SITE NO. 7-38-033
OSWEGO CASTINGS
OSWEGO, OSWEGO COUNTY

1.0 CONSULTANTS FILE

No files

2.0 TITLE 3 GRANT AND/OR AMENDMENT, STATE SUPERFUND AGREEMENT, ROD, SITE LISTING/DELISTING PACKAGE

No files

3.0 CONTRACTORS FILE

4.0 CONRACT DOCUMENTS

4.1 Contract Documents
4.2 Contracting Processing
4.3 Project Plans (Work, HASP, QA/QC)
4.4 Shop Drawings/Submittals
4.5 Final Remediation Report

5.0 INSPECTION

6.0 MANIFESTS

No files

7.0 SAMPLING

8.0 CONTRACTOR LOGS

No files

9.0 CORRESPONDENCE

10.0 PHOTOGRAPHS

11.0 NON-FOIL/CONFIDENTIAL DOCUMENTS

New York State Department of Environmental Conservation

MEMORANDUM

TO: Michael J. O'Toole, Jr., Director,
Division of Hazardous Waste Remediation

FROM: Edward R. Belmore, Director,
Bureau of Western Remedial Action, DER

SUBJECT: **ROD Briefing: Oswego Castings Site, Oswego County, Site No. 7-38-033**

DATE: March 21, 1997

Attached for your review is a draft copy of the Record of Decision (ROD) and Responsiveness Summary (Appendix A) for the Oswego Castings Site. The proposed remedy consists of the excavation of contaminated waste materials, surface and subsurface soils, and wetland sediments (approximately 5000 cubic yards total) with off-site disposal at a hazardous waste or solid waste landfill, as appropriate. Materials containing PCB levels less than 50 ppm would be sent to a solid waste landfill. This remedy also includes removal and off-site treatment and disposal of the septic system.

No major modifications were made to this document from the PRAP. The public comment period closed on March 14 and public comments received were supportive of the remedy.

A briefing has been scheduled with you for Thursday March 27, 1997 at 3:00 p.m. A final copy of the ROD suitable for signing will be available at the briefing. The NYSDOH is completing their review and concurrence is expected before the date of the briefing.

Attachment

cc: T. Quinn
S. Ervolina
E. Belmore
B. Schick

New York State Department of Environmental Conservation

DECISION DOCUMENT

for

INTERIM REMEDIAL MEASURE

Oswego Castings Site
Oswego, Oswego County, NY
Site No. 7-38-033

October 1996

Division of Environmental Remediation
Bureau of Western Remedial Action
EDWARD R. BELMORE, *Director*

Decision Document Summary
Interim Remedial Measure

Oswego Castings Site
Oswego, Oswego County, NY
Site No. 7-38-033

Statement of Purpose and Basis:

The attached Decision Document summarizes the proposed action to be carried out as an Interim Remedial Measure (IRM) at the Oswego Castings Inactive Hazardous Waste Site. The proposed action qualifies as an IRM in accordance with *Technical and Administrative Guidance Memoranda (TAGM) DHWR-4042: Interim Remedial Measure* because it 1.) can be undertaken quickly based on current information, 2.) will prevent, mitigate, or remedy environmental damage or the consequence of environmental damage attributable to the site, and 3.) will lessen obvious hazardous waste risks to the environment and/or public health. The IRM to be completed consists of a removal action as identified in the National Contingency Plan at 40 CFR §300.415 in that it includes the excavation of contaminated soil at a source to prevent potential on-site exposures to workers who may enter the area.

Description of the Interim Remedial Measure:

Subsequent to completion of the Remedial Investigation, B&K Metals, Inc., the site owner, gave formal notice to the NYSDEC regarding a transfer and sale of the site. As a condition of sale B&K Metals proposed an IRM to address the west gate and loading dock areas of the site, since these areas would be used by the future owners of the property, who plan on reopening the facility for manufacturing. These areas contain soils contaminated with polychlorinated biphenyls (PCBs). The elements of this IRM include the following:

- Excavation of contaminated soil in the vicinity of the west gate and loading dock areas followed by staging the soils on site.
- Verification sampling in conjunction with the excavation to verify that all soils exceeding site-specific cleanup goals are removed.
- Restoration of the excavations by backfilling with clean fill.

Approved

Edward R Belmore 10/25/96

Edward R. Belmore, P.E.
Director
Bureau of Western Remedial Action
Division of Environmental Remediation

Decision Document for Interim Remedial Measure
Oswego Castings Site
Oswego, Oswego County, New York
Site No. 7-38-033

October 1996

1.0 Introduction

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), is approving an Interim Remedial Measure (IRM) to address PCB contaminated soil present in the West Gate Area and the Loading Dock Area of the Oswego Castings Site. The IRM consists of the following:

- Excavation of contaminated soil in the vicinity of the west gate and loading dock areas followed by staging the soils on site.
- Verification sampling in conjunction with the excavation to verify that all soils exceeding site-specific cleanup goals are removed.
- Restoration of the excavations by backfilling with clean fill.

This Decision Document identifies an IRM removal action to address partial remediation of the identified site contamination. The removal action is a component of the comprehensive remedial investigation/feasibility study (RI/FS) process for this site. A final remedy for the site will be selected after completion of the RI/FS, currently in progress.

2.0 Site Description and History

2.1 Site Description

The Oswego Castings Site, Site No. 7-38-033, is located on Mitchell Street in the City of Oswego, Oswego County, New York as shown on Figure 1. The site is situated on 23 acres of property owned by B&K Metals, Inc. The property contains three former manufacturing buildings: the main manufacturing building and two smaller outbuildings. The west gate area and loading dock areas are located adjacent to the main manufacturing building. A former disposal area is located behind the buildings. The disposal area contains spent core sands, slag, molds, etc., used in the manufacturing process and is referred to as the core sand disposal area. Adjacent to this area to the east is a wetland.

2.2 Site History

The Oswego Castings facility was built in 1953 and operated as an aluminum casting facility until 1986, when it closed. The facility was operated by B&K Metals, Inc. formerly known as Oberdorfer Foundries, Inc. After the facility closed, polychlorinated biphenyls (PCBs) were detected in on-site core sands, surface soils and sediments. The core sand waste materials contain the most significant PCB levels.

Because of the presence of PCBs above 50 ppm the facility was designated as a Class 2 Inactive Hazardous Waste Site in 1989. In July of 1993 B&K Metals entered into an Order on Consent with the NYSDEC for implementation of a RI/FS. The RI was completed in December 1995. After completion of the RI, B&K Metals gave formal notice to the NYSDEC regarding a transfer and sale of the site. The prospective buyer would reopen the facility for manufacturing. As a condition of sale, B&K Metals proposed an IRM to address the west gate and loading dock areas, since these areas of the site would be used by the future property owners.

3.0 Summary of Site Characteristics

Contamination identified at the west gate and loading dock areas consists of PCBs. Concentrations range from less than 1 ppm to 1900 ppm. A summary of the data can be found on Table 1.

Figures 2 and 3 show the previous sample locations and estimated extent of contamination. It is believed, based on available sampling data, that contamination is limited to surface soils (i.e., 0-12" deep). However, during the IRM the lateral and vertical extent of contamination will be verified. It is estimated that 300 to 600 cubic yards of soil would be excavated, depending upon the actual limits of contamination.

4.0 Summary and Evaluation of the IRM

4.1 Soil Removal

The NYSDEC *Technical and Administrative Guidance Memoranda (TAGM) number 4046* has established recommended soil remedial levels for PCBs of 1 ppm for surface soils and 10 ppm for subsurface soils with a minimum of 12 inches of cover. Therefore, soils exceeding this criteria will be excavated. The estimated boundary of excavation is shown on Figures 2 and 3.

In the west gate area, the lateral extent of contamination north of the driveway is not clearly defined. The owner has expressed concern that the contamination may extend well beyond the driveway and be beyond the scope of this IRM. Therefore, an initial remedial boundary has been established approximately ten feet north of the driveway, which would be sufficient to allow for the future use of the driveway. If during pre-removal sampling, the contamination is found to be widespread, the excavation will be limited to this boundary, with construction fencing installed at the boundary and the remaining soil to be addressed by the FS. If the contamination is not widespread, the IRM boundary will be expanded to excavate all of the contaminated soils at this time.

4.2 Verification Sampling

Verification samples will be analyzed in the field for PCBs using a Dexsil Chlorine Analyzer. The sampling and excavation will be performed concurrently. Ten percent of the field samples will also be analyzed in the laboratory to confirm results. Areas where analytical results are above the remedial criteria will require additional excavation and sampling.

Proposed verification sample locations are shown on Figures 2 and 3. In the west gate area, verification sampling will be used to determine the lateral and vertical extent of PCB contamination. In the loading dock area, the lateral extent of contamination has been defined. Therefore, the contaminated soil will initially be excavated to a depth of 12 inches and verification samples will be collected below the 12 inch depth to determine if the excavation must be excavated to greater depth.

4.3 Soil Staging

Excavated soils will be loaded into a dump truck and staged on site in the core sand disposal area. The material will be stockpiled on polyethylene sheeting and covered with polyethylene tarps. The material will ultimately be addressed by the site remedial plan to be developed by the FS.

4.4 Restoration of the Excavations

The excavated areas will be backfilled with clean fill. Clean fill will be either compacted gravel in driveway areas or locally available fill and topsoil in other areas.

5.0 IRM Remedial Goals

This IRM removal action is being implemented to address potential impacts to workers and the public who might be exposed to the contaminated soils if they entered these areas of the property. Soil exceeding the remedial criteria of 1 ppm surface and 10 ppm subsurface will be removed from those areas of potential human contact.

6.0 Enforcement Status

This IRM is being conducted pursuant to the IRM provisions of the Consent Order for the RI/FS for this site, entered into between the NYSDEC and B&K Metals in 1993.

