

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 99-014

ADOPTION OF SITE CLEANUP REQUIREMENTS FOR:

MILLENNIUM HOLDINGS, INC.

for the properties located at

**750-50th AVENUE AND 5050, 5051, AND 5200 COLISEUM WAY
OAKLAND
ALAMEDA COUNTY**

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

1. **Site Location:** The subject properties (the "Site") are located at 750-50th Avenue and 5050, 5051, and 5200 Coliseum Way. They are in an industrial area of Oakland, approximately one half mile east of San Leandro Bay. The Site is approximately 15 acres in size and bounded by a Southern Pacific Railroad to the northeast, the 54th Avenue Creek (an open drainage ditch) to the south, an open stormwater drainage channel to the west, and the Courtland Creek Culvert and the Second Line G Culvert underneath 50th Avenue to the northwest.
2. **Site History:** The Site has a long history of industrial usage. From the mid-1800s to about 1928, 5050 Coliseum Way was used for the retorting of pyrite ores for the production of sulfuric acid. The ore reduction process resulted in the deposition of approximately 15,000 cubic yard of pyrite slag and cinders onto the 5050 and 5200 Coliseum Way properties.

A lithopone (paint pigment) manufacturing facility, operated by the Chemical and Pigment Company, occupied the properties at 750-50th Avenue and 5050 Coliseum Way from approximately 1926 to 1963. Processing residuals from lithopone production included various forms of insoluble sulfate residuals such as barium sulfate and zinc sulfate. These residuals were deposited as both dry filter cake and slurry deposits on portions of the 5051 and 5200 Coliseum Way properties.

5050 Coliseum was referred to as the Volvo-GM site because heavy truck servicing facilities were built on this property in 1974 and operated by Volvo GM Heavy Truck Corporation. Currently, there is a large warehouse-type building which contains office space and large service bays to maintain heavy trucks and other large vehicles for the City of Oakland. The building is surrounded by a concrete apron, and the remainder of this property is covered with asphalt.

Buildings associated with the former Volvo-GM truck maintenance facility are also located at 750-50th Avenue. Volvo-GM sold the 750-50th Avenue and 5050 Coliseum Way properties to Millennium Holdings, Inc. (Millennium) in early 1997.

Previous manufacturing and processing structures located at the 5200 Coliseum Way property included aboveground tar storage tanks, a tar storage building, and tar drum storage. Currently, Coliseum Storage Associates (CSA) owns and operates this property as a mini-storage facility. Millennium has agreed to undertake the responsibility of investigating and remediating the 5200 Coliseum Way property because its subsurface contamination is the result of former operations on 750-50th Avenue and 5050 Coliseum Way.

5051 Coliseum Way is currently divided into a north area and a south area by a cyclone fence. The area north of the fence is unpaved and previously was used by Pacific Gas and Electricity Company (PG&E) for temporary storage of construction materials. The area south of the fence is paved and used for weekend parking. PG&E sold this property to Millennium in 1998.

3. **Named Discharger:** Millennium Holdings, Inc. is named the discharger because it is the owner of the 750-50th Avenue, and 5050 and 5051 Coliseum Way properties. Volvo-GM (former owner of 750-50th Avenue and 5050 Coliseum Way) and PG&E (former owner of 5051 Coliseum Way) are not named as dischargers in this order for the following reasons: Millennium Holdings, Inc. has adequate financial resources to comply with this order; Millennium has complied with prior Board requests; Millennium has requested that Volvo-GM and PG&E not be named in this order. However, Volvo-GM and PG&E may be named in future if these circumstances change.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the Site where it entered or could have entered waters of the state, the Board will consider adding that party's name to this order.

4. **Regulatory Status:** This site is currently not subject to Board Order.
5. **Site Hydrogeology:** The Site is located in the East Bay Plain Basin. Soils immediately underlying pavement on- and off-site consist of clayey to silty sand with gravel fill material extending to approximately 3 to 7 feet below ground surface (bgs). Below the cap fill material is a layer of slag waste material. Bay Mud consisting of silty clay, clayey sand, silt, and thin bedded sands underlies the waste slag materials to a depth of 60.5 feet bgs, the total depth investigated.

