TCE were the only VOCs detected in soil vapor at concentrations of 63 µg/L and 1.0 µg/L, respectively.

2. **Feature No. 40 (Subsurface Collection Sump)**
A subsurface collection sump was previously located in the southeast section of Building 80. This feature was suspected to have collected drainage from the sinks to the sanitary sewer. One soil boring (C80-SB49) was drilled to a total depth of 26 feet bgs adjacent to the sump. TPH, VOCs and PCBs were not detected in the any of the soil samples analyzed from boring C80-SB49. Heavy metals, including chromium (total) were not detected above their TTLC and STLC based on the CCR, Title 22. Chromium (total) was detected at a maximum concentration of 8.5 mg/kg (10 feet bgs).

3. **Feature No. 42 (Former Paint Booth)**
A former paint booth was previously located in the northwest corner of Building 80. One soil boring (C80-SB51) was drilled at Feature No. 42. This boring was terminated at 6 feet bgs due to structural obstruction. TPH and VOCs were not detected in any of the soil samples analyzed. Heavy metals, including chromium (total), were not detected above their TTLC and STLC based on the CCR, Title 22. Chromium (total) was reported at a maximum concentration of 18.9 mg/kg (1 foot bgs). In addition to the soil boring, one soil vapor sample, C80-SG197, was collected at this feature. PCE and TCE were the only VOCs detected at concentrations of 69 and 1.6 µg/L, respectively.

4. **Feature No. 43 (Former Vibratory Deburr Clarifier)**
A clarifier was previously located in the southwest section of Building 80. This feature was suspected to have collected effluent from the deburring equipment. One soil boring (C80-SB52) and one soil vapor probe (C80-SG207) were installed adjacent to the clarifier. TPH, VOCs and PCBs were not detected in the any of the soil samples analyzed. Heavy metals, including chromium (total) were not detected above their TTLC and STLC based on the CCR, Title 22. Chromium (total) was reported at a peak concentration of 24.2 mg/kg (5 feet bgs). In soil vapor, PCE and TCE were detected at concentrations of 125 µg/L and 3.1 µg/L, respectively.

BUILDING 93

Building 93 was previously located in the east part of Plant A-1 North. Building 93 contained large fabrication equipment used primarily to produce large aircraft structural parts. Twelve features, where chemicals were reportedly used or stored, were identified in Building 93.

1. **Feature No. 54 (Former Keller Mill Area)**
A former Keller mill, used to machine aircraft parts, was previously located at the northwest corner of Building 93. Two soil borings (C93-SB66 and C93-SB67) and one soil vapor probe (C93-SG96) were installed in the vicinity of Feature No. 54. In soil matrix, PCE and dichlorodifluoromethane were the primary VOCs detected at maximum concentrations of 24 µg/kg (5 feet bgs in boring C93-SB66) and 76 µg/kg (1 foot bgs in boring C93-SB67), respectively. Low concentrations (less than 13 µg/kg) of 1,2,3-trichlorobenzene and 1,2,4-trichlorobenzene were detected at 20 feet bgs. Heavy metals, including chromium (total), were not detected above their TTLC and STLC based on the CCR, Title 22.

Chromium (total) was identified at a peak concentration of 7.8 mg/kg (1 foot bgs) in soil boring C93-SB67. TPH and PCBs were not detected in any of the soil samples analyzed. In soil vapor, PCE and TCE were reported at concentrations of 60 µg/L and 10 µg/L, respectively.

2. **Feature No. 55 (Former Skin Mill Contaminant Basin)**
A skin mill, used for milling aluminum parts, was previously located in the northeast corner of Building 93. Two soil borings (C93-SB68 and C93-SB69) were drilled adjacent to Feature No. 55. TPH was not identified in any of the soil samples analyzed. PCE was detected at concentrations of 42 µg/kg (1 foot bgs) and 20 µg/kg (5 feet bgs) in boring C93-SB69. VOCs were not detected in any of the remaining samples analyzed from borings C93-SB68 and C93-SB69. Heavy metals, including chromium (total), were not detected above their TTLC and STLC based on the CCR, Title 22. Chromium (total) was present at a peak concentration of 6.5 mg/kg (2 feet bgs) in boring C93-SB68.

3. **Feature No. 56 (Oil Drum Storage Area)**
An oil drum storage area was previously located along the north interior wall of Building 93. One soil boring (C93-SB70) was drilled to a total depth of 20 feet bgs adjacent to this feature. PCE and TCE were detected at concentrations of 21 µg/kg and 8 µg/kg at 2 feet bgs. VOCs were not present in any of the remaining samples analyzed. Chromium (total) and selenium were also detected at maximum concentrations of 8.5 mg/kg (2 feet bgs) and 11.0 mg/kg (5 feet bgs), respectively. Heavy metals, including chromium (total) and selenium were not detected above their TTLC and STLC based on the CCR, Title 22. No TPH, semi-VOCs and PCBs were reported in any of the soil samples analyzed from boring C93-SB70. In soil vapor sample C93-SG96, which was collected in the vicinity of Feature No. 56, PCE and TEC were detected at concentrations of 60 µg/L and 10 µg/L, respectively.

4. **Feature No. 57 (Cutting Oil Storage Area)**
A cutting oil storage area was previously located outside the northwest corner of Building 93. One soil boring (C93-SB71) was drilled to a total depth of 20 feet bgs adjacent to Feature No. 57. PCE was detected at a concentration of 5 µg/kg (5 feet bgs), but VOCs were not identified in any of the remaining soil samples analyzed. Heavy metals, including chromium (total), were not detected above their TTLC and STLC based on the CCR, Title 22. Chromium (total) was present at a peak concentration of 8.8 mg/kg (1 foot bgs). TPH, PCBs and semi-VOCs were not reported in any of the soil samples analyzed. In soil vapor probe C93-SG96 located in the vicinity of Feature No. 57, PCE and TCE were reported at concentrations of 60 µg/L and 10 µg/L, respectively.

CONCLUSIONS:

Based on the subject submittal and other information in our files, we have no further requirements with respect to the San Fernando Valley Cleanup Program. VOC concentrations detected in soil matrix and soil vapor samples obtained beneath the features described above were below the Regional Board's VOC screening level of 127 µg/kg for the subject site. Also, the concentrations of PCBs and heavy metals, including chromium (total), detected in soil matrix samples were below the TTLC and the STLC criteria based on the CCR, Title 22. These contaminants appear not to pose a significant threat to groundwater quality. Groundwater beneath the site is at approximately 193 feet bgs. Therefore, further soil assessment or

cleanup is not required. However, elevated PCE soil vapor concentrations detected in Building 70 (beneath Feature Nos. 17 and 18) and in Building 75 (beneath Feature No. 37) appear to be primarily associated with the PCE plume from Feature Nos. 33 (Building 69) and 48 (Building 93), respectively. The PCE plume in the area of Feature Nos. 17, 18 and 37 must be remediated by the proposed SVE system being designed for the site. In addition, assessment or cleanup may be needed in the event that previously undiscovered subsurface features or signs of soil contamination are discovered during future site redevelopment activities.

The "no further requirements" determination for these features does not affect the requirements for either assessment or cleanup of adjacent features at the subject site. This Regional Board's "no further requirements" decision does not affect the jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please call Alex Carlos at (213) 576-6726.

Sincerely,

Dennis A. Dickerson
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Diane Strassmaier, U.S. EPA, Region IX
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November 20, 2001

Mr. Gene Matsushita
Lockheed Martin Corporation
Burbank Program Office
2550 North Hollywood Way, 3rd Floor
Burbank, CA 91505-1055

NO FURTHER REQUIREMENTS (SOIL ONLY), FEATURE NOS. 28, 29 and 30, LOCKHEED MARTIN PLANT A-1 NORTH, AREA "B", 2555 N. HOLLYWOOD WAY, BURBANK, CALIFORNIA (FILE NO. 104.5152)(CLEANUP & ABATEMENT ORDER NO. 87-161)

Dear Mr. Matsushita:

We have reviewed the *Cadmium Excavation Report, Feature Nos. 28, 29 and 30, Plant A-1 North, Area "B" Burbank, California* dated November 9, 2001. This report documents the results of a remedial action to remove residual cadmium and chromium impacted soil beneath a former cadmium plating area (Feature No. 28), former sump A-1-W (Feature No. 29) and the former bonderlite/bonderlube tanks (Feature No. 30), which are located in the southern section of Building 69, Lockheed Martin Plant A-1 North, Area "B". The objective of the removal action was to meet the closure requirements of the Regional Board's letter to Lockheed dated August 28, 2001 and obtain a *no further requirements* determination. The removal action was conducted in accordance with Tetra Tech's *Final Cadmium Excavation Work Plan, Feature Nos. 28, 29 and 30, Plant A-1 North, Burbank, California* dated September 24, 2001. Furthermore, the removal action was also conducted in compliance with Cleanup and Abatement Order No. 87-161, issued by the Regional Board on December 17, 1987. Regional Board staff verbally approved the work plan on October 4, 2001 and issued written approval in a letter dated October 5, 2001.

Based on our review of the subject report, we have the following findings:

FINDINGS:

A. Feature Descriptions

1. Feature No. 28 (Former Cadmium/Chromium Plating Tanks), which consist of twelve process tanks (25 to 1,000 gallons) used for cadmium and chromium plating, was situated in a 2-foot deep secondary containment basin. Reportedly, the process tanks contained alkaline cleaners, rinse water, hydrochloric acid, sulfuric acid, chromic acid, cadmium plating solution and ammonium nitrate. These tanks were removed in the mid-1970s.

2. Feature No. 29 (Former Sump A-1-W), was an overflow containment sump, which received spills and rinse water from the adjacent bonderlube process area. This process area was used to clean and treat metal parts. The sump was removed in 1994.

3. Feature No. 30 (Former Bonderlite/Bonderlube Tanks) was a series of eleven (11) aboveground tanks identified as the bonderlite/bonderlube process line, similar to plating operations. The tanks contained acids, neutralizers, alkaline cleaners and rinse water. All tanks were removed in 1990.

B. Site Investigations

1. In February 1998, a site-wide preliminary site investigation was conducted at Plant A-1 North. Five (5) soil borings (B69-SB39 through B69-SB43) were drilled to a maximum depth of 40 feet below ground surface (bgs) at the subject features. Soil samples were collected at 1 foot, 5 feet and at 5-foot intervals thereafter to 40 feet bgs. Samples were analyzed for: a) Total Petroleum Hydrocarbons (TPH) using EPA Method 8015 Modified; b) volatile organic compounds (VOCs) using EPA Method 8260A; c) pH using EPA Method 9045; d) and heavy metals using EPA Method 6010/7000 series.

   The concentrations of heavy metals, including chromium (total), were below the Total Threshold Limit Concentration (TTLC) and the Soluble Threshold Limit Concentration (STLC) screening criteria based on the California Code of Regulations Title 22 (CCR, Title 22), except for cadmium and selenium. Cadmium concentrations above the CCR, Title 22 screening criteria were detected in all the borings. Total cadmium and soluble cadmium were reported at maximum concentrations of 514 mg/kg and 73.1 mg/L, respectively in boring B69-SB39 (at 10 feet bgs). These concentrations exceed the cadmium TTLC of 100 mg/kg and STLC of 1 mg/L and are considered hazardous. In the case of boring B69-SB41 (10 feet bgs), selenium was detected at a concentration of 13.1 mg/kg, but there was no soluble selenium found. Chromium (total) was also detected in boring B69-SB41 at a concentration of 91.6 mg/kg (1 foot bgs). TPH was not detected in any of the soil samples analyzed.

   Tetrachloroethene (PCE) was the primary VOC found at a peak concentration of 44 µg/kg (5 feet bgs at B69-SB41), which is below the PCE screening concentration of 127 µg/kg. In soil vapor probe B69-SG122 (5 feet bgs), which was located near Feature Nos. 28 and 29, PCE and trichloroethene (TCE) were the primary VOCs reported at concentrations of 241 µg/L and 80.6 µg/L, respectively. The distribution pattern for PCE vapors in the vicinity of the subject features indicates that this vapor plume is associated with Feature No. 33 (Former sump A-1-X). A proposed soil vapor extraction (SVE) system is being designed to remediate the PCE contamination in the Feature No. 33 area.

2. Between February and September 1999, addition subsurface soil investigations were conducted to delineate the cadmium-contaminated soil. A total of 439 soil samples were collected from 40 borings drilled to depths ranging from 40 feet to 180 feet bgs. Based on this assessment, two cadmium-impacted areas were identified and delineated: a) the eastern part of Feature No. 28 and b) near the center of Feature Nos. 29 and 30. The extent of cadmium-impacted soil in these areas is described below.

   a. Feature No. 28
   The cadmium-impacted area has a lateral extent of approximately 50 feet long and 45 feet wide and a vertical extent of approximately 35 feet bgs. Total cadmium and soluble cadmium were reported at peak concentrations of 1,530 mg/kg (5 feet bgs) and 14.8 mg/L (20 feet bgs), respectively. Total cadmium and soluble cadmium concentrations, within the impacted area, exceed the cadmium TTLC of 100 mg/kg and STLC of 1 mg/L. Total cadmium concentrations detected between 40 feet and 180 feet bgs ranged from non-detect to 5.45 mg/kg, which are below the CCR, Title 22 screening criteria. Total chromium and hexavalent chromium were also reported at peak concentrations of 16.2 mg/kg (10 feet bgs at boring B69-28-SB3) and 1.4 mg/kg (10 feet bgs at boring B69-28-SB2), respectively.

   b. Feature Nos. 29 and 30
   The cadmium-impacted area that exceeds the CCR, Title 22 screening criteria extends laterally to approximately 85 feet long and 65 feet wide and vertically to a depth of approximately 85 feet bgs (at boring B69-30-SB18). The maximum concentrations of cadmium and soluble cadmium within this area were 1,190 mg/kg (5 feet bgs) and 10.3 mg/L (30 feet bgs), respectively. Soluble cadmium was reported above the STLC of 1 mg/L from 1 foot bgs to 85 feet bgs. Cadmium was detected at a peak concentration of 3.74 mg/kg between 90 feet and 105 feet bgs, but was non-detect from 110 feet to 180 feet bgs. Cadmium concentrations detected from 90 feet to 180 feet bgs were below the CCR, Title 22 screening criteria. Total chromium and hexavalent chromium were also found at peak concentrations of 174 mg/kg and 70.8 mg/kg, respectively in the 1-foot bgs sample from boring B69-29-SB2.

C. Soil Removal Actions

1. Due to the close proximity of the impacted areas, a single removal action was implemented by Lockheed to cover an area approximately 115 feet long and 70 feet wide. About 2,675 cubic yards of impacted soil was excavated to a depth of 15 feet deep in order to reduce the potential human exposure during future site redevelopment activities. The goal was to remove cadmium-impacted soil to levels below the Regional Board's cleanup guideline of ten times the

STLC of 10 mg/kg for total cadmium and below the STLC of 1 mg/L for soluble cadmium. Lockheed excavated this area from November 1999 to January 2000 in accordance with Tetra Tech's *Final Remedial Action Plan, Feature Nos. 28, 29 and 30, Plant A-1 North Area "B", Burbank, California* dated December 2, 1999. Regional Board staff verbally approved the work plan on November 18, 1999 and later in a letter to Lockheed Martin dated January 7, 2000.

A total of 32 final confirmation soil samples were collected around the periphery of the excavation and analyzed for cadmium, chromium (total) and hexavalent chromium. The remaining cadmium affected soil was left in place and fate and transport modeling was used to determine potential impacts to groundwater. The modeling results showed that cadmium would impact the groundwater (approximately 193 feet bgs) beneath the Plant A-1 North at a peak concentration of 3 µg/L. The California drinking water standard for cadmium is 5 µg/L.

The excavation was backfilled with imported clean soil. Reportedly, the concentrations of residual heavy metals, including total chromium (maximum of 3.56 mg/kg) in the imported soil were below the CCR, Title 22 screening criteria. No TPH, VOCs, PCBs, pesticides and SVOCs were detected in any of the samples collected from the imported soil.

Soil excavated from the immediate vicinity of Feature Nos. 28, 29 and 30 was placed in a stockpile designated *affected soil.* Approximately 2,575 cubic yards of *affected soil* was disposed of offsite as RCRA or California hazardous waste. Soil from the perimeter of the excavation was designated *clean soil* stockpile. Cadmium (total), chromium (total) and hexavalent chromium were detected in the *clean soil* at peak concentrations of 9.83 mg/kg, 25.5 mg/kg and 6 mg/kg, respectively.

2. On August 28, 2001, the Regional Board required Lockheed Martin to remediate the remaining cadmium-impacted soil to eliminate the potential threat to groundwater quality. The cadmium excavation was conducted from October 4, 2001 through October 24, 2001 in accordance with the *Final Cadmium Excavation Work Plan, Feature Nos. 28, 29 and 30, Plant A-1 North, Burbank, California* dated September 24, 2001. Regional Board staff verbally approved the workplan on October 4, 2001 and in a letter to Lockheed Martin dated October 5, 2001.

