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9 UNITED TECHNOLOGIES CORPORATION

10 STATE OF CALIFORNIA

11 STATE WATER RESOURCES CONTROL BOARD

12 IN RE:

13 NO. \_\_\_\_\_

14 ORDER LETTER DATED JULY 2,  
15 2008, ISSUED BY CALIFORNIA  
16 REGIONAL WATER QUALITY  
CONTROL BOARD,  
LOS ANGELES REGION, PURSUANT  
TO CWC § 13267 AND CLEANUP  
AND ABATEMENT ORDER NO. R4-  
2003-0039.

PETITION FOR REVIEW

17 Petitioner United Technologies Corporation and its related affiliates and interests  
18 submit this Petition for Review of the order letter that was issued by the California Regional  
19 Water Quality Control Board, Los Angeles Region (the "RWQCB"), entitled "Requirement for  
20 Complete Site Assessment and Technical Report Pursuant to California Water Code Section  
21 13267 Order and Requirement for a Remedial Action Plan Pursuant to California Water Code  
22 Section 13304 Order – Former Composite Structures, 801 Royal Oaks Drive, Monrovia,  
23 California (File No. 106.2010, Site ID No. 2041N00, Cleanup and Abatement Order No. R4-  
24 2003-0039)," dated July 2, 2008, and sent to Petitioner by email on July 8, 2008 and thereafter by  
25 regular mail (the "Order Letter"). The Order Letter makes several findings regarding the former  
26 Composite Structures facility located at 801 Royal Oaks Drive in Monrovia, California (the  
27 "Site") and sets forth the RWQCB's related requirements of Petitioner and three other companies  
28 (the "Parties") pursuant to Section 13267 of the California Water Code and the requirements set

1 forth in the Cleanup and Abatement Order No. R4-2003-0039 issued by the RWQCB on March  
2 12, 2003 (the "CAO"). The CAO is the subject of Petitions for Review filed by the Parties, which  
3 are currently being held in abeyance by the State Water Resources Control Board as  
4 SWRCB/OCC File A-1560(c). This Petition for Review of the Order Letter is filed in accordance  
5 with Section 13320 of the California Water Code and Section 2050 of Title 23 of the California  
6 Code of Regulations, which requires Petitioner to set forth the following items of information.

7 1. Petitioner is United Technologies Corporation, One Financial Plaza,  
8 Hartford, CT 06101. Petitioner requests that all communications be directed through its counsel,  
9 as identified in the caption of this Petition.

10 2. Petitioner requests that the State Water Resources Control Board  
11 ("SWRCB") review the above-mentioned Order Letter (copy attached as Exhibit A).

12 3. On July 8, 2008, the RWQCB sent a copy of the Order Letter (dated July 2,  
13 2008) to the Petitioner and other Parties by electronic mail (copy of email attached as Exhibit B);  
14 the RWQCB then sent the original by regular U.S. Mail (Certified, Return Receipt Requested) for  
15 subsequent receipt by Petitioner and the other Parties on or about July 14, 2008.

16 4. The issuance of the Order Letter follows the RWQCB's issuance of the  
17 CAO to Composite Structures, LLC, the current property owner, and to ALCOA, Inc., United  
18 Technologies Corporation, and Whittaker Corporation (the three Parties comprising the "Group"  
19 and working together on certain Site issues). The Parties have filed and maintained Petitions for  
20 Review of the CAO, but have requested that the State Water Resources Control Board hold these  
21 CAO petitions in abeyance while the Group has attempted to determine and meet the actual  
22 requirements of the CAO. The Group has also submitted related materials requesting corrections  
23 and revisions to the 2003 CAO, including without limitation a letter report prepared by the  
24 Group's consultant, PES Environmental, dated February 26, 2004 and a related letter filed by  
25 counsel for ALCOA, Inc. dated March 19, 2004. The requested corrections and revisions have  
26 not been addressed to date and the Order Letter contains many of the same factual inaccuracies.  
27 The CAO Petitions for Review and related submissions are hereby incorporated by reference in  
28 this Petition.

1                   5.       Despite their concerns with certain provisions of the CAO, the Group has  
2 undertaken all reasonable efforts available to determine and comply with the requirements of the  
3 CAO, as set forth in several work plans and other submissions made for the RWQCB's review  
4 and approval pursuant to the CAO. On May 30, 2003 and June 20, 2003, the Group submitted  
5 and later updated a work plan for completing additional vadose zone assessment in locations that  
6 the Group identified based on a careful review of prior site investigations and reports and relevant  
7 standards and policies. Through their consultant, the Group also submitted a proposed work plan  
8 for additional groundwater assessment dated September 11, 2003, which was based on an  
9 understanding that the RWQCB would allow the Group to proceed with this work in a phased  
10 manner based on input from the initial phases of the proposed investigations, other available  
11 monitoring results, and data expected from investigations that the RWQCB proposed to require  
12 from other parties. In the interim, pending such RWQCB review, the Group completed and  
13 operated a soil vapor extraction system at the Site pursuant to a work plan previously approved by  
14 the RWQCB and continued to monitor the on-Site and off-Site wells installed by the Group under  
15 prior RWQCB directives. During the entire time in question, the Group regularly submitted  
16 reports and data describing the results of quarterly groundwater monitoring and operation of the  
17 soil vapor extraction system and informing the RWQCB of its efforts and proposed plans for fully  
18 addressing the relevant Site conditions. Despite these efforts and various efforts to inquire, the  
19 Group received no written comments or approvals from the RWQCB on the pending work plan  
20 proposals, nor any notice of any change in the RWQCB's previously-stated plan to require the  
21 completion of site assessments and/or cleanup and abatement potentially required at other sites in  
22 conjunction with the phased work proposed for the subject Site. However, at a meeting on May  
23 21, 2008, RWQCB representatives provided the Group with an explanation of the RWQCB  
24 staffing shortages and turnover contributing to this history, a summary of their findings  
25 concerning the pending work plans and interim measures, and a description of the staff's intention  
26 to pursue issuance of the subject Order Letter without first distributing a proposed or draft version  
27 to the Parties.

