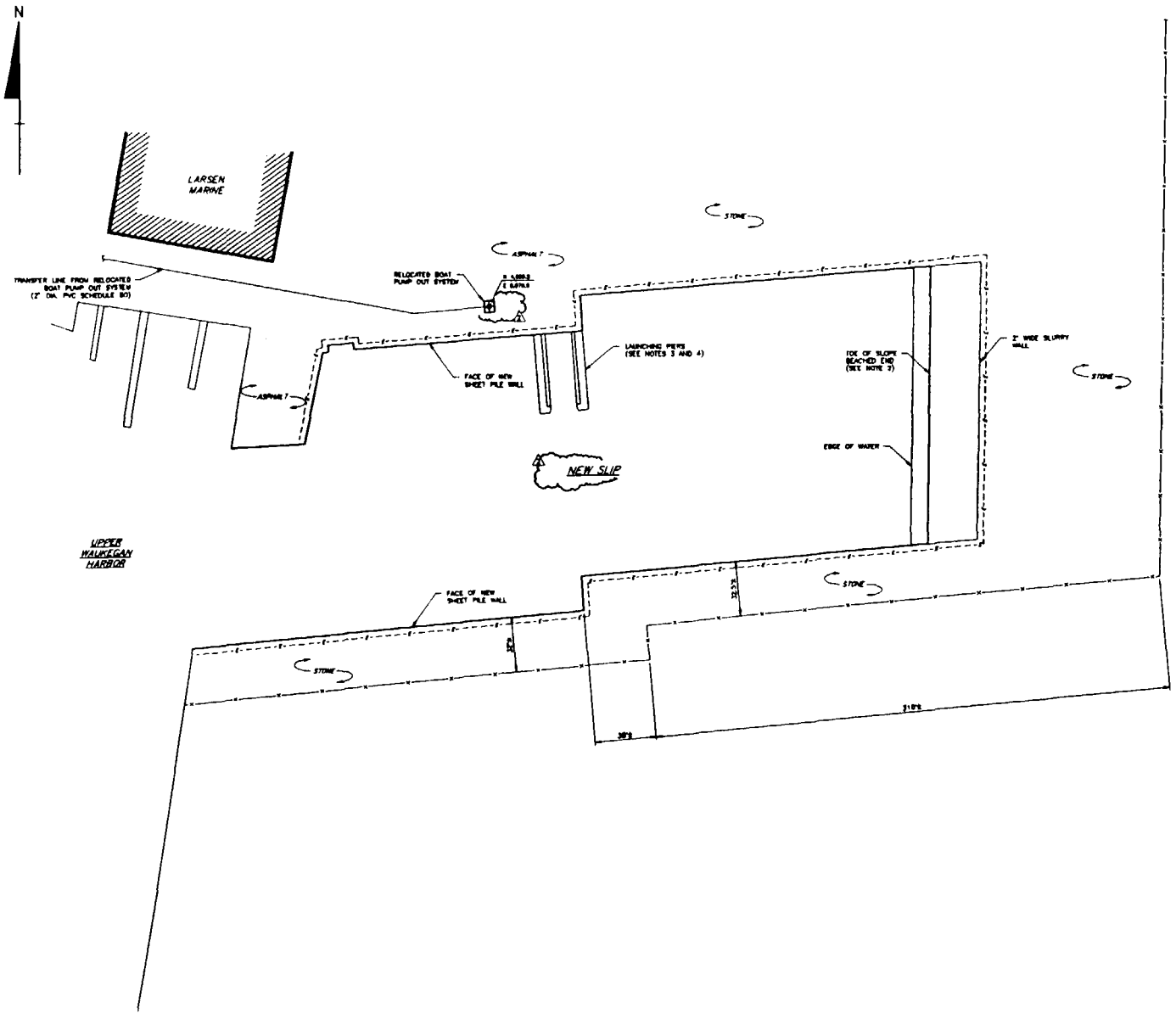
PREPARED FOR

WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 5-24-89	NS-3	DRAWING NUMBER 87-126-E7	△
SCALE: AS SHOWN			

REVISIONS	NO.	DATE	DRAWN BY	KHM	5-24-89	CHECKED BY	PGR	7-6-89	DRAWING NUMBER	87-126-E7
						APPROVED BY	CC	7-6-89		



LEGEND:

—·—·— FENCE

- - -·- - - ELECTRIC LINE INSTALLED BELOW GRADE

NOTES:

1. ALL ELEVATIONS SHOWN ARE USGS ELEVATIONS. IGL (INTERNATIONAL GREAT LAKES) ELEVATION = USGS ELEVATION − 1.8 FEET.
2. FINISHED GRADE ELEVATION AROUND NEW SLIP IS 585.0 (USGS).
3. LAUNCHING PIER IS SUPPORTED ON H-PILES DRIVEN INTO CLAY TILL, SEE DWG. 87-126-E35.
4. 2'-6"± x 45'-0", 25 TON MARINE TRAVELIFT MODEL 25 BFM MOBILE BOAT HOIST LAUNCHING RUNWAY, TOP EL 585.0 (USGS).
5. BOAT DOCKS ARE NOT SHOWN.
6. FOR ELECTRICAL BLOCK DIAGRAM, WIRE AND CONDUIT SIZES SEE DWG. 87-126-E164.

SCALE

30 0 30 60 FEET

RECORD OF CONSTRUCTION
ACCESSORIES AND IMPROVEMENTS
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 6-13-89	NS-4	DRAWING NUMBER 87-126-E17	2
SCALE: AS SHOWN			

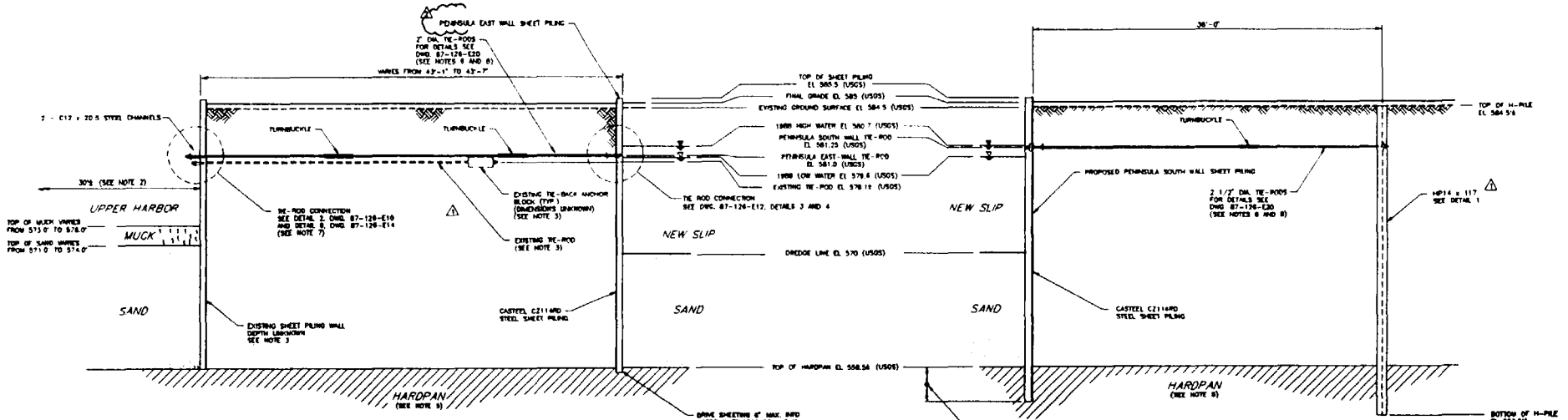
REFERENCES:

- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88.
- LARSEN MARINES' LAYOUT PLAN FOR NEW SLIP, DATED MAY 23, 1989.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	NP'D BY
2	9-10-93	RECORD OF CONSTRUCTION, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS, UPDATED NEW SLIP CONFIGURATION, REMOVED SIDEWALK, RELOCATED BOAT PUMP OUT SYSTEM	DRE	KMB	CC
1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
0	10-10-90	ISSUED FOR CONSTRUCTION	M.A.M	SD	CC

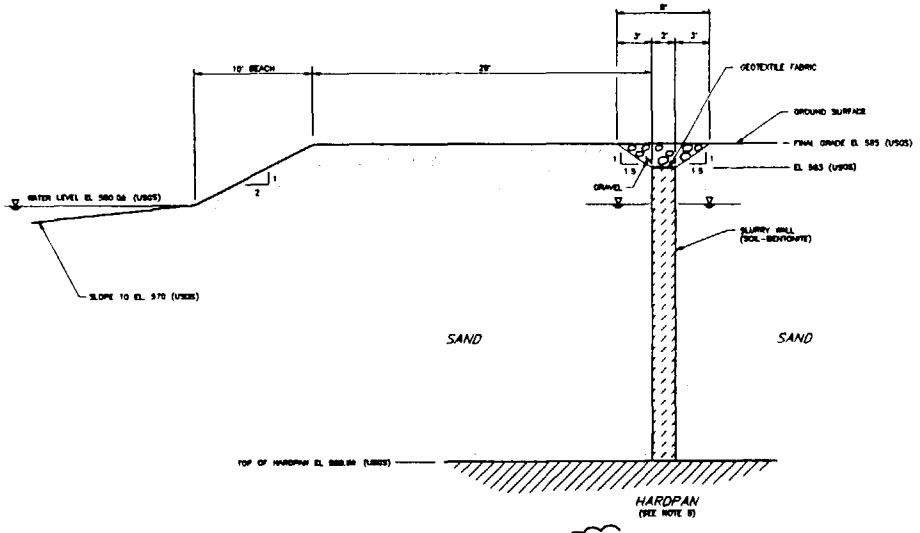
REVISIONS	NO.	DATE

DRAWN BY	KHM	6-13-89	CHECKED BY	PGR	7-6-89	DRAWING NUMBER	87-126-E17
			APPROVED BY	CC	7-6-89		

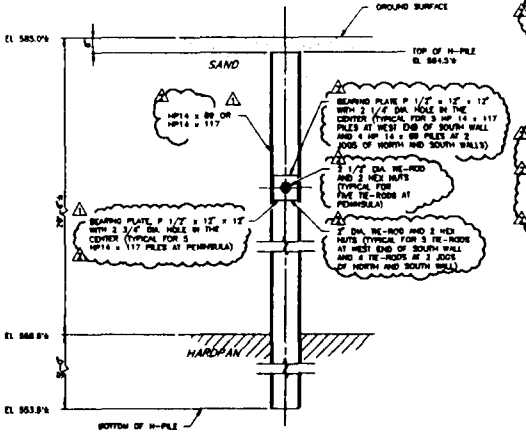


CROSS SECTION A-A
VIEW LOOKING NORTH
PENINSULA EAST-WEST SECTION
SCALE: 1" = 5'

CROSS SECTION B-B
VIEW LOOKING WEST
PENINSULA NORTH-SOUTH SECTION
SCALE: 1" = 5'



CROSS SECTION F-F
VIEW LOOKING NORTH
SLURRY WALL
SCALE: 1" = 5'



TYPICAL H-PILE EMBEDMENT
SCALE: 1/2" = 1'-0"

NOTES:

1. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
2. TO PRESERVE THE STABILITY OF THE EXISTING SHEET PILING WALL, NO DREDGING IS PERMITTED IN THIS ZONE.
3. TO PRESERVE THE STABILITY OF EXISTING SHEET PILING WALL, NO DISTURBANCE WAS PERMITTED DURING CONSTRUCTION FOR THE EXISTING TIE-BACK SYSTEM.
4. FOR LOCATIONS OF CROSS SECTIONS A-A, B-B, AND F-F SEE DWGS. 87-126-E7, AND 87-126-E20.
5. HARDPAN IS A HARD SILTY CLAY WITH AN UNCONFINED COMPRESSIVE STRENGTH GREATER THAN 4.5 TONS PER SQUARE FOOT.
6. TIE-RODS WERE INSTALLED ONE AT A TIME. SOIL WAS BACKFILLED AND COMPACTED PRIOR TO THE INSTALLATION OF THE NEXT TIE-ROD.
7. SUPPORTS FOR THE NEW WALE IN THE UPPER HARBOR AREA WAS PARTIALLY UNDER WATER. NO DEWATERING OF THE UPPER HARBOR WAS PERFORMED TO INSTALL SUPPORTS.
8. THE SOIL UNDER AND ON THE SIDES OF THE NEWLY INSTALLED TIE-RODS WAS WELL COMPACTED TO PREVENT HIGH TENSILE FORCE PRODUCED BY THE MANITOWOC LIFTING CRANE LOADS.

RECORD OF CONSTRUCTION

CROSS SECTIONS A-A, B-B, AND F-F
NEW SLIP CONFIGURATION

WAUKEGAN HARBOR, WAUKEGAN ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

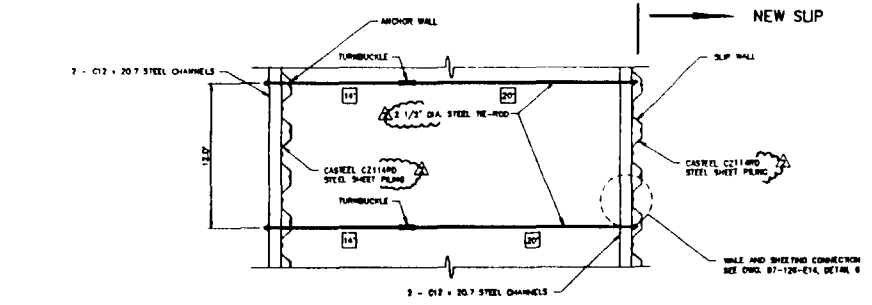
CanonieEnvironmental

DATE:	8-7-89	NS-5	DRAWING NUMBER 87-126-E9	4
SCALE:	AS NOTED			

DRAWN BY	KHM 6-7-89	CHECKED BY	PRS 10-19-90	DRAWING NUMBER	87-126-E9
		APPROVED BY	CC 11-20-90		

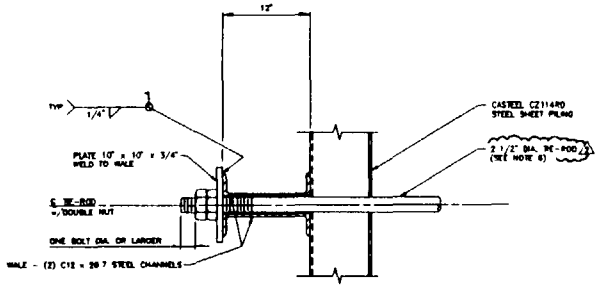
REVISIONS

NO.	DATE		DWN. BY	CK'D BY	APP'D BY
4	8-10-93	RECORD OF CONSTRUCTION. REMOVED PRE-CONSTRUCTION ISSUE NOTATION, UPDATED NOTES AND DETAIL 1	SAK	KMB	CC
3	11-20-90	FINAL ISSUE TO AGENCIES, CHANGED ANCHOR PILE SIZE, CHANGED DETAIL REFERENCE	SAK	SD	CC
2	10-19-90	ISSUED FOR CONSTRUCTION	DRZ	SD	CC
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY



PLAN

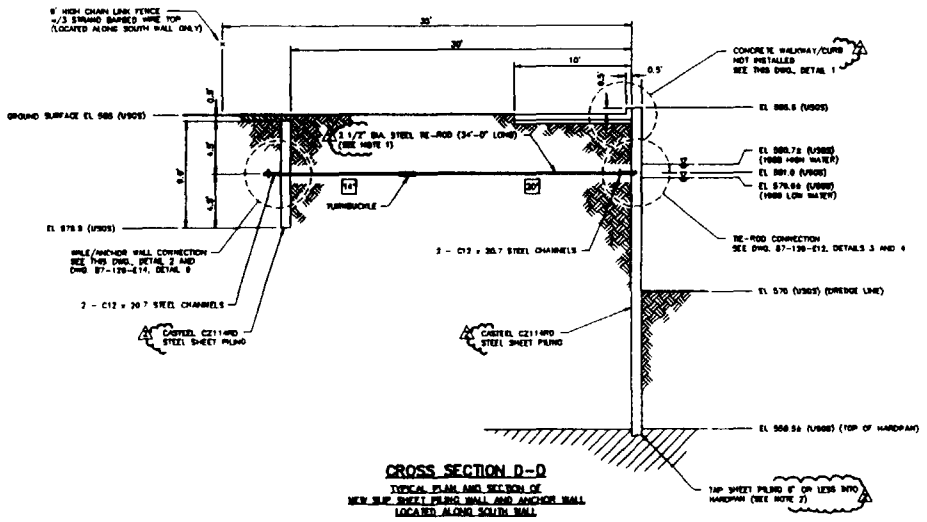
SCALE: 1"=5'



ELEVATION

7/E10 WALE/ANCHOR WALL CONNECTION DETAIL

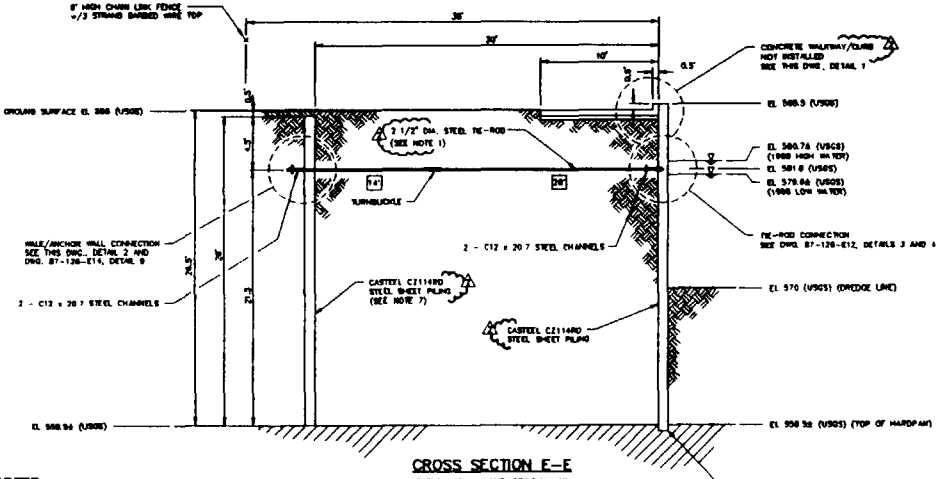
SCALE: 1 1/2"=1'-0"



CROSS SECTION D-D

TYPICAL PLAN AND SECTION OF NEW SLIP SHEET PILING WALL AND ANCHOR WALL LOCATED ALONG SOUTH WALL

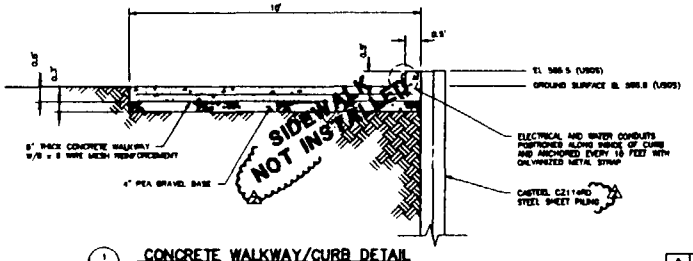
SCALE: 1"=5'



CROSS SECTION E-E

TYPICAL PLAN AND SECTION OF NEW SLIP SHEET PILING WALL AND ANCHOR WALL LOCATED ALONG SOUTH WALL

SCALE: 1"=5'



1/E10 CONCRETE WALKWAY/CURB DETAIL

SCALE: 1"=2'

NOTES:

1. SPACING BETWEEN TIE-RODS IS 12.0 FEET EXCEPT AT PENINSULA, WATER INTAKE, AND JOGS.
2. ALL IN-PLACE SHEET PILING WAS DRIVEN TO ELEVATIONS BETWEEN 558.0 AND 558.5 EXCEPT SHEET PILES 1 THROUGH 22 ALONG THE NORTH WALL AND 1 THROUGH 14 ALONG THE SOUTH WALL AT THE NEW SLIP ENTRANCE.
3. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
4. FOR LOCATIONS OF SECTIONS D-D AND E-E SEE DWG. 87-126-E7.
5. TIE-RODS, WASHERS, WASHER PLATES AND HEX NUTS WERE GALVANIZED TO REDUCE CORROSION.
6. TIE-RODS WERE 2 1/2" DIA. WITH NO UPSET ENDS.
7. ANCHOR SHEETING SHOWN IN CROSS SECTION E-E WAS DRIVEN DEEP TO ALLOW FOR EXCAVATION BETWEEN PILING WALL AND ANCHOR WALL.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	9-10-93	RECORD OF CONSTRUCTION, UPDATED DETAIL 1, CHANGED NOTES	DRE	WMB	CC
2	11-20-89	FINAL ISSUE TO AGENCIES	SMK	SD	CC
1	10-10-89	ISSUED FOR CONSTRUCTION	DRE	SD	CC

