Chan, Barney, Env. Health

To: Drogos, Donna, Env. Health

Cc: Levi, Ariu, Env. Health

Subject: RO2877, Robert's Tire, 4311-4333 MacArthur Blvd., Oakland 94619

FYI:
On 2/9/07 , Joe Farrow of Questa Engineering notified me that he would not be able to meet my technical request deadlines (1/29/07) for this site because his company had not been paid yet by the RP. I stated that the County had received some "pressure" to expedite the site and now the ball was back in the RPs court. No extension date was discussed since it appeared that money was the issue.

Barney M. Chan
Hazardous Materials Specialist
Alameda County Environmental Health
510-567-6765

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

December 11, 2006

Mr. Alex Hahn
Hahn & Kang Equity I LP
80 Grand Ave., Suite M
Oakland, CA 94612

Hahn Development LLC
64 Hickory Court
Danville, CA 94506-4527

Glenn Roberts Tr
Mr. Glenn Roberts
1030 Circle Creek Dr.
Lafayette, CA 94549-3263

Dear Messrs. Hahn and Roberts:

Subject: Fuel Leak Case RO0002877, 4311-4333 Mac Arthur Blvd., Oakland, CA 94619
Global ID # T0600193302

Alameda County Environmental Health (ACEH) has recently reviewed the files for the subject site referred to our agency by the Department of Toxics Substances Control, DTSC. As you are aware, DTSC oversaw the remediation of surface soils primarily for the presence of motor oil and lead, which was completed to their satisfaction. The site was previously operated as a gasoline station as well as several different automotive related businesses. The surface petroleum contamination was likely from operation of the automotive businesses. A series of investigations has also identified the fuel contaminants; gasoline, diesel, benzene, toluene, ethyl benzene and xylenes in the soil and groundwater beneath the site. These contaminants are believed to have come from the underground tank system at the site. Our office, as agent to the Water Board and as delegated by the Oakland Fire Department, oversees the investigation and cleanup of these type releases.

A brief history of site activities follows:

Between 1999 and 2004 a series of environmental investigations and soil excavations occurred that resulted in the closure of the soil contamination case in 2005 by DTSC. The investigation apparently started when motor oil and lead were discovered in shallow soils near the border of the Roberts Tire (4311-4333 Mac Arthur) and the PG&E (immediately southwest of Roberts Tires) properties. A Preliminary Assessment conducted by DTSC in March 2001 detected elevated lead and motor oil in surface soils at the site. Excavation of the impacted soils was determined to be the best remedial approach.

In 1999 a magnetometer survey was performed on the property. Results identified five metal objects, three which were believed to be possibly underground tanks. Historic records and the 1957 Sanborn map indicate that USTs existed at the site, however, there is no record of their removal. Two of the metal objects are located within a portion of Mac Arthur Blvd., formerly part of the Robert's property, historically taken to widen the street. It is noted that one of the five objects likely corresponds to a small waste oil container removed during soil excavation in 2004.

In 2000 Clearwater Group drilled six borings (SB1 through SB6) and collected groundwater samples. Elevated TPHg (gasoline) up to 13, 000 ppb, TPHd (diesel) up to 14,000 ppb and TPHmo (motor oil) up to 46,000 ppb was detected in samples SB4 and SB-6 on the south and north sides of the site, respectively. Because of the uncertainty of the location of the underground tank system, this contamination may or may not be representative of groundwater releases from the USTs. TPHd was present in all samples.

In 3/2001, under DTSC oversight, four borings, SSRT1-4 and SSRT10, a duplicate of SSRT1, were drilled at the site and identified two elevated lead and motor oil impacted areas. In 9/2002, DTSC oversaw the excavation and re-sampling of these areas and verified soil cleanup to acceptable DTSC and Water Board levels.

In 3/2003 JMK Consultants drilled seven borings, B-1 through B-7, and collected soil and grab groundwater samples. Although the rationale was not stated, it appears that this investigation was meant to duplicate the previous 2000 Clearwater investigation and to include the sampling of soil, not sampled in the 2000 investigation. Low concentrations of contaminants were detected in soil samples, however, these samples were collected at approximately 10.5 and 20' depths, possibly missing shallow contamination. Again, it is unclear how representative these boring locations are relative to the UST system. Elevated gasoline, up to 42, 000 ppb, diesel, up to 4000 ppb, and benzene, toluene, ethyl benzene and xylenes (BTEX), up to 5800, 6600, 6000 and 8500 ppb, respectively were detected in groundwater samples. JMK recommended installing borings near the two metal objects in Mac Arthur Blvd. and converting these into monitoring wells in addition to installing two wells on-site and instituting a groundwater monitoring program. They also recommended a pilot study to consider potential remediation alternatives. The JMK report also included a Stellar Environmental Solutions (Stellar) Phase I investigation. Stellar reported that the on-site locations of magnetic anomalies, C, D and E, had evidence of excavation, ie patches or absence of pavement. It was assumed that no USTs were found in these locations. Stellar recommended investigating local groundwater flow direction, defining the extent, magnitude and sources of contamination and installation of monitoring wells.

