CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 98-025

ADOPTION OF SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER NO. 87-169 FOR:

KEMWATER NORTH AMERICA
USS-POSCO INDUSTRIES
PITTSBURG PLANT
PITTSBURG, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location**: Kemwater North America (hereinafter called the discharger) owns and operates an approximately 11-acre ferrous and ferric chloride manufacturing plant (hereinafter called the facility) located at 1401 Loveridge Road within the City of Pittsburg, Contra Costa County (Figure 1). The manufactured product is primarily used as coagulants in wastewater treatment facilities.

2. **Purpose:** This Order requires cleanup of wastes discharged into waters of the State that create or threaten to create a condition of pollution or nuisance under the authority of Water Code Section 13304. In addition, the Order requires closure of three existing surface impoundments in compliance with the requirements of Title 27, Chapter 3, Subchapter 5, Article 3, and updating of the site's groundwater and surface water monitoring program.

3. **Site History**: Imperial West Chemical Company (IWC) operated the site on property leased from USS-POSCO Industries property from 1978 until the site was purchased by IWC in 1995. IWC manufactured ferrous chloride and ferric chloride from scrap steel and pickle liquor piped in from the nearby USS-POSCO Industries plant. The use of pickle liquor was discontinued in 1991. In 1995 IWC's name was changed to Kemwater North America, which currently operates as a subsidiary under a company called Pioneer Company Incorporated (Pioneer).

   Kemwater North America continues to operate the facility manufacturing ferrous chloride and ferric chloride from scrap steel and hydrochloric acid. Ferrous chloride is reacted with iron oxide to maximize the ferrous chloride in solution. The concentrated ferrous chloride is (1) sold to wastewater treatment facilities, and (2) used in the production of ferric chloride.

   Three surface impoundments, pond A, pond B, and pond C as shown in Figure 2, were used for storage. Ponds A and B were used to store and concentrate the waste pickle liquor. Pond C was used to store and concentrate ferrous chloride product. The ponds

were constructed on the property as detailed in the 1985 Site Hydrogeological Assessment Report (HAR) prepared by Brown and Caldwell Consulting Engineers. Ponds A and B are no longer used for storage. Pond A has been out of service for over eight years, and was reported closed to the Regional Board staff in 1992. Pond B has been out of service since 1987 when a leak was identified in the pond liner. Pond C is currently used for surface water runoff storage and secondary containment for the aboveground process tanks at the site.

4. **Named Dischargers**: Kemwater North America/Pioneer as current owner and operator of the site is identified as the primary discharger. Kemwater/Pioneer has indicated their willingness to comply with the Site Cleanup Requirements.

   USS-POSCO Industries is identified as secondarily responsible for compliance with the Site Cleanup Requirements. As a former property owner of the facility, USS-POSCO knowingly piped pickle liquor and disposed of scrap metal at the facility. USS-POSCO never operated the facility or the surface impoundments, however they did have control over the piped discharges to the facility.

5. **Regulatory Status**: The Board adopted waste discharge requirements Order No. 87-169, on December 16,1987 for the site's three active surface impoundments. The Order required the discharger to submit additional information regarding site hydrogeology and iron concentrations in soils near the surface impoundments. The discharger has fully complied with the Order. The Order did not require closure of the ponds or compliance with a self-monitoring program.

6. **Site Hydrogeology**: The site is situated in the Pittsburg Basin, which is composed of 20 to 30 square miles of Pleistocene to recent-age river deposited alluvial plains. The upper 60 feet of sediments beneath the site consist of vertically and laterally discontinuous clays and silts with interbeded sand lenses. These sediments, which comprise the uppermost hydrogeologic unit, have been characterized as an aquitard. Four additional hydrogeologic units underlie the aquitard: the upper sand aquifer, barrier clay, the main sand aquifer, and basement clay. The elevation of the site is about 35 feet above mean sea level and slopes gently to the north. The closest surface water drainages are the Contra Costa Canal Spillway, Kirker Creek and New York Slough located about 3/4 mile east and north of the Site, respectively.

7. **Remedial Investigation**: Remedial investigations (1985 HAR and groundwater monitoring data) conducted at the site indicate the site groundwater has been impacted by past discharges from the ponds. The following table identifies constituents detected in the site's groundwater that are above applicable groundwater quality objectives.

