

CALIFORNIA WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

ORDER NO. 99-072

SITE CLEANUP REQUIREMENTS ORDER FOR:

OEA AEROSPACE, INC.
POTRERO HILLS FACILITY
FAIRFIELD, SOLANO COUNTY

DEPARTMENT OF THE AIR FORCE
TRAVIS AFB, FAIRFIELD, SOLANO COUNTY, CALIFORNIA

for the property located at

3530 BRANSCOMBE ROAD
FAIRFIELD, SOLANO COUNTY, CALIFORNIA 94533-0659

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

1. **Site Location:** OEA Aerospace, Inc. (OEAA) operates a facility which includes approximately 525 acres owned by OEAA and 25 acres located at Launch Site leased from the United States Department of the Air Force. The facility is located at 3530 Branscombe Road (formerly E. T Road) in Fairfield, Solano County. The site is about 2.5 miles south of Travis Air Force Base, and 3.5 miles southeast of the city of Fairfield. The property, including the leased parcel, is shown in Figure 1, which is made part of this Order.
2. **Site History:** The facility was built in 1956 by the U. S. Army and operated as a military base from 1956 until it was decommissioned in 1964. The primary activities during this period included the operation, maintenance, and fueling of NIKE missiles. In 1967 Explosive Technology, which is currently called OEA Aerospace Inc., purchased the majority of the old NIKE facility and leased a 25-acre parcel from DOD. Travis Air Force Base is currently the property administrator for the lease on behalf of the Department of Defense. A detailed history of the property follows:

The property for Nike Battery 53 totaled 337 acres and was acquired by DOD in 1956. The Nike facility consisted of a Facility Area, a Launcher Area, and an Integrated Fire Control (IFC) Area. The United States Army used this anti-aircraft missile-launching site to protect major metropolitan and strategic military installations from aerial attack.

Explosive Technology Inc., an explosive testing and manufacturing company, purchased 275.05 acres of the former Nike Battery 53 site (the Facility and IFC Area) in 1965.

During the late 1980's, the U.S. Army Corps of Engineers (COE) conducted an environmental assessment of the 337.71 acre parcel as required by the Superfund Amendments and Reauthorization Act of 1986 (SARA). SARA gives DOD the authority to conduct certain cleanup activities at former DOD sites in the United States and its territories. In accordance with SARA, the DOD established the Defense Environmental Restoration Program (DERP) as the vehicle to accomplish these cleanups. The cleanup of Formerly Used Defense Sites (FUDS) is a part of this program. FUDS are those properties that the DOD once owned or used, but no longer controls. These properties can range from privately owned farms to National Parks. They also include residential areas, schools, colleges, and industrial area. The FUDS program includes former Army, Navy, Air Force, or other defense agencies' properties. In October 1990 the COE determined that the former military activities on the 337.71-acre parcel did not mandate any additional cleanup action.

3. **Potentially Hazardous Materials of Concern:**

Potentially hazardous materials used at this facility during the existence of the US Army Nike Missile Battery included nitric acid, fuming red nitric acid (nitric acid with dissolved nitrogen dioxide), hydrazine, JP fuel, octane, gasoline, 2-propanol, trichloroethylene (TCE), acetone, methyl ethyl Ketone (MEK), tetrachloroethylene (PCE) polychlorinated biphenyls (PCBs), red phosphorous, waste oils, paints, and ethylene glycol (CH₂MHILL, 1997, also see Section 3.2.1 of August 15, 1997, Site Investigation Report).

Hazardous materials which are associated specifically with the OEAA explosive testing include: 1) the metals antimony, chromium, copper, lead, nickel, and silver, and 2) nitrated-organic compounds (explosives) including: hexahydro-1, 3, 5-trinitro-1, 3,5-triazine (RDX); octahydro-1, 3,5, 7-tetrazocine (HMX); 2,2-bis [(nitroxy) methyl]-1, 3-propanediol] dinitrate (PETN); and 1,1(-1,2, ethenedityl) bis- (2,4,6-trinitrobenzene)(HNS).