   In order to access the residual cadmium-impacted soils, the upper 15 feet of clean backfill soil from the previous excavation program was removed and stockpiled. Due to the geographic proximity of the subject features, a single excavation was extended laterally to final dimensions of approximately 340 feet long by 150 feet wide. Approximately 10,400 cubic yards of cadmium-impacted soil were removed to a maximum depth of 90 feet bgs. The removal action was performed until heavy metal concentrations were below the TTLC and STLC based on the CCR, Title 22.

A total of 90 confirmation samples were collected from the excavation. All samples were analyzed for CCR, Title 22 metals, including hexavalent chromium. Samples containing metal concentrations above ten times their respective STLCs were also analyzed for the soluble fraction of the individual metal using the Waste Extraction Test (WET) method. If the soluble concentration for any metal was above its STLC, further excavation and additional sample collection was conducted.

In the area of Feature No. 28, cadmium, total chromium and hexavalent chromium were detected in final confirmation samples at maximum concentrations of 4.04 mg/kg. 4.4 mg/kg and 0.790 mg/kg, respectively at 25 feet bgs. In the area of Feature Nos. 29 and 30. maximum concentrations of cadmium, total chromium and hexavalent chromium detected in final confirmation samples were 8.95 mg/kg (37 feet bgs), 129 mg/kg (11 feet bgs) and 5.3 mg/kg (12 feet bgs). These concentrations are below the TTLC and the STLC screening criteria based on the CCR, Title 22 and the USEPA's current Preliminary Remediation Goals (Year 2000) for industrial sites.

Approximately 2,400 cubic yards of cadmium-impacted soil was disposed of as either California or RCRA hazardous waste to Chemical Waste Management facility in Kettleman City, California. Soil from the perimeter of the excavation was designated *clean soil* stockpile. Cadmium, chromium (total) and hexavalent chromium were detected in the *clean soil* at peak concentrations of 6.26 mg/kg, 55 mg/kg and 10 mg/kg, respectively. These concentrations are below the TTLC and the STLC screening criteria based on the CCR, Title 22 and the USEPA's current Preliminary Remediation Goals (Year 2000) for industrial sites.

The excavation was backfilled with gravel from approximately 90 feet bgs to 60 feet bgs. Currently, Lockheed is backfilling the remainder of the excavation using *clean soil* from the excavation and imported fill material. The concentrations of residual heavy metals in the imported soil were below the CCR, Title 22 screening criteria. No TPH, VOCs, PCBs, pesticides and SVOCs were detected in any of the samples collected from the imported soil.

D. Groundwater

Groundwater beneath the site occurs at approximately 193 feet bgs. Based on the groundwater monitoring data from the early 1990's to the present, some dissolved heavy metals have been detected in wells A-1-CW04, A-1-CW05, A-1-CW06 and A-1-CW9 located immediately downgradient from Plant A-1 North. These heavy metals include barium, chromium (total), lead, nickel, selenium, thallium and zinc. We note that chromium (total), nickel and selenium were detected only once in monitoring well A-1-CW9 at concentrations of 11 µg/L, 57 µg/L and 24 µg/L, respectively. Thallium was also found once at a concentration of 103 µg/L in monitoring well

A-1-CW05. In upgradient monitoring well LBC6-CW10 and cross-gradient monitoring wells A-1-CW03R, A-1-CW03, A-1-CW02, and A-1-CW01, barium, chromium (total), lead and zinc were also detected. Based on the current concentrations, groundwater remediation for heavy metals is not warranted in this area.

Elevated concentrations of VOCs (primarily PCE and trichloroethene [TCE]) have been detected in groundwater monitoring wells located in the vicinity of Plant A-1 North. For example, PCE and TCE were detected at maximum concentrations of 2,900 µg/L and 810 µg/L, respectively in monitoring well A-1-CW04. Under a Consent Decree with the U.S. Environmental Protection Agency, Lockheed Martin is extracting and treating VOC-polluted groundwater within the Burbank Operable Unit including the Plant A-1 North area.

CONCLUSIONS:

Based on the information in our files, we have no further soil requirements with respect to the San Fernando Valley Cleanup Program. The concentrations of heavy metals, including cadmium, chromium (total) and hexavalent chromium, detected in the final confirmation soil samples were below the TTLC and the STLC criteria based on the CCR, Title 22. In view of the above, the contaminants remaining in the soil do not pose a threat to groundwater quality. Therefore, further soil assessment or cleanup is not required. Water quality data obtained to date from downgradient monitoring wells indicates that some heavy metals have been detected in the groundwater at low concentrations, such as barium, chromium (total), lead, nickel, selenium, thallium and zinc. These contaminants were either found only once during 9 years of groundwater monitoring (from 1992 to present) or were also found in upgradient and cross-gradient wells. This suggests a source(s) other than the subject features are responsible. Based on historical and the current low concentrations of heavy metals in the groundwater, which are 0.1 mg/L of barium (MCL is 1 mg/L) and 0.34 mg/L of zinc (secondary MCL is 5 mg/L) as detected in monitoring well A-1-CW9 located immediately downgradient from this site, groundwater cleanup will not be required. However, the Regional Board may require groundwater cleanup for heavy metals in the future if new information is obtained, such as concentrations that are approaching or which exceed drinking water standards or conditions arise that threaten drinking water wells or water quality in lower aquifers. Note that this *no further requirements* letter is issued provided that Lockheed backfills the excavation to the existing grade level and compacts the material to at least 90% of the soil's maximum density as proposed in the remediation work plan.

This soil only "no further requirements" determination for these features does not affect the requirements for either assessment or cleanup of adjacent features at the subject site, or the current or future requirements related to cleanup of polluted groundwater underlying the subject site. Also, additional assessment or cleanup may be needed in the event that new information is obtained, such as: a) previously undiscovered subsurface features and b) signs of soil

contamination discovered during future site redevelopment activities. Furthermore, this Regional Board's "no further requirements" decision does not affect the jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please call Alex Carlos at (213) 576-6726.

Sincerely,

Dennis A. Dickerson
Executive Officer

cc: Michael Lauffer, Office of the Chief Counsel, State Water Resources Control Board
Robert Sams, Office of the Chief Counsel, State Water Resources Control Board
Diane Strassmaier, U.S. EPA, Region IX
Sayareh Amirebrahimi, Department of Toxic Substances Control, Glendale Regional Office
Paul Lisak, L. A. County Fire Dept., Health Hazmat
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California Regional Water Quality Control Board

Los Angeles Region

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Arnold Schwarzenegger
Governor

August 27, 2009

Mr. Gene Matsushita
Lockheed Martin Corporation
Energy, Environment, Safety and Health
2950 North Hollywood Way, Suite 125
Burbank, CA 91505-1055

NO FURTHER ACTIVE SOIL REMEDIATION FOR VOCS, FEATURES 33, 38 AND 48, FORMER LOCKHEED MARTIN PLANT A-1 NORTH, 2555 NORTH HOLLYWOOD WAY, BURBANK, CALIFORNIA (WIP FILE NO. 104.5152; SITE ID 2040060; CLEANUP & ABATEMENT ORDER NO. 87-161)

Dear Mr. Matsushita:

The California Regional Water Quality Control Board Los Angeles staff has received and reviewed the following documents:

- "Request for Closure of Feature 33 and Feature 38 (Zone 1) at Lockheed Martin Corporation's Former Plant A-1 North, Burbank, California" (Letter) dated June 18, 2008.
- "Plant A-1 North Soil Vapor Extraction System Quarterly Operations Report, October – December 2008, Burbank, California" dated February 16, 2009.
- "Plant A-1 North Soil Vapor Extraction System Quarterly Operations Report, January – March 2009, Burbank, California" dated May 15, 2009.
- "Request for Closure of Feature 48 (Zone 2) at Lockheed Martin Corporation's Former Plant A-1 North, Burbank, California" (Letter) dated April 2, 2009.

All documents were prepared by Tetra Tech. The following information is presented in the submitted documents:

1. The former Plant A-1 North site, which occupies approximately 32 acres, is located southeast of the Burbank-Glendale-Pasadena Airport in the City of Burbank. Plant A-1 North was constructed in 1940 on a former farmland. Operations at Plant A-1 North consisted primarily of manufacturing and assembly of aircraft and components from approximately 1941 to early 1990s and consisted of three functional areas designated as Area "A" (administrative and offices), Area "B" (high bay assembly area) and Area "C" (fabrication and painting operations). In addition, aerospace research and development activities were conducted at this facility.

2. In 1998, Lockheed Martin Corporation conducted a site-wide investigation to document the presence or absence of contaminants beneath chemical use and storage areas throughout the Site. At least one soil boring was drilled in each suspected source area and multiple borings were completed in a large

source area. In addition, soil borings were drilled on a 200-foot grid to provide a general assessment of the site. Based on the chemicals used in a given area, soil samples were selectively analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), pH, semi-VOCs and heavy metals. Soil vapor samples were collected adjacent to each identified and suspected area and also on a 100-foot grid throughout the site to determine VOC concentrations in the vapor phase. More soil matrix and soil vapor investigations were performed to delineate the lateral and vertical extent at contaminated areas within all three Areas.

3. Several site assessments, investigations, and delineation surveys were conducted to evaluate the extent of VOC concentrations in the soil beneath the former concrete sump A-1-X located in Area "B" (designated as Feature No. 33), the former skin mills machining area located within Building 69 in Area "B" (designated as Feature No. 38) and the former degreaser basin located within Building 93 in Area "C" (designated as Feature No. 48).

4. Based on the results of the investigation activities completed, a VOC plume was identified in the soil beneath Features No. 33, 38 and 48. A soil vapor extraction (SVE) system was designed to remediate VOC vapors in the soil beneath these Features.

5. Lockheed Martin began operating the SVE system at the Site in January 2003 to remediate soil impacted with VOCs, primarily trichloroethene (TCE) and tetrachloroethene (PCE). The SVE system was designed to remediate VOC vapors in soil beneath the Features 33, 38 and 48.

6. A total of 25 triple nested SVE wells were constructed to capture the VOC plume at the Site. Each nested well consisted of three individual extraction wells that were screened in the three major litholoic zones. The shallow well was screened in the upper sand zone (generally at 15 to 70 feet bgs); the intermediate well in the cobble zone (generally at 75 to 120 feet bgs), and the deep well in the lower sand zone (generally at 125 to 180 feet bgs). SVE wells were designed and placed at locations to ensure the VOC capture zone would extend beyond the VOC plume boundaries targeted for remediation.

7. A total of 26 multi-level soil vapor monitoring wells were installed to monitor the VOC plume changes before, during and post SVE operations. At each monitoring well location, nested soil vapor probes were installed at approximate 20-foot depth intervals from 20 feet to 180 feet below ground surface (bgs).

8. In April 2006, the SVE system was shutdown for a six-moth rebound period. VOC concentrations were not observed to rebound during the May, June, and July 2006 soil vapor sampling events. After the initial rebound period, the SVE system was restarted in October 2006 with operations focused on extracting VOC mass from Feature 48 and near the groundwater in Features 33 and 38. In January 2007, SVE cycling (shutdown and extraction) was conducted to maximize VOC mass recovery and verify that no further reduction in VOC mass could be attained.

9. In September 2007, Lockheed Martin ended cycling operations and shutdown the SVE system for a one-year rebound period as VOC mass removal rate reached asymptotic condition since December 2005.

10. The SVE system has been effective in removing PCE and TCE in soil vapor. Since January 2003 approximately 28,169 pounds of VOC mass has been removed by the SVE system.

11. Lockheed Martin compared the PCE and TCE concentrations detected during the vapor monitoring events with the Tier 1 screening levels for each sampling depth, which were calculated based on the Regional Board's May 1996 *Interim Site Assessment and Cleanup Guidebook*. The Tier 1 screening levels were based on the California Drinking Water Maximum Contaminant Level (MCL) of 5 micrograms per liter (µg/L) for PCE and TCE and the depth of groundwater beneath the subject site (currently at 218 feet bgs).

12. For Features 33 and 38, vapor rebound data collected in October 2007, January 2008 and March 2008 show that PCE and TCE concentrations meet the Tier 1 screening levels, except for some samples taken from the deepest probe (180 feet bgs) near the groundwater at B69-33-SB6A, SB69-33-SB12, B69-38-SB7A, B69-38-SB8, B69-38-SB9, and B69-38-SB10. During the March 2008 sampling event, PCE and TCE were detected at 180 feet bgs at maximum concentrations of 93 µg/L and 33 µg/L, respectively. These concentrations exceed the PCE and TCE Tier 1 screening levels of 28 µg/L and 9 µg/L, respectively. However, in August 2008, additional soil vapor samples were taken at B69-33-SB6A which showed that the PCE concentration decreased to 72 µg/L from 93 µg/L (180 feet bgs).

13. For Features 48, vapor rebound data collected in August 2008, January 2009 and March 2009 show that PCE and TCE concentrations meet Tier 1 screening levels, except for PCE in some samples taken from the deepest probe (160 feet bgs and 180 feet bgs) near the groundwater at C96-48-SB3A and in multiple depths in C96-48-SB5A. During the March 2009 sampling event, PCE was detected at 160 feet bgs with a maximum concentration of 115 µg/L and at 180 feet bgs with a maximum concentration of 93 µg/L. These concentrations exceed the PCE Tier 1 screening levels of 84 µg/L (160 feet bgs) and 28 µg/L (180 feet bgs), respectively.

14. VLEACH modeling of soil vapor data was performed using the highest August 2008 PCE soil vapor concentration of 134 µg/L detected at 160 feet bgs, from soil vapor monitoring well C93-48-SB3A to determine if residual VOC mass would degrade regional groundwater quality. The VLEACH model of the C93-48-SB3A data indicated that the impact to groundwater at the water table was 3.84 µg/L, which is less than the MCL of 5 µg/L for PCE.

15. All vapor monitoring wells in Features 33, 38 and 48 had soil vapor VOC concentrations that were less than the risk-based cleanup (RBC) concentrations (Tier 2) for both PCE and TCE, which indicates compliance with commercial/industrial indoor air health risk-levels ($1x10^{-5}$).

16. Since 2003, the site has been redeveloped as a parking lot and restaurants. The Burbank Airport developed the extreme southeastern portion of the site for parking in November 2005. In 2006, the City of Burbank approved Zelman's proposed restaurant development activities to be located at the northeastern portion of the site. The restaurant development was completed in June 2008.

17. The Regional Board letter dated October 29, 2008, requested, as part of the site closure process, that Lockheed Martin provide a summary table of VOC concentrations detected in shallow soil (5 feet and 10 feet bgs) during soil and soil vapor investigations and soil cleanup beyond the restaurant areas. VOC concentrations were compared with the RBC concentrations to ensure that VOC concentrations in shallow soils meet RBC concentrations and not pose a risk for indoor air intrusion. The data table was provided to this Regional Board in a letter dated December 1, 2008, which indicates that PCE concentrations were lower than the RBC concentrations developed for the site, and considered protective of groundwater quality and indoor air quality in commercial developments.

Based upon the information provided to the Regional Board, and with the provision that the information was accurate and representative of the site conditions, no further soil remediation for VOCs is required for Features 33, 38 and 48. A no further action (NFA) letter for the site soils will be considered once other chemicals of concern are adequately evaluated by this Regional Board staff and a Land Use Covenant (LUC) is finalized. A LUC is necessary for the site since the cleanup goals developed were based on the industrial/commercial use of the property.

This soil only "no further active soil remediation for VOCs" determination for Features 33, 38 and 48 does not affect the requirements for either assessment or cleanup of other contaminants at the subject site, or the current or future requirements related to cleanup of polluted groundwater underlying the subject site. Also, additional assessment or cleanup may be needed in the event that new information is obtained, such as: a) previously undiscovered subsurface contamination sources; b) signs of soil contamination discovered during future site redevelopment activities; and c) Regional Board staff's review of the subsurface demolition and debris material investigation reports. This Regional Board's "no further active soil remediation for VOCs" decision for Features 33, 38 and 48 does not affect the jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please call Ms. Ana Townsend at (213) 576-6738 or e-mail at atownsend@waterboards.ca.gov.

Sincerely,

Tracy J. Egoscue
Executive Officer

cc: Rachelle Loftin, U.S. EPA, Region IX
Rita Kamat, Department of Toxic Substances Control, Glendale Regional Office
Shahin Nourishad, L. A. County Fire Dept., Health Hazmat
Richard Slade, ULARA Watermaster
Joseph Crisologo, California DHS, Drinking Water Field Operations Branch
Dennis Barlow, City of Burbank
Dirk Drussell, City of Burbank
Roberto Pinon, Tetra Tech, Inc.

Exhibit 7
Plant B-1 NFA Materials

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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101 CENTRE PLAZA DRIVE
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E. S. A. T. B. P. O.