Constituent	Concentration mg/l (maximum)	Well No.	Groundwater Quality Objectives (mg/l)	
Chloride	5,100	P-12	500	SS
Iron	180	P-12	0.3	SS
Manganese	56	P-10	0.05	SS
Nickel	0.60	P-12	0.01	SP
pH	Approx. 3	MW-2 & P-12	6.5 –8.5	BP

Notes:

- Several volatile organic compounds (VOC's) have been detected in MW-2, P-3, P-5, P-6, P-12, P-13, P-15, and P-17. Many of the VOC's detected in the site's groundwater have likely migrated to the site from nearby offsite source(s).
- Wells MW-2 and P-12 are pumping wells, which the discharger has reportedly observed an ongoing decrease in contaminant concentrations.
- SS = State Secondary MCL, BP= Basin Plan, SP= State Primary MCL

8. **Interim Remedial Measures:** Two pumping wells, P-12 located adjacent to Pond B, and MW-2 located within the process area, continuously extract ferrous chloride and low pH impacted groundwater. Well P-12 has been in operation since 1988 and MW-2 has been pumping since 1993. Currently, the extracted groundwater is recycled through plant processes.

9. **Cleanup Plan:** A formal cleanup and closure plan which documents compliance with Title 27, Section 21400, California Code or Regulations, for the site's surface impoundments has not been developed. Pond A had the liner removed, certain contaminated soil under the liner removed, and the pond bottom was graded after mixing with limestone. Ponds A, B, and C although inactive have the potential to continue to release additional pollutants to groundwater.

10. **Adjacent Sites:** The properties immediately to the north and south of the Site were owned by United States Steel Corporation (USX) until they were sold in 1989. Both properties are currently and jointly held by Contra Costa Industrial Park and Antioch Marina Business Park. Prior to the sale, a portion of the northern property was apparently leased by USX to a firm known as NuBulk that transported organic chemicals. NuBulk is the most likely source of VOC's detected in groundwater beneath the northwestern portion of the site.

11. **Basis for Cleanup Standards:**

a. **General**: State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

b. **Beneficial Uses**: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

State Board Resolution No. 88-63, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of <u>groundwater</u> underlying and adjacent to the site:

- Municipal and domestic water supply
- Industrial process water supply
- Industrial service water supply
- Agricultural water supply
- Freshwater replenishment to surface waters

The Basin Plan designates the following beneficial uses of Suisun Bay and contiguous <u>surface waters</u> near the site:

- Water contact recreation
- Non-contact water recreation
- Wildlife habitat
- Preservation of Rare and Endangered Species
- Estuarine habitat

- Fish migration and spawning
- Industrial service supply
- Navigation
- Commercial and sport fishing
- Municipal and Domestic Supply

12. **Preliminary Cleanup Goals**: The discharger will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remedial investigation, interim remedial actions, and the draft cleanup plan. Pending the establishment of site-specific cleanup standards, the following preliminary cleanup goals should be used for these purposes:

    a. Groundwater: Applicable water quality objectives (e.g. maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, risk-based levels (e.g. drinking water equivalent levels).

    b. Soil: Where applicable, 1mg/kg total volatile organic compounds (VOCs), 10 mg/kg total semi-volatile organic compounds (SVOCs), and background concentrations of metals.

13. **Reuse or Disposal of Extracted Groundwater**: Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible. The extracted groundwater from the two extraction wells, MW-2, and MW-12, are used for process make up water at the plant.

14. **Authority and Basis for 13304 Order**: The discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance. This Order has, therefore, been prepared for Board adoption pursuant to Section 13304 of the California Water Code.

15. **Cost Recovery**: Pursuant to California Water Code Section 13304, the discharger is hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.

16. **CEQA**: This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

17. **Notification**: The Board has notified the discharger and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.

18. **Public Hearing**: The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner, which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.

2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharger shall remediate soil and groundwater contamination, which actually or threatens to adversely affect the beneficial uses of the waters of the State.

