

**STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
DEPARTMENT OF TOXIC SUBSTANCES CONTROL**

In the Matter of:	)	Docket No. <b>IS&amp;E 02/03-005</b>
	)	
Chemical & Pigment Co.	)	
600 Nichols Road	)	IMMINENT AND SUBSTANTIAL
Bay Point, California 94565	)	ENDANGERMENT
	)	DETERMINATION AND ORDER
Respondents:	)	
	)	
Chemical & Pigment Co.	)	Health and Safety Code
P.O. Box 21107	)	Sections (b)(3),
Concord, California 94521	)	25358.3(a), 58009 and 58010
	)	
ESI Chemicals, Inc.	)	
8100 South Park Way, Suite B2	)	
Littleton, Colorado 80120	)	
	)	
Robert Granville Knox, III	)	
3734 Ecker Hill Drive	)	
Park City, Utah 84098	)	
	)	
CPC Holdings, Inc.	)	
3734 Ecker Hill Drive	)	
Park City, Utah 84098	)	
	)	
Armor Equipment Sales Corp. )	)	
3734 Ecker Hill Drive	)	
Park City, Utah 84098	)	
_____	)	

I. INTRODUCTION

October 18, 2002

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issues this Imminent and Substantial Endangerment Determination and Order (Order) to the Chemical & Pigment Co., a California Corporation; ESI Chemicals Inc., a Colorado Corporation; Robert Granville Knox, III, an individual; CPC Holdings, a Utah Corporation; and Armor Equipment Sales Corp., a California Corporation (Respondent(s)).

1.2 Property/Site. This Order applies to the property located at 600 Nichols Road, Bay Point, Contra Costa County, California 94565. The property consists of 12.34 acres and is identified by Assessor's Parcel numbers 099061001. A map showing the Property is attached as Exhibit A. This Order applies to the property and the aerial extent of contamination that resulted from activities on the property (hereinafter, the ASite@).

1.3 Permitting Status. An unpermitted hazardous waste facility is located on the property at 600 Nichols Road, Bay Point, Contra Costa, California 94565 (Facility). The Facility's operation included treatment and disposal of hazardous wastes and substances. On November 5, 1997, DTSC issued an administrative enforcement action against the Chemical & Pigment Co. for violations of the California Hazardous Waste Control Law (HWCL). The enforcement action was resolved by a Stipulation and Order, effective March 16, 1998, which required the company to pay fifty thousand dollars (\$50,000) in penalties. In addition, DTSC determined that in order for the facility to continue its operations, a hazardous waste facility permit would be required. Although the facility submitted a standardized permit application in 1998, the facility filed for bankruptcy and subsequently ceased operations before a permit decision could be made by DTSC.

1.4 Jurisdiction. This Order is issued by DTSC to Respondents pursuant to its authority under Health and Safety Code sections 25358.3(a), 25355.5(b)(3), 58009 and 58010.

Health and Safety Code section 25358.3(a) authorizes DTSC to take various actions, including issuance of an Imminent or Substantial Endangerment Determination and Order, and taking or contracting for necessary removal or remedial action when DTSC determines that there may be an imminent or substantial endangerment to the public health or welfare or to the environment, because of a release or a threatened release of a hazardous substance.

Section 25355.5(b)(3) of the Health and Safety Code authorizes the Department to expend funds from the Hazardous Substance Account and the Hazardous Substance Cleanup Fund without first taking the actions specified in Health and Safety Code section 25355.5(a), if the Department determines that removal or remedial action is necessary at a site because there may be an imminent and substantial endangerment to the public health or welfare or to the environment, because of a release or a threatened release of a hazardous substance.

October 18, 2002

Health and Safety Code section 58009 authorizes DTSC to commence and maintain all proper and necessary actions and proceedings to enforce its rules and regulations; to enjoin and abate nuisances related to matters within its jurisdiction which are dangerous to health; to compel the performance of any act specifically enjoined upon any person, officer, or board, by any law of this state relating to matters within its jurisdiction; and/or on matters within its jurisdiction, to protect and preserve the public health.

Health and Safety Code section 58010 authorizes DTSC to abate public nuisances related to matters within its jurisdiction.

## II. FINDINGS OF FACT

DTSC hereby finds:

2.1 Liability of Respondent(s). Respondent(s) are responsible parties or liable persons as defined in Health and Safety Code section 25323.5.

2.1.1 The Chemical & Pigment Co. (CPC) is the current owner and/or operator of the Facility. The Chemical & Pigment Co. also owned and/or operated the Facility at the time hazardous substances were disposed at the Facility.

ESI Chemicals, Inc., a division of Earth Sciences, Inc., owned and/or operated the Facility from approximately 1979 through 1983, during which time hazardous substances were disposed at the Facility.

Robert Granville Knox, III owned and/or operated the Facility from 1996 until the present, during which time hazardous substances were disposed at the Facility. Mr. Knox was the Chief Executive Officer, Chief Financial Officer, Secretary and Director of Chemical & Pigment Company.

CPC Holding Inc. owned and/or operated the Facility for a period of time beginning on or about 1996. Hazardous substances were disposed at the Facility during this period of time.

2.1.2 Armor Equipment Sales Corp. arranged by contract, agreement or otherwise for the treatment of hazardous substances at the Facility from approximately 1989 through 1998.

2.2 Physical Description of Site. The Site consists of approximately 12.34 acres of land located in the unincorporated City of Bay Point, Contra Costa County, California (formerly West Pittsburg, California). The property is located close to the intersection of Nichols Road and the Port Chicago Highway in an industrial area.

October 18, 2002

The Site is bordered on the east by Nichols Road, on the west by Nichols Creek and the Concord Naval Weapons Station, on the south by the Port Chicago Highway, and on the north by the Union Pacific Railroad tracks. Runoff from the Site drains naturally into Nichols Creek. The Nichols Creek, then drains into the Suisun Bay, which is a part of the Greater San Francisco Bay. The Site is completely fenced with an access gate on both the east and north sides. The fence is poorly maintained, allowing unauthorized access to the site.

The Site consists of seven buildings: three warehouses, an office, two processing areas, 41 tanks, mixing equipment and granulators. The physical plant is located on approximately four acres of the northern part of the property. The southern portion is undeveloped; approximately five acres of the southern parcel was used to store zinc-tailing piles from 1960 to 1969.

2.3 Site History. The Facility plant was constructed in approximately 1960. The Facility recovered zinc from galvanizing waste (zinc fines and dust containing trace metal contaminants) to produce zinc chloride. After discontinuing the production of zinc chloride, the Facility bought and resold zinc chloride, acting as a broker. The Facility produced zinc sulfate for agricultural fertilizer, soil amendments, pharmaceuticals, toiletries, and electrogalvanizing. The products included Meteor Brand Zinc Sulphate Mono-Granular, 36% zinc; Meteor Brand Zinc Sulphate Mono-Hydrate, 36% zinc and 17% sulphur powder; Meteor Brand Zinc Sulphate Liquid, 36%; and Meteor Granular 26 Zinc Sulphate, 26% zinc and 15% sulphur granular.

Although the Facility has been owned and operated by different companies, the manufacturing and processing activities have remained the same, producing the same products.

In 1991, the U.S. Navy filed a lawsuit against CPC, alleging the company was the source of zinc and lead contamination in the groundwater, underlying the Concord Naval Weapons Station. As a result of this court action approximately 15,000 cubic yards of contaminated soil was excavated from the undeveloped southern parcel of the property and stored adjacent to the excavated area. This pile of contaminated soil remains at the Site.

In October 1996, the 1.4 million-gallon surface impoundment was closed. Although the surface impoundment conceptual closure design was approved by the San Francisco Bay Area Regional Water Quality Control Board (RWQCB) on January 29, 1993, the RWQCB did not oversee the implementation of the surface impoundment closure or approve the final design.

On May 1, 1998, Chemical & Pigment Co. filed Chapter 11 bankruptcy that was subsequently converted to a liquidation. Subsequently, the company ceased operations and abandoned the Site, leaving everything that could not be sold. In January 2002, DTSC's Emergency Response Unit (ERU) took measures to stabilize the Site which included covering the soil pile, putting locks on the gates and repairing holes in the fence. DTSC also removed abandoned chemicals that remained in the company

October 18, 2002

laboratory. DTSC's Emergency Response Unit again responded to the site on October 3, 2002 to contain the discharge of zinc and lead contaminated water, resulting from a valve failure on a storage tank.

2.4 Hazardous Substances Found at the Site. On November 9, 1990, a metal sampling study of the surface impoundment located west of the processing area was conducted by the CPC. The surface impoundment had a storage capacity of approximately 1.4 million gallons. The dimensions were 8.5 feet deep, 150 x 225 feet at surface grade, and 100 x 175 feet at the base. The surface impoundment was used to collect storm water runoff, process leaks, spills, and equipment wash run-off. CPC collected samples from the surface impoundment on October 17, 1990 at one, three, and five feet beneath the impoundment. The samples analyzed detected zinc at concentrations exceeding the Total Threshold Level Concentration (TTLC) of 5000 milligrams per kilogram (mg/kg). Copper, cadmium, and lead were also analyzed for, but found at concentrations below the TTLC, for each of the respective compounds.