Groundwater is first encountered at approximately 7 feet bgs. It generally flows west towards San Leandro Bay at a gradient of 0.015 feet per foot. Shallow

aquifers of limited extent located throughout the East Bay Plain are often perched, discontinuous, and unconfined.

6. **Remedial Investigation:** Significant amount of pollutants exists in the subsurface on-site. The historical maximum soil concentrations of the primary pollutants for each of the four properties are shown in Table I below:

Table I. Maximum Soil Concentration (mg/kg) by Property

Constituent	750-50th Avenue & 5050 Coliseum Way	5051 Coliseum Way	5200 Coliseum Way
Arsenic	18,000	1,500	890
Barium	92,000	100,000	190,000
Cadmium	1,400	2,100	230
Lead	24,000	42,000	23,000
Zinc	60,000	54,000	84,000

The presence of the sulfide rich slag and cinders has given rise to a localized condition of low pH shallow groundwater on the 5050 Coliseum Way property. The acidic groundwater has solubilized a suite of metals, including zinc, cadmium, and barium. The groundwater conditions are as follows:

- An extensive arsenic plume exists in the groundwater with the highest concentration of 24 ppm underneath 5200 Coliseum Way.
- Barium in groundwater is mostly confined to 5200 Coliseum Way, with a maximum concentration of 470 ppm. Because there is a localized groundwater gradient toward the southeast on this property, the barium plume could possibly have extended southeast beyond the 54th Avenue Creek Culvert. Additional groundwater samples southeast of the culvert need to be collected in order to determine the southward extent of this barium plume.
- The cadmium plume underneath 5050 Coliseum Way has a maximum concentration of 43 ppm and extends to the Second Line G Culvert, underneath 50th Avenue.
- The zinc plume has a maximum concentration of 17,000 ppm. This plume has extended all the way to 5051 Coliseum Way. The micro-gradient for groundwater in the area where 50th Avenue intersects Coliseum Way needs to be investigated. The latest sampling showed that zinc concentrations in groundwater declined significantly in this area within a distance of less than 150 feet. Having a better understanding of the local hydrogeologic conductivity would shed light on the fate and transport of this pollutant in this area. This is important because this area is adjacent to the culverts along 50th Avenue.

- A limited plume of TPH-g straddles parts of the 5050, 5051, and 5200 Coliseum Way properties. The current maximum concentrations is measured at 13 ppm. Associated BTEX products follow a similar distribution, with benzene found underneath 5200 Coliseum Way. The maximum concentration is 0.15 ppm. This hydrocarbon contamination is attributed to the former tar storage, distillation facility, and associated piping located on the 5200 Coliseum Way property.

A surface water study of the stormwater drainage channel and the culverts has yielded concentrations of heavy metals at or near the Basin Plan objectives. It should be noted that each of these stormwater sewers drains a large industrial area in the City of Oakland. Additional samples should be taken from upstream so that off-site contributions can be estimated. Moreover, samples need to be collected from the "weep holes" near MW-4 on 5051 Coliseum Way. These weep holes have been observed to visibly drain into the open channel. Samples gathered at these locations, together with others, can be used to calculate mass loading of the heavy metals from the subject site for estimating the degree of adverse impact that the subsurface contamination is exerting on the surface water.

Measurements for total dissolved solids (TDS) in the groundwater were performed at several locations throughout the Site. The TDS levels range from a low of 620 ppm to a high of 170,000 ppm. The areas with high TDS appear to border upon the stormwater drainage channels and are therefore subject to salt water influences. An area-weighted TDS average for the entire Site needs to be calculated in order to determine the appropriate cleanup standards.

7. **Interim Remedial Measures:** In 1963, the entire lithopone manufacturing facility was sold and one year later all buildings were demolished. No remediation or risk management of the subsurface contamination has been performed so far.
8. **Adjacent Sites:** A PG&E site at 4930 Coliseum Way is adjacent to and northwest of the Site. On this property, near-surface soils have been impacted by lead thought to have originated from maintenance over 50 years ago which included sandblasting and painting with lead-based paint on a former above-ground natural gas holder tank. The tank was dismantled in May 1990, which may also have contributed to elevated lead levels in the soil. Groundwater did not appear to be affected by the lead found in the soil. PG&E proposed to cap the soils with asphalt, accompanied by appropriate deed restrictions limiting use of the site. Alameda County Health Care Services approved the PG&E proposal on May 7, 1992.
9. **Basin Plan:** 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.