In 2003 and 2004, soil and groundwater investigation was performed which identified additional areas where TPHmo exceeded the acceptable cleanup level. Further soil excavation was performed along with building demolition and post-excavation soil sampling. It was at this time that an approximate 100 gallon waste oil tank was discovered and removed from the site. Upon satisfaction of excavation results, DTSC issued a no further action letter for soil contamination of motor oil and diesel at the site in 2005.

In October 2006, six borings were drilled and soil and groundwater samples collected. Soil samples collected from 11.5-28' bgs were non-detect, ND, with the exception of 1.7 ppm TPHd and 17 ppm TPHmo for the contaminants sought, TPHg, BTEX, MTBE, TPHd and TPHmo. TPHg up to 1700 ppb, and up to 78, 240, 49 and 207 ppb BTEX, respectively was reported in groundwater samples. TPHd in the range of 230-440 ppb was detected in all water samples. The sampling rationale was not stated, however, it is presumed that another "snap shot" of groundwater conditions was taken to see the effects of the soil removal and/or to determine current conditions.

Upon review of the existing data, we find that additional information is necessary to progress your site to case closure. Our office requests that you address the following technical comments and submit the technical report requested below.

TECHNICAL COMMENTS

1. Investigation of Metal Anomalies- the 1999 magnetometer survey identified five metal objects, three of which were identified as potential underground tanks. One of the objects may have been the 100 gallon waste oil tank removed in 2004. Please detail how each of the other identified objects has or will be investigated since they may represent residual sources of contamination. References to the potential excavation of the on-site locations of the anomalies was given, however, we find this information insufficient.

2. Presentation of Data and Figures- we find that the presentation of data ie the figures and data tables difficult to interpret. The location of samples relative to each other is unclear. This appears to be the result of the presentation of different figures from different consultants, the lack of or difference in scale used in the figures or only the partial representation of the site. We request that you provide figures using the same scale, showing the complete site and indicating the location of former buildings and the magnetic anomalies. Separate figures for each historic investigation and a cumulative figure should be provided. In addition, please provide a cumulative summary of all analytical results.

3. Conduit Study- The purpose of the conduit study is to locate potential migration pathways and potential conduits and determine the probability of the plume encountering preferential pathways and conduits that could spread the contamination. Of particular concern is the identification of abandoned wells and improperly-destroyed wells that can act as conduits to deeper water bearing zones.

   We request that you perform a conduit study that details the potential migration pathways and potential conduits (utilities, storm drains, etc.) that may be present in the vicinity of the site. Provide a map showing the location and depth of all utility lines and trenches including sewers and storm drains within and near the plume area. The conduit study shall include a well survey of all wells (monitoring and production wells: active, inactive, standby, destroyed (sealed with concrete), abandoned (improperly destroyed); and dewatering, drainage, and cathodic protection wells) within a ¼ mile radius of the subject site. Provide a map(s) showing the location of all wells identified in your study and use data tables to report the data collected as part of your survey.

   Using the results of your conduit study and data from previous investigations at the site you are to develop the initial three-dimensional conceptual model of site conditions. You are to use this initial conceptual model to determine the appropriate configuration for sampling points in the Soil and Water Investigation phase of work at this site and propose these in the work plan.

4. Extent of Groundwater Contamination- We request that you provide figures indicating the extent of gasoline, diesel, motor oil and BTEX concentrations in groundwater using iso-concentration contours. Based upon your interpretation, we request that

you determine what additional investigation is necessary to complete the contaminant plume definition and submit your proposal in the work plan requested below. If necessary, please pursue any off-site access agreements needed to complete your investigation activities.

5. Groundwater Plume Monitoring- The purpose of plume monitoring is to determine movement, size, magnitude and stability of the contaminant plume. The need for remediation can also be indicated. The historical grab groundwater results indicate a high potential for significant groundwater impact, which requires monitoring. Based upon your summary of data requested above, the previous recommendations of consultants and your work plan for plume definition, we request that you provide in your work plan a proposal for monitoring well installations.