RECORD OF CONSTRUCTION
CROSS SECTIONS D-D AND E-E
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS

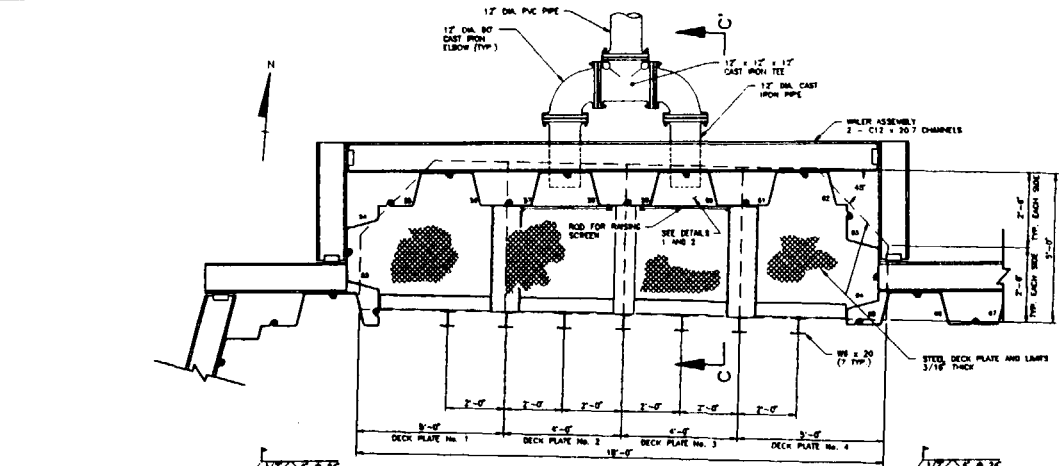
PREPARED FOR

WAUKEGAN HARBOR TRUST

Canonie Environmental

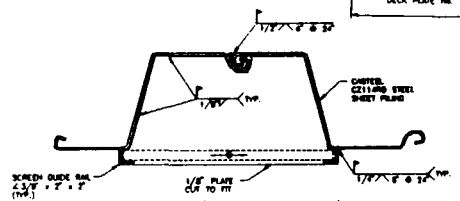
DATE: 6-16-89	NS-6	DRAWING NUMBER 87-126-E10	3
SCALE: AS SHOWN			

REVISIONS		DRAWN BY	KHM	CHECKED BY	PGR	DRAWING NUMBER	87-126-E10
NO.	DATE		6-16-89	APPROVED BY	CC		7-6-89
							7-6-89



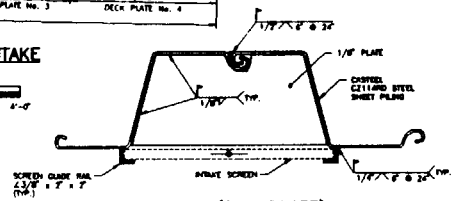
PLAN OF WATER INTAKE

SCALE: 1/2" = 1'-0"



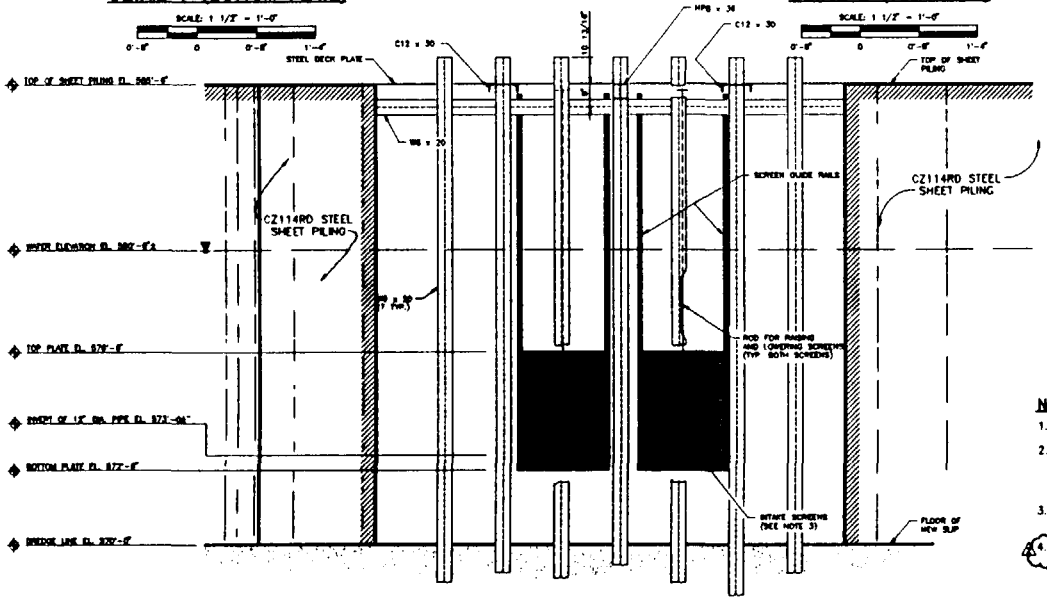
DETAIL 1 (BOTTOM PLATE)

SCALE: 1 1/2" = 1'-0"



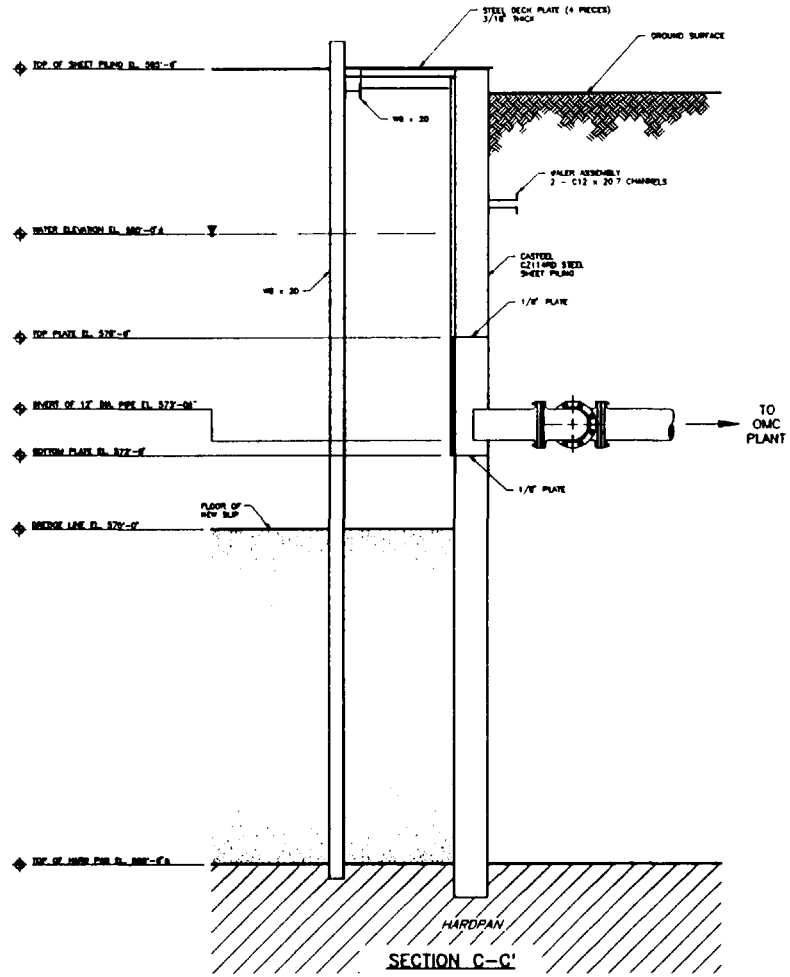
DETAIL 2 (TOP PLATE)

SCALE: 1 1/2" = 1'-0"



FRONT ELEVATION OF WATER INTAKE

SCALE: 1/2" = 1'-0"



SECTION C-C'

SCALE: 1/2" = 1'-0"

NOTES:

1. ALL ELEVATIONS ARE USGS UNLESS OTHERWISE NOTED.
2. SEE DRAWING 87-126-E32 (NS-9) FOR WATER INTAKE LOCATION. SEE DRAWINGS 87-126-E12 (NS-13) AND 87-126-E14 (NS-14) FOR SHEET PILE CONNECTION DETAILS.
3. TWO INTAKE SCREENS ARE MADE OF 1" x 1/8" GALVANIZED BAR STOCK.
4. THE NEW WATER INTAKE STRUCTURE WAS CONSTRUCTED IN JANUARY 1991.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
2	9-10-93	RECORD OF CONSTRUCTION, REDRAWN, CHANGED TITLE ADDED NOTE.	M.A.M	HMB	CC
1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	DRE	SD	CC

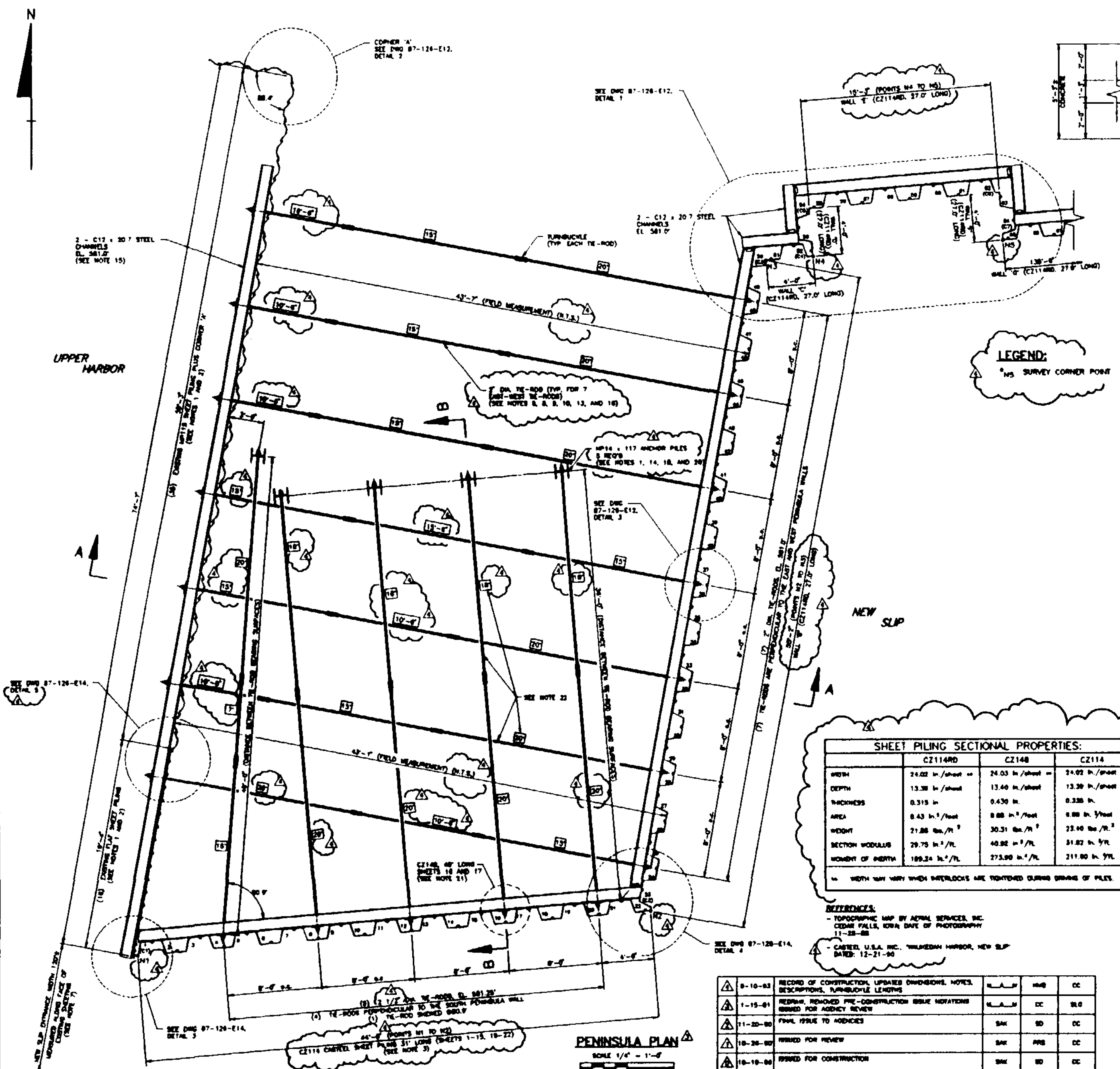
RECORD OF CONSTRUCTION
WATER INTAKE
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
Canonie Environmental

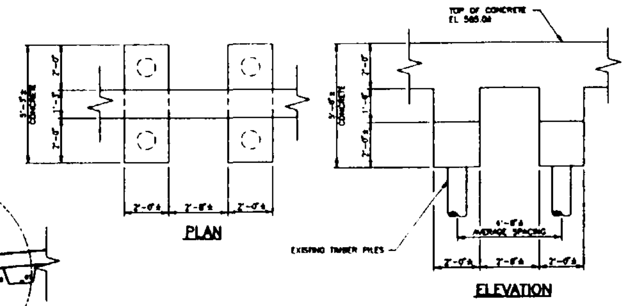
DATE: 6-15-89	NS-7	DRAWING NUMBER 87-126-E11	2
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	KHM	CHECKED BY	PRS	10-19-90	DRAWING NUMBER 87-126-E11
	6-15-89	APPROVED BY	CC	11-20-90	

REVISIONS	NO.		DRAWN BY	KHM	CHECKED BY	SD	11-20-90	DRAWING NUMBER	87-126-E20
	DATE			6-29-89	APPROVED BY	CC	11-20-90		





EXISTING CONCRETE COKE CRANE FOUNDATION

SCALE: 3/8" = 1'-0"

NOTES:

1. DESIGN DIMENSIONS AND INSTALLATION PROCEDURES ARE BASED ON AVAILABLE FIELD CONDITIONS AS SHOWN. AS-BUILT DRAWINGS FOR EXISTING SHEET PILING WALL AND ITS' TIE-BACKS ARE NOT AVAILABLE. DIMENSIONS AND PROCEDURES WERE MODIFIED DURING THE INSTALLATION OF THE NEW SLIP SHEET PILING WALL TO ACCOMODATE ACTUAL FIELD CONDITIONS.
2. EXISTING SHEET PILING WALL DETAILS BELOW WATER LEVEL ARE UNKNOWN. EXISTING WALL WAS PRESERVED AS IS. AN EXISTING 27' LONG FLAT SHEET WAS PULLED OUT AT THE NORTHWEST CORNER OF THE NEW SLIP ENTRANCE TO MAKE THE THE OLD AND NEW SHEET PILE CONNECTIONS. THE PILE INDICATES THAT THE TIP OF THE FLAT SHEET IS LOCATED ON TOP OF THE HARDPAN (HARD CLAY).
3. SHEET PILING IN THIS AREA WAS DRIVEN A MINIMUM OF 3' INTO THE HARDPAN.
4. FOR CROSS SECTIONS A-A AND B-B, SEE DWG. 87-126-E9 (NS-5). FOR GENERAL LAYOUT OF THE NEW SLIP, SEE DWG 87-126-E7 (NS-3).
5. ALL STEEL SHEET PILING ARE CZ114 AND CZ114RD EXCEPT SHEET No. 16 AND 17 AS SUPPLIED BY CASTEEL U.S.A. INC. EACH SHEET IS NUMBERED ACCORDING TO THE SUPPLIER'S DRAWINGS WITH MINOR ALTERATIONS. ALL NEW SHEETS TO BE BOLTED TO ALL NEW WALES.
6. TIE-RODS WERE INSTALLED ONE AT A TIME BY TRENCHING. EXCAVATION OF ENTIRE PENINSULA AREA WAS NOT PERMITTED.
7. EXISTING SHEET PILING, TIE-RODS, AND TIMBER PILES WERE REMOVED FOR THE NEW SLIP ENTRANCE TO THE UPPER HARBOR
8. LOCATIONS OF EXISTING TIE-BACKS IN THIS AREA ARE NOT KNOWN.
9. GALVANIZED TIE-RODS, WASHERS AND HEX NUTS WERE USED TO REDUCE CORROSION
10. TIE-RODS ARE 2" DIAMETER FOR 7 EAST-WEST DIRECTION TIES AND 2 1/2" DIAMETER FOR 5 NORTH-SOUTH DIRECTION TIES. TIES USED DID NOT HAVE UPSET ENDS.
11. ALL ELEVATIONS SHOWN ARE USGS.
12. EAST-WEST TIE-RODS ARE LOCATED AT EL. 581.0'. NORTH-SOUTH TIE-RODS ARE LOCATED AT EL. 581.25'.
13. TIE-ROD LENGTHS WERE SET TO AVOID THE LOCATION OF TURNBUCKLES AT THE INTERSECTIONS OF CROSSING TIE-RODS.
14. LOCATION OF ANCHOR PILES MAY VARY SLIGHTLY TO AVOID INTERFERENCE WITH NEW TIE-RODS AND EXISTING TIE-BACKS.
15. EXISTING HARBOR WALL WALE WAS REMOVED FOR INSTALLATION OF NEW C12 WALES
16. SIX INCHES OF COMPACTED SLAG WAS PLACED BENEATH TIE-RODS IN PENINSULA AREA.
17. TOP FOOT OF PENINSULA, EL. 586.0 TO 584.0, WAS PAVED WITH CRUSHED STONE.
18. HP14 x 117 TOP EL. 584.5'±, BOTTOM EL. 383.5±. SEE DETAIL 1, DWG. 87-126-E9 (NS-5).
19. THE WATER LEVEL IN THE UPPER HARBOR WAS AT EL. 580.50' ON DEC. 21, 1990
20. BURN 2 3/4" DIA. HOLE IN THE WEB FOR THE TIE-ROD.
21. SHEET PILE No.S 16 AND 17 ARE CASTEEL CZ148, 40' LONG. THESE TWO SHEETS ARE HEAVIER AND WERE USED TO TEST THE DRIVING RESISTANCE 10' INTO THE HARDPAN FOR SLIP No. 3 CUTOFF WALL EMBEDMENT DESIGN.
22. TIE-ROD SEGMENTS ARE ARRANGED AS SHOWN. THE TOTAL LENGTH OF EACH EAST-WEST TIE-ROD IS 48'-8" (7 RODS). THE TOTAL LENGTH OF EACH NORTH-SOUTH TIE-RODS 42'-8" (1 WEST TIE) AND 38'-0" (4 EAST TIES).
23. TIE-RODS HAVE A 24" THREADED SEGMENT AT EACH OUTSIDE END. TIE-RODS HAVE A 10" THREADED SEGMENT AT EACH TURNBUCKLE CONNECTION.

SHEET PILING SECTIONAL PROPERTIES:

	CZ114RD	CZ148	CZ114
WIDTH	24.02 in./sheet **	24.03 in./sheet **	24.02 in./sheet **
DEPTH	13.38 in./sheet	13.40 in./sheet	13.39 in./sheet
THICKNESS	0.315 in.	0.430 in.	0.330 in.
AREA	6.43 in.²/foot	8.88 in.²/foot	6.88 in.²/foot
WEIGHT	21.88 lbs./ft.²	30.31 lbs./ft.²	23.40 lbs./ft.²
SECTION MODULUS	29.75 in.³/ft.	40.92 in.³/ft.	31.82 in.³/ft.
MOMENT OF INERTIA	189.24 in.⁴/ft.	273.90 in.⁴/ft.	211.80 in.⁴/ft.