28

1           6.       Following receipt of the Order Letter, representatives of the Group have  
2           conferenced and corresponded with RWQCB on several occasions and developed the following  
3           plans to try to improve communications and better define the requirements of the CAO and the  
4           Order Letter:

- 5                   a.       Deadlines for submission of work plans have been extended to  
6                   September 4, 2008 by the RWQCB pursuant to their letter dated July  
7                   22, 2008;
- 8                   b.       The Group intends to submit work plans proposing phases of site  
9                   assessment efforts based on input received from RWQCB staff at a  
10                  technical meeting held in the offices of the RWQCB on July 30, 2008;
- 11                  c.       The RWQCB intends to hold additional technical meetings on a  
12                  definite schedule, at which the Group can summarize the results of  
13                  completed work and propose revisions and updates to pending work,  
14                  and the RWQCB can provide direction on those plans and report on  
15                  RWQCB efforts and plans to require site assessments and/or cleanup  
16                  and abatement at other sites.

17           7.       Petitioner maintains that the issuance of the Order Letter by the RWQCB  
18           was inappropriate and improper for reasons that include, without limitation, those set forth in this  
19           Petition and the Petition for Review of the related CAO. Following the completion of the  
20           technical meetings between representatives of the Group and staff of the RWQCB (described  
21           above), the Petitioner will submit to the SWRCB, as a Petition amendment, a full and complete  
22           statement of any additional reasons why the Order Letter is inappropriate or improper, as  
23           necessary.

24           8.       Petitioner is aggrieved by the Order Letter for the reasons that include,  
25           without limitation, those set forth in this Petition and the Petition for Review of the related CAO,  
26           and will submit to the SWRCB, as a Petition amendment, a statement of the manner in which  
27           Petitioner is additionally aggrieved by the Order Letter, as necessary.

28

1           9.     Petitioner requests that the SWRCB set aside the Order Letter or direct the  
2 RWQCB to set aside that Order Letter.

3           10.    Petitioner will submit to the SWRCB, as a Petition amendment, a complete  
4 statement of points and authorities in support of this Petition, as necessary.

5           11.    Petitioner will request from the RWQCB and submit to the SWRCB an  
6 amendment to this Petition a list of persons, if any, other than the Petitioner, known by the  
7 RWQCB to have an interest in the subject matter of the Petition.

8           12.    A copy of this Petition for Review and the attached Exhibits A and B have  
9 been sent to the RWQCB and the other Parties named in the Order Letter.

10          13.    Petitioner will submit to the SWRCB, as a Petition amendment, a copy of  
11 its request to the RWQCB for preparation of the RWQCB's record concerning the Order Letter.

12          14.    Petitioner requests that the SWRCB hold this Petition for Review in  
13 abeyance, while the Petitioner and other Parties attempt to work cooperatively with the RWQCB  
14 to resolve the issues raised in this Petition for Review and the Petition for Review of the CAO. In  
15 the event that such efforts are unsuccessful, Petitioner will amend this Petition for Review, as  
16 necessary, and inform the SWRCB of the need for active review of the Petition for Review. If  
17 active review becomes necessary because the Parties and the RWQCB are unable to resolve their  
18 differences, Petitioner requests that the SWRCB hold a hearing at which Petitioner will present  
19 additional evidence to the SWRCB and otherwise allow Petitioner to present additional evidence  
20 that may become available or that was not considered by the RWQCB. Petitioner will submit to  
21 the SWRCB as an amendment to this Petition statements regarding evidence as appropriate under  
22 23 California Code of Regulations, Chapter 6, Section 2050 et seq.

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24    ///  
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28    ///

1 For all the reasons stated herein, Petitioner request that the State Water Resources  
2 Control Board set aside the Order Letter or direct the RWQCB to set aside that Order Letter.