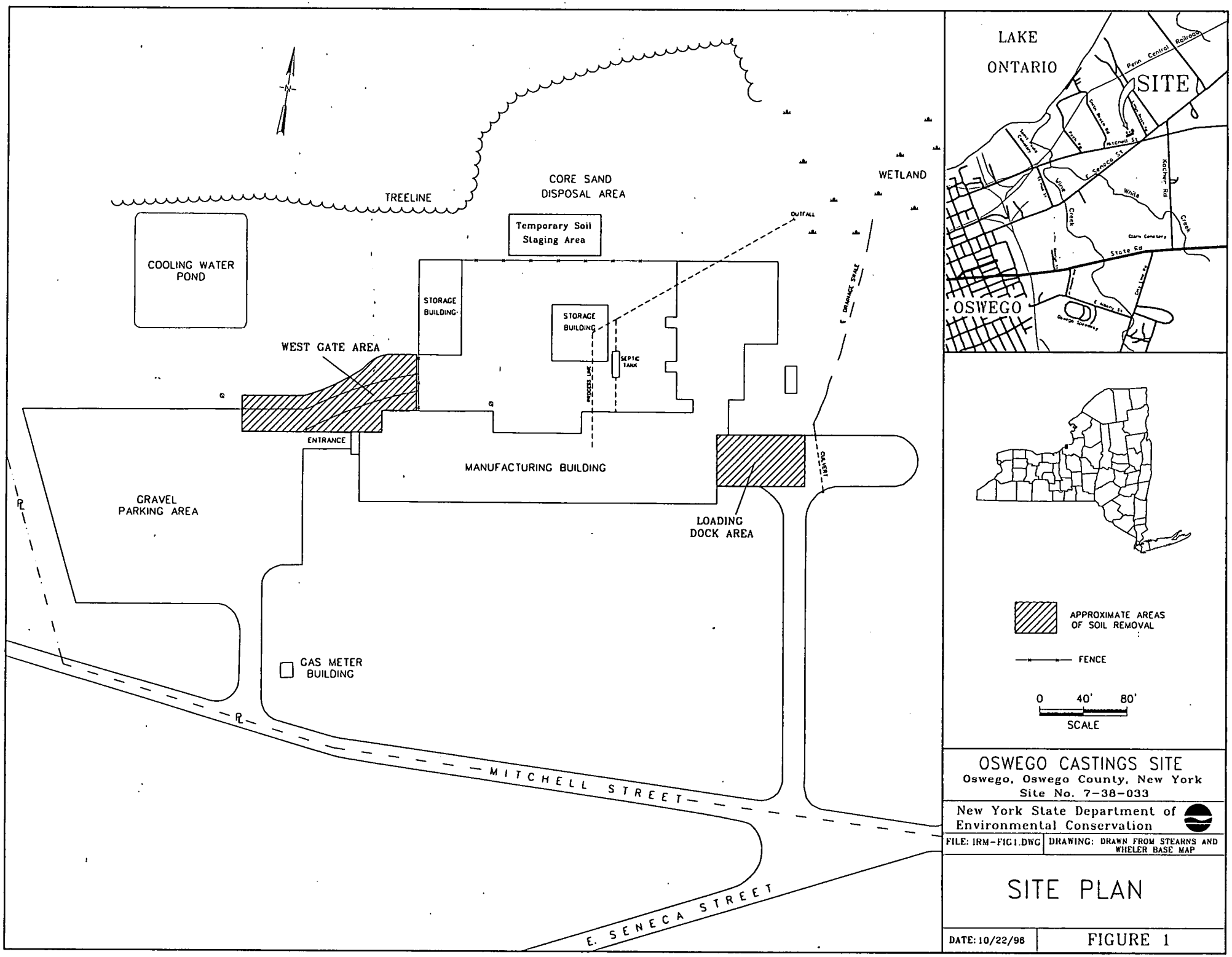
7.0 Highlights of Community Participation

To provide interested citizens with an opportunity to learn about the IRM, an information sheet will be sent to persons on the site contact list. This decision document will be available for public review at the document repositories established for this site. The following persons may be contacted for more information.

David A. Camp, P.E.
NYSDEC, DER
50 Wolf Road
Albany, New York 12233-7010
(518) 457-4343
1-800-342-9296 (answering machine)

Gary Robinson
NYSDOH
217 South Salina Street
Syracuse, New York 13202
(315) 426-7625

irmdoc.ocs



OSWEGO CASTINGS SITE

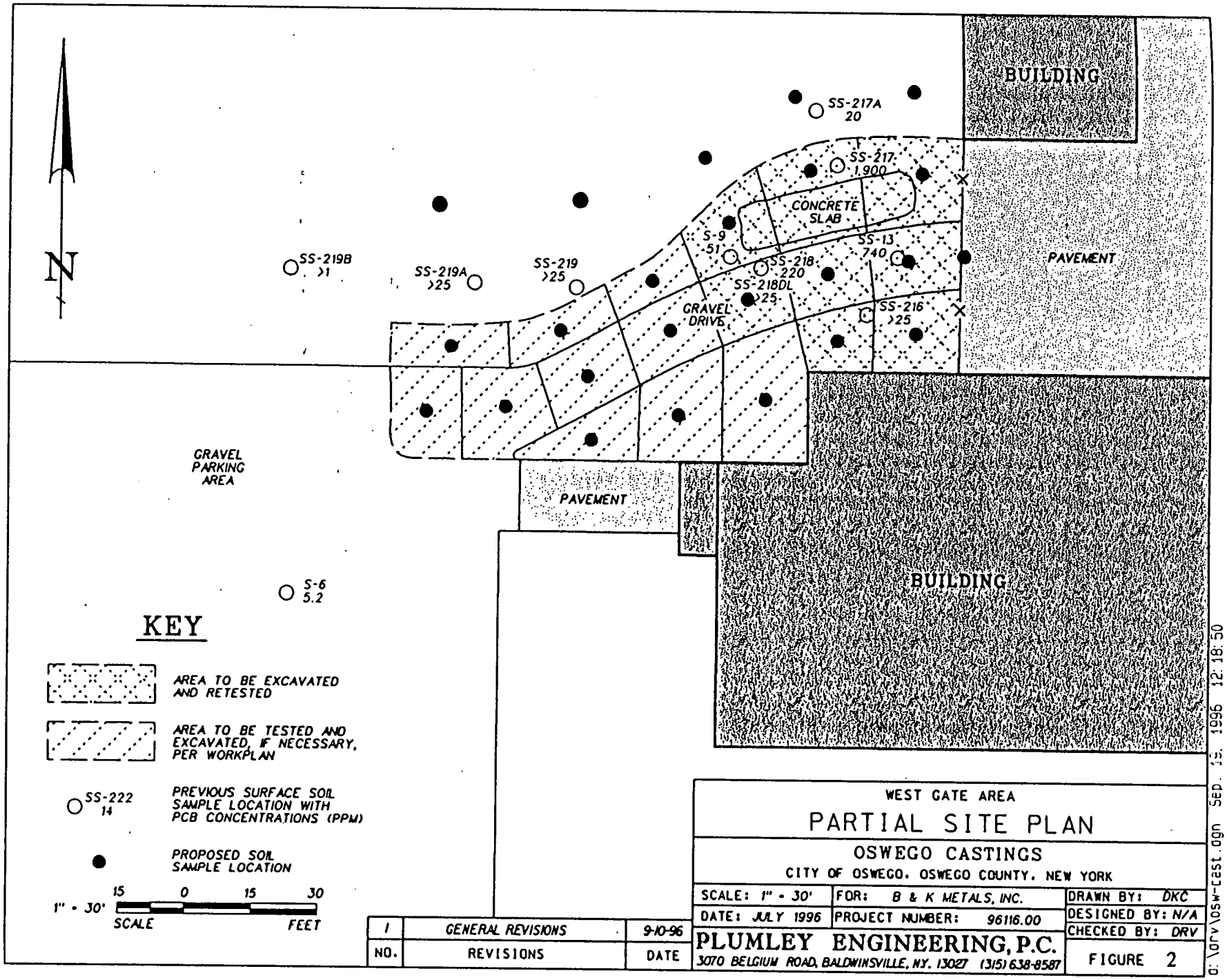
Oswego, Oswego County, New York
Site No. 7-38-033

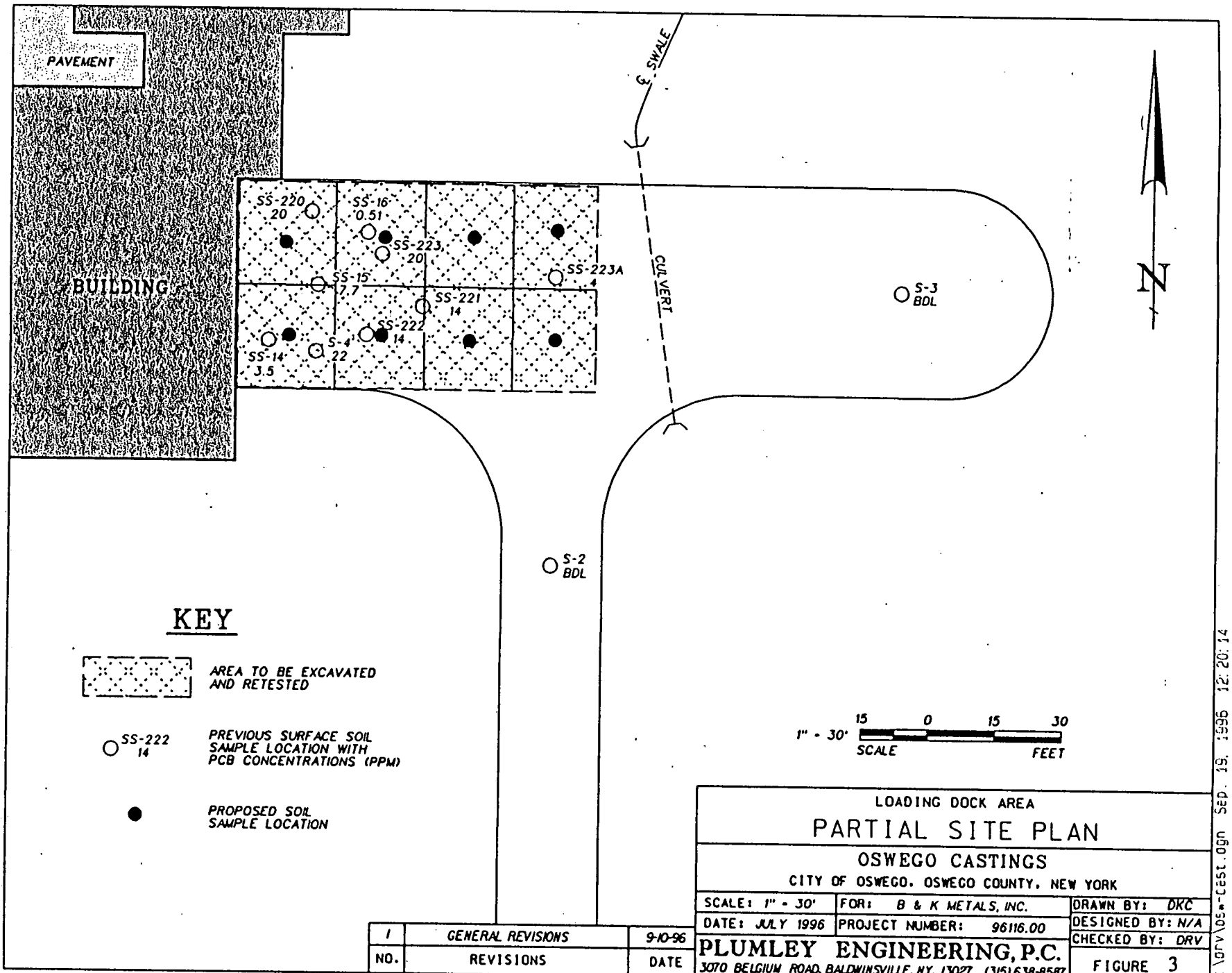
New York State Department of Environmental Conservation

