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

In the Matter of:	)	Docket No. IS/E-RAO 06/07-005
	)	
Zeneca Site aka: Stauffer Chemical Site 1390 South 49th Street Richmond, California	)	SITE INVESTIGATION AND REMEDIATION ORDER
	)	
Respondents:	)	
	)	
Cherokee Simeon Venture I, LLC c/o Simeon Commercial Properties 655 Montgomery Street, 11th Floor San Francisco, CA 94111	)	Health and Safety Code Sections 25355.5(a)(1)(B), 25358.3(a), 58009 and 58010
	)	
Zeneca, Inc., successor to ICI Americas, Inc. 1800 Concord Pike Wilmington, DE 19850-5438	)	
	)	
Bayer CropScience Inc., successor to Stauffer Chemical Company 2 TW Alexander Drive Research Triangle Park, NC 27709	)	
	)	
The Regents of the University of California 1111 Franklin Street, 12th Floor Oakland, California 94607	)	
	)	

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issues this Site Investigation and Remediation Order (Order) to Cherokee Simeon Venture I, LLC, a Delaware limited liability company doing business in California, Zeneca, Inc., a Delaware corporation doing business in California, Bayer CropScience, Inc., a New York corporation, and the Regents of the University of California. (Respondents)

1.2 Property/Site. This Order applies to the Property located between

Meade Street, the University of California Richmond Field Station, South 49th Street, and San Francisco Bay, in Richmond, Contra Costa County, California 94804. The Property consists of six subareas in an 86 acre area and is identified by Assessor's Parcel numbers 560-050-007, 560-050-019, 560-050-021, 560-050-022, 560-050-023, 560-010-047, 560-010-046, 560-022-019, 560-026-002, 560-023-026, 560-027-005, and 560-028-007. A map showing the Property including the six subareas 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" or the "Property").

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 order, upon DTSC's making certain determinations 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.

2.1.1 Cherokee Simeon Ventures I, LLC (CSV) currently owns and operates the Site, and has owned and operated the Site since December 31, 2002.

2.1.2 Zeneca, Inc. (Zeneca) owned and operated the Site as itself, and as successor in interest to ICI Americas, Inc. from 1987 to December 31, 2002. During that time hazardous substances, including some or all of those described in this section, were disposed at the Site.

2.1.3 Bayer CropScience, Inc. is the corporate and legal successor to Stauffer Chemical Company, Inc., and its successors in interest, which owned some or all of the Site from approximately 1897 to January 3, 1986, and which operated on some or all of the Site from approximately 1897 to 1987. During that time hazardous substances, including some or all of those described in this section, were disposed at the Site.

2.1.4 The Regents of the University of California (UC) own the adjacent Richmond Field Station. Spent pyrite cinders generated during the historical industrial operations described below on the Site were used as fill material on the Richmond Field Station property. Hazardous substances generated by activities that occurred on the Richmond Field Station property were found to be co-located with some of the cinders. During remediation activities in 2002, and 2003, Zeneca and CSV, respectively, agreed to accept for placement on the Zeneca site, certain cinders and sediment containing levels of mercury up to 260 mg/kg. These cinders and related materials were removed from the Richmond Field Station property, treated at the Site, and placed within a capped area on the Zeneca Site. The spent cinders contained hazardous substances, including but not limited to mercury, lead, and arsenic. These materials are within the scope of work required by this Order.

2.2 Description of the Site.

2.2.1 Physical Description of the Site. The Site comprises approximately 86 acres, located south of Interstate 580, east of the University of California Richmond Field Station, west of South 49th Street except an area that is to the west of the Stege Property Pistol Range and the Liquid Gold Site, and north and adjacent to the East Bay Regional Park District San Francisco Bay Trail in Richmond, California. The Site includes six subareas as shown on Exhibit A:

(a) Lot 1. The term "Lot 1" means the following APNs: 560-050-023, 560-050-019, and 560-050-007 (part north of the westerly extension of APN 560-050-021).

(b) Lot 2. The term "Lot 2" means the following APNs: 560-050-021 and 560-050-007 (part north of the westerly extension of APN 050-050-022).

(c) Lot 3. The term "Lot 3" means the following APNs: 560-050-007 (part not included in Lot 1 and Lot 2) and 560-050-022 (part

not included within the Habitat Areas described below).

(d) Habitat Area 1. The term "Habitat Area 1" means East Stege Marsh and adjacent upland areas along the banks designated as habitat area. Habitat Area 1 is located within the southern portions of APNs 560-050-022 and 560-010-046, and the western portion of APN 560-010-047 not included within Habitat Area 2 or Southeast Parcel described below.

(e) Habitat Area 2. The term "Habitat Area 2" means the Upper and Lower Freshwater Lagoons and the surrounding banks and upland areas designated as habitat areas. Habitat Area 2 is located in APNs 560-050-022, 560-022-019, 560-023-026, 560-028-007, 560-027-005, 560-026-002, 560-010-046 (part not included in Habitat Area 1), and 560-010-047(northwestern corner part not included in Habitat Area 1 or Southeast Parcel described below)

(f) Southeast Parcel. The term "Southeast Parcel" means the area within APN 560-010-047 (part east of the southerly extension of the east boundary of APN 560-026-002, coinciding generally with the west bank of Baxter Creek, and is separated from the rest of the Site by Baxter Creek (also known as Carlson Creek). It is located to the south and west of the Stege Property Pistol Range and the Liquid Gold Site.

The Site is generally flat and historically consisted of three main areas: the former manufacturing plant area, the Western Research Center, and the unimproved upland area south of the plant area and north of the San Francisco Bay Trail. The former Western Research Center portion of the Site is currently used for research, office space, and undeveloped areas and is now commonly referred to as Lot 1. The former manufacturing facilities have been largely demolished and this area is now commonly known as Lots 2 and 3. Also located primarily south of the former manufacturing plant area are the closed agricultural pond, a subsurface slurry wall between the Site and the Richmond Field Station, a subsurface permeable reactive barrier, and cinder fill areas that have been treated with limestone, compacted and covered with a temporary site cap. East Stege Marsh is located to the south of the subsurface slurry wall and to the north of the Bay Trail. Eastern Stege Marsh is an inter-tidal salt marsh bounded by embankments on all sides. Two freshwater lagoons known as the Upper and Lower Lagoons are located between the East Stege Marsh and the upland area of the Site. The lagoons currently receive surface storm water run-off and are capable of discharging into East Stege Marsh. The lagoons were formerly used as evaporation ponds for the manufacturing facilities discussed above. The southeastern-most portion of the Site is separated from the rest of the Site by Baxter Creek (also known as Carlson Creek), and is located to the south of the Stege Property Pistol Range and the Liquid Gold Site. Previous uses of this portion of the Site are not known; however, soil sampling indicates that elevated

levels of arsenic are present.

2.3 Site History.

2.3.1 The Site was first developed in 1897 when Stauffer Chemical Company (Stauffer) built a plant for the manufacture of sulfuric acid. Stauffer manufactured sulfuric acid at the Site from approximately 1897 to 1970. As part of the manufacturing process, pyrite ores were roasted at the southwestern portion of the former Plant Area. After processing, spent pyrite cinders were placed as fill material primarily within the southern portions of the Plant Area and the unimproved uplands and marsh areas. The use of pyrite ore in the production of sulfuric acid ceased in 1962. From 1916 to the 1950's both sulfuric and nitric acids were produced and stored in above ground tanks. The production of sulfuric acid ceased in 1970.