3  
4 DATED: August 5, 2008

ROBINSON & COLE, LLP

5  
6 By: 

ROBERT S. MELVIN

Robinson & Cole, LLP

Attorneys for Petitioner

UNITED TECHNOLOGIES CORPORATION

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# California Regional Water Quality Control Board Los Angeles Region



Linda S. Adams  
Cal/EPA Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.waterboards.ca.gov/losangeles>

Arnold Schwarzenegger  
Governor

July 2, 2008

Mr. Robert Cowan  
Ducommun AeroStructures, Inc.  
268 East Gardena Boulevard  
Gardena, CA 90248

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
7008 0150 0003 7886 7583

Mr. Sanford W. Harvey, Jr., Esq.  
Legal Department  
ALCOA, Inc.  
201 Isabella Street  
Pittsburgh, PA 15212

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
7008 0150 0003 7886 7576

Mrs. Kathleen M. McFadden, Esq.  
United Technologies Corporation  
United Technologies Building  
One Financial Plaza, MS524  
Hartford, CT 06101

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
7008 0150 0003 7886 7590

Mr. Eric G. Lardiere, Esq.  
Whittaker Corporation  
1955 N. Surveyor Avenue  
Simi Valley, CA 93063

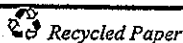
CERTIFIED MAIL  
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**REQUIREMENT FOR COMPLETE SITE ASSESSMENT AND TECHNICAL REPORT  
PURSUANT TO CALIFORNIA WATER CODE SECTION 13267 ORDER AND  
REQUIREMENT FOR A REMEDIAL ACTION PLAN PURSUANT TO CALIFORNIA  
WATER CODE SECTION 13304 ORDER - FORMER COMPOSITE STRUCTURES, 801  
ROYAL OAKS DRIVE, MONROVIA, CALIFORNIA (FILE NO. 106.2010, SITE ID NO.  
2041N00, CLEANUP AND ABATEMENT ORDER NO. R4-2003-0039)**

Dear Messrs Cowan, Harvey, Lardiere and Mrs. McFadden:

On March 12, 2003, a Cleanup and Abatement Order (CAO) No. R4-2003-0039 was issued by the Executive Officer of the Los Angeles Regional Water Quality Control Board (Regional Board) to the previous and current operators of the former Composite Structures facility (Site), now Ducommun AeroStructures, (Composite Structures, LLC, ALCOA, Inc., Whittaker Corporation and United Technologies Corporation) located at 801 Royal Oaks Drive, Monrovia, California.

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The dischargers identified in the CAO were required to completely assess the soil and groundwater contaminated areas onsite and offsite, to fully delineate the contamination onsite and offsite and to clean up and abate the effects of contamination in the soil and groundwater emanating from their site.

On May 21, 2008, Regional Board staff met with representatives of the dischargers and discussed the status of the implementation of the CAO. Regional Board staff expressed its dissatisfaction with the inadequate site assessments, incomplete delineation of the contamination in the vadose zone and groundwater and limited cleanup efforts.

While Regional Board staff acknowledges that the dischargers conducted many site investigations and limited remediation activities at the site, a review of technical reports submitted to the Regional Board from 1985 to 2008, indicates that the requirements listed in the CAO (Item No. 1 through 13) are not yet fully met.

## **BACKGROUND**

The real property and business at the site is owned by Ducommun AeroStructures, Inc., now the parent company of Composite Structures, which has been responsible for the operations over the last 21 years. Prior to about 1987, other companies, identified as dischargers in the CAO, were engaged in similar operations as owners and operators at the site.

Ducommun AeroStructures is engaged in the manufacture and assembly of aerospace components, including helicopter blades, jet spoilers and aircraft winglets. The manufacturing processes performed at this site include; machining, fabrication, painting, plating and etc. Chlorinated volatile organic compounds (VOCs) including trichloroethylene (TCE) and 1,1,1-trichloroethane (1,1,1-TCA) had been stored and used at the facility. Perchloroethylene (PCE) and heavy metals like chromium, nickel, cadmium, silver, copper, tin, manganese, zinc etc. and metal-containing paints and dyes were also used and stored onsite to support site operations. Acids, bases, stripping or degreasing agents, sodium hydroxide, sulfuric and hydrochloric acids and cyanide were also used throughout the process lines.

## **SITE INVESTIGATIONS**

Site investigations have been conducted at the site since 1985, where there have been documented discharges of wastes to the soil, soil gas and groundwater. In 1985, Kleinfelder & Associates conducted an environmental monitoring study involving drilling of soil borings and installation of vapor monitoring wells at six locations in the former waste oil tank; former four compartment solvent tank, spill containment area and west clarifier tank/neutralizer areas. Soil samples were analyzed for metals, acids, and pH.

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In response to directives by Regional Board staff under its Well Investigation Program (WIP), a series of soil, soil vapor and groundwater investigations have been conducted at the site by different consultants since 1991, namely SEACOR (1991), AeroVironment Inc.(1992-1997), McCulley, Frick & Gilman (1997-1998), Golder Associates (1998) and PES (1998-2008). The site investigations have indicated that the 300 feet thick vadose zone, and the saturated zone have been contaminated with volatile organic compounds (VOCs), especially TCE, heavy metals, (primarily hexavalent chromium), and emergent chemicals like 1,4-dioxane, N-Nitrosodimethylamine (NDMA) and perchlorate.