FILE: IRM-FIG1.DWG | DRAWING: DRAWN FROM STEARNS AND WHEELER BASE MAP

SITE PLAN

DATE: 10/22/98 | FIGURE 1


N
BUILDING
SS-217A
20
SS-217
1,900
CONCRETE
SLAB
S-9
51
SS-13
740
SS-218
220
SS-218DL
>25
SS-216
>25
PAVEMENT
SS-219B
>1
SS-219A
>25
SS-219
>25
GRAVEL
DRIVE
GRAVEL
PARKING
AREA
PAVEMENT
BUILDING
S-6
5.2
KEY
AREA TO BE EXCAVATED AND RETESTED
AREA TO BE TESTED AND EXCAVATED, IF NECESSARY, PER WORKPLAN
SS-222
14
PREVIOUS SURFACE SOIL SAMPLE LOCATION WITH PCB CONCENTRATIONS (PPM)
PROPOSED SOIL SAMPLE LOCATION
1" = 30'
15 0 15 30
SCALE
FEET
WEST GATE AREA
PARTIAL SITE PLAN
OSWEGO CASTINGS
CITY OF OSWEGO, OSWEGO COUNTY, NEW YORK
SCALE: 1" = 30'
FOR: B & K METALS, INC.
DRAWN BY: DKC
DATE: JULY 1996
PROJECT NUMBER: 96116.00
DESIGNED BY: N/A
CHECKED BY: DRV
PLUMLEY ENGINEERING, P.C.
3070 BELGIUM ROAD, BALDWINSVILLE, NY. 13027 (315) 638-8587
FIGURE 2
1 GENERAL REVISIONS 9-10-96
NO. REVISIONS DATE
d:\drv\osw-cast.dgn Sep. 13, 1996 12:18:50



LOADING DOCK AREA

PARTIAL SITE PLAN

OSWEGO CASTINGS

CITY OF OSWEGO, OSWEGO COUNTY, NEW YORK

SCALE: 1" = 30'	FOR: B & K METALS, INC.	DRAWN BY: DKC
DATE: JULY 1996	PROJECT NUMBER: 96116.00	DESIGNED BY: N/A
		CHECKED BY: DRV

NO.	REVISIONS	DATE
1	GENERAL REVISIONS	9-10-96

PLUMLEY ENGINEERING, P.C.
3070 BELGIUM ROAD, BALDWINSVILLE, N.Y. 13027 (315) 638-8587

FIGURE 3

D:\DRV\DSK-CEST.DGN Sep. 19, 1996 12:20:14

TABLE 1

OSWEGO CASTINGS

WEST GATE AND LOADING DOCK AREAS

PREVIOUS SURFACE SOIL SAMPLES

WEST GATE AREA

SAMPLE	DATE	PCB (PPM)	METHOD	DESCRIPTION
S-6	1990	5.2	LAB	GRAVEL PARKING AREA
S-9	1990	51	LAB	50' WEST OF GATE
SS-13	4/12/94	740	LAB	DRIVEWAY @ GATE
SS-216	1995	>25	FIELD	20' WEST OF GATE
SS-217	1995	>25	FIELD	10' NORTH OF DRIVEWAY
SS-217	1995	1900	DEC LAB	10' NORTH OF DRIVEWAY
SS-217A	1995	20	FIELD	25' NORTH OF DRIVEWAY
SS-218	1995	>25	FIELD	45' WEST OF GATE
SS-218	1995	220	LAB	45' WEST OF GATE
SS-218DL	1995	>25	FIELD	45' WEST OF GATE
SS-219	1995	>25	FIELD	85' WEST OF GATE
SS-S19A	1995	>25	FIELD	110' WEST OF GATE
SS-219B	1995	<1	FIELD	150' WEST OF GATE

LOADING DOCK AREA

SAMPLE	DATE	PCB (PPM)	METHOD	DESCRIPTION
S-2	May-88	BDL	LAB	ENTRANCE 40' SOUTH OF DOCK AREA
S-3	May-88	BDL	LAB	150' EAST OF DOCK
S-4	May-88	22	LAB	LOADING DOCK AREA
SS-14	4/12/94	3.5	LAB	LOADING DOCK AREA
SS-15	4/12/94	7.7	LAB	LOADING DOCK AREA
SS-16	4/12/94	0.51	LAB	LOADING DOCK AREA
SS-220	1995	20	FIELD	LOADING DOCK AREA
SS-221	1995	14	FIELD	LOADING DOCK AREA
SS-222	1995	14	FIELD	LOADING DOCK AREA
SS-223	1995	20	FIELD	LOADING DOCK AREA
SS-223A	1995	4	FIELD	70' EAST OF DOCK

NOTES:

DL = DILUTED
BDL = BELOW DETECTION LIMITS

15 (12-75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: **Distribution Below**
FROM: David A. Camp, Bureau of Western Remedial Action, DER DaC
SUBJECT: Oswego Castings, Oswego County, Site No. 7-38-033

DATE: February 12, 1997

Attached please find a copy of the final Proposed Remedial Action Plan (PRAP) for the subject site. The proposed remedy is the excavation of contaminated waste materials, soils, and wetland sediments with off-site disposal at permitted hazardous waste and solid waste landfills, as appropriate.

A public meeting has been scheduled for February 27, 1997 and the public comment period ends on March 14, 1997.

If you have any questions regarding this matter, please contact me at 518/457-4343.

DISTRIBUTION

M. O'Toole
A. Carlson (NYSDOH)
E. Belmore
R. Schick
G. Litwin (NYSDOH)
C. Branagh (Region 7)
G. Robinson (NYSDOH)
C. Dowd (DFW)
M. Lesser (DEE)

Attachment
prapdist.osc
DAC/td

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233-7010

John P. Cahill
Acting Commissioner

February 12, 1997

Doreen A. Simmons, Esq.
Hancock & Estabrook
1500 Mony Tower 1
P.O. Box 4976
Syracuse, New York 13221-4976

Dear Ms. Simmons:

Re: Oswego Castings Site, Oswego County, Site No. 7-38-033

Please find enclosed for your information the Proposed Remedial Action Plan (PRAP) and information fact sheet for the Oswego Castings Site. The PRAP provides a summary of the Remedial Investigation/Feasibility Study (RI/FS) that has been conducted at the site and proposes a remedy to address the contamination identified as originating from the site. The information fact sheet is to briefly summarize the PRAP and to announce a Public Information Meeting to be held on February 27, 1997. Both documents have been released for public review.

If you have any questions, please contact me at 518/457-4343.

Sincerely,

David A. Camp, P.E.
Project Engineer
Bureau of Western Remedial Action
Division of Environmental Remediation

Enclosure

w/o enclosure
bc: R. Schick
C. Branagh, Reg.7
G. Robinson, DOH
M. Lesser, DEE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233-7010

John P. Cahill
Acting Commissioner

February 12, 1997

Sarah Lewis Belcher
Green & Seifter
One Lincoln Center
Syracuse, New York 13202

Dear Ms. Belcher:

Re: Oswego Castings Site, Oswego County, Site No. 7-38-033

Please find enclosed for your information the Proposed Remedial Action Plan (PRAP) and information fact sheet for the Oswego Castings Site. The PRAP provides a summary of the Remedial Investigation/Feasibility Study (RI/FS) that has been conducted at the site and proposes a remedy to address the contamination identified as originating from the site. The information fact sheet is to briefly summarize the PRAP and to announce a Public Information Meeting to be held on February 27, 1997. Both documents have been released for public review.

If you have any questions, please contact me at 518/457-4343.

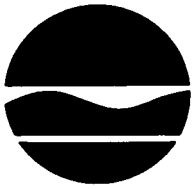
Sincerely,

David A. Camp, P.E.
Project Engineer
Bureau of Western Remedial Action
Division of Environmental Remediation

Enclosure

w/o enclosure
bc: R. Schick
C. Branagh, Reg.7
G. Robinson, DOH
M. Lesser, DEE

NEW YORK STATE
DEPARTMENT OF



ENVIRONMENTAL
CONSERVATION

Proposed Remedial Action Plan Meeting

****

**Thursday,
February 27, 1997
7:00 to 9:00 p.m.
at the
Oswego City Hall,
9-19 West Oneida St.**

The purpose of this meeting is to present the NYSDEC's Proposed Remedial Action Plan for the Oswego Castings Site and solicit comments from the public. Comments will be accepted through March 14, 1997.

FACT SHEET

OSWEGO CASTINGS SITE
Oswego, Oswego County, N.Y.
February 1997

Notice of Availability of the Proposed Remedial Action Plan for the Oswego Castings Site

Public Meeting to be held February 27, 1997

The New York State Department of Environmental Conservation (NYSDEC) in conjunction with the New York State Department of Health (NYSDOH) will hold a public meeting to present the Proposed Remedial Action Plan (PRAP) for the Oswego Castings Site, and solicit formal comments from the public. At the meeting the NYSDEC will discuss the Remedial Investigation results, the Feasibility Study and describe the remedial action proposed by the State. There will be an opportunity for the public to ask questions relating to the site and the proposed remedy. A summary of the PRAP is included below.

Comment Period: The comment period for the PRAP will close on March 14, 1997. In addition to any comments received at the public meeting, written comments may be submitted to David A. Camp, P.E., Project Engineer, at the address shown at the end of this notice.

Site Description: The Oswego Castings Site, Site ID No. 7-38-033, is located on Mitchell Street in the City of Oswego, Oswego County, New York. Oswego Castings, Inc., a subsidiary of Oberdorfer Foundries, Inc., operated an aluminum casting facility at the site from 1956 to 1986. After the facility closed, PCBs were detected on-site in disposed foundry wastes, surface soils and sediments. Because of the presence of PCBs above 50 part per million (ppm), in 1989 the facility was designated as a Class 2 Inactive Hazardous Waste Disposal Site. In July of 1993 B&K Metals, Inc. (formerly Oberdorfer Foundries) entered into an Order on Consent, a legal agreement, with the NYSDEC for implementation of a Remedial Investigation/Feasibility Study (RI/FS). An RI determines the type and location of the contamination and an FS identifies and evaluates cleanup alternatives.

Shortly after the completion of the RI, B&K Metals presented evidence that it was a non-operating company with limited assets and unable to complete its full obligations under the RI/FS Order. At the same time, the property was sold to Great Lakes Veneer, under the NYS voluntary agreement program, with sale proceeds used to perform certain interim remedial measures. A Feasibility Study was then completed in January 1997 under State Hazardous Waste Remedial Fund. A brief summary of the RI/FS and proposed remedy is presented on the next few pages.

Remedial Investigation (RI): An RI was performed to define the type and location of hazardous waste contamination resulting from historic operations at the site. The RI consisted of two phases of site investigations conducted during the spring of 1994 and the summer of 1995. The following activities were performed:

- Site survey
- Soil and waste test pit investigation
- Sediment sampling
- Groundwater monitoring
- Septic tank investigation
- Fish and wildlife impact analysis

Based on the information collected from these investigations, PCBs are considered the primary compounds of concern on the site. PCBs were detected up to 1200 ppm in site waste materials. During the facility operations, core sands and foundry wastes were disposed of in a former on-site landfill. The most significant levels of PCBs are related to the disposal of core sands, however, PCBs were also identified in surface soils near the west gate and loading dock area, and in sediments in a wetland area adjacent to the landfill. The facility's former process line and septic tank previously drained into this wetland. Sediment in the septic tank also contain PCBs as well as volatile organic compounds such as chemical solvents. All of these areas were addressed in the Feasibility Study, discussed below.

Complete results and discussion of the RI can be found in the report entitled *Remedial Investigation: Oswego Castings, Oswego, New York* dated December 1995. It is available for review at the document repositories listed at the end of this fact sheet.