DATE REC'D. 4-11-94

WBS # 32720

COPIES TO: Jim Joan
Carol Richelle

March 28, 1994

Mr. Ron Helgerson
Lockheed Environmental System & Technologies Company
2550 North Hollywood Way, Suite 506
Burbank, California 91505

WELL INVESTIGATION PROGRAM, SUBSURFACE SOIL INVESTIGATION AND SOIL REMEDIATION, PLANT B-1, BUILDING 199 (File No. 104.0676)

We have reviewed the reports on results of additional soil borings, dated March 1993 and results of PCB-contaminated soil remediation, dated February 1994, prepared by your consultant, McLaren Hart.

Previously, a soil gas survey was conducted across the site. No significant quantities of volatile organic compounds (VOCs) were detected at the site except at the Chip Bin Area at the northern end where TCE (153 µg/l maximum) was detected. In addition, four former underground storage tank locations were identified at the site: Tank B-1-F101 (waste oil tank), B-1-F102 (unleaded gasoline tank), B-1-F103 (spill containment tank), and B-I-F105. These areas were investigated by the completion of eight soil test borings.

Based on the results of investigations, VOCs, petroleum-based and aromatic hydrocarbons, and polychlorinated biphenyls (PCBs) were detected in soil samples collected from the site.

The following summarizes the results of investigation and our comments:

1. Petroleum-based hydrocarbons

   Only one sample at SB-48 drilled at five feet below ground surface (bgs) at Tank B-1-F103 contained Total Recoverable Petroleum Hydrocarbons (TRPH) of 180 mg/kg. TRPH concentrations decrease to 5 mg/kg at 10 feet bgs at the same boring. Because TRPH detected in soil is shallow and limited in area extent, no further investigation is required with respect to petroleum-based hydrocarbons.

2. Polychlorinated biphenyls

PCB contamination was detected up to 18 inches deep in the Chip Bin Area during site demolition. PCB-contaminated soil or asphalt with PCB concentrations above 5 mg/kg were excavated from the Chip Bin Area and disposed offsite. Final confirmation sampling results indicated remaining PCB concentrations were below 3 mg/kg.

3. Volatile Organic Compounds:

Elevated concentrations of VOCs were detected at the Chip Bin Area. Trichloroethylene (TCE) was detected at SB-51 at 700 µg/kg at five feet bgs. However, soil samples greater than 5 feet showed only trace concentrations of VOCs (maximum 2.3 µg/kg TCE). Shallow VOC-contaminated soil was excavated and disposed offsite.

Based on the reports, no further soil remediation will be required at the Building 199 area at this time. The groundwater quality at the site must be continued to be monitored for VOCs, TPH and PCBs from wells B-1-CW17, B1-CW-18, and B1-CW-21. You may be requested to conduct further investigations if future groundwater quality data indicate that there are contaminants in groundwater originating from Building 199 area.

If you have any questions concerning this matter, please call Mr. Jay C. Huang at (213) 266-7608 or Mr. Alex P. Carlos at (213) 266-7588.

ROY R. SAKAIDA
Supervising Water Resources
Control Engineer

cc: David Seter, U.S. EPA, Region IX
Mel Blevins, ULARA Watermaster
Jim Hamilton, Lockheed Engineering & Sciences Company
Gary B. Taggart, McLaren Hart

California Regional Water Quality Control Board

Los Angeles Region

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B. F. O.

DATE REC'D. 8/12/02

WBS # 32

COPIES TO: Matsushita

Gretter

August 6, 2002

Mr. Gene Matsushita
Lockheed Martin Corporation
Burbank Program Office
2550 North Hollywood Way, 3rd Floor
Burbank, CA 91505-1055

NO FURTHER REQUIRMENTS (SOIL ONLY), FORMER LOCKHEED MARTIN PLANT B-1 DRY WELL, 1705 VICTORY PLACE, BURBANK, CA (FILE NO. 104.0676) (CLEANUP & ABATEMENT ORDER NO. 87-161)

Dear Mr. Matsushita:

We have reviewed your *Request for Closure of Former Drywell, Former Lockheed Martin Plant B-1* report dated August 9, 2001 and the *Addendum to Request for Closure of Former Drywell Lockheed Martin Plant B-1* dated February 1, 2002 and February 12, 2002. These reports documented the assessment and cleanup activities conducted during the removal of a drywell at the former Lockheed Martin Plant B-1 site.

Based on Regional Board staff review of the subject submittals, we have the following comments:

FINDINGS:

1. In February 2001, a drywell was discovered in the vicinity of former Building 111 during redevelopment activities at the subject site. The brick-lined drywell had an inside diameter of approximately 4 feet and a depth of approximately 15 feet below its concrete cap cover. The top of the drywell was located at approximately 9 feet below ground surface (bgs). No information was available when the drywell was installed, its purpose or how it was abandoned.

2. Two samples collected from inside the drywell on February 8, 2001 contained elevated concentrations of volatile organic compounds (VOCs) and heavy metals. Total chromium and hexavalent chromium were detected at peak concentrations of 20,000 milligrams per kilogram (mg/kg) and 3,900 mg/kg, respectively. Cadmium, lead and tetrachloroethene (PCE) were also detected as high as 235 mg/kg, 231 mg/kg and 1.6 mg/kg, respectively.

3. On February 19 and 20, 2001, one soil boring was drilled approximately 7 feet from the center of the drywell to a depth of 145 feet bgs. Soil samples were collected for heavy metal analyses every 10-foot depth intervals to the total depth of the boring. The maximum concentrations of cadmium and total chromium detected in soil samples were 170 mg/kg (30 feet bgs) and 55 mg/kg (30 feet bgs). Cadmium was not detected in samples collected from 40 feet bgs to the total depth. Total chromium concentrations were less than 50 mg/kg in samples collected from 40 feet to the total depth. Hexavalent chromium was not present in the samples.

4. On April 2, 2001, the drywell and contaminated soil around it was removed to a depth of approximately 36 feet bgs. The removal action was conducted based on a March 9, 2001 workplan, which was approved by Regional Board staff in a letter to Earth Tech dated March 23, 2001.

   A total of five confirmation samples were collected from the sidewall and bottom of the excavation. The samples were analyzed for heavy metals, VOCs, polychlorinated biphenyls (PCBs), semi-VOCs and hexavalent chromium. The analysis of soil samples detected cadmium and total chromium at maximum concentrations of 1,100 mg/kg (25 feet bgs) and 690 mg/kg (30 feet bgs), respectively. Based on the California Waste Extraction Test (WET), soluble cadmium and chromium were also detected at peak concentrations of 6.6 mg/L (20 feet bgs) and 0.85 mg/L (36 feet bgs), respectively. The concentrations of cadmium exceeded the Total Threshold Limit Concentration (TTLC) of 100 mg/kg and the Soluble Threshold Limit Concentration (STLC) of 1 milligram per liter (mg/L) based on the California Code of Regulations Title 22 (CCR, Title 22). PCE and trichloroethene (TCE) were the primary VOCs detected at peak concentrations of 16 mg/kg and 11 mg/kg, respectively. PCBs, semi-VOCs and hexavalent chromium were not detected in any of the confirmation samples. The excavated contaminated soils were legally disposed by Earth Tech at Kettleman Hills. The excavation was then backfilled with cement slurry to 7 feet bgs and finished to the surface with native material from the site.

5. Elevated concentrations of total chromium (24,000 mg/kg), hexavalent chromium (2,100 mg/kg) and cadmium (640 mg/kg) were also identified in a sample of the material found inside a vertical pipe, which was attached at the bottom of the drywell. The data obtained during this removal action confirms that liquid wastes containing heavy metals and VOCs were discharged in the drywell.

6. On May 22, and 23, 2001, four soil borings were drilled around the perimeter of the drywell to further assess the extent of contamination. Soil samples were collected at 5-foot intervals from 10 feet bgs to the total depth of 80 feet bgs.

   The analytical results indicated that heavy metal concentrations, except for cadmium and total chromium were below the TTLC and the STLC based on the CCR, Title 22. Generally, cadmium and total chromium concentrations declined with increasing distance from the center of the drywell. Peak concentrations of cadmium (480 mg/kg) and total chromium (540 mg/kg) were found at 30 feet bgs in soil boring B-4, located approximately 4.5 feet from the center of the drywell. Cadmium was not detected from 45 feet bgs to the maximum depth of 80 feet bgs. In the case of total chromium, concentrations detected below 45 feet bgs ranged from 5 mg/kg to 28 mg/kg, except for a detection of 69 mg/kg at 65 feet bgs. All total chromium concentrations detected below 45 feet bgs (except 69 mg/Kg at 65 feet) were below the screening level for chromium of 50 mg/Kg. Also, total chromium concentrations detected below 45 feet bgs were less than the U.S. Environmental Protection Agency (USEPA) Region IX preliminary remediation goals (PRGs) for residential (210 mg/Kg) and industrial (450 mg/Kg) areas. Hexavalent chromium was not detected in any of the confirmation samples. total chromium and

7. Between June 23, 2001 and July 3, 2001, a second remedial action was conducted to remove additional contaminated soil outside the area of the original excavation. A total of 19 overlapping 5-foot diameter boreholes were drilled to a maximum depth of 45 feet bgs. Confirmation samples were collected from the sidewall at 5-foot depth intervals and at the bottom of every excavation. Heavy metal concentrations

detected in sidewall samples collected above 30 feet bgs and all samples from the excavation bottom were below the TTLC and the STLC based on the CCR, Title 22. However, soluble cadmium concentrations (1.3 to 4.5 mg/L) detected in eight (8) sidewall samples taken at 30, 35 and 40 feet bgs exceeded the cadmium STLC of 1 mg/L. Heavy metal concentrations detected in confirmation samples were also below the USEPA Region IX PRGs for residential reuse, except cadmium found in one sample (48 mg/Kg at 35 feet bgs), which exceeded the cadmium residential PRG (37 mg/Kg). Cadmium concentrations detected in confirmation samples were below the industrial PRG (810 mg/kg). The contaminated soils removed from the drywell area were transported to Kettleman Hills for stabilization and legal disposal.

The limited residual soil containing cadmium concentrations above the STLC screening level is inaccessible due to the recent redevelopment of the site. Several utilities have been constructed adjacent to or on top of this area. This area is completely paved, reducing water percolation through the soil. The materials generated during the remedial actions were transported to Kettleman Hills for stabilization and legal disposal.

8. Although hexavalent chromium was detected in sediments from inside the drywell, none of the soil samples collected outside the drywell during the assessment and remedial phases contained detectable concentrations of hexavalent chromium.

9. The drywell is located at the center of the ventfield for the Plant B-1 soil vapor extraction (SVE) system that Lockheed Martin started operating in 1997. Lockheed Martin continues to operate the SVE system to remove VOCs in soil beneath the subject site including the drywell area until closure is obtained from the Regional Board.

10. Groundwater beneath the site occurs at approximately 151 feet bgs (at B1-CW12 on March 2002). The regional groundwater flow in the water table hydrologic unit is toward the southeast. Based on groundwater monitoring data obtained from the 1980's to the present, some heavy metals have been detected above the Maximum Contaminant Level (MCL) in wells B1-CW12 and B1-CW22, which are located immediately downgradient from the subject drywell. These heavy metals and their historical maximum concentrations include: 1) antimony (11 µg/L); 2) barium (5,000 µg/L); 3) total chromium (480 µg/L); 4) iron (510 µg/L); 5) nickel (113 µg/L); and 6) thallium (111 µg/L). Current data indicate that heavy metal concentrations have significantly decreased and none exceed the MCLs at this time. During the first quarter 2001 monitoring event, barium (11 µg/L), hexavalent chromium (14.8 µg/L), total chromium (30 µg/L) and zinc (250 µg/L) were the only heavy metals detected in these downgradient wells. In March 2002, 15 µg/L of hexavalent chromium was detected in monitoring well B1-CW12. Two monitoring wells (B1-CW16 and B1-CW29) are located upgradient from the former drywell. Some historical heavy metal concentrations detected from these wells also exceed the MCL including: 1) iron (1,300 µg/L); nickel (148 µg/L) and thallium (66 µg/L). During the first quarter 2001 and 2002 sampling events, peak heavy metal concentrations detected from the upgradient wells were below the MCL which include barium (156 µg/L), total chromium (13 µg/L), hexavalent chromium (8.9 µg/L) and zinc (606 µg/L). Cadmium, a primary heavy metal detected during the drywell assessment and remediation, has not been detected in either the upgradient or downgradient monitoring wells.

Concentrations of VOCs, primarily PCE and TCE, have been detected above the MCL in groundwater monitoring wells in and around the former Plant B-1 site. Currently, VOCs in groundwater within the BOU are extracted and treated as part of the USEPA's regional cleanup efforts in the San Fernando Valley Superfund site. While the existing groundwater cleanup only treats VOCs, the extraction wells, which are located downgradient from the Plant B-1 site, appear to contain and control the spread of the VOC and heavy metal plumes. Based on the current heavy metal concentrations, groundwater remediation for heavy metals is not warranted in this area. However, Lockheed Martin must continue to monitor groundwater quality in the BOU.

CONCLUSIONS

Based on the information in our files for this project, we have no further soil assessment or cleanup requirements with respect to the drywell. The concentrations of heavy metals detected in confirmation samples were below the TTLC and the STLC criteria based on the CCR, Title 22, except for cadmium concentrations detected between 30 and 40 feet bgs. Soluble cadmium concentrations in these samples, which ranged from 1.3 to 4.5 mg/L, exceeded the cadmium STLC of 1 mg/Kg. However, cadmium was not present from 45 feet bgs to the maximum depth of 80 feet bgs. Heavy metal concentrations in confirmation samples were also below the USEPA Region IX preliminary remediation goals (PRGs) for residential reuse, except for cadmium found in one sample (48 mg/Kg at 35 feet bgs), which exceeded the cadmium residential PRG of 37 mg/Kg.

The residual soil containing cadmium concentrations above the STLC screening level is inaccessible due to the recent redevelopment of the site. Several utilities have been constructed adjacent to or on top of this area. The area above this residual cadmium contamination is completely paved, reducing water percolation through the soil. In view of the above, the heavy metal contamination that remain in the soil do not appear to pose a significant threat to groundwater quality. Therefore, further heavy metal soil assessment or cleanup is not required. In the case of VOC contamination, Lockheed Martin continues to operate a soil vapor extraction system to remove VOCs in soil beneath the subject site including the drywell area. In order to protect present and future public health and safety, Lockheed Martin and ZRP Burbank, LLC (current property owner) recorded and filed a *Covenant and Agreement to Restrict Use of Property* with the Los Angeles County Recorder's Office on December 6, 2000. This document specifies that the following structures shall not be built on-site: residence(s), hospital for humans, schools for persons under 21 years of age, day care centers for children and any structure for permanently occupied human habitation.

Water quality data obtained from downgradient monitoring wells indicated that heavy metal concentrations have significantly decreased from historical highs and none exceed the MCL. Based on the current low concentrations of heavy metals in the groundwater as detected in monitoring wells located in the vicinity of the former drywell, groundwater cleanup will not be required. However, the Regional Board may require groundwater cleanup for heavy metals in the future if new information is obtained, such as concentrations that are approaching or which exceed drinking water standards or conditions arise that threaten drinking water wells or the water quality of lower aquifers.

This soil only "no further requirements" determination does not affect the requirements for either assessment or cleanup of adjacent features at the subject site, including the VOC-impacted areas noted above or the current or future requirements related to cleanup of polluted groundwater underlying the

subject site. Also, additional assessment or cleanup may be needed in the event that new information is obtained, such as: a) previously undiscovered subsurface features; b) signs of soil contamination discovered during future site redevelopment activities; and c) Regional Board staff's review of heavy metal data collected during previous assessment, remediation and demolition activities. This Regional Board's "no further requirements" decision does not affect the jurisdictional requirements of other agencies, such as the USEPA. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please call Mr. J. T. Liu at (213) 576-6667 or Mr. Alex Carlos at (213) 576-6726.

Sincerely,

Dennis A. Dickerson
Executive Officer

cc: Michael Lauffer, Office of the Chief Counsel, State Water Resources Control Board
Robert Saros, Office of the Chief Counsel, State Water Resources Control Board
Diane Strassmaier, U.S. EPA, Region IX
Sayareh Amirbrahami, Department of Toxic Substances Control, Glendale Regional Office
Paul Lisak, L. A. County Fire Dept., Health Hazmat
Mel Blevins, ULARA Watermaster
Vera Melnyk-Vecchio, California DHS, Drinking Water Field Operations Branch
Robert Ovrom, City of Burbank
Bruce Feng, City of Burbank
Roger Baker, City of Burbank
Dennis Barlow, City of Burbank
Devin Burns, City of Burbank
Eric Lang, Earth Tech, Inc.