Site investigations identified 10 areas of concern (AOCs) at the site, namely the Process Line and Concrete Vault in Building-1 (Area-1), Deionized Water Tank (Area-2), Former Products and Loading Area (Area-3), Chemical Storage Area (Area-4), Waste Storage Area and Storm Drain (Area-5), East Clarifier (Area-6), West Clarifier (Area-7), Paint Booths and Alodine Area in Building-D (Area-8), Former Alodine Area and Former Paint Booth in Building-2 (Area-9), and Former Spill Containment Sump in Building U (Area-10).

## **GROUNDWATER MONITORING**

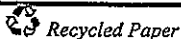
As part of the groundwater assessments, groundwater monitoring wells (CSD-1 through CSD-5) were installed onsite and offsite in 1997, 2000, 2001 and 2002. CSD-1, CSD-2 and CSD-4 are onsite wells where as CSD-3 and CSD-5 are offsite wells. CSD-4 is a dual phase soil vapor/groundwater monitoring well to allow collection of soil vapor and groundwater samples via a nested well completion. CSD-5 is a Westbay multi-port system well with five monitoring ports, inside a 4-inch diameter, steel well with five multilevel stainless steel well screens, with sampling ports at 276-, 406-, 526-, 627-, and 738-feet below ground surface (bgs).

Groundwater monitoring has been conducted at the site since 1997. From 1997 to 2008, CSD-1 and CSD-2 have not been monitored for approximately 40 per cent of the monitoring period due to: (i) dry conditions or low groundwater levels, (ii) shallower depths of the wells and (iii) relatively smaller screened intervals of the wells. In addition, no upgradient well has been installed onsite to monitor the background concentrations of contaminants found in the groundwater.

## **REMEDIATION**

Some soil remediation activities have been performed at the site. In 1991, approximately 4 cubic yards of soil contaminated with heavy oils at concentrations exceeding 100 milligrams per kilogram (mg/kg) from Area-4 was excavated and disposed of offsite. And in the same year, approximately 35 cubic yards of soil with cutting oil concentrations exceeding 100 mg/kg was

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excavated from Area-5 and also disposed of offsite. We have no records in our file that your waste disposal manifests have been submitted to date for the excavated soil.

In 1999, a soil vapor extraction (SVE) system was installed and began operating, first on a pilot-scale and later at full-scale, to remove the VOCs detected at elevated concentrations in the soil gas and adsorbed to the soil matrix in Area-1, Area-7 and Area-9. The SVE system has removed a total of 7,648 pounds of VOCs from the vadose zone through the end of March 2008.

The theoretical radius of influence (ROI) of the system is estimated to be approximately 200 feet for the depth intervals monitored in the vadose zone (25 to 300 feet bgs) during the pilot-scale test. However, the farthest vapor monitoring well is located at approximately 225 feet from the tested extraction well (SVE-1) and no vapor monitoring well or probe was installed west of the plumes offsite (on the school property). Besides, the ROI estimation for the deeper intervals (200 feet to 300 feet bgs) was not properly computed. This fact calls into question the effective ROI computed for the SVE wells.

#### **IMPACT ON DRINKING WATER SUPPLY WELLS**

The Site is located in the San Gabriel Valley where over 1.7 million residents depend on groundwater for water supply. Many drinking water supply wells are located downgradient, within approximately 2 miles of the Site. Water quality data from the United States Environmental Protection Agency (USEPA) database indicates that most of those wells are impacted with contaminants also detected in the onsite and offsite groundwater monitoring wells installed for this Site.

The migrating plume from the Site could also threaten the USEPA's El Monte Operable Unit Superfund Remedy, located downgradient of the Site, where several water treatment plants are being installed to treat impacted groundwater in the El Monte area.

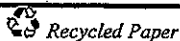
#### **FINDINGS**

Based on our review of site investigation, groundwater monitoring and remediation status reports and work plans submitted to the Regional Board for the site since 1985, the following determinations are made.

##### **1. SOIL ASSESSMENT**

- 1.1. The Regional Board uses Soil Screening Levels (SSLs) to determine the residual concentration of contaminants in the soil for the protection of groundwater quality. However, soil matrix analytical data for the entire site was screened

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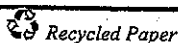
against USEPA Preliminary Remediation Goals (PRG) values. SSLs are generally more conservative than PRGs.

- 1.2 The sampling protocol followed during some of the site investigations was such that samples were composited from large sample intervals, which in our view misrepresents actual site conditions. No discrete samples were collected from these sampled events.
- 1.3 No soil assessment was performed for organic emergent chemicals in the vadose zone.
- 1.4 The lateral and vertical extent of the VOC plume in the soil gas is not fully delineated, onsite and offsite. Available plume maps indicate that the plume may have migrated offsite. Submitted cross-sections do not show the defined extent of the plume vertically. However, data from some deep monitoring wells (e.g. CSD-1) show the track of VOCs in the soil column from the surface to the water table.
- 1.5 The lateral and vertical extent of hexavalent chromium in the soil is not defined. Some samples were collected and analyzed for hexavalent chromium during the site investigations. However, no hexavalent chromium groundwater plume map and corresponding cross-section are presented showing the extent of the contamination laterally and vertically. Hexavalent chromium has been detected in the groundwater monitoring wells, showing the migration of the contaminant from the vadose zone to the saturated zone.
- 1.6 The work plan that was submitted to the Regional Board on June 20, 2003 focuses only on Area-10 where USEPA PRGs were used to screen soil matrix analytical results and justify the focused investigation of Area-10. The Regional Board uses SSLs for protection of groundwater quality. SSL values are more conservative than PRG values as earlier stated, thus necessitating a re-assessment of additional AOCs at the site.