The potential beneficial uses of groundwater underlying and adjacent to the site include:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply
- e. Freshwater replenishment to surface waters

At present, there is no known use of groundwater underlying the site for the above purposes.

The existing and potential beneficial uses of the San Leandro Bay include:

- a. Industrial process supply or service supply
- b. Water contact and non-contact recreation
- c. Wildlife habitat
- d. Fish migration and spawning
- e. Navigation
- f. Estuarine habitat
- g. Shellfish harvesting
- h. Preservation of rare and endangered species

10. **Other Board Policies:** 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.

Board Resolution No. 89-39, "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.

11. **State Water Board Policies:** State Water 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. Given

the Board's past experience with groundwater pollution cases of this type, it is unlikely that background levels of water quality can be restored. This initial conclusion will be verified when a cleanup plan is prepared. This order and its requirements are consistent with Resolution No. 68-16.

State Water 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.

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: 1 mg/kg total volatile organic compounds (VOCs), 10 mg/kg total semi-volatile organic compounds (SVOCs), and background concentrations of metals.
13. **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.
14. **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.
15. **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.
16. **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.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger (or his 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. TASKS

1. **HUMAN HEALTH RISK ASSESSMENT**

COMPLIANCE DATE: May 17, 1999

Submit a Final Human Health Risk Assessment acceptable to the Executive Officer incorporating Board staff comments on the February 24, 1999, *Draft Human Health Risk Assessment* for the Site.

2. **COMPLETION OF REMEDIAL INVESTIGATION**

COMPLIANCE DATE: May 17, 1999

Submit a technical report acceptable to the Executive Officer documenting the completion of additional remedial investigation proposed in the January 11, 1999, workplan (Schedule of Proposed Investigation Activities). These activities include:

- a. Conducting a tracer study of the hydrogeologic conductivity between well, CW-13, and the downgradient CW-12 and CW-10.
- b. Collecting water samples from the "weep holes" along the cement lined stormwater channel in the vicinity of MW-4.
- c. Collecting surface water samples along the Second Line G Culvert at locations upstream and next to the Site.
- d. Calculating mass loading rates to surface water for the heavy metals using available data.
- e. Collecting additional groundwater samples southeast of the 54th Avenue Creek that parallels the 5200 Coliseum Way property.

- f. Calculate an area-weighted TDS average in the groundwater for determining cleanup standards.

3. **REMEDIATION / RISK MANAGEMENT PLAN**

COMPLIANCE DATE: July 30, 1999

Submit a technical report acceptable to the Executive Officer containing:

- a. A summary of remedial investigation results (including an historical pollutant trend analysis) and risk assessment findings
- b. Feasibility study evaluating alternative remedial and risk management actions
- c. Recommended remedial and risk management actions and cleanup standards
- d. A risk management plan with seasonal monitoring
- e. Implementation tasks and time schedule

Item b should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.

Items a through c should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

Item c should consider the preliminary cleanup goals for soil and groundwater identified in finding 12 and should address the attainability of background levels of water quality (see finding 11).

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 revision to this Order.

C. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).

2. **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.
3. **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.
4. **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.
5. **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, or a California registered civil engineer.
6. **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).

7. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agency:

a. Alameda County Environmental Health Department

The Executive Officer may modify this distribution list as needed.

8. **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.

9. **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.

10. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. The discharger may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements.