Feasibility Study (FS): Having determined the type and location of the contamination at the Oswego Castings Site, the NYSDEC conducted a Feasibility Study (FS) to identify, evaluate and screen various clean-up alternatives. This evaluation assessed whether the clean-up techniques suggested will be effective and are physically possible to do. The following alternatives were evaluated as part of the FS:

- No Action
- On-site Containment
- On-site Containment with Off-site Landfill Disposal of Core Sand Wastes
- Excavation with Off-site Landfill Disposal
- Excavation with Off-site Incineration
- Excavation with On-site Low Temperature Thermal Desorption

The screening process includes a comparison of each of the potential alternatives to an established list of criteria. These criteria include: short term impacts and effectiveness; long term effectiveness and permanence; reduction in toxicity, mobility and volume; implementability; compliance with clean-up standards; protection of human health and the environment; and cost. The FS details the components of the various alternatives as well as the evaluation of those alternatives. For more information see the report entitled *Feasibility Study Report for the Oswego Castings Inactive Hazardous Waste Disposal Site,* dated January 1997. It is available for review at the document repositories listed at the end of the fact sheet.

Proposed Remedy: Based on the FS, the NYSDEC is proposing Excavation with Off-site Landfill Disposal as the preferred clean-up alternative. As part of this clean-up, waste, soils and wetland sediments contaminated with PCBs above cleanup objectives (approximately 5000 cubic yards total) would be excavated and transported to off-site permitted hazardous waste and solid waste landfills, as appropriate. Foundry wastes and excavated materials containing only residual levels of PCBs would be consolidated in the site landfill area and covered with a soil cap. In addition, this remedy would also include the removal and off-site disposal of the septic system. A more detailed description of this alternative, as well as other alternatives evaluated by the NYSDEC, can be found in the Proposed Remedial Action Plan (PRAP) which is available at the document repositories listed below.

Document Repositories:

Two locations have been established as document repositories to provide you with access to project information. The RI, FS, PRAP and all other site-related documents are available for review at the following locations:

Oswego City Library
120 East Second Street
Oswego, New York 13126
(315) 341-5867

NYSDEC, Central Office
50 Wolf Road Room 242
Albany, NY 12233-7010
(518) 457-4343
Attn.: David A. Camp

NYSDEC, Region 7 Office
615 Erie Boulevard West
Syracuse, NY 13204-2400
(315) 426-7403
Attn.: Sue Miller

For More Information:

The NYSDEC and the NYSDOH will keep you informed throughout this process. Your understanding and involvement in this project will help to ensure an effective remedial program. You are encouraged to contact us at any time with questions, comments or concerns.

Reports & General Concerns:

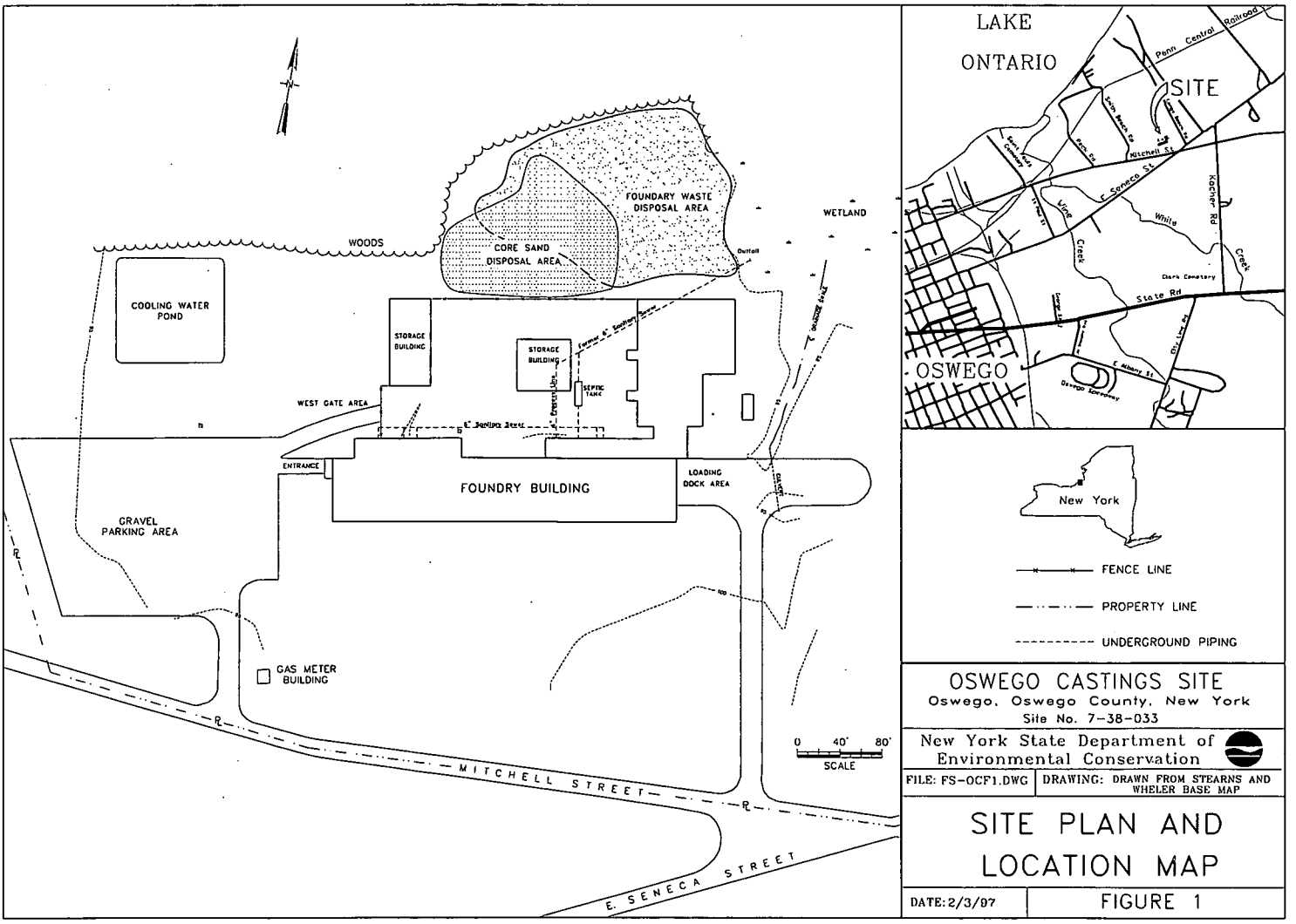
David A. Camp, P.E.
Project Engineer - NYSDEC
(518) 457-4343

Site Related Health Concerns:

Gary Robinson
NYSDOH (Syracuse Office)
(315) 426-7610

Site Related Health Concerns:

Susan VanPatten
NYSDOH
1 (800) 458-1158, ext. 402
or **(518) 458-6402**



OSWEGO CASTINGS SITE

Oswego, Oswego County, New York
Site No. 7-38-033

PROPOSED REMEDIAL ACTION PLAN

February 1997

Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

OSWEGO CASTINGS SITE
Oswego, Oswego County, New York
Site No. 7-38-033
February 1997

SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) is proposing excavation of contaminated waste materials, surface and subsurface soils and wetland sediments at the Oswego Castings Site, with off-site disposal at a permitted hazardous waste or solid waste landfill, as appropriate. This remedy is proposed to address the threat to human health and the environment created by the presence of polychlorinated biphenyls (PCBs) in on-site soils, waste materials and sediments.

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy, summarizes the other alternatives considered, and discusses the rationale for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments submitted during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan developed pursuant to the New York State Environmental Conservation Law (ECL) and 6 NYCRR Part 375. This document summarizes the information that can be found in greater detail in the Remedial Investigation (RI) and Feasibility Study (FS) reports available at the document repositories.

The NYSDEC may modify the preferred alternative or select another alternative based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here.

To better understand the site, and the alternatives evaluated, the public is encouraged to review the project documents which are available at the following repositories:

Oswego City Library
120 East Second Street
Oswego, New York 13126
Phone: (315) 341-5867

NYSDEC Regional Headquarters
615 Erie Boulevard west
Syracuse, New York 13204-2400
Contact: Mr. Charles Branagh
Phone: (315) 426-7400

NYSDEC Central Office
50 Wold Road
Albany, New York 12233-1070
Contact: Mr. David A. Camp
Phone: (518) 457-4343

Written comments on the PRAP can be submitted to Mr. Camp at the above address.

DATES TO REMEMBER:

February 13, 1997 to March 14, 1997: Public comment period on RI/FS Report, PRAP, and preferred alternative.

February 27, 1997: Public meeting from 7 pm to 9 pm at the Oswego City Hall, 9-19 West Onieda Street, Second Floor.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Oswego Castings Site, Site No. 7-38-033, is located on Mitchell Street in the City of Oswego, Oswego County, New York as shown on Figure 1. The site occupies approximately 10 acres of the 23 acres formerly owned by B&K Metals, Inc. The property includes three former manufacturing buildings: the main foundry building and two smaller outbuildings. The facility's former landfill is located to the north of the buildings. The landfill contains an area of spent core sands, which were part of the casting molds, and an area of miscellaneous foundry waste. The landfill is bounded on the east by a wetland. An abandoned 4 inch diameter pipe, which appears to have discharged process related water, exited from the manufacturing building and discharged into the wetland area. In addition, another line exited the building to an underground septic tank which in turn discharged into the process line to the wetland. The facility's former cooling water pond is located to the west of the developed area. Beyond these areas the site is wooded and historically no manufacturing or disposal operations have been identified. All of these features are also shown on Figure 1.

The area surrounding the site is sparsely populated. Residential properties are located to the south across Mitchell Street. NYSDEC regulated wetlands are located north and west of the site. Lake Ontario is located approximately one half mile north of the site. In addition, the Pollution Abatement Services (PAS) site, a class 2 inactive hazardous waste disposal site (Site No. 7-38-001) and the Niagara Mohawk Fire Training School site (Site No. 7-38-030) are both located southwest of the site on East Seneca Street.