CPC excavated approximately 15,000 cubic yards from a 5-acre portion of the southern parcel. The soils were known to have heavy metal concentrations above hazardous waste criteria. for cadmium, lead and zinc. On July 14, 1994, samples were taken from the excavated soil pile. The samples indicated the soil exceeded hazardous waste criteria for lead, zinc, and cadmium as Soluble Threshold Level Concentration (STLC). On February 19, 2002, the soil pile was sampled, and determined to exceed published regional soil background levels for zinc, cadmium and lead.

Nichols Creek is located along the entire western boundary of the property and collects drainage from the property. In 1970, the Regional Water Quality Control Board (RWQCB) conducted a fish bioassay using water from the creek; there was 100% mortality. In 1981, sediments near the creek were sampled and analyzed. The results showed toxic levels of zinc, copper, lead and cadmium were present near the creek. In 1982, the RWQCB determined that Nichols Creek was contaminated and that contaminants were being released into the waters of the state (Suisun Bay).

2.4.1 Lead was detected up to a maximum concentration of 540 mg/kg in the surface impoundment exploration, and 5370 mg/kg in the soil pile samples using TTLC protocol. Lead levels in samples taken from the soil pile in 1994 were measured at up to 131 mg/l using STLC protocols. Title 22, California Code of Regulations (CCR), Section 66261.24 states that lead concentrations that equal or exceed the STLC value of 5 mg/l is a hazardous waste. The lead concentrations also exceed the United States Environmental Protection Agency Region IX (USEPA) industrial lead Preliminary Remediation Goals (PRGs) of 750 mg/kg.

2.4.2 Zinc was detected up to a maximum concentration of 49,000 mg/kg in the surface impoundment exploration and 22,100 mg/kg in the 2002-sampling event of the soil pile using TTCL protocol. The zinc STLC value of the soil pile as measured in 1994 was 908 mg/l. Title 22, California Code of Regulations (CCR), Section 66261.24 states the zinc concentrations that equal or exceed the

October 18, 2002

STLC value of 250 mg/l is a hazardous waste. The zinc concentrations also exceed the United States Environmental Protection Agency Region IX (USEPA) residential Preliminary Remediation Goals (PRGs) of 2300 mg/kg.

2.4.3 Cadmium was detected in the 1994 soil pile analysis at 1.1 mg/l. Title 22, California Code of Regulations (CCR), Section 66261.24 states the cadmium concentrations that equal or exceed the STLC value of 1.0 mg/l is a hazardous waste. Samples from the soil pile analyzed in 2002, measured cadmium TTLC values up to 21.1 mg/kg, which exceed the residential PRGs of 9 mg/kg.

## 2.5 Health Effects.

2.5.1 Lead. Exposure to lead may produce fatigue, headache, aching bones and muscles, abdominal pains, and constipation. Short-term exposure to lead can cause reversible kidney damage, but prolonged exposure at high concentrations may result in progressive kidney damage and possible kidney failure. Anemia, due to the inhibition of hemoglobin synthesis and a reduction in the life span of circulating red blood cells, in an early manifestation of lead poisoning (*Sax, Dangerous Properties of Industrial Materials, Sixth Edition, 1984*).

The most serious effects associated with markedly elevated blood levels of lead are severe neurotoxic effects that include irreversible brain damage, as indexed by the occurrence of acute or chronic encephalopathic symptoms. Lead is listed as a reproductive toxicant under Proposition 65.

2.5.2 Copper. Copper is used in a wide variety of industrial processes. Copper is well absorbed through oral ingestion. Acute inhalation of copper fumes or dust can result in a reversible, influenza-like syndrome. Chronic ingestion of high levels of copper has been reported to cause hemolysis, fibrosis and cirrhosis of the liver, nervous system damage and kidney dysfunction. Copper salts act as irritants and may cause itching, erythema, and dermatitis. In the eyes, copper salts may cause conjunctivitis or ulceration and turbidity of the cornea (*U.S. Department of Health, Education and Welfare, Occupational Diseases, A Guide to Their Recognition, Revised Edition, June 1977*).

2.5.3 Zinc. Zinc is a human skin irritant. Inhalation of the fumes may cause coughing, weakness, generalized aching, nausea, fever, and vomiting. Inhalation of large amounts may cause a specific short-term disease or syndrome called metal fume fever. Small doses of salts of zinc can cause nausea and vomiting, while larger doses cause violent vomiting and purging (*Sax, Dangerous Properties of Industrial Materials, Sixth Edition, 1984*).

2.5.4 Cadmium. Confirmed human carcinogen producing lung tumors. Poison by ingestion. The irritating and emetic action is so violent, however, that little of the cadmium has time to be absorbed and fatal poisoning rarely ensues. Experimental carcinogen and teratogen. Cases of human poisoning have been reported from ingestion of food or beverages prepared or stored in cadmium-plated containers. Inhalation of fumes or dust affects the respiratory tract and the kidneys. Brief exposure to

high concentrations may result in pulmonary edema and death. Fatal concentrations may be breathed without sufficient discomfort to warn a worker to leave the exposure site. Cadmium oxide fumes can cause metal fume fever resembling that caused by zinc oxide fumes.

## 2.6 Routes of Exposure.

2.6.1 The main exposure pathways are inhalation, dermal absorption, and ingestion of contaminants in soil, and dermal absorption from surface water.

2.6.2 All soil contaminants are sources or potential sources of groundwater and surface water contamination. Rainfall may cause migration of hazardous substances through the soil to the groundwater and surface water. The site is located adjacent to Nichols Creek and the natural surface drainage is into the creek. The groundwater direction is towards the creek and may charge the creek during some parts of the year (a gaining stream scenario). Nichols Creek flows north, into wetlands on the southern shores of the Suisun Bay, less than a half a mile. Suisun Bay is a northern section of the Greater San Francisco Bay.

2.7 Public Health and/or Environmental Risk. All processing operations have ceased at the facility and the Site lies in a state of abandonment. Present at the site are hazardous substances that pose a danger to public safety and the environment. The hazardous substances include approximately 75 super-sacks (27 cubic foot bags) of the company's zinc sulfate product, which contains high concentrations of lead (38,300 mg/kg) and cadmium (206 mg/kg); eleven 25-kilogram drums of potassium permanganate; two 10 gallons pails of sodium chlorate; and approximately twelve 55-gallon drums of a petroleum base material, stacked on wooden pallets. In January 2002, the DTSC's Emergency Response Unit responded to reports that the contaminated soil pile had become uncovered, exposing the contaminated soil. The soil was being eroded and spread by rainwater runoff onto the site and into the adjacent Nichols Creek. The soil pile was re-covered. Sediment samples were collected near the pile. The sample results indicate that the topsoil in the runoff path is contaminated with high levels of lead (4170 mg/kg) and zinc (38,300 mg/kg).

Surface runoff contamination across the entire site is documented. In January 2002, DTSC collected various samples of ponded water across the site detecting elevated levels of zinc. The exact outfall of the storm water collection system is undetermined at this time. Surface runoff appears to be directed to the low-lying area, located in the far northwestern corner of the site. Samples were collected from the standing water and sediments in the area and were found to contain elevated levels of lead and zinc. The water sample analyzed detected zinc at 303 mg/kg and the sediment sample detected zinc at 6640 mg/kg and lead at 580 mg/kg. The impoundment area is asphalted, but large sections of asphalt have deteriorated along the western edge of the impoundment area, allowing the release of the contaminated water into Nichols Creek, which drains into the wetlands north of the Site.

October 18, 2002

Most of the storage tanks at the site appear to contain product. Several of the tanks containing product have failed or appear close to failure. On October 3, 2002, DTSC's Emergency Response Unit was on site to respond to a leaking tank. The 12,000-gallon capacity tank was evacuated; approximately 9,000 gallons were removed from the tank. Samples were collected from the liquid in the tank, the liquid being discharged from the tank, the liquid ponding around the tank, and the precipitate from the edges of the evaporating liquid on the ground. Samples results indicated zinc and/or lead concentrations exceed hazardous waste criteria. The highest concentrations of lead and zinc were analyzed in the precipitate at 2860 mg/kg and 222,000 mg/kg, respectively. Two of the tanks located at the site are known to contain sulfuric acid and sodium hydroxide, both are estimated to contain 1,500 and 3,000 gallons respectively. The condition of the tanks are unknown.