** WIDTH MAY VARY WHEN INTERLOCKS ARE TIGHTENED DURING DRIVING OF PILES.

REFERENCES:

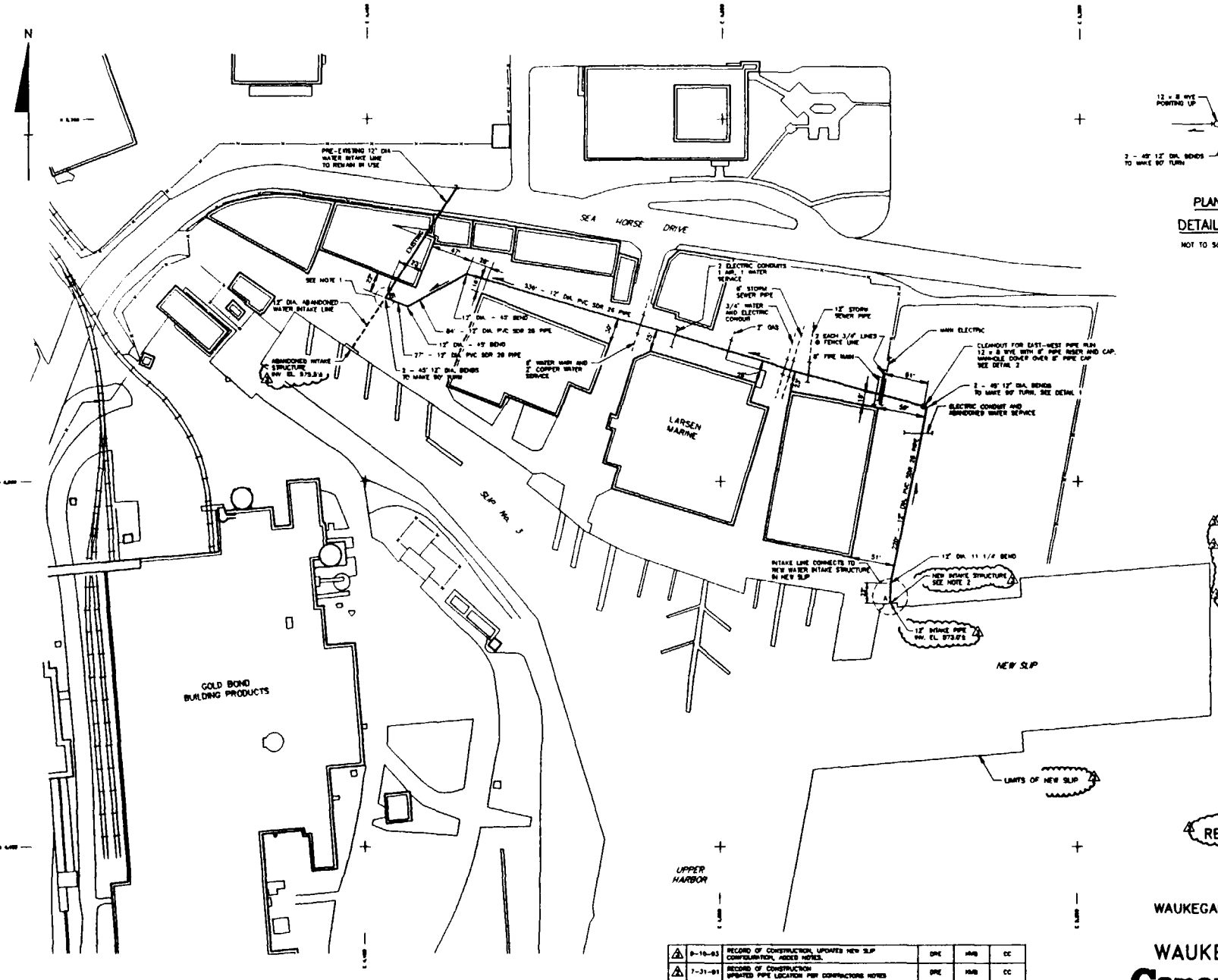
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC. CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88
- CASTEEL U.S.A. INC., "WAUKEGAN HARBOR, NEW SLIP" DATED: 12-21-90

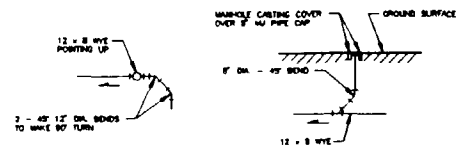
No.	DATE	CONSTRUCTION ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
4	8-10-93	RECORD OF CONSTRUCTION, UPDATED DIMENSIONS, NOTES, DESCRIPTIONS, TURNBUCKLE LENGTHS	M.A.M	HMG	CC
3	1-15-91	REDRAW, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS ISSUED FOR AGENCY REVIEW	M.A.M	CC	SLG
2	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
1	10-26-90	ISSUED FOR REVIEW	SAK	PRS	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	SAK	SD	CC

RECORD OF CONSTRUCTION
PENINSULA TIE-BACK WALL
CONSTRUCTION DETAILS
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE:	6-29-89	NS-8	DRAWING NUMBER 87-126-E20
SCALE:	AS SHOWN		





PLAN
DETAIL-1
NOT TO SCALE

ELEVATION
DETAIL-2
NOT TO SCALE

LEGEND:

- FENCE
- UNIMPROVED ROADWAY
- RAILROAD
- MANHOLE COVER OVER CLEANOUT
- DIRECTION OF FLOW

NOTES:

1. CONNECTION MADE TO EXISTING WATER INTAKE PIPELINE JULY 27, 1991. PORTION OF PIPELINE BETWEEN SLIP No. 3 AND NEW CONNECTION ABANDONED.
2. FOR NEW INTAKE STRUCTURE DETAILS SEE DRAWING 87-126-E11 (NS-7).
3. THE 870'± LONG NEW 12" DIAMETER PVC SDR 26 PIPE FROM POINTS 'A' TO 'B' WAS INSTALLED IN A 0.3% SLOPE TRENCH TO ACCOMODATE THE 2.5' DIFFERENCE BETWEEN THE NEW INTAKE AND THE EXISTING 12" DIAMETER WATER INTAKE LINE INVERT ELEVATIONS.
4. THE 870'± LONG NEW WATER INTAKE PIPE WAS INSTALLED IN MARCH 1991.

SCALE
50 0 50 100 FEET

RECORD OF CONSTRUCTION
PROCESS COOLING
WATER INTAKE PLAN
NEW SLIP
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

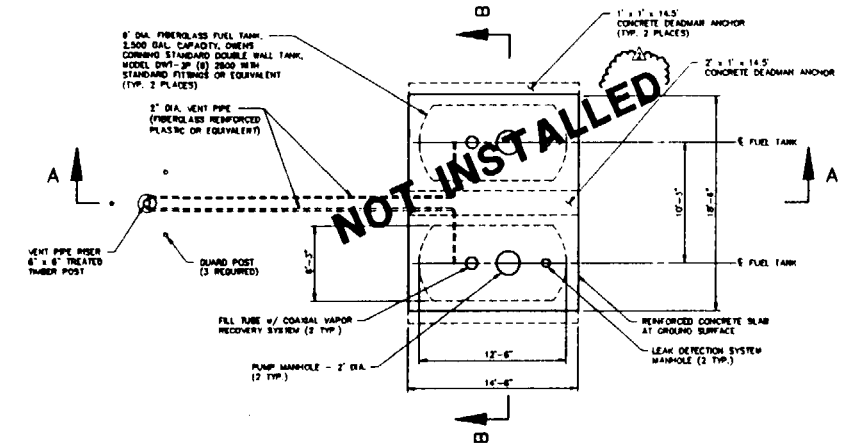
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	9-16-93	RECORD OF CONSTRUCTION, UPDATED NEW SLIP CONFIGURATION, ADDED NOTES.	DRE	KMB	CC
2	7-31-91	RECORD OF CONSTRUCTION UPDATED PIPE LOCATION PER CONTRACTORS NOTES	DRE	KMB	CC
1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	DRE	SD	CC

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-30-88

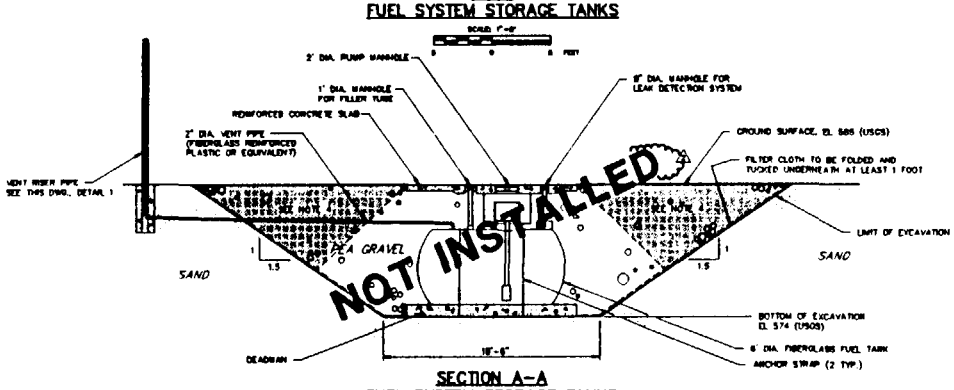
DATE: 7-3-89	NS-9	DRAWING NUMBER 87-126-E32
SCALE: AS SHOWN		

REVISIONS	NO.	DATE

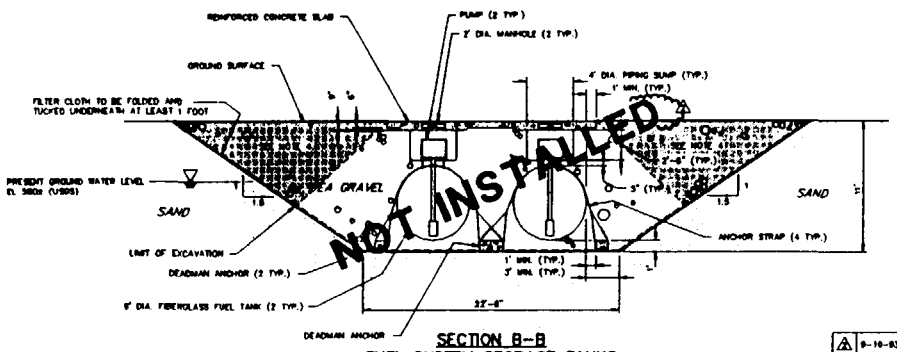
DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M A M 7-3-89	PRS	CC	87-126-E32
	10-19-90	11-20-90	



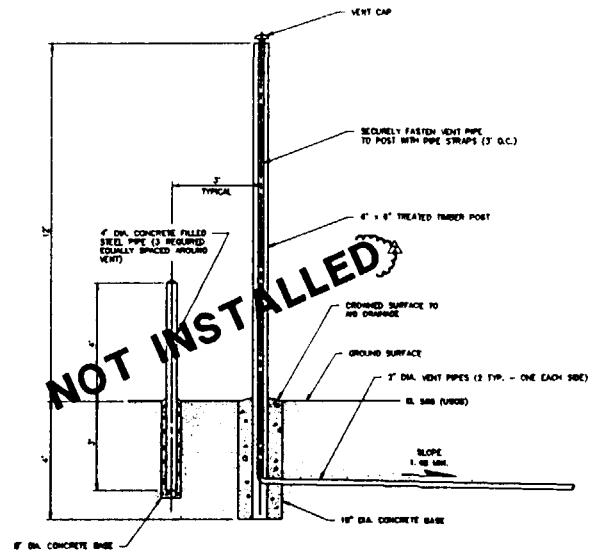
PLAN
FUEL SYSTEM STORAGE TANKS



SECTION A-A
FUEL SYSTEM STORAGE TANKS



SECTION B-B
FUEL SYSTEM STORAGE TANKS



1/E26 VENT PIPE RISER
SCALE 1"=2'

NOTES:

1. TANK ANCHORING SYSTEM IS SHOWN SCHEMATICALLY. TANKS AND ANCHORING SYSTEM TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS FOR POTENTIAL WATER ELEVATION OF 583.0 (USGS).
2. INSTALLATION OF UNDERGROUND FUEL TANKS WILL REQUIRE DEWATERING.
3. SEE DWG. 87-126-E17 FOR APPROXIMATE LOCATION OF UNDERGROUND FUEL STORAGE TANKS.
4. NATURAL SOIL MAY BE SUBSTITUTED FOR PEA GRAVEL IN THIS AREA. FILTER CLOTH WILL FOLLOW PEA GRAVEL.
5. UNDERGROUND STORAGE TANKS WERE INSTALLED BY OTHERS.

RECORD OF CONSTRUCTION
UNDERGROUND FUEL STORAGE TANKS
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

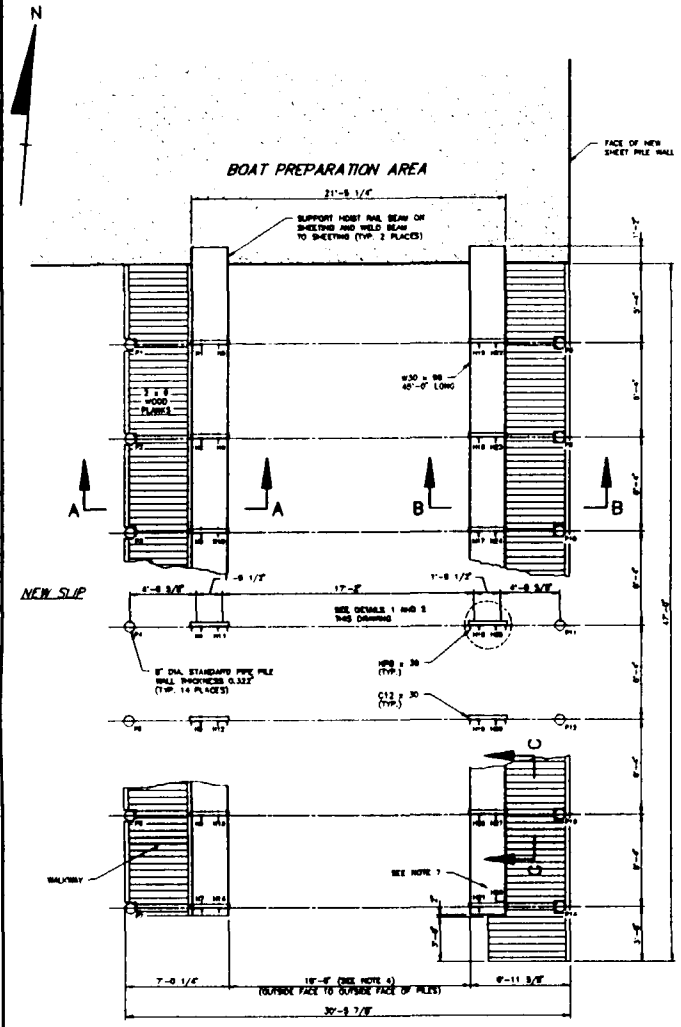
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	9-10-93	RECORD OF CONSTRUCTION, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS, ADDED NOTE 5.	DRE	KMB	CC
2	11-20-90	FINAL ISSUE TO AGENCIES	SAK	BD	CC
1	10-19-90	ISSUED FOR CONSTRUCTION	DRE	BD	CC

DATE: 8-1-89	NS-10	DRAWING NUMBER 87-126-E26	3
SCALE: AS NOTED			

REVISIONS	NO.	DATE

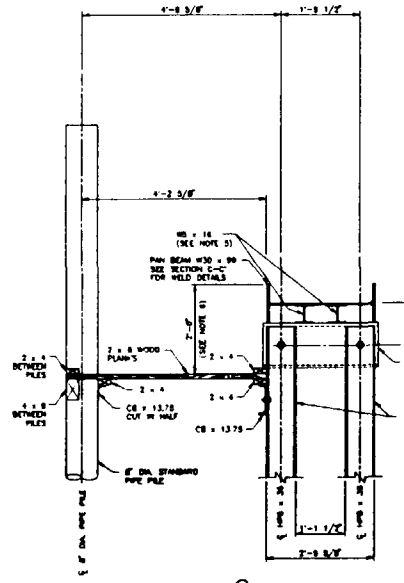
DRAWN BY	KMM	8-1-89
CHECKED BY	PRS	10-19-90
APPROVED BY	CC	11-20-90

DRAWING NUMBER 87-126-E26



PLAN

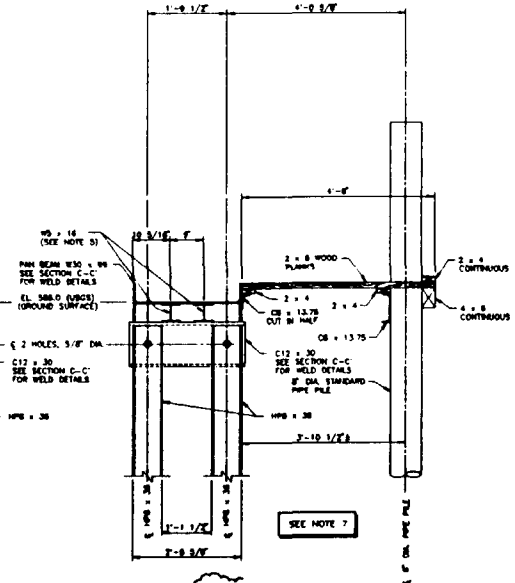
SCALE: 1/4" = 1'-0"



SECTION A-A

WEST SIDE OF PIER

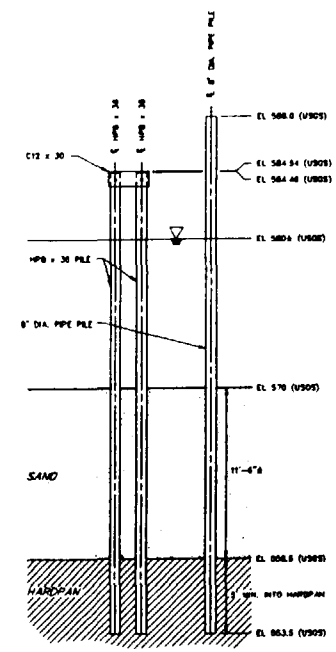
SCALE: 3/4" = 1'-0"



SECTION B-B

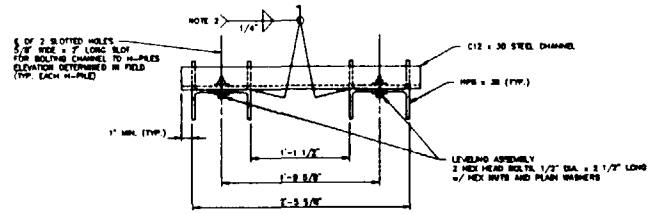
EAST SIDE OF PIER

SCALE: 3/4" = 1'-0"



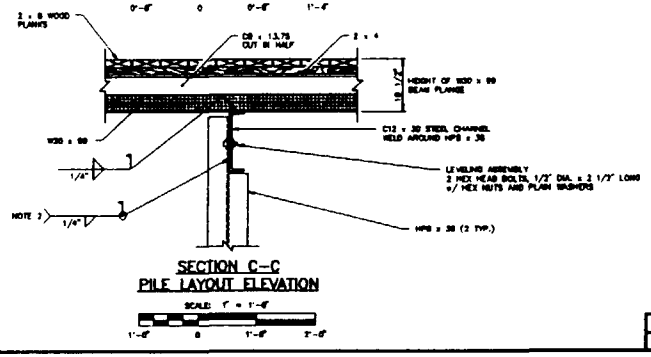
PILE LAYOUT EMBEDMENT

SCALE: 1/4" = 1'-0"



TYPICAL PILE LAYOUT

SCALE: 1 1/2" = 1'-0"



SECTION C-C

PILE LAYOUT ELEVATION

SCALE: 1" = 1'-0"

NOTES:

1. NO RUNWAY OR WALKWAY MATERIALS WERE SALVAGED FROM THE EXISTING STRUCTURE. ALL MATERIALS USED WERE NEW.
2. AFTER SURVEYING, CUT THE PILE FLANGES IN THE FIELD SO THAT THE CHANNEL (C12 x 30) CAN FIT THE PILE (HP8 x 36) ADEQUATELY FOR WELDING.
3. THE OUTSIDE DIMENSION OF PILE PAIR IS THE SAME AS THE WIDTH OF EXISTING PAN BEAM.
4. THIS DIMENSION IS 6" LESS THAN THE STANDARD DIMENSION OF 17' PER LARSEN MARINE SERVICE LETTER DATED JUNE 9, 1989.
5. FIELD FIX THE 8" WIDE FLANGE BEAMS UNDERNEATH THE PAN BEAM TO SUIT THE NEW PILE LAYOUT.
6. WOOD DECKING ON WEST SIDE WAS LOWERED 24" PER REQUEST OF LARSEN MARINE SERVICES.
7. H-PILE H28 WAS MOVED 4" NORTH TO AVOID AN OBSTRUCTION.