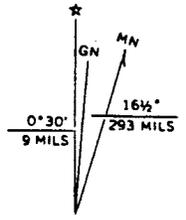
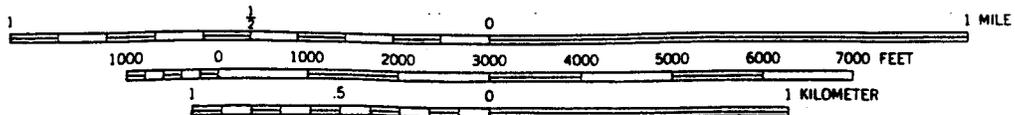
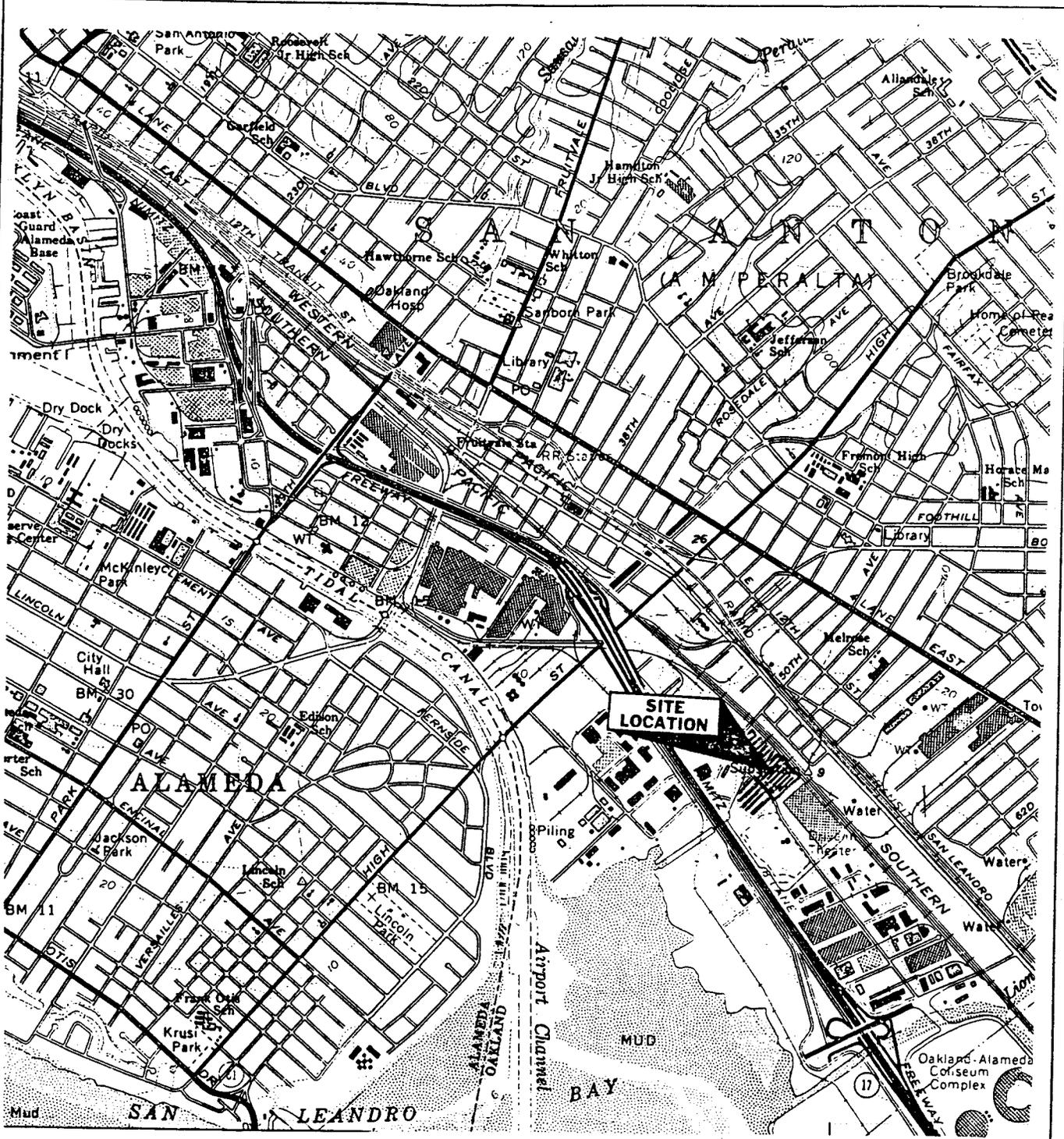

for

Loretta K. Barsamian
Executive Officer

4/8/99

Date

FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY



SITE LOCATION MAP

5200 COLISEUM WAY
 OAKLAND, CALIFORNIA
 Clayton Project No. 70-97203.00.500

Figure

1

08/06/97
 97203sm.cdr

Clayton
 ENVIRONMENTAL
 CONSULTANTS