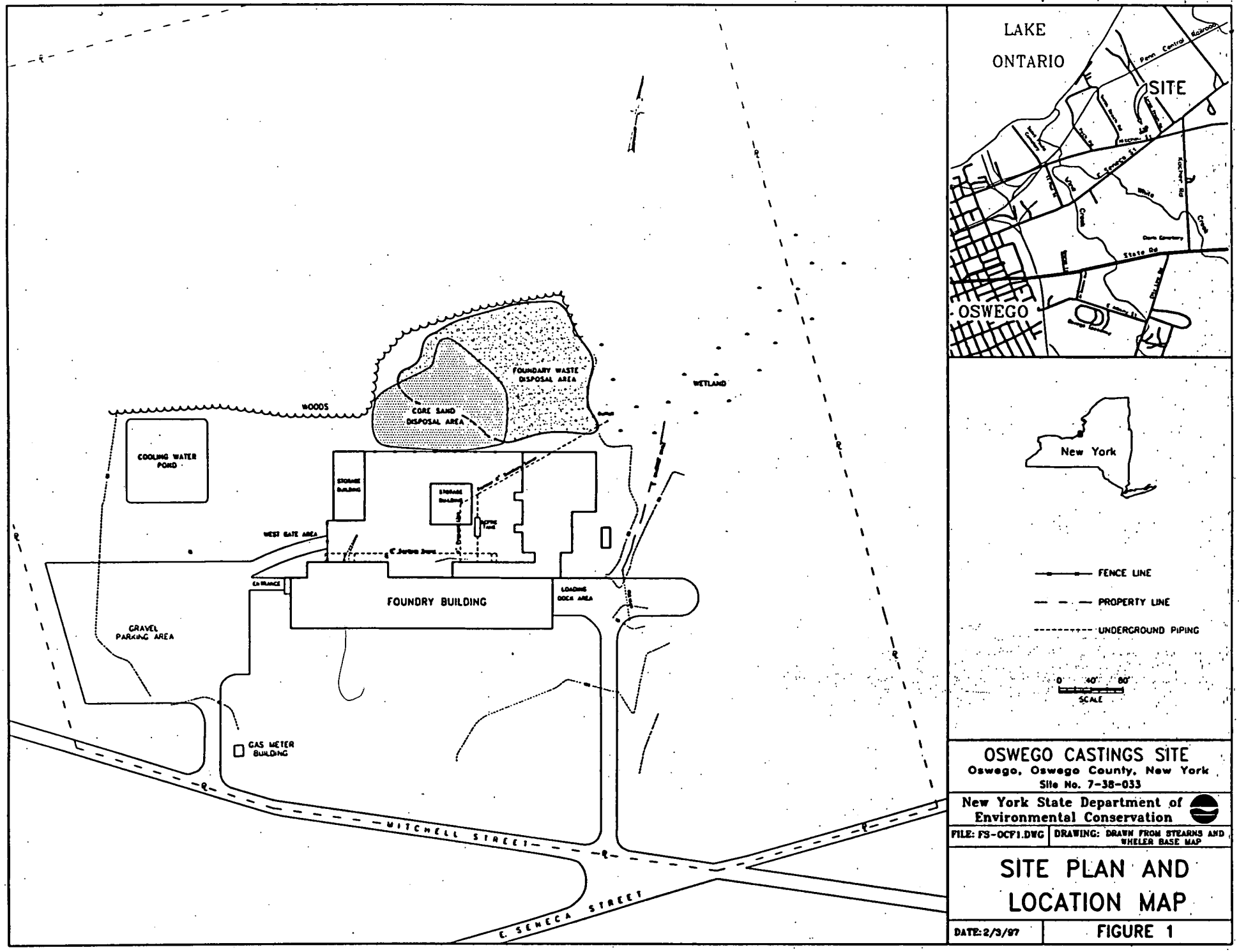
SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Oswego Castings, Inc., a subsidiary of Oberdorfer Foundries, Inc., operated an aluminum die casting facility at the site from 1956 to 1986, after which time foundry operations were discontinued and the equipment removed. During the operation of the foundry, the disposal of core sands and foundry waste occurred behind the manufacturing buildings. In addition, PCBs were present in wastes discharged to the ground surface near the wetland via a process line / septic tank discharge line. PCBs are present in the wastes and in surface soils and sediments on the site above 50 ppm. It is believed that the PCBs were introduced into the process from leaks in hydraulic equipment and from core sand binders or coatings applied to core sand surfaces. Before they were banned in 1977, PCBs were used in high-temperature hydraulic fluids and casting agents because of their desirable heat resistant properties.

3.2: Remedial History

After the facility closed, PCBs were detected at the site during an investigation performed by a prospective purchaser. Preliminary investigations of the facility were then performed by Oberdorfer Foundries starting in June of 1988, which identified the presence of PCBs above the hazardous waste classification of 50 ppm. Based on these investigations, the facility was designated as a Class 2 Inactive Hazardous Waste Site in June of 1989.



OSWEGO CASTINGS SITE
Oswego, Oswego County, New York
Site No. 7-38-033

New York State Department of Environmental Conservation

FILE: FS-OCF1.DWG | DRAWING: DRAWN FROM STEARNS AND WHELER BASE MAP

SITE PLAN AND LOCATION MAP

DATE: 2/3/97 | FIGURE 1

SECTION 4: CURRENT STATUS

In response to a determination that the presence of hazardous waste at the Site presents a significant threat to human health and the environment, the PRP and NYSDEC have recently completed a Remedial Investigation/Feasibility Study (RI/FS).

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted in two phases. The first phase was conducted during the spring of 1994 and the second phase during the summer of 1995. A report entitled *Remedial Investigation: Oswego Castings, Oswego, New York*, dated December 1995, prepared by Stearns and Wheler describes the field activities and findings of the RI in detail.

The RI included the following activities:

- Site survey;
- Soil and waste test pit investigation;
- Sediment sampling;
- Groundwater monitoring;
- Septic tank investigation; and
- Fish and wildlife impact analysis.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the RI analytical data was compared to environmental Standards, Criteria, and Guidance (SCGs). Groundwater, drinking water and surface water SCGs identified for the Oswego Castings site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. NYSDEC TAGM 4046 soil cleanup guidelines for the protection of groundwater, background conditions, and risk-based remediation criteria were used as SCGs for soil and the NYSDEC Technical Guidance for Screening Contaminated Sediments is used for surface water sediments.

Based upon the results of the remedial investigation in comparison to the SCGs and potential public health and environmental exposure routes, certain areas and media of the site require remediation. These are summarized below. More complete information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb) or parts per million (ppm). For comparison purposes, SCGs are given for each medium.

4.1.1 Nature of Contamination:

As described in the RI Report, many soil, waste, groundwater and sediment samples were collected at the Site to characterize the nature and extent of contamination. PCBs were the primary compounds of concern identified in these media and were detected at the highest levels in the core sand waste materials. The PCBs are believed to have been present in hydraulic fluids and casting agents used by the facility, and were released through hydraulic leaks and the disposal of core sands. In addition, volatile organic compounds (VOCs) are present in the septic tank sludge and the groundwater in proximity of the tank. The sample locations and associated PCB concentrations are shown on Figure 2.

4.1.2 Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in wastes, soils, sediments and groundwater and compares the data with the proposed remedial action levels (SCGs) for the Site. The following are the media which were investigated and a summary of the findings of the investigation. The estimated areas of impacted soils, sediments and waste are shown on Figure 3.

Waste Materials

Waste materials on the site consists of the core sands and foundry wastes within the landfill. The core sand materials are distinct from the foundry wastes since they are coarser grained and blue-grey to white in color, with two areas which are black and purple in color. The depth of these materials range from 1 foot to 5 feet below ground surface, making up a volume of approximately 1500 cubic yards. The core sand materials contain relatively high levels of PCBs with levels detected from 190 ppm to 1200 ppm. Volatile organic compounds (VOCs) and semiVOCs were also detected in the core sand materials, but at relatively low levels with maximum detections of 0.058 ppm and 2.7 ppm, respectively. Several inorganic constituents were detected above NYSDEC SCGs. These include aluminum (8620 ppm to 223,000 ppm), chromium (23.2 ppm to 30 ppm) and copper (654 ppm to 1660 ppm).

The majority of the landfill, however, consists of miscellaneous foundry wastes. Much of this waste was apparently disposed of prior to the core sands disposal as it is present below the core sand wastes and extends east into the wetland. These materials primarily consist of brown sandy fill with areas of miscellaneous debris, encountered to a maximum depth of approximately 7 feet. The foundry wastes make up a volume of approximately 5600 cubic yards. PCBs are present in this material, but at lower levels than the core sand waste, with levels ranging from < 1 ppm to 140 ppm. However, the majority of this material contains PCBs below 1 ppm, with PCBs present at greater than 10 ppm in only about 500 cubic yards. Combining the core sand and foundry wastes, the total volume of landfill materials with PCBs above 10 ppm is approximately 2000 cubic yards, as shown on Figure 3.

Soil

PCBs were also detected in surface soils surrounding the landfill area. Surface soils in this area contain PCBs, from < 1 ppm to 800 ppm, with impacted soils extending up to 150 feet from the core sand disposal area. Significant standing and shallow water, which flows during the wet seasons, is present in this area. Therefore, PCB impacts to this area can probably be attributed, at least in part, to surface water runoff carrying sediments from the core sand disposal area.

Two locations in the proximity of the former manufacturing building were also impacted by PCBs: the west gate area and the loading dock area. In the west gate area, PCBs were detected in surface soils from 20 ppm to 740 ppm. In addition, a NYSDEC sample detected PCBs at 1900 ppm in sample SS-217. In the loading dock area, PCBs were detected in surface soils from 0.51 ppm to 20 ppm. Contamination in these areas probably occurred from spills and was limited to surface soils. These two areas were the subject of an IRM, which is discussed in Section 4.2.

Sediments

Elevated levels of PCBs, as related to the NYSDEC Sediment Criteria Guidance, were identified in the sediments in the wetland. Concentrations ranged from 280 ppm, near the process line/septic line outfall, to 0.68 ppm at the furthest downstream sample location about 300 feet from the outfall. Two samples collected near the outfall at a 1 foot depths indicate that PCBs contamination appears limited to surface sediments (0-12"). A small drainage swale runs from the loading dock area into the wetland. PCBs were detected in the drainage swale at concentrations up to 160 ppm. It is estimated that there are a total of 1000 cubic yards of contaminated sediments in the wetland and drainage swale containing PCBs from 1 ppm to 280 ppm, assuming a 1 foot contaminant depth.

Sediments from the cooling water pond located northeast of the main building were sampled in 1988 and in 1990 as part of the pre-RI investigations. In these samples PCB levels range from non-detect to 24 ppm. Two sediment samples were collected during the RI of the pond sediments and pond outlet sediments with PCB detections of 0.61 ppm and 0.14 ppm, respectively. The maximum estimated volume of potentially contaminated pond sediments is 200 cubic yards assuming a 6 inch depth.

Groundwater

Groundwater samples from monitoring wells located within and northeast of the core sand area indicate that the PCBs in soils are migrating to the groundwater. Four wells located in the vicinity of the core sand disposal area contained PCBs above the groundwater standard for PCBs of 0.1 ppb and levels ranged from <0.05 ppb to 4.6 ppb. A single well located in the wetland area down gradient from the outfall contained PCBs at 11 ppb.

Two wells located in the vicinity of the septic tank also show impacts to groundwater. The well down gradient of the tank contained PCBs at 1.2 ppb; the other well, located up gradient of the tank, contained total VOCs up to 217 ppb, but no PCBs.

Native overburden soils on the site are primarily unconsolidated glacial sediments or till. The permeability, or ability to transport water, is low in these materials ($K=6.2 \times 10^{-6}$ cm/sec) and higher in the landfill materials ($K=4.6 \times 10^{-4}$ cm/sec). Groundwater occurs at shallow depths across the site, and was observed to vary from ground surface to 3 to 4 feet deep. Based on groundwater elevation data, the local groundwater flow is from the south and north, with convergence towards the landfill area. From there, discharge is to the east into the wetland, where the ground elevation is about 7 feet lower than the surface of the core sand disposal area.

Surface Water

PCBs were not detected in surface water from the cooling water pond above the detection level of 0.5 ppb, however, this detection level is above the surface water standard of 0.001 ppb. Surface water samples were not collected from the wetland area adjacent to the site because of the lack of sufficient water depth.

Septic Tank

A former process line exits from the main foundry building which formerly discharged into the wetland to the east of the landfill. Another line exits the building into a 3000 gal underground septic tank. The outlet from this tank connected into the process line as it discharged to the wetland. The sludge present in the septic tank was sampled during the RI and contains PCBs at 1700 ppm and total VOCs at 464 ppm.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. An IRM was performed by the former property owner in January of 1997, as a condition of the sale of the property under the voluntary agreement program. For this IRM the impacted surface soils in the loading dock and west gate areas were excavated and stockpiled in the landfill area. These soils will be included in the material to be addressed by this FS. Total volume of these soils is estimated to be 300 cubic yards.