6. Future Use of Property- Please clarify the future use of the property. Cleanup goals and investigations should be consistent the planned use of the site. Site closure requirements for commercial or industrial use differ significantly from that for unrestricted use.

TECHNICAL REPORT REQUEST

Please submit the following technical reports to our office according to the following schedule:

- January 29, 2007- Plans to investigate and details of investigation of magnetic anomalies
- January 29, 2007- Site Figures and Analytical Data Tables
- January 29, 2007- Conduit and Receptor Survey
- January 29, 2007- Iso-concentration Contours for Contaminants, Work Plan for Plume Delineation and Monitoring Well Installations

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in

Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at barney.chan@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

If you have any questions, please call me at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: files, D. Drogos, A. Levi

12_8_06 4311_4333 MacArthur Blvd

Department of Toxic Substances Control

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

April 28, 2005

Ms. Donna Drogos
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Dear Ms. Drogos,

The Department of Toxic Substances Control (DTSC) is referring the Roberts Tires Property (the Property) located at 4311-4333 Mac Arthur Boulevard, Oakland, California to Alameda County Environmental Health Department. Groundwater at the Property is contaminated with motor oil, diesel, gasoline, benzene, toluene, ethylbenzene and xylene.

The soil in the Property has been cleaned to residential standards for lead using 350 mg/Kg clean up level and for motor oil and diesel using the Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs). Therefore, DTSC has determined that no further action is necessary for the soil at the Property.

Enclosed here with this letter are the documents related to this Property. If you have any questions regarding this matter, please call Jayantha Randeni of my staff at (510) 540-3806.

Sincerely,

Karen Toth, P.E., Unit Chief
Northern California
Coastal Cleanup Operations Branch

w/o enclosure

cc: Mr. Alex Hahn
80 Grand Avenue, Suite M
Oakland, CA 94612

Department of Toxic Substances Control

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

January 24, 2005

Mr. Alex Hahn
80 Grand Avenue, Suite M
Oakland, CA 94612

Dear Mr. Hahn:

The Department of Toxic Substances Control (DTSC) has completed the review of the Removal Action Sampling and Testing Results report dated December 1, 2004 and revised January 6, 2005, submitted by Questa Engineering Corp. for the Roberts Tires Property (the Property) located at 4311-4333 Mac Arthur Boulevard, Oakland, California. This report presents soil sampling results conducted during removal action activities at the Property.

Based upon DTSC's evaluation of the information submitted, the soil in the Property has been cleaned to residential land use levels using the Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for motor oil and diesel. Therefore, DTSC determines that no further action is necessary for the soil at this Property.

However, groundwater at the Property is contaminated with motor oil, diesel, gasoline, benzene, toluene, ethylbenzene and xylene. Therefore, DTSC is referring this Property to the San Francisco Bay Regional Water Quality Control Board (RWQCB).

If you have any questions regarding this matter, please call Jayantha Randeni of my staff at (510) 540-3806.

Sincerely,

Barbara J. Cook, P.E., Chief
Northern California
Coastal Cleanup Operations Branch

cc: See next Page

cc: Mr. Bruce Wolfe, Executive Officer
San Francisco Bay
Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Mr. Willard Hopkins
Senior Engineering Geologist
P.O. Box 70356
1220 Brickyard Cove Road, Suite 206
Pt. Richmond, California 94807

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

In the Matter of:	)	Docket No. I&SE 01/02 -004
	)	
Roberts Tires Facility	)	
4311 - 4333 MacArthur Boulevard	)	IMMINENT AND SUBSTANTIAL
Oakland, California 94619	)	ENDANGERMENT
	)	DETERMINATION AND ORDER
Respondents:	)	AND REMEDIAL ACTION ORDER
	)	
1. The Ruth C. Roberts Trust,	)	
2. Glenn Eugene Roberts as Trustee of the	)	Health and Safety Code
Ruth C. Roberts Trust,	)	Sections 25355.5(a)(1)(B),
3. The Estate of Ruth C. Roberts, and	)	25358.3(a), 58009 and 58010
4. Glenn Eugene Roberts as	)	
Executor of the Estate of Ruth C. Roberts	)	
1716 Broadway	)	
Oakland, California 94612	)	

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issues this Imminent and Substantial Endangerment Determination and Order and Remedial Action Order (Order) to the Ruth C. Roberts Trust, Glenn Eugene Roberts as Trustee of the Ruth C. Roberts Trust, the Estate of Ruth C. Roberts, and Glenn Eugene Roberts as Executor of the Estate of Ruth C. Roberts.

