California Regional Water Quality Control Board
San Francisco Bay Region

Winston H. Hickox
Secretary for Environmental Protection

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Governor

Certified Mail Nos. 70993220000146709481/9498/9504

Date: FEB 09 2001
SLIC No. 01S0422 (BG)

Mr. Samuel Friedman
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5050 Coliseum, LLC
c/o Thomas Roberts
Commercial Development Company, Inc
1650 Des Peres Road, Suite 303
St. Louis, MO 63131

R095

Oakland 5051, LLC
c/o Daniel T. Engle, Esq.
Thompson Coburn L.L.P.
One Mercantile Center
St. Louis, MO 63101

Subject: Tentative Order Proposing Final Site Cleanup Requirements for Properties at 750-50th Avenue and 5050, 5051, and 5200 Coliseum Way, Oakland, Alameda County

Dear Sir Madam:

Enclosed is the tentative order to set final site cleanup requirements for the subject properties (site). This matter will be considered by the Board at its meeting of March 21, 2001. The meeting starts at 9:30 a.m., in the Auditorium of the Elihu Harris State Building at 1515 Clay Street, Oakland. You will be notified of any change in the meeting date or meeting cancellation.

Please submit any comments you may have no later than 5 p.m. on March 1, 2001. Please direct your comments to Betty Graham. She may be contacted at (510) 622-2358 or by e-mail at bg@rb2.swrcb.ca.gov.

Sincerely,

Loretta K. Barasmian
Executive Officer

Stephen A. Hill
Chief, Toxics Cleanup Division

Enclosure: Tentative Order

cc with enclosure: Mailing List

Mailing List
File No. 01S0422 (BG)
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ATTN: Mr. Beaven

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San Francisco, CA 94129-0921
ATTN: Jonathan Kaplan

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE ORDER

ADOPTION OF FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER NO. 99-014 FOR:

MILLENNIUM HOLDINGS, INC.,
5050 COLISEUM, LLC, and
OAKLAND 5051,LLC

for the property 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, Oakland, Alameda County. 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. (see Figure 1. Site Location Map, attached)

2. **Site History**:

   This site has been under investigation since 1990. It consists of 4 properties, 750 50th Avenue, 5050, 5051, and 5200 Coliseum Way. Three properties are fully developed and entirely covered with impervious surfaces. The fourth property, 5051 Coliseum Way, is vacant and unimproved except for two high voltage electrical transmission towers. The 750 50th Ave. and 5050 Coliseum Way parcels are considered as a single property and are occupied by a truck maintenance facility which is leased to the City of Oakland. The 5200 Coliseum Way property is developed with self storage units.

   The site has a long history of industrial use. From about 1879 to 1903, the site was used for lead smelting from sulfide ores. From 1903 to 1917, it was used for sulfuric

and nitric acid production including the retorting of pyrite ores and sodium nitrate. The smelting and ore reduction reportedly resulted in the deposition of about 15,000 cubic yards of process waste residuals on the 5050 and 5200 Coliseum Way properties. From 1917 to 1926, it was used by various chemical manufacturing companies.

In 1926, a lithopone (paint pigment) manufacturing facility was developed on the site and operated by the Glidden Paint Company. Lithopone consists of a chemically co-precipitated pigment of barium sulfate and zinc sulfide. Processing residuals from lithopone production included various forms of insoluble sulfate residuals including barium sulfate, zinc sulfate, and black ash. These residuals were deposited as both dry filter cake and slurry deposits on the 5050, 5051, and 5200 Coliseum Way properties. These deposits were buried by a cover of 3 to 7 feet of imported soil and other fill materials which remain in place today. In addition to the lithopone operations there was a history of storage and distribution of coal tar (used in roofing applications) in above ground storage tanks and drums located on the 5050 and 5200 Coliseum Way properties.

The lithopone facility operated until 1963. Above ground structures were demolished and removed from the site in 1964. In 1974, a heavy-truck maintenance facility was developed by Volvo/General Motors Truck Division (Volvo GM) on a portion of the site (the 5050 Coliseum Way and 750 50th Ave. properties). The property at 5200 Coliseum Way was developed into a self storage facility in 1977. The northerly part of the 5051 Coliseum Way property has been used for the storage of construction materials and the southerly part of the property has been used for weekend parking.

In 1997 and 1998 Millennium Holdings (Millennium), corporate successor to Glidden Paint Company, purchased the 750 50th Ave. and 5050 Coliseum Way property from Volvo GM, and the 5051 Coliseum Way property from Pacific Gas and Electric Company (PG&E). Millenium also accepted responsibility for environmental issues on the 5200 Coliseum Way property that were associated with the former lithopone manufacturing use.

Millennium's ownership interest in the subject properties was conveyed to LeMean Property Holdings (LeMean) in March 1999. In January 2000, LeMean's ownership interest in the 750 50th Avenue and the 5050 Coliseum Way parcels was conveyed to 5050 Coliseum, LLC and its interest in the 5051 Coliseum Way parcel was conveyed to Oakland 5051, LLC. In addition, Oakland 5051 has agreed to act as Millennium's agent to address environmental issues on the 5200 Coliseum Way parcel.