## 2. GROUNDWATER ASSESSMENT AND MONITORING

- 2.1 No assessment was done for emergent chemicals and hexavalent chromium in the saturated zone. Yet, emergent chemicals including hexavalent chromium have been detected in the groundwater monitoring wells during the 11-year monitoring period.

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- 2.2 The VOC plume in the groundwater is not laterally delineated onsite and offsite. The plume has evidently migrated offsite and VOCs have been detected in the offsite monitoring wells during groundwater monitoring. Some constituents detected in onsite wells have also been detected in drinking water wells located downgradient approximately within 2 miles of the site, along the principal flow direction.
- 2.3 No upgradient monitoring well is installed onsite to monitor the background concentrations of contaminants beneath the site.
- 2.4 Historical records indicate that the depth to groundwater in the general vicinity of the site fluctuated by up to 100 feet. As observed in the 11-year monitoring period, the water levels in the groundwater monitoring wells onsite fluctuated by approximately up to 77 feet. As a result, monitoring wells CSD-1 and CSD-2 were not monitored for approximately 40% of the historical monitoring period due to low water levels, the relatively shallower depth of the wells and comparatively smaller screened intervals.

### 3. REMEDIATION

- 3.1 Although remediation activities have been performed at Area-4 and Area-5, involving the excavation of soil and the collection of confirmation samples, the analytical method used to analyze the samples does not meet the requirements of the Regional Board's *Interim Site Assessment and Cleanup Guidebook* (May 1996) in classifying the carbon ranges of total petroleum hydrocarbons (TPH) detected in the samples and in using the required SSLs to screen the analytical results. USEPA Method 418.1 that is used for analysis of the samples does not determine the carbon ranges of the TPH.
- 3.2 Although a SVE system has been installed and has been in operation since 1999, the Regional Board considers the SVE remediation activity as only an interim remedial measure, in light of the fact that:
  - a. The VOC plume in the soil gas was not fully defined onsite and offsite when the system was installed. The defined edge of the plume has a concentration of 100 µg/L, which indicates the incomplete delineation of the plume;
  - b. No extraction well was installed in the center of one of the plumes found beneath Area-1;

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- c. The farthest vapor monitoring well (NNSG-2) is located approximately 225 feet from the extraction well (SVE-1). There are no other vapor monitoring wells installed at more distant locations from the extraction well to ascertain the actual ROI of the SVE system;
- d. No vapor monitoring wells were installed offsite west of the plumes (on the school property) to monitor the vacuum pressure during the test;
- e. The Regional Board does not concur with the minimum vacuum pressure used to define the ROI (0.1 inches of water), given the existence of sensitive receptors adjoining the site (a school west of the site). The Regional Board requires a much more conservative vacuum response to be used for ROI estimation;
- f. The ROI estimation for the deeper zones (200 feet to 300 feet) was not properly computed, following the proper theoretical approach. The Regional Board thus does not accept the claim that the ROI extends below 200 feet.

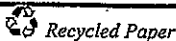
## REQUIREMENTS

Pursuant to Section 13267 of the California Water Code (CWC) and the requirements set forth in the CAO, you are hereby directed to complete the site investigations to address: (a) soil vapor, (b) soil matrix, and (c) groundwater pollution delineation onsite and offsite. We require you to document your efforts in technical reports, which must be submitted to this Regional Board in accordance with the schedule specified below:

### 1. SOIL ASSESSMENT

- 1.1 Screen all soil matrix analytical results obtained during the various site investigations against the USEPA SSLs, which are acceptable to Regional Board staff. If the SSLs indicate that the concentration of individual contaminants pose a threat to groundwater quality, additional investigations are required. Screening results shall be presented in tables and exceedences shall be indicated in bold face. Parts of the site where these exceedences occur need to be identified and presented in a technical report.
- 1.2 Additional borings need to be advanced in parts of the site where composite soil samples were previously collected. Only discrete soil samples need to be collected from these borings.

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- 1.3 The work plan which was submitted to the Regional Board on June 20, 2003 for assessment of heavy metals and emergent chemicals in the vadose zone in Area-10 needs to be revised and resubmitted for the following reasons:
- a. The soil screening criteria used to exclude other AOCs and to focus the investigation on Area-10 were based on PRG values. The Regional Board uses SSLs for the protection of groundwater quality. Exceedences from hexavalent chromium SSL value, for example, are noted in other AOCs, like Area-1, necessitating inclusion of these areas in the assessment;
  - b. Samples were composited from large sample intervals during the previous site investigations, like in Area-1 and Area-7, causing dilution of sample concentrations and misrepresenting actual site conditions;
  - c. There were an inadequate number of samples collected to characterize some of the AOCs. For example, in Area-2, Area-5 and Area-6, only one sample was collected from each location and analyzed for heavy metals;
  - d. Samples were collected only from shallower depths in some of the AOCs. For example, in Area-8, samples were collected from only 5 feet where hexavalent chromium was detected (in these samples). Samples were not collected from deeper sample intervals to assess the concentration trend.