The buildings at the site are a potential hazard. The buildings are made up of primary corrugated steel, with steel support and I beams and wooden floors. Most of the buildings are showing major corrosion damage from weathering including discoloration, oxidation, and brittleness. Processing equipment, machinery, and other hazards are present in the buildings. Most of the building floors and equipment are covered in residual dusts from the manufacturing process, which contain elevated levels of zinc, lead, and cadmium. The wooden floors of the buildings are showing signs deterioration. Pipelines appear to have process liquid in them, as evidenced by crystallization and leaking at several of the pipe joints.

Vandalism and theft of equipment are occurring at the site. DTSC attempted to secure the site to keep trespassers from the potential dangers such as exposure to chemicals remaining on site. A building was broken into and further vandalized, windows were broken out, the walls were tagged, and holes were put in the walls. A front loader has been removed from the site by unknown parties and one of the forklifts has been moved around the site several times. Piles of old clothes and furniture are being found on the property recently.

The potential threats to public health and/or the environment include direct contact with soil, failure of the tanks containing hazardous substances, collapse of the building or building floors, inhalation or ingestion of residual metallic dust found in most of the building, and surface runoff and sediment deposition into the creek.

### III. CONCLUSIONS OF LAW

3.1 Respondent(s) are responsible parties as defined by Health and Safety Code section 25323.5.

3.2 Each of the substances listed in Section 2.4 is a "hazardous substance" as defined in Health and Safety Code section 25316.

October 18, 2002

3.3 There has been a release and/or there is a threatened release of hazardous substances listed in Section 2.4 at the Site, as defined in Health and Safety Code section 25320.

3.4 The actual and threatened release of hazardous substances at the Site may present an imminent and substantial endangerment to the public health or welfare or to the environment.

3.5 Response action is necessary to abate a public nuisance and/or to protect and preserve the public health.

#### IV. DETERMINATION

4.1 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that response action is necessary at the Site because there has been a release and/or there is a threatened release of a hazardous substance.

4.2 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that there may be an imminent and substantial endangerment to the public health or welfare or to the environment because of the release and/or the threatened release of the hazardous substances at the Site.

#### V. ORDER

Based on the foregoing FINDINGS, CONCLUSIONS, AND DETERMINATION, IT IS HEREBY ORDERED THAT Respondent(s) conduct the following response actions in the manner specified herein, and in accordance with a schedule specified by DTSC as follows:

5.1 All response actions taken pursuant to this Order shall be consistent with the requirements of Chapter 6.8 (commencing with section 25300), Division 20 of the Health and Safety Code and any other applicable state or federal statutes and regulations.

5.1.1 Site Remediation Strategy. The purpose of this Order is to require for the Site: implementation of any appropriate removal actions, completion of a Remedial Investigation/Feasibility Study (RI/FS), preparation of a Remedial Action Plan (RAP), preparation of California Environmental Quality Act (CEQA) documents, and Design and Implementation of the remedial actions approved in the RAP. An overall Site investigation and remediation strategy shall be developed by Respondent(s) in conjunction with DTSC which reflects program goals, objectives, and requirements. Current knowledge of the Site contamination sources, exposure pathways, and receptors shall be used in developing this strategy.

An objective of the Site investigations shall be to identify immediate or potential risks to public

October 18, 2002

health and the environment and prioritize and implement response actions using removal actions and operable units, if appropriate, based on the relative risks at the Site. Respondent(s) and DTSC shall develop and possibly modify Site priorities throughout the course of the investigations. If necessary for the protection of public health and the environment, DTSC will require additional response actions not specified in this Order to be performed as removal actions or separate operable units. Removal actions shall be implemented in accordance with a workplan and implementation schedule submitted by Respondent(s) and approved by DTSC.

For operable unit remedial actions, DTSC will specify the separate and focused remedial phase activities to be conducted as RI/FS, RAP, Design, and Implementation. The focused activities shall be conducted in accordance with the corresponding remedial phase requirements specified in this Order, but shall only address the area or problem of the operable unit.

5.1.2 Remedial Action Objectives. Based on available information, DTSC has preliminarily determined that the remedial action objectives for the Site shall include:

The reasonably foreseeable future land use of the Site is industrial; however, the Site potentially poses an ecological risk to the wetlands and bay waters to the north of the site.

Therefore, remedial action objectives for contaminated media shall be developed which are protective of the adjacent creek and the wetlands to the north.

5.1.3 Removal Actions. Respondent(s) shall undertake removal actions if, during the course of the RI or FS, DTSC determines that they are necessary to mitigate the release of hazardous substances at or emanating from the Site.

DTSC may require Respondent(s) to submit a removal action workplan that includes a schedule for implementing the workplan for DTSC's approval. Either DTSC or Respondent(s) may identify the need for removal actions. Respondent(s) shall implement the following removal actions. Workplans for implementing the following removal actions shall be submitted by the specified dates:

(a) Fence and Post.

- 1) Within 30 days of the effective date of this Order, Respondent(s) shall maintain the fence in accordance with the specifications attached as Exhibit B. The fence shall secure, at a minimum, the areas specified on the Site map (Exhibit C).
- 2) Within 30 days of the effective date of this Order, Respondent(s) shall install signs which are visible from the area surrounding the contaminated Site and posted at each route of entry into the Site, including those routes likely to be used by unauthorized persons. Such routes of entry include: access roads leading to the Site, and facing

rivers, creeks, lakes or other waterways which may provide a route of access to the Site. The signs shall be in accordance with the specifications attached as Exhibit B.

- 3) The fence and signs shall be constructed of materials able to withstand the elements and shall be continuously maintained for as long as DTSC determines it to be necessary in order to protect public health and safety and the environment.
- (b) Drainage Control. Surface runoff from the site has been observed flowing into the Nichols Creek. Berms and/or other appropriate runoff controls should be implemented to control and manage the storm water at the Site.

5.1.4 Operable Units. Respondents shall conduct separate and focused RI/FS investigations and subsequent response actions for the following operable units in accordance with the schedules contained within this Order.

5.1.5 Groundwater Monitoring. Respondents shall immediately begin to inspect the groundwater wells that currently exist at the site. Once the number of wells and their functionality is determined and all necessary repairs are made, respondents shall begin interim groundwater monitoring. Groundwater level measurements shall be conducted monthly, commencing with the first Tuesday of the month proceeding the month this order was issued. Groundwater sampling shall be conducted on a quarterly basis commencing at the same time as groundwater level measurements. Subsequent monitoring shall be conducted until DTSC determines it is appropriate to terminate monitoring.

5.1.6 Surface Water Monitoring. Respondents shall immediately begin interim monitoring of Nichols Creek. Stream level measurements shall be conducted monthly, commencing with the first Tuesday of the month proceeding the month this order was issued.

Stream sampling shall be conducted on a quarterly basis commencing with the first Tuesday of the month proceeding the month this order was issued. Subsequent monitoring shall be conducted until DTSC determines it is appropriate to terminate sampling.

5.1.7 Site Remediation Strategy Meeting. Respondents, including the Project Coordinator (Section 6.1) and Project Engineer/Geologist (Section 6.2) shall meet with DTSC within 90 days from the effective date (and concurrent with the development of the RI/FS workplan of this Order to discuss the Site remediation strategy. These discussions will include Site risks and priorities; project planning, phasing and scheduling, remedial action objectives, remedial technologies, data quality objectives, and the RI/FS workplan. Results of the discussions will be included in the Scoping Document, Section 5.2.2(b) of this Order.

5.2 Remedial Investigation/Feasibility Study (RI/FS). A RI/FS shall be conducted for the Site.

October 18, 2002

The RI/FS may be performed as a series of focused RI/FSs, if appropriate, based on Site priorities. The RI/FS shall be prepared consistent with the U.S. Environmental Protection Agency's "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," October 1988. The purpose of the RI/FS is to assess Site conditions and to evaluate alternatives to the extent necessary to select a remedy appropriate for the Site. RI and FS activities shall be conducted concurrently and iteratively so that the investigations can be completed expeditiously. Because of the unknown nature of the Site and iterative nature of the RI/FS, additional data requirements and analyses may be identified throughout the process. Respondents shall fulfill additional data and analysis needs identified by DTSC; these additional data and analysis requests will be consistent with the general scope and objectives of this Order.

The following elements of the RI/FS process and those defined by DTSC in Section 5.1.4 of this Order shall be preliminarily defined in the initial Site scoping and refined and modified as additional information is gathered throughout the RI/FS process.

- (a) Conceptual Site Model identifying contamination sources, exposure pathways, and receptors;
- (b) Federal, State and local remedial action objectives including applicable legal requirements or relevant and appropriate standards;
- (c) Project phasing including the identification of removal actions and operable units;
- (d) General response actions and associated remedial technology types; and
- (e) The need for treatability studies.

5.2.1 RI/FS Objectives. The objectives of the RI/FS are to:

- (a) Determine the nature and full extent of hazardous substance contamination of air, soil, surface water and groundwater at the Site.
- (b) Identify all actual and potential exposure pathways and routes through environmental media;
- (c) Determine the magnitude and probability of actual or potential harm to public health, safety or welfare or to the environment posed by the threatened or actual release of hazardous substances at or from the Site;
- (d) Identify and evaluate appropriate response actions to prevent or minimize future releases and mitigate any releases which have already occurred; and

(e) Collect and evaluate the information necessary to prepare a RAP.

5.2.2 RI/FS Workplan. Within 30 days from the effective date of this Order, Respondent(s) shall prepare and submit to DTSC for review and approval a detailed RI/FS Workplan and implementation schedule which covers all the activities necessary to conduct a complete RI/FS of the Site.

The RI/FS Workplan shall include a detailed description of the tasks to be performed, information or data needed for each task, and the deliverables, which will be submitted to DTSC. Either Respondent(s) or DTSC may identify the need for additional work.

These RI/FS Workplan deliverables are discussed in the remainder of this Section, with a schedule for implementation, and monthly reports. The RI/FS Workplan shall include all the sections and address each component listed below.

(a) Project Management Plan. The Project Management Plan shall define relationships and responsibilities for major tasks and project management items by Respondent(s), its contractors, subcontractors, and consultants. The plan shall include an organization chart with the names and titles of key personnel and a description of their individual responsibilities.

(b) Scoping Document. The Scoping Document shall incorporate program goals, program management principles, and expectations contained in the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Part 300), as amended. It shall include:

(1) An analysis and summary of the Site background and the physical setting. At a minimum, the following information is required:

(A) A map of the Site, and if they exist, aerial photographs and blueprints showing buildings and structures;

(B) A description of past disposal practices;

(C) A list of all hazardous substances which were disposed, discharged, spilled, treated, stored, transferred, transported, handled or used at the Site, and a description of their estimated volumes, concentrations, and characteristics;

(D) A description of the characteristics of the hazardous substances at the Site; and

(E) If applicable, a description of all current and past manufacturing processes which are or were related to each hazardous substance.

October 18, 2002

(2) An analysis and summary of previous response actions including a summary of all existing data including air, soil, surface water, and groundwater data and the Quality Assurance/Quality Control (QA/QC) procedures which were followed;

(3) Presentation of the Conceptual Site Model;

(4) The scope and objectives of RI/FS activities;

(5) Preliminary identification of possible response actions and the data needed for the evaluation of alternatives. Removal actions shall be proposed, if needed, based on the initial evaluation of threats to public health and the environment. If remedial actions involving treatment can be identified, treatability studies shall be conducted during the characterization phase, unless Respondent(s) and DTSC agree that such studies are unnecessary as set forth in Section 5.4; and

(6) If applicable, initial presentation of the Site Remediation Strategy.

(c) Field Sampling Plan. The Field Sampling Plan shall include:

(1) Sampling objectives, including a brief description of data gaps and how the field sampling plan will address these gaps;

(2) Sample locations, including a map showing these locations, and proposed frequency;

(3) Sample designation or numbering system;

(4) Detailed specification of sampling equipment and procedures;

(5) Sample handling and analysis including preservation methods, shipping requirements and holding times; and

(6) Management plan for wastes generated.

(d) Quality Assurance Project Plan. The plan shall include:

(1) Project organization and responsibilities with respect to sampling and analysis;

(2) Quality assurance objectives for measurement including accuracy, precision, and method detection limits. In selecting analytical methods, Respondent(s) shall consider obtaining

detection limits at or below potentially applicable legal requirements or relevant and appropriate standards, such as Maximum Contaminant Levels (MCLs) or Maximum Contaminant Level Goals (MCLGs);

- (3) Sampling procedures;
- (4) Sample custody procedures and documentation;
- (5) Field and laboratory calibration procedures;
- (6) Analytical procedures;
- (7) Laboratory to be used certified pursuant to Health and Safety Code section 25198;
- (8) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;
- (9) Reporting procedure for measurement of system performance and data quality;
- (10) Data management, data reduction, validation and reporting. Information shall be accessible to downloading into DTSC's system; and
- (11) Internal quality control.

(e) Health and Safety Plan. A site-specific Health and Safety Plan shall be prepared in accordance with federal (29 CFR 1910.120) and state (Title 8 CCR Section 5192) regulations and shall describe the following:

- (1) Field activities including work tasks, objectives, and personnel requirements and a description of hazardous substances on the Site;
- (2) Respondent(s) key personnel and responsibilities;
- (3) Potential hazards to workers including chemical hazards, physical hazards, confined spaces and climatic conditions;
- (4) Potential risks arising from the work being performed including the impact to workers, the community and the environment;
- (5) Exposure monitoring plan;

- (6) Personal protective equipment and engineering controls;
- (7) Site controls including work zones and security measures;
- (8) Decontamination procedures;
- (9) General safe work practices;
- (10) Sanitation facilities;
- (11) Standard operating procedures;
- (12) Emergency response plan covering workers addressing potential hazardous material releases;
- (13) Training requirements;
- (14) Medical surveillance program; and
- (15) Record keeping.

(f) Other Activities. A description of any other significant activities, which are appropriate to complete the RI/FS, shall be included.

(g) Schedule. A schedule, which provides specific time frames and dates for completion of each activity and report conducted or submitted under the RI/FS Workplan including the schedules for removal actions and operable unit activities.

5.2.3 RI/FS Workplan Implementation. Respondent(s) shall implement the approved RI/FS Workplan.

5.2.4 RI/FS Workplan Revisions. If Respondent(s) proposes to modify any methods or initiates new activities for which no Field Sampling Plan, Health and Safety Plan, Quality Assurance Project Plan or other necessary procedures/plans have been established, Respondent(s) shall prepare an addendum to the approved plan(s) for DTSC review and approval prior to modifying the method or initiating new activities.

5.3 Interim Screening and Evaluation of Remedial Technologies. At the request of DTSC, Respondent(s) shall submit an interim document, which identifies and evaluates potentially suitable

remedial technologies and recommendations for treatability studies.

5.4 Treatability Studies. Treatability testing will be performed by Respondent(s) to develop data for the detailed remedial alternatives. Treatability testing is required to demonstrate the implementability and effectiveness of technologies, unless Respondent(s) can show DTSC that similar data or documentation or information exists. The required deliverables are: a workplan, a sampling and analysis plan, and a treatability evaluation report.

To the extent practicable, treatability studies will be proposed and implemented during the latter part of Site characterization.

5.5 Remedial Investigation (RI) Report. The RI Report shall be prepared and submitted by Respondent(s) to DTSC for review and approval in accordance with the approved RI/FS workplan schedule. The purpose of the RI is to collect data necessary to adequately characterize the Site for the purposes of defining risks to public health and the environment and developing and evaluating effective remedial alternatives. Site characterization may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation. Respondent(s) shall identify the sources of contamination and define the nature, extent, and volume of the contamination. Using this information, the contaminant fate and transport shall be evaluated. The RI Report shall contain:

(a) Site Physical Characteristics. Data on the physical characteristics of the Site and surrounding area shall be collected to the extent necessary to define potential transport pathways and receptor populations and to provide sufficient engineering data for development and screening of remedial action alternatives.

(b) Sources of Contamination. Contamination sources (including heavily contaminated media) shall be defined. The data shall include the source locations, type of contaminant, waste characteristics, and Site features related to contaminant migration and human exposure.

(c) Nature and Extent of Contamination. Contaminants shall be identified and the horizontal and vertical extent of contamination shall be defined in soil, groundwater, surface water, sediment, air, and biota. Spatial and temporal trends and the fate and transport of contamination shall be evaluated.

5.6 Baseline Health and Ecological Risk Assessment. Respondent(s) shall perform health and ecological risk assessments for the Site that meet the requirements of Health and Safety Code ' 25356.1.5(b).

Respondents shall submit a Baseline Health and Ecological Risk Assessment Report within 30 days or as required by DTSC from the approval of the RI Report. The report shall be prepared consistent with U.S. EPA and California Environmental Protection Agency guidance and regulations, including as a

October 18, 2002

minimum: Risk Assessment Guidance for Superfund, Volume 1; Human Health Evaluation Manual, December 1989; Superfund Exposure Assessment Manual, April 1988;

Risk Assessment Guidance for Superfund, Volume 2, Environmental Evaluation Manual, March 1989; and all other related or relevant policies, practices and guidelines of the California Environmental Protection Agency and policies, practices and guidelines developed by U.S.EPA pursuant to 40 CFR 300.400 et seq. The Baseline Health and Ecological Risk Assessment Report shall include the following components:

(a) Contaminant Identification. Characterization data shall identify contaminants of concern for the risk assessment process.

(b) Environmental Evaluation. An ecological assessment consisting of:

(1) Identification of sensitive environments and rare, threatened, or endangered species and their habitats; and

(2) As appropriate, ecological investigations to assess the actual or potential effects on the environment and/or develop remediation criteria.

(c) Exposure Assessment. The objectives of an exposure assessment are to identify actual or potential exposure pathways, to characterize the potentially exposed populations, and to determine the extent of the exposure. Exposed populations may include industrial workers, residents, and subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations, that are identifiable as being at greater risk of adverse health effects due to exposure to hazardous substances than the general population.

(d) Toxicity Assessment. Respondents shall evaluate the types of adverse health or environmental effects associated with individual and multiple chemical exposures; the relationship between magnitude of exposures and adverse effects; and related uncertainties such as the weight of evidence for a chemical's potential carcinogenicity in humans.

(e) Risk Characterization. Risk characterization shall include the potential risks of adverse health or environmental effects for each of the exposure scenarios derived in the exposure assessment.

5.7 Feasibility Study (FS) Report. The FS Report shall be prepared and submitted by Respondent(s) to DTSC for review and approval, no later than 30 days from submittal of the RI Report. The FS Report shall summarize the results of the FS including the following:

October 18, 2002

- (a) Documentation of all treatability studies conducted.
- (b) Development of medium specific or operable unit specific remedial action objectives, including legal requirements and other promulgated standards that are relevant.
- (c) Identification and screening of general response actions, remedial technologies, and process options on a medium and/or operable unit specific basis.
- (d) Evaluation of alternatives based on the criteria contained in the NCP including:

Threshold Criteria:

- (1) Overall protection of human health and the environment.
- (2) Compliance with legal requirements and other promulgated standards that are relevant.

Primary Balancing Criteria:

- (1) Long-term effectiveness and permanence.
- (2) Reduction of toxicity, mobility, or volume through treatment.
- (3) Short-term effectiveness.
- (4) Implementability based on technical and administrative feasibility.
- (5) Cost.

Modifying Criteria:

- (1) State and local agency acceptance.
- (2) Community acceptance.
- (e) Proposed remedial actions.

5.8 Public Participation Plan (Community Relations). Respondents shall work cooperatively with DTSC in providing an opportunity for meaningful public participation in response actions.

Any such public participation activities shall be conducted in accordance with H&SC ' ' 25356.1 and 25358.7 and DTSC's most current Public Participation Policy and Guidance Manual, and shall be subject to DTSC's review and approval.

Respondents, in coordination with DTSC, shall conduct a baseline community survey and develop a Public Participation Plan (PPP) which describes how, under this Order, the public and adjoining community will be kept informed of activities conducted at the Site and how Respondents will be responding to inquiries from concerned citizens. Major steps in developing a PPP are as follows:

- (a) Develop proposed list of interviewees;
- (b) Schedule and conduct community interviews; and
- (c) Analyze interview notes, and develop objectives.

Respondents shall conduct the baseline community survey and submit the PPP for DTSC's review within 40 days of the effective date of this Order.

Respondents shall implement any of the public participation support activities identified in the PPP, at the request of DTSC. DTSC retains the right to implement any of these activities independently. These activities include, but are not limited to, development and distribution of fact sheets; public meeting preparations; and development and placement of public notices.

5.9 California Environmental Quality Act (CEQA). DTSC will comply with CEQA for all activities required by this Order that are projects subject to CEQA. Upon DTSC request, Respondents shall provide DTSC with any information that DTSC deems necessary to facilitate compliance with CEQA. The costs incurred by DTSC in complying with CEQA are response costs and Respondents shall reimburse DTSC for such costs pursuant to Section 6.19.

5.10 Remedial Action Plan (RAP). No later than 30 days after DTSC approval of the FS Report, Respondents shall prepare and submit to DTSC a draft RAP. The draft RAP shall be consistent with the NCP and Health and Safety Code section 25356.1. The draft RAP public review process may be combined with that of any other documents required by CEQA. The draft RAP shall be based on and summarize the approved RI/FS Reports, and shall clearly set forth:

- (a) Health and safety risks posed by the conditions at the Site.
- (b) The effect of contamination or pollution levels upon present, future, and probable beneficial uses of contaminated, polluted, or threatened resources.
- (c) The effect of alternative remedial action measures on the reasonable availability of

groundwater resources for present, future, and probable beneficial uses.

(d) Site specific characteristics, including the potential for offsite migration of hazardous substances, the surface or subsurface soil, and the hydro geologic conditions, as well as preexisting background contamination levels.

(e) Cost-effectiveness of alternative remedial action measures. Land disposal shall not be deemed the most cost-effective measure merely on the basis of lower short-term cost.

(f) The potential environmental impacts of alternative remedial action measures, including, but not limited to, land disposal of the untreated hazardous substances as opposed to treatment of the hazardous substances to remove or reduce their volume, toxicity, or mobility prior to disposal.

(g) A statement of reasons setting forth the basis for the removal and remedial actions selected. The statement shall include an evaluation of each proposed alternative submitted and evaluate the consistency of the removal and remedial actions proposed by the plan with the NCP.

(h) A schedule for implementation of all proposed removal and remedial actions.

In conjunction with DTSC, Respondents shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual. Within 10 days of closure of the public comment period, Respondents shall submit to DTSC a written Responsiveness Summary of all written and oral comments presented and received during the public comment period.

Following DTSC's review and finalization of the Responsiveness Summary, DTSC will specify any changes to be made in the RAP. Respondents shall modify the document in accordance with DTSC's specifications and submit a final RAP within [15] days of receipt of DTSC's comments.

5.11 Remedial Design (RD). Within 60 days after DTSC approval of the final RAP, Respondents shall submit to DTSC for review and approval a RD describing in detail the technical and operational plans for implementation of the final RAP, which includes the following elements, as applicable:

(a) Design criteria, process unit and pipe sizing calculations, process diagrams, and final plans and specifications for facilities to be constructed.

(b) Description of equipment used to excavate, handle, and transport contaminated material.

(c) A field sampling and laboratory analysis plan addressing sampling during implementation and

to confirm achievement of the performance objectives of the RAP.

- (d) A transportation plan identifying routes of travel and final destination of wastes generated and disposed.
- (e) For groundwater extraction systems: aquifer test results capture zone calculations, specifications for extraction and performance monitoring wells, and a plan to demonstrate that capture is achieved.
- (f) An updated health and safety plan addressing the implementation activities.
- (g) Identification of any necessary permits and agreements.
- (h) An operation and maintenance plan including any required monitoring.
- (i) A detailed schedule for implementation of the remedial action consistent with the schedule contained in the approved RAP including procurement, mobilization, construction phasing, sampling, facility startup, and testing.

5.12 Deed Restrictions. If the approved remedy in the Final RAP includes deed restrictions, the current owners of the Site shall sign and record deed restrictions approved by DTSC within 90 days of DTSC's approval of the final RAP.

5.13 Implementation of Final RAP. Upon DTSC approval of the RD, Respondents shall implement the final RAP in accordance with the approved schedule in the RD. Within 30 days of completion of field activities, Respondents shall submit an Implementation Report documenting the implementation of the Final RAP and RD.

5.14 Operation and Maintenance (O&M). Respondents shall comply with all O&M requirements in accordance with the final RAP and approved RD. Within 30 days of the date of DTSC's request, Respondents shall prepare and submit to DTSC for approval an O&M plan that includes an implementation schedule. Respondents shall implement the plan in accordance with the approved schedule.

5.15 Five-Year Review. Respondent shall review and reevaluate the remedial action after a period of 5 years from the completion of construction and startup, and every 5 years thereafter. The review and reevaluation shall be conducted to determine if human health and the environment are being protected by the remedial action. Within thirty 30 calendar days before the end of the time period approved by DTSC to review and reevaluate the remedial action, Respondents shall submit a remedial action review workplan to DTSC for review and approval. Within sixty 60 days of DTSC's approval

of the workplan, Respondents shall implement the workplan and shall submit a comprehensive report of the results of the remedial action review. The report shall describe the results of all sample analyses; tests and other data generated or received by Respondents and evaluate the adequacy of the implemented remedy in protecting public health, safety and the environment. As a result of any review performed under this Section, Respondents may be required to perform additional Work or to modify Work previously performed.

5.16 Changes During Implementation of the Final RAP. During the implementation of the final RAP and RD, DTSC may specify such additions, modifications, and revisions to the RD, as DTSC deems necessary to protect public health and safety or the environment or to implement the RAP.

5.17 Stop Work Order. In the event that DTSC determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC may order Respondents to stop further implementation of this Order for such period of time needed to abate the endangerment. In the event that DTSC determines that any site activities (whether or not pursued in compliance with this Order) are proceeding without DTSC authorization, DTSC may order Respondents to stop further implementation of this Order or activity for such period of time needed to obtain DTSC authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

5.18 Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances caused by the release or threatened release of a hazardous substance) during the course of this Order, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Manager. Respondents shall take such action in consultation with the Project Manager and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, Respondents shall furnish a report to DTSC, signed by Respondents' Project Coordinator, setting forth the events, which occurred, and the measures taken in the response thereto.

In the event that Respondents fail to take appropriate response and DTSC takes the action instead, Respondents shall be liable to DTSC for all costs of the response action. Nothing in this Section shall be deemed to limit any other notification requirement to which Respondents may be subject.

5.19 Discontinuation of Remedial Technology. Any remedial technology employed in implementation of the final RAP shall be left in place and operated by Respondents until and except to the extent that DTSC authorizes Respondents in writing to discontinue, move or modify some or all of the remedial technology because Respondents has met the criteria specified in the final RAP for its

discontinuance, or because the modifications would better achieve the goals of the final RAP.

5.20 Financial Assurance. Respondents shall demonstrate to DTSC and maintain financial assurance for operation and maintenance and monitoring. Respondents shall demonstrate financial assurance prior to the time that operation and maintenance activities are initiated and shall maintain it throughout the period of time necessary to complete all required operation and maintenance activities. The financial assurance mechanisms shall meet the requirements of Health and Safety Code Section 25355.2. All financial assurance mechanisms are subject to the review and approval of DTSC.

## VI. GENERAL PROVISIONS

6.1 Project Coordinator. Within 10 days from the date the Order is signed by DTSC, Respondents shall submit to DTSC in writing the name, address, and telephone number of a Project Coordinator whose responsibilities will be to receive all notices, comments, approvals, and other communications from DTSC. Respondents shall promptly notify DTSC of any change in the identity of the Project Coordinator. Respondents shall obtain approval from DTSC before the new Project Coordinator performs any work under this Order.

6.1.1 Communication and Coordination Plan (CCP). Within thirty 30 days from the date this Order is signed by DTSC, Respondents shall submit to DTSC for its approval a CCP which specifies the requirements and procedures by which Respondents will communicate and coordinate with one another in carrying out the requirements of this Order.

6.2 Project Engineer/Geologist. The work performed pursuant to this Order shall be under the direction and supervision of a qualified professional engineer or a registered geologist in the State of California, with expertise in hazardous substance site cleanups. Within 15 calendar days from the date this Order is signed by DTSC, Respondents must submit:

- a) The name and address of the project engineer or geologist chosen by Respondents; and
- b) in order to demonstrate expertise in hazardous substance cleanup, the résumé of the engineer or geologist, and the statement of qualifications of the consulting firm responsible for the work. Respondents shall promptly notify DTSC of any change in the identity of the Project Engineer/Geologist. Respondents shall obtain approval from DTSC before the new Project Engineer/Geologist performs any work under this Order.

6.3 Quarterly Summary Reports. Within 30 days from the date this Order is signed by DTSC, and on a quarterly basis thereafter, Respondents shall submit a Quarterly Summary Report of its activities under the provisions of this Order. The report shall be received by DTSC by the 15th day of the month, following each quarter and shall describe:

October 18, 2002

- (a) Specific actions taken by or on behalf of Respondents during the previous quarter;
- (b) Actions expected to be undertaken during the current quarter;
- (c) All planned activities for the next quarter;
- (d) Any requirements under this Order that were not completed;
- (e) Any problems or anticipated problems in complying with this Order; and
- (f) All results of sample analyses, tests, and other data generated under this Order during the previous calendar month, and any significant findings from these data.

6.4 Quality Assurance/Quality Control (QA/QC). All sampling and analysis conducted by Respondents under this Order shall be performed in accordance with QA/QC procedures submitted by Respondents and approved by DTSC pursuant to this Order.

6.5 Submittals. All submittals and notifications from Respondent(s) required by this Order shall be sent simultaneously to:

Barbara J. Cook, P.E.  
Regional Branch Chief  
Attention: Xavier Bryant  
Site Mitigation and Brownfields Reuse Program  
DTSC of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710

Executive Officer  
Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, California 94612

6.6 Communications. All approvals and decisions of DTSC made regarding submittals and notifications will be communicated to Respondents in writing by the Site Mitigation Branch Chief, or his/her designee. No informal advice, guidance, suggestions or comments by DTSC regarding reports, plans, specifications, schedules or any other writings by Respondents shall be construed to relieve Respondents of the obligation to obtain such formal approvals as may be required.

October 18, 2002

## 6.7 DTSC Review and Approval.

(a) All response actions taken pursuant to this Order shall be subject to the approval of DTSC. Respondents shall submit all deliverables required by this Order to DTSC. Once the deliverables are approved by DTSC, they shall be deemed incorporated into, and where applicable, enforceable under this Order.

(b) If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Order fails to comply with this Order or fails to protect public health or safety or the environment, DTSC may:

(1) Modify the document as deemed necessary and approve the document as modified; or

(2) Return comments to Respondents with recommended changes and a date by which Respondents must submit to DTSC a revised document incorporating the recommended changes.

(c) Any modifications, comments or other directives issued pursuant to (a) above, are incorporated into this Order. Any noncompliance with these modifications or directives shall be deemed a failure or refusal to comply with this Order.

6.8 Compliance with Applicable Laws. Nothing in this Order shall relieve Respondents from complying with all other applicable laws and regulations, including but not limited to compliance with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California Regional Water Quality Control Board.

Respondents shall conform all actions required by this Order with all applicable federal, state and local laws and regulations.

6.9 Respondent Liabilities. Nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current or future operations of Respondents.

Nothing in this Order is intended or shall be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from the Site. Nothing in this Order is intended or shall be construed to limit or preclude DTSC from taking any action authorized by law to protect public health or safety or the environment and recovering the cost thereof. Notwithstanding compliance with the terms of this Order, Respondents may be required to take further actions as are necessary to protect public health and the environment.

October 18, 2002

6.10 Site Access. Access to the Site and laboratories used for analyses of samples under this Order shall be provided at all reasonable times to employees, contractors, and consultants of DTSC. Nothing in this Section is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of any law. DTSC and its authorized representatives shall have the authority to enter and move freely about all property at the Site at all reasonable times for purposes including, but not limited to: inspecting records, operating logs, sampling and analytic data, and contracts relating to this Site; reviewing the progress of Respondents in carrying out the terms of this Order; conducting such tests as DTSC may deem necessary; and verifying the data submitted to DTSC by Respondents.

To the extent the Site or any other property to which access is required for the implementation of this Order is owned or controlled by persons other than Respondents, Respondents shall use best efforts to secure from such persons access for Respondents, as well as DTSC, its representatives, and contractors, as necessary to effectuate this Order. To the extent that any portion of the Site is controlled by tenants of Respondents, Respondents shall use best efforts to secure from such tenants, access for Respondents, as well as for DTSC, its representatives, and contractors, as necessary to effectuate this Order. For purposes of this Section, ~~Best efforts~~ includes the payment of reasonable sums of money in consideration of access.

If any access required to complete the Work is not obtained within forty-five (45) days of the effective date of this Order, or within forty-five (45) days of the date DTSC notifies Respondents in writing that additional access beyond that previously secured is necessary, Respondents shall promptly notify DTSC, and shall include in that notification a summary of the steps Respondents has taken to attempt to obtain access. DTSC may, as it deems appropriate, assist Respondents in obtaining access. Respondents shall reimburse DTSC in obtaining access, including, but not limited to, attorneys fees and the amount of just compensation.

6.11 Site Access for Respondents. The Site owner Respondents shall grant access to [other Respondents] who are in compliance with this Order for the purpose of conducting activities pursuant to this Order or for activities deemed necessary by DTSC to meet the objectives of this Order.

6.12 Sampling, Data and Document Availability. Respondents shall permit DTSC and its authorized representatives to inspect and copy all sampling, testing, monitoring or other data generated by Respondents or on Respondents behalf in any way pertaining to work undertaken pursuant to this Order.

Respondents shall submit all such data upon the request of DTSC. Copies shall be provided within 7 days of receipt of DTSC's written request. Respondents shall inform DTSC at least 7 days in advance of all field sampling under this Order, and shall allow DTSC and its authorized representatives to take duplicates of any samples collected by Respondents pursuant to this Order. Respondents shall maintain a central depository of the data, reports, and other documents prepared pursuant to this Order.

October 18, 2002

6.13 Record Retention. All such data, reports and other documents shall be preserved by Respondents for a minimum of ten years after the conclusion of all activities under this Order. If DTSC requests that some or all of these documents be preserved for a longer period of time, Respondents shall either comply with that request or deliver the documents to DTSC, or permit DTSC to copy the documents prior to destruction. Respondents shall notify DTSC in writing at least six months prior to destroying any documents prepared pursuant to this Order.

6.14 Government Liabilities. The State of California shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or related parties specified in Section 6.25, Parties Bound, in carrying out activities pursuant to this Order, nor shall the State of California be held as party to any contract entered into by Respondents or its agents in carrying out activities pursuant to this Order.

6.15 Additional Actions. By issuance of this Order, DTSC does not waive the right to take any further actions authorized by law.

6.16 Extension Requests. If Respondents is unable to perform any activity or submit any document within the time required under this Order, Respondents may, prior to expiration of the time, request an extension of the time in writing. The extension request shall include a justification for the delay. All such requests shall be in advance of the date on which the activity or document is due.

6.17 Extension Approvals. If DTSC determines that good cause exists for an extension, it will grant the request and specify a new schedule in writing. Respondents shall comply with the new schedule incorporated in this Order.

6.18 Liability for Costs. Respondents are ~~is~~ liable for all of DTSC's costs that have been incurred in taking response actions at the Site (including costs of overseeing response actions performed by Respondents) and costs to be incurred in the future.

6.19 Payment of Costs. DTSC may bill Respondents for costs incurred in taking response actions at the Site prior to the effective date of this Order. DTSC will bill Respondents quarterly for its response costs incurred after the effective date of this Order. Respondents shall pay DTSC within sixty (60) days of receipt of any DTSC billing.

Any billing not paid within sixty (60) days is subject to interest calculated from the date of the billing pursuant to Health and Safety Code section 25360.1. All payments made by Respondent(s) pursuant to this Order shall be by cashier's or certified check made payable to this "DTSC," and shall bear on the face the project code of the Site (Site 200019-00) and the Docket number of this Order. Payments shall be sent to:

October 18, 2002

Department of Toxic Substances Control  
Accounting/Cashier  
400 P Street, 4th Floor  
P.O. Box 806  
Sacramento, California 95812-0806

A photocopy of all payment checks shall also be sent to the person designated by DTSC to receive submittals under this Order.

6.20 Severability. The requirements of this Order are severable, and Respondents shall comply with each and every provision hereof, notwithstanding the effectiveness of any other provision.

6.21 Incorporation of Plans, Schedules and Reports. All plans, schedules, reports, specifications and other documents that are submitted by Respondents pursuant to this Order are incorporated in this Order upon DTSC's approval or as modified pursuant to Section 6.7, DTSC Review and Approval, and shall be implemented by Respondents. Any noncompliance with the documents incorporated in this Order shall be deemed a failure or refusal to comply with this Order.

6.22 Modifications. DTSC reserves the right to unilaterally modify this Order. Any modification to this Order shall be effective upon the date the modification is signed by DTSC and shall be deemed incorporated in this Order.

6.23 Time Periods. Unless otherwise specified, time periods begin from the effective date of this Order and "days" means calendar days.

6.24 Termination and Satisfaction. Except for Respondents obligations under Sections 5.14 Operation and Maintenance (O&M), 5.15 Five-Year Review, 5.20 Financial Assurance, 6.13 Record Retention, 6.18 Liability for Costs, and 6.19 Payment of Costs, Respondents obligations under this Order shall terminate and be deemed satisfied upon Respondents receipt of written notice from DTSC that Respondents has complied with all the terms of this Order.

6.25 Parties Bound. This Order applies to and is binding upon Respondents, and its officers, directors, agents, employees, contractors, consultants, receivers, trustees, successors and assignees, including but not limited to, individuals, partners, and subsidiary and parent corporations. Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Order, within 15 days after the effective date of this Order or the date of retaining their services, whichever is later. Respondents shall condition any such contracts upon satisfactory compliance with this Order. Notwithstanding the terms of any contract, Respondents is responsible for compliance with this Order and for ensuring that its

October 18, 2002

subsidiaries, employees, contractors, consultants, subcontractors, agents and attorneys comply with this Order.

6.26 Change in Ownership. No change in ownership or corporate or partnership status relating to the Site shall in any way alter Respondent's responsibility under this Order. No conveyance of title, easement, or other interest in the Site, or a portion of the Site, shall affect Respondent's obligations under this Order. Unless DTSC agrees that such obligations may be transferred to a third party, Respondents shall be responsible for and liable for any failure to carry out all activities required of Respondents by the terms and conditions of this Order, regardless of Respondent's use of employees, agents, contractors, or consultants to perform any such tasks. Respondents shall provide a copy of this Order to any subsequent owners or successors before ownership rights or stock or assets in a corporate acquisition are transferred.

## VII. NOTICE OF INTENT TO COMPLY

7. Not later than fifteen 15 days after the effective date of this Order, Respondents shall provide written notice, in accordance with paragraph 6.5 Submittals of this Order, stating whether or not Respondents will comply with the terms of this Order.

If Respondents, or any one of them, do not unequivocally commit to perform all of the requirements of this Order, they, or each so refusing, shall be deemed to have violated this Order and to have failed or refused to comply with this Order.

Respondents= written notice shall describe, using facts that exist on or prior to the effective date of this Order, any ~~Asufficient cause@~~defenses asserted by Respondents under Health and Safety Code sections 25358.3(a) or CERCLA section 107(c)(3), 42 U.S.C. section 9607(c)(3).

## VIII. EFFECTIVE DATE

8. This Order is final and effective five days from the date of mailing, which is the date of the cover letter transmitting the Order to you.

## IX. PENALTIES FOR NONCOMPLIANCE

9. Each Respondent may be liable for penalties of up to \$25,000 for each day out of compliance with any term or condition set forth in this Order and for punitive damages up to three times the amount of any costs incurred by DTSC as a result of Respondents= failure to comply, pursuant to Health and Safety Code sections 25359, 25359.2, 25359.4, and 25367(c). Health and Safety Code section 25359.4.5 provides that a responsible party who complies with this Order, or with another order or agreement concerning the same response actions required by this Order, may seek treble

October 18, 2002

If Respondents, or any one of them, do not unequivocally commit to perform all of the requirements of this Order, they, or each so refusing, shall be deemed to have violated this Order and to have failed or refused to comply with this Order.

Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under Health and Safety Code sections 25358.3(a) or CERCLA section 107(c)(3), 42 U.S.C. section 9607(c)(3).

**VIII. EFFECTIVE DATE**

8. This Order is final and effective five days from the date of mailing, which is the date of the cover letter transmitting the Order to you.

**IX. PENALTIES FOR NONCOMPLIANCE**

9. Each Respondent may be liable for penalties of up to \$25,000 for each day out of compliance with any term or condition set forth in this Order and for punitive damages up to three times the amount of any costs incurred by DTSC as a result of Respondents' failure to comply, pursuant to Health and Safety Code sections 25359, 25359.2, 25359.4, and 25367(c). Health and Safety Code section 25359.4.5 provides that a responsible party who complies with this Order, or with another order or agreement concerning the same response actions required by this Order, may seek treble damages from Respondents who fail or refuse to comply with this Order without sufficient cause.