3. **Named Dischargers**: Millennium Holding, Inc. is named the discharger due to Millennium's successor corporate interest in the Glidden Paint Company, its prior ownership of the 750 50th Avenue, and 5050 and 5051 Coliseum Way properties,

Millennium's acceptance of responsibility for remediation of the 750 50th Avenue, 5050, 5051, and 5200 Coliseum Way and because Millennium was the named Discharger in Order No. 99-014.

5050 Coliseum, LLC, is named as discharger due to its ownership interest in the 750 50th Avenue, and the 5050 Coliseum Way properties. Oakland 5051, LLC, is named as discharger due to its ownership interest in the 5051 Coliseum Way property.

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 has adequate financial resources to comply with this order; Millennium has complied with prior Board requests; and 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 the future if these circumstances change.

Coliseum Storage Associates (CSA), current owner of the 5200 Coliseum Way property, is not a named discharger in this order because Millennium has adequate financial resources to comply with this order; Millennium has complied with prior Board requests; and Millennium and Oakland 5051, LLC, have accepted responsibility for investigation and cleanup of the site. However, CSA may be named in the 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 those parties' names to this order.

4. **Regulatory Status**: This site was subject to the following Board order: Site Cleanup Requirements (Order No. 99-014) adopted April 8, 1999.

5. **Site Hydrogeology**: The Site is located in the East Bay Plain Basin. Soils immediately underlying the site consist of clayey to silty sand with gravel fill material extending to approximately 3 to 7 feet below ground surface (bgs). Below the fill material is a layer of waste material. Bay Mud consisting of silty clay, clayey sand, silt, and thinly bedded sands underlies the waste materials to a depth of 60 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.

The site is bordered on three sides by tidally influenced storm drainage channels. An open and unlined channel (54th Avenue Creek) borders the southerly property boundary. Two underground stormwater conduits (Courtland Creek and the Second Line G Culvert) border the northerly property boundary and join with the Peralta Creek drainage channel prior to discharging to San Leandro Bay.

6. **Remedial Investigation**:

The following documents which describe the soil and groundwater investigations, risk analysis, and remedial/risk management plans have been submitted to the Board:

Sept. 19, 1994, *Remedial Investigation Report 5050 Coliseum Way and 750 50th Avenue Oakland, California,* prepared by Levine-Fricke for Volvo GM

Nov. 23, 1994, *Preliminary Remedial Alternatives Evaluation Report 5050 Coliseum Way and 750 50th Avenue Oakland, California,* prepared by Levine-Fricke for Volvo GM

Nov. 5, 1998, *Additional Remedial Investigation and Third Quarter 1998 Monitoring Report at Coliseum Way Properties 750 50th Avenue and 5050, 5051 and 5200 Coliseum Way, Oakland, California,* prepared by Clayton Environmental for Millennium

May 25, 1999, *Additional Remedial Investigation 1999 at 5050, 5051, and 5200 Coliseum Way and 750 50th Avenue, Oakland, California,* prepared by Clayton Environmental for Millennium

Nov. 30, 1999, *Remediation and Risk Management Plan, LeMean Property Holdings Located at 750 50th Avenue, 5050, 5051, and 5200 Coliseum Way, Oakland, California,* prepared by Clayton Environmental for LeMean Property Holdings

April 14, 2000, *Remediation and Risk Management Plan, at 5050, 5051, and 5200 Coliseum Way and 750 50th Avenue, Oakland, California,* prepared by Clayton Environmental for 5050 Coliseum Way LLC and Oakland 5051 LLC and as amended by letters dated January 26, 2001, and January 31, 2001.

June 1996, *Site Characterization Report 5051 Coliseum Way Oakland, California,* prepared by Geomatrix for PG&E

Oct. 2, 1997, *Monitoring Well Sampling and Analysis at 5051 Coliseum Way Oakland, California,* prepared by Clayton Environmental for Millennium

March 22, 1995, *Limited Soil and Groundwater Investigation, 5200 Coliseum Way, Oakland, California,* prepared by Subsurface Consultants for Coliseum Storage Associates

Oct. 2, 1997, *Limited Soil and Groundwater Investigation Coliseum Storage 5200 Coliseum Way, Oakland, California,* prepared by Clayton Environmental for Millennium

The above documents provide the information summarized below.

A layer of waste materials (waste ore and slag materials, lithopone process waste residuals, and petroleum hydrocarbons) underlies portions of the 5050, 5051, and 5200 Coliseum Way properties. The general areas and depths of the waste materials are shown in figure 2, attached.

The historical maximum and mean soil concentrations of the primary pollutants for each of the four properties are shown in Table 1 below.

Table 1. Maximum and Mean Soil Concentration (mg/kg), by property.