Therefore, a revised work plan must be prepared and submitted to:

- a. Conduct a site-wide assessment for heavy metals (hexavalent chromium) and emergent chemicals (1,4-dioxane, NDMA and perchlorate) in the vadose zone;
- b. Collect discrete soil samples from areas where composite samples were previously collected and to collect samples from deeper sample intervals where samples were previously collected from only shallower depths;
- c. Propose additional soil boring locations in those areas where an inadequate number of samples were previously collected;
- d. Fully delineate the heavy metal impacted areas in the vadose zone onsite. All analytical results shall be screened against SSLs acceptable to the Regional Board.

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Mr. Sanford W. Harvey  
Mrs. Kathleen M. McFadden  
Mr. Eric G. Lardiere

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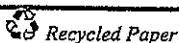
The work plan shall be prepared in accordance with the Regional Board's *General Requirements for Subsurface Investigations* and shall be submitted by **August 4, 2008**.

- 1.4 Additional step-out soil vapor probes need to be advanced for the collection and analyses of soil gas samples in Area-1, Area-4, Area-7, Area-9, and near CSD-2. Offsite vapor probes are needed west of Area-7 and near CSD-2. Past investigations focused only on the south-western and central parts of the site near the west clarifier, former degreaser and process line. However, limited data exists for other parts of the site that could indicate the existence of isolated plumes in those areas.
- 1.5 Deeper soil vapor probes need to be installed in areas where elevated concentrations of VOCs were detected in shallow probes for better characterization of the entire vadose zone. Past investigations focused only on the south-western and central parts of the site near the west clarifier, former degreaser and process line areas. However, limited data for other parts of the site indicate that the vertical extent of the plume is not adequately defined in the vadose zone.
- 1.6 The lateral extent of the VOC plume in the vadose zone needs to be delineated onsite and offsite. Contaminant-specific iso-concentration plume maps for major constituents, like TCE, showing the furthest lateral extent of the plume onsite and offsite need to be prepared and presented, since the release occurred about 60 years ago.
- 1.7 The vertical extent of the VOC plume in the vadose zone needs to be delineated onsite and offsite. Geologic cross-sections having iso-concentration contours of contaminants for major constituents like TCE and showing the vertical extent of the plume onsite and offsite need to be prepared and presented. Several cross-section profiles crossing the site north-south and west to east are needed.
- 1.8 A work plan shall therefore be prepared and submitted to meet the requirements enumerated in Item Nos. 1.1, 1.2, 1.4, 1.5, 1.6 and 1.7 above. The work plan shall be prepared in accordance with the Regional Board's *General Requirements for Subsurface Investigations* and shall be submitted by **August 4, 2008**.

## 2. GROUNDWATER ASSESSMENT AND MONITORING

- 2.1 A work plan must be prepared and submitted for assessment of emergent chemicals (1,4-dioxane, NDMA and perchlorate) and hexavalent chromium in the groundwater. The purpose of the work plan shall be to define the lateral extent of

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emergent chemicals (1,4-dioxane, NDMA and perchlorate) and hexavalent chromium in the saturated zone onsite and offsite. The work plan shall be prepared in accordance with the Regional Board's *General Requirements for Subsurface Investigations* and shall be submitted by **August 4, 2008**.

- 2.2 The lateral extent of the VOC plume in the groundwater needs to be delineated onsite and offsite. Contaminant-specific iso-concentration plume maps for major constituents, like TCE, showing the furthest lateral extent of the plume onsite and offsite need to be prepared and presented.
- 2.3 In order to fully accomplish the task stated in Item Nos. 2.1 and 2.2 above, the Regional Board requires the installation of at least four additional groundwater monitoring wells offsite. At least one upgradient, one cross-gradient and two downgradient wells are required to be installed offsite to monitor the background concentration of contaminants and to define the lateral extent of the VOC plume(s) in the groundwater. The historical fluctuation of groundwater level needs to be taken into consideration in determining the depth of the wells and addition to the screened intervals. Monitoring wells could be dual-phase wells for vapor and groundwater monitoring to aid in delineating the VOC plume(s) in the vadose zone.
- 2.4 Contaminant-specific concentration trend graphs (concentration versus time) for major constituents, like TCE, crossing the site from upgradient wells to downgradient offsite wells must be prepared and submitted.
- 2.5 A hydrogeologic cross-section for a profile running from an upgradient groundwater well, 01N11W24R located offsite (and identified by the Regional Board), through the subject site to the downgradient drinking water wells (south of Interstate 210 freeway) and terminating at 01S11W03G07S (in El Monte Operable Unit), must be constructed. The cross-section shall show the geologic and hydrogeologic setting of the area, perforated/completed zones, and iso-contours for major constituents, like TCE, and shall reflect the base of the aquifer to the extent possible.
- 2.6 A work plan shall therefore be prepared and submitted to meet the requirements enumerated in Item Nos. 2.2, 2.3, 2.4 and 2.5 above. The work plan shall be prepared in accordance with the Regional Board's *General Requirements for Subsurface Investigations* and shall be submitted by **August 4, 2008**.