4. **Named Dischargers:** OEAA is named as a discharger because it is an owner and operator of the facility and because of its past and present chemical usage, and operations described in finding 2 above.

The DOD owned the site from at least 1956 to 1964. In 1967 the Department of Defense sold the majority of old NIKE facility to OEAA, and leased the 25-acre Launch Site to OEAA. Prior to 1964, the U. S. Army operated the site as a military base for about 9 years. The August 15, 1997 site investigation report submitted by OEAA to this Board indicates that some of the pollution of surface

soil is likely a result of the past U.S. Army operations at the site. The Department of the Air Force is listed as a discharger as it was an owner of the site at the time of initial discharges. The U. S. Air Force is listed as the property administrator of the portion of the property leased from the Department of Defense to OEAA. The Board finds that as a property administrator, the Air Force is permitting the discharge of wastes by OEAA pursuant to Section 13304 (see Finding 15) the Air Force was the owner of the 25 acre parcel.

The United States has waived sovereign immunity pursuant to CERCLA section 120 (42 U. S. C. 9620), RCRA section 6001 (42U. S. C. 6961), and Clean Water Act section 313 (33 U. S. C. 1323).

OEAA and the Department Of Air Force are hereafter jointly referred to as "the dischargers". The dischargers are responsible for meeting the requirements of this order.

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

5. **Regulatory Status:** For the most part, the site is currently not subject to any Board Orders, nor is it presently under DTSC or EPA orders or agreements. However, the 25-acre Annex owned by the Air Force has been identified as a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site. On August 4, 1999, DTSC and USEPA agreed to defer CERCLA action pending issuance of this Order.
6. **Site Hydrology:** The facility's explosive testing sites are all located within the Potrero Hills and that surface water runoff from each site flows down slope in several directions, ultimately discharging into seasonal and permanent wetlands surrounding the site. The hydrologic regime of the site has been described in detail in the August 15, 1997 site investigation report.
7. **Site Hydrogeology:** The depth to shallow groundwater beneath the site is currently believed to be highly variable and dependent on topography and elevation. The shallow water bearing zone's water is not used for human consumption. Drinking water used at the facility is being obtained from a well that is 200 feet deep and was installed in 1975, and is routinely tested in accordance with requirements of the Department of Health Services. Shallow groundwater has been observed to seep from the cut banks of drainage courses at lower elevations within the facility. There is one natural spring within the limit of the facility, which is about 1,350 feet east of the Upper Site area. Two domestic wells and another spring are located offsite 600 feet northeast of the area known

as the Launch Site. The wells are 120 and 180 feet deep, respectively. The general flow of groundwater is controlled by surface topography. The facility is surrounded by sloughs, marshes, and grazing land. The sloughs and marshes are part of the San Francisco Bay estuary system.

8. **Site Geology:** The geology of the Potrero Hills area is summarized in a report prepared by CH2MHILL in 1997. The Potrero Hills are formed by an east/west trending, easterly plunging anticline in which early Paleocene to late Pliocene sandstone and shale have been folded and partly truncated by erosion. The oldest rocks occur along the core of the anticline and become progressively younger perpendicular to the anticlinal axis and towards the east along the trend of the plunge of the anticline. The exposed rock at the site consists of Markley Sandstone, an Eocene Epoch massive grayish to yellowish brown, medium to coarse grained sandstone. The geologic log of a gas well located at the Launch Site indicated that the Markley Sandstone extends down to a depth of about 1,000 feet below ground surface.

Unconsolidated deposits of inter-stratified sand, silt, clay and gravel occur along the hill slopes and drainage ways (colluvium) and at the mouths of the canyons (alluvial fan deposits). These fan deposits grade laterally into the bay mud in the marshlands the surrounds the facility. Surface soil is comprised primarily of weathered bedrock including sandstone and shale, with colluvium and landslide deposits. Clay and silt matrices limit the hydraulic conductivity of the surface deposits. The depth to bedrock is approximately one to three feet below ground surface. Observations made during sampling activities indicated that where soil is present, it consists mainly of light brown silty sand, with some silt and clay. Shales and sandstone are found at relatively shallow depths (less than two feet).