Constituent	750 50th Ave. 5050 Coliseum Way		5051 Coliseum Way		5200 Coliseum Way	
	Max.	Mean	Max.	Mean	Max.	Mean
Arsenic	18,000	254	1,500	88	890	161
Barium	92,000	3,317	100,000	2,105	190,000	29,304
Cadmium	1,400	34	2,100	35	230	48
Chromium	80	29	210	35	49	21
Copper	3,600	319	16,570	451	5,500	921
Lead	24,000	1,254	42,000	2,337	23,000	2,004
Zinc	60,000	3,854	54,000	5,674	84,000	13,791

The groundwater plumes of dissolved metals and hydrocarbons have been defined. Sampling in the adjacent stormwater channels and dye tracer studies indicate that contaminants are not migrating off-site except for small releases of zinc laden groundwater through the weep holes in the concrete sidewall of the stormwater channel.

On the 5050 Coliseum Way property, the presence of sulfide rich waste materials has contributed to a localized area of low pH shallow groundwater which has solublized a suite of metals, primarily zinc, barium, and cadmium. The maximum reported concentration of zinc, barium, and cadmium in groundwater are 47,000, 70, and 140 mg/l respectively. Sampling of wells along the northwestern property boundary

indicates that these metals are not migrating off-site in measurable quantities. However, metals concentrations in some wells within 50 feet of the property boundry currently exceed certain surface water quality objectives.

The highest concentrations of barium and arsenic (1,400 and 27 mg/l respectively) occur on the 5200 Coliseum Way property due to the preferential deposition of black filter cake on that property. Although concentrations of barium and arsenic in groundwater currently exceed surface water quality objectives, testing in the 54th Avenue Creek indicates that neither barium nor arsenic are being released off-site in measurable quantities.

The zinc plume in groundwater underlying the 5050 Coliseum Way property extends to the 5051 Coliseum Way property where maximum reported concentration is 1,800 mg/l. Sampling of the weep holes in the concrete lined storm drainage channel indicates that an estimated 7.6 pounds of zinc per year are released from the 5051 property.

A surface water study of the stormwater drainage channels and culverts adjacent to the site has yielded concentrations of heavy metals at or near the water quality objectives set forth in a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) adopted by the Board on June 21, 1995. Each of these stormwater channels drains a large industrial area in the city of Oakland. Samples have been collected from upstream locations and from the weep holes near MW-4 on 5051 Coliseum Way. These sampling results indicate that mass loadings of metals from existing stormwater flows are several orders of magnitude higher than metals loadings from the site and that a supplemental environmental project to reduce metals loadings in stormwater flows could be a cost effective measure to mitigate the effects of contaminants at this site.

A limited plume of petroleum hydrocarbons underlies portions of the 5050, 5051, and 5200 Coliseum Way properties. This contamination is attributed to the former tar storage, distillation facility, and associated piping located on the 5200 Coliseum Way property. Recent sampling indicates that this plume has stabilized.

Total dissolved solids (TDS) in groundwater was measured at several locations throughout the Site. The TDS levels ranged from a low of 620 ppm to a high of 170,000 ppm. The areas with high TDS border upon the stormwater drainage channels which are tidally influenced. An area-weighted TDS average of 6417 mg/l was calculated for the site. Due to this high level of TDS, shallow groundwater is not a potential supply of drinking water.

7. **Adjacent Sites:**

There are no adjacent sites with contamination affecting the Coliseum Way properties nor is contamination on the Coliseum Way properties affecting other properties.

8. **Interim Remedial Measures**:

Following demolition of the lithopone manufacturing facility, the 750 50th Ave. and 5050 Coliseum Way properties were developed for a heavy-truck maintenance facility and the 5200 Coliseum Way property was developed with self storage units. These uses effectively covered each of these properties with impervious surfaces.

The impervious surfaces have served as an interim remedial measure since they limit direct and indirect human exposure, and isolate contaminants from surface drainage and runoff. No other remediation or risk management of the subsurface contamination has been performed.

Additional remediation and risk management is needed to protect the health and safety of future site workers, the public and the environment and to constrain future development of 5051 Coliseum Way property or redevelopment of the 5050 and 5200 Coliseum Way properties.

9. **Feasibility Study**:

Past industrial uses on the site have resulted in the deposition of waste ores, waste slag. and other metal bearing solid waste. The storage of petroleum hydrocarbons, including roofing tars, has also impacted shallow groundwater on portions of the site. Remedial investigations have characterized environmental contamination on this site and identified potential pathways for contaminated groundwater to migrate off-site to adjacent stormwater channels thence San Leandro Bay, and for potential exposures of future construction or utility workers to unacceptable human health risks.

A feasibility study has been prepared which evaluates a range of remedial alternatives. These alternatives included the following measures: institutional constraints (a deed restriction on future land use, and a soil and human health risk management plan); a supplemental environmental project; in-situ treatment to raise pH and stabilize metal containing wastes; excavation and removal of waste materials; a groundwater diversion wall; and long term monitoring. The alternatives were compared on the basis of potential effectiveness and reliability, practicality of implementation, and cost effectiveness.