4.3 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Access to the contamination at the site is unrestricted and the following completed pathways are known to or may exist at the site: (1) Dermal contact, (2) inhalation; or (3) ingestion of contaminants in soils, wastes and sediments by on-site workers or trespassers.

4.4 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site. The Fish and Wildlife Impact Assessment included in the RI presents a more detailed discussion of the potential impacts from the site to fish and wildlife resources. The following pathways for environmental exposure have been identified:

A potential environmental exposure pathway exists for exposure of aquatic biota and wildlife to PCBs associated with the sediments in the wetland and pond and with waste materials and surface soils in the vicinity of the landfill.

SECTION 5: ENFORCEMENT STATUS

The Potential Responsible Parties (PRP) for the site, documented to date, include the former owner and operator of the site, B&K Metals, Inc. (formerly known as Oberdorfer Foundries, Inc.). In July of 1993, B&K Metals entered into an Order on Consent with the NYSDEC for implementation of an RI/FS. The RI was performed on behalf of B&K Metals by Stearns and Wheler from July 1993 to February 1996.

Subsequent to completion of the RI, B&K Metals presented financial evidence that it was a non-operating corporation with limited and diminishing assets, which prevented it from completing its full obligations under the RI/FS order. At the same time, B&K identified to the NYSDEC a potential site purchaser with interest in a purchase of the site under the State's voluntary agreement program. All parties then agreed to perform certain site Interim Remedial Measures from B&K's sale proceeds from the sale of the site to the volunteer. Therefore, in October of 1996, B&K Metals entered into a second Order on Consent with the NYSDEC which terminated its obligations under the RI/FS Order, allowed for the completion of the IRMs, allowed for partial recovery of the NYSDEC's response costs, and released it from further liability for this site. The NYSDEC then assumed responsibility for implementation of the FS, and any remedial design / remedial action necessary for this site, pursuant to a referral to the State Hazardous Waste Remedial Fund.

The following is the chronological enforcement history of this site.

Date	Index No.	Subject of Order
7/19/93	A7-0252-90-12	Implementation of a RI/FS
10/7/96	A7-0346-96-09	Settlement and Remedial Program

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall

remedial goal is to meet all Standards, Criteria, and Guidance (SCGs) and be protective of human health and the environment.

At a minimum, the remedy selected should eliminate or mitigate all significant threats to the public health and to the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- Reduce, control, or eliminate to the extent practicable the contamination present within the soils/waste on site and the generation of leachate within the fill mass.

- Eliminate the threat to surface waters and Lake Ontario by eliminating any future contaminated surface run-off from the contaminated soils on site, and by reducing, controlling, or eliminating contaminated wetland sediment migration.

- Eliminate the potential for direct human or animal contact with the contaminated soils on site or sediments.

- Prevent, to the extent possible, migration of contaminants in the landfill to groundwater.

- Provide for attainment of SCGs for groundwater quality at the limits of the area of concern (AOC), to the extent practicable.

The soil cleanup levels to best achieve the goals for this site have been determined to be 10 ppm of PCBs in subsurface soils (greater than 12 inches deep) and 1 ppm in surface soils. This determination is based upon the unrestricted access to the site in its present state and the proximity of the contamination to areas of potential environmental impact. Consideration was given to restricting access to areas of surface soil contamination above 1 ppm by fencing to limit exposure. However, due to the low incremental cost associated with achieving this goal by the alternatives evaluated as compared to fencing, 1 ppm has been established as the surface soil cleanup goal for this site.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy should be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Oswego Castings site were identified, screened and evaluated in a Feasibility Study. This evaluation is presented in the report entitled *Feasibility Study Report for the Oswego Castings Inactive Hazardous Waste Disposal Site*, February 1997.

A summary of the detailed analysis follows. As used in the following text, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy or procure contracts for design and construction.

7.1: Description of Alternatives

The potential remedies are intended to address the contaminated soils, sediments, surface water and groundwater at the site. The following alternatives were developed in the feasibility study:

Alternative 1: No Action

The no action alternative is evaluated as a procedural requirement and as a basis for

comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2: On-site Containment with Groundwater Diversion and Leachate Collection and Treatment

Present Worth:	$ 834,000
Capital Cost:	$ 526,000
Annual O&M:	$ 20,010
Time to Implement	6 to 9 months

This alternative would consist of the construction of a low permeability cap over the core sand and foundry wastes, and construction of a hydraulic barrier surrounding the limits of the cap to dewater the impacted material within the area of the cap. The cap would be designed and constructed in compliance with the NYS Part 360 regulations. Impacted sediments and soils beyond the core sand disposal area, which exceed the remedial objectives for PCBs of 1 ppm in surface soils, 10 ppm subsurface soils and established sediment cleanup goals, would be excavated and consolidated into the area to be capped. After excavation these areas would be appropriately restored. Groundwater monitoring would be performed to insure the cap and leachate/groundwater collection systems are working properly. Since hazardous waste would be consolidated and remain contained at the site, the area would be designated a Corrective Action Management Unit (CAMU) and managed accordingly. Long-term operation and maintenance activities would be required to maintain the cap and drains.

The septic tank and associated piping would also be removed as part of this alternative. It is assumed that the sludge would be drummed for transport and treatment at an off-site hazardous waste incineration facility. After the removal of the tank sludge the tank would be excavated and disposed and the excavation would then be backfilled with clean fill/soil.

Alternative 3: On-site Containment with Excavation and Off-site Landfill Disposal of Core Sand Waste

Present Worth:	$ 1,360,000
Capital Cost:	$ 1,053,000
Annual O&M:	$ 20,010
Time to Implement	6 to 9 months

This alternative would consist of excavation of the landfill wastes containing PCBs greater than 50 ppm followed by the transport and off-site disposal of these materials at a Toxic Substances Control Act (TSCA)-permitted hazardous waste landfill. The estimated volume of material for off-site disposal is 2000 cubic yards. The remaining impacted soils and sediments, which would include approximately 1600 cy of material > 50 ppm, would be excavated and consolidated in the landfill area. Since these materials would contain PCBs above 50 ppm, this area would be covered with a low permeability cap which would be consistent with Part 360 and equipped with a hydraulic barrier surrounding the limits of the cap, similar to Alternative 2, above. Groundwater monitoring would be performed to insure the cap and leachate/groundwater collection systems are working properly. The capped area would be designated a CAMU and long-term operation and maintenance activities would be required to maintain the cap and drains.

This alternative would also include the removal of the septic tank and associated piping as described in Alternative 2.

Alternative 4: Excavation with Off-site Landfill Disposal

Present Worth:	$ 1,488,000
Capital Cost:	$ 1,485,000

Annual O&M:	$ 2,680
Time to Implement	3 to 6 months

This alternative would consist of excavation of the impacted wastes, soils and wetland sediments followed by the transport and off-site landfill disposal of the material with PCB concentrations greater than 10 ppm. Materials containing PCBs at levels greater than or equal to 50 ppm would be disposed of at a TSCA-permitted hazardous waste landfill. Materials containing PCBs at levels less than 50 ppm, but above 10 ppm, would be disposed of as non-hazardous material at an off-site industrial waste landfill. During the excavation of the landfill wastes, contaminated groundwater which infiltrates into the excavation will be extracted and treated on-site. Confirmatory sampling would be performed at the sides of the excavations to verify remedial boundaries. Surface soils and other materials containing PCB concentrations over 1 ppm, but below 10 ppm, would be consolidated and contoured in the landfill area followed by the placement and grading of a 12 inch topsoil cap with seeding. The other excavated areas would be appropriately restored. Groundwater and surface water monitoring would be conducted for one year following the completion of remedial construction.

This alternative would also include the removal of the septic tank and associated piping as described in Alternative 2.

Alternative 5: Excavation with Off-site Incineration

Present Worth:	$ 9,659,000
Capital Cost:	$ 9,656,000
Annual O&M:	$ 2,680
Time to Implement	3 to 6 months

This alternative would consist of excavation of the impacted soils and sediments followed by the transport of the material with PCB concentrations exceeding 50 ppm off site for treatment at a permitted incineration facility. Materials containing PCBs at levels less than 50 ppm would be disposed of as non-hazardous material at an off-site industrial landfill, rather than incinerated. During the excavation of contaminated material, contaminated groundwater which infiltrates into the excavations will be extracted and treated on-site. Confirmatory sampling would be performed at the sides of the excavations to verify remedial boundaries. Foundry wastes containing PCBs less than 10 ppm would be contoured in place followed by the placement and grading of a 12 inch topsoil cap with seeding. The other excavated areas would then be appropriately restored. Groundwater and surface water monitoring would be conducted for one year following the completion of remedial construction.

This alternative would also include the removal of the septic tank and associated piping as described in Alternative 2.

Alternative 6: Excavation with On-site Low Temperature Thermal (LTTD) Desorption

Present Worth:	$ 3,369,000
Capital Cost:	$ 3,367,000
Annual O&M:	$ 2,680
Time to Implement	9 to 12 months

Soils and sediments containing PCBs above cleanup goals would be excavated and treated on site with a mobile low temperature thermal desorption (LTTD) treatment unit. An estimated 5000 cubic yards of material would be excavated and treated. LTTD utilizes relatively low temperatures to separate organic compounds, including PCBs, from soils. During the excavation of contaminated material, contaminated groundwater which infiltrates into the excavations will be extracted and treated on-site. Confirmatory sampling would be performed at the sides of the excavations to verify remedial boundaries before being backfilled with the treated materials. Foundry wastes containing

PCBs less than 10 ppm would be contoured in place followed by placement of the treated soils to act as a cover for these materials. All backfilled areas would then be graded, covered with topsoil and seeded. Groundwater and surface water monitoring would be conducted for one year following the completion of remedial construction.

This alternative would also include the removal of the septic tank and associated piping as described in Alternative 2.

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375). For each of the criteria, a brief description is provided followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance. SCGs for the Oswego Castings site include soil cleanup goals of 1 ppm PCBs for surface soils, 10 ppm PCBs for subsurface soils, and NYS groundwater standards.

All of the alternatives except the no action alternative can be designed to meet SCGs. The no action alternative would leave PCBs in soils and sediments above cleanup levels and the site would continue to impact groundwater standards. The other alternatives would have to be designed to meet TSCA requirements for handling and management of PCB contaminated materials, and other action specific SCGs.

The removal and treatment of groundwater during the excavation of the waste material under Alternatives 3, 4, and 5 would allow the meeting of SCGs as would the containment of the waste under Alternative 2.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective.

All of the alternatives except the no action alternative would be protective of human health and the environment. No action is not considered to be effective since PCBs would remain on site in their present condition in excess of SCGs.