RECORD OF CONSTRUCTION

LAUNCHING PIER

PLAN AND DETAILS

NEW SLIP CONFIGURATION

WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

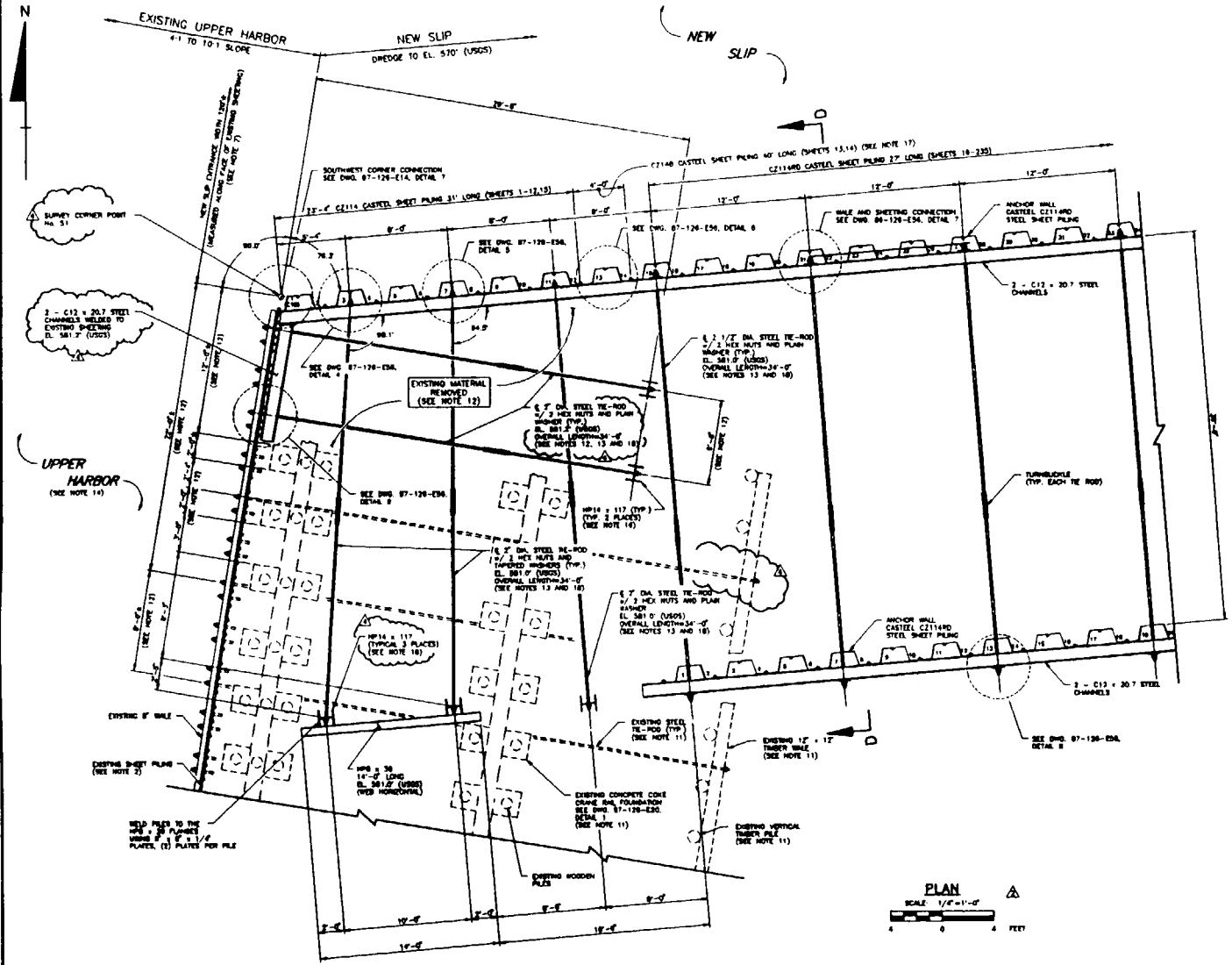
CanonieEnvironmental

DATE: 7-12-89	NS-11	DRAWING NUMBER 87-126-E35
SCALE: AS SHOWN		

DRAWN BY	KHM	7-12-89	CHECKED BY	PRS	10-19-90	DRAWING NUMBER	87-126-E35
			APPROVED BY	CC	11-20-90		

REVISIONS

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	9-10-93	RECORD OF CONSTRUCTION, ADDED SECTION B-B, UPDATED SECTION A-A, ADDED NOTE 7	[illegible]	KMB	CC
2	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
1	10-19-90	ISSUED FOR CONSTRUCTION	DRC	SD	CC



NOTES:

1. THE SOUTHWALL SITE IS COVERED BY A LARGE PILE OF SAND AND AS-BUILT DRAWINGS OF THE EXISTING TIE-BACK WALL ARE UNAVAILABLE. DESIGN DIMENSIONS AND INSTALLATION PROCEDURES ARE BASED ON ASSUMED FIELD CONDITIONS AS SHOWN. DIMENSIONS AND PROCEDURES WERE MODIFIED DURING CONSTRUCTION TO ACCOMODATE ACTUAL FIELD CONDITIONS.
2. EXISTING SHEET PILING WALL DETAILS BELOW THE WATER LEVEL ARE UNKNOWN. WALL IS PRESERVED AS IS. SEE DWG. 87-126-E60 FOR EXISTING SHEET DETAIL.
3. REMOVE EXISTING CONCRETE COKE CRANE FOUNDATION AND TIMBER PILES AS REQUIRED.
4. FOR CROSS SECTION D-D SEE DWG. 87-126-E10.
5. ALL STEEL SHEET PILING ARE CZ114RD, CZ114, AND CZ14B AS SUPPLIED BY CASTEEL U.S.A. INC. EACH SHEET IS NUMBERED ACCORDING TO THE SUPPLIERS DRAWING. ALL NEW SHEETS ARE BOLTED TO ALL NEW WALES.
6. EXCAVATE AND BACKFILL ONE TRENCH AT A TIME TO PRESERVE THE STABILITY OF THE EXISTING WALL. EXCAVATING THE WHOLE AREA ALONG THE EXISTING WALL IS NOT PERMITTED.
7. EXISTING SHEET PILING, TIE-RODS AND TIMBER PILES WERE REMOVED FOR THE NEW SLIP ENTRANCE.
8. LOCATIONS OF EXISTING TIE-BACKS IN THIS AREA ARE NOT KNOWN.
9. FOR GENERAL LAYOUT OF NEW SLIP SEE DWG. 87-126-E7.
10. GALVANIZED TIE-RODS, WASHERS, AND HEX NUTS WERE USED TO REDUCE CORROSION.
11. EXISTING CONDITIONS TAKEN FROM FIELD SKETCHES. LOCATIONS ARE APPROXIMATE.
12. THE EXISTING TIE-RODS AND CONCRETE SHOWN ARE APPROXIMATE. THE EXISTING TIE-RODS AND CONCRETE PILE CAPS WERE REMOVED IN THE FIRST 12'± FROM THE SOUTHWEST CORNER (C10) OF THE NEW SLIP ENTRANCE. TWO NEW 2" DIA. TIE-RODS WERE INSTALLED AND ANCHORED TO NEW H-PILES TO PRESERVE THE STABILITY OF THE EXISTING WALL.
13. DIAMETER OF TIE-RODS AS NOTED. NO UPSET ENDS.
14. THE WATER LEVEL IN THE UPPER HABOR WAS AT EL. 580.50 (USGS) ON DEC. 21, 1990.
15. BEFORE DRIVING ANY PILES, AN INVESTIGATION WAS PERFORMED TO DETERMINE THE LOCATIONS OF EXISTING WOOD PILES, TIE-RODS, AND CONCRETE PILE CAPS.
16. HP14 x 117 TOP EL. 584.5'± (USGS), BOTTOM EL. 553.5'± (USGS). SEE DETAIL 1, DWG. 87-126-E9 (NS-5)
17. SHEET PILE No.s 13 AND 14 ALONG THE SOUTH WALL ARE CASTEEL CZ14B, 40' LONG. THESE TWO SHEETS ARE HEAVIER AND WERE USED TO TEST THE DRIVING RESISTANCE 10' INTO HARDPAN FOR SLIP No. 3 CUTOFF WALL EMBEDMENT ANALYSIS.
18. PLACE 6" OF COMPACTED CRUSHED STONE UNDERNEATH THE FIVE 2" DIA. TIE-RODS (3 NORTH-SOUTH, 2 EAST-WEST) TO ASSURE THAT THE TIE-RODS ARE WELL SEATED IN THE GROUND SUCH THAT NO EXTRA TENSION WILL BE PRODUCED FROM TRUCK OR EQUIPMENT SURFACE LOADS. THE REMAINING TIE-RODS REQUIRE COMPACTED SOIL ONLY.

REFERENCES:

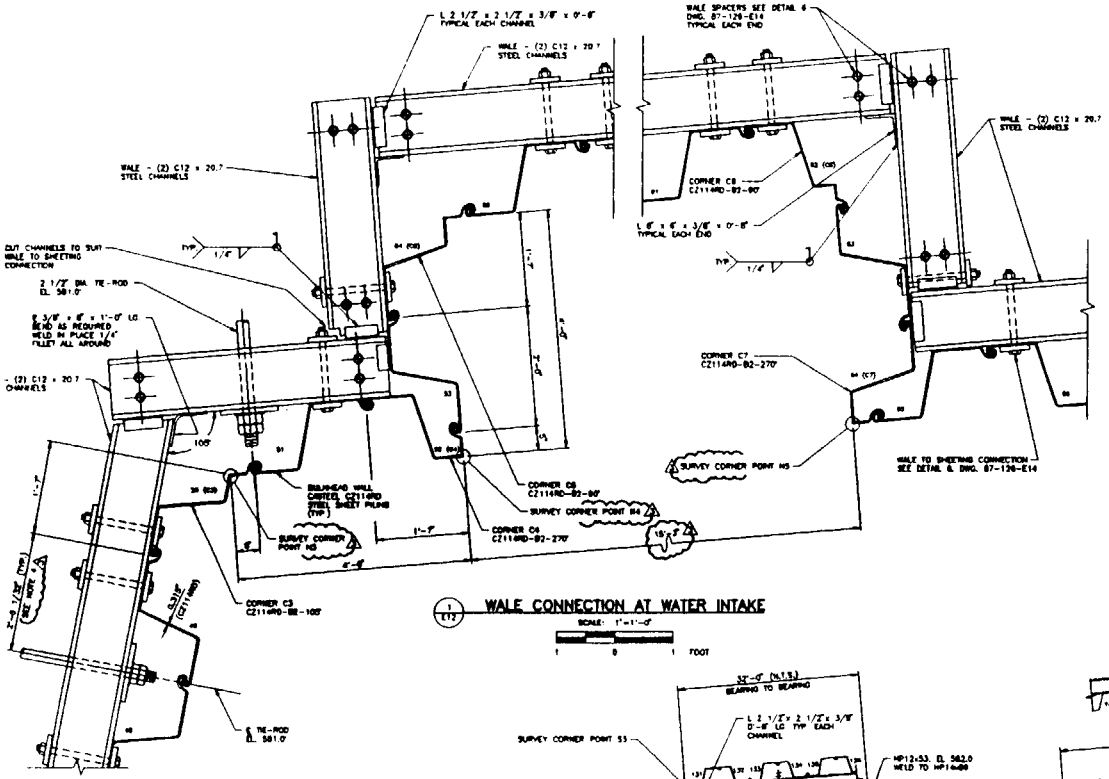
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88.
- CASTEEL U.S.A. INC., "WAUKEGAN HARBOR, NEW SLIP" DATED: 8-12-90.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
3	9-10-93	RECORD OF CONSTRUCTION, UPDATED NOTES, DESCRIPTIONS	M_A_M	KMB	CC
2	1-10-91	FINAL ISSUE TO AGENCIES	M_A_M	CC	SLG
2	1-8-91	REDRAW, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS ISSUED FOR FIELD REVIEW, NOT FOR CONSTRUCTION	M_A_M		
1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	M_A_M	SD	CC

RECORD OF CONSTRUCTION
NEW SLIP SOUTH WALL
PARTIAL PLAN
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
CanonieEnvironmental

DATE: 7-27-89	NS-12	DRAWING NUMBER 87-126-E46	3
SCALE: AS SHOWN			

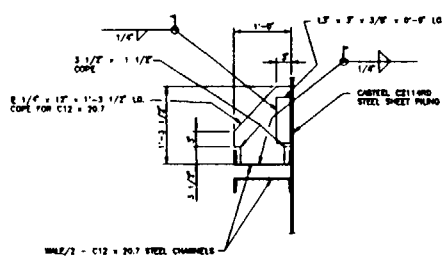
REVISIONS		DRAWN BY	SAK	CHECKED BY	PRS	DRAWING NUMBER	87-126-E46
NO.	DATE		7-27-89	APPROVED BY	CC		10-19-90 / 11-20-90



1 / E12 WALE CONNECTION AT WATER INTAKE

SCALE: 1" = 1'-0"

1 0 1 FOOT

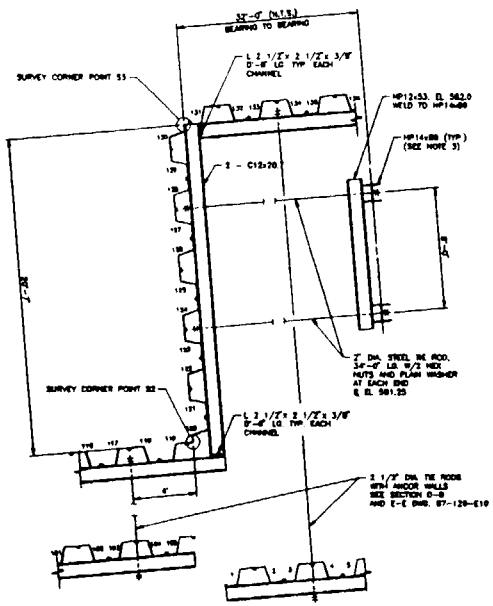


TYPICAL WALE SUPPORT SPACED ON 20' CENTERS

4 / E12 TYPICAL WALE SUPPORT

SCALE: 1" = 1'-0"

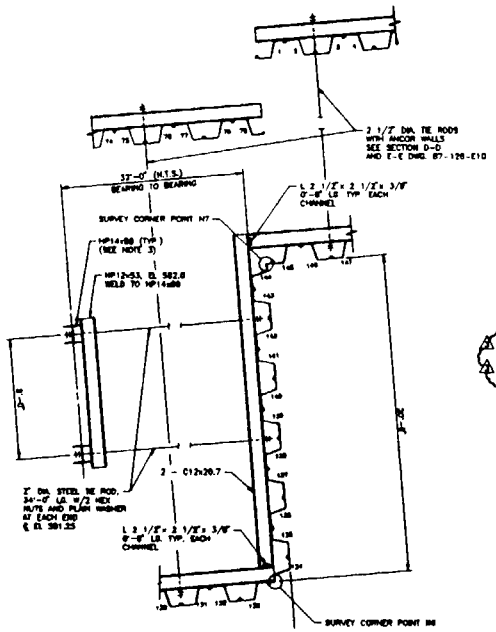
1 0 1 FEET



5 / E12 JOG IN SOUTH SHEET PILE WALL DETAIL

SCALE: 1/4" = 1'-0"

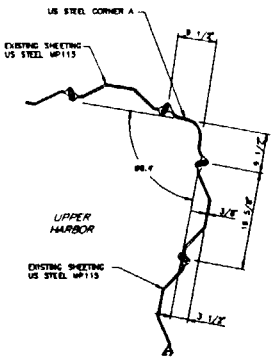
4 0 4 FEET



6 / E12 JOG IN NORTH SHEET PILE WALL DETAIL

SCALE: 1/4" = 1'-0"

4 0 4 FEET

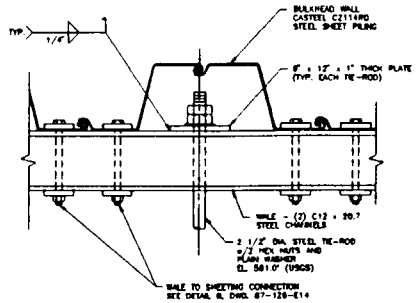


DIMENSIONS SHOWN ARE PER FIELD NOTES

2 / E12 NORTHEAST CORNER UPPER HARBOR

SCALE: 1" = 1'-0"

1 0 1 FOOT



1 / E12 2 1/2" DIA. TIE-ROD CONNECTION

SCALE: 1" = 1'-0"

1 0 1 FOOT

LEGEND:

CORNER C3 — STEEL SHEET PILING CORNER DESIGNATION
CZ114RD-B2-105° — CASTEEL CO. CORNER FABRICATION DESIGNATION

NOTES:

1. TIE-RODS, WASHERS, AND HEX NUTS WERE GALVANIZED TO REDUCE CORROSION.
2. BOLT HOLES IN SHEETING FOR TIE-ROD OR WALE CONNECTIONS WERE FIELD CUT.
3. PILE HP14x89 TOP EL. 584.5±, AND BOTTOM EL. 553.5±.
4. SHEET PILE INTERLOCKS MAY HAVE TIGHTENED ABOUT 1/4" AFTER DRIVING.

RECORD OF CONSTRUCTION
CONSTRUCTION DETAILS
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

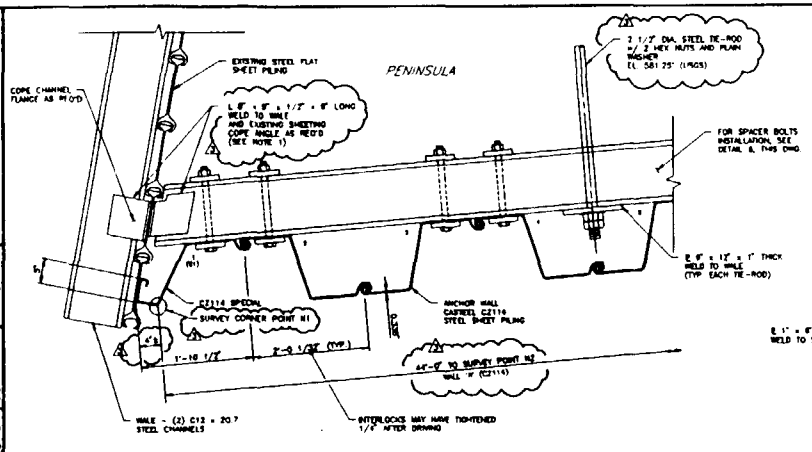
Canonie Environmental

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
4	9-10-93	RECORD OF CONSTRUCTION, ADDED DETAIL 5 & 6 AND SURVEY POINTS, CHANGED DIMENSION, REMOVED NOTE	BAK	KMB	CC
3	1-15-91	REDRAWN, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS ISSUED FOR AGENCY REVIEW	M_A_M	CC	SLG
2	11-20-90	FINAL ISSUE TO AGENCIES	BAK	SD	CC
1	10-19-90	ISSUED FOR CONSTRUCTION	BAK	SD	CC

DATE:	6-16-89	NS-13	DRAWING NUMBER 87-126-E12	4
SCALE:	AS NOTED			

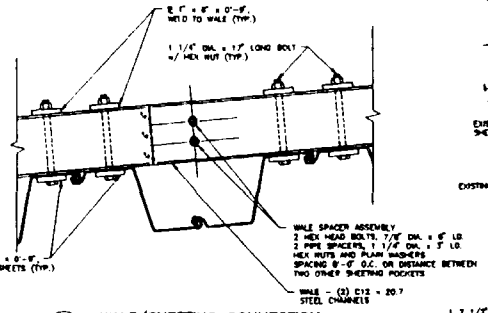
DRAWN BY	KHM	6-16-89	CHECKED BY	PRS	10-19-90	DRAWING NUMBER	87-126-E12
			APPROVED BY	CC	11-20-90		

REVISIONS



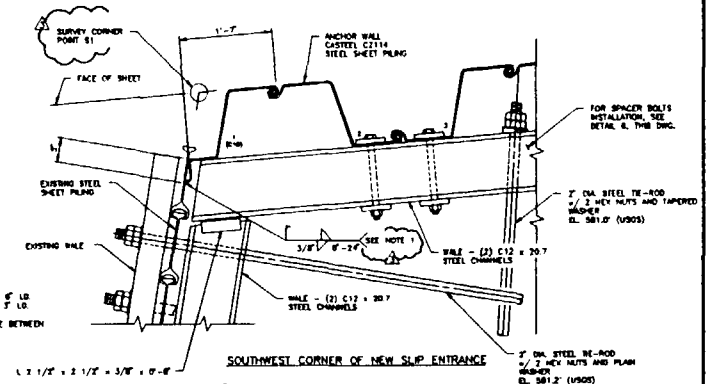
3/E14 SOUTHWEST PENINSULA CORNER CONNECTION

SCALE: 1"=1'-0"



4/E14 WALE/SHEETING CONNECTION

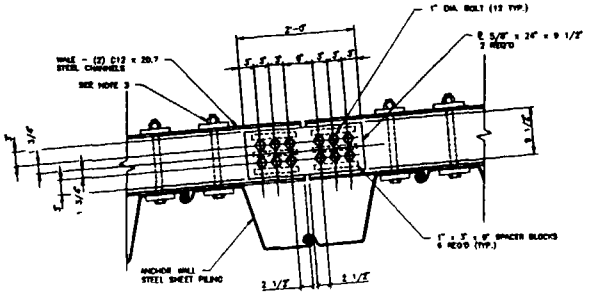
SCALE: 1"=1'-0"



SOUTHWEST CORNER OF NEW SLIP ENTRANCE

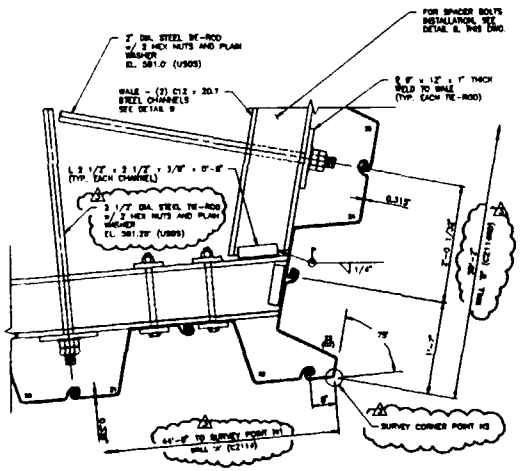
7/E14 SOUTH CORNER CONNECTION

SCALE: 1"=1'-0"



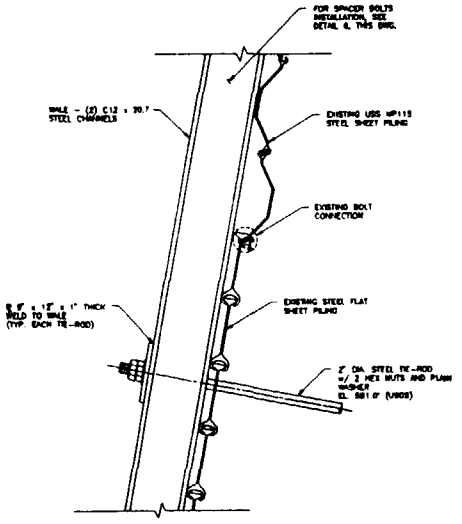
8/E14 WALE CONNECTION

SCALE: 1"=1'-0"



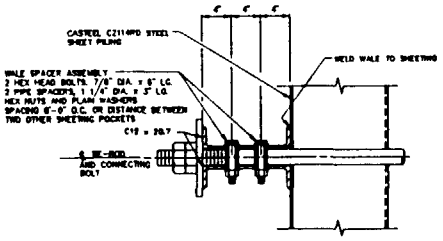
4/E14 SOUTHEAST PENINSULA CORNER CONNECTION

SCALE: 1"=1'-0"



5/E14 EXISTING SHEET PILING/WALE CONNECTION

SCALE: 1"=1'-0"



ELEVATION

SCALE: 1 1/2"=1'-0"

9/E14 WALE SPACER ASSEMBLY

NOTES:

1. NEWLY INSTALLED SHEETING AND PLATES WERE FIELD MEASURED, CUT OFF AND WELDED TO THE EXISTING SHEETING.
2. PROTECTIVE MEASURES WERE TAKEN BY THE CONTRACTOR PRIOR TO CUTTING OFF THE EXISTING TIE-RODS.
3. GALVANIZED TIE-RODS, WASHERS AND HEX NUTS WERE USED TO REDUCE CORROSION.