2.3.2 Superphosphate fertilizer was produced at the Site beginning in 1906 first by Union Superphosphate, then later by Stauffer, until 1971.

2.3.3 Stauffer expanded its operations to include the manufacturing of carbon disulfide from 1906 to 1961, aluminum sulfate from 1923 to 1984, ferric sulfate from 1949 to 1972, and titanium trichloride from 1954 to 1976. Activated carbon gas masks were also produced on-site.

2.3.4 In 1960, Stauffer began agricultural formulating activities. Production of agricultural products ceased in 1997.

2.3.5 Several smaller companies occupied parcels at the Site prior to and during Stauffer's ownership of the land. Stauffer acquired all of the parcels on which these companies operated by 1984.

2.3.6 On December 24, 1985, Stauffer Chemical Company executed a deed granting the Site to Hudson Finance, Inc. Also on December 24, 1985, Hudson Finance leased the Site to Stauffer Chemical Company. On March 15, 1988, the lease was amended to replace Stauffer Chemical Company with ICI Americas Inc. On December 27, 1989, Hudson Finance Inc. executed a deed granting the Site to ICI Americas Inc.

2.3.7 In 1987, various corporate affiliates of Imperial Chemical Industries, P.L.C. (ICI), purchased Stauffer through a series of name changes, asset transfers, and mergers. One of these affiliates retained the Stauffer agricultural chemical business and merged into ICI Americas Inc. ICI Americas Inc. continued to operate the Site, including Stauffer's Western Research Center located on 47th Street.

2.3.8 In 1987 and 1988, through a series of transactions, ICI sold Stauffer to Rhône-Poulenc, Inc. Stauffer ultimately became Rhône-Poulenc Basic Chemicals Company, Inc., and then Aventis CropScience USA, Inc. Bayer

CropScience Inc. is the successor by merger to Aventis CropScience USA, Inc. Bayer CropScience Inc. is the corporate and legal successor to Stauffer Chemical Company, Inc. and its successors in interest.

2.3.9 In 1993, ICI underwent a global reorganization, through which ICI Americas Inc. changed its name to Zeneca, Inc. Zeneca, Inc. continued agricultural chemical products manufacturing at the Site until 1997. Zeneca, Inc. acquired title to the Site under that name in 2002, and then conveyed the Site to Cherokee Simeon Ventures I, LLC.

2.3.10 On or about October 5, 2001, the San Francisco Bay Regional Water Quality Control Board ("RWQCB") issued to Zeneca, Inc. Site Cleanup Requirements Order No. 01-101 covering the Properties identified in this Order. Order No. 01-101 required technical evaluation and implementation of various remedial measures for soil, groundwater, and sediment contamination that had been identified at the Site.

2.3.11 In November 2004 DTSC and the RWQCB agreed to divide the environmental oversight of the environmental cleanup of the Site. Each agency assumed oversight responsibility based upon its experience and expertise. DTSC assumed oversight and lead agency responsibility for all activities within the upland areas and including groundwater and surface water at the Site. DTSC issued a Site Investigation Order (Docket No. 04/05-006) on February 6, 2005 covering portions of the Site. Subsequent to the California Environmental Protection Agency designating DTSC as lead environmental agency for the entire Site in May 2005, the RWQCB adopted Order No. R2-2005-0054, rescinding RWQCB Order No. 01-101 in October 2005.

2.3.12 Various reports have been prepared and submitted to DTSC documenting site investigations and/or previous remediation activities for the Site. Exhibit H includes a list of certain reports produced under the oversight of the RWQCB and/or DTSC that describe the work conducted at the Site from 2000 through 2005. (Note: By acknowledging receipt of these reports, DTSC does not intend to imply that it is in agreement with the contents or conclusions set forth in any of these reports or otherwise approves of them.)

2.4. Hazardous Substances Found at the Site.

2.4.1 Pursuant to section 102 of CERCLA, 42 U.S.C. section 9602, and Health and Safety Code section 25316, a substance is a "hazardous substance" if it is listed in Title 40, Code of Federal Regulations ("CFR"), Section 302.4. The following substances, listed in 40 CFR section 302.4, have been detected in the soil at the Site: arsenic, DDD, DDT, lead, and toxaphene. The following substances, listed in 40 CFR section 302.4, have been detected in the groundwater at the Site above Basin Plan requirements: arsenic; chloroform; copper; cis-1,2-

dichloroethene; mercury; nickel; 1,1,2,2-tetrachloroethane; tetrachloroethene (a.k.a. perchloroethene, PCE); toluene; trichlorethene; and vinyl chloride.

2.4.2 Attached hereto as Exhibit B and incorporated herein by this reference is a table setting forth hazardous substances detected in Site soil above levels safe for unrestricted residential use.

2.5 Health Effects.

2.5.1 Arsenic. Arsenic is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Arsenic is a confirmed human carcinogen producing liver tumors. It is a poison by subcutaneous, intramuscular, and intraperitoneal routes, and is an experimental teratogen. It causes human systemic skin and gastrointestinal effects by ingestion. Arsenic causes other experimental reproductive effects.

2.5.2 Chloroform (Trichloromethane). Chloroform is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking Water and Toxic Enforcement Act of 1986. Chloroform can irritate the skin and mucous membranes, and cause liver, heart and kidney damage. Chloroform is anesthetic. Prolonged inhalation of large doses may cause paralysis, cardiac and respiratory failure, and death.

2.5.3 Copper. Copper is a questionable carcinogen with experimental tumorigenic data. It causes experimental teratogenic and reproductive effects. it causes human systemic effects by ingestion including nausea and vomiting.

2.5.4 DDD (Dichlorodiphenyldichloroethane). DDD is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. A poison by ingestion, DDD is moderately toxic by skin contact.

2.5.5 DDT (Dichlorodiphenyltrichloroethane). DDT is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. A poison by ingestion, DDT is moderately toxic by skin contact.

2.5.6 Cis-1, 2-dichloroethene. Cis-1, 2-dichloroethene has anesthetic properties at high concentrations. Humans inhaling high concentrations may display symptoms of nausea, vomiting, and cramps, followed by unconsciousness.

2.5.7 Lead. Lead is listed as a chemical known to the State to cause cancer and reproductive toxicity pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Short-term exposure to lead can cause fatigue, sleep disturbance, headache, aching bones and muscles, constipation, abdominal pains, decreased appetite and reversible kidney damage. Chronic lead exposure can lead

to irreversible vascular sclerosis, irreversible brain damage, tubular cell atrophy, interstitial fibrosis, and glomerular sclerosis. Prolonged exposure at high concentrations may result in progressive kidney damage and possibly kidney failure. Anemia is an early sign of lead poisoning. Exposure to lead can produce neurobiological defects in children such as learning disabilities and behavioral problems.

2.5.8 Mercury. Mercury is listed as a chemical known to the State to cause reproductive toxicity pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. It is highly toxic by skin absorption and inhalation of fume or vapor, absorbed by respiratory and intestinal tracts. Acute effects of exposure to mercury include vomiting, abdominal pain, bloody diarrhea, kidney damage, and death. Chronic effects include inflammation of mouth and gums, excessive salivation, loosening of teeth, kidney damage, muscle tremors, jerky gait, spasms of extremities, personality changes, depression, irritability, and nervousness.

2.5.9 Nickel. Nickel and certain nickel compounds are listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Nickel can cause dermatitis, pulmonary asthma, and conjunctivitis.

2.5.10 1, 1, 2, 2-Tetrachloroethane. 1,1,2,2-Tetrachloroethane is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. It is a powerful narcotic and a liver poison, and is toxic by ingestion, inhalation and skin absorption. Exposure symptoms include eye and skin irritation, and gastrointestinal upset.

2.5.11 Tetrachloroethene (Perchloroethene, "PCE"). PCE is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Short-term exposure to PCE through ingestion and inhalation may cause nausea, vomiting, headache, dizziness, drowsiness, and tremors. Skin contact with PCE causes irritation and blistering. Liver and kidney toxicity are long-term effects.

2.5.12 Toluene. Toluene is listed as a chemical known to the State to cause developmental toxicity pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Toluene is a clear, colorless liquid with a distinctive smell. It is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes. Exposure symptoms include: irritated eyes and nose, fatigue, weakness, confusion, euphoria, dizziness, headache, dilated pupils, lacrimation, nervousness, muscle fatigue, insomnia, paresthesia, dermatitis, and liver and kidney damage.

2.5.13 Toxaphene. Toxaphene is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Toxaphene is used as an insecticide, and is toxic by ingestion,

inhalation, and skin absorption. It can cause mild skin irritation, central nervous system stimulation with tremors, convulsions, and death.

2.5.14 Trichloroethene ("TCE"). TCE is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Acute exposure to TCE causes headache, dizziness, vertigo, tremors, irregular heartbeat, fatigue, nausea, vomiting, and blurred vision. TCE vapors may cause irritation of the eyes, nose, and throat. Long-term effects may include liver and kidney damage.

2.5.15 Vinyl Chloride. Vinyl chloride is listed as a chemical known to the State to cause cancer pursuant to the Safe Drinking water and Toxic Enforcement Act of 1986. Inhalation of vinyl chloride causes headache, dizziness, abdominal pain, numbness, and tingling of the extremities. Vinyl chloride vapors cause eye irritation and may cause skin irritation. Long-term effects of vinyl chloride exposure include liver damage and liver cancer. There is evidence that vinyl chloride causes mutagenicity.

2.6 Routes of Exposure.

2.6.1 People working at the Site could be exposed to contaminants via dermal contact or via inhalation of volatile or dust-borne contaminants. Excavation and/or treatment of soil in the areas where contamination exists could expose workers, nearby residents and/or business employees to contamination via dermal contact or via inhalation of contaminants, either from soil or groundwater. Currently, a temporary cap made up of cement, paper, and glue covers the upland portion of the Site where mixed cinders have been placed in order to prevent dust-borne contaminants and erosion of placed cinders.

2.6.2 Contaminated groundwater or surface water runoff could migrate to adjacent properties, including the adjacent marsh. Sensitive species may be exposed to contaminants via contact, inhalation, and/or ingestion of contaminated water and/or plants. Currently, a groundwater treatment trench (bioreactive permeable barrier) exists to treat contaminated groundwater before it reaches the marsh.

2.7 Public Health and/or Environmental Risk.

2.7.1 The public potentially at risk includes those people who work at or visit the Site, those who excavate into contaminated soil or groundwater, and/or persons who otherwise come into contact with, inhale or ingest contaminated air, soil or groundwater. People who could potentially come into contact with contamination at the Site include people working at adjacent businesses located both to the east and west of the Property boundaries, and recreational users of the San Francisco Bay Trail.

2.7.2 The Property includes East Stege Marsh (within Habitat Area 1) and two Freshwater Lagoons (within Habitat Area 2). The potential exists for contamination from the upland areas to discharge via groundwater or surface water runoff into the marsh or lagoon areas. The risk to the environment includes sensitive species (which may include threatened or endangered species) that may reside in these areas.

2.7.3 The Property includes a southeastern parcel of undeveloped land (Southeast Parcel) located east of Baxter Creek (also known as Carlson Creek). The potential exists for contamination located on this Property to discharge via surface water runoff into the creek and San Francisco Bay. The risk to the environment includes sensitive species (which may include threatened or endangered species) that may reside in these areas. Transients are also known to trespass and inhabit this Property and could come into direct contact with contamination.

III. CONCLUSIONS OF LAW

3.1 Respondents are "responsible parties" or "liable persons" 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 present the conditions set forth in Health and Safety Code section 25358.3(a).

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

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 presenting the conditions set forth in Health and Safety Code section 25358.3(a).

4.2 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that further investigation is required 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 This Order supplements and does not supersede Site Investigation Order Docket No. 04/05-006.

5.1.2 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 (RI), preparation of a Baseline Risk Assessment, preparation of CEQA documents, preparation of feasibility study(ies) and preparation and implementation of remediation plan(s). If necessary for the protection of public health and the environment, DTSC will require additional response action not specified in this Order to be performed as removal actions. Removal Actions shall be implemented in accordance with a workplan and implementation schedule submitted by Respondents and approved by DTSC. More specifically, the task list ("Task List") included as Exhibit I specifies the principal activities required to complete the investigation and, if necessary, remediation of each subarea of the Site in accordance with this Order.

5.1.3 Removal Actions. Respondents shall undertake removal actions if, during the course of the RI, DTSC determines that they are necessary to mitigate the release of hazardous substances at or emanating from the Site. Either DTSC or Respondents may identify the need for removal actions. Respondents shall implement the following removal actions:

(a) Fence and Post.

(1) Respondents shall maintain a fence around the fresh water lagoons, in accordance with the specifications attached as Exhibit C. The fence shall secure, at a minimum, the areas specified on the Site map (Exhibit D). The Respondents previously installed a fence around the Upland portions of the Site, between the Upland and marsh areas of the Site, and around the boundaries of East Stege Marsh. Following completion of removal activities in East Stege Marsh, DTSC authorized the portion of the fence that bounded the eastern and southern portions of East Stege Marsh to be removed.

(2) Respondents shall maintain a 4 foot "no climb" fence

around the eastern boundary of East Stege marsh and improvements to the fencing around all other access points to East Stege marsh in accordance with East Bay Regional Park District specifications. The fence shall secure, at a minimum, the areas specified on the Site Map (Exhibit D)

(3) Respondents shall maintain the 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 around the fresh water lagoons. 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 E. The Respondents previously posted signs on Lots 1, 2 and 3 of the Site and on the fence separating Lot 3 and Habitat Areas. Standard East Bay Regional Park District "Resource Protection Area, Keep Out" signs shall be posted on the fence required in section 5.1.3(a)(2) around East Stege Marsh.

(4) 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) Temporary Cap. A temporary cap has been installed over portions of the former manufacturing area (Lot 3). On April 27, 2005, DTSC approved the Temporary Cap Maintenance Plan (Plan), dated April 18, 2005 and repair work was completed on May 24, 2005. Respondents shall continue to implement the maintenance requirements contained in the approved Plan.

(c) Dust Abatement. Respondents shall perform dust abatement activities as specified and required by DTSC during any future remediation activities that may be required.

(d) Biologically Active Permeable Barrier. Respondents shall maintain the biologically active permeable barrier and shall implement the additional evaluation requirements identified in DTSC's August 18, 2005 letter. If, after review of the results of the additional evaluation DTSC determines that any modifications, repairs or upgrades are necessary, the Respondents shall implement those modifications upon DTSC's approval.

5.1.4 Groundwater Monitoring. Respondents shall continue interim groundwater monitoring in accordance with Exhibit F and any approved revisions. Groundwater level measurements shall be conducted quarterly from all wells. Groundwater sampling shall be conducted on a quarterly basis commencing March

2005. Subsequent monitoring shall be conducted until DTSC determines it is appropriate to terminate monitoring.

5.1.5 Respondents previously submitted the Groundwater Monitoring Assessment and Well Installation, Abandonment, and Well Repair Work Plan, dated March 30, 2005. Respondent provided a response to DTSC's comments contained in a letter dated June 24, 2005 regarding the groundwater monitoring assessment. The Respondents' response to DTSC comments is dated March 30, 2006. Respondents shall implement the work regarding monitoring well installation, abandonment and repair described in the Revised Quarterly Monitoring, Well Installation/Repair and Lot 1/Lot2 Field Sampling and Analysis Plan, dated September 19, 2005.

5.1.6 Surface Water Monitoring. Respondents shall continue interim monitoring of surface water in accordance with the Self-Monitoring Program attached as Exhibit G. Copies of all monitoring reports shall be submitted to the RWQCB and DTSC.

5.1.7 Air Monitoring. Respondents shall perform air monitoring actvities as required and specified by DTSC during any future remediation activities that may be required.

5.1.8 East Stege Marsh Implementation Report. Within 60 days of the effective date of this Order, Respondents shall prepare and submit an implementation report describing all actions taken during the 2004/2005 Habitat Enhancement work conducted in East Stege Marsh and the Upper Freshwater Lagoon (Habitat Area 1 and a portion of Habitat Area 2) under the oversight of the RWQCB and stockpiled soil removal activities under DTSC's oversight, and actions taken during the 2005/2006 remedial work conducted under the oversight of DTSC. The report shall include but not be limited to:

(a) A description of the remediation work conducted;
(b) Identification of areas excavated, excavation depths and quantities excavated from each of those areas;
(c) Confirmation sampling results of the backfill material used in the marsh and the Upper Freshwater Lagoon;
(d) Maps identifying the excavation locations and depths, final backfill depths, and final Site grade;
(e) Deviations from the remediation plans;
(f) Copies of all signed manifests, bills of lading, and other trucking documents;
(g) A description of all methods used to stabilize material, including dates stabilization occurred, quantities of material stabilized, and a description and quantity of the stabilization material used;
(h) Summary of air monitoring data collected (both environmental and contractor personnel);

(i) Copies of all field notes related to the habitat enhancement work and soil stockpile removal;

(j) Copies of all photographs taken to document the work conducted.

5.1.9 Habitat Area 1.

(a) The remedy included in the final RAW for the Remaining Portions of East Stege Marsh (November 30, 2005) includes land use restrictions pursuant to California Code of Regulations, title 22, section 67391.1. The current owner of the Site shall request EBRPD authorization, as the conservation easement holder for this area, to record a land use covenant approved by DTSC within 60 days of DTSC's approval of the Marsh Implementation Report identified in section 5.1.8 above. Within 30 days after EBRPD approval of this request, the current owner of the Site shall record the land use covenant referenced herein.

(b) Operation and Maintenance (O&M). Respondents shall comply with all O&M requirements in accordance with the final RAW, which includes the monitoring and maintenance plan included in the Revised Habitat Enhancement Plan (LFR, June 15, 2004), the Remedial Design Details for Habitat Enhancement Area, Subunit 1, Meade Street Operable Unit (LFR, August 1, 2003), and sediment sampling in accordance with the Comprehensive Monitoring Plan (LFR 2002) as modified by the Addendum to the Remedial Design Details for the Habitat Enhancement Area (LFR 2004) and the Remedial Design Details for Habitat Enhancement Area, Subunit 1, Meade Street Operable Unit (LFR, August 1, 2003). Respondents shall enter into an O&M Agreement, including financial assurance pursuant to California Health and Safety Code section 25355.2, with DTSC within 90 days of the date of DTSC's request.

(c) Respondents shall review and reevaluate the remedial actions as required in the final RAW, and every 5 years thereafter from the completion of construction. 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, Respondent's may be required to perform additional work or to modify work previously performed.

5.2 Site Investigations. The Respondents shall prepare and submit to DTSC for review and approval detailed Site Investigation Workplans and implementation schedules, and Site Investigation Reports that cover all the activities necessary to conduct a complete site investigation and feasibility study for the subareas indicated in the Task List (Exhibit I). The Site Investigation Workplans for Habitat Area 2 and the Southeast Parcel shall be submitted within 60 and 90 days, respectively, of the effective date of this Order.

5.2.1 Each Site Investigation 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.

5.2.2 Each Site Investigation (SI) Report shall be prepared and submitted by Respondents to DTSC for review and approval in accordance with the approved Site Investigation Workplan. The purpose of the SI is to collect data necessary to adequately characterize the subareas for the purposes of defining risks to public health and the environment and developing and evaluating effective remedial alternatives. Respondents shall identify the sources of contamination and define the nature, extent, and volume of contamination. Using this information, the contaminant fate and transport shall be evaluated. The SI Report shall contain:

(a) Site Physical Characteristics. Data on the physical characteristics of the subareas 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 features related to contaminant migration, human exposure, and exposure ecological receptors.

(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.

5.3 Current Site Conditions. DTSC acknowledges that site activities have occurred at certain subareas of the Site in the past as documented in the reports described in Section 2.3 12. However, there is no single report that accurately depicts current Site conditions.

5.3.1 Current Condition Report Objectives. The objectives of the Current Condition Report 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; and

(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.

5.3.2 Current Condition Report Respondents have submitted Current Conditions Reports for Lots 1, 2 and 3 to DTSC. Respondent shall revise the Current Conditions report based upon DTSC comments.

5.4 Field Sampling

5.4.1 Field Sampling Workplan. Respondents have submitted to DTSC for review and approval Workplans for Lots 1 and 2, and Lot 3. Respondents have incorporated DTSC's comments into the workplans and have submitted the final plans.

5.4.2 Field Sampling Implementation. Respondents shall implement the approved Field Sampling Workplans. All contractors and all subcontractors shall be given a copy of the Health and Safety Plan prior to entering the Site. Any supplemental health and safety plans prepared by any subcontractor shall also be prepared in accordance with the regulations and guidance identified in Section 5.12. The prime contractor will be responsible for ensuring that all subcontractor supplemental health and safety plans will follow these regulations and guidelines.

5.4.3 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.

5.4.4 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. As indicated in the Task List (Exhibit I), an addendum to the Current Site Conditions Reports incorporating the results of the Field Sampling Workplans shall be prepared for Lot 1, Lot 2 and Lot 3. These reports will serve as the Final RI Reports for Lot 1, Lot 2 and Lot 3. Respondents shall submit the RI Reports for Lot 1 and Lot 2 within 60 days and Lot 3 within 90 days from the completion of field sampling activities. The purpose of the RI is to collect data necessary to adequately characterize the Uplands Area for the purposes of defining risks to public health and the environment and developing and evaluating effective remedial alternatives for foreseeable land uses. 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) Physical Characteristics. Data on the physical characteristics of Lot 1, Lot 2 and Lot 3 and surrounding areas 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 a health and ecological (if applicable) risk assessment for each subarea as indicated in the Task List (Exhibit I) that meets the requirements of Health and Safety Code section 25356.1.5(b). Respondents shall submit a Baseline Health and Ecological Risk Assessment Report within 60 days from the approval of the SI or RI Report, as appropriate. 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; Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities

(DTSC, September 1993); 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/commercial 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. If, after review of the SI or RI Report and Baseline Health and Ecological Risk Assessment Report, DTSC determines that remedial measures are necessary at the Site, Respondents shall prepare and submit a FS Report to DTSC for review and approval. The FS Report shall be prepared and submitted by Respondents to DTSC no later than 60 days after a request is made in writing by DTSC. If a Removal Action Workplan (RAW) is to be prepared for a subarea or portion thereof (Section 5.8), a stand-alone FS Report is

not required for that removal action; the analysis of remedial alternatives in the RAW will suffice. 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.

5.8 Removal Action Workplan. If DTSC determines a removal action is appropriate, Respondents will prepare and submit no later than 60 days after DTSC's approval of the FS Report or within 60 days after a request by DTSC if an FS Report is not prepared, a draft Removal Action Workplan (RAW) in accordance with Health and Safety Code sections 25323.1 and 25356.1.

(a) The Removal Action Workplan will include:

(1) A description of the onsite contamination;
(2) The goals to be achieved by the removal action;

(3) An analysis of the alternative options considered and rejected and the basis for that rejection. This should include a discussion for each alternative which covers its effectiveness, implementability and cost;

(4) Administrative record list;

(5) A description of the techniques and methods to be used in the removal action, including any excavating, storing, handling, transporting, treating, and disposing of material on or off the site;

(6) Sampling and Analysis Plan with corresponding Quality Assurance Plan to confirm the effectiveness of the RAW, if applicable;

(7) A brief overall description of methods that will be employed during the removal action to ensure the health and safety of workers and the public during the removal action. A detailed community air monitoring plan shall be included if requested by DTSC.

(b) In conjunction with DTSC, Respondents shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual and Public Participation Plan. DTSC will prepare a response to the public comments received. If required, the Respondents shall submit within fourteen (14) days of the request the information necessary for DTSC to prepare this document.

Following DTSC's finalization of the Responsiveness Summary, DTSC will specify any changes to be made in the RAW. Respondents shall modify the draft document in accordance with DTSC's specifications and submit a final RAW within 30 days of receipt of DTSC's comments.

If the proposed removal action does not meet the requirements of Health and Safety Code section 25356.1(h), the Respondents will prepare a Remedial Action Plan (RAP) in accordance with Health and Safety Code section 25356.1(c) for DTSC review and approval.

5.9 Remedial Action Plan (RAP). As specified in the Task List (Exhibit I), a draft RAP shall be prepared and submitted by the Respondents to DTSC for review and approval, no later than 60 days from approval of the Feasibility Study Reports for Lot 1, Lot 2 and Lot 3. 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 hydrogeologic 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. DTSC will prepare a response to the public comments received. If required, the Respondents shall submit within fourteen (14) days of the request the information necessary for DTSC to prepare this document.

Following DTSC's 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.

5.10 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.

5.11 Quality Assurance Project Plan (QAPP). To the extent applicable, all environmental sampling shall be collected pursuant to the QAPP prepared by LFR, dated July 18, 2005. This QAPP was approved by DTSC in a letter, dated July 25, 2005. The plan includes:

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

(b) 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);

(c) Sampling procedures;

(d) Sample custody procedures and documentation;

(e) Field and laboratory calibration procedures;

(f) Analytical procedures;

(g) Laboratory to be used certified pursuant to Health and Safety Code section 25198;

(h) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;

(i) Reporting procedure for measurement of system performance and data quality;

(j) Data management, data reduction, validation and reporting. Information shall be accessible to downloading into DTSC's system; and

(k) Internal quality control.

5.12 Health and Safety Plan. All field work occurring at the Site shall conform to the site-specific Health and Safety Plan prepared in accordance with federal (29 CFR 1910.120) and state (Title 8 CCR Section 5192) regulations. This Health and Safety Plan, prepared by LFR, dated July 19, 2005, was accepted by DTSC in a letter, dated July 25, 2005. This plan includes, at a minimum, the following elements:

(a) Site Background/History/Workplan;
(b) Key Personnel and Responsibilities
(c) Job Hazard Analysis/Summary;
(d) Employee Training;
(e) Personal Protection;
(f) Medical Surveillance;
(g) Air Surveillance;
(h) Site Control;
(i) Decontamination;
(j) Contingency Planning;
(k) Confined Space Operations;
(l) Spill Containment;
(m) Sanitation;
(n) Illumination; and
(o) Other applicable requirements based on the work to be performed.

DTSC reserves the right to require Respondents to supplement or modify the applicable health and safety plan as field conditions and data warrant.

DTSC's *Interim Draft Site Specific Health and Safety Plan Guidance Document for Site Assessment/Investigation, Site Mitigation Projects, Hazardous Waste Site Work Closure, Post Closure, and Operation and Maintenance Activities*

(DTSC, December 2000) can be used as a reference tool.

All contractors and all subcontractors shall be given a copy of the Health and Safety Plan prior to entering the Site. Any supplemental health and safety plans prepared by any subcontractor shall also be prepared in accordance with the regulations and guidance identified above. The prime contractor will be responsible for ensuring that all subcontractor supplemental health and safety plans will follow these regulations and guidelines.

5.13 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 Health and Safety Code sections 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.

A baseline community survey was previously completed. Respondents shall assist DTSC in developing a revised Public Participation Plan (PPP) for the Site, 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.

DTSC with assistance of the Respondents shall prepare a revised PPP within 90 days of the effective date of this Order. DTSC will seek to work cooperatively with the City of Richmond to ensure that the affected and interested public and community are informed of the decision-making process applicable to the clean-up of the property. DTSC will strive to coordinate its public participation activities with any public participation activities of the City of Richmond associated with the redevelopment of the Property, as appropriate.

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.

5.14 California Environmental Quality Act (CEQA). DTSC will comply with CEQA for all activities required by this Order that are projects subject to CEQA. DTSC will coordinate, as appropriate, with the City of Richmond regarding the preparation of CEQA documents. 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.

5.15 Land Use Covenant. On April 26, 2004, the Cherokee Simeon Venture I (Current Property Owner) and the RWQCB signed Covenants and Environmental

Restriction documents for Lot 1, Lot 2, and Lot 3. The documents were recorded with the Contra Costa County Recorder's Office. The Current Property Owner shall abide by the terms of those covenants until they are either removed or replaced.

If the approved remedy in the final RAW or RAP includes land use covenants or land use restrictions pursuant to California Code of Regulations, title 22, section 67391.1, the current owner of the Site shall sign and record land use covenants approved by DTSC within 90 days of DTSC's approval of the final RAW or RAP.

5.16 Implementation of Final RAP or Final RAW. Upon DTSC approval of any RD or final RAW, Respondents shall implement the final RAP or final RAW in accordance with the approved schedule in the RD or final RAW. Within 45 days of completion of field activities, Respondents shall submit an Implementation Report documenting the implementation of the Final RAP and RD or final RAW.

5.17 Operation and Maintenance (O&M). Respondents shall comply with all O&M requirements in accordance with any final RAP and approved RD or final RAW prepared for the Site. Within 45 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. Respondents shall enter into an O&M Agreement, including financial assurance pursuant to California Health and Safety Code section 25355.2, with DTSC within (30) days of the date of DTSC's request.

5.17.1 For all remedial or removal activities previously conducted under the oversight of the RWQCB and where a RAP or RAW is not prepared under DTSC oversight, and where unrestricted land use standards were not achieved, Respondents shall submit an O&M plan. The O&M plan shall propose methods to evaluate the effectiveness of remedial actions.

5.18 Five-Year Review. Respondent shall review and reevaluate the remediation 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.

5.19 Changes During Implementation of the Final RAP or Final RAW.

During the implementation of the final RAP and RD or final RAW, DTSC may specify such additions, modification, and revisions to the RD or final RAW as DTSC deems necessary to protect public health and safety or the environment or to implement the final RAP or final RAW.

5.20 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.

5.21 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 7days 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.

5.22 Discontinuation of Remedial Technology. Any remedial technology employed 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.

5.23 Financial Assurance. Respondents shall demonstrate to DTSC and maintain financial assurance sufficient for operation and maintenance and monitoring related to the fencing and signage, temporary cap, groundwater and air monitoring, maintenance and monitoring of East Stege Marsh, and the bioreactive wall. Respondents shall demonstrate financial assurance within 30 days after the Effective Date of this Order or the time that operation and maintenance activities for that item of work is initiated, whichever is later, and shall maintain it throughout the period of time necessary to complete all required operation and maintenance

activities pursuant to this Order. 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. Respondents previously submitted 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 Communication and Coordination Plan (CCP). Respondents previously submitted 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. Within thirty (30) days from the date this Order is signed by DTSC, Respondents shall submit to DTSC for its approval a modified CCP which includes all Respondents.

6.3 Project Engineer/Geologist. The work performed pursuant to this Order shall be under the direction and supervision of a qualified professional engineer or professional geologist in the State of California, with expertise in hazardous substance site cleanups. Respondents previously submitted to DTSC: 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 resume 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.

6.4 Monthly Summary Reports. Respondents shall continue to 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

6.5 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.

6.6 Submittals. All submittals and notifications from Respondents required by this Order shall be sent simultaneously to:

Barbara J. Cook, P.E.
Regional Branch Chief
Attention: Lynn Nakashima [2 paper copies and 2 copies provided on compact disc]
Site Mitigation and Brownfields Reuse Branch
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710

The title and date of the document shall be identified on each compact disc and shall be searchable portable document format (PDF).

6.7 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.

6.8 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 after

consultation with Respondents, if appropriate, 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.

6.9 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 to all applicable federal, state, and local laws and regulations.

6.10 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.

6.11 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.

The Respondent who is the current owner of the Site 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.

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 tenants of Respondents control any portion of the Site, 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 45 days of the effective date of this Order, or within 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 have 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.

6.12 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.

6.13 Record Retention. Respondents shall preserve all such data, reports and other documents for a minimum of 10 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 are 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 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 60 days of receipt of any DTSC billing. Any billing not paid within 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 Docket number of this Order. Payments shall be sent to:

Department of Toxic Substances Control
Accounting/Cashier
1001 I Street, 21st Floor
P.O. Box 806
Sacramento, California 95812-0806

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 5.12 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 have complied with all the terms of this Order.

6.25. Parties Bound. This Order applies to and is binding upon Respondents, and their 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 are responsible for compliance with this Order and for ensuring that its 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 Respondents' responsibility under this Order. No conveyance of title, easement, or other interest in the Site, or a portion of the Site, shall affect Respondents' 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 Respondents' 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 15 days after the effective date of this Order, Respondents shall provide written notice, in accordance with paragraph 6.6 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 "sufficient cause" defenses asserted by Respondent(s) 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 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: 9-15-2006

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

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

EXHIBITS

EXHIBIT A	Site Map
EXHIBIT B	Table of Hazardous Substances
EXHIBIT C	Fence Specifications
EXHIBIT D	Map of Area to be Fenced
EXHIBIT E	Sign Specifications
EXHIBIT F	Groundwater Monitoring Requirements
EXHIBIT G	Surface Water Monitoring Requirements
EXHIBIT H	Previous Documentation
EXHIBIT I	Task List

EXHIBIT A - SITE MAP

EXHIBIT A - SITE MAP

Explanation:

Project boundary

Area boundary

EXHIBIT B
SUBSTANCES DETECTED
Zeneca Site

Table 1 lists hazardous substances detected in Site soil that requires remediation to reach levels suitable for unrestricted residential land use.

Table 1

Substances Detected in Soil	Range of Concentrations in mg/kg.	Hazardous Waste Criteria in mg/kg
Arsenic	Up to 1,700	500
DDD	Up to 2,800	1
DDT	Up to 2,100	1
DDE	Up to 6.7	1
Lead	Up to 18,000	1,000
Toxaphene	Up to 230	5

Table 2 lists hazardous substances detected in Site groundwater above Basin Plan requirements

TABLE 2

Substances Detected in Groundwater	Range of concentrations in ug/L	Maximum Contaminant Levels
Arsenic	45,000	10
Chloroform	3,400	100
Copper	380,000	1,300
Cis-1,2-dichloroethene	880	6
Mercury	8.7	2
Nickel	5,400	100
1,1,2,2-tetrachloroethane	120	1
Tetrachloroethene	10,000	5
Toluene	7,100	150
Trichloroethene	5,700	5
Vinyl chloride	54	0.5

EXHIBIT C
STANDARD FENCE SPECIFICATIONS

The fence shall be a standard chain link fence with a height of six feet. The fence shall be similar in construction and material to the main line fences located on the Site. In general, replacement fencing shall consist of a minimum of 11-gauge, woven into an 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 shall be placed no more than ten feet apart. Any access gates are to be of the same material as the fence. Gates shall be secured with a padlock unless alternative measures approved by DTSC are in place to prevent access to unauthorized personnel.

The 4-foot no-climb fence shall be made of 10 gauge galvanized wrapped wire. An 8-guage top wire shall be added in high use areas to further stiffen the fence. The fence shall be installed using pressure treated "peeler core" posts or steel T-Bar posts if wood is not suitable. T-Bar posts shall be driven to at least 2 feet below ground surface, while "peeler core" posts shall be driven to four feet. Corner and end posts shall be Schedule 40 steel pipe with 3-inch nominal diameter. Brace posts shall be Schedule 40 steel pipe with 1.315 –inch outside diameter. Fabric ties shall be 11-guage galvanized steel wire. When necessary, concrete footings 12 inches in diameter and 2 feet deep shall be installed at the fence posts.

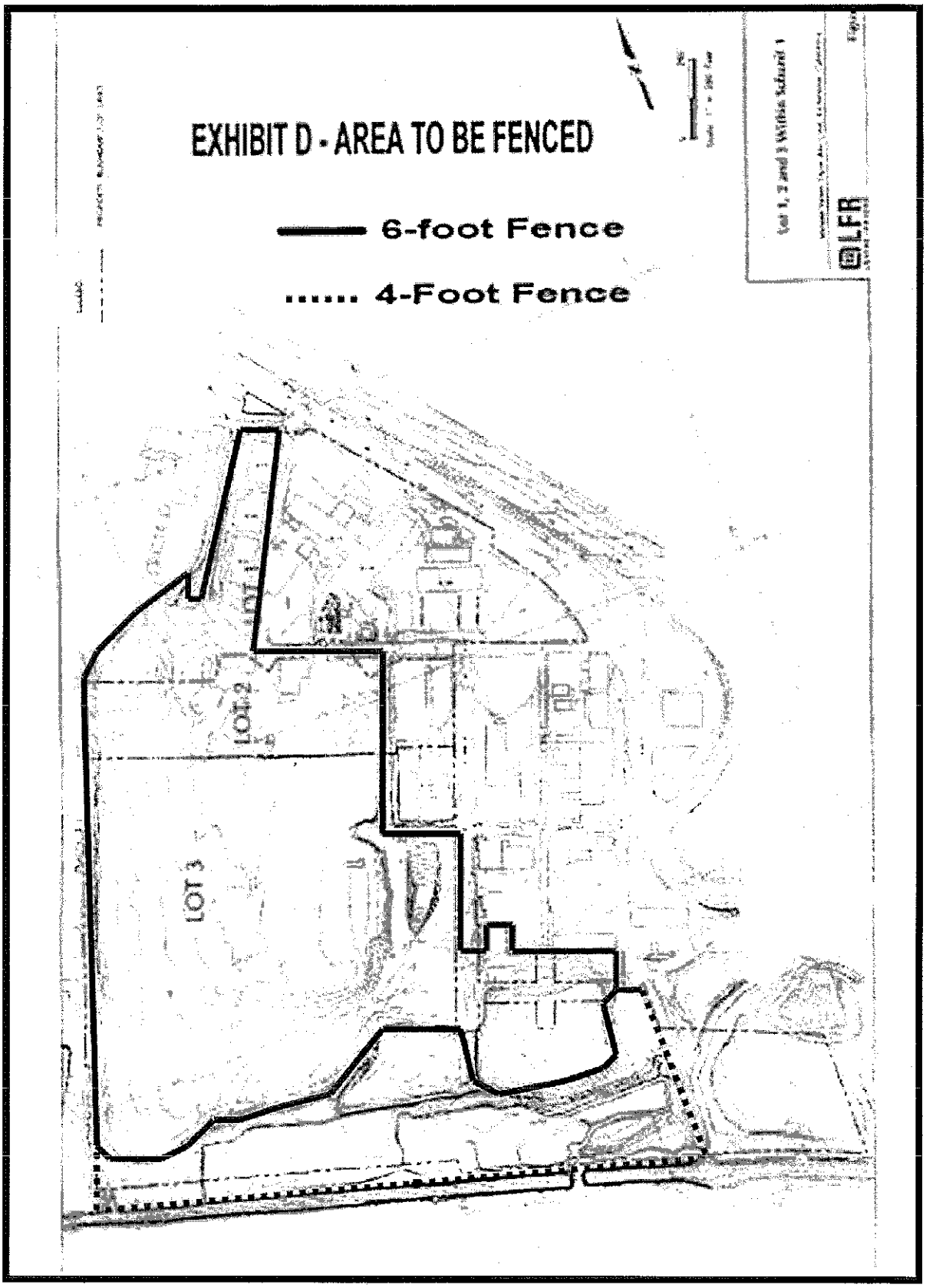
EXHIBIT D - AREA TO BE FENCED
6-foot Fence
4-Foot Fence
LOT 1
LOT 2
LOT 3
LFR

EXHIBIT E
SIGN SPECIFICATIONS

Signs shall be posted with lettering legible from a distance of at least 25 feet which states, "Caution: Hazardous Substance Area, Unauthorized Persons Keep Out", in English. The signs shall include the name of the Department and the telephone number 510-540-2122. The Department also recommends that the Respondents attach "do not enter" international symbol signs at appropriate intervals to the fence to prevent injury to individuals who cannot read the sign. Signs along the 4-foot no climb fence shall meet East Bay Regional Park District requirements and shall state, "Resource Protection Area, Keep Out". These signs shall be placed at a minimum of every 200 to 250 feet and on each side of the bridge on the Bay Trail. Signs shall also be mounted on posts made of a composite material and placed at the northern base of the slope on each side of the bridge on the Bay Trail.

The signs shall be visible from the area surrounding the contaminated area and posted at each route of entry into the Site, including those routes likely to be used by unauthorized persons, access roads leading to the Site, and facing rivers, creeks, lakes or other waterways where appropriate.

The fence and signs shall be continuously maintained to minimize the risk of unauthorized entry. The signs shall be of a material able to withstand the elements.

EXHIBIT F
GROUNDWATER MONITORING REQUIREMENTS

Consistent with the Comprehensive Monitoring Plan dated November 7, 2002, as modified by San Francisco Bay Region, Regional Water Quality Control Board comments, groundwater elevation shall be measured in all monitoring wells quarterly on Monday of the first full week of February, May, August, and November. Representative samples of groundwater shall be collected and analyzed quarterly during the first full week of February, May, August, and November from all monitoring wells and piezometers. Sampling, analysis, and reporting procedures shall be as approved by the San Francisco Bay Region, Regional Water Quality Control Board until such times as DTSC amends these requirements. Copies of reports submitted in compliance with these requirements must be sent concurrently to the San Francisco Bay Region, Regional Water Quality Control Board and to DTSC.

EXHIBIT G
SURFACE WATER MONITORING REQUIREMENTS

Surface water monitoring shall be conducted in accordance with the Comprehensive Monitoring Plan dated November 7, 2002, as modified by San Francisco Bay Region, Regional Water Quality Control Board comments. Surface water monitoring will also be conducted as part of the General Industrial Storm Water Discharge Permit through Industrial and Construction Storm water Monitoring Plans (NPDES Permit Nos. CAS000001 and CAS000002, respectively. Sampling, analysis, and reporting procedures shall be as approved by the San Francisco Bay Region, Regional Water Quality Control Board until such times as DTSC amends these requirements. Copies of reports submitted in compliance with these requirements must be sent concurrently to the San Francisco Bay Region, Regional Water Quality Control Board and to DTSC.

EXHIBIT H

PREVIOUS SITE DOCUMENTATION

Phase I Environmental Site Assessment, Zeneca Inc. Facility (LFR Levine-Fricke, April 7, 2000)

Phase II Investigation Report Zeneca Inc., Richmond Facility (LFR Levine-Fricke, May 31, 2000)

Phase II Investigation Report Addendum, Zeneca Inc. Richmond Facility (LFR Levine-Fricke, October 25, 2000)

Conceptual Remediation and Risk Management Plan – Upland (LFR, Levine Fricke, November 15, 2000)

Treatability Study Report Zeneca Richmond Facility (LFR Levine-Fricke, December 8, 2000)

Results of Additional Soil and Groundwater Investigations and Groundwater Monitoring Plan, Upland Portion of Subunit 2A, Richmond Field Station (URS November 21, 2001)

Summary Remedial Investigation and Localized Remediation Report, Zeneca Inc. Richmond Facility (LFR Levine-Fricke, November 30, 2001)

Conceptual Remediation and Risk Management Plan for the Upland Portion of Subunit 2A Meade Street Operable Unit – University of California, Berkeley Richmond Field Station (LFR – Levine-Fricke December 17, 2001)

Remedial Design Details, Upland Remediation, Subunit 1 and 2A, Meade Street Operable Unit (LFR Levine-Fricke, January 31, 2002)

Human and Ecological Risk Assessment East Stege Marsh (LFR Levine Fricke March 31, 2002)

Remedial Design Details Addendum Subunit 2A Meade Street Operable Unit Richmond Field Station (URS August 16, 2002)

Biologically Active Permeable Barrier Design and Treatability Study Report, Meade *Street Operable Unit (LFR Levine-Fricke, September 26, 2002)*

Conceptual Remediation and Risk Management Plan for the Habitat Enhancement Area (LFR Levine Fricke, October 4, 2002)

Comprehensive Monitoring Plan (LFR Levine Fricke, November 7, 2002)

Radiological Survey Report for Building 94 (MACTEC January 8, 2003)

Radiological Survey and Sampling Report for Building 94 (MACTEC March 26, 2003)

Well Installation Report Subunit 1 Meade Operable Unit (LFR Levine-Fricke, May 16, 2003)

Summary Remedial Investigation and Localized Remediation Report Addendum Subunit 1 of the Meade Street Operable Unit (LFR Levine-Fricke, May 20, 2003)

Presentation of RA-4a Modified to RWQCB (LFR Levine-Fricke, May, 2003)

Remedial Design Details, Habitat Enhancement Area, (LFR Levine-Fricke, August 1, 2003)

Post-Demolition Radiological Survey Report for Buildings 18, 90, 91, 94 and 96 (MACTEC, August 11, 2003)

Biological Assessment of Remediation and Restoration of the Habitat Enhancement Area (LFR Levine Fricke, August 12, 2003).