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### 3. REMEDIATION

- 3.1 Confirmation samples need to be collected again from the bottom of the excavation in Area-4 and Area-5 where soil remediation activities were performed. Discrete soil samples shall be collected and analyzed for VOCs by EPA Method 8260B and for TPH by EPA Method 8015 (Modified) to determine the TPH carbon ranges. The analytical results shall be screened against the SSLs.
- 3.2 Copies of the waste manifests must be submitted for the excavated soil from Area-4 and Area-5, which was reported to have been disposed of offsite. The waste manifests are due to the Regional Board by **August 4, 2008**.
- 3.3 While the Regional Board considers the installation and operation of the SVE system as an interim remedial measure to remediate the vadose zone, it does not believe that it is a full remediation effort to clean up the site. Therefore:
  - a. Step out soil vapor monitoring probes must be installed outside of Area-1, Area-7 and Area-9 onsite and offsite to estimate the ROI again and to assess the effectiveness of the SVE system in remediating the entire vadose zone beneath the site;
  - b. A soil gas survey must be conducted to update the soil gas results for the vadose zone onsite and offsite;
  - c. Results from the installation of the soil vapor monitoring probes and the soil gas survey could be used for complete delineation of the VOC plumes in the vadose zone onsite and offsite;
  - d. An extraction well must be installed in the center of one of the plumes beneath Area-1;
  - e. The ROI must be estimated for the SVE system again, using an expected vacuum response at the monitoring point, which is at least one percent of the applied vacuum pressure at the extraction well. The ROI for the deeper zones (200 feet to 300 feet bgs) shall also be estimated using at least three monitoring points;
- 3.4 A work plan shall therefore be prepared and submitted to meet the requirements enumerated in Item Nos. 3.1, and 3.3 above. The work plan shall be prepared in

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accordance with the Regional Board's *General Requirements for Subsurface Investigations* (see attached) shall be submitted by **August 4, 2008**.

Pursuant to Section 13304 of the CWC and the requirements set forth in the CAO, you shall comply with cleanup and abatement requirements for soil, soil gas and groundwater pollution and threatened pollution caused by the release of VOCs, heavy metals and emergent chemicals by implementing the following actions:

- 3.5 Prepare and submit a comprehensive *Remedial Action Plan (RAP)* for the remediation of contaminated soil, soil vapor and groundwater onsite and offsite. The RAP shall be designed to address site-wide and the offsite contamination in both the vadose zone and the groundwater. The submitted *Vadose Zone Remedial Action Plan*, dated April 15, 2002, and its addendum, *Vadose Zone Remedial Action Plan Addendum*, dated June 12, 2002, which were designed for limited cleanup of the site are not acceptable.

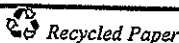
In addition, the RAP must be prepared after the site has been adequately characterized and complete delineation of the contamination in the vadose zone and groundwater, onsite and offsite, has been accomplished. A RAP submitted without adequate characterization of the site and complete delineation of the contamination will not be approved.

All final reports should be developed following the Regional Board's *Guidelines for Report Submittals (March 1991, Revised June 1993)* and shall be submitted as a hardcopy and electronic Adobe® "pdf" format. A total of two (2) hardcopies and one (1) electronic copy of each final report shall be submitted. Additionally, laboratory Quality Assurance/Quality Control (QA/QC) data must be included with each final report.

The California Business and Professions Code Sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of registered professionals. Therefore, all future work must be performed by or under the direction of a registered geologist or registered civil engineer. A statement is required in the report that the registered professional in responsible charge actually supervised or personally conducted all the work associated with the project.

Failure to comply with the terms or conditions of this Order may result in the imposition of civil liabilities either administratively by the Regional Board or judicially by the Superior Court in accordance with Section 13350 of the CWC, and/or referral to the Attorney General of the State of California for such action as he may deem appropriate.

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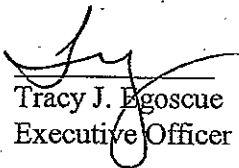
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Pursuant to CWC, section 13320, you may seek review of this Order by filing a petition with the State Water Resources Control Board (State Board). Such a petition must be received by the State Board, located at P.O. Box 100, 1001 I Street, Sacramento, California, 95814, within 30 days of the receipt of this Order.

If you have any questions regarding this letter, please call Mr. Dixon Oriola at (213) 576-6803 or Mr. Bizuayehu Ayele at (213) 576-6747 of my staff.

Sincerely,


  
Tracy J. Egoscue  
Executive Officer

Attachments:

- 1) *General Requirements for Subsurface Investigations*
- 2) *Guidelines for Report Submittals (March 1991, Revised June 1993).*

cc: Ms. Jennifer Fordyce, State Water Resources Control Board, Office of Chief Counsel  
Dr. Jackie Spizman, California Department of Toxic Substances Control (Cypress Office)  
Mr. Kurt Souza, California Department of Public Health (DPH)  
Ms. Bella Dizon, Superfund Division, USEPA, Region XI, San Francisco  
Mr. Richard Hiett, Superfund Division, USEPA, Region XI, San Francisco  
Ms. Kathleen Salyer, Superfund Division, USEPA, Region XI, San Francisco  
Ms. Elizabeth Adams, Superfund Division, USEPA, Region XI, San Francisco  
Mr. Jon L. Benjamin, Esq., Farella Braun & Martel LLP  
Mr. James R. Campbell, Engineering Management, Inc.  
Mr. Robert Melvin, Esq., Robinson & Cole LLP  
Mr. Patrick J. Cafferty, Esq., Munger, Tolles & Olson, LLP  
Mr. Scott Parsons, Geo Trans, Inc.  
Mr. Ronald Morosky, Alcoa, Inc.  
Mr. Keith M. O'Brien, PES Environmental, Inc.  
Mr. Nicholas Pogoncheff, PES Environmental, Inc.  
Mr. William Penn, United Technologies Corporation  
Ms. Carol Williams, Main San Gabriel Basin Watermaster  
Ms. Grace Burgess, San Gabriel Basin Water Quality Authority  
Mr. Steve Johnson, Stetson Engineers, Inc.

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EXHIBIT B - PETITION FOR REVIEW

**From:** Lisa Lazarus [llazarus@waterboards.ca.gov]  
**Sent:** Tuesday, July 08, 2008 12:33 PM  
**To:** Ronald Morosky; Sanford Harvey Jr.; William Penn; Kurt Souza; Jackie Spizman; Robert Cowan; James Campbell; Elizabeth Adams; Bella Dizon; Richard Hiatt; Kathleen Salyer; Jon Benjamin; Scott Parsons; Patrick Cafferty; Keith O'Brien; Nicholas Pogoncheff; Melvin, Robert; Steve Johnson; Kathleen McFadden; Jennifer Fordyce; Carol Williams; Eric Lardiere; Grace Burgess  
**Cc:** Bizuayehu Ayele; Lisa Lazarus  
**Subject:** File#106.2010-CWC 13267 & 13304 Order Requirement for Complete Site Assessment and Technical Report

**Attachments:** 106.2010 CWC 13267 & 13304 Order Requirement for Complete Site Assessment and Technical Report 070208.pdf; ESI 070105.pdf



106.2010 CWC ESI 070105.pdf (31  
3267 & 13304 Ord.. KB)

I am sending you the attached pdf file for your information. The original signed copy will be sent to the addressee via regular mail.

Please see attached July 1, 2005 memo regarding new regulations requiring the electronic submittal of information (ESI), which went into effect on January 1, 2005. The new regulations stated that beginning on July 1, 2005, a paper copy of reports will no longer be required upon submittal of the electronic copy unless the Regional Board specifically requires the paper copy to be submitted.

Thank you very much for your cooperation! If you have any questions, please contact the project manager listed in the attached letter directly.

Lisa Lazarus, Office Technician  
Remediation Section  
California Environmental Protection Agency Los Angeles Regional Water Quality Control Board 320 West 4th Street Ste  
200 Los Angeles CA 90013  
(213)576-6623  
(213)576-6717 fax  
llazarus@waterboards.ca.gov

# FedEx Shipment Receipt

## Address Information

### Ship to:

Tracy J. Egoscue  
CA Regional Water Quality Control

### Ship from:

Kathryn Jameson  
ROBINSON & COLE LLP

320 W 4TH ST STE 200  
LOS ANGELES REGION  
LOS ANGELES, CA  
90013-2343  
US  
213-576-6623

280 TRUMBULL STREET  
HARTFORD, CT  
06103  
US  
8605412651

## Shipping Information

Tracking number: 796046778151  
Ship date: 08/05/2008  
Estimated shipping charges: 19.97

## Package Information

Service type: Priority Overnight  
Package type: FedEx Envelope  
Number of packages: 1  
Total weight: 0LBS  
Declared value: 0.00USD  
Special Services:  
Pickup/Drop-off: Give to scheduled courier at my location

## Billing Information

Bill transportation to: Sender  
Your reference: 21909.0010  
P.O. no.:  
Invoice no.:  
Department no.:

Thank you for shipping online with FedEx ShipManager at [fedex.com](http://fedex.com).

## Please Note

FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$500, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits; Consult the applicable FedEx Service Guide for details.  
The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable [FedEx Service Guide](#) or the FedEx Rate Sheets for details on how shipping charges are calculated.

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## Address Information

### Ship to:

Jeannette L. Bashaw  
State Water Resources

### Control Board

Office of Chief Counsel  
1001 I ST FL 22  
SACRAMENTO, CA  
95814-2828  
US  
916-341-5155

### Ship from:

Kathryn Jameson  
ROBINSON & COLE LLP

280 TRUMBULL STREET

HARTFORD, CT  
06103  
US  
8605412651

## Shipping Information

Tracking number: 797045892272

Ship date: 08/05/2008

Estimated shipping charges: 19.97

## Package Information

Service type: Priority Overnight

Package type: FedEx Envelope

Number of packages: 1

Total weight: 0LBS

Declared value: 0.00USD

Special Services:

Pickup/Drop-off: Give to scheduled courier at my location

## Billing Information

Bill transportation to: Sender

Your reference: 21909.0010

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Invoice no.:

Department no.:

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