RECORD OF CONSTRUCTION
CONSTRUCTION DETAILS
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS

PREPARED FOR

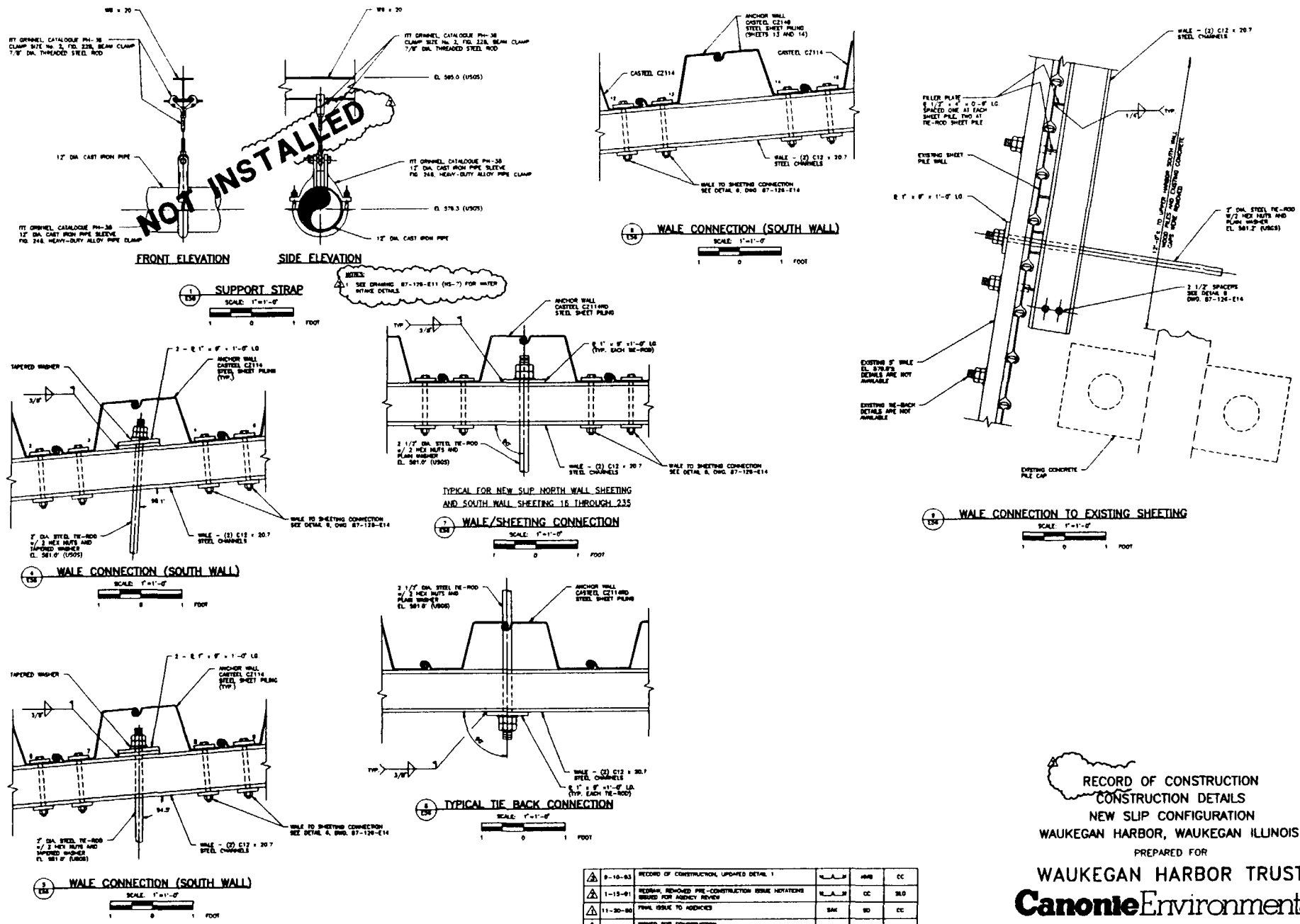
WAUKEGAN HARBOR TRUST

Canonie Environmental

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN BY	CK'D BY	AP'D BY
4	8-10-93	RECORD OF CONSTRUCTION, UPDATED NOTES, DESCRIPTIONS	[illegible]	FWB	CC
3	1-15-91	REDRAWN, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS ISSUED FOR AGENCY REVIEW	[illegible]	CC	SLB
2	11-30-89	FINAL ISSUE TO ADDICKS	BAK	SB	CC
1	10-19-89	ISSUES FOR CONSTRUCTION	BAK	SB	CC

DATE: 6-16-89	NS-14	DRAWING NUMBER 87-126-E14	4
SCALE: AS SHOWN			

REVISIONS	NO.	DATE
DRAWN BY	KHM	6-16-89
CHECKED BY	PRS	10-19-90
APPROVED BY	CC	11-20-90
DRAWING NUMBER	87-126-E14	

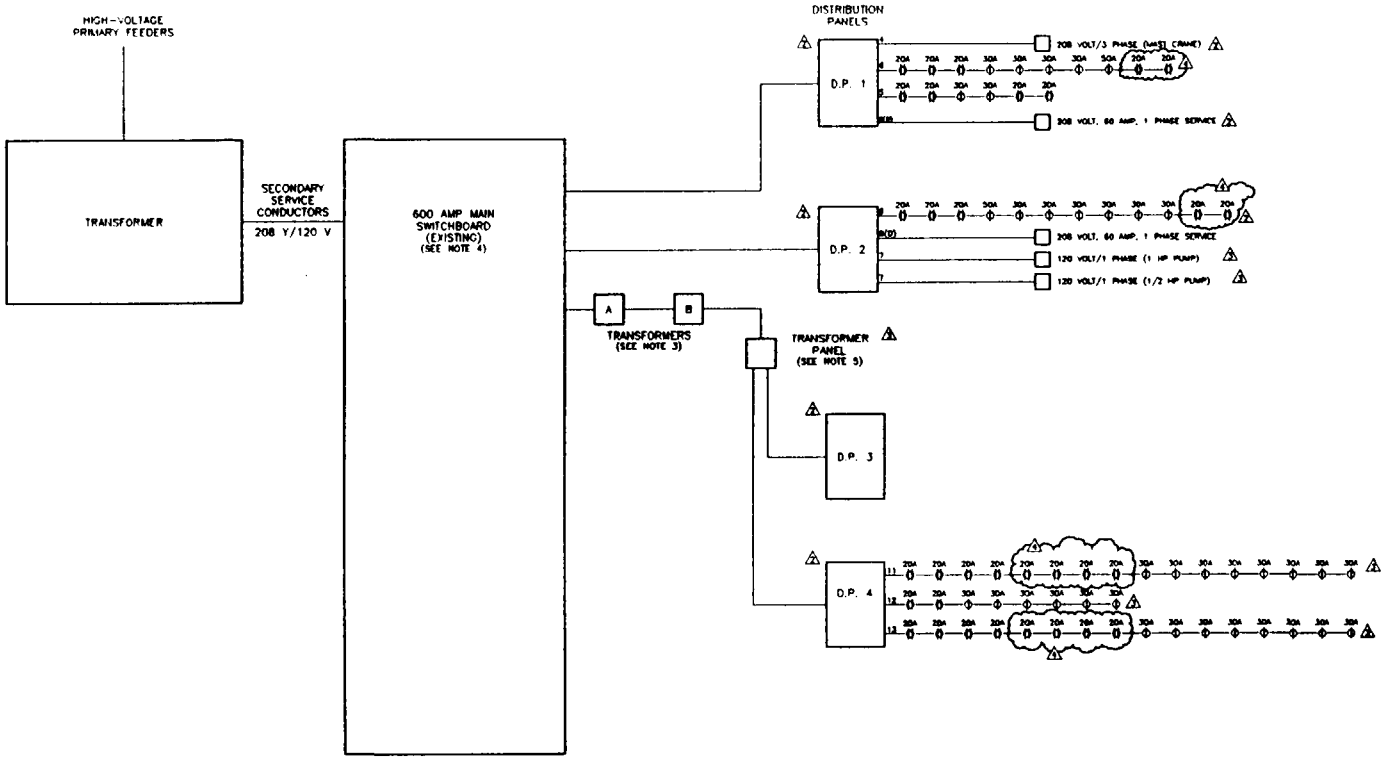


No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
3	9-10-93	RECORD OF CONSTRUCTION, UPDATED DETAIL 1	[illegible]	[illegible]	CC
2	1-15-91	REDRAW, REMOVED PRE-CONSTRUCTION ISSUE NOTATIONS ISSUED FOR AGENCY REVIEW	[illegible]	CC	SLO
1	11-20-90	FINAL ISSUE TO AGENCIES	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	SAK	SD	CC

RECORD OF CONSTRUCTION
CONSTRUCTION DETAILS
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
Canonie Environmental

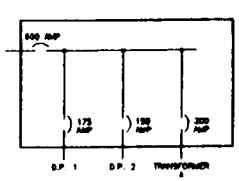
DATE: 8-14-89	NS-15	DRAWING NUMBER 87-126-E56
SCALE: AS SHOWN		

REVISIONS	NO.	DATE	DRAWN BY	KHM	CHECKED BY	PRS	DRAWING NUMBER	87-126-E56
				8-14-89	APPROVED BY	CC	10-19-90	11-20-90

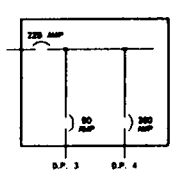


NOTES:

1. DISTRIBUTION PANELS ARE RATED AT 200 AMPS.
2. THIS DIAGRAM REPRESENTS A SCHEMATIC LAYOUT; INSTALLATION WAS MADE ACCORDING TO NATIONAL ELECTRIC CODE, ANSI/NFPA 303, AND ALL STATE AND LOCAL CODES AND IN COOPERATION WITH LARSEN MARINE.
3. TRANSFORMER A: 112.5 KVA, 208 Y/120 V PRIMARY – 480 V DELTA SECONDARY TRANSFORMER
   TRANSFORMER B: 112.5 KVA 480 V DELTA PRIMARY – 208 Y/120 V SECONDARY TRANSFORMER
4. MODIFICATIONS TO SWITCHBOARD BY LARSEN MARINE.
5. TRANSFORMER PANEL – SQUARE D, QO CIRCUIT BREAKER LOAD CENTER, MAIN BREAKER, RAIN PROOF, 225 AMP, CATALOG No. QO 4407225RB OR EQUAL.



MAIN SWITCHBOARD
ONE LINE
(SEE NOTE 4)



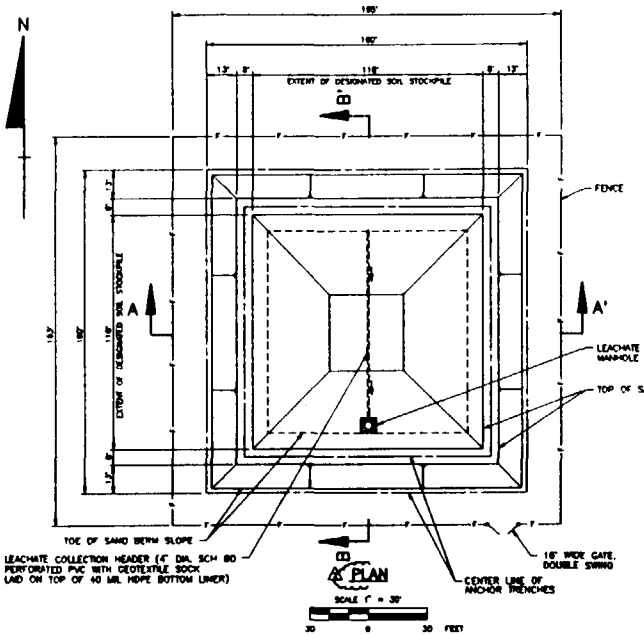
TRANSFORMER PANEL
ONE LINE

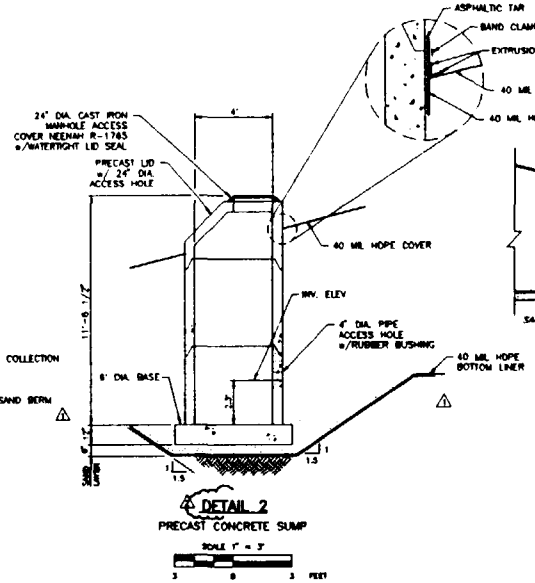
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
4	9-10-93	UPDATED DISTRIBUTION PANELS, RECORD OF CONSTRUCTION	M_A_M	JCV	CC
3	4-12-91	ISSUED FOR REVIEW ADDED NOTES 4 AND 5, GENERAL UPDATE	SAK	JCV	CC
2	3-14-91	GENERAL UPDATE ISSUED FOR REVIEW BY CLIENT AND LARSEN MARINE	M_A_M	JCV	
1	11-20-90	FINAL ISSUE TO AGENCIES CHANGED NOTES	SAK	SD	CC
0	10-19-90	ISSUED FOR CONSTRUCTION	M_A_M	SD	CC

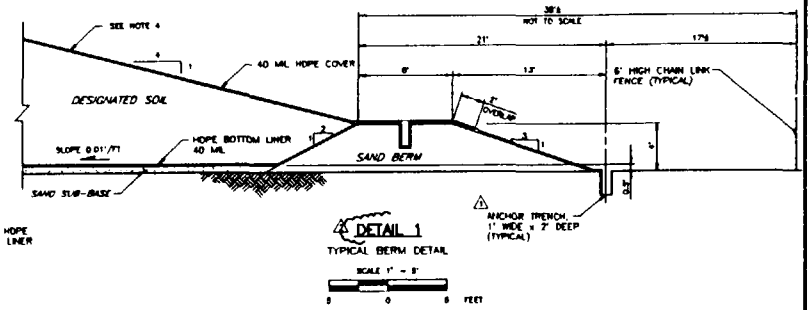
RECORD OF CONSTRUCTION
ELECTRICAL BLOCK DIAGRAM
NEW SLIP CONFIGURATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST
Canonie Environmental

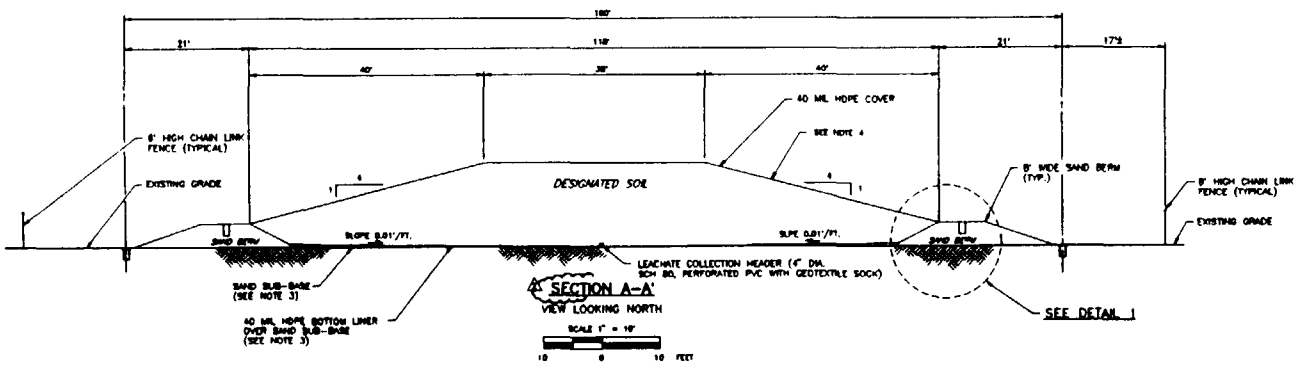
DATE: 12-29-89	NS-16	DRAWING NUMBER 87-126-E164
SCALE: NONE		

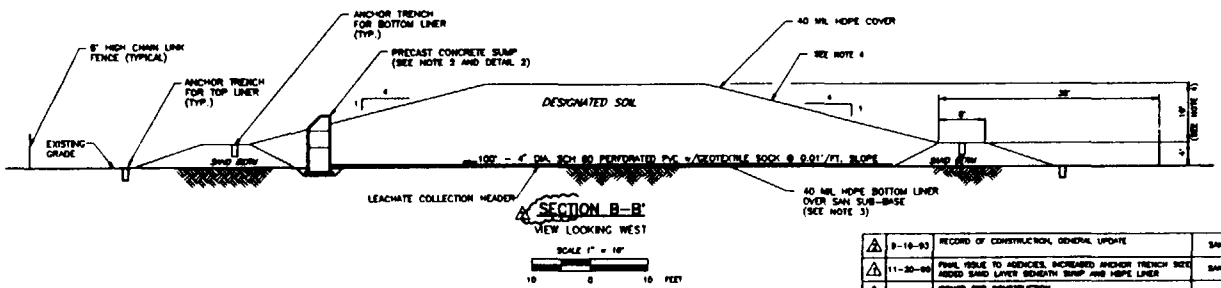
REVISIONS	NO.	DATE	DRAWN BY	M_A_M	CHECKED BY	PRS	10-19-90	DRAWING NUMBER 87-126-E164
				12-29-89	APPROVED BY	CC	11-20-90	











NOTES:

1. SEE DRAWING 87-126-E163 (NS-2) FOR STOCKPILE LOCATION.
2. STOCKPILE BOTTOM LINER WAS SLOPED TO THE MIDDLE AND LEACHATE COLLECTION MANHOLE WAS INSTALLED AT EDGE OF STOCKPILE.
3. THE HDPE BOTTOM LINER WAS PLACED ON TOP OF A 0' - 0.5' THICK SAND LAYER WHICH HAD BEEN GRADED SMOOTH AND WHICH WAS FREE FROM ROCKS, STICKS, SHARP OBJECTS, OR ANY FOREIGN MATTER WHICH MIGHT PUNCTURE THE LINER.
4. THE TOP SLOPE OF STOCKPILE WAS GRADED TO A 1 VERTICAL TO 4 HORIZONTAL SLOPE.