Cal/EPA

Los Angeles Regional Water Quality Control Board

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Pete Wilson
Governor

July 18, 1997

Ron N. Helgerson
Lockheed Martin Corporation
Corporate Environmental Safety & Health
2550 N. Hollywood Way, Suite 305
Burbank, CA 91505-1055

Partial Closure - Lockheed Martin Plant B-1, 1705 Victory Place, Burbank (File No. 104.0676)(Cleanup & Abatement Order No. 87-161)

We have reviewed your April 17, 1997, letter requesting closure for the Plant B-1 property except for the operation and maintenance of the soil vapor extraction (SVE) system, and your June 27, 1997, submittal containing supplementary information to support the closure. Upon review, we have the following comments with respect to the Well Investigation Program:

1. Operations at Plant B-1 (encompassing approximately 80 acres) consisted primarily of aircraft parts fabrication and subassembly from 1928 to 1991. Numerous phases of soil and ground water assessment have been conducted on this property to evaluate the extent of impact from on-site sources.

2. During demolition, all surface and subsurface features (buildings, underground storage tanks, clarifiers, sumps, machine pits) were removed from the property. Approximately 215,000 cubic yards of soil impacted with petroleum hydrocarbons, volatile organic compounds (VOC) and metals were excavated to depths ranging from 10' to 25' bgs and hauled off-site to appropriate treatment and disposal or recycling facilities. The excavated areas were subsequently backfilled with clean soil.

3. Board staff approved the workplan to remediate remaining VOC soil contamination on approximately 10 acres of the Plant B-1 site using SVE. The system will operate until VOC concentrations are below acceptable levels based on our performance criteria.

4. High-molecular weight petroleum hydrocarbons remain in some soil horizons. However, based on assessment data the vertical migration of these contaminants appears to be strongly impeded by the fine-grained units in the 35' and 55' bgs depth interval. Results of fate and transport modeling and health risk assessment indicate low potential for remobilization of high-molecular weight petroleum hydrocarbons and low associated health risk.

5. We believe ground water (at a depth of approximately 200' bgs in this area) will not be substantially impacted by releases from residual on-site sources outside of the SVE remediation area and any that may occur will be captured and detected by ground water extraction and monitoring wells in the Burbank Operable Unit regional ground water cleanup facilities downgradient from the site.

6. Board staff must be notified and appropriate actions (e.g., determine extent, limit site worker exposure) must be taken if evidence of soil contamination are encountered during site redevelopment at the subject property.

Based on the subject submissions, our inspections and other information in our files, we have no further requirements for the subject site with respect to the Well Investigation Program except for the SVE noted on Item 3.

The requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by the Board's "partial closure" determination. Such agencies may choose to make their own determination concerning the site.

If you have any questions, contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Duane James, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Carol Yuge, Lockheed Martin Corporation

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S.F.C.

DATE REC'D. 1/30/97

WBS # 34

COPIES TO: Blackman, James, Helgerson, Yuge, Patton

January 29, 1997

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-1055

No Further Requirements, Area 3, Building 175, Former Plant B-1 West (File No. 104.0676)(Cleanup & Abatement Order No. 87-161)

We have reviewed the December 19, 1996, "Lockheed Martin, Area 3, Building 175 Site, Former Plant B-1 West, Excavation Closure Report" prepared by your consultant, Tetra Tech Inc. This report presents results of excavation and removal of petroleum hydrocarbon (TPH) and volatile organic compound (VOC) contaminated soil in the former location of a hydraulic press foundation (Area 3) in former Plant B-1 West. Upon review of the report, we have the following comments with respect to the Well Investigation Program:

1. During the subject remedial action, approximately 412 cubic yards of soil with PCE concentrations above the Board's VOC soil screening level (116 ug/kg for this area) and petroleum hydrocarbons (TPH) in the gasoline range >1,000 mg/kg, TPH-diesel and high molecular weight hydrocarbons >10,000 mg/kg were excavated to a depth of approximately 18' bgs in the subject area.

2. PCE and TRPH were detected in confirmation soil samples at maximum concentrations of 56 ug/kg and 45 mg/kg, respectively. TPH-gasoline was not-detected in any of the samples analyzed. The soil stockpiles were transported off-site to an approved treatment and disposal facility.

3. Prior to excavations in Area 3, six soil vapor samples were collected from two locations in the vicinity of previous soil sample locations SS-28 and SB18 to a maximum depth of 30' bgs to further characterize VOC soil contamination in this area. All vapor samples contained detectable concentrations of PCE at a maximum concentration of 1,100 ug/l (10' bgs).

4. Laboratory analysis of soil matrix samples collected during previous phases of assessment in the subject area detected maximum concentrations of 260 mg/kg PCE (at 2' bgs), 51,000 mg/kg TRPH (at 2' bgs), 2,100 mg/kg TPH-diesel (at 5' bgs), 3,600 mg/kg TPH-motor oil (at 5' bgs) and 2,700 mg/kg TPH-gasoline (at 5' bgs).

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Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program. Residual TPH and VOC concentrations detected in soil in this area are below cleanup goals based on the Board's Interim Site Assessment and Cleanup Guidebook (May 1996). The remaining soil contamination is not a substantial threat to ground water quality and therefore additional cleanup is not warranted. Ground water is approximately 160' bgs in the subject area.

The jurisdiction requirements of other agencies, such as the U.S. Environmental Protection Agency (USEPA), are not affected by the Board's "no further requirements" determination. Such agencies may choose to make their own determination concerning the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Duane James, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Carol Yuge, Lockheed Martin Corporation

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Los Angeles Regional Water Quality Control Board

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Pete Wilson
Governor

B. P. O.
DATE REC'D. 5/12/97
WBS # 34
COPIES TO: Helgerson, Yuga, Simpson, Chan, Chiang, Spalding, Walker

May 2, 1997

Mr. Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
2550 N. Hollywood Way, Suite 305
Burbank, CA 91505-1055

No Further Requirements - Area 1, Former Clarifier B-1-ZB, Building 175 Site, Lockheed Plant B-1 West (File No. 104.0676)(Cleanup & Abatement Order No. 87-161)

We have reviewed "Building 175 Site Former Clarifier B-1-ZB, Excavation Closure Report" dated April 16, 1997, prepared by your consultant, Tetra Tech. This report summarizes results of excavation and removal of volatile organic compound (VOC) contaminated soil in the former clarifier B-1-ZB (Area 1) in the northwest corner of former Building 175, within former Plant B-1 West. Upon review of the report, we have the following comments with respect to the Well Investigation Program:

1. During this cleanup action, approximately 225 cubic yards of soil with a maximum PCE concentration of 1,490 mg/kg was excavated to a depth of approximately 70' bgs in the subject area. The objective of this removal action was to reduce residual VOC impact in silt layers identified during confirmation sampling after soil vapor extraction system (SVE) cleanup. All excavated soil was transported off-site to an approved recycling facility.

2. Previously, the clarifier area was the subject of extensive subsurface investigation and cleanup using SVE. A total of 5,416 gallons of PCE and TCE were recovered from the soil and ground water during combined SVE and ground water pump and treatment system operation from 1988 to 1994. Significant reduction in VOC mass using SVE was demonstrated by verification sampling.

3. Based on the subject report, our inspections and other information in our files, assessment and cleanup in Area 1 and the entire Plant B-1 West is **complete** and we have **no further requirements** with respect to the Well Investigation Program. Residual VOC soil contamination in the subject area appears to be associated with thin stringers of fine-grained soil and is not a substantial continuing threat to ground water quality, and therefore further cleanup is not warranted. Any continuing releases of VOCs to the ground water will be captured by the

ground water extraction and monitoring wells in the Burbank Operable Unit regional ground water cleanup operations downgradient from the subject area. Plant B-1 West is therefore excluded from requirements in our Cleanup and Abatement Order No. 87-161.

The requirements of other agencies, such as the U.S. Environmental Protection Agency (USEPA), are not affected by the Board's "no further requirements" determination. Such agencies may choose to make their own determination concerning the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Catherine Tyrell, AEO

Lawrence P. Kolb
for Acting Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Duane James, USEPA, Region IX
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Carol Yuge, Lockheed Martin Corporation

STATE OF CALIFORNIA—ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
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TEREY PARK, CA. 91754-2156
266-7500
FAX: (213) 266-7600

March 29, 1996

Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
2550 N. Hollywood Way, Suite 305
Burbank, CA 91505-1055

Building 180 Site, Soil Investigation and Demolition Reports, Lockheed Plant B-1 (File No. 104.0676)(Cleanup & Abatement Order No. 87-161)

We have reviewed the "Plant B-1, Building 180 Site, Subsurface Soil Investigation Report" dated May 26, 1995, and "Building 180 Site, Plant B-1 West, Infrastructure Demolition Oversight Project Documentation" dated September 15, prepared by your consultant, Tetra Tech Inc, for the subject site.

According to the subject submissions, additional subsurface features (i.e., sumps, seepage pit) in the Building 175 area were uncovered during demolition at the subject site that could have been sources of liquid wastes that may have impacted soil and ground water. Laboratory analyses of soil matrix samples collected beneath some of these structures detected concentrations of VOCs, TPH and metals above regulatory limits. Although a soil gas survey was conducted in the Building 175/180 site prior to demolition, some of the newly discovered features were not adequately evaluated and therefore need additional assessment. This issue was discussed during our meeting February 29, 1996, with Lockheed representatives.

Substantial VOC soil contamination remains in Area 1 (northwest corner of Bldg 175) and southeast of Buildings 179 and 183 where remediation has been conducted using SVE methods. Elevated concentrations of total VOCs (maximum 300,000 µg/kg at SB2-110') remain in coarse grained soil. A maximum combined VOC concentration of 7,025 µg/l PCE+TCE was detected in soil vapor samples collected from the extraction wells after one month VES shutdown during a rebound test. A maximum concentration of 22,884 µg/l PCE+TCE was detected in soil vapor samples collected from vapor extraction wells after four months of shutdown. Applying the same criteria used at the main Plant B-1 where soil contamination with 1,000 µg/l will be remediated, additional soil remediation is needed in the northwest corner of Building 175 and southeast of Buildings 179 and 183. Alternatively, Lockheed may demonstrate (e.g., fate and transport modeling) that residual VOCs in these previously remediated areas are not a substantial source of ground water contamination.

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Results of subsurface investigations in the Building 180 area indicate that soil contamination in this area is below screening levels noted in our guidebook (Interim Site Assessment and Remediation) and not a substantial threat to ground water quality. Therefore, no additional investigation or remediation is necessary in this area.

Specific Comments

A. Petroleum Hydrocarbons

Shallow soil matrix samples collected during demolition of Building 175/180 contained levels of petroleum hydrocarbon compounds (motor oil range) that exceed our Soil Screening Levels (see table below) as specified in the Interim Guidance for Remediation of Petroleum Impacted Sites (January, 1995). The horizontal and vertical extent of TPH-impacted soils in Areas 2 and 3 must be determined. Soil samples should be analyzed for TPH in accordance with EPA Method 8015 Modified to speciate the different hydrocarbon ranges.

Areas of TPH-affected soil left in place that exceed the Board's Soil Screening Levels

	Gasoline (ppm)	Diesel (ppm)	Motor Oil (ppm)
Soil Screening Level (ppm) Depth to gw 40-150 ft bgs	500	1,000	10,000
Area 2 SS26-2'			26,000
Area 2 SS27-2'			52,000
Area 2 SS41-8'	190		10,000
Area 3 SS28-2'			21,000
Area 3 SS40-3'	130		

B. METALS

Areas 15 and 16 are of concern with respect to metals. Concentrations of total chromium in soil matrix sample SS50-6' (Area 16) and Area 15 exceed 10 times the STLC. The vertical extent of metals-impacted soil in Areas 15 and 16 has not been adequately determined and will require additional soil sampling. Soil samples from these areas must be analyzed for total chromium, including chromium VI WET analysis for selected samples.

C. Volatile Organic Compounds

Additional assessment is needed to evaluate VOC impacted soil in the Building 175 demolition areas. Supplemental soil gas samples must be collected and analyzed for VOCs in Areas 2, 3, 9 and 10, 12 and paint storage area, SW Bldg 175 as noted below to delineate the extent of VOC contamination.

1. Area 2, autoclave hydraulic table, northwest Bldg 175

   Maximum concentrations of 22,000 ug/kg PCE and 190 mg/kg TPH-gasoline (SS41-8) were detected in this area. The nearest soil vapor sample location (A175-SW14), sampled from 20 to 52 feet bgs, is approximately 30 feet northwest of SB6. Between soil sample locations SB6 and SS-41, collect soil gas samples at 5, 10, 20 and within the second fine-grain layer (approximately 30 feet bgs). Adjacent to soil sample SS-26, collect soil gas samples at 5, 10 and 20 feet bgs.

2. Area 3, press pit area, west-central Bldg 175 and Area 8

   Concentrations ranging from 800 (SB18-5') to 260,000 ug/kg (SS28-2') PCE and 130 mg/kg TPH-gasoline were detected in soil samples from this area. The extent of TPH and VOC soil contamination in this area must be determined.

3. Area 8

   In Area 8, sample SS21-1 (northeast of the press pit) contained a maximum concentration of 320 ug/kg PCE. Collect a minimum of two soil gas samples at 5 feet bgs in this area.

4. Area 9, water well, central Bldg 175

   A maximum concentration of 440 ug/kg PCE was detected in soil sample SS23 collected 51' bgs inside the well. Later excavation revealed that the well is 59 ft deep and 4' in diameter built of concrete. The nearest soil gas sample location (A175-SW22), sampled from 20 39 ft bgs, is approximately 60 feet southeast from the water well. A minimum of two soil gas samples, separated 10 feet vertically, should be collected below the excavation depth.

5. Area 10, sump, north of Bldg 175 plaster room

   A maximum concentration of 360 ug/kg PCE was detected in soil sample SS-30-5'. The nearest soil gas sample location (A175-8W27), sampled from 20 to 51 feet bgs, is approximately 60 ft southwest of SS-30. At least three soil gas samples should be

collected in this area at 5', 10' and 20' bgs.

6. Area 12, seepage pit/dry well, west of plaster room

Soil sample SS37-11', collected inside the seepage pit, contained 29,000 ug/kg PCE. Laboratory results of the nearest soil gas sample (A175-SW06), collected while the VES was still operating, were not reported. Lockheed's consultant considered this soil gas data to not be representative of equilibrium conditions due to active operation of the VES. Soil gas samples should be collected at 10 and 20 feet bgs adjacent to soil sample location SS 37. Also, please provide the results for A175-SW06.

7. Paint storage area, southwest Bldg 175

A concentration of 172 ug/kg PCE was detected in a soil matrix sample collected at 5' bgs in boring SB-25. This area was not previously considered to be an area of concern based on low head-space readings (< 1.8 ppm) taken during the site demolition. The nearest soil gas sample location (A175-SW25-20') is approximately 50 feet away. A minimum of two soil gas samples at 5' bgs must be collected adjacent to soil boring SB-25 and at the center of the former paint storage area.

We would be pleased to meet with you or your representatives to discuss this project. If you have any questions, please contact Alex P. Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

EN:apc

cc: Mr. Jorge Leon, SWRCB, Office of the Chief Counsel
Mr. David Seter, USEPA, Region IX
Mr. Hamid Saebfar, CALEPA, DTSC-Region 3
Mr. Mel Blevins, ULARA Watermaster
Mr. Gene Matsushita, Lockheed Martin Corporation
Ms. Carol Missirlian, Lockheed Martin Corporation
Ms. Carol Yuge, Lockheed Martin Corporation

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Winston H. Hickox
Secretary for Environmental Protection

California Regional Water Quality Control Board

Los Angeles Region

(50 Years Serving Coastal Los Angeles and Ventura Counties)

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640
Internet Address: http://www.swrcb.ca.gov/rwqcb4

Gray Davis
Governor

B. P. O.

DATE REC'D. 6-6-00

WBS # 32

COPIES TO: Yuge, Spaulding, Peterson, Rege

June 1, 2000

Ms. Carol Yuge
Lockheed Martin Corporation
2555 North Hollywood Way, Third Floor
Burbank, CA 91505-1055

Dear Ms. Yuge:

NO FURTHER REQUIREMENTS, AERATION CELL AC-A, LOCKHEED MARTIN PLANT B-1, 1705 NORTH VICTORY PLACE, BURBANK, CALIFORNIA (FILE NO. 104.0676) (CLEANUP & ABATEMENT ORDER NO. 87-161)

We have reviewed your report titled *Closure Request Aeration Cell AC-A* dated January 18, 1999, which presented the operational data for Aeration Cell AC-A associated with the soil vapor extraction (SVE) system at the Lockheed Martin Plant B-1 site. We have also reviewed Tetra Tech's May 23, 2000 supplementary soil gas data collected in the vicinity of the aeration cell. Contaminant remediation activities at your site are being performed under Cleanup and Abatement Order No. 87-161 issued by this Regional Board.

Based upon Regional Board staff review of these documents, we have the following comments:

1. Aeration Cell AC-A was constructed to contain and remediate soils contaminated with volatile organic compounds (VOCs). The impacted soil was generated during trenching operations associated with the construction of the SVE system at Plant B-1. Excavated VOC-impacted soil was placed on a geosynthetic liner in the aeration cell to isolate it from surrounding soil.

2. Soil vapor was extracted from Aeration Cell AC-A between July 1997 and April 1998. Lockheed Martin implemented the Operational Sampling Plan for the SVE system at Plant B-1, as approved by Regional Board staff.

3. In July 1997, soil vapor concentrations in Aeration Cell AC-A were as high as 3,900 ug/L for tetrachloroethylene (PCE) and 36 ug/L for trichloroethylene (TCE). By April 1998, the SVE system has successfully reduced VOC concentrations to asymptotic levels of 13 ug/L PCE and 1.4 ug/L TCE.

4. A rebound test was performed on October 1998 to verify earlier results. Two samples collected at varying times detected peak inlet concentrations of 13 ug/L PCE. Other VOCs were not detected above the detection limit of 1 ug/L.

Cal/EPA

Los Angeles Regional Water Quality Control Board

101 Centre Plaza Drive
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FAX (213) 266-7600

Pete Wilson
Governor

FILE

B. P. O.
DATE REC'D. 7/14/97
WBS # 32
COPIES TO: Simpson, Johnson, Yuge, Helgerson

July 11, 1997

Ron N. Helgerson
Lockheed Martin Corporation
Corporate Environmental Safety & Health
2550 N. Hollywood Way, Suite 305
Burbank, CA 91505-1055

No Further Requirements, High-Molecular Weight Petroleum Hydrocarbons, Lockheed Martin Plant B-1 (File No. 104.0676) (Cleanup & Abatement Order No. 87-161)

We have reviewed your June 22, 1997, letter requesting closure for areas with residual high molecular weight petroleum hydrocarbon (C_{12} to C_{20}) soil impact. This submittal presents the rationale for closure based on the Board's 1996 Interim Site Assessment & Cleanup Guidebook and assessment data. Upon review, we have the following comments with respect to the Well Investigation Program:

1. During demolition at Plant B-1, potential sources of petroleum hydrocarbons (machine pits, underground storage tanks) were removed and an estimated 215,000 cubic yards of soil contaminated with petroleum hydrocarbons, volatile organic compounds and metals were excavated to depths ranging from 10' to 25' bgs and transported off-site to an approved treatment and disposal or recycling facility. The excavated areas were subsequently backfilled with clean soil.

2. During numerous phases of assessments, approximately 4,000 soil samples were collected from 600 boreholes drilled to a maximum depth of 150' bgs. TRPH (total recoverable petroleum hydrocarbons) and TEH (total extractable hydrocarbons) were detected at maximum concentrations of 104,000 mg/kg at 46' bgs and 99,100 mg/kg (turbine oil) at 32' bgs, respectively. Based on the data, downward migration of petroleum hydrocarbons appears to be strongly impeded by the fine-grained unit between 35' and 55' bgs.

3. The results of fate and transport modeling and health risk assessment indicate low potential for remobilization of high molecular weight petroleum hydrocarbon and low associated health risk.

4. Although petroleum hydrocarbons have been periodically detected in ground water samples collected from monitoring wells at Plant B-1, recent monitoring analyses were non-detect for all petroleum hydrocarbon constituents. Ground water in this area is estimated to be approximately 170' bgs. Hydrocarbon contaminants that might be released to the ground water from the subject

site will be captured by the downgradient Burbank Operable Unit ground water extraction wells.

Based on the subject submittal, previous reports and other information in our files, we have no further requirements for the high-molecular weight petroleum hydrocarbon impacted areas at the subject site with respect to the Well Investigation Program. Residual high molecular weight petroleum hydrocarbon soil contamination at the site is not a significant threat to ground water quality and therefore further cleanup is not warranted.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Duane James, USEPA, Region IX
Hamid Saebfar, CALEPA, Region 3
Mel Blevins, ULARA Watermaster
Carol Yuge, Lockheed Martin Corporation

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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B. P. O.

DATE REC'D 1/9/97

WDS # 34

COPIES TO: Jones, Tavargna
Blackburn, Yuen, Ritter

January 8, 1997

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-1055

Area 15/16, Building 175, Former Plant B-1 West
(File No. 104.0676)(Cleanup & Abatement Order No. 87-161)

We have received the December 19, 1996, "Lockheed Martin, Area 15/16 - Building 175 Site, Former Plant B-1 West, Subsurface Investigation Report" prepared by your consultant, Tetra Tech Inc. This report presents results of supplemental assessment to further characterize chromium soil impact at depths greater than 15' bgs in the subject area. Upon review of this report, we have the following comments with respect to the Well Investigation Program:

1. A total of 6 soil samples were collected from two boreholes drilled to a maximum depth of 25' bgs in the vicinity of former SB-66 and SB-67. Laboratory analysis of the soil samples detected maximum total chromium and chromium VI concentrations of approximately 299 mg/kg and 2 mg/kg, respectively. All samples were also analyzed for soluble total chromium by the California Code of Regulations (CCR) Title 22 Waste Extraction Test. The soluble total chromium concentrations ranged from not detected (ND) to approximately 8 mg/l.

2. Results of the subject phase of assessment and previous investigations in the subject area demonstrate that the concentrations of total chromium and chromium VI are below the CCR Title 22 TTLC and STLC levels. Total chromium and chromium VI concentrations were within the USEPA Region IX Preliminary Remediation Goals (PRG) range, except for sample (SB-67-15) collected at a depth of 15' bgs which had 690 mg/kg total chromium. Since the upper 10' of soil in the subject area had been excavated and backfilled with clean soil, standard human exposure pathway assumptions (e.g., metals or compounds exists in the upper 10' of the soil column) used in the PRGs are not relevant unless this area is excavated to this depth.

3. Ground water is approximately 160' bgs in this area.

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Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program for the subject area. Chromium concentrations in soil detected in this area is not a threat to ground water quality and therefore additional cleanup is not warranted.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Duane James, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Carol Yuge, Lockheed Martin Corporation

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Exhibit 8

Plant B-6 NFA Materials

CITY OF BURBANK
311 ORANGE GROVE AVENUE, BURBANK, CALIFORNIA 91502-1221
(818) 238-3473
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FIRE DEPARTMENT

MICHAEL W. DAVIS
FIRE CHIEF

B. P. O.

April 11, 2000 DATE REC'D. 4-13-00

WBS # 22

COPIES TO: Warren, George
Planning, Berkowitz, Fay

MR. SCOTT WARREN
LOCKHEED MARTIN CORPORATION
2550 N HOLLYWOOD WAY, 3RD FLOOR
BURBANK CA 91505

RE: UNDERGROUND STORAGE TANK SITE INVESTIGATION REPORT, DATED FEBRUARY 11, 2000, 2801 N HOLLYWOOD WAY, BURBANK

Dear Mr. Warren:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks is greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of the site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721 (e) of Tile 23 of the California Code of Regulations. Please contact our office, if you have any questions regarding this matter.

Sincerely,

Michael W. Davis
Chief of Fire Department

BY Devin Burns
Devin Burns, Hazardous Materials Specialist
Burbank Fire Department

cc. Robert Lorton, AE Schmidt

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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B. P. O.

DATE REC'D. 10/9/96

WBS # 3A

COPIES TO: Blackmon
Gilbert, Levasseur, Helgerson, Gregor

October 9, 1996

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-0256

No Further Requirements, Area #3, Subsurface Soil Investigation, Building 353 - Dry Wells and Reservoir Sump, Lockheed Plant B-6 (File No. 104.0674) (Cleanup & Abatement Order No. 87-161)

We have reviewed the "Area #3 Subsurface Soil Investigation, Building 353 - Dry Wells and Reservoir Sump" report dated September 27, 1996, prepared by your consultant, Tetra Tech Inc. This report documents results of soil assessment intended to determine the extent of petroleum hydrocarbon impact beneath the subject area. Upon review, we have the following comments with respect to the Well Investigation Program:

1. During the subject phase of assessment, a total of 48 soil samples were collected from 3 boreholes drilled to a maximum depth of 90' bgs in the subject area.

2. Maximum concentrations of TRPH (total recoverable petroleum hydrocarbons) and TEH (total extractable hydrocarbons) were detected at 10' bgs at concentrations of 210 mg/kg and 270 mg/kg, respectively. TRPH and TEH concentrations were either non-detectable or less than 21 mg/kg at depths greater than 10' bgs. Previous assessment detected maximum concentrations of 709 mg/kg TRPH at 10' bgs adjacent at the reservoir sump and up to 255 mg/kg TRPH at 60' bgs in the vicinity of the dry wells.

3. The subject report and previous assessment demonstrate that petroleum-hydrocarbon impacted soil is limited to areas adjacent to the former dry wells and reservoir sump. Ground water is at approximately 260' bgs in this area.

Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program. Soil contamination detected in this area is not a threat to ground water quality and therefore cleanup is not necessary.

p:\Lockheed\B-6west\area3rpt.nfa

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert,Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

p:\Lockheed\B-6west\area3rpt.nfa

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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B. P. O.
DATE REC'D. 10/21/96
WBS # 3H72c
COPIES TO: [illegible]

October 15, 1996

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-0256

No Further Requirements, Area #4, Subsurface Soil Investigation, Building 353 - Process Lines, Lockheed Plant B-6 (File No. 104.0674) (Cleanup & Abatement Order No. 87-161)

We have reviewed the "Plant B-6: Area #4 Subsurface Soil Investigation, Building 353 - Process Lines" report dated September 12, 1996, prepared by your consultant, Tetra Tech Inc. This report documents results of soil assessment to determine metals impact in the process line area located within Building 353 at the Plant B-6 site. Upon review, we have the following comments with respect to the Well Investigation Program:

1. During the subject phase of assessment, a total of 72 soil matrix samples were collected from 8 boreholes drilled to a maximum depth of 50' bgs in the subject area.

2. The concentrations of metals detected in soil matrix samples were below TTLC and less than 10 times the STLC concentrations. The highest concentration of lead was 16 mg/kg collected at 10' bgs. Lead was previously detected at 358 mg/kg, which is above 10 times the STLC (50 mg/kg), in a sample collected at 2' bgs in the subject area.

3. Ground water is at approximately 260' bgs in this area.

Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program. Soil contamination detected in this area is not a threat to ground water quality and therefore cleanup is not necessary.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

p:\Lockheed\B-6west\area4.nfa

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert,Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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STATE OF CALIFORNIA—ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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B. P. O.
DATE REC'D. 11/21/96
WBS # 3A
COPIES TO: Helgerson, Yerga, Gilbert, Levesque, Blackman, Hartlieb

November 20, 1996

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-1055

No Further Requirements, Area #5 - Building 353 - Former TCA Degreaser, Lockheed Plant B-6 (File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed Lockheed Martin's "Area #5 Subsurface Soil Investigation, Building 353 - Former TCA Degreaser" report dated October 25, 1996, prepared by your consultant, Tetra Tech Inc. This report documents the results of supplementary soil and soil gas investigations in the former TCA degreaser area located in former Building 353 within Lockheed Plant B-6. Upon review, we have the following comments with respect to the Well Investigation Program:

1. Prior to drilling and sampling, the 1,1,1-TCA degreaser containment pit and a previously undiscovered concrete pit below it were removed and the area excavated to a depth of 15' bgs.

2. Laboratory analysis of 46 soil matrix samples collected in the subject area to a maximum depth of 200' bgs detected only low concentrations (<48 ug/kg) of VOCs, primarily 1,1,1-TCA, and a maximum of 140 mg/kg TRPH (at 90' bgs). A tentatively identified compound (1,4-dioxane) was detected in samples taken from 20' to 50' bgs at concentrations between 0.04 and 3.3 mg/kg.

3. Laboratory analysis of 36 soil vapor samples from the subject site detected 1,1,1-TCA at concentrations ranging from 69 to 448 ug/L at depths of 30' to 60' bgs, and lesser concentrations of other contaminants. 1,1,1-TCA concentrations in soil vapor samples collected at depths from 60' to 200' bgs did not exceed 86 ug/L. Other VOCs were also detected in some samples at concentrations below 291 ug/L.

4. Previous investigations in this area detected TRPH to a depth of 10' bgs at a maximum concentration of 92 mg/kg (at 2' bgs). Ten tentatively identified VOCs were detected in soil matrix samples from 15' to 55' bgs at concentrations from 7 to 400 ug/kg.

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5. Multi-depth soil gas samples collected to a maximum depth of 61' bgs during previous investigations in this area contained 1,1,1-TCA at maximum concentration of 739 ug/L (at 6' bgs). Low concentrations (<107 ug/L) of 1,1-DCE, TCE, PCE and freon-113 were also detected.

6. Ground water is approximately 260' bgs in this area.

Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program. Residual soil contamination detected in this area is not a threat to ground water quality and therefore additional cleanup is not warranted.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
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Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
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Michelle Levesque, Lockheed Martin Corporation

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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DATE REC'D. 10/11/96
WBS # 3A
COPIES TO: Helgerson, Yoza, Blackman, Lovasque, Gilbert, Sutter

October 10, 1996

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-0256

No Further Requirements, Area #7, Subsurface Soil Investigation, Building 88 - Former Fuel UST, Lockheed Plant B-6 (File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed the "Area #7 Subsurface Soil Investigation, Building 88 - Former Fuel UST" report dated September 27, 1996, prepared by your consultant, Tetra Tech Inc. This report documents results of soil assessment of petroleum hydrocarbon impact at the former 5,000 gallon UST located north of Building 88 within Plant B-6. Upon review, we have the following comments with respect to the Well Investigation Program:

1. During the subject phase of assessment, a total of 61 soil samples were collected from 4 boreholes drilled to a maximum depth of 140' bgs in the subject UST area.

2. Maximum concentrations of TRPH (total recoverable petroleum hydrocarbons) and TEH (total extractable hydrocarbons) were detected in shallow soil matrix samples at concentrations of 980 mg/kg and 480 mg/kg, respectively. TRPH and TEH concentrations were either non-detectable or less than 130 mg/kg at depths greater than 10' bgs. Previous assessment detected lower concentrations in the subject UST area.

3. Ground water is at approximately 260' bgs in this area.

Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program. Soil contamination detected in this area is not a threat to ground water quality and therefore cleanup is not warranted.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

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If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert,Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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COPY

August 16, 1996

Mr. Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
2550 North Hollywood Way, Suite 506
Burbank, CA 91505-1055

No Further Requirements, Parcels B, C, I and L, Lockheed Plant B-6 West (File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

Recently, we issued no further requirements with respect to the Well Investigation Program for the subject parcels. The soil contamination detected in these parcels is not a threat to ground water quality and therefore cleanup is not necessary. As a result, the subject parcels are excluded from requirements set forth in Cleanup and Abatement Order No. 87-161. This "no further requirements" determination for these parcels does not affect requirements for assessment and cleanup on the other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation
Carol Yuge, Lockheed Martin Corporation

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD
INVESTIGATION HISTORY DATA ENTRY SHEET

FACILITY NAME: LOCKHEED PLANT B-6

FILE NUMBER : 104.064

ACTION CODE: ~~NOA~~ SR2 DATE REQUIRED: 7/11/96 DATE DUE: 8/11/96

DATE RECEIVED: 7/26/96 PROPOSED NEXT ACTION: NON

ACTION CODE: ___ DATE REQUIRED: __/__/__ DATE DUE: __/__/__

DATE RECEIVED: __/__/__ PROPOSED NEXT ACTION: ___

ACTION CODE: ___ DATE REQUIRED: __/__/__ DATE DUE: __/__/__

DATE RECEIVED: __/__/__ PROPOSED NEXT ACTION: ___

ACTION CODE: ___ DATE REQUIRED: __/__/__ DATE DUE: __/__/__

DATE RECEIVED: __/__/__ PROPOSED NEXT ACTION: ___

ACTION CODES

ADR	ADDITIONAL DATA REQUIRED
AGR	AMENDMENTS TO GROUNDWATER RESULTS REQUIRED
AGW	AMENDMENTS TO GROUNDWATER WORKPLAN REQUIRED
ASR	AMENDMENTS TO SOIL RESULTS REQUIRED
ASW	AMENDMENTS TO SOIL WORKPLAN REQUIRED
AVR	AMENDMENTS TO SOIL GAS RESULTS REQUIRED
AVW	AMENDMENTS TO SOIL GAS WORKPLAN REQUIRED
CLR	CLARIFIER INVESTIGATION RESULTS
CUQ	CHEMICAL STORAGE AND USE QUESTIONNAIRE
GR1	FIRST GROUNDWATER INVESTIGATION RESULTS
GR2	SECOND GROUNDWATER INVESTIGATION RESULTS
GRn	nTH GROUNDWATER INVESTIGATION RESULTS
GW1	FIRST GROUNDWATER INVESTIGATION WORKPLAN
GW2	SECOND GROUNDWATER INVESTIGATION WORKPLAN
GWn	nTH GROUNDWATER INVESTIGATION WORKPLAN
M01	MONITORING EVENT IN JANUARY
M02	MONITORING EVENT IN FEBRUARY
M03	MONITORING EVENT IN MARCH
M04	MONITORING EVENT IN APRIL
M05	MONITORING EVENT IN MAY
M06	MONITORING EVENT IN JUNE
M07	MONITORING EVENT IN JULY
M08	MONITORING EVENT IN AUGUST
M09	MONITORING EVENT IN SEPTEMBER
M10	MONITORING EVENT IN OCTOBER
M11	MONITORING EVENT IN NOVEMBER
M12	MONITORING EVENT IN DECEMBER
NON	NONE
RW1	REMEDIATION WORKPLAN 1
RW2	REMEDIATION WORKPLAN 2
SAR	SITE AUDIT REQUIRED
SR1	FIRST SOL INVESTIGATION RESULTS
SR2	SECOND SOIL INVESTIGATION RESULTS
SRn	nTH SOIL INVESTIGATION RESULTS
SRR	SOIL REMEDIATION RESULTS
SRW	SOIL REMEDIATION WORKPLAN
SVR	SOIL VAPOR EXTRACTION RESULTS
SVW	SOIL VAPOR EXTRACTION WORKPLAN
SW1	FIRST SOIL INVESTIGATION WORKPLAN
SW2	SECOND SOIL INVESTIGATION WORKPLAN
SWn	nTH SOIL INVESTIGATION WORKPLAN
VR1	FIRST SOIL GAS SURVEY RESULTS
VR2	SECOND SOIL GAS SURVEY RESULTS
VRn	nTH SOIL GAS SURVEY RESULTS
VW1	FIRST SOIL GAS SURVEY WORKPLAN
VW2	SECOND SOIL GAS SURVEY WORKPLA
VWn	nTH SOIL GAS SURVEY WORKPLAN

PROPOSED NEXT ACTION CODES:

ADR	ADDITIONAL DATA REQUIRED
BCA	BEGIN CLEANUP ACTION
BPW	BEGIN PROPOSED WORK
FGA	FURTHER GROUNDWATER ASSESSMENT REQUIRED
FSA	FURTHER SOIL ASSESSMENT REQUIRED
FSG	FURTHER SOIL GAS ASSESSMENT REQUIRED
HFN	HOLD FOR NOV
IGA	INITIAL GROUNDWATER ASSESSMENT REQUIRED
ISA	INITIAL SOIL ASSESSMENT REQUIRED
IT	[illegible]
MWD	MONITORING WELL DRY, SAMPLING POSTPONED
NFA	NO FURTHER ACTION
NON	NONE
RAR	REPORT AMENDMENTS REQUIRED
RQS	REQUIREMENT SUSPENDED
RRR	REVISED REPORT REQUIRED
RWR	REVISED WORKPLAN REQUIRED
SAR	SITE AUDIT REQUIRED
WAR	WORKPLAN REQUIREMENTS REQUIRED

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November 14, 1994

Mr. Ron Helgerson
Lockheed Environmental Systems & Technologies Company
2550 North Hollywood Way, Suite 503
Burbank, California 91505

WELL INVESTIGATION PROGRAM, LOCKHEED BUILDINGS 369 and 371, PLANT B-6 EAST, BURBANK, CALIFORNIA (FILE NO. 104.1691)

We have reviewed the Subsurface Debris Excavation Report, dated June 30, 1994, and Vertical Soil Gas Profiling and Clarifier Assessment, dated September 22, 1994, prepared by your consultant, Tetra Tech, Inc., for the subject site.

I. Debris Excavation

The subsurface debris excavation has uncovered solid wastes (glass, ceramics, scrap metal, pipes, etc.) buried at three areas in the northwest portion of the site. Soil samples collected at the bottom of each excavation area were analyzed for metals and volatile organic compounds (VOC). Tetrachloroethylene (PCE up to 66 µg/kg) was detected in soil samples from sidewalls subsequent to excavation. Metal concentrations in soil samples were analyzed for CAM-17 metals, and the results of soil after excavation showed concentrations below ten times the Soluble Threshold Limit Concentrations (STLC). Approximately 200 tons of soil/debris were hauled off to Venvirotek, Arvin, California for treatment.

II. Soil Gas Investigation

Three soil gas investigations were conducted at the site: in March 1992, September 1993, and September 1994. PCE, TCE, 1,1,1-trichloroethane (TCA), 1,1-dichloroethene (DCE) were detected. However, higher concentrations of VOCs including PCE (379 µg/l) and TCE (35 µg/l) were detected near the western end of the parking lot along the property boundary. Higher TCA (231 µg/l) and DCE concentrations were detected along the northern property boundary. The results of investigations showed that VOC problems at Building 369 site might be originated primarily from offsite sources, the west and north.

The laboratory results of soil gas investigation report dated September 22, 1994, and the addendum dated November 1, 1994, were not submitted in the format in accordance with this Regional Board's March 1994 requirements (copy enclosed). As a result, lab calibration data such as percent RSD, average response factor, standard deviation and percent difference were not tabulated in the report for review. You are requested to resubmit the soil gas lab data report in our format.

III. Clarifier Investigation

Soil matrix samples were collected in May 1994 from a former clarifier site at the southeast corner of Building 369. Concentrations of total petroleum hydrocarbons (12 mg/kg) were detected at 12 feet below grade and xylenes (35 µg/kg) were detected at 5 feet below grade.

Based on the results of soil and soil gas investigations since 1992, no further investigation is required at Lockheed Building 369 facility at this time. However, the VOC-impacted soil at the western portion may need to be remediated in the future depending on the RI/FS of the adjacent sites (Lockheed Building 371 and Pacific Airmotive Corporation). Lockheed Corporation or any potential future owner must provide unlimited access to Building 369 facility for future remediation. This Board must also be notified if any future construction activity is planned on the VOC-impacted area.

Elevated concentrations of VOCs were detected at the properties adjacent to the west of Lockheed Building 369: Lockheed Building 371, and Pacific Airmotive Corporation (PAC). You are requested to submit a workplan by January 1, 1995 for a soil boring program and deep soil gas survey to investigate the extent of petroleum hydrocarbons, metals, and VOC contamination at point sources including sumps, underground storage tank and associated pipelines, and clarifiers in Building 371 facility. The revised lab soil gas data report of Building 369 is also due January 2, 1995.

If you have any questions concerning this matter, please call Mr. Jay C. Huang at (213) 266-7608.

HUBERT H. KANG
Senior Water Resources
Control Engineer

cc: David Seter, U.S. EPA, Region IX
Mel Blevins, ULARA Watermaster
Gene Matsushita, Lockheed Environmental Systems & Technologies
Michelle Levesque, Lockheed Environmental System & Technologies
Dan Batrack, Tetra Tech, Inc.
William F. Gross, Pacific Airmotive Corporation
Raphe Pavlick, Hydro GeoSpectrum

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B. P. O.

DATE REC'D. 12/4/96

WBS # 3A

COPIES TO: Lavoie, Gillet, Blackburn, Helgerson, Chee, Hatten

December 3, 1996

Ron N. Helgerson
Lockheed Martin Corporation
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No Further Requirements, Parcel A, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your November 8, 1996, letter requesting closure for Parcel A at Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During multiple phases of assessment, approximately 663 soil matrix and 140 soil gas samples were collected at the subject parcel. Based on the results of these investigations, nine areas that required further assessment were identified:

   Building 309/310
   Building 322 southeast corner (Site 19)
   Southeast Parking Lot #7 (Site 20)
   Building 310 former UST F17 (Site 21)
   Building 309 former UST F9/F17 (Site 22)
   Building 310 former closed in-place UST F20 (Area #10)
   Building 310 former closed in-place UST F15 (Area #11)
   Building 304 sump/sand trap (Area #12)
   Building 304 former UST F14

2. Additional soil gas investigation within Building 309/310 demonstrated that the relatively low VOC concentrations (<31 ug/L) were limited primarily to depths less than 20' bgs. Based on these results, Board staff required no further investigation in this area on August 8, 1995.

3. At Sites 19, 20, 21 and 22, further soil assessment was conducted to determine the extent of petroleum hydrocarbon and metal impact. Investigation results demonstrated that soil contamination is limited to relatively small areas and shallow depths (<25' bgs). Based on confirmation sampling results obtained during the limited excavation delineation in the subject sites, the Board approved backfilling in July 1996.

4. Additional subsurface investigation was conducted in Area #10 to delineate the extent of petroleum hydrocarbon impact beneath the former 3,000 gallon diesel UST F20. Petroleum hydrocarbon concentrations detected were less than 320 mg/kg and limited to shallow depths (less than 40' bgs). On October 28, 1996, Board staff issued a "no further requirements" letter for this area.

5. Based on supplementary assessment at Area #11 (former diesel UST F15), we issued a "no further requirements" letter on October 24, 1996. Petroleum hydrocarbons were detected at maximum concentration of 570 mg/kg 2' below the base of the tank in the subject UST area.

6. Supplementary assessment was conducted in Area #12 to determine the extent of VOC impact. No VOCs and less than 310 mg/kg of petroleum hydrocarbons were detected during the investigation. On May 9, 1996, Board staff made a "no further assessment" determination for this area.

7. On November 19, 1996, Board staff issued a "no further requirements" letter for UST F14 based on the limited area and depth (approximately 90' bgs) of soil contamination, relatively low concentrations of petroleum hydrocarbons and depth to groundwater (approximately 210' bgs). Supplemental assessment in this area detected TRPH and TEH (characterized as diesel) at maximum concentrations of 3,520 mg/kg (10' bgs) and 4,360 mg/kg (10' bgs), respectively. No aromatic VOCs were detected in the subject area.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. Remaining soil contamination in this parcel is not a threat to ground water quality and therefore further cleanup is not warranted. This parcel is therefore excluded from requirements in our Cleanup and Abatement Order No. 87-161.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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L. E. S. A. T. B. P. O.
DATE REC'D. 8/9/96
WBS # 3C
COPIES TO: Lawrence, Mallett
Blackman, Helgerson, Unger

August 6, 1996

Ron N. Helgerson
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No Further Requirements, Parcel C, Lockheed Plant B-6 West
(File No. 104.0674) (Cleanup & Abatement Order No. 87-161)

We have reviewed your July 26, 1996, letter requesting closure for Parcel C of Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During multiple phases of assessment at the subject site, a total of 65 soil matrix samples were collected on this parcel. Laboratory analysis of these samples detected maximum concentrations of 6600 mg/kg TRPH at 15' bgs and 4100 mg/kg TPH-diesel at 2' bgs [near a former diesel/fuel oil UST (F32)], 120 ug/kg acetone, 12 ug/kg MEK, 340 ug/kg bis(2-ethylhexyl)phthalate, 350 ug/kg di-n-butylphthalate, 420 ug/kg anthracene, 5100 ug/kg pyrene, 1300 ug/kg benzoperylene, 4000 ug/kg benzoanthracene, 3200 ug/kg benzopyrene, 5000 ug/kg benzofluoranthene, 1300 ug/kg indenopyrene, 4600 ug/kg chrysene, 510 ug/kg dibenzanthracene, 4700 ug/kg fluoranthene, 1300 ug/kg phenanthrene and 49 ug/kg aroclar-1254. Supplemental sampling demonstrated that the identified soil contaminated is limited to relatively small areas and shallow depths. Ground water is at approximately 200' bgs in this area.

2. Additionally, a total of 21 shallow (6' bgs) soil gas samples were collected on the subject parcel. Only low concentrations of TCE (maximum 11 ug/L) were detected in these samples.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. The soil contamination detected on this parcel is not a threat to ground water quality and therefore cleanup is not necessary. This "no further requirements" determination for this parcel does not affect requirements for assessment and cleanup on the other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161. We have no information concerning other conditions that would adversely impact the value

or usage of this property. However, additional assessment or remediation may be needed depending on future use of this site.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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B. P. O.
DATE REC'D. 11/25/96
WBS # 3A
COPIES TO: Gilbert [redacted], Ron Helgerson, Barbara

November 22, 1996

Ron N. Helgerson
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No Further Requirements, Parcel E, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your November 8, 1996, letter requesting closure for Parcel E at Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During multiple phases of assessment, approximately 694 soil matrix and 190 soil gas samples were collected at the subject parcel. Based on the results of these investigations, six areas that required further assessment were identified:

   Building 345-346
   Building 357 utility pit (Sites 3)
   Building 357 utility pit/trenches (Site 4)
   Building 370 sump.sand trap (Area #1)
   Building 363 Former Jet Fuel UST B6-F33 (Area #2)
   LAT Fuel Farm UST F37

2. Additional soil gas investigation in the Building 345-346 area demonstrated that the relatively low VOC concentrations (<166 ug/L) were limited to depths less than 20' bgs. Based on these results, Board required no further investigation in this area on August 8, 1995.

3. At Sites 3 and 4, further soil assessments were conducted to determine the extent of petroleum hydrocarbon and metal impact. Investigation results demonstrated that the identified soil contamination is limited to relatively small areas and shallow depths. Concentrations of metals detected in confirmation samples were below Title 22 TTLC and 10 times STLC and U.S. Environmental Protection Agency (USEPA) Preliminary Remediation Goals (1995). Based on results of limited excavation delineation in the subject sites, the Board approved backfilling in July 1996.

4. Additional subsurface investigation was conducted in Area #1 to delineate the extent of VOC impact. A remedial action was required and approximately 590 cubic yards of petroleum hydrocarbon and VOC contaminated soil were excavated to a depth of approximately 35' bgs in this area. On November 6, 1996, the Board issued a "no further requirements" letter for this area based on the results of this remediation.

5. Based on site assessment results for Building 363 Former Jet Fuel UST B6-F33 (Area #2), Board staff issued a "no further requirements" letter on September 23, 1996. Multiple investigations demonstrated that petroleum hydrocarbon contamination in this area is limited to the immediate area of the former tank cavity and vertically to approximately 120' bgs.

6. On October 30, 1996, Board staff issued a "no further requirements" letter for UST F37 based on the limited area and depth (approximately 90' bgs) of soil contamination, and depth to groundwater (approximately 260' bgs) in this area.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. Remaining soil contamination in this parcel is not a threat to ground water quality and therefore further cleanup is not warranted. This parcel is therefore excluded from requirements in our Cleanup and Abatement Order No. 87-161.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ROBERT P. GHIRELLI, D.Env.
for Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
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Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
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DATE REC'D. 8/9/96
WBS # 3C
COPIES TO: Helgerson, Lovegrove, Albert, Blackman, Yerger

August 2, 1996

Ron N. Helgerson
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No Further Requirements, Parcel G, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed the July 26, 1996, letter requesting closure for Parcel G of Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program.

During multiple phases of assessment, a total of 242 soil matrix samples were collected and analyzed from 26 boreholes on this parcel. Laboratory analysis of these samples detected maximum concentrations of 1,081 mg/kg TRPH at 2' bgs, 28 ug/kg acetone, 82 ug/kg methylene chloride, 12 ug/kg napthalene, 6 ug/kg 1,2,4-trimethylbenzene, and 4.4 mg/kg of bis(2-ethylhexyl)phthalate at 10' bgs. Supplemental sampling demonstrated that the extent of soil contamination is limited to small areas and shallow depths. Laboratory analysis of a total of 96 shallow (6' bgs) soil vapor samples detected only low concentrations of PCE (maximum 3.1 ug/L), TCE (maximum 1.3 ug/L) and 1,1,1-TCA (maximum 2.2 ug/L). Ground water is at approximately 220' bgs in this area.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. The soil contamination detected on this parcel is not a threat to ground water quality and therefore cleanup is not necessary. This "no further requirements" determination for this parcel does not affect requirements for assessment and cleanup on the other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161. We have no information concerning other conditions that would adversely impact the value or usage of this property. However, additional assessment or remediation may be needed depending on future use of this site.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

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We are pleased to release this parcel from the obligations of the cleanup and abatement order. Your cooperation in completing the required work is appreciated. If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
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B. P. O.
DATE REC'D. 10/24/96
WBS # 3A
COPIES TO: H[illegible], [illegible], Gilbert Bl[illegible], [illegible], [illegible]

October 18, 1996

Ron N. Helgerson
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Burbank, CA 91505-1055

No Further Requirements, Parcel H, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your letter dated October 1, 1996, requesting closure for Parcel H (approximately 16,000 square feet) at Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject submittal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. A total of 76 soil matrix samples were collected from 6 boreholes drilled to a maximum depth of 90' bgs during assessments in this area. Maximum concentrations of TRPH (total recoverable petroleum hydrocarbons) and TEH (total extractable hydrocarbons) were detected at 10' bgs at concentrations of 709 mg/kg and 270 mg/kg, respectively. TRPH and TEH concentrations were less than 255 mg/kg at depths greater than 10' bgs. No VOCs, SVOCs, PCBs or metals exceeding Title 22 TTLC and 10 times STLC limits were detected in soil matrix samples.

2. No VOCs above 1 ug/L were detected in any of the soil gas samples collected from 4 locations at a depth of approximately 6' bgs in the subject parcel.