C. PROVISIONS

1. a. The discharger shall submit a technical report, acceptable to the Executive Officer, which evaluates the influence on groundwater levels and hydraulic control/capture of the ferrous chloride plume near the monitoring/extraction wells P-12 and MW-2. The report is to include recommendations on additional corrective measures to contain the plume as needed.
   Report Due: September 29, 1998

   b. In the event that the plume of contamination has extended beyond the influence of wells P-12 and MW-2, the discharger shall submit a remediation plan and implementation schedule, acceptable to the Executive Officer.
   Report Due: November 27, 1998

2. The discharger shall submit a closure plan, acceptable to the Executive Officer, for the three surface impoundments (Pond A, Pond B and Pond C) in compliance with the requirements of Title 27, Chapter 3, Subchapter 5, Article 3. The plan must include a deadline for complete closure, and implementation of the proposed deadline must not exceed six months after approval of the closure plan submittal. The plan shall propose cleanup levels for both soil and groundwater at the in accordance with Finding 12.
Plan Due: September 4, 1998

3. The discharger shall submit As-Built construction design plans and an Operation and Maintenance Plan acceptable to the Executive Officer for the areas formerly occupied by Pond A, Pond B, and Pond C.
Plans Due: March 2, 1999

4. **Delayed Compliance**: If the discharger is delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the discharger shall promptly notify the Executive Officer and the Board may consider revisions to this Order.

5. **Good O&M**: The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.

6. **Cost Recovery**: The discharger shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

7. **Access to Site and Records**: In accordance with California Water Code Section 13267(c), the discharger shall permit the Board or its authorized representative:

    a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

    b. Access to copy any records required to be kept under the requirements of this Order.

    c. Inspection of any monitoring or remediation facilities installed in response to this Order.

d. Sampling of any groundwater or soil, which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.

8. **Self-Monitoring Program**: The discharger shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.

9. **Contractor / Consultant Qualifications**: All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, California registered civil engineer, or equivalently qualified Pioneer staff which is acceptable to the Board.

10. **Lab Qualifications**: All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).

11. **Document Distribution**: Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
    a. City of Pittsburg
    b. County of Contra Costa
    The Executive Officer may modify this distribution list as needed.

12. **Reporting of Changed Owner or Operator**: The discharger shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.

13. **Reporting of Hazardous Substance Release**: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Regional Board by calling (510) 286-1255 during regular office hours (Monday through Friday, 8:00 to 5:00).

    A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

    This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

14. **Rescission of Existing Order**: This Order supersedes and rescinds Order No. 87-169

15. **Periodic Review**: The Board will review this Order periodically and may revise it when necessary.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 15, 1998.

Loretta K. Barsamian
Executive Officer

Attachments:
Figure 1-Site Location Map
Figure 2-Surface Impoundments Location Map
Self-Monitoring Program