9. **Results Of Soil And Groundwater Investigations:** OEAA has conducted a preliminary soil investigation and has collected more than 100 soil samples at selected locations based on topography (drainage areas) throughout the site. The samples were tested for various explosive compounds and metals by EPA method 8330. The results of analysis indicated that explosive compound concentrations (see finding 2) were in the range of 0.4 to 127.6 mg/kg. The highest concentrations were found in soil samples from the MAW Test Site (see site map).

The results of analytical data, which are contained in the August 15, 1997 site investigation report, indicated that the concentration of explosive compounds in soil samples did not exceed the Preliminary Remediation Goals (PRGs) for industrial sites. There is no PRG for Pentaerythritol Tetra Nitrate (PETN) which was detected at higher concentrations at the MAW Site. It has been noted that concentrations of explosive compounds and metals decrease with depth.

Soil samples were also analyzed for Mercury, Silver, Chrome, Nickel, Antimony, Copper, and Lead. The analytical results indicated elevated metals in surface soils as well as in shallow depths at the test sites. With respect to lead, the highest concentrations detected at the MAW Test Site and the Braider Building were 37,000 and 17,000 mg/kg respectively. Building 7 also had elevated lead, with a maximum concentration of 23,000 mg/kg. All samples for metals were extracted by USEPA Method 3050A and analyzed using USEPA Test Method 6010A series. The data indicated that lead has been the only metal detected at the site found above PRGs, primarily at the MAW Test Site. The maximum background concentration for lead at the site is about 13 mg/kg (OEAA background) and Travis RI reports a lead background of 61.2 mg/kg.

In addition to soil sampling by OEAA, the Department of the Air Force also collected sediment and soil samples as a part of their remedial investigation of the 25-acre parcel (the Launch Site-Remedial Investigation Report for the Travis WABOU [CH2MHILL, 1997].) The collected samples were tested for VOCs. Five VOCs (bis (2-ethylhexyl) phthalate, benzoic acid, acetone, toluene, and xylenes) were detected in several of the sediment samples.

10. **Adjacent Sites:** The lands which border the facility on the north, east, and west are privately owned and consist primarily of pasture lands. The lands, which are situated in rolling hills or at the foot of the Potrero Range, are used for grazing cattle. Sloughs are located approximately one-quarter mile from the facility to the north, east, and southeast. These sloughs are privately owned or leased, and operated by various waterfowl hunting clubs. Further away from the site are sloughs on public lands including Luco and Denverton sloughs on the northeast.
11. **Potential Receptors:** The potential on-site human receptors consist of employees involved with test operations. These employees have received specialized training in the use of personal protective equipment to avoid overexposure to lead while working in the test site operations. The nearest off-site potential human receptors consist of people living at various distances away from the facility. Their exposure would be predominantly from dust inhalation.

Harding Lawson Associates (HLA) established the ecological setting and receptors of the OEAA site. Ecological data was collected by HLA during a field reconnaissance study in June 1996. The purpose of the study was to identify sensitive on-site or off-site ecological receptors and habitats that could be affected by chemicals on or migrating from the test site. The information was used in the selection of sampling locations for an ecological risk assessment. (The site ecological risk assessment reports will require review and approval by agencies such as The Department of Fish and Game, DTSC or any other agencies that may have jurisdiction over the site).

12. **Interim Remedial Measures:** No interim remedial measures in term of soil cleanup has been implemented, however, institutional controls that have been implemented by OEAA (access restriction, escort requirements and personnel handling hazardous material and wastes receive Hazardous Waste Operations Emergency Response training annually) have been considered by the dischargers as equivalent to interim remedial measures.
13. **Feasibility Study:** A feasibility study may be needed to determine the appropriate response for impacted areas.

14. **Basis for Cleanup Standards:**

- a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

- b. **Beneficial Uses:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

Board Resolution No. 89-39, "Sources of Drinking Water," incorporated in the Basin Plan defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally high contaminant levels. Groundwater underlying and adjacent to the site qualifies as a potential source of drinking water.

The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

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

- o municipal and domestic water supply
- o Industrial service water supply
- o Agricultural water supply

The existing and potential beneficial uses of Suisun Marsh located in close vicinity of site include:

- o Freshwater Replenishment
- o Preservation of rare and endangered species
- o Water contact and non-contact water recreation
- o Wildlife habitat
- o Fish migration and spawning
- o estuarine habitat
- o Preservation of rare and endangered species

- c. **Basis for Groundwater Cleanup Standards:** The groundwater cleanup goals for the site are background or no higher than applicable water quality objectives or other more stringent of EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will result in acceptable residual risk to humans.
 - d. **Basis for Soil Cleanup Standards:** The soil cleanup standards for the site are 1 mg/kg total VOCs and 10 mg/kg total SVOCs (See Chapter 4, Water Quality Control Plan, San Francisco Bay Basin Region 2, dated June 21, 1995). The cleanup goal for soil is to attain background level concentration for metals. If background levels are not possible the polluted soil must be cleaned up to a level to prevent degradation of the quality of water of the adjoining wetlands. Cleanup to this level is intended to prevent leaching of contaminants to groundwater or transport of contaminants in stormwater runoff and will result in acceptable residual risk to humans and the ecosystem.
15. **Basis for 13304 Order:** The dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
16. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions

of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

17. The Department of the Air Force presently complies with the requirements of Provision C. 3 (Cost Recovery) of this Order, and funds oversight of the 25-acre parcel through the Department of Defense State of California Memorandum of Agreement.
18. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
19. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner, which will degrade water quality or adversely affect beneficial uses of waters of the State, is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup, which will cause significant adverse migration of wastes or hazardous substances, are prohibited.

B. TASKS

1. **Site Assessment Workplan**

Compliance Date: January 15, 2000

Submit a technical report acceptable to the Executive Officer to define the vertical and lateral extent of soil and groundwater pollution. The workplan should specify investigation methods and a proposed time schedule. Work may be conducted in phases to allow the investigation to proceed efficiently. Note: If the investigation finds that chemical

contamination is confined only to soils, no groundwater investigation is required. If groundwater is not encountered during this investigation, analysis of spring water in lieu of groundwater will suffice.

2. **Completion of Site Assessment**

Compliance Date: September 1, 2000

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 1 workplan. The technical report should define the vertical and lateral extent of pollution down to concentrations at or below typical cleanup standards for soil and groundwater.

3. **Ecological Risk/Human Health Assessment Report**
Compliance Date: November 1, 2000

The dischargers shall submit a site ecological risk assessment report acceptable to the Executive Officer. The report must take into account any groundwater or storm water runoff that reaches Suisun Marsh or other wetlands surrounding the site.

4. **Revised Storm Water Pollution Prevention Plan (SWPP) /
Erosion And Sediment Control Measures**

Compliance Date: December 1, 1999

The dischargers shall submit a SWPP to include as an appendix an Erosion and Sediment Control Plan acceptable to the Executive Officer describing of such a plan to monitor for and remedy any adverse pollutant migration or other event that might cause an increased risk to human health, safety and or the environment.

5. **Report of Effectiveness of the Revised SWPP/ Erosion and Sediment
Control Measures**

Compliance Date: March 1, 2001

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

- a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment

- b. Comparison of contaminant concentration trends with cleanup standards
- c. Any additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule

6. **Proposed Final Remedial Actions and Cleanup Standards**

Compliance Date: December 1, 2001

Submit a technical report acceptable to the Executive Officer containing:

- a. Results of the site assessment
 - b. Feasibility study evaluating alternative final remedial actions (If remedial action is required complete a feasibility study for evaluating potential remedial alternatives)
 - c. Recommended final remedial actions and cleanup standards
 - d. Implementation of tasks and time schedule
7. **Delayed Compliance:** If the dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.

C. PROVISIONS

- 1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
- 2. **Good Operation and Maintenance (O&M):** The dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
- 3. **Cost Recovery:** The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the

dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the dischargers shall permit the Board or its authorized representative:
 - a. Entries upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
 - d. Sampling of any groundwater or soil, which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the dischargers.
5. **Self-Monitoring Program:** The dischargers shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All geotechnical and hydrogeological documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature). In addition, the OEAA onsite laboratory may perform specialized analyses for which no EPA test method(s) are currently available.
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:

- a. Department of Environmental Health Management of Solano County at 601 Texas Street, Fairfield, CA 94533 (Attention: David L. Eubanks)
- b. DTSC, Region One at 10152 Croydon Way, Suite #3, Sacramento., CA 95827-2106 (Attention: Mr. Jose Salcido)
- c. EPA, Region 9 at 75 Hawthorne Street, H-9-1, San Francisco, CA 94105-3901 (Attention: Mr. John Luci)

The Executive Officer may modify this distribution list as needed.

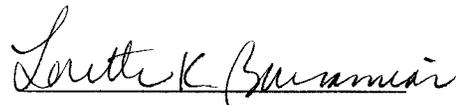
9. **Reporting of Changed Owner or Operator:** The dischargers shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, dischargers shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

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

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 15, 1999.



Loretta K. Barsamian
Executive Officer

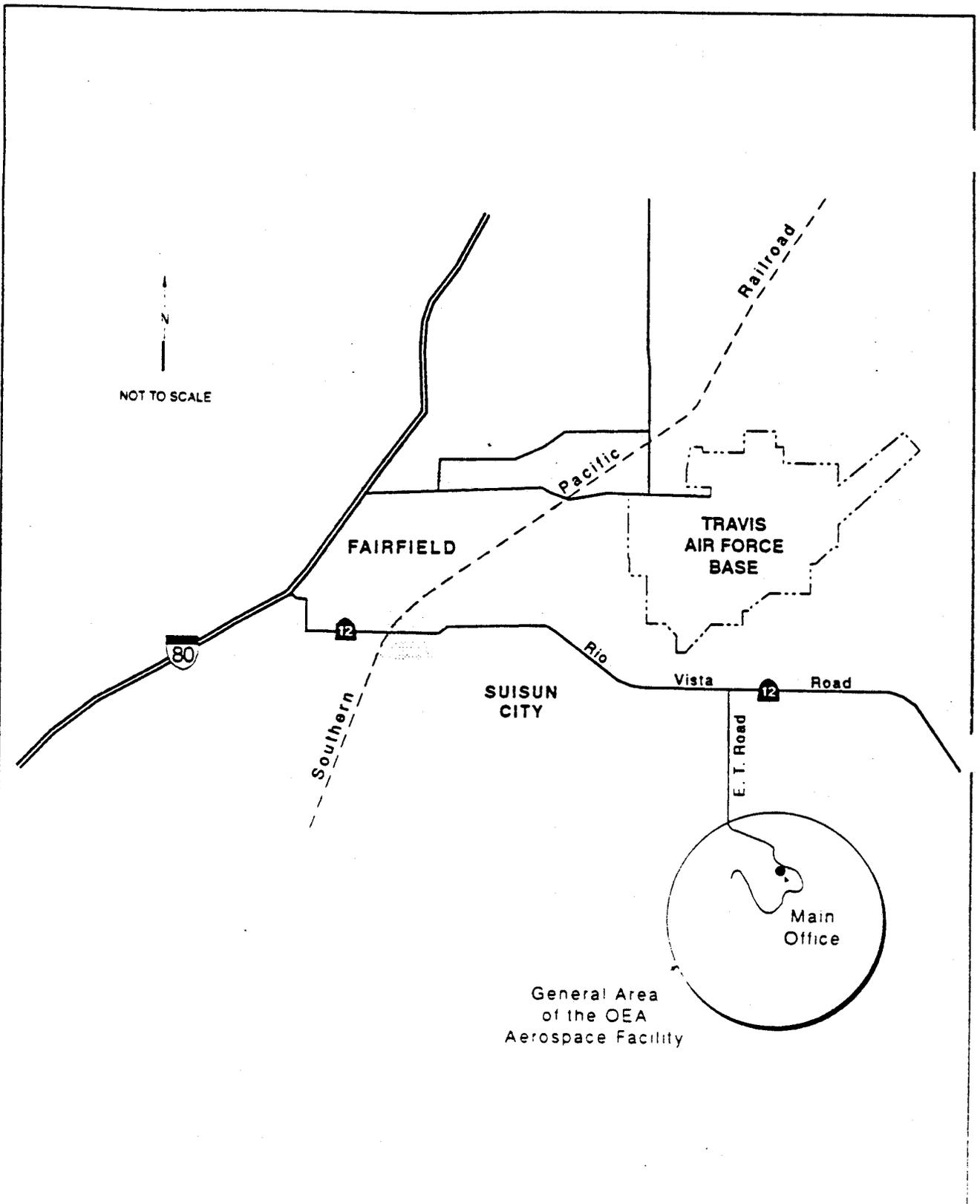
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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY
SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED
TO IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER
CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY
GENERAL FOR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

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Attachments:

- Vicinity Map (Figure 1)
- Self-Monitoring Program



 OEA AEROSPACE, INC.	7/8/97	PEM	97034	Vicinity Map Site Investigation Report OEA Test Sites Potrero Hills Facility Fairfield, CA	Figure 1
	7/24/97	JSM	OEAmenackFig1		

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

**OEA AEROSPACE, INC.
POTRERO HILLS FACILITY
FAIRFIELD, SOLANO COUNTY**

**US DEPARTMENT OF THE AIR FORCE
TRAVIS AFB, FAIRFIELD, SOLANO COUNTY, CALIFORNIA**

for the property located at

3530 BRANSCOMBE ROAD
FAIRFIELD, SOLANO COUNTY, CALIFORNIA 94533-0659

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 99-072 (site cleanup requirements).
2. **Monitoring:** The dischargers shall measure groundwater elevations (not applicable to onsite deep well) quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

Table 1
Sampling Frequency and Analysis table

Well #	Sampling Frequency	Analyses
* On Site Well	Quarterly	Standard EPA Method
* Off Site Well #1	Quarterly	Standard EPA Method
Surface Water at Discharge Point to Suisun Marsh	Must be performed concurrently with the site Industrial storm water permit	Standard EPA Method

* On site water well and a downgradient surface water discharge point must be analyzed for metals (i.e., Antimony, Barium, Cadmium, Chromium, Copper,

Lead, Nickel, Silver and Zinc), Perchlorate explosive residuals (i.e., all chemicals of potential concern as introduced in the August 15, 1997 report), and oil and grease semi annually for the first two years. Based on results of eight quarters of data the frequency of monitoring may be modified.

The dischargers shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The dischargers may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Quarterly Monitoring Reports:** Where applicable the dischargers shall submit quarterly monitoring reports to the Board no later than 30 days following the end of the quarter (e.g. report for the first quarter of the year is due on April 30). The first monitoring report for the purpose of this Order shall be due on December 30, 1999. The reports shall include:
 - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
 - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the fourth quarterly report each year. (No measurement of groundwater elevation is required for the wells identified in Table 1)
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the fourth quarterly report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
 - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and

from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.

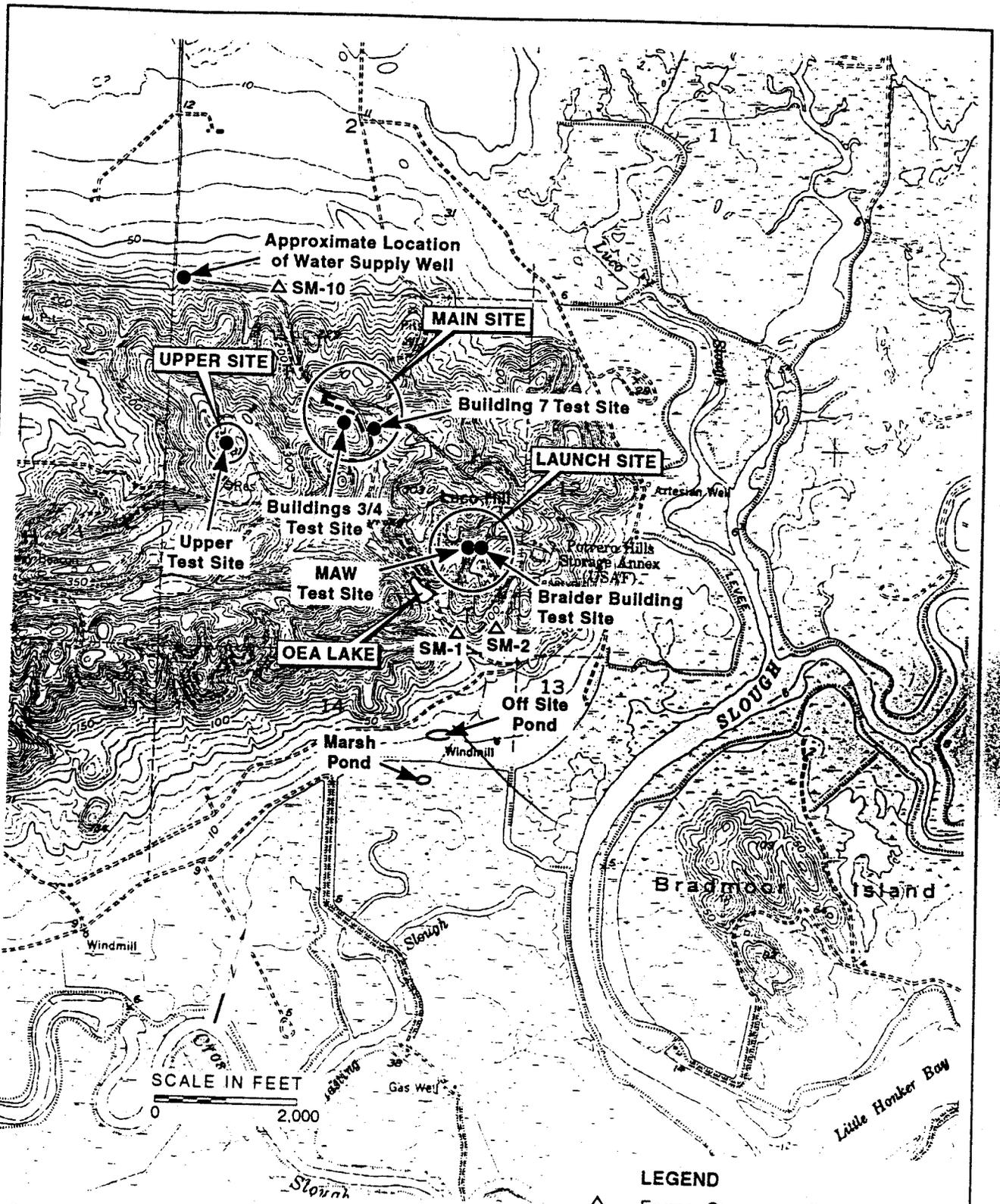
- e. **Status Report:** The quarterly report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following quarter.
4. **Violation Reports:** If the dischargers violate requirements in the Site Cleanup Requirements, then the dischargers shall notify the Board office by telephone as soon as practicable once the dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the dischargers to submit a separate technical report on the violation within five working days of telephone notification.
5. **Other Reports:** The dischargers shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
6. **Record Keeping:** The dischargers or their agents shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
7. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on September 15, 1999.


Loretta K. Barsamian
Executive Officer

Attachment:

Figure 1- Monitoring Points Location Map



Source: U.S.G.S., 7.5' Denverton Quadrangle, 1953 (photorevised 1980)

LEGEND
 ▲ SM-1 Former Stormwater Sample Location



DWG DATE	DRAFTED BY	PROJECT NUMBER
7/8/97	PEM	97034
REV DATE	CHECKED BY	FILE NAME
7/29/97	JSM	OEAmenackFig2

Monitoring Point Location Map
 Site Investigation Report
 OEA Test Sites, Potrero Hills Facility
 Fairfield, CA

Figure
2