3. The assessment data demonstrate that petroleum-hydrocarbon impacted soil is limited to areas adjacent to the former dry wells and reservoir sump (Area #3) at Parcel H. Ground water is approximately 260' bgs in this area.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. The soil contamination detected at this parcel is not a threat to ground water quality and therefore cleanup is not necessary. Parcel H is therefore effectively excluded from requirements in our Cleanup and Abatement Order No. 87-161. Our "no further requirements" determination for this parcel does not affect requirements for assessment and cleanup on the other adjacent parcels covered by Cleanup and Abatement Order No. 87-161.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

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Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation
Carol Yuge, Lockheed Martin Corporation

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L. E. S. A. T: B. P. 0

DATE REC'D. 8/9/96

WBS # 3C

COPIES TO: Lavergne, Albert
Blackman, Hagman, Yuge

August 6, 1996

Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
2550 North Hollywood Way, Suite 305
Burbank, CA 91505-1055

No Further Requirements, Parcel I, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your July 26, 1996, letter requesting closure for Parcel I of Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During initial assessment on this parcel, a total of 13 soil matrix samples were collected and analyzed. Laboratory analysis of these samples detected maximum concentrations of 4,881 mg/kg TRPH (2' bgs) and 11 ug/kg acetone. Supplemental sampling demonstrated that the TPH soil contamination is limited to small areas and shallow depths. Ground water is at approximately 210' bgs in this area.

2. Assessment on the subject parcel also included a total of 17 soil gas samples collected to a maximum depth of 60' bgs. Only relatively minor concentrations of 1,1,1-TCA (maximum 37 ug/L), 1,1-DCE (maximum 99 ug/L) and freon-113 (maximum 46 ug/L) were detected in these samples.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. Remaining soil contamination detected on this parcel is not a threat to ground water quality and therefore cleanup is not necessary. This "no further requirements" determination for this parcel does not affect requirements for assessment and cleanup on other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161. We have no information concerning other conditions that would adversely impact the value or usage of this property. However, additional assessment or remediation may be needed depending on future use of this site.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

P:\Lockheed B-6 West\parcel1.ltr

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

p:\Lockheed\b-6west\parceli.nfa

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Post-It™ Fax Note 7671	Date 12/5/96	# of pages 3
To MICHELLE LEVESQUE	From A.P. CARLOS	
Co./Dept. LOCKHEED MARTIN	Co. RWQCB	
Phone #	Phone #	
Fax 818 847-0256	Fax #	

December 4, 1996

Ron N. Helgerson
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Burbank, CA 91505-1055

No Further Requirements, Parcel J, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your letter dated November 25, 1996, requesting closure for Parcel J at Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During multiple phases of assessment, approximately 884 soil matrix and 403 soil gas samples were collected at the subject parcel. Based on the results of these investigations, fourteen areas that required further assessment were identified:

   Site No. 5 - Building 84 clarifier
   Site No. 7 - Building 88 - sump and pump lift station
   Site No. 9 - Building 88 - collection sump
   Site No. 10 - Building 352 machine pit #1
   Site No. 11 - Building 82 sand pit
   Site No. 12 - Building 352 machine pit #2
   Site No. 14 - Building 82 - former film tank
   Site No. 15 - Building 82 - northeast parking lot
   Area No. 4 - Building 353 - process line
   Area No. 5 - Building 353 - former TCA degreaser
   Area No. 6 - Building 352 - former sewage sump
   Area No. 7 - Building 88 - former fuel UST
   Area No. 8 - Building 88 - former UST F28
   Area No. 9 - Building 82 - northern parking lot

2. At Sites 5, 7, 9, 10, 11, 12, 14 and 15, further soil assessment was conducted to determine the extent of petroleum hydrocarbon, VOC, PCB and metal impact. Investigation results demonstrated that soil contamination is limited to relatively small areas and shallow depths (<25' bgs). Based on confirmation sampling results, Board staff approved backfilling in July 1996.

JA

Levesque
Helgerson
Yuya
Blackman
Gilbert
Gatlin

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3. Additional subsurface investigation was conducted in Area #4 to delineate the extent of metals impact in the process line within Building 353. Metal concentrations detected in soil samples were below Title 22 TTLC and less than 10 times STLC concentrations and U.S. Environmental Protection Agency (USEPA) Preliminary Remediation Goals (1995). The highest concentration of lead was 16 mg/kg (at 10' bgs). On October 15, 1996, Board staff issued a "no further requirements" letter for this area.

4. Based on supplementary assessment at Area #5 (Building 353 - former TCA degreaser), we issued a "no further requirements" letter on November 20, 1996. 1,1,1-TCA was the primary VOC detected at maximum concentrations of 48 ug/kg (soil matrix) at 15' bgs and 448 ug/L (soil gas) at 30' bgs. The 1,1,1-TCA degreaser containment pit was removed and the area excavated to a depth of 15' bgs.

5. In Area #6, approximately 1,000 cubic yards of soil containing PCBs exceeding the USEPA Preliminary Remediation Goals (340 ug/kg for PCB) were excavated to a depth of approximately 44' bgs. PCB (Arocolor-1248) was detected in two confirmation samples at a maximum concentration of 240 ug/kg. On November 26, 1996, Board staff made a "no further remediation" determination for this area.

6. On October 7 and 10, 1996, Board staff issued "no further requirements" letters for Area #7 and Area #8, respectively. Maximum concentrations of total recoverable petroleum hydrocarbons (TRPH) and total extractable hydrocarbons (TEH) were detected in shallow soils (<10' bgs) in Area #7 at concentrations of 980 mg/kg and 480 mg/kg, respectively. In Area #8, the highest concentrations of TRPH and TEH characterized as diesel were detected in soil samples between 15' and 35' bgs at 2,100 to 8,100 mg/kg and 1,100 to 5,800 mg/kg, respectively.

7. In Area #9, supplementary assessment was conducted to delineate the extent of VOCs. No VOCs were positively detected while maximum TRPH concentration was 310 mg/kg (5' and 10' bgs). Board staff made a "no further requirements" determination for this area on May 9, 1996.

Completion of assessment and cleanup in Parcel J fulfills requirements for closure of Plant B-6. Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for Parcel J and the entire Plant B-6 facility. Residual soil contamination in this

parcel is not a threat to ground water quality, human health and the environment and therefore further cleanup is not warranted. This parcel and Plant B-6 are therefore excluded from requirements in our Cleanup and Abatement Order No. 87-161.

The jurisdiction requirements of other agencies, such as the U.S. Environmental Protection Agency (USEPA), are not affected by the Board's "no further requirements" determination. Such agencies may choose to make their own determination concerning the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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L.E.S.A.T. B.P.O.
DATE REC'D. 8/9/96
WBS # 3C
COPIES TO: Lenaburg, Gilbert, Blackman, Helgerson, Yung

August 6, 1996

Ron N. Helgerson
Lockheed Martin Corporation
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No Further Requirements, Parcel L, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your July 10, 1996, letter requesting closure for Parcel L of Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During multiple phases of assessment on the subject parcel, a total of 11 soil matrix samples were collected and analyzed. Laboratory analysis of these samples detected maximum concentrations of 350 mg/kg TRPH (2' bgs), 45 ug/kg acetone, 10 ug/kg ethylbenzene, 13 ug/kg toluene and 46 ug/kg xylenes. Supplemental sampling demonstrated that the identified soil contamination is limited to shallow depths. Ground water is approximately 210' bgs in this area.

2. Only one shallow (6' bgs) soil gas sample was collected on this subject parcel. Relatively low concentrations of 1,1-DCE (maximum 1.9 ug/l) were detected in the sample.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. The soil contamination detected on this parcel is not a continuing threat to ground water quality and therefore cleanup is not necessary. This "no further requirements" determination for this parcel does not affect requirements for assessment and cleanup on the other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161. We have no information concerning other conditions that would adversely impact the value or usage of this property. However, additional assessment or remediation may be needed depending on future use of this site.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

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If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
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Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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July 18, 1996

Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
2550 North Hollywood Way, Suite 305
Burbank, CA 91505-1055

No Further Requirements, Parcels D and F, Lockheed Plant B-6 West, (File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed your July 5, 1996, letter requesting closure for Parcels D and F of Plant B-6 as notated on the attached map. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

Parcel D

1. A total of 228 soil matrix samples were collected from 28 boreholes during assessment in this area. The highest TPH concentration detected was 3,680 mg/kg at 2' bgs. The only VOCs detected in these samples were acetone (maximum 40 ug/kg), MEK (maximum 12 ug/kg), toluene (maximum 21 ug/kg) and xylenes (maximum 23 ug/kg). No significant levels of PCB's, metals or other contaminants were detected.

2. A total of 104 soil gas locations were sampled in the subject parcel. Elevated concentrations of PCE (maximum 166 ug/l), TCE (maximum 4 ug/l), 1,1,1-TCA (maximum 5 ug/l) and methylene chloride (maximum 133 ug/l) were detected in shallow samples. The highest VOC concentration in samples collected at depth below the highest shallow VOC concentrations was approximately 7 ug/l at 20' bgs. Ground water is at approximately 250' bgs in this area.

3. The ground water monitoring well located on this property may be a key well in the network established by USEPA and may be needed to evaluate adjacent properties. One or more additional wells may be required in the future to accomplish these objectives if this well is destroyed for new construction.

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Parcel F

1. Acetone (maximum 16 ug/kg) was the only VOC detected above detection limits in the 28 soil matrix samples collected from 3 soil borings in this area. Total petroleum hydrocarbons (maximum of 252 mg/kg at 2' bgs) were detected in near surface samples. No other compounds were detected in any of the soil samples.

2. No VOCs were detected in any of the soil gas samples collected from eighteen locations during the initial soil gas investigation in this parcel.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject two parcels. The soil contamination detected on these parcels is not a threat to ground water quality and therefore cleanup is not necessary. This "no further requirements" determination for these two parcels does not affect requirements for assessment and cleanup on the other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161. We have no information concerning other conditions that would adversely impact the value or usage of these properties. However, additional assessment or remediation may be needed depending on future use of these sites.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

We are pleased to release these two parcels from the obligations of the cleanup and abatement order. Your cooperation in completing the required work is appreciated. If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Mr. Jorge Leon, SWRCB, Office of the Chief Counsel
Mr. David Seter, USEPA, Region IX
Mr. Hamid Saebfar, CALEPA, DTSC, Region 3
Mr. Josef Solares, Burbank Fire Department, UST Section
Mr. Mel Blevins, ULARA Watermaster
Mr. Tom Blackman, Lockheed Martin
Mr. Bob Gilbert, Lockheed Martin
Ms. Michelle Levesque, Lockheed Martin

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Cal/EPA

Los Angeles
Regional Water
Quality Control
Board

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Pete Wilson
Governor

August 29, 1997

Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
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Burbank, CA 91505-1055

Status Reports, Foundation and Infrastructure Demolition Monitoring, Lockheed Plant B-6 West (File No. 104.0674)

We have received and reviewed reports entitled "Status Report for Plant B-6 Foundation and Infrastructure Demolition Monitoring" dated May 23, 1997, June 4, 1997, June 5, 1997, and June 6, 1997, prepared by your consultant, Tetra Tech. These reports document environmental monitoring conducted during recent demolition at the subject site and are the final monitoring reports for this phase.

No elevated concentrations of volatile organic compounds, metals, or petroleum hydrocarbons were detected during demolition environmental monitoring. Soil contamination detected during demolition was consistent with previous assessment results and does not represent a substantial threat to ground water quality, and therefore further assessment or cleanup is unwarranted. Based on the subject submittals and other information in our files, we have no further requirements with respect to the Well Investigation Program.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

EN:apc
cc: Jorge Leon, SWRCB, Office of the Chief Counsel
Duane James, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC-Region 3
Mel Blevins, ULARA Watermaster
Bob Gilbert, Lockheed Martin Corporation

Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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August 2, 1996

Ron N. Helgerson
Lockheed Martin Corporation
Burbank Program Office
2550 North Hollywood Way, Suite 305
Burbank, CA 91505-1055

No Further Requirements, Parcel B, Lockheed Plant B-6 West
(File No. 104.0674)(Cleanup & Abatement Order No. 87-161)

We have reviewed the July 26, 1996, letter requesting closure for Parcel B of Plant B-6 as notated on the map that accompanied the letter. Upon review of the subject proposal and other information in our files, we have the following comments with respect to the Well Investigation Program:

1. During multiple phases of assessment, a total of 193 soil matrix samples were collected from 20 boreholes in this parcel. Laboratory analysis of these samples detected maximum concentrations of 6,820 mg/kg TRPH at 2' bgs, 23 ug/kg acetone, 6 ug/kg TCE, 22 ug/kg 4-methyl-2-pentanone, 3.2 mg/kg bis(2-ethylhexyl)phthalate at 10' bgs, 580 ug/kg pyrene, 480 chrysene and 400 ug/kg benzoanthracene, 98 ug/kg aroclar-1254 (PCBs) at 2' bgs. Supplemental sampling demonstrated that the soil contamination is limited to small areas and shallow depths. Ground water is at approximately 200' bgs in this area.

3. A total of 126 soil gas samples were collected on the subject parcel to a maximum depth of 60' bgs. Only minor concentrations of PCE (maximum 3 ug/L), TCE (maximum 69 ug/L), carbon tetrachloride (maximum 14 ug/L), DCE (maximum 7 ug/L) and freon-113 (maximum 9 ug/L) were detected in these samples.

Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program for the subject parcel. The soil contamination detected in this parcel is not a threat to ground water quality and therefore cleanup is not necessary. This "no further requirements" determination for this parcel does not affect requirements for assessment and cleanup on the other adjacent parcels covered by our Cleanup and Abatement Order No. 87-161. We have no information concerning other conditions that would adversely impact the value or usage of this property. However, additional assessment or remediation may be needed depending on future use of this site.

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The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

If you have any questions, please contact Alex Carlos at (213) 266-7583.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Josef Solares, Burbank Fire Department, UST Section
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert, Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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B. P. O.
DATE REC'D. 10/21/96
WBS # 3H72c
COPIES TO: [illegible]

October 15, 1996

Ron N. Helgerson
Lockheed Martin Corporation
2550 North Hollywood Way, Suite 305
Burbank, California 91505-0256

No Further Requirements, Area #4, Subsurface Soil Investigation, Building 353 - Process Lines, Lockheed Plant B-6 (File No. 104.0674) (Cleanup & Abatement Order No. 87-161)

We have reviewed the "Plant B-6: Area #4 Subsurface Soil Investigation, Building 353 - Process Lines" report dated September 12, 1996, prepared by your consultant, Tetra Tech Inc. This report documents results of soil assessment to determine metals impact in the process line area located within Building 353 at the Plant B-6 site. Upon review, we have the following comments with respect to the Well Investigation Program:

1. During the subject phase of assessment, a total of 72 soil matrix samples were collected from 8 boreholes drilled to a maximum depth of 50' bgs in the subject area.

2. The concentrations of metals detected in soil matrix samples were below TTLC and less than 10 times the STLC concentrations. The highest concentration of lead was 16 mg/kg collected at 10' bgs. Lead was previously detected at 358 mg/kg, which is above 10 times the STLC (50 mg/kg), in a sample collected at 2' bgs in the subject area.

3. Ground water is at approximately 260' bgs in this area.

Based on the subject submittal and other information in our files, we have no further requirements with respect to the Well Investigation Program. Soil contamination detected in this area is not a threat to ground water quality and therefore cleanup is not necessary.

The jurisdictional requirements of other agencies, such as the U.S. Environmental Protection Agency, are not affected by this Board's "no further requirements" decision. Such agencies may choose to make their own determinations regarding the site.

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If you have any questions, please contact Alex Carlos at (213) 266-7583.

ERIC NUPEN, R.G.
Senior Engineering Geologist

cc: Jorge Leon, SWRCB, Office of the Chief Counsel
David Seter, USEPA, Region IX
Hamid Saebfar, CALEPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Tom Blackman, Lockheed Martin Corporation
Bob Gilbert,Lockheed Martin Corporation
Michelle Levesque, Lockheed Martin Corporation

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Exhibit 9
Plant C-1 NFA Materials

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
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August 8, 1990

Mr. Fred Reed
LOCKHEED CORPORATION
4500 Park Granada Blvd.
Calabasas, CA 91302

LOCKHEED BURBANK BUILDING 528

Reference is made to your consultant's, McLaren Engineering, letters dated June 29 and July 11, 1990, addressing Board staff's comments and additional requirements contained in this Regional Board's letter of June 11, 1990.

McLaren's response to the concerns raised by Board staff regarding the laboratory data contained in Bldg. 528's supplementary subsurface investigation report have been evaluated, and Board staff have the following additional comments:

1. EPA SW-846 allows a 14-day holding time for volatile organic analyses. If it allows a longer holding time for analysis of the extracts, which it does not, then it should have been stated in the manual as for semi-volatile organic analyses by EPA Method 8270. Therefore, we will not accept test data for any volatile organic analyses performed after the 14-day holding time limit.

2. Should confirmation analyses become necessary in order to improve quality control, these confirmation analyses must also be completed within the allowable 14-day holding time limit.

3. Analytical test results for system and reagent blanks must also be submitted as part of the routine laboratory QA/QC documentation for all projects.