The feasibility study recommends implementation of: institutional constraints that include a deed restriction and a soil and human health risk management plan (*Soil*

Management Plan), a supplemental environmental project, a groundwater diversion wall on the 5051 Coliseum Way property, and long term monitoring.

The deed restrictions and property specific *Soil Management Plans* will run with the land. The *Soil Management Plans* will prescribe the technical, safety and regulatory measures necessary for managing the contaminated soil and waste residuals which remain in the subsurface and for protecting the future health of on-site workers, the public, and the environment. Long term monitoring will assess attenuation of dissolved metals and hydrocarbons in shallow groundwater.

10. **Cleanup Plan**:

The Remediation/Risk Management Plan, submitted in draft form in accordance with Task 3 of Order 99-014, and amended by letters dated January 26, 2001, and January 31, 2001, proposes the following measures:

- filing of a permanent deed restriction on land use and a site specific *Soil Management Plan* to run with the land;
- implementation of a supplemental environmental project to enhance wetland habitat values in San Leandro Bay and in the form of a one-time contribution of $30,000 to the Arrowhead Marsh Endowment managed by the East Bay Regional Park District;
- monitoring of shallow groundwater and the weep holes in the stormwater channel; and
- construction of a groundwater diversion wall on the 5051 Coliseum Way property.

The proposed site specific *Soil Management Plans* prescribe the remedial measures that are planned to protect the future health and safety of on-site workers, the public, and the environment. These measures include, but are not limited to, requirements for a site specific health and safety plan for subsurface activities, provisions to cover and cap all deposited waste materials, cover each of the properties with impervious surfaces (paving, building foundations/roofs) except for minor landscaped areas, and remove from the site any waste materials or soils disturbed by subsurface activities and containing metals in excess of soil cleanup standards.

Following implementation of the cleanup plan, and demonstration that contaminant migration potential is minimal, that contaminant concentrations are stable and that water quality beneficial uses are protected, the responsible parties may petition for a

conditional no further action determination. Although conditional no further action would require continued compliance with institutional and risk management remedial measures described by this finding, further active remedial measures would not be required.

11. **Risk Assessment**:

To determine the potential impacts to public health posed by on-site contaminants, a human health risk assessment was prepared. The risk assessment identified and evaluated two exposure scenarios. The first scenario assumed that the site remains in its current state and that exposures only occur through construction or other soil disturbing activities. The second scenario assumed that the properties remain in industrial use (as currently zoned), that additional buildings are constructed on the site, and exposures occur through indoor air inhalation.

The risk assessment found that calculated non-carcinogenic and carcinogenic risks are within acceptable levels for future on-site commercial or industrial workers but that soil disturbing activities could expose future site workers to unacceptable non-carcinogenic hazards. The exposure pathways which pose potentially hazardous non-carcinogenic risks to future site workers are through inhalation and ingestion of particulate dusts and through direct skin contact.

The calculated baseline non-carcinogenic and carcinogenic risks, as site-wide averages, are listed in the table below:

Exposure Scenario	Non-Carcinogenic Risk	Carcinogenic Risk
Construction Worker	9.8	$1.56 * 10^{-5}$
Indoor Industrial Worker	0.08	$1.21 * 10^{-6}$

For comparison, the Board considers the following risks to be acceptable at remediation sites: hazard index of 1.0 or less for non-carcinogens, and an excess cancer risk of 10^{-4} to 10^{-6} or less for carcinogens.

Due to the risk that will remain at the site pending full remediation, institutional constraints are appropriate to limit on-site exposure to acceptable levels. These constraints include permanent deed restrictions on land use and site specific *Soil Management Plans*. The deed restrictions and *Soil Management Plans* will run with the land and will notify future owners of sub-surface contamination.

Land use at the site should be restricted to industrial or commercial uses. Uses of the site for residences, hospitals for humans, schools for persons under 21 years of age,

"day-care" centers for children, or other potentially incompatible purposes would create unacceptable human health risks.

Use of shallow groundwater underlying the site is not restricted.

12. **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. The previously-cited cleanup plan confirms the Board's initial conclusion that background levels of water quality cannot be restored. Remedial investigations have demonstrated that adjacent surface and ground waters are not impacted by low level releases from this site. This order and its requirements are consistent with Resolution No. 68-16.

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 Title 23, California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and ground waters.

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.

Shallow groundwater underlying and adjacent to the site, to a depth of about 60 feet below ground surface, is brackish. There is no known historical, current or planned use of the shallow brackish groundwater as a source of potable drinking water, industrial process or service water, or as an agricultural supply. The estimated rate of freshwater replenishment to surface waters is less that half a gallon per minute.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the site: freshwater replenishment to surface waters.