Implementation Report for the Upland Remedation of Subunit 1 and 2A Meade Street Operable Unit (URS September 4, 2003)

Implementation Report for Upland Remediation Subunit 1 and Subunit 2A Meade Street Operable Unit (LFR Levine-Fricke, October 3, 2003)

Risk Management Plan for Lot 3 (LFR Levine Fricke December 12, 2003)

Revised Residential Risk Evaluation, Lots 2 and 3 (LFR Levine-Fricke, January 13, 2004)

Annual Groundwater Monitoring Report Subunit 1 of the Meade Street Operable Unit January 1 to December 31, 2003 (LFR Levine-Fricke, February 3, 2004)

Risk Management Plan for Lot 1 and 2 (LFR Levine Fricke February 27, 2004)

Technical Memorandum on Engineering Controls to Mitigate Potential Risks for Soil Vapor Intrusion in to Indoor Air, Lot 2 and 3 (LFR Levine Fricke March 26, 2004).

Work Plan for Pilot-Scale and Full-Scale Remedation of Groundwater at Meade Street OU 1 (LFR Levine-Fricke, July 6, 2004)

Remedial Design Detail Addendum for the Habitat Enhancement Area (LFR Levine Fricke August 9, 2004)

Groundwater Monitoring Assessment and Well Installation, Abandonment, and Repair Work plan. (LFR Levine Fricke March 30, 2005)

Revised Temporary Cap Maintenance Plan (LFR Levine Fricke April 18, 2005)

Well Installation, Abandonment, and Well Repair Field Sampling and Analysis Plan (LFR Levine Fricke April 18, 2005)

Current Conditions Report Lot 1 (LFR Levine Fricke May 12, 2005)

Biologically Active Permeable Barrier Performance Evaluation Report (LFR Levine Fricke May 16, 2005)

Current Conditions Report Lot 2 (LFR Levine Fricke June 24 2005)

Current Conditions Report Lot 3 (LFR Levine Fricke July 29, 2005)

Final Revised Removal Action Workplan Remaining Portions of East Stege Marsh to be Remediated (LFR Levine Fricke November 30, 2005)

EXHIBIT I

TASK LIST FOR ENVIRONMENTAL SITE INVESTIGATIONS
AND REMEDIATION OF SUBAREAS

Task (a)	Subarea Identification					
	Lot 1	Lot 2	Lot 3	Habitat Area 1 (East Stege Marsh and Surrounding Area)	Habitat Area 2 (Freshwater Lagoons and Surrounding Area)	Southeast Parcel
Current Conditions Report	Complete (b)	Complete (c)	Complete (d)			
Field Sampling Workplan	Complete (e)	Complete (e)	Complete (e)			
Site Investigation Workplan					√	√
Field Sampling Implementation	√ (f)	√ (f)	√ (f)		√	√
Remedial Investigation Report	√	√	√			
Site Investigation Report					√	√
Human Health and Ecological Risk Assessment	√	√	√		√	□
Feasibility Study Report	√ (g)	√ (g)	√ (g)		√ (g)	√ (g)
Removal Action Workplan (RAW)	√ (h)	√ (h)	√ (h)		√ (h)	√ (h)
Remedial Action Plan (RAP)	√ (h)	√ (h)	√ (h)		√ (h)	√ (h)
Remedial Design (i)	√ (j)	√ (j)	√ (j)		√ (j)	□
Implementation of Final RAP or RAW	√	√	√		√	□
Implementation Report	√	√	√	√	√	□
Operation and Maintenance Plan	√ (l)	√ (l)	√ (l)	√ (k)	√ (l)	□
Operation and Maintenance Agreement	√ (l)	√ (l)	√ (l)	√	√ (l)	
5-Year Review	√ (l)	√ (l)	√ (l)	√	√ (l)	□
Land Use Covenant	√ (m)	√ (m)	√ (m)	√	√ (m)	□

Notes:

(a) Tasks listed represent tasks that are or may be required by the Order. Specific tasks checked for a given subarea indicates that the task is required by the Order based on currently available information, including but not limited to prior site investigation and remediation reports.

(b) The Respondents to DTSC Order (Docket No. 04/05-006) have prepared and submitted to DTSC the Current Conditions Report for Lot 1 (dated May 12, 2005)

(c) The Respondents to DTSC Order (Docket No. 04/05-006) have prepared and submitted to DTSC the Current Conditions Report for Lot 2 (dated June 24, 2005)

(d) The Respondents to DTSC Order (Docket No. 04/05-006) have prepared and submitted to DTSC the Current Conditions Report for Lot 3 (dated July 29, 2005)

(e) The Respondents to DTSC Order (Docket No. 04/05-006) have prepared and submitted to DTSC the following: Field Sampling and Analysis Plan for Lots 1 and 2 (dated September 19, 2005); Field Sampling and Analysis Plan for Lot 3 (dated November 2, 2005); and Addendum to Field Sampling and Analysis Plan for Lots 1, 2 and 3 (dated march 2, 2006).

(f) The Respondents to DTSC Order (Docket No. 04/05-006) began implementation of the Field Sampling and Analysis Plans in March 2006. Implementation of the Field Investigation Workplan is ongoing, pending review by DTSC.

(g) If DTSC determines a feasibility study is necessary, Respondents will prepare and submit a Feasibility Study Report. However, if a RAW is to be prepared for a subarea or portion thereof, a stand-alone Feasiblity Study Report is not required for that removal action.

(h) If DTSC determines a removal action is appropriate, Respondents will prepare and submit a draft Removal Action Workplan (RAW) in accordance with Health and Safety Code section 25323.1 and 25356.1. If the proposed removal action does not meet the requirements of Health and Safety Code section 25356.1(h), the Respondents will prepare a Remedial Action Plan (RAP) in accordance with Health and Safety Code section 25356.1(c). In

addition, multiple RAWs may be prepared to address specific areas of concern on Lots 1, 2 and 3.

(i) The Remedial Design, where applicable will include a long-term monitoring plan if included as part of the approved remedy.

(j) A Remedial Design Report will be completed if DTSC determines that a RAP is required.

(k) Data to be collected and reported in compliance with the Comprehensive Monitoring Plan (LFR, 2002), Revised Habitat Enhancement Plan (LFR, June 15, 2004), and the Remedial Design Details for Habitat Enhancement Area, Subunit 1, Meade Street Operable Unit (LFR, August 1, 2003). Data will be submitted with quarterly and annual reports.

(l) Task will be required if the remedy documents includes a requirement for long-term operation and maintenance.

(m) Land Use Covenant will be required if the remedy does not meet unrestricted land use requirements.