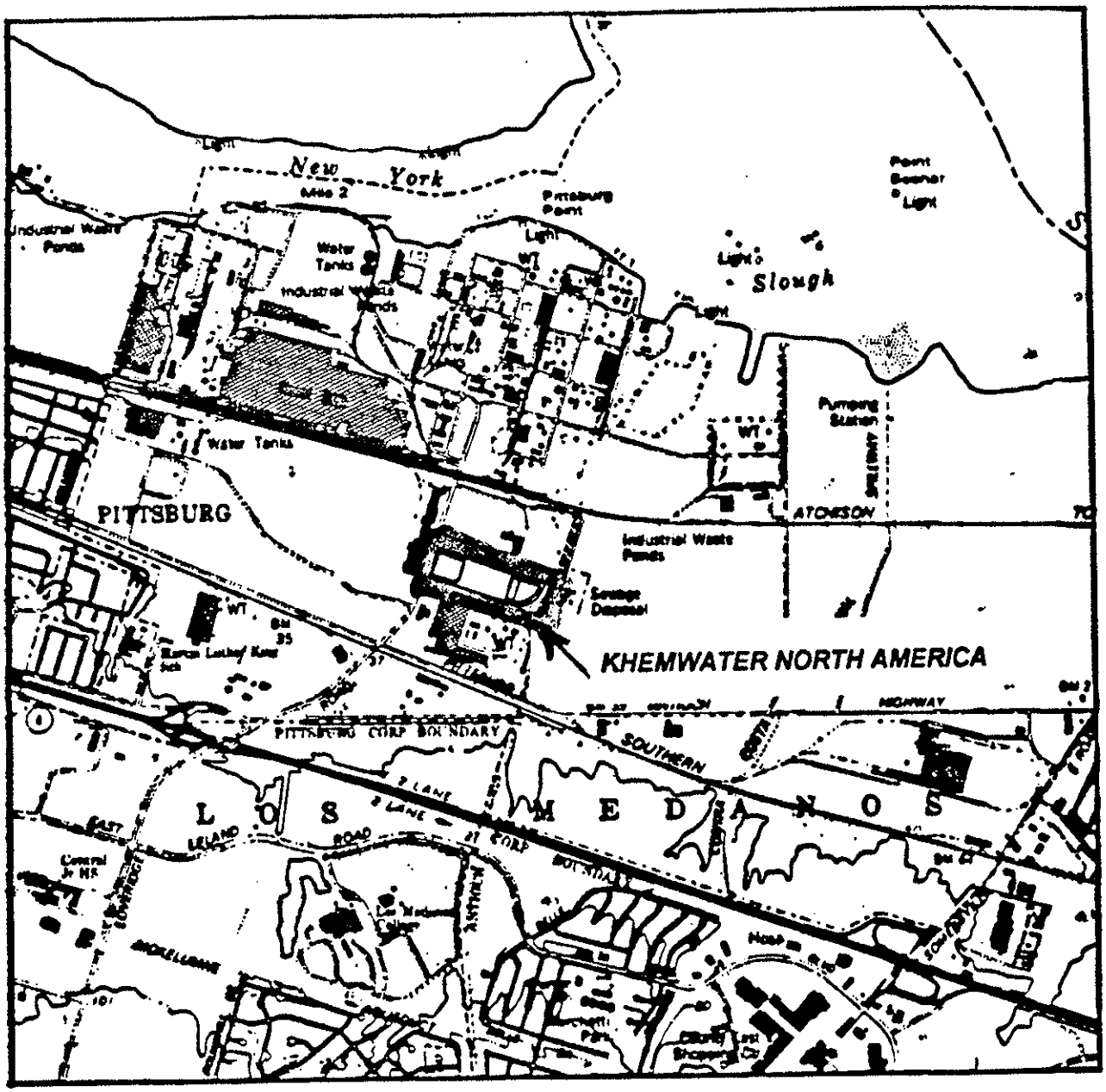

Figure 1. Site Location Map

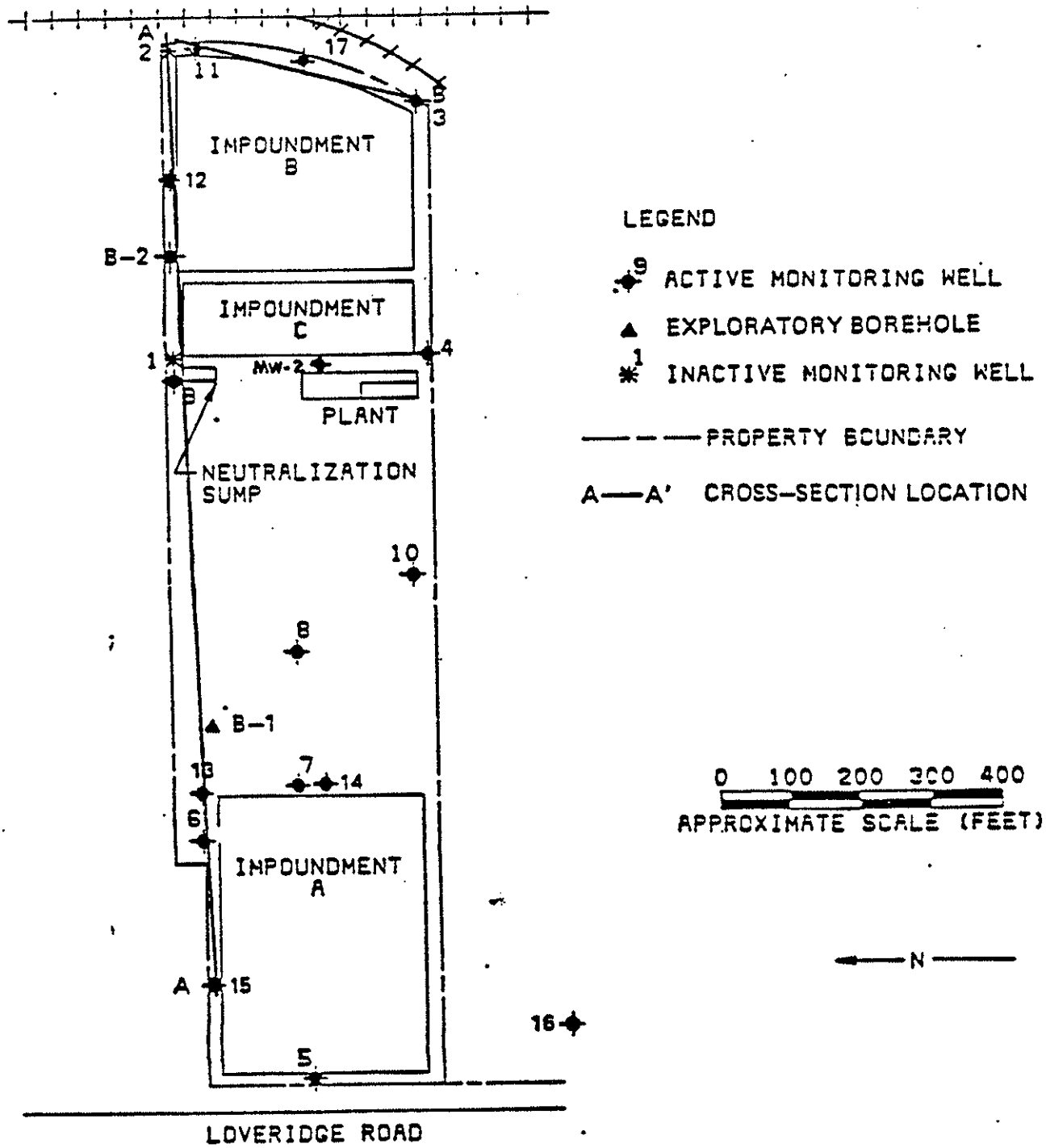

FIGURE 2
SURFACE IMPOUNDMENT LOCATION MAP

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:
KEMWATER NORTH AMERICA
USS-POSCO INDUSTRIES
PITTSBURG PLANT

for the property located at

1401 LOVERIDGE ROAD
PITTSBURG
CONTRA COSTA COUNTY

1. **Authority and Purpose**: The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 98-025 (site cleanup requirements).

2. **Monitoring**: The discharger shall measure groundwater elevations semiannually in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the attached Table 1.

3. **Semiannual Monitoring Reports**: The discharger shall submit semiannual monitoring reports to the Board no later than 30 days following the end of the monitoring period. The report due dates are as follows:

Summer/Fall	Due: November 30th
Winter/Spring	Due: May 30th
Annual	Due: November 30th. The annual report can be combined with the summer/fall semiannual report.

The reports shall include:

a. Transmittal Letter: The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

b. Groundwater Elevations: Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map shall be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the annual (summer/fall) report each year.

c. Groundwater Analyses: Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the annual report (summer/fall) each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).

d. Status Report: The semi annual reports shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following quarter.