The existing and potential beneficial uses of Courtland, Second Line G, Peralta and 54th Ave. Creek thence San Leandro Bay include:

o Estuarine habitat
o Water contact and non-contact recreation
o Wildlife habitat
o Preservation of rare and endangered species

c. **Basis for Groundwater Remedial Action Levels**: The groundwater remedial action levels for portions of the site within 50 feet of surface waters are based on applicable surface water quality objectives for the protection of salt water life. Because the on-site contaminants are largely confined to the waste layer, and are highly immobile, the remedial action levels include a 10:1 attenuation factor. This attenuation factor reflects the chemical-specific characteristics, site-specific hydrogeological conditions, and the absence of benthic habitat due to the concrete channel lining.

d. **Basis for Soil Remedial Action Levels**: The soil remedial action levels for the site will be the lower of human health and ecological action levels for industrial use and for saltwater environments but not less than background soil concentrations. Soil Remedial Action Levels will apply in areas subject to ground disturbing activities where potentially unacceptable human health risks could be present.

13. **Future Changes to Remedial Action Levels**: The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not technologically nor economically achievable within a reasonable period of time, then the discharger may request modification to the remedial action levels or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information

indicates that remedial action levels can be surpassed, the Board may decide that further cleanup actions should be taken.

14. **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.

15. **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.

16. **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.

17. **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.

18. **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.

19. **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. CLEANUP PLAN AND CLEANUP STANDARDS

1. **Implement Cleanup Plan**: The discharger shall implement the cleanup plan described in finding 10. The discharger shall continue to monitor groundwater quality and shall conduct additional site investigations, as needed, to verify the stability and attenuation of contaminants which remain in the subsurface. Should monitoring results show evidence of contaminant migration, additional contaminant characterization may be required.

2. **Groundwater Cleanup Standards**: The following remedial action levels apply to all wells located within 50 feet, as a horizontal projection, of any surface water or storm drainage channel. Until such time that these levels are met, the remedial actions defined by paragraph B.1. shall be implemented and shall remain in effect.

Constituent	Groundwater Remedial Action Level (ug/l)	Basis
Arsenic	360	Basin Plan, Table 3-3 (Salt)
Barium	10,000	US EPA Gold Book
Cadmium	93	Basin Plan, Table 3-3 (Salt)
Chromium (VI)	500	Basin Plan, Table 3-3 (Salt)
Copper	49	Basin Plan, Table 3-3 (Salt)
Lead	56	Basin Plan, Table 3-3 (Salt)
Mercury	.25	Basin Plan, Table 3-3 (Salt)
Nickel	71	Basin Plan, Table 3-3 (Salt)
Zinc	580	Basin Plan, Table 3-3 (Salt)

Groundwater remedial action levels are based on applicable surface water quality objectives with a 10:1 attenuation factor.

3. **Soil Cleanup Standards**: The following soil remedial action levels shall be met for any soils excavated or exposed at the surface as a result of any construction or other soil disturbing activities.

Constituent	Soil Remedial Action Level (mg/kg)	Constituent	Soil Remedial Action Level (mg/kg)
Antimony	40	Mercury	10
Arsenic	14	Molybdenum	40
Barium	1500	Nickel	150
Beryllium	95	Selenium	10
Cadmium	12	Silver	40
Total Chromium	12	Thallium	29
Cobalt	80	Vanadium	200
Copper	225	Zinc	600
Lead	1000	TPH residuals	1000

C. TASKS

1. **IMPLEMENTATION OF SUPPLEMENTAL ENVIRONMENTAL PROJECT**

COMPLIANCE DATE: May 31, 2001

Submit a technical report, acceptable to the Executive Officer, documenting implementation of the Supplemental Environmental Project described by finding 10.

2. **PROPOSED INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: March 1, 2001

Submit a final copy of the Remediation and Risk Management Plan described by finding 10 which incorporates the two letter amendments and documents

proposed measures to protect the future health of on-site workers, the public, and the environment. Such measures shall include a deed restriction to limit future land use to commercial or industrial use and to prohibit development of the properties for residences, hospitals, schools for persons under 21 years of age, and day care centers for children or adults.

3. **IMPLEMENTATION OF INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: 60 days after Executive Officer approval

Submit a technical report acceptable to the Executive Officer documenting that the proposed risk management measures and institutional constraints have been implemented.

4. **IMPLEMENTATION OF REMEDIAL ACTION**

COMPLIANCE DATE: June 1, 2001

Submit a technical report acceptable to the Executive Officer documenting completion of the groundwater diversion barrier described by findings 9 and 10.

5. **NOTIFICATION OF PROJECT SPECIFIC HEALTH AND SAFETY PLAN**

COMPLIANCE DATE: 30 days prior to any ground-disturbing activities

For any future ground disturbing activities that would potentially expose on-site workers to residual waste materials and for which a written Health and Safety Plan in required under the site specific *Soil Management Plan*, written notification of the proposed activities shall be submitted to the Executive Officer. The notification shall include a description of the proposed activities and a copy of the written Health and Safety Plan prepared for the work to be performed.