NO.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
2	9-10-93	RECORD OF CONSTRUCTION, GENERAL UPDATE	SAK	KMB	CC
1	11-20-90	FINAL ISSUE TO AGENCIES, INCREASED ANCHOR TRENCH SIZE ADDED SAND LAYER BENEATH SUMP AND HDPE LINER	SAK	WD	CC
0	10-19-90	SIGNED FOR CONSTRUCTION	SAK	WD	CC

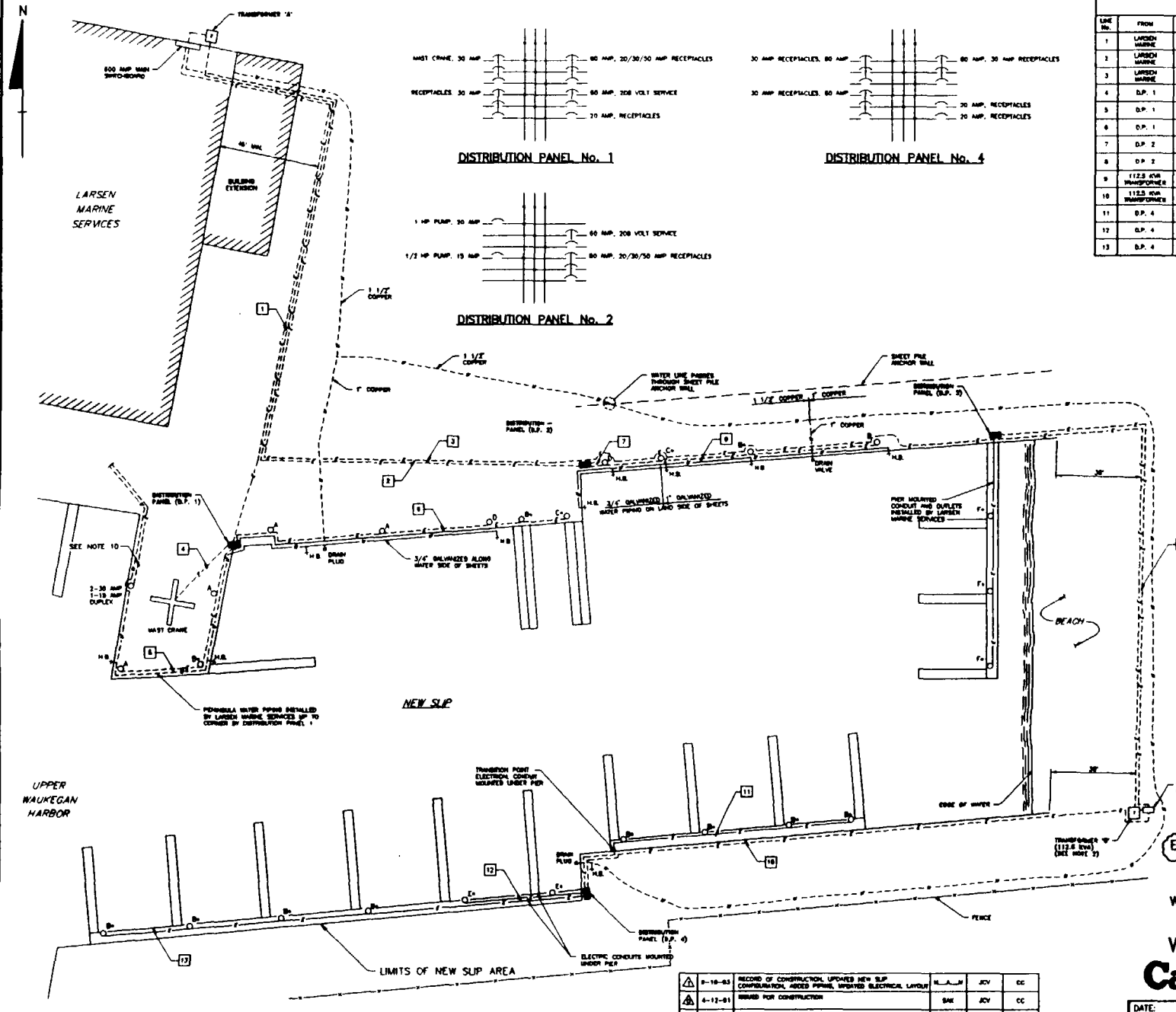
RECORD OF CONSTRUCTION
DESIGNATED SOIL STOCKPILE
PLAN AND SECTIONS
NEW SLIP AREA
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 8-9-90	NS-17	DRAWING NUMBER 87-126-E221	REV 2
SCALE: AS NOTED			

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
M. A. M. 8-9-90	PRS 9-19-90	T.J.H. 9-19-90	87-126-E221

REVISIONS



CABLE AND CONDUIT SCHEDULE

LINE No.	FROM	TO	CONDITION	CONDUIT SIZE	No. OF CONDUCTORS	WIRE SIZE	COMMENTS
1	LARSEN MARINE	D.P. 1	BURIED	2"	4	3/0	
2	LARSEN MARINE	D.P. 2	BURIED	2"	4	3/0	
3	LARSEN MARINE	112.5 kVA TRANSFORMER	BURIED	1-1/4"	3	#1	FROM BOOST TRANSFORMER LARSEN MARINE
4	D.P. 1	MAST CRANE	BURIED	1/2"	3	#10	
5	D.P. 1	WEST SIDE	BURIED	1-1/4"	2 4	#10 #6	20 AMP RECEPTACLES 30 AMP RECEPTACLES
6	D.P. 1	EAST SIDE	BURIED	2"	3 4	#1 1/0	60 AMP, 208 VOLT 30/50 AMP RECEPTACLES
7	D.P. 2	60 AMP SERVICE	BURIED	1"	2	#1	
8	D.P. 2	RECEPTACLES	BURIED	2"	4	1/0	
9	112.5 kVA TRANSFORMER	D.P. 3	BURIED	1-1/4"	4	#2	
10	112.5 kVA TRANSFORMER	D.P. 4	BURIED	2"	4	3/0	
11	D.P. 4	RECEPTACLES	PIER MOUNTED	1 1/2"	2 4	#6 #1	20 AMP RECEPTACLES 30 AMP RECEPTACLES
12	D.P. 4	RECEPTACLES	PIER MOUNTED	1-1/4"	2 4	#12 #4	20 AMP RECEPTACLES 30 AMP RECEPTACLES
13	D.P. 4	RECEPTACLES	PIER MOUNTED	2"	2 4	#6 2/0	20 AMP RECEPTACLES 30 AMP RECEPTACLES

LEGEND:

- O^A 20 AMP DUPLEX OUTLET
- O^B (2) 30 AMP AND (2) 20 AMP DUPLEX OUTLETS
- O^C (2) 30 AMP, (1) 50 AMP, (1) 20 AMP DUPLEX OUTLETS
- O^D 208 VOLT 60 AMP SERVICE
- O^E (3) 30 AMP AND (1) 20 AMP DUPLEX OUTLETS
- O^F (2) 30 AMP AND (1) 20 AMP DUPLEX OUTLETS
- [1] LINE NUMBER (SEE CABLE AND CONDUIT SCHEDULE)
- * POWER STATIONS PROVIDED BY LARSEN MARINE
- —w— UNDERGROUND WATER LINE
- —w— ABOVE GROUND WATER LINE
- —e— UNDERGROUND ELECTRIC LINE
- —e— ABOVE GROUND/PIER MOUNTED ELECTRIC LINE
- H.B. WATER SERVICE (HOSE BIBB)

⚠ NOTES:

1. UTILITY INSTALLATIONS WERE MADE ACCORDING TO NATIONAL ELECTRIC CODE, ANSI/NFPA 303, AND ALL APPLICABLE STATE AND LOCAL CODES.
2. ALL CONDUCTORS ARE STRANDED COPPER.
3. CONDUIT - CARLON PLUS 40 RIGID NON-METALLIC CONDUIT.
4. DISTRIBUTION PANELS - 200 AMP, 3 PHASE, 4 WIRE 208 Y/120 V AC, MAIN LUGS, RAINPROOF, SQUARE D CATALOG No. QO412L200RB.
5. ALL 20 AMP DUAL RECEPTACLES ARE GFCI PROTECTED.
6. MODIFICATIONS TO SWITCHBOARD BY LARSEN MARINE.
7. PENINSULA ELECTRICAL SERVICES INSTALLED BY CANONIE WITH THE EXCEPTION OF THIS OUTLET WHICH WAS INSTALLED BY LARSEN MARINE SERVICES.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
1	9-10-93	RECORD OF CONSTRUCTION, UPDATED NEW SLIP CONFIGURATION, ADDED PIPING, UPDATED ELECTRICAL LAYOUT	M.A.J.N	JCV	CC
0	4-12-91	ISSUED FOR CONSTRUCTION	SAK	JCV	CC

RECORD OF CONSTRUCTION
ELECTRICAL CONDUIT AND WATER PIPING SCHEMATIC
NEW SLIP AREA
WAUKEGAN HARBOR, WAUKEGAN ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 3-1-91	NS-18	DRAWING NUMBER 87-126-E259	1
SCALE: AS SHOWN			

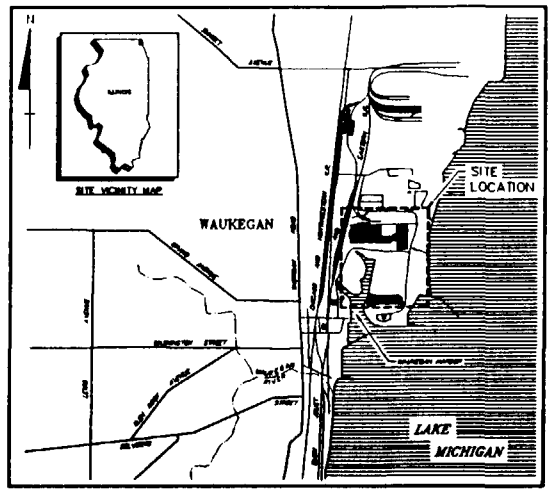
REVISIONS NO.	DATE	DRAWN BY	DRE/MAM 3-1-91	CHECKED BY	JCV 4-12-91	DRAWING NUMBER	87-126-E259
				APPROVED BY	CC 4-12-91		

WAUKEGAN HARBOR REMEDIATION

WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST



SITE LOCATION MAP
NOT TO SCALE

LIST OF STORM WATER RETENTION POND DRAWINGS

FIGURE	TITLE	DRAWING NUMBER
RP-1	RECORD OF CONSTRUCTION STORM WATER RETENTION POND AND UTILITY LOCATION PLAN	87-126-E242
RP-2	RECORD OF CONSTRUCTION UTILITY LOCATION PLAN	87-126-E256
RP-3	RECORD OF CONSTRUCTION UTILITY LOCATION PLAN	87-126-E257
RP-4	RECORD OF CONSTRUCTION STORM WATER RETENTION POND SECTIONS A-A' AND B-B'	87-126-E264
RP-5	RECORD OF CONSTRUCTION STORM WATER RETENTION POND SECTION C-C' AND WET WELL DETAIL	87-126-E265
RP-6	RECORD OF CONSTRUCTION JUNCTION BOX DETAILS	87-126-E263
RP-7	RECORD OF CONSTRUCTION SANITARY SEWER PLAN AND PROFILE	87-126-E302

RECORD OF CONSTRUCTION
STORM WATER RETENTION POND
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR REMEDIATION
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

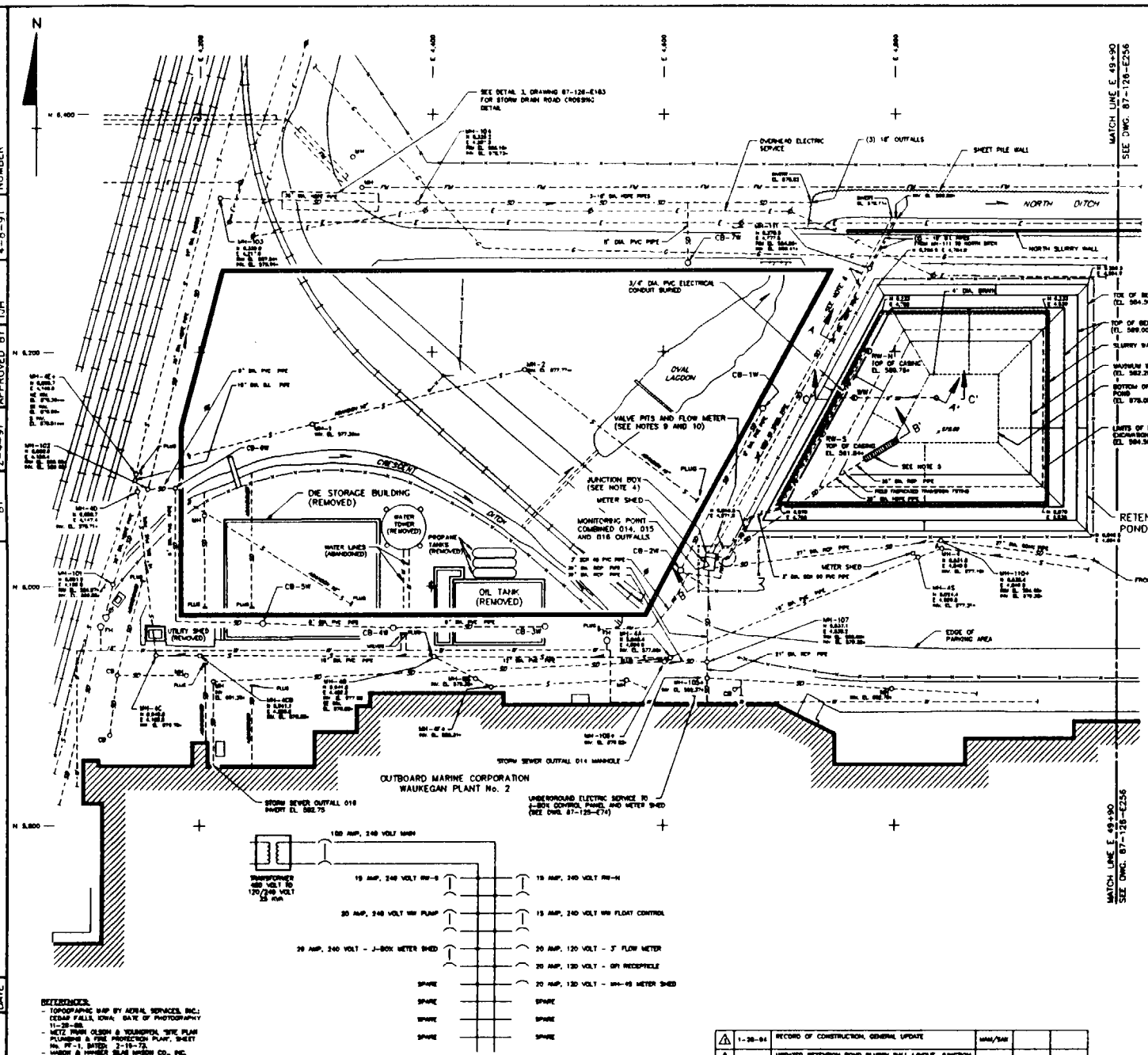
Canonie Environmental

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-28-94	RECORD OF CONSTRUCTION UPDATED DRAWING LIST	M.A.M		
0	8-27-91	ISSUED FOR CONSTRUCTION	G. Bohnke	KMB	TJH

DATE: 3-21-91
SCALE: NONE
DRAWING NUMBER 87-126-E266

REFERENCES:
- USGS 7.5 MIN SERIES QUADRANGLE WAUKEGAN, ILL. 1980 PHOTOREVISED 1972 AND 1980
- USGS 7.5 MIN SERIES QUADRANGLE ZION, ILL.-WIS. 1980

REVISIONS	NO.	DATE
DRAWN BY	M.A.M	3-21-91
CHECKED BY	SLG	3-27-91
APPROVED BY	TJH	4-8-91
DRAWING NUMBER	87-126-E266	



LEGEND:

- FENCE
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- CATCH BASIN
- MANHOLE
- RECOVERY WELL
- WET WELL (36" DIAMETER)
- FIRE HYDRANT
- SLURRY WALL
- FORCE MAIN
- H.P. GAS LINE
- STORM DRAIN
- POWER LINE
- SANITARY SEWER
- WATER LINE

NOTES:

1. DIE STORAGE BUILDING, UTILITY SHED, WATER TOWER, OIL TANKS, AND PROPANE TANKS WERE REMOVED BEFORE STARTING WORK ON WEST CONTAINMENT CELL.
2. RETENTION POND AND INTERIOR BERM SLOPES ARE 4H:1V. EXTERIOR BERM SLOPES ARE 2H:1V.
3. RETENTION POND CAPACITY OF 353,000 GALLONS WILL STORE A 1.7" RAINFALL EVENT (20 MINUTE DURATION) FROM OUTFALLS 014, 015, AND 016
4. CONCRETE JUNCTION BOX (J-BOX) (SEE SHEET RP-6, DWG. 87-126-E263)
   INSIDE BASE EL. 578.12
   ADJUSTABLE weir SET AT 582.00
   014/016 INLET INVERT EL. 579.97
   015 INLET INVERT EL. 579.08
   POND INLET INVERT EL. 577.83
   36" DIA. HDPE OVERFLOW TO NORTH DITCH INVERT EL. 581.01
   30" DIA. STEEL OVERFLOW PIPE TO NORTH DITCH INVERT EL. 578.85
5. 5'-0" SPAN x 1'-6" RISE CORRUGATED ALUMINUM ARCH FOR EROSION CONTROL/ENERGY DISSIPATION
6. STORM DRAIN FROM JUNCTION BOX TO NORTH DITCH IS A COMBINATION OF THE EXISTING 30" DIA. SCHEDULE 40 STEEL STORM DRAIN AND ONE NEW 30" DIA. HDPE STORM DRAIN
7. SEE DWG. 87-126-E264 FOR PROFILE A-A' AND B-B'. SEE DWG. 87-126-E265 FOR PROFILE C-C'.
8. * - ELEVATIONS WERE SURVEYED IN THE FIELD BY CANONIE OR MID AMERICA SURVEYING CO
   ** - ELEVATIONS FROM METZ TRAIN OLSON & YOUNGREN DRAWING
   *** - ELEVATIONS FROM WASON & HANGER SILAS WASON CO. DRAWING
   + - CANONIE ASSIGNED MANHOLE DESIGNATIONS TO EXISTING MANHOLES
9. VALVE PIT ALLOWS THE WATER FROM THE RETENTION POND TO BE DISCHARGED TO THE JUNCTION BOX.
10. A FLOW METER WAS LOCATED BETWEEN THE VALVE PIT AND THE WET WELL TO MEASURE THE RETENTION POND DISCHARGE.
11. MANHOLES MH-4S AND MH-4SS ARE SAMPLING MANHOLES WITH FLOW CONTROLLING FLUMES.