This Board's requirement for groundwater monitoring at Bldg. 528 is still in effect, although no further soils investigation nor any soil remediation is required onsite. We have no objection to deferring installation of the groundwater monitoring wells for Bldg. 528 until after completion of the investigations at Plant C-1 so that work at both sites may be coordinated.

Regarding the property sale, the future land use must be identified, and the buyer must be made aware of the existing Cleanup and Abatement Order and the results of the soils investigation completed onsite. A copy of the notification letter must be sent to the Regional Board Executive Officer.

If you have any questions, please contact Dave Bacharowski at (213) 266-7539 or Mila Silvestre-Kleinbergs at (213) 266-7529.

HANK H. YACOUB
Supervising Water Resource
Control Engineer

cc: Gary Taggart, McLaren Engineering
Ron Helgerson, Lockheed Aeronautical Systems Company
Valerie Sheppe, Lockheed Environmental Systems Company

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December 7, 1994

Mr. Ron Helgerson
Lockheed Environmental Systems
& Technology Company
2550 North Hollywood Way, Suite 506
Burbank, CA 91505

LOCKHEED PLANT C-1, 10650 AND 10750 SHERMAN WAY, BURBANK, CA
SITE REMEDIATION FINAL REPORT (FILE NO. 104.1343; CLEANUP AND ABATEMENT ORDER NO. 87-161)

Board staff have reviewed the following reports pertaining to the soil remediation activities at the former Lockheed Plant C-1 site that were submitted in conjunction with Lockheed's letter dated October 25, 1993, requesting closure of the Plant C-1 site:

July 16, 1993, Plant C-1 Abatement, Remediation, and Demolition Oversight Activities, URS Consultants, Inc.

September 1993, Final Report, Lockheed Plant C-1 Site Remediation, Canonie Environmental

October 8, 1993, Plant C-1 Soil Remediation Oversight, URS Consultants, Inc.

October 25, 1993, Soil Remediation Report, Building 44 Water Vault Area, Lockheed Plant C-1, Tetra Tech, Inc.

Based on our review of these documents, no further remediation is required as it appears that the contaminated areas identified by previous site investigations have been remediated to the extent possible that would greatly reduce the threat to the groundwater at the site. Subsequent confirmation samplings have indicated that this site has been remediated in accordance with Cleanup and Abatement Order No. 87-161 issued by this Regional Board on December 10, 1987. Board staff is satisfied that Lockheed has diligently remediated the subject site to the acceptable levels.

As a result, the Lockheed Plant C-1 site is hereby excluded from requirements set forth in the previously mentioned Cleanup and

Abatement Order No.87-161. This does not release any other Lockheed sites from this Order.

Please contact Joe Luera at (213)266-7588 or Alex Carlos at (213)266-7583 if you have any questions and address all correspondence to their attention.

Robert P. Ghirelli

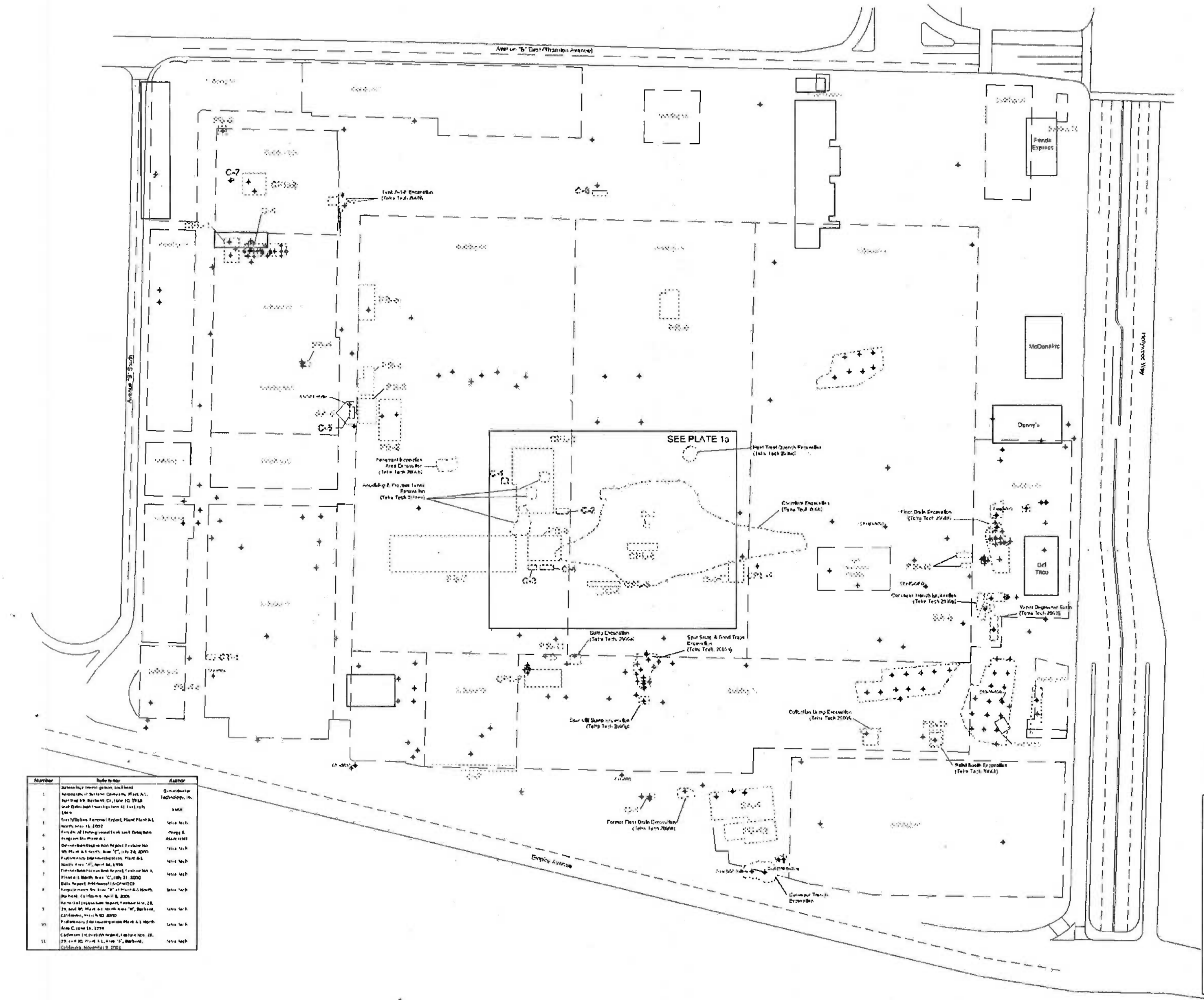
ROBERT P. GHIRELLI, D.Env.
Executive Officer

cc : Jorge Leon, SWRCB, Office of the Chief Counsel
John Lewis, RWQCB, Region 4
David Seter, U.S. EPA, Region 9
Hamid Saebfar, CAL-EPA, DTSC, Region 3
Mel Blevins, ULARA Watermaster
Dan Batrack, Terra Tech Inc.
Dios Marerro, Burbank-Glendale-Pasadena Airport Authority
Michelle Levesque, Lockheed Environmental Systems & Technologies Co.
David Jones, Lockheed Environmental Systems & Technologies Co.
Carol Yuge, Lockheed Environmental Systems & Technologies Co.

Exhibit 10
Technical Reports

PLATE 1

TOTAL CHROMIUM EXCEEDING NATIVE SOIL CONCENTRATION[1]: PLANT A-1 NORTH



LEGEND

- Soil Boring Location with Cr > Native Soil Concentrations
- Soil Boring Location with Cr ≤ Native Soil Concentrations
- Extent of Excavations
- Existing Building
- Previous Building

Potential Metals Use/Storage Locations

- (Paint Booth)
- (Chemical Process Line)
- (Plating Line)
- (Clarifier)
- (Storage Area)
- (Other)

Excavation References

(AEC 1994a) *Tank Closure Report for Plant A-1 North UST No. A-1-F13*, May 1994

(AEC 1994b) *Tank Closure Report for Plant A-1 North UST No. A-1-F101*, May 1994

(Tetra Tech 2000a) *Delineation Excavation Report, Feature No. 15, Plant A-1 North Area "C"*, January 12, 2000.

(Tetra Tech 2000b) *Delineation Excavation Report, Feature No. 9, Plant A-1 North Area "B"*, February 11, 2000.

(Tetra Tech 2000c) *Delineation Excavation Report, Feature No. 37, Plant A-1 North Area "B"*, February 11, 2000.

(Tetra Tech 2000d) *Remedial Excavation Report, Feature No. 8, Plant A-1 North Area "A"*, February 28, 2000.

(Tetra Tech 2000e) *Delineation Excavation Report, Feature No. 35, Plant A-1 North Area "C"*, June 6, 2000.

(Tetra Tech 2000f) *Delineation Excavation Report, Feature No. 30, Plant A-1 North Area "C"*, June 6, 2000.

(Tetra Tech 2000g) *Delineation Excavation Report, Feature No. 8, Plant A-1 North Area "C"*, June 12, 2000.

(Tetra Tech 2000h) *Delineation Excavation Report, Feature No. 19, Plant A-1 North Area "C"*, June 23, 2000.

(Tetra Tech 2000i) *Delineation Excavation Report, Feature No. 10, Plant A-1 North Area "A"*, June 28, 2000.

(Tetra Tech 2000j) *Excavation Report, Feature No. 49, Plant A-1 North Area "C"*, June 29, 2000.

(Tetra Tech 2000k) *Remedial Excavation Report, Feature No. 1, Plant A-1 North Area "C"*, July 21, 2000.

(Tetra Tech 2000m) *Delineation Excavation Report, Feature No. 6, Plant A-1 North Area "B"*, July 21, 2000.

(Tetra Tech 2000n) *Delineation Excavation Report, Feature No. 51, Plant A-1 North Area "C"*, July 21, 2000.

(Tetra Tech 2000p) *Delineation Excavation Report, Feature No. 50, Plant A-1 North Area "C"*, July 24, 2000.

(Tetra Tech 2001) *Chromium Excavation Report, Feature Nos. 28, 29, and 30, Plant A-1 North Area "B"*, November 9, 2001.

(Tetra Tech 2002) *Trash/Debris Removal Report, Plant A-1 North*, May 31, 2002

[1] Average concentrations of total chromium in the San Fernando Valley as defined by the Los Angeles Regional Water Quality Control Board for this exercise:

-Total chromium 13 mg/kg

Boring ID	Sample ID	Sample Depth (ft bgs)	Chromium Concentration (mg/kg)	Sample Date	Reference Number
AL-1-01 Station	AL-1-01 Station 14'	14	[illegible]	[illegible]	4
[illegible]	[illegible]	10	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1.5	[illegible]	[illegible]	[illegible]
C70-586	C70-586-05	5	15.2	[illegible]	10
C71-5813	C71-5813-05	5	15.2	[illegible]	10
	C71-5813-10	10	17.5	[illegible]	10
[illegible]	[illegible]	15	[illegible]	02-Oct-99	3
	[illegible]	20	[illegible]	02-Oct-99	3
[illegible]	[illegible]	15	[illegible]	01-Oct-99	3
[illegible]	[illegible]	13.2	[illegible]	01-Oct-99	3
East 500 Gallon	UMC 500 gallon tank-East	-	46	[illegible]	[illegible]
West 500 Gallon	UMC 500 gallon tank-West	-	34	[illegible]	[illegible]

Number	Reference	Author
1	Subsurface Investigation, Lockheed Aeronautical Systems Company, Plant A-1, Building [illegible], Burbank, CA, June [illegible]	Groundwater Technology, Inc.
2	[illegible]	[illegible]
3	Trash/Debris Removal Report, Plant A-1 North, May 31, 2002	Tetra Tech
4	Results of Underground Tank Leak Detection Program for Plant A-1	[illegible] & Associates
5	Delineation Excavation Report Feature No. [illegible], Plant A-1 North Area "C", July 24, 2000	Tetra Tech
6	Preliminary [illegible] Investigation, Plant A-1 North Area [illegible]	Tetra Tech
7	Delineation Excavation Report, Feature No. [illegible], Plant A-1 North Area "C", July 21, 2000	Tetra Tech
8	Data Report, Additional [illegible] Requirements for Area "B" at Plant A-1 North, Burbank, California, [illegible]	Tetra Tech
9	Remedial Excavation Report, Feature Nos. 28, 29, and 30, Plant A-1 North Area "B", Burbank, California, [illegible]	Tetra Tech
10	Preliminary [illegible] Investigation Plant A-1 North Area C, [illegible]	Tetra Tech
11	Cadmium Excavation Report, Feature Nos. 28, 29 and 30, Plant A-1, Area "B", Burbank, California, November 9, 2001	Tetra Tech

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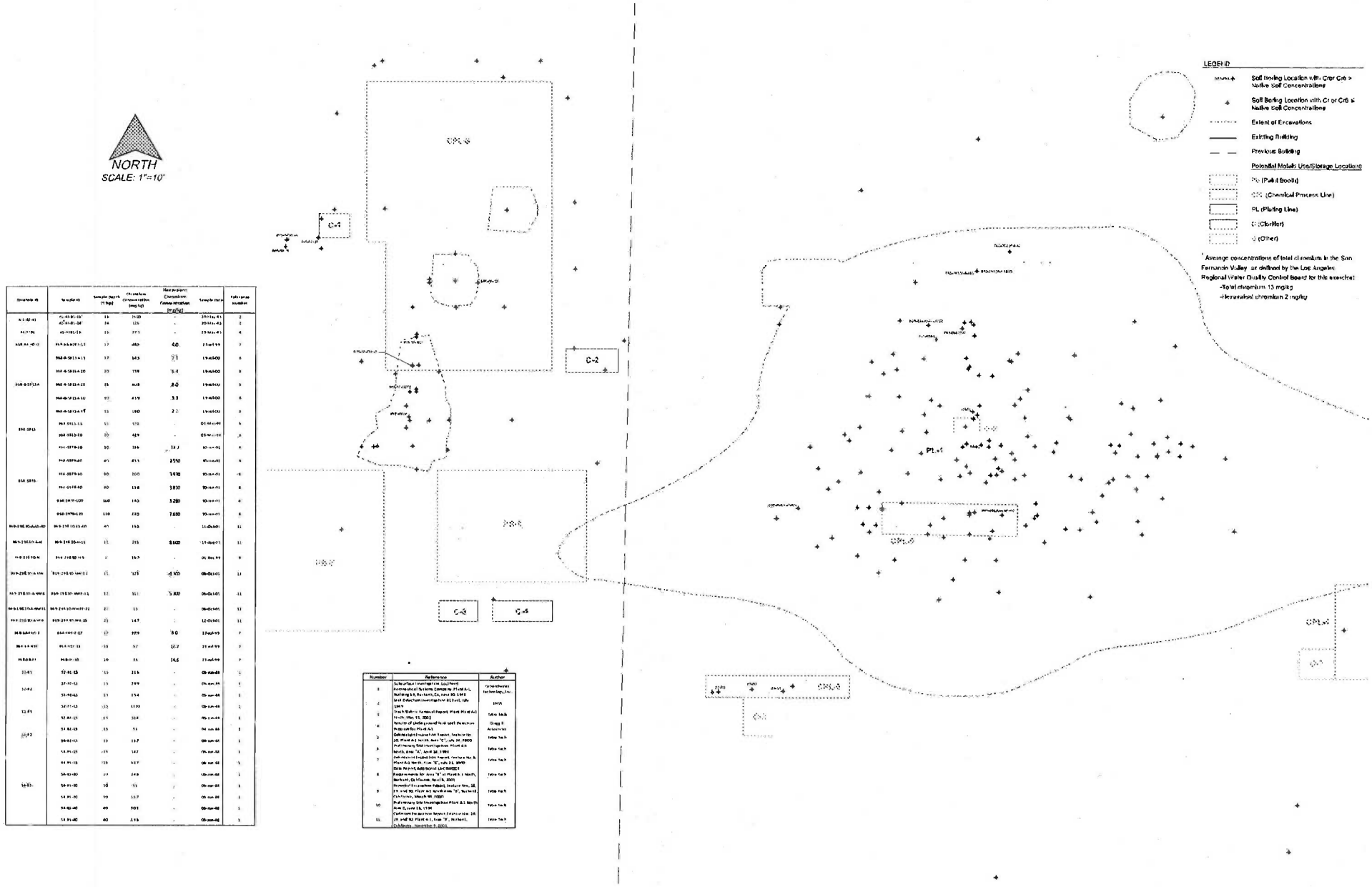
PLATE 1a
TOTAL AND HEXAVALENT CHROMIUM EXCEEDING NATIVE SOIL CONCENTRATION[1]: PLANT A-1 NORTH (SUBSET OF BUILDING 69 AREA)



Boring ID	Sample ID	Sample Depth (ft bgs)	Chromium Concentration (mg/kg)	Hexavalent Chromium Concentration (mg/kg)	Sample Date	Reference Number
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Number	Reference	Author
[illegible]	[illegible]	[illegible]