6. **THREE-YEAR STATUS REPORT**

COMPLIANCE DATE: March 1, 2004

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved cleanup plan. The report should include:

a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
b. Comparison of contaminant concentration trends with time
c. Comparison of anticipated versus actual costs of cleanup activities
d. Performance data (e.g. groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted)
e. Cost effectiveness data (e.g. cost per pound of contaminant removed)
f. Summary of additional investigations (including results) and significant modifications to remediation systems
g. Additional remedial actions proposed (if applicable) including time schedule

7. REQUEST FOR CONDITIONAL NO FURTHER ACTION

COMPLIANCE DATE: As appropriate and no earlier than March 1, 2004

Submit a technical report acceptable to the Executive Officer containing a request for conditional no further action for some or all of the properties. Conditional no further action is expected to mean that no further remedial action will be required at some or all of the properties subject to the condition that the approved institutional constraints and risk management measures would remain in effect. In order to obtain the conditional no further action, the responsible parties must demonstrate that contaminant concentrations are stable, that contaminant migration potential is minimal and that water quality beneficial uses are protected. Further, the request for conditional no further action shall include assurances that the approved institutional constraints and risk management measures would remain in effect. For the 5051 Coliseum Way property, the responsible parties must also demonstrate that the property has been developed or capped. The request for conditional no further action should include a reasonable rationale for decision making and demonstrate that the conditions for conditional no further action are satisfied.

This technical report can be submitted concurrently with the three year status report, if desired.

8. EVALUATION OF NEW HEALTH CRITERIA

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved cleanup plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

9. **EVALUATION OF NEW TECHNICAL INFORMATION**

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information which bears on the approved cleanup plan and cleanup standards for this site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports shall not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved cleanup plan or cleanup standards.

10. **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.

D. 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 Operation and Maintenance (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. **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.

6. **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.

7. **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).

8. **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 Oakland, Department of Public Works
   b. County of Alameda, Department of Environmental Health

c. California State Department of Toxic Substances Control

The Executive Officer may modify this distribution list as needed.

9. **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.

10. **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 Board by calling (510) 622-2300 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.

11. **Rescission of Existing Order**: This Order supercedes and rescinds Order No. 99-014.

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

I, Loretta K. Barsamiam, 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 _____.