SCALE: 40 0 40 80 FEET

RECORD OF CONSTRUCTION
STORM WATER RETENTION POND AND UTILITY LOCATION PLAN
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

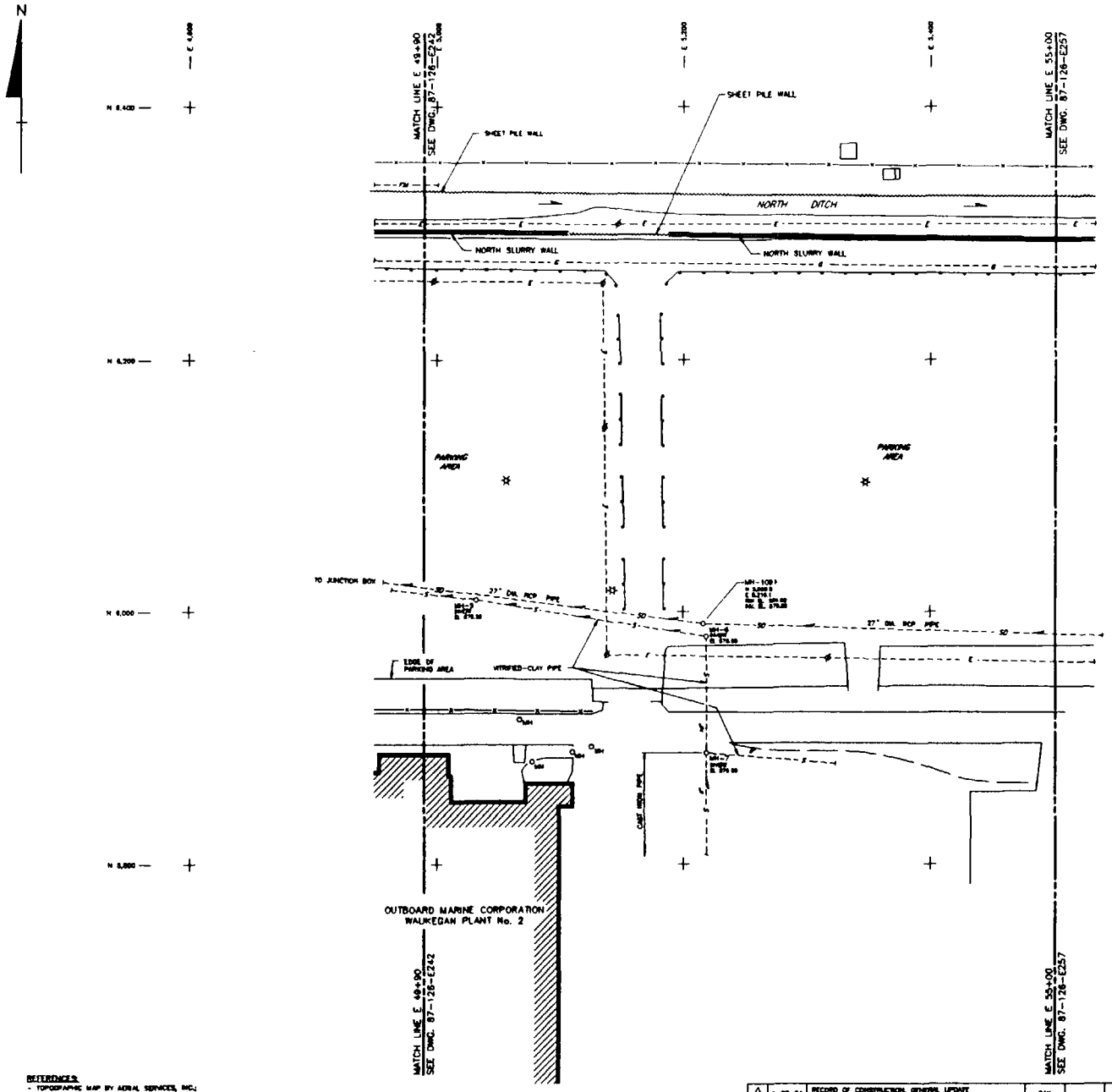
CanonieEnvironmental

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-30-94	RECORD OF CONSTRUCTION, GENERAL UPDATE	MAK/SAK		
0	6-27-91	UPDATED RETENTION POND SLURRY WALL LAYOUT, JUNCTION BOX, MANHOLE IMPRVTS. ISSUED FOR CONSTRUCTION	M.A.M	MAB	TJH

DATE: 2-4-91	RP-1	DRAWING NUMBER 87-126-E242
SCALE: AS SHOWN		

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., DEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-29-88.
- METZ TRAIN OLSON & YOUNGREN, SITE PLAN PLUMBING & FIRE PROTECTION PLAN, SHEET No. M-1, DATED: 2-19-72.
- WASON & HANGER SILAS WASON CO., INC. "SUBSURFACE INVESTIGATION NORTH DITCH AREA", DWG. No. 91-088-E18, SHEET No. 1 of 2.

REVISIONS					
NO.	DATE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
0	2-4-91	M.A.M	DSC	T.JH	87-126-E242
1	3-28-91			4-8-91	



LEGEND:

- FENCE
- GUARD RAIL
- UTILITY POLE
- LIGHT POLE
- DIRECTION OF FLOW
- MANHOLE
- SLURRY WALL
- FORCE MAIN
- H.P. GAS LINE
- STORM DRAIN
- POWER LINE
- SANITARY SEWER

SCALE

40 0 40 80 FEET

REFERENCES:

- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-20-88.
- METZ TRAIN OLSON & YOUNGREN, "SITE PLAN PLUMBING & FIRE PROTECTION PLAN", SHEET No. PF-1, DATED: 3-18-73.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-28-94	RECORD OF CONSTRUCTION, GENERAL UPDATE	SAK		
0	9-27-91	ISSUED FOR CONSTRUCTION	G. Bahnke	KMB	TJH

RECORD OF CONSTRUCTION
UTILITY LOCATION PLAN
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

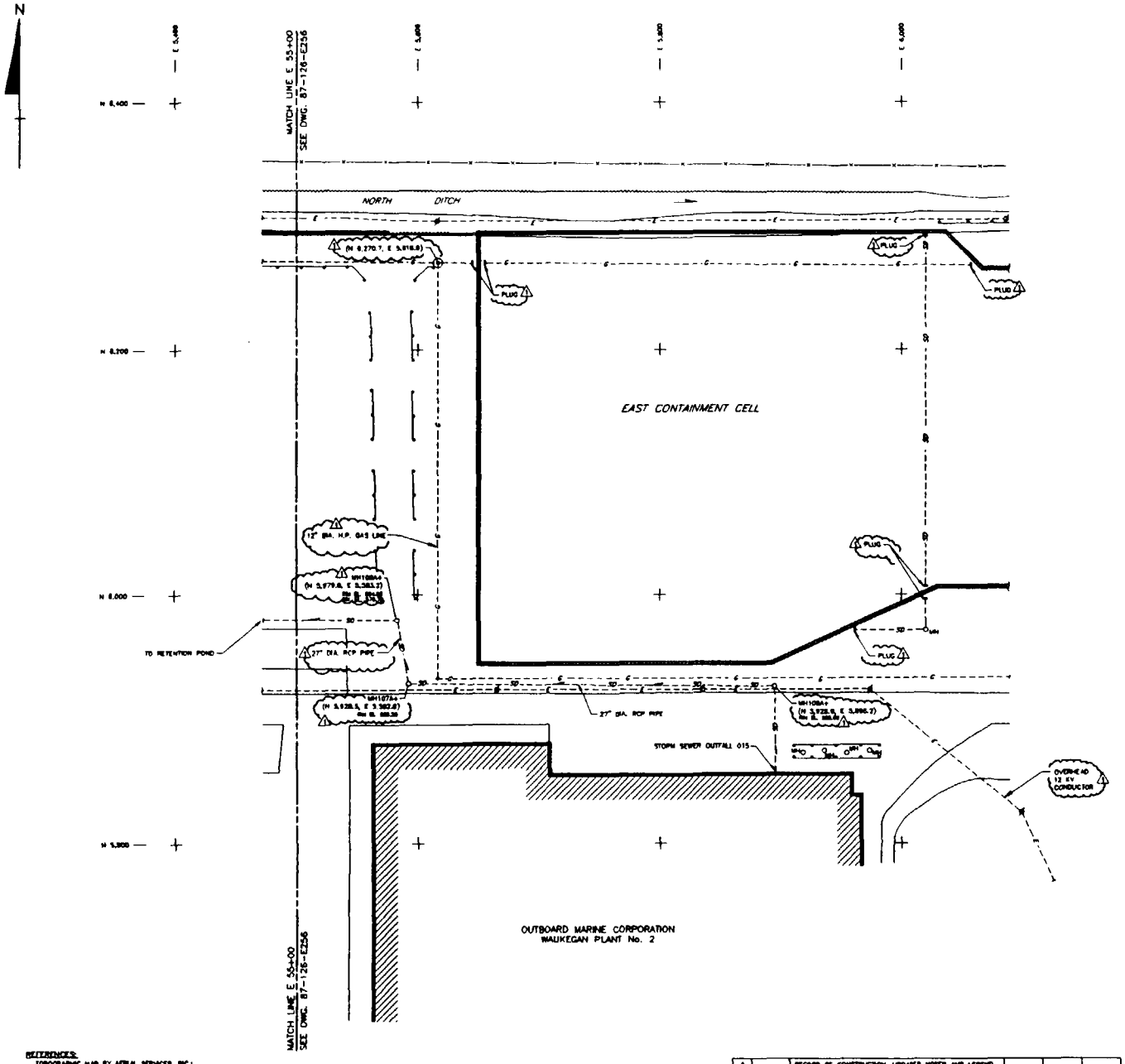
Canonie Environmental

DATE: 2-14-91	RP-2	DRAWING NUMBER 87-126-E256	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

DRAWN BY	M. A. M.	2-14-91
CHECKED BY	DSC	3-28-91
APPROVED BY	TJH	4-8-91

DRAWING NUMBER 87-126-E256



LEGEND:

- FENCE
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- MANHOLE
- SLURRY WALL
- H.P. GAS LINE
- STORM DRAIN
- POWER LINE

NOTES:

1. '+' INDICATES CANONIE ASSIGNED MANHOLE DESIGNATIONS TO EXISTING MANHOLES.

SCALE

40 0 40 80 FEET

RECORD OF CONSTRUCTION
UTILITY LOCATION PLAN
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

WAUKEGAN HARBOR TRUST

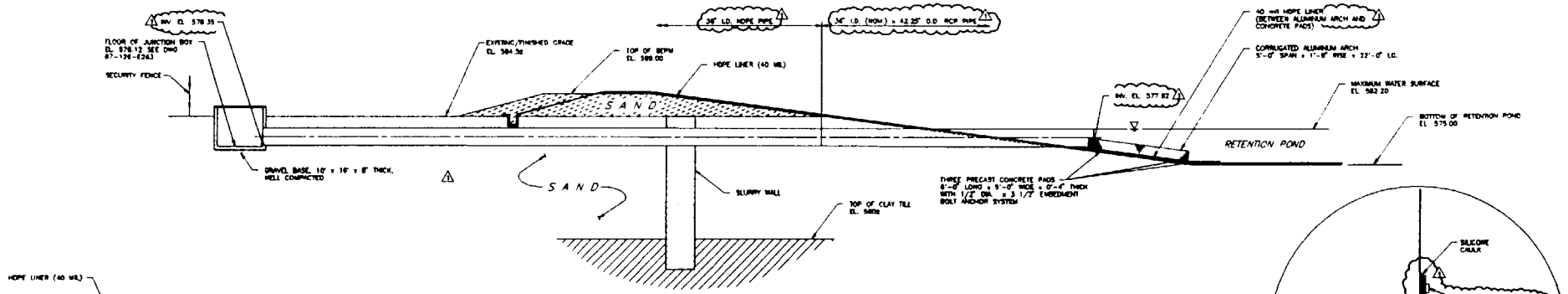
Canonie Environmental

DATE:	2-14-91	RP-3	DRAWING NUMBER	87-126-E257
SCALE:	AS SHOWN			

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-28-94	RECORD OF CONSTRUCTION, UPDATED NOTES AND LEGEND REVISED SLURRY WALL AND UTILITY LOCATIONS	DRE/SAK		
0	9-7-92	ISSUED FOR CONSTRUCTION	G. Bohnke	[illegible]	TJH

REFERENCES:
- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC.; CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-28-88.
- METZ TRAIN OLSON & YOUNGTON, "SITE PLAN PLUMBING & FIRE PROTECTION PLAN", SHEET No. PF-1, DATED: 2-16-73.

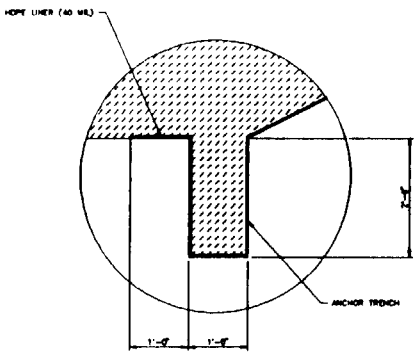
REVISIONS	NO.	DATE	DRAWN BY	M A M	2-14-91	CHECKED BY	DSC	3-28-91	DRAWING NUMBER	87-126-E257
						APPROVED BY	TJH	4-8-91		



CROSS-SECTION OF RETENTION POND INLET SYSTEM ALONG CENTERLINE OF PIPE

SECTION B-B'

SCALE 10 0 10 FEET

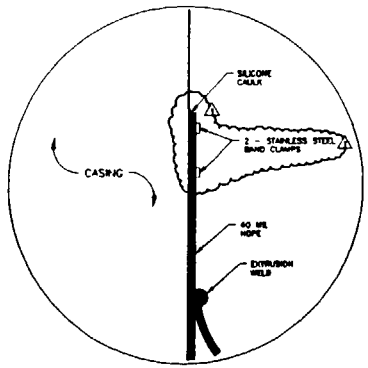


ANCHOR TRENCH

DETAIL 2

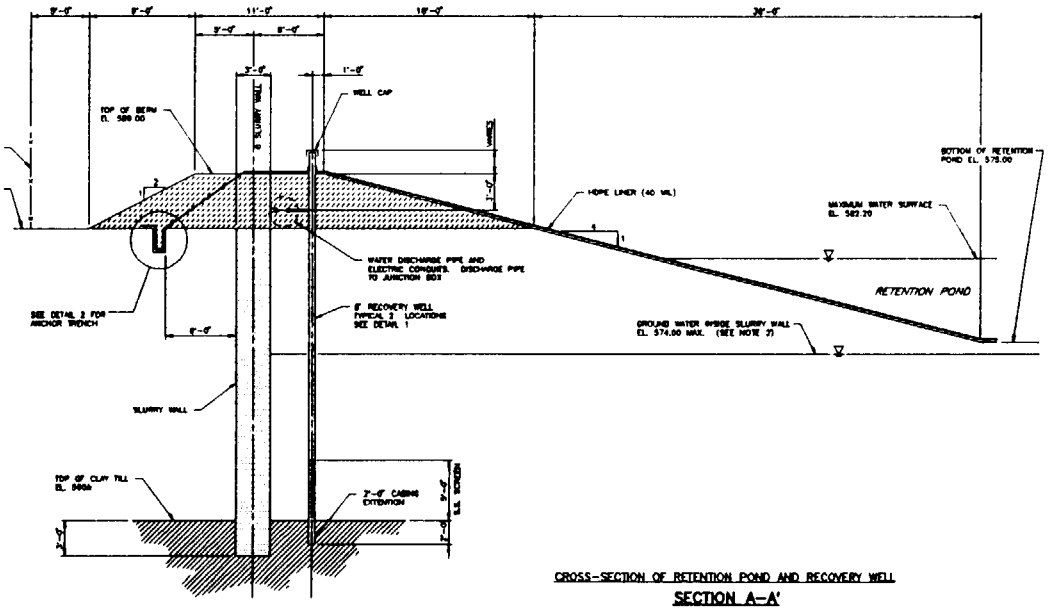
SCALE 1" = 1'-0"

1 0 1 FEET



DETAIL 3

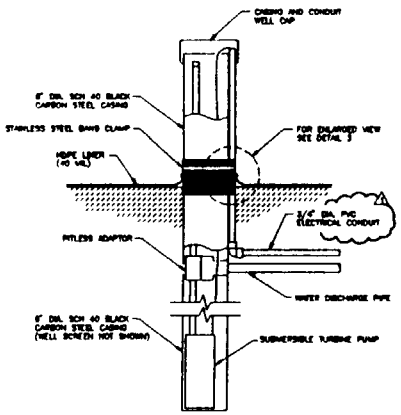
NOT TO SCALE



CROSS-SECTION OF RETENTION POND AND RECOVERY WELL

SECTION A-A'

SCALE 0 0 0 FEET



RECOVERY WELL

DETAIL 1

NOT TO SCALE

NOTES:

1. FOR LOCATION PLAN OF SECTIONS A-A' AND B-B', SEE DWG. 87-126-E242.
2. THE MAXIMUM ALLOWABLE GROUND WATER ELEVATION INSIDE THE SLURRY WALL SHALL BE 574.00 TO AVOID FLOATING THE LINER FROM THE BOTTOM OF THE RETENTION POND.

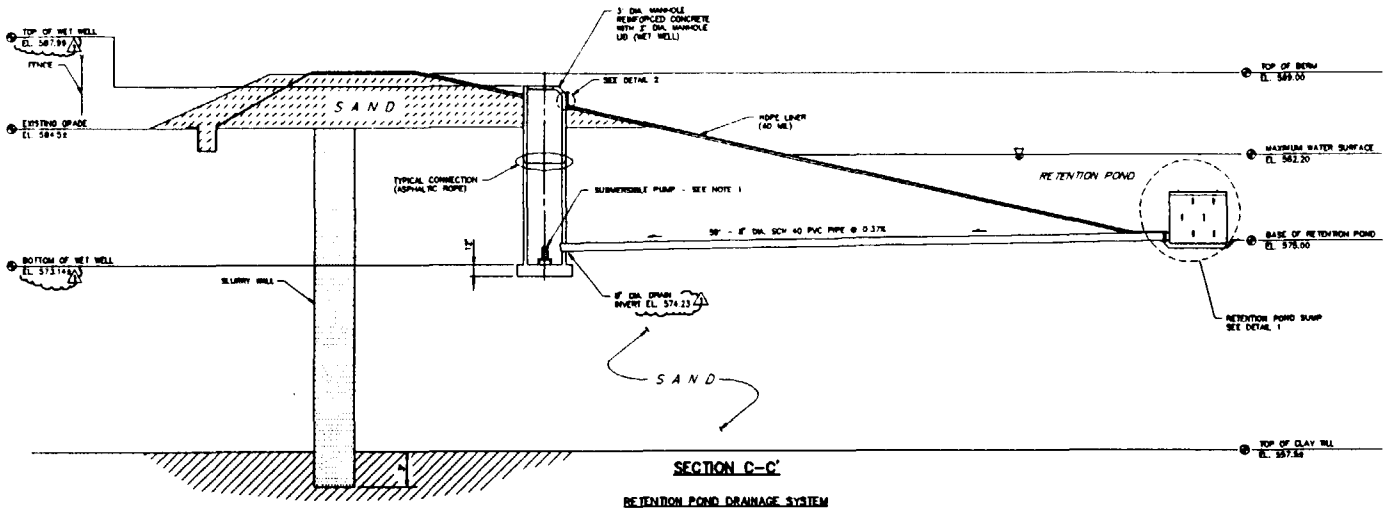
No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
2	1-28-94	RECORD OF CONSTRUCTION, CHANGED ELEVATION AND PIPE MATERIAL DESIGNATION, UPDATED DETAIL 1	SAK		
1	9-27-91	UPDATED SECTIONS AND DETAILS ISSUED FOR CONSTRUCTION	[illegible]	YMB	LJH

RECORD OF CONSTRUCTION
STORM WATER RETENTION POND
SECTIONS A-A' AND B-B'
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 3-21-91	RP-4	DRAWING NUMBER 87-126-E264	2
SCALE: AS SHOWN			

REVISIONS					
NO.	DATE				
DRAWN BY	SAK 3-20-91	CHECKED BY	DSC 3-27-91	DRAWING NUMBER	87-126-E264
		APPROVED BY	CC 4-28-91		

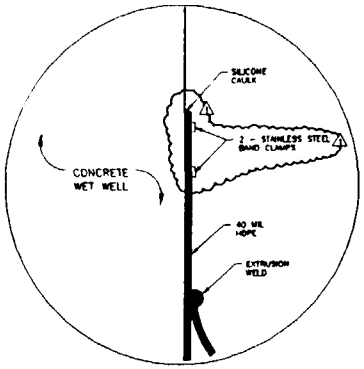


SECTION C-C'