4. **Violation Reports**: If the discharger violates requirements in the Site Cleanup Requirements, then the discharger shall notify the Board office by telephone as soon as practicable once the discharger has knowledge of the violation. Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five working days of telephone notification.

5. **Other Reports**: The discharger shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.

6. **Record Keeping**: The discharger or his/her agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.

7. **SMP Revisions**: Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian Executive Officer, hereby certify that the foregoing Self-Monitoring and Reporting Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 98-025

2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

Date Ordered: April 15, 1998

Loretta K. Barsamian
Executive Officer

Table 1: Well Monitoring Schedule

Well #	Freq.	Metals	Chloride	VOCs	pH	Specific Conduct.	Hardness
P-3	SA	X	X	-	X	X	X
P-4	SA	X	X	-	X	X	X
P-5	SA	X	X	-	X	X	X
P-6	SA	X	X	-	X	X	X
P-7	SA	X	X	-	X	X	X
P-8	SA	X	X	-	X	X	X
P-9	SA	X	X	-	X	X	X
P-10	SA	X	X	-	X	X	X
P-11	SA	X	X	-	X	X	X
P-12	SA	X	X	-	X	X	X
P-13	SA	X	X	-	X	X	X
P-14	SA	X	X	-	X	X	X
P-15	SA	X	X	-	X	X	X
P-16	SA	X	X	-	X	X	X
P-17	SA	X	X	-	X	X	X
P-18	SA	X	X	-	X	X	X
MW-2	SA	X	X	X	X	X	X

Key: SA = Semiannually
Metals include: copper, iron, nickel, zinc, and manganese
VOCs by EPA Method 8260

The discharger shall sample any new monitoring or extraction well quarterly and analyze groundwater samples for the same constituents as shown in the above table. The discharger may propose changes in the above table; any proposed changes are subject to Executive Officer approval.