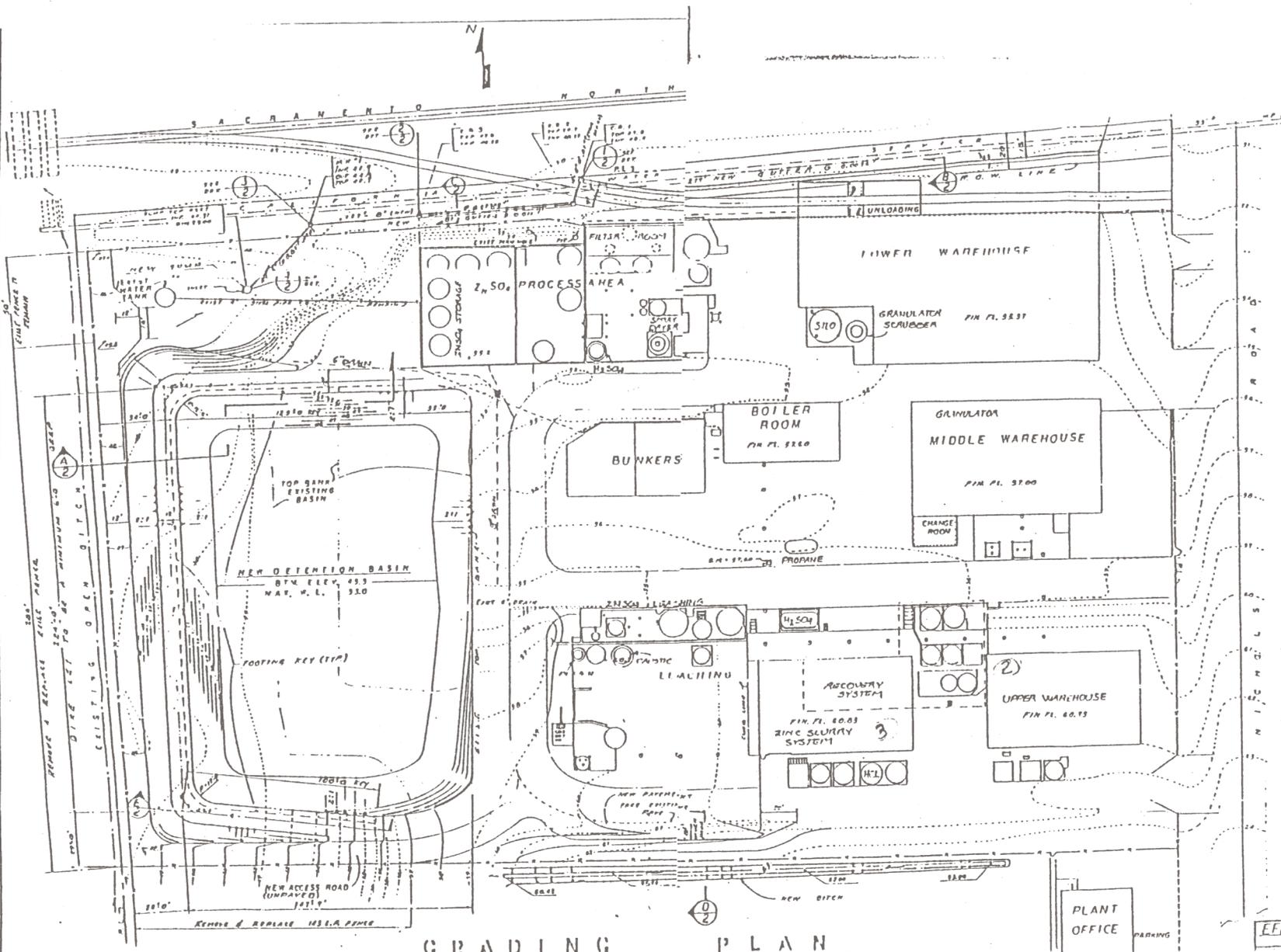
DATE OF ISSUANCE: Oct 18, 2002

  
\_\_\_\_\_  
Barbara J. Cook, P.E.  
Regional Branch Chief  
Department of Toxic Substances Control

cc: Site Mitigation Program  
Headquarters, Planning & Policy  
Office of Legal Counsel

October 18, 2002

**Exhibit A**  
**Site Map**



1. BROWSE SIDE: CONTRACTOR SHALL OBTAIN BROWSE MATERIAL FOR SPILLING AREAS OF THE SIDE FROM THE OWNER'S PREMISES. WHITE SOILS SHOULD BE REMOVED COMPLETELY AND AN AREA TO BE LEFT.
2. UNDERGROUND DRAINAGE: CONTRACTOR IS TO PROVIDE A WATER TIGHT NEW DRAINAGE AND DRAINAGE SHALL BE LOCATED AS SHOWN ON THE PLAN. ALL DRAINAGE SHALL BE PROVIDED THE 2" CROSSING AND SHALL BE 2" MIN. OF STEEL PIPE.
3. CATCH BASIN: CONTRACTOR SHALL PROVIDE A CATCH BASIN AS SHOWN ON THE PLAN. CONTRACTOR SHALL PROVIDE A DRAINAGE AND SHALL BE 2" MIN. OF STEEL PIPE.
4. CONCRETE: ALL CONCRETE SHALL BE AT LEAST 5" THICK ON GRADE PER EACH YARD AND APPROX. 2000 PSI STRENGTH. ALL CONCRETE SHALL BE REINFORCED WITH #4 BARS SHALL BE 12" MIN.
5. PROTECTION OF UTILITIES: CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AS SHOWN ON THE PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AS SHOWN ON THE PLAN.

- LEGEND**
- - - - - DRAINAGE SYSTEM LINE
  - SLOPE LINE
  - EXIST. ELEV. 10'
  - NEW ELEV. 10'
  - EXIST. POWER POLE

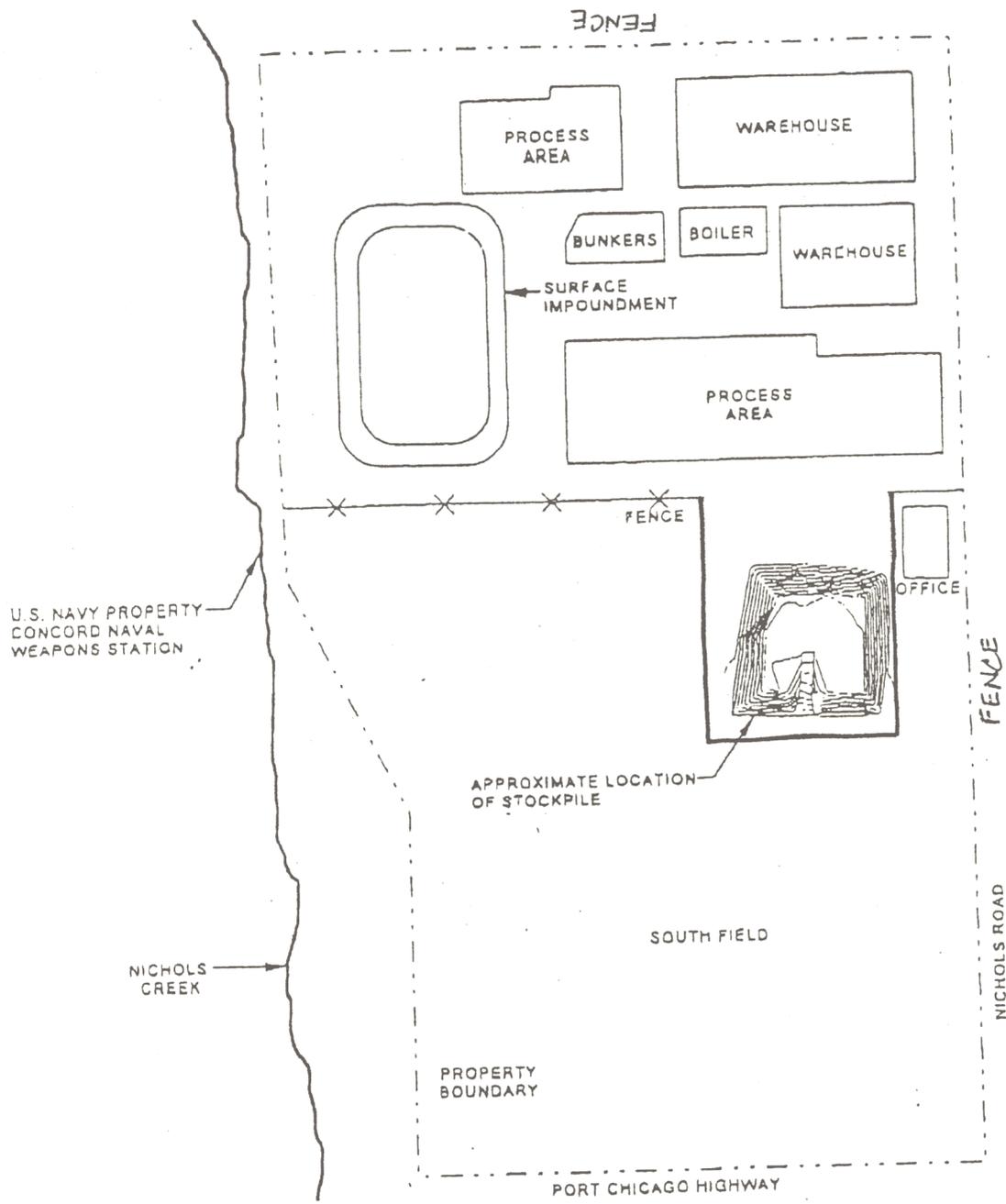
ISSUED 7/3/75 BY  
EFFLUENT TREATMENT SYSTEM

**Exhibit B**  
**Fence and Post Specifications**

## **Fence and Post Specifications**

Pursuant to section 25359.5 of the State of California Health and Safety Code, fencing and signs posted as part of this agreement must meet the following specifications:

- 1) The fences shall be maintained at the site to prevent unauthorized persons from gaining access to the site.
- 2) Fences shall be a minimum of six feet in height. All gates and access points to the site shall be secured.
- 3) The signs shall be bilingual, appropriate to the local area, and may include international symbols, as required by DTSC.
- 4) The signs shall have lettering which is legible from a distance of at least 25 feet.
- 5) The signs shall read, "Caution: Hazardous Substance Area, Unauthorized Persons Keep Out" and shall have the name and phone number of the department or the county health officer that ordered the sign posting.
- 6) The signs shall be visible from the surrounding contaminated area and posted at each route of entry into the Site, including those routes which are likely to be used by unauthorized persons, at access roads leading to the Site, and facing navigable waterways where appropriate.
- 7) The signs shall be of a material able to withstand the elements.



SITE LAYOUT  
 CHEMICAL & PIGMENT COMPANY  
 BAY POINT, CALIFORNIA

Figure By JT	Project No. 55130
Date 02/23/99	Figure ?