RETENTION POND DRAINAGE SYSTEM

SCALE

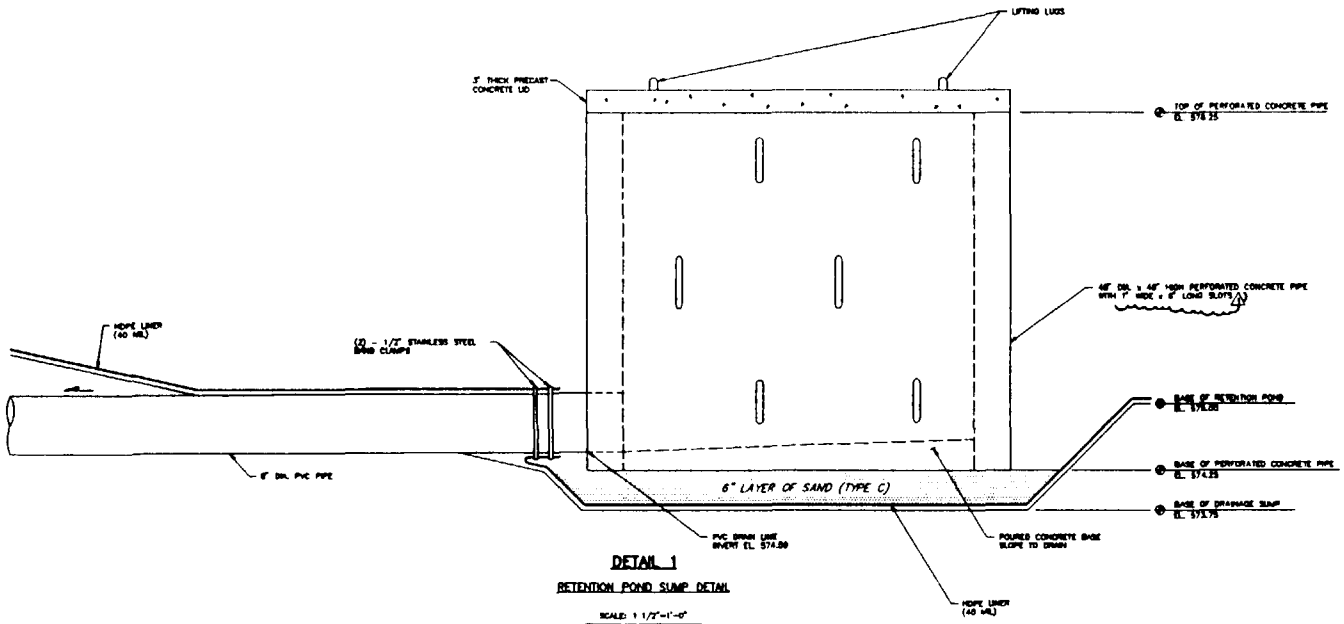
5 0 5 FEET



DETAIL 2

40 MIL HDPE LINER CONNECTION TO REINFORCED CONCRETE PIPE (WET WELL)

NOT TO SCALE



DETAIL 1

RETENTION POND SUMP DETAIL

SCALE: 1 1/2"=1'-0"

0'-0" 0 0'-0"

LEGEND:

→ DIRECTION OF FLOW

NOTES:

1. SUBMERSIBLE PUMP DISCHARGES TO THE JUNCTION BOX.
2. SEE DWG. 87-126-E242 FOR SECTION LOCATION.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-20-94	RECORD OF CONSTRUCTION, CHANGED ELEVATIONS, MOVED MANHOLE, REMOVED FILTER CLOTH, ADDED DRAIN SLOTS	SAK		
0	8-27-91	ISSUED FOR CONSTRUCTION	G. Bolinko	KMB	TJH

RECORD OF CONSTRUCTION
STORM WATER RETENTION POND
SECTION C-C' AND WET WELL DETAIL
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

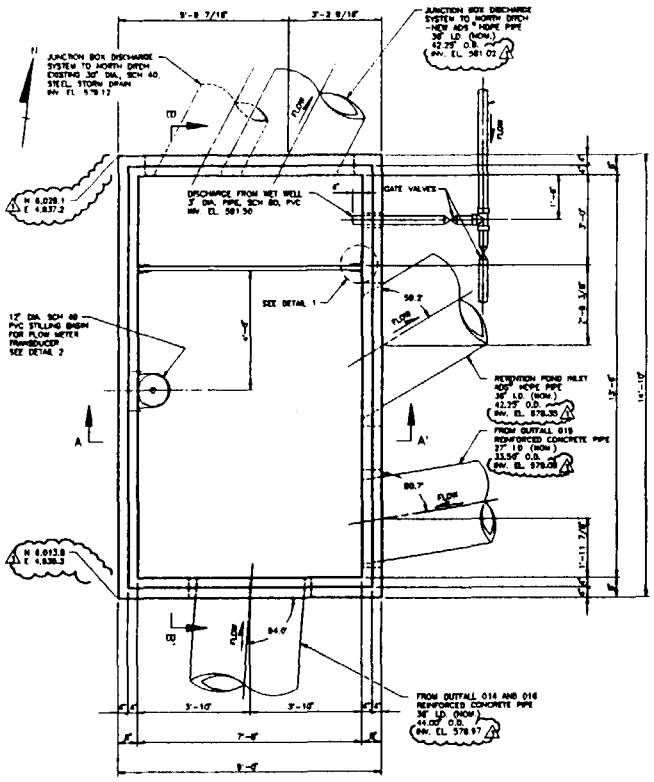
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 3-20-91	RP-5	DRAWING NUMBER 87-126-E265	1
SCALE: AS SHOWN			

REVISIONS	NO.	DATE

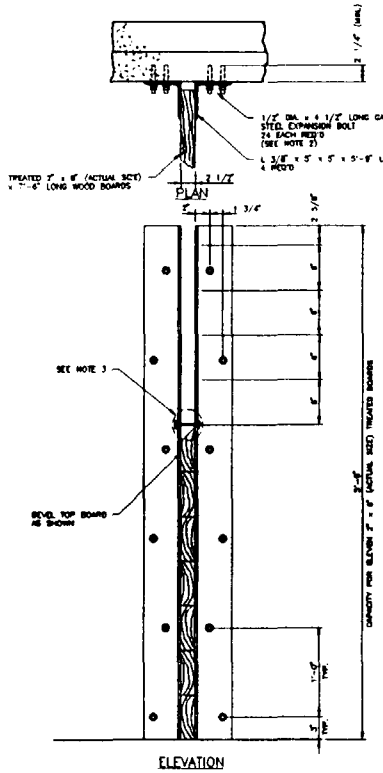
DRAWN BY	DRE	CHECKED BY	DSC	DRAWING NUMBER
	3-20-91	APPROVED BY	TJH	87-126-E265
			4-8-91	



PLAN OF PRECAST JUNCTION BOX

GRATING NOT SHOWN FOR CLARITY

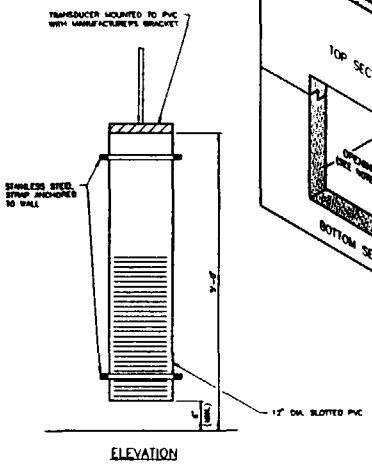
SCALE: 1/2" = 1'-0"



ELEVATION

DETAIL 1

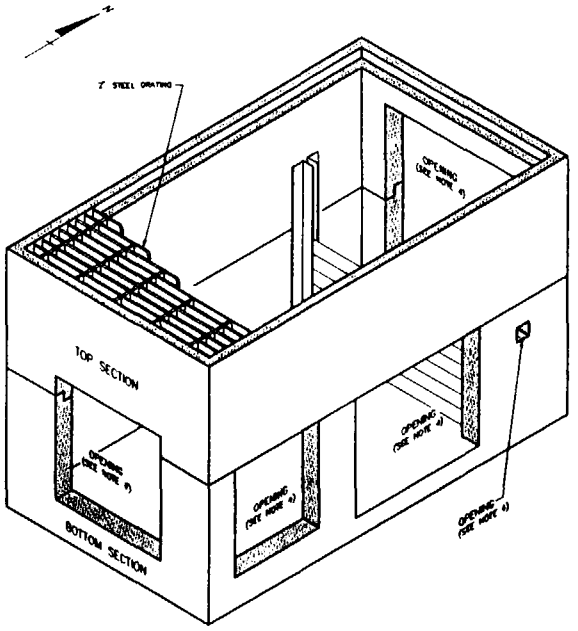
SCALE: 1 1/2" = 1'-0"



ELEVATION

DETAIL 2

SCALE: 1" = 1'-0"

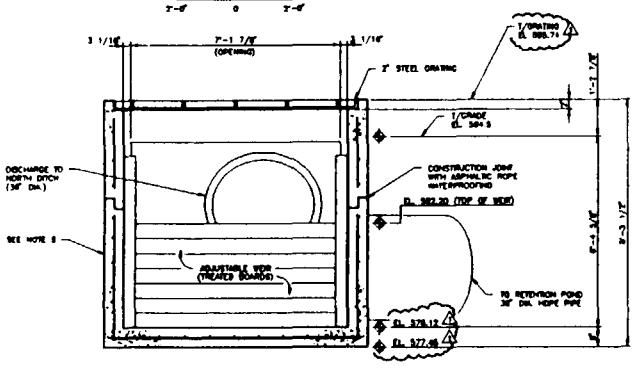


ISOMETRIC VIEW OF PRECAST JUNCTION BOX

NOT TO SCALE

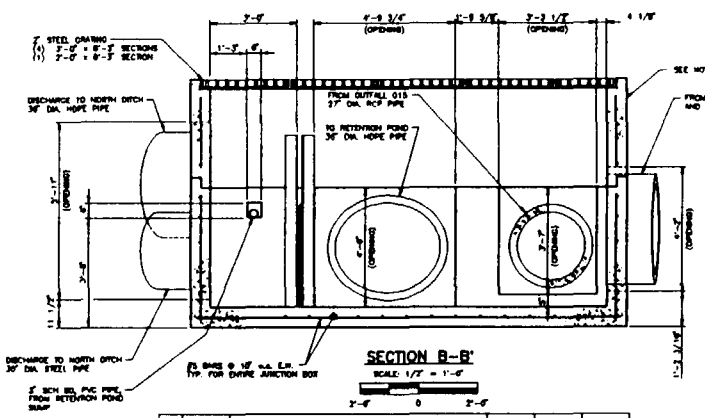
NOTES:

1. FOR JUNCTION BOX LOCATION SEE DWG. 87-126-E242.
2. BOLT SYSTEM INCLUDES: (1) EXPANSION BOLT, (1) NUT, (1) PLAIN WASHER, AND (1) LOCK WASHER.
3. 1/4" DIA. GALVANIZED STEEL BOLTS TO REFRAIN WEIR BOARDS FROM UPWARD MOVEMENT.
4. THE JUNCTION BOX OPENINGS CONTAIN THE RETENTION POND INLET AND OUTLET PIPES, AND ARE SEALED WITH A FIELD INSTALLED CONCRETE PATCH.
5. BELOW-GRADE EXTERIOR WALLS WERE PAINTED WITH A BITUMINOUS WATERPROOF COATING.
6. BADGER MODEL UM 2100 OPEN CHANNEL FLOW METER IS LOCATED ADJACENT TO THE SHARP CRESTED WEIR TO MEASURE THE FLOW TO THE NORTH DITCH.
7. PIPE INVERT ELEVATIONS SHOWN ARE MEASURED INSIDE THE JUNCTION BOX.



SECTION A-A'

SCALE: 1/2" = 1'-0"



SECTION B-B'

SCALE: 1/2" = 1'-0"

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	AP'D BY
1	1-28-94	RECORD OF CONSTRUCTION, CHANGED ELEVATIONS, ADDED COORDINATES AND NOTE 7	SAK		
0	9-10-91	ISSUED FOR CONSTRUCTION	M_A_M	HWB	TJH

RECORD OF CONSTRUCTION
JUNCTION BOX DETAILS
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS

PREPARED FOR

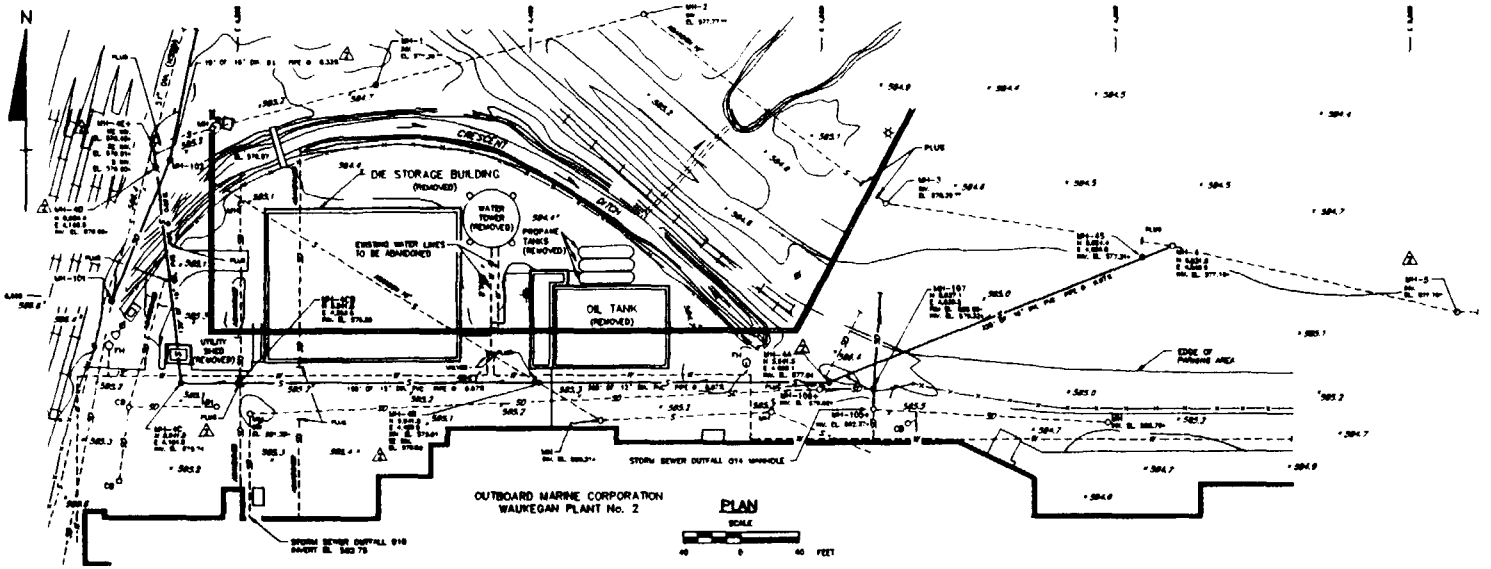
WAUKEGAN HARBOR TRUST

CanonieEnvironmental

DATE: 3-21-91	RP-6	DRAWING NUMBER 87-126-E263
SCALE: AS SHOWN		

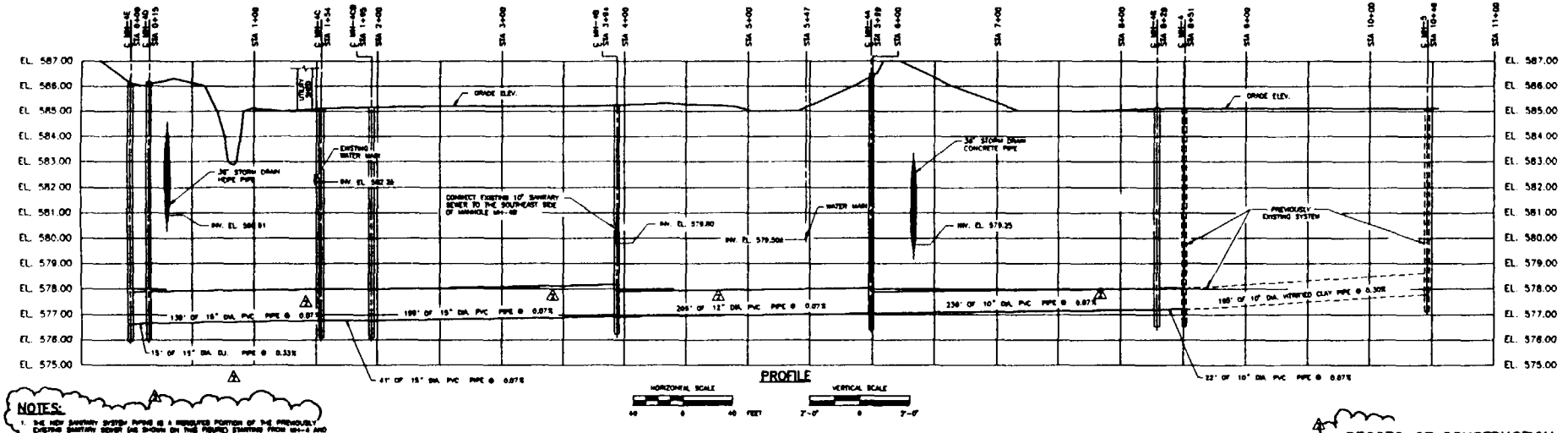
DRAWN BY	M_A_M	CHECKED BY	OSC	DRAWING NUMBER	87-126-E263
	3-21-91	APPROVED BY	CC		3-28-91 / 4-28-91

REVISIONS NO. DATE



LEGEND:

- FENCE
- RAILROAD
- GUARD RAIL
- UTILITY POLE
- DIRECTION OF FLOW
- CATCH BASIN
- MANHOLE
- NEW MANHOLE (4' DIAMETER)
- FIRE HYDRANT
- SLURRY WALL
- STORM DRAIN
- RE-ROUTED STORM DRAIN
- SANITARY SEWER
- RE-ROUTED SANITARY SEWER (SEE NOTE 2)
- WATER LINE
- TOPOGRAPHIC CONTOUR (USGS)
- 584.7 SPOT ELEVATION (USGS)
- SEE NOTE 5



NOTES:

1. THE NEW SANITARY SYSTEM PIPING IS A REROUTED PORTION OF THE PREVIOUSLY EXISTING SANITARY SEWER (AS SHOWN ON THIS FIGURE) STARTING FROM MH-4 AND ENDING AT MH-4E+ (MH-4 AND MH-4E+ ARE PREVIOUSLY EXISTING MANHOLES).
2. THE NEW SANITARY PIPING IS SHOWN HEAVY WALL PVC SEWER PIPE SDR-26 (SDR IS THE RATIO OF OUTSIDE DIAMETER TO THE WALL THICKNESS).
3. PREVIOUSLY EXISTING MANHOLES MH-4 AND MH-4E+ WERE CORED FOR THE NEW REROUTED SEWER CONNECTIONS.
4. THE NEW SANITARY SEWER SYSTEM REPLACES THE EXISTING 10" DIA. SANITARY SEWER LINES. THE NEW SYSTEM BETWEEN MH-4B TO MH-4E+ WAS DESIGNED TO HANDLE THE COMBINED FLOW OF THE EXISTING LINES.
5. + - ELEVATIONS WERE SURVEYED IN THE FIELD BY CANONIE.
   m - ELEVATIONS FROM METZ PRAIN OLSON & YOUNGREN (PRAIN)
   — - ELEVATIONS FROM HARON & HANGER SILAS HARON (HANG)
   • - CANONIE ASSIGNED MANHOLE DESIGNATIONS TO EXISTING MANHOLES.
6. GRANULAR BEDDING MATERIAL IS TYPE B - IDOT GRADATION CA-7.

REFERENCES:

- TOPOGRAPHIC MAP BY AERIAL SERVICES, INC., CEDAR FALLS, IOWA; DATE OF PHOTOGRAPHY 11-29-88.
- NOTE FROM OLSON & YOUNGREN, SITE PLAN PLUMBING & FIRE PROTECTION PLAN, SHEET No. PF-1, DATED: 3-15-73.
- HARON & HANGER SILAS HARON CO. INC. "SUBSURFACE INVESTIGATION NORTH DITCH AREA, DWG. No. 81-498-E10, SHEET No. 1 of 2.

No.	DATE	CONSTRUCTION ISSUE/REVISION	DWN. BY	CK'D BY	APP'D BY
4	1-28-94	RECORD OF CONSTRUCTION, GENERAL UPDATE	SAK		
3	7-3-91	CHANGED NOTES 3 AND 11, UPDATED SANITARY SEWER ELEVATIONS AND SLOPES	[illegible]	TD	LJH
2	6-18-91	CHANGED NOTE 18, LOCATION OF MH-4B, AND PIPE MATERIAL BETWEEN MH-4D AND MH-4E+	SAK	HAB	CC
1	4-24-91	ISSUED FOR CONSTRUCTION	SAK	DSC	CC

RECORD OF CONSTRUCTION
SANITARY SEWER
PLAN AND PROFILE
NORTH PROPERTY GROUNDS
WAUKEGAN HARBOR, WAUKEGAN, ILLINOIS
PREPARED FOR
WAUKEGAN HARBOR TRUST

Canonie Environmental

DATE: 4-18-91	RP-7	DRAWING NUMBER 87-126-E302	4
SCALE: AS NOTED			

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
SAK 4-18-91	DSC 4-24-91	CC 4-24-91	87-126-E302

REVISIONS

NO.	DATE