Of the action alternatives, Alternatives 2 and 3 would be slightly less protective because wastes would remain on site and continued operation and maintenance would be required to insure the cap and collection system remain effective. However, Alternative 3 would be more effective than Alternative 2 since the core sand wastes, which contain the highest PCB concentrations, would be eliminated from the site. Alternatives 4, 5 and 6 are equally protective since contaminated materials would be eliminated from the site.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of

time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

The no action alternative would not involve any construction activities and, therefore, there would be no increased short-term risks. All of the other alternatives would have potential short-term risks to human health and the environment during the construction due to excavation and handling of contaminated media. However, these risks could be reduced with the use of engineering controls such as dust control measures. These risks would be slightly lower for alternative 2 since containment would involve the least handling of the contaminated materials. Alternatives 3, 4 and 5 would involve the transportation of materials off site which would pose some greater short-term risk from potential spills during transport. However, these risks could be minimized by properly covering the materials during hauling and by establishing emergency spill response measures. Alternative 6 would involve on-site treatment and has slightly greater short-term risk than the other alternatives because of the increased handling and on-site processing of contaminated materials.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

The no action alternative would not be effective in the long-term because PCBs would remain on site above SCGs. All of the other alternatives would be reliable and effective in the long-term to varying degrees.

Alternative 2 and 3 would be slightly less effective than the other action alternatives because hazardous wastes would remain on site and long-term monitoring and maintenance of the cap and collection systems would be required to insure they remain effective. However, Alternative 3 would be more effective then Alternative 2 since the core sand wastes material, containing the highest levels of PCBs, would be eliminated from the site. In addition, under these alternatives the landfill area would remain a listed site and would be restricted from future use.

Alternatives 4, 5 and 6 are equally effective over the long-term since contamination above levels of concern would be eliminated from the site through either treatment or removal. Since the contamination would be eliminated from the site, under these alternatives the site could be delisted and the use of the property would be unrestricted.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

The no action alternative would not reduce the toxicity, mobility or volume of contaminants. Alternative 2 would only reduce the mobility of the contamination as contaminants would remain on site, but be contained. Alternative 3 and 4 would reduce the toxicity, mobility and volume of the contamination on site through disposal of materials off site. Alternatives 5 and 6 would be the most effective at reducing the toxicity, mobility and volume, since contamination would be destroyed through treatment by off-site incineration (alternative 5) or on-site separation followed by LTTD (alternative 6).

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative

feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc..

All of the action alternatives are relatively easy to implement since they involve common construction procedures and the equipment and materials required are readily available. However, the no action alternative would be the easiest alternative to implement since no construction activities would take place. Alternatives 4 and 5 would be the next easiest to implement since they would only involve excavation and transport of the contaminated materials to an off-site landfill or an off-site incineration facility. Alternative 2 and 3 would be more difficult to implement than alternatives 1, 4 and 5 because there would be more construction details and administrative requirements in constructing a containment system. In addition, long term monitoring and maintenance would be required to insure that the effectiveness of these alternatives are maintained. Alternative 6 would be the most difficult to implement because on-site treatment would involve a greater degree of waste handling and processing and the operation of a thermal treatment unit on site.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 2.

The no action alternative would be the lowest in cost since it does not involve any construction or operational costs. The estimated costs for the action alternatives range from $834,000 to $9,659,000. Alternative 2 would be the most cost effective alternative followed by Alternative 3. With Alternative 3, less material would have to be contained on site than with Alternative 2 resulting in lower landfill construction costs. However, this reduction would be more than off-set by the cost for off-site landfill disposal of the core sand wastes. Alternative 4, off-site landfill disposal, would be the next highest in cost and would be almost double the cost of Alternative 2. Due to the relatively low volume of impacted material, Alternative 6 would not be cost effective for this site. Alternatives 5 would be the least cost effective due to the relatively high off-site incineration price.

Alternatives 2 and 3 would have the highest operation and maintenance costs since an on-site landfill would have to be monitored and maintained indefinitely. Alternatives 4, 5 and 6 would likely have equal maintenance costs since contaminants would be eliminated from the site to the same degree with each of these alternatives. These costs would likely involve only one year of post remedial groundwater monitoring.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is focused upon after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan are evaluated. A "Responsiveness Summary" will be prepared that describes public comments received and how the Department will address the concerns raised. If the final remedy selected differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 8: SUMMARY OF THE PREFERRED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC is proposing **Alternative 4, Excavation with Off-site Land Disposal**, as the remedy for this site.

This selection is based upon the evaluation of the six alternatives developed for this site. Alternatives 2 and 3 are more cost effective than Alternative 4, however, overall these alternatives are not considered to be as effective. With Alternative 2 (on-site containment), waste materials, containing relatively high levels of PCBs, would remain on site. Therefore, operation and maintenance would be required indefinitely to insure that the containment system remains effective. In addition, the landfill would remain a listed site with use restricted. Alternative 3, which involves the removal and off-site land disposal of the higher contaminated waste material, would be more effective than Alternative 2. However, because a portion of the hazardous wastes would also be contained on-site, this alternative would result in similar use restrictions and long-term maintenance requirements as Alternative 2. Alternative 4 would provide maximum protection and would not consist of any long-term operation and maintenance and associated cost uncertainties. Also, this alternative would allow for the unrestricted use of the property and site delisting. For these reasons, Alternative 4, is considered to provide the best balance of the evaluation criteria.

The no action alternative would not be protective of human health and the environment and would not meet SCGs and, therefore, is not a viable alternative. Alternative 5 (off-site incineration) would be equally protective over the long-term as Alternative 4, however, the high cost for off-site incineration makes this alternative cost prohibitive. Similarly, Alternative 6 (LTTD) would be equally protective, however the higher mobilization and treatment costs associated with the on-site treatment unit, relative to land disposal, are not justified in this case. The removal of waste and the elimination of the septic tank discharge would allow SCGs for groundwater to be achieved for all alternatives.

The estimated present worth cost to implement the proposed remedy would be $1,488,000. The cost to construct the remedy is estimated to be $1,485,000 and the estimated annual operation and maintenance cost for a one year period after construction would be $2,680.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS would be resolved.

2. Excavation of the following contaminated media:

   a.) Surface soils containing PCBs above 1 ppm. This would consist of the removal of 12 inches of surface soil around the landfill area, approximately 700 cubic yards of soil.

   b.) Surface and subsurface waste containing PCBs above 10 ppm. This would consist of the removal of approximately 2000 cubic yards of core sands and foundry waste.

   c.) Sediment in the wetland and drainage swale containing PCBs above 1 ppm. This would consist of the removal of approximately 1000 cubic yards of contaminated sediments, within the area shown on figure 3. Additional samples would be collected from the former cooling

water pond to evaluate if any remediation of the sediments here would be necessary.

d.) Approximately 400 cubic yards of material previously excavated as an IRM from the west gate and loading dock areas would be included in the material to be addressed by the remedy.

3. The collection of confirmatory samples to verify that the remedial objectives have been achieved.

4. Disposal of the excavated materials off-site in permitted landfills. Materials containing PCBs at levels above 10 ppm but less than 50 ppm would be disposed of as non-hazardous material at an off-site industrial waste landfill. This portion of material is estimated to be 1250 cubic yards. Materials containing PCBs at levels greater than or equal to 50 ppm would be disposed of at a TSCA-permitted hazardous waste landfill, with the volume of this material estimated to be 3600 cubic yards.

5. The remaining foundry wastes in the landfill area containing PCBs below 10 ppm, would be consolidated and covered with a 12 inch soil cover and seeded. In addition, excavated surface soils and sediments containing PCBs at levels below 10 ppm would also be consolidated into the foundry waste area prior to placement of the cover.

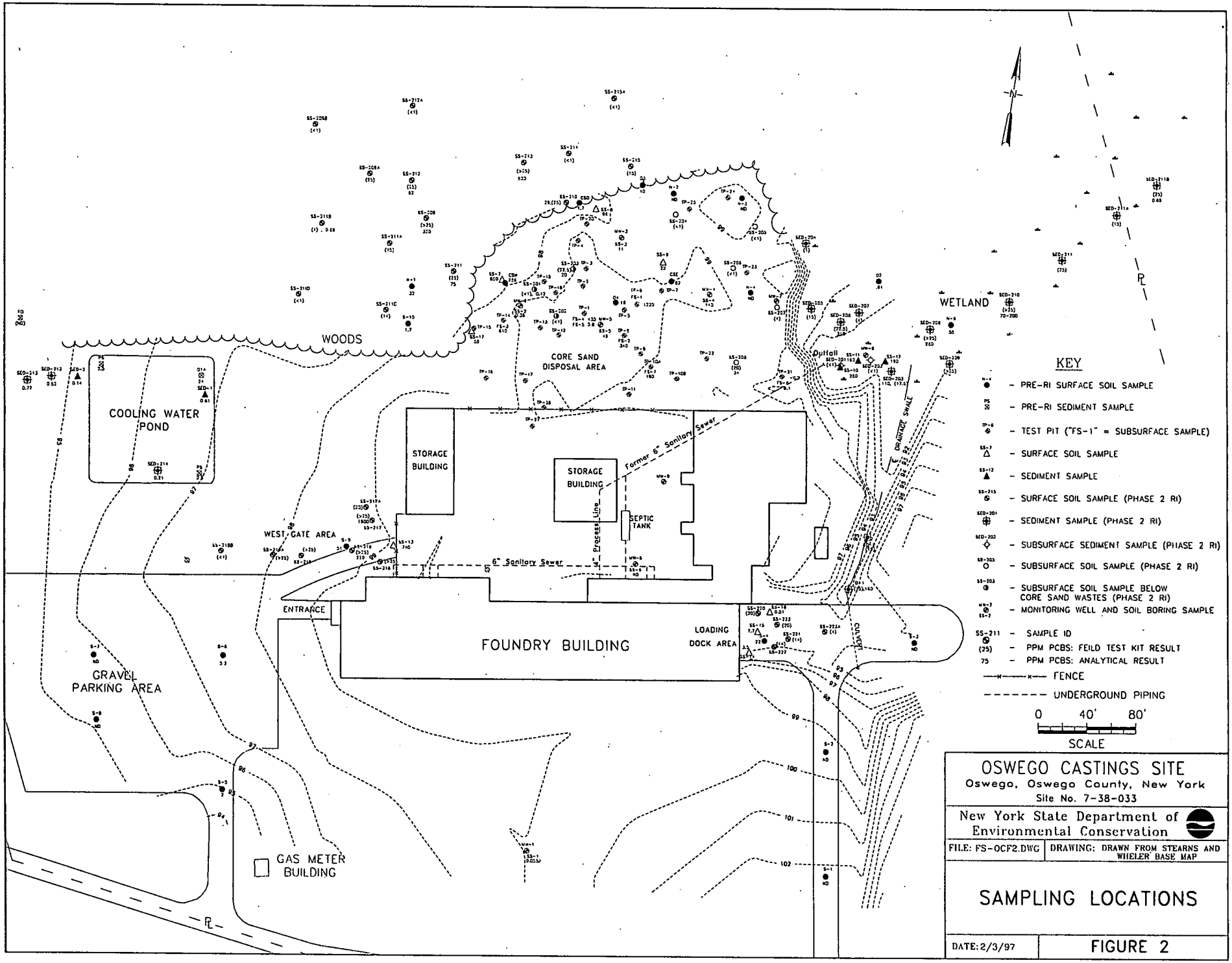
6. Extraction and treatment of contaminated groundwater which infiltrates into the open excavation area during excavation of the landfill wastes and sediments in the wetland. The excavations would be left open, as necessary, to allow sufficient removal of contaminated groundwater before backfilling or recontouring.