1.2 Property/Site. This Order applies to the property located at 4311 -4333 MacArthur Boulevard, Oakland, California 94619. Assessor's Parcel numbers for this property are 30-1982-121 and 30-182-122. A map showing the Property is attached as Exhibit A. This Order applies to the property and the areal extent of contamination that resulted from activities on the property (hereinafter, the "Site").

1.3 Jurisdiction. This Order is issued by DTSC to Respondents pursuant to its authority under Health and Safety Code sections 25358.3(a), 25355.5(a)(1)(B), 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, 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.

Health and Safety Code section 25355.5(a)(1)(B) authorizes DTSC to issue an order establishing a schedule for removing or remedying a release of a hazardous substance at a site, or for correcting the conditions that threaten the release of a hazardous substance. The order may include, but is not limited to requiring specific dates by which the nature and extent of a release shall be determined and the site adequately characterized, a remedial action plan prepared and submitted to DTSC for approval, and a removal or remedial action completed.

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 Respondents. Respondents are responsible parties or liable persons as defined in Health and Safety Code section 25323.5. Mrs. Ruth C. Roberts owned and operated the Site during all pertinent periods either with her husband Clifford E. Roberts, or alone after his death. During her lifetime, Mrs. Roberts transferred the Site into the Ruth C. Roberts Trust, where it remains on the date of this Order. Glenn Eugene Roberts is the Trustee of the Ruth C. Roberts Trust. Upon the death of Mrs. Roberts, Glenn Eugene Roberts was appointed Executor of her estate.

2.2 Physical Description of Site. The Site is located in a mixed industrial and residential area in the southeast portion of Oakland and consists of a one story building addressed 4311 MacArthur Boulevard and a garage building addressed 4317 MacArthur Boulevard. The front portion of the Site adjoining the public street is covered with asphalt. The Site is enclosed by a chain-link fence in the front and sides, and by the existing building in the back.

2.3 Site History. Mr. Charles E. Roberts, Sr. purchased the property in 1920 and opened Roberts Service gas station in early 1940s. Mr. Clifford E. Roberts (son of Charles E. Roberts, Sr.) purchased the Tire and Battery portion of the property in 1949. During 1950s, a

body and paint shop also was operated on the Site. In 1961, portion of the property was taken by State of California (Caltrans) for the development of Highway 580. In 1966, the remaining property was deeded to Mr. Clifford E. Roberts and his wife, Ruth C. Roberts. In 1968, a portion of the Caltrans property was deeded to the City of Oakland as part of MacArthur Boulevard. Upon death of Mr. Clifford E. Roberts in 1976, Mrs. Ruth C. Roberts became the sole owner. Mrs. Ruth C. Roberts operated a tire and brake shop on the property until 1996.

2.4 Hazardous Substances Found at the Site. A Preliminary Assessment conducted by DTSC in March 2001 found lead in surface soil in an unpaved area of the Site at concentrations as high as 36,400 milligrams/kilogram (mg/Kg). Lead compounds are listed as hazardous material (No. 406) in section 66261.126, Title 22, California Code of Regulations; Title 22 California Code of Regulations section 66261.24 defines any soil sample containing 1,000 mg/Kg or more of lead as hazardous waste.

2.5 Health Effects. Short-term exposure to lead can cause reversible kidney damage, but prolonged exposure at high concentrations may results in progressive kidney damage and possibly kidney failure. Anemia, due to the inhibition of hemoglobin synthesis and reduction in the lifespan of circulation red blood cells, is an early manifestation of lead poisoning. The most serious effects associated with markedly elevated blood lead levels are severe neurotoxic effects that include irreversible brain damage, as index by the occurrence of acute or chronic encephalopatic symptoms. Lead poisoning in children is characterized by occasional vomiting, irritability, abdominal pain, convulsion, and coma. With chronic, low-level exposure to lead, learning deficits in young children may be the only measurable effects of lead intoxication. In older children and adults the effects of lead may be more subtle and nonspecific with decreased fertility and fatigue as the only signs. Lead has been reported to cause birth defects in animals.

2.6 Routes of Exposure. Lead is absorbed following ingestion, inhalation or dermal contact with the extent of absorption being influenced by the particular lead compound in question.

2.7 Public Health and/or Environmental Risk. The primary public health risk posed by the Site is exposure by nearby residents to the highly contaminated surface soil via air dispersion or direct contact. The nearest residences are 100 feet from the western boundary of the property and 200 feet from the southeastern boundary of the property. There are approximately 34,800 people living within 1 mile radius of the Site.

III. CONCLUSIONS OF LAW

3.1 Respondents 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.

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/or 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 Respondents 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 Removal Actions. Respondents 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 Respondents to submit a removal action workplan that includes a schedule for implementing the workplan for DTSC's approval. Either DTSC or Respondents may identify the need for removal actions. Respondents 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, Respondents shall install a 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 A).

2) Within 30 days of the effective date of this Order, Respondents 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 C.

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 to be necessary in order to protect public health and safety and the environment.

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

(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 Respondents 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, Respondents 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) Respondents 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. Respondents shall implement the approved RI/FS Workplan.

5.2.4 RI/FS Workplan Revisions. If Respondents 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, Respondents 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, Respondents 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 Respondents to develop data for the detailed remedial alternatives. Treatability testing is required to demonstrate the implementability and effectiveness of technologies, unless Respondents 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 Respondents 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. Respondents 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. Respondents 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 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 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 Respondents 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:

(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 6.18.

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.

(if) 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 owner(s) 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 year(s) 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 calender 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.

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

(a) Specific actions taken by or on behalf of Respondents during the previous calendar month;

(b) Actions expected to be undertaken during the current calendar month;

(c) All planned activities for the next month;

(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 Respondents required by this Order shall be sent simultaneously to:

Barbara J. Cook, P.E., Chief
Northern California Coastal Cleanup Operations Branch
Department of Toxic Substances Control
700 Heinz Avenue, Building F, Suite 200
Berkeley, California 94710

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.

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.

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 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.

6.12 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.

6.13 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 6.24, 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.

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

6.15 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.

6.16 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.

6.17 Liability for Costs. Respondents 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.

6.18 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 Respondents 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 201357-00) and the Docket number of this Order. Payments shall be sent to:

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.

6.19 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.

6.20 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.

6.21 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.

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

6.23 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.

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

6.25 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 an 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. Respondent's (s') 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) and 25355.5(a)(1)(B) 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 Respondent's(s') 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: 12/11/01

Barbara J. Cook, P.E., Chief
Northern California
Coastal Cleanup Operations Branch
Department of Toxic Substances Control

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

EXHIBIT A

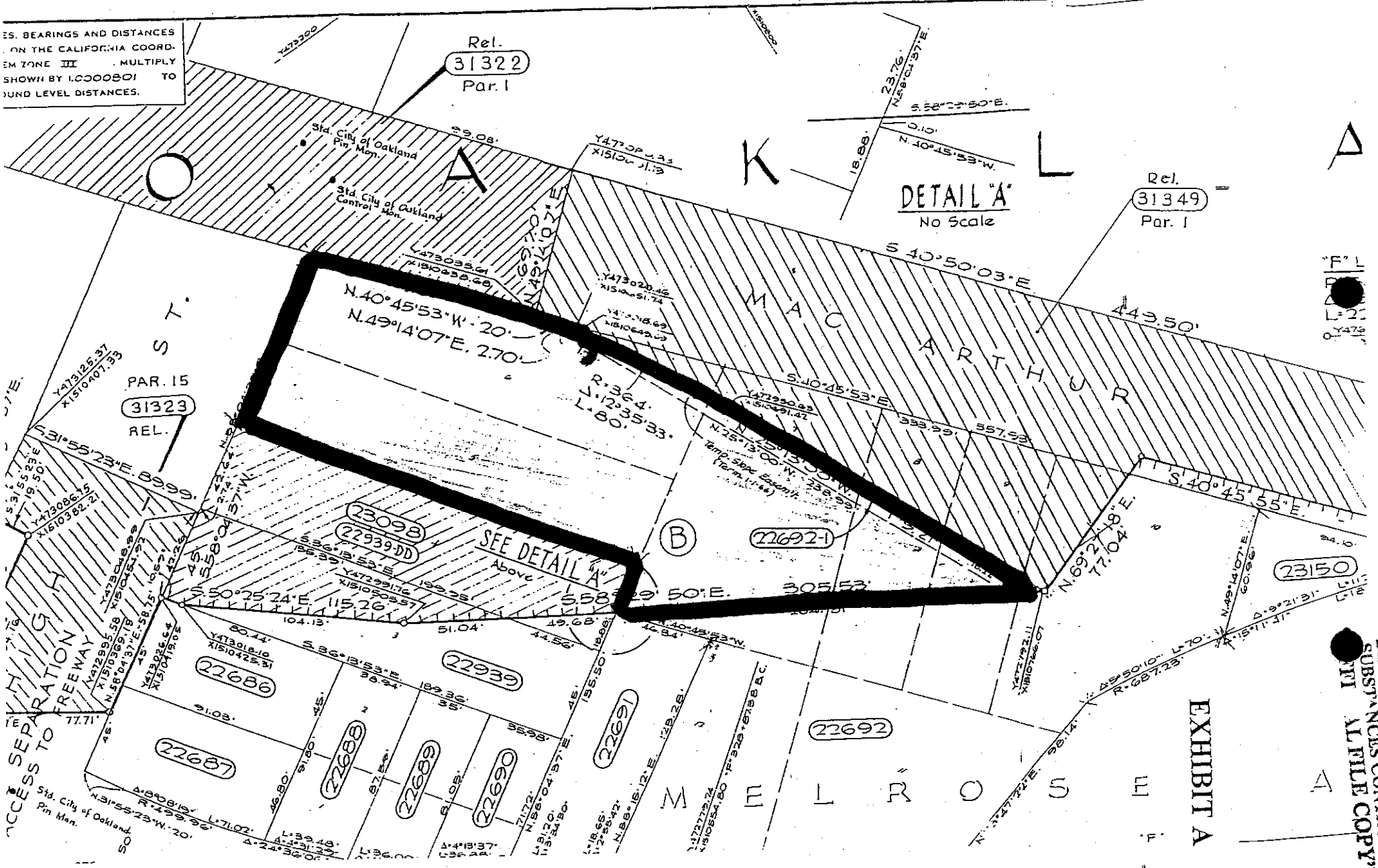
ES. BEARINGS AND DISTANCES ON THE CALIFORNIA COORD. EM ZONE III . MULTIPLY SHOWN BY 1.0000801 TO OUND LEVEL DISTANCES.
Rel. 31322 Par. 1
Std. City of Oakland Pin Mon.
Std. City of Oakland Control Mon.
DETAIL "A" No Scale
Rel. 31349 Par. 1
MACARTHUR
S 40°50'03" E
449.50'
N.40°45'53"W. 20.
N.49°14'07"E. 2.70'
R. 364.
Δ 12°35'33"
L. 80.
S.40°45'53"E.
333.99'
557.93'
S.40°45'55"E.
N.69°27'19"E.
77.04'
PAR. 15
31323
REL.
S31°55'23"E. 89.99'
SEE DETAIL "A" Above
S.50°25'24"E. 115.26'
S.58°29'50"E. 305.53'
23098
22939-DD
22692-1
23150
22686
22939
22687
22688
22689
22690
22691
22692
MELROSE
EXIT
ACCESS TO SEPARATION FREEWAY
Std. City of Oakland Pin Mon.
N.31°55'23"W. 20'
"F" L
DEPARTMENT OF CONTROL SUBSTANCES
"ALL FILE COPY"

Exhibit B

Standard Chain Link Fence Specifications

The fence shall be a six foot high chain link fence topped with three (3) stands of barbed wire. The barbed wire shall be placed outward from the fence at an angle of between 30 to 45 degrees. The fence wire shall be at least eleven (11) gauge and woven into approximately two inch mesh. The fencing should have a knuckled finish on the top and bottom edges. The posts are to be made of galvanized metal and placed no more than ten (10) feet apart and set deeply enough to support the fencing. Corner post shall be set in concrete. Any access gates are to be of the same material as the fence and shall be secured with an appropriate padlock.

Exhibit C

Sign Specification

The following are specifications for warning signs which shall be posted in accordance with a Fence and/or Post Order:

1. The signs shall be bilingual, appropriate to the local area, and may include international symbols as may be required by the Department.
2. The signs shall read : " Caution: Hazardous Substance Area, Unauthorized Persons Keep Out", and shall have the name and telephone number of the Department, the name of the Department's contact person or the name and telephone number of the county health officer that ordered the posting.
3. The lettering on the signs shall be legible from a distance of twenty five (25) feet.
4. The signs shall be visible from the surrounding area and be posted at each route of entry into the site. Signs shall be posted on the fence, facing outwards, at intervals of not more than 100 feet or less than 75 feet.
5. The signs shall be made of a material able to withstand the elements.