_____
Loretta K. Barsamian
Executive Officer

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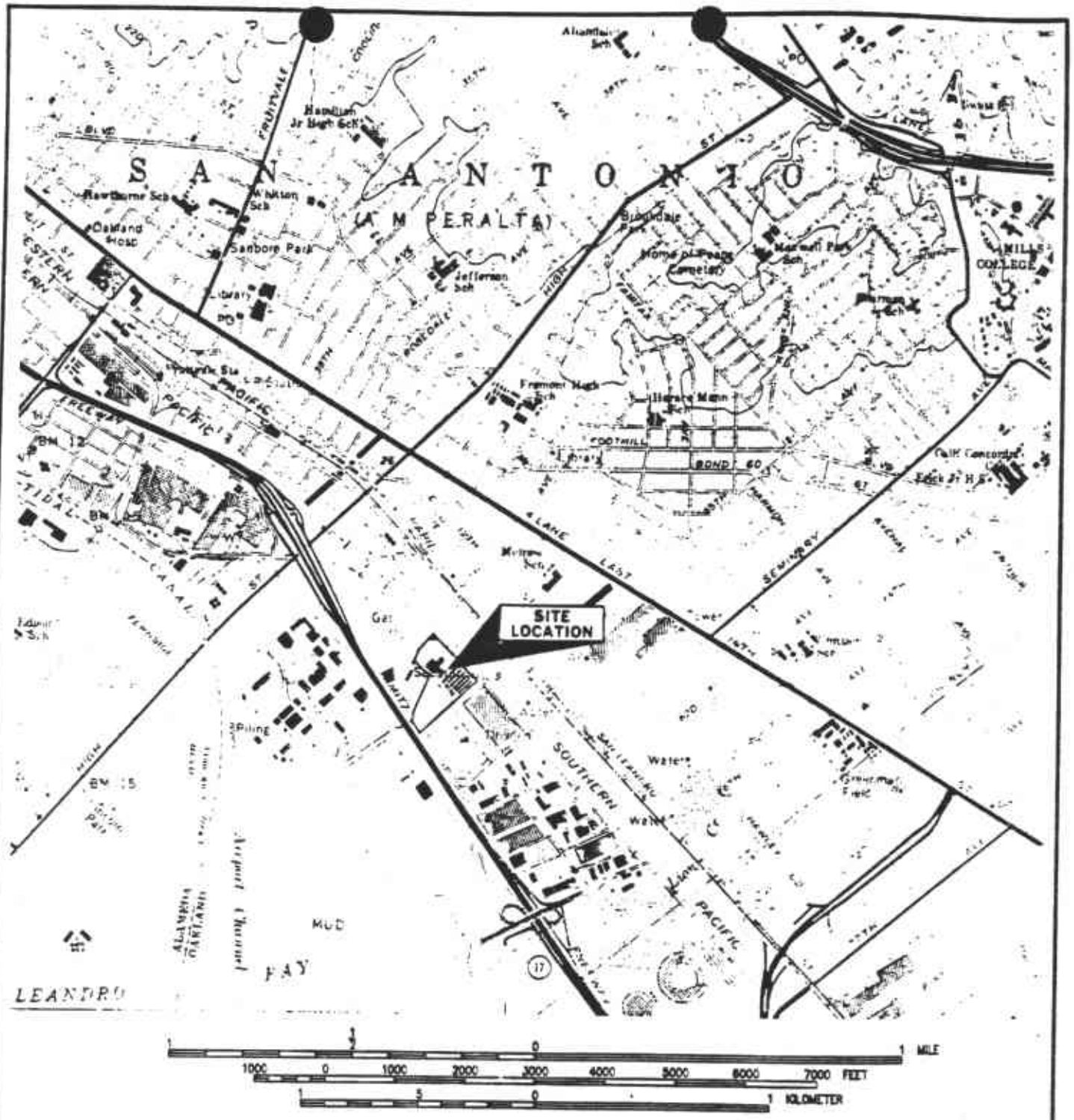
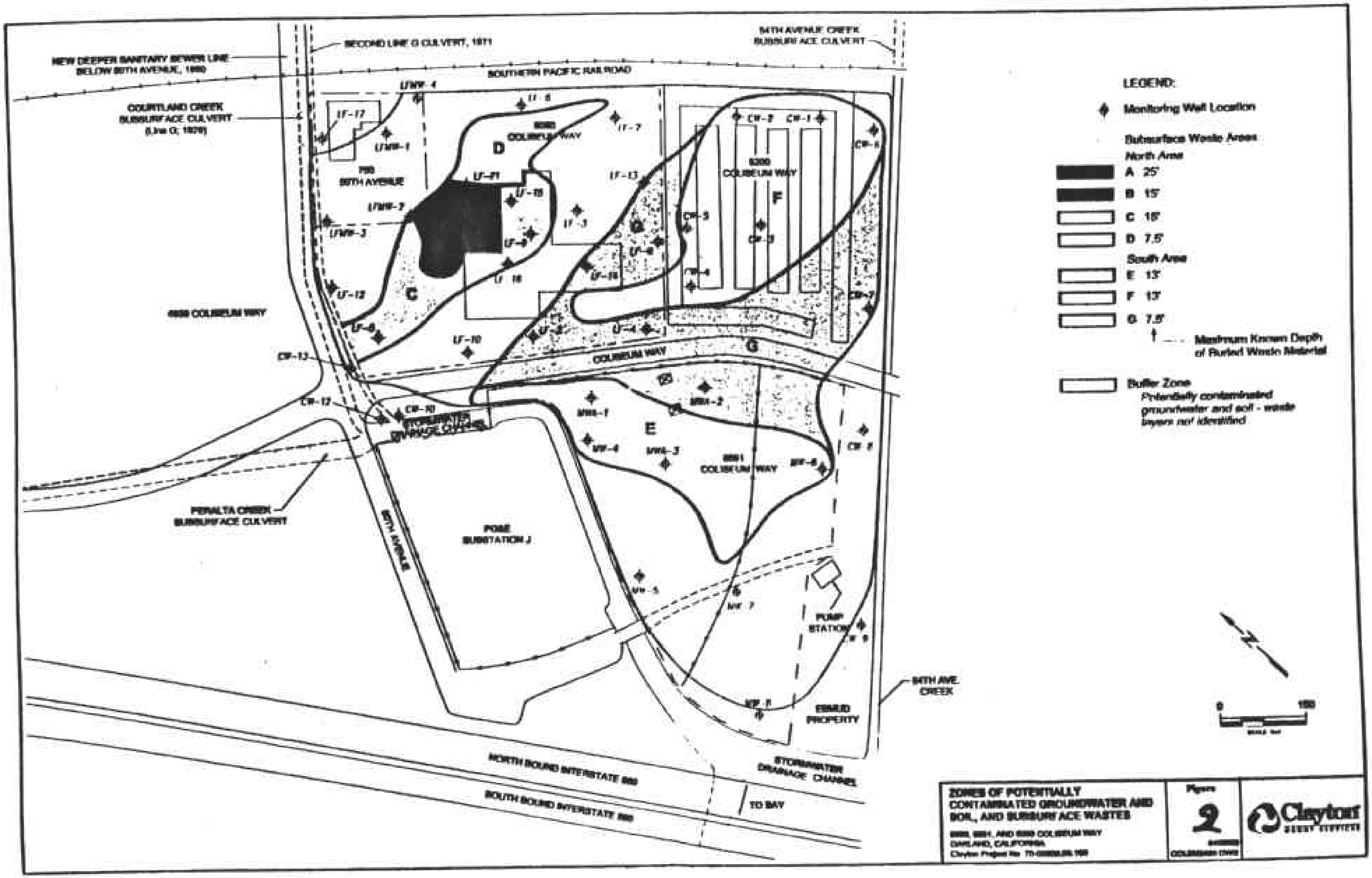
FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

Attachments: Site Location Map
Approximate Locations of Residual Waste Materials
Self-Monitoring Program



Portion of 7.5-Minute Oakland East, California Quadrangle Map
United States Department of the Interior
Geological Survey
1959
Photorevised 1980

SITE LOCATION MAP Coliseum Way Properties Oakland, California Client: Lempres & Wulfsberg Clayton Project No. 70-97203.00.300	Figure 1 97203-6-16	Clayton ENVIRONMENTAL CONSULTANTS


NEW DEEPER SANITARY SEWER LINE
SECOND LINE G CULVERT, 1971
54TH AVENUE CREEK
SUBSURFACE CULVERT
SOUTHERN PACIFIC RAILROAD
COURTLAND CREEK
SUBSURFACE CULVERT
LF-17
LFWW-4
LF-5
LFWW-1
D
LF-7
LF-21
LF-13
LF-15
LFWW-2
LF-3
LFWW-3
LF-9
LF-16
C
LF-12
LF-8
LF-10
CW-2
CW-1
CW-6
5300
COLISEUM WAY
F
CW-3
CW-4
CW-7
LF-4
COLISEUM WAY
G
CW-13
CW-12
CW-10
MW-1
MW-2
E
MW-4
MW-3
COLISEUM WAY
MW-6
CW-8
PERALTA CREEK
SUBSURFACE CULVERT
PG&E
SUBSTATION J
MW-5
MW-7
PUMP
STATION
CW-9
54TH AVE.
CREEK
EBMUD
PROPERTY
NORTH BOUND INTERSTATE 880
SOUTH BOUND INTERSTATE 880
STORMWATER
DRAINAGE CHANNEL
TO BAY
LEGEND:
Monitoring Well Location
Subsurface Waste Areas
North Area
A 25'
B 15'
C 15'
D 7.5'
South Area
E 13'
F 13'
G 7.5'
Maximum Known Depth
of Buried Waste Material
Buffer Zone
Potentially contaminated
groundwater and soil - waste
layers not identified
N
0
150
ZONES OF POTENTIALLY
CONTAMINATED GROUNDWATER AND
SOIL, AND SUBSURFACE WASTES
OAKLAND, CALIFORNIA
Figure
2
Clayton

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

Millennium Holdings, Inc.
5050 Coliseum, LLC
Oakland 5051, LLC

for the property located at

750 50th Avenue and 5050, 5051, & 5200 Coliseum Way
Oakland
Alameda 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._____ (site cleanup requirements).

2. **Monitoring**: The discharger shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following schedule (Table 1). In addition, representative samples of surface water shall be collected from the stormwater drainage channel which abuts the 5051 Coliseum Way property.

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
LF-2	Q	GW Elev.	MWA-1	Q	TPHg, TPHd/o, CAM-17, TDS, GW Elev.
LF-5	Q	CAM-17, TDS, GW Elev.	MWA-2	Q	GW Elev.

LF-6	Q	GW Elev.	MWA-3	Q	GW Elev.
LF-11	Q	TPHd/o, CAM-17, TDS, GW Elev.	MW-4	Q	TPHg, CAM-17, TDS, GW Elev.
LF-12	Q	CAM-17, TDS, GW Elev.	MW-5	Q	CAM-17, TDS, GW Elev.
LF-13	Q	GW Elev.	CW-8	Q	GW Elev.
LF-17	Q	GW Elev.	CW-9	Q	GW Elev.
CW-13	Q	CAM-17, TDS, GW Elev.	CW-10	Q	GW Elev.
CW-1	Q	CAM-17, TDS, GW Elev.	CW-12	Q	CAM-17, TDS, GW Elev.
CW-2	Q	TPHg, TPHd/o, CAM-17, TDS, GW Elev.	CW6	Q	TPHg,TPH d/o, CAM-17, TDS, GW Elev.
CW-4	Q	GW. Elev.	CW7	Q	TPHg,TPH d/o, CAM-17, TDS, GW Elev.

Key: Q = Quarterly
TPHg = Total Petroleum Hydrocarbons as Gasoline/Benzene, Toluene, Ethylbenzene, & Xylene
TPHd/o = Total Petroleum Hydrocarbons as Diesel and Motor Oil
CAM-17 = California Assessment Manual 17 Metals
TDS = Total Dissolved Solids
GW Elev. = Groundwater Elevation

The discharger shall sample any new monitoring or extraction wells 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.

3. **Quarterly Monitoring Reports**: The discharger shall submit quarterly monitoring reports to the Board no later than 30 days following the end of the quarter (e.g. report for first quarter of the year due April 30). The first quarterly monitoring report shall be due on January 30, 2001. 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 should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the fourth quarterly report each year.

   c. Groundwater Analyses: Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should 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 fourth quarterly report 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. Groundwater Extraction: If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.

e. Status Report: The quarterly report 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 this Self-Monitoring Program was adopted by the Board on _____.

_____
Loretta K. Barsamian
Executive Officer