7. Restoration of the excavated areas. The wetland would be restored as required, consisting, at a minimum, of grading and seeding. The areas of surface soil excavations would be graded as appropriate.

8. Removal and off-site treatment and disposal, as required by appropriate regulations, of the septic tank and sludge with flushing and/or removal of associated piping.

9. Groundwater and surface water monitoring for one year (two sampling events) following the completion of remedial construction.

10. It is anticipated that the site would be eligible for delisting from the Registry of Hazardous Waste Disposal Sites following one year of monitoring.



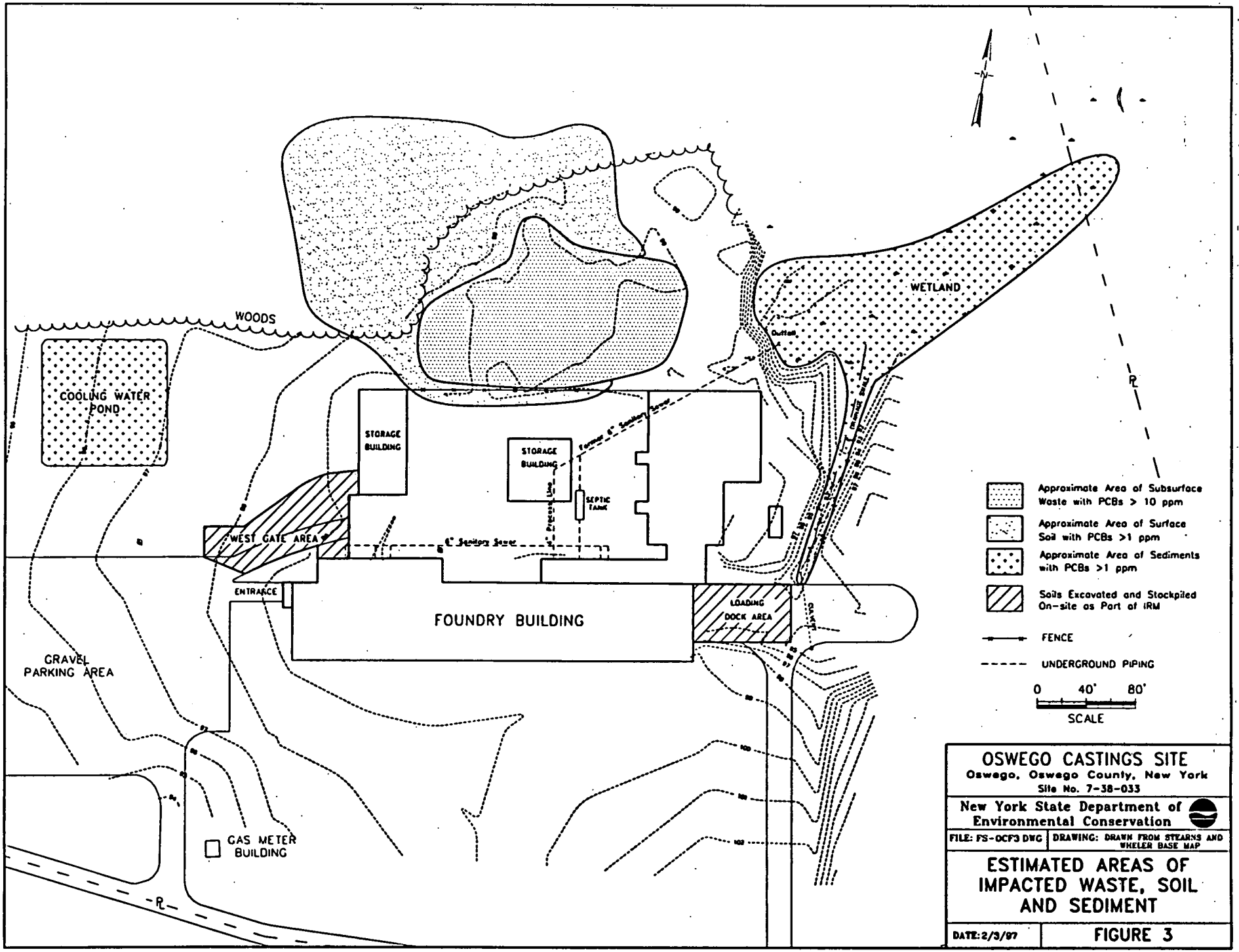
OSWEGO CASTINGS SITE
Oswego, Oswego County, New York
Site No. 7-38-033

New York State Department of Environmental Conservation

FILE: FS-OCF2.DWG | DRAWING: DRAWN FROM STEARNS AND WHEELER BASE MAP

SAMPLING LOCATIONS

DATE: 2/3/97 | FIGURE 2



OSWEGO CASTINGS SITE
Oswego, Oswego County, New York
Site No. 7-38-033

New York State Department of Environmental Conservation

FILE: FS-OCF3.DWG | DRAWING: DRAWN FROM STEARNS AND WHEELER BASE MAP

ESTIMATED AREAS OF IMPACTED WASTE, SOIL AND SEDIMENT

DATE: 2/3/97 | FIGURE 3

Table 1
Summary Table of Analytical Data
Oswego Castings Site

Media	Location	Compound	Concentration Range ppm (* = ppb)	SCG ppm (* = ppb)	Frequency of Exceeding SCGs
Waste/Fill	Core Sands	PCB	190-1200	10	5 of 5
	Foundry Waste	PCB	< 1-140	10	7 of 12
Surface Soils	Northeast of Core Sands	PCB	0.68-800	1	9 of 16
	West Gate Area	PCB	< 1-740	1	7 of 8
	Loading Dock Area	PCB	0.51-7.7	1	7 of 8
Sediments	Wetland	PCB	0.68-280	0.14	14 of 14
	Pond	PCB	0.21-24	0.14	5 of 5
Sludge	Septic Tank	PCB	230-1700	10	2 of 2
		VOC	464	10	1 of 1
Groundwater	Disposal Area	PCB	0.8-4.6/<0.05-1.4*	0.1*	4 of 4
	Septic Tank Area	PCB	<0.05-1.2*	0.1*	1 of 2
		VOC	1-217*	5*	1 of 2
	Wetland	PCB	11*	0.1*	1 of 1
		VOC	2*	5*	0 of 1

Notes:
1. Data in this table is from the Remedial Investigation except for two of the pond samples which are pre-RI.
2. * indicates value is in ppm; all other values are in ppb.
3. VOC = Total Volatile Organic Compounds.
4. SCGs = Standards, Criteria and Guidance.
5. The SCG for sediments of 0.14 ppm is a preliminary goal from the NYSDEC's Technical Guidance for Screening contaminated Sediments.

Table 2
Oswego Castings Site
Summary of Remedial Alternative Costs

Alternative	Capital Cost	Annual O&M	Total Present Worth
1. No Action	$0	$0	$0
2. On-site Containment	$526,000	$20,010*	$834,000
3. On-site Containment with Off-site Landfill Disposal of Core Sand Waste	$1,053,000	$20,010*	$1,360,000
4. Off-site Landfill Disposal	$1,460,000	$2,680**	$1,463,000
5. Off-site Incineration	$9,399,000	$2,680**	$9,402,000
6. On-site LTTD Treatment	$3,367,000	$2,680**	$3,370,000

* For Alternatives 2 and 3 the annual O&M is over a 30 year period. Present worth based on 5% discount rate.
** For Alternatives 4, 5 and 6 the annual O&M is for a 1 year period.

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Office of Public Health II University Place Albany, New York 12203-3399

Barbara A. DeBuono, M.D., M.P.H.
Commissioner of Health

Dennis P. Whalen
Executive Deputy Commissioner

February 11, 1997

Mr. Michael O'Toole, P.E., Director
NYS Dept. of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road, Room 212
Albany, NY 12233

RE: Proposed Remedial Action Plan
Oswego Castings
Oswego (C), Oswego County
Site ID #738033

Dear Mr. O'Toole:

My staff have reviewed the Proposed Remedial Action Plan (PRAP) for the Oswego Castings site. The PRAP provides for the excavation and removal, for off-site disposal in permitted landfills, of PCB contaminated waste, soil, and sediments. PCB contamination below the subsurface clean-up level will be addressed by consolidation of the contaminated media into the existing on-site landfill, which will be capped with 12 inches of soil and seeded. Groundwater exposed by remediation excavations and found to be contaminated will be extracted and treated. The septic tank will be removed for off-site treatment and disposal. Process and sewer piping will be cleaned-in-place and/or removed for off-site treatment and disposal.

With this information, I find the PRAP protective of public health and I hereby concur with the Proposed Remedial Action Plan.

Sincerely,

G. Anders Carlson, Ph.D.
Director
Bureau of Environmental Exposure
Investigation

#70410245

cc: Dr. N. Kim
Mr. G. Litwin/FILE
Mr. R. Heerkens - Syracuse Area Office
Mr. R. Schick - DEC - Central Office
Mr. D. Camp - DEC - Central Office
Mr. C. Branagh - DEC - Region 7
Mr. E. Walsh - Oswego County Health Dept.

TD - can I get cc's of these PRAPs + Fact Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233-7010

John P. Cahill
Acting Commissioner

M E M O R A N D U M

TO: Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

FROM: Edward R. Belmore, Director
Bureau of Western Remedial Action

Edward R Belmore

RE: **PRAP Briefing: Oswego Castings Site, site no. 7-38-033**

DATE: JAN 17 1997

Attached for your review is a draft copy of the Proposed Remedial Action Plan (PRAP) and PRAP Summary for the Oswego Castings Site. This PRAP proposes excavation of PCB contaminated surface and subsurface soils, waste materials, and wetland sediments with off-site disposal at a hazardous waste or solid waste landfill, as appropriate.

A briefing has been scheduled with you and Tom for January 28 at 9:30 am. The Project Manager for this site is David Camp of Remedial Section A.

Attachments

cc: w/ att.T. Quinn

cc: w/o att. S. Ervolina
R. Schick
D. Camp

prapbrf.osc
RWS/td

FILE COPY

New York State Department of Environmental Conservation

MEMORANDUM

TO: E. Belmore, BWRA and S.Ervolina, BERA, DER
FROM: Robert W. Schick, Bureau of Western Remedial Action, DER
SUBJECT: Oswego Castings Site, Oswego County, Site No. 7-38-033

DATE: January 13, 1997

Attached for your review is a draft copy of the Proposed Remedial Action Plan (PRAP) for the Oswego Castings Site. Also attached is a PRAP Summary Sheet for your information. A PRAP briefing with Mike O'Toole has been scheduled for **9:30 am, on Tuesday, January 28, 1997.** If you have any questions based on your review, please contact the Project Manager, Dave Camp, or myself at 457-4343.

Also, we have **rescheduled** the PRAP briefing with Mike on the Mr. C's Dry Cleaners site from January 28, to January 23, 1997 at 11 a.m.

cc: D. Camp

Attachment

OSWEGO CASTINGS - PRAP/KOD

Globe-Weis®

General Purpose File Folders

62

Reorder No. 2221/3

File on eDOCs X Yes ____ No
Site Name Oswego casting
Site No. 738033
County Oswego
Town Oswego
Foliable X Yes ____ No
File Name ~~Prop~~ 1996-10-1 Prop- ROD
Scanned & eDOC ____