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June 14, 1991

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PRC ENVIRONMENTAL
MANAGEMENT, INC.

Chris Stubbs
South Coast Groundwater Section, H-6-4
United States Environmental Protection Agency
Post Office Box 193062
San Francisco, CA 94119-3036

Re: Hawker Pacific Inc.
11310 Sherman Way
Sun Valley, California; EPA Reference T-4-1

Dear Chris:

Enclosed is the response of Hawker Pacific Inc. to EPA's second request for information to it pertaining to the above facility delivered by letter dated March 14, 1991. Pursuant to my conversation with yourself and Marcia Preston, this response is timely. Also pursuant to those conversations, the company is submitting the most recent <u>two</u> years of tax returns and financial reports, and the financial reports are the one available recent year of audited financial statements for the company and are otherwise the financial statements of its parent entity (contained in its annual reports -- of which 3 are actually enclosed). Our agreement is that EPA's acceptance of fewer years financial data shall not preclude EPA from seeking the other years at some later time. I also enclose for your convenience a copy of Hawker Pacific's response to an earlier (February 1989) § 104(e) request (without exhibits). The current response refers in several places to the prior response.

If you have any questions regarding this response, please call me.

Very truly yours,

Michael A. Monahan

MAM/par

cc: Marcia Preston, Asst. Regional Counsel, EPA

LA911650.031

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Los Angeles, California 90071
(213) 229-7000

Attorneys for
HAWKER PACIFIC INC.

BEFORE THE
UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

In re Hawker Pacific Inc., facility at 11310 Sherman Way, Sun Valley, California; San Fernando Valley Groundwater Investigation	RESPONSE OF HAWKER PACIFIC INC. TO SECOND EPA REQUEST FOR INFORMATION PURSUANT TO CERCLA § 104(e)

This response is made by Hawker Pacific Inc. ("Hawker Pacific") to the request for information under CERCLA § 104(e), 42 U.S.C. § 9604(e) ("Second EPA Request"), made by the United States Environmental Protection Agency ("EPA") by letter dated March 14, 1991, addressed to D. L. Lokken, regarding Hawker Pacific's facility at 11310 Sherman Way, Sun Valley, California 91352. Much of the information sought by the Second EPA Request was provided in response to EPA's request for information under CERCLA § 104(e), served by letter dated February 1989 ("First EPA Request"), by response dated July 7, 1989.

The persons who provided information regarding the facility included in these responses are Erik Johnson and Jeff Belzer, who are currently Hawker Pacific employees who can be contacted through Hawker Pacific counsel.

This response does not constitute any admission by Hawker Pacific that it has contributed to or is responsible for the San Fernando Valley groundwater contamination referred to in the EPA's request, and Hawker Pacific denies any such contribution or responsibility.

This response includes certain exhibits as to which Hawker Pacific claims confidentiality pursuant to CERCLA § 104(e)(7)(E) and (F). These exhibits are enclosed in separate envelopes marked to indicate confidentiality.

Hawker Pacific objects to Instruction 3 of the Request insofar as it seeks to establish a continuing obligation upon Hawker Pacific to report information subsequently discovered or learned by Hawker Pacific, on the grounds that such a continuing request is beyond the scope of EPA authority under CERCLA § 104(e) and would be impracticable or impossible to implement.

Without waiving the foregoing qualifications and objections, Hawker Pacific further responds to the Requests as follows:

1. **List the EPA RCRA Identification Numbers of the Respondent, if any.**

   The EPA I.D. Number for this site is CAT 000646257.

2. **Describe the nature and dates of present and past operations at the facility.**

Hawker Pacific overhauls and repairs, and manufactures, aircraft landing gear and flight control equipment at this facility. The operations at the site consist of receiving and inspection of material and equipment, machining and grinding, plating, painting, assembly and testing of new and reassembled equipment. Hawker Pacific has conducted such operations at the site since April 1, 1987, when it purchased assets for that purpose from Inchcape PLC. At that time, its facility included buildings currently numbered 1, 2, 3 and 5. In December 1987, its facility was expanded to include the building currently numbered No. 4. (These building numbers have changed over time: Current Buildings 4 and 5 were referred to as Buildings 5 and 4, respectively in Hawker Pacific's response to First EPA Request.) See the response to Question 5, below, regarding the operations at the site prior to Hawker Pacific's.

3. **Identify the current owner(s) of the facility. State the dates during which the current owner owned, operated, or leased any portion of the facility, and provide copies of all documents evidencing or relating to such ownership, operation, or lease, including, but not limited to, purchase and sale agreements, deeds, and leases.**

The property under Buildings 1, 2 and 3 is owned by Gordon Wagner and Joseph Bassinger, and Hawker Pacific believes it has been since 1963. During the period 1963 to 1969, the owners operated a business known as Stellar Hydraulics on part of the current site. From 1969 to April 1987, Hawker Pacific believes, the owners leased the property to (or otherwise allowed it to be used by) the companies identified in the response to Question 5, below. Since April 1987, the owners have leased the property to Hawker Pacific. A copy of the current lease is submitted herewith as Exhibit 1.

The property under Buildings 4 and 5 is owned by Industrial Bowling Corp. Hawker Pacific does not know how long Industrial Bowling has owned the property. From 1967 to April 1987, Hawker Pacific believes, the owner leased the Building 5 property to (or otherwise allowed it to be used by) the businesses identified in the response to Question 5, below. Since April 1987, the owners have leased the property to Hawker Pacific. A copy of the lease is submitted herewith as Exhibit 2. For some period prior to December 1987, the owner leased the Building 4 property to (or otherwise allowed it to be used by) Laura Scudder or a Laura Scudder distributor. Since December 1987, the owner has leased

the property to Hawker Pacific. A copy of the lease is submitted herewith as Exhibit 3.

4. **Identify all prior owners of the facility. For each prior owner further identify:**

   a. **The dates of ownership;**

   b. **All evidence that hazardous materials were released or threatened to be released at the facility during the period that they owned the facility.**

   Hawker Pacific does not know the identity of the prior owners of the properties referred to in response to Question 3.

5. **Identify the prior operators and lessees of the facility. For each such operator or lessee, further identify:**

   a. **The dates of their operations at or lease of the facility;**

   b. **The nature of their operations at the facility;**

   c. **All evidence that hazardous materials were released or threatened to be released at the facility during the period in which they were operating at the facility.**

   a.

Period (Approx.)	Operator	Buildings
1963-1969	Stellar Hydraulics	1, 2, 5
1969-1977	Canoga Industries	1, 2, 5
1977-1979	Zero Corporation	1, 2, 3, 5

1979-1980	Bertea Corporation	1, 2, 3, 5
1980-1982	Parker Hannifin Corp.	1, 2, 3, 5
1982-1987	Inchcape PLC	1, 2, 3, 5
? - 1987	Laura Scudder	4

b. The prior operators in Buildings 1, 2, 3 and 5 operated businesses generally similar to Hawker Pacific's current business, except that the rotor wing operations were added by Bertea and continued by subsequent operators, and except that Hawker Pacific did not use some of the solvents or other chemicals used by prior operators at the site (as discussed further in response to part (c) of this Question, below).

The prior operator in Building 4 operated a warehouse/delivery truck maintenance facility for Laura Scudder food products.

c. Analyses of soil samples taken from the leach field area of the Building 4 septic tank system showed trace amounts of toluene and perchloroethylene ("PCE"). Analyses of soil samples from the leach field of the building 3 septic tank system also showed trace toluene. Hawker Pacific has not used PCE at this facility. Hawker Pacific has not used products containing toluene in Buildings 3 or 4, or disposed of any

such product in the Building 3 or 4 septic tank systems. Moreover, lacquer thinner, the product Hawker Pacific has used at the facility containing toluene, also contains other chemicals that were not detected in either leach field. Hawker Pacific believes that Laura Scudder, the prior operator at Building 4, conducted vehicle maintenance operations there; this belief is based, among other things, on used oil filters and other similar materials left at the site by Laura Scudder. Records of prior operators at Buildings 1, 2, 3 and 5 retained by Hawker Pacific indicate that prior operators on those portions of the site used PCE, but only until the early 1980's. (The trace levels of toluene and PCE found in the leach field areas do not threaten groundwater and were deemed insignificant by the Regional Water Board.) Shallow soil samples from the area adjacent to the clarifier in Building 2 also show trace quantifies of toluene and PCE. PCE, as stated above, has not been used by Hawker Pacific at the site. No product containing toluene was used or disposed of by Hawker Pacific in this area.

Soil samples taken in the area of a small unused underground tank and an adjacent small sump

between Buildings 1 and 2 contained hydrocarbons (oil), PCE, TCE, TCA, toluene and xylene. The tank was not used by Hawker Pacific and its presence was not discovered by Hawker Pacific until 1989. As stated above, Hawker Pacific has not used PCE at this facility. Hawker Pacific stored in this area only new machine lubricants unlike the chemicals detected in the soil here.

6. **Provide a scaled map of the facility which includes the locations of significant features. Describe the physical characteristics of the facility, including, but not limited to, the following:**

   a. **Surface structures (e.g., building, tanks, etc.);**

   b. **Subsurface structures (e.g., underground tanks, sumps, pits, clarifiers, etc.);**

   c. **Ground water wells and dry wells, including drilling logs;**

   d. **Past and present storm water drainage system, sanitary sewer system, including septic tank(s) and subsurface disposal field(s);**

   e. **Any and all additions, demolitions, or changes of any kind to physical structures on, under, or about the facility, or to the property itself (e.g., excavation work) and state the dates on which such changes occurred.**

See diagram and key with descriptions, submitted herewith as Exhibit 4.

7. **Provide all existing technical or analytical information about the facility, including, but not limited to, data and documents related to soil, water (ground and surface), geology, hydrogeology, or air quality on and about the facility.**

   See reports submitted herewith as Exhibits 5, 6, 7 and 8.

8. **Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, hydrogeology, or air quality on or about the facility? If so, identify:**

   a. **The nature and scope of these investigations;**

   b. **The contractors or other persons that will undertake these investigations;**

   c. **The purpose of the investigations;**

   d. **The dates when such investigations will take place and be completed;**

   e. **Where on the facility such investigations will take place.**

   See work proposal dated May 22, 1991 submitted herewith as Exhibit 9. The work set forth therein is scheduled to begin this month; and it is anticipated that it will be completed in three to four months.

9. **Did you acquire the facility after the disposal or placement of the hazardous substances on, in, or at the facility? Describe all of the facts on which you base the answer to this Question.**

Hawker Pacific is a lessee. See response to Question 5 above.

10. **At the time you acquired the facility, did you know or have reason to know that any hazardous substance was disposed of on, in, or at the facility? Describe all investigations of the facility that you took prior to acquiring the facility, and all of the facts on which you base the answer to this Question.**

Hawker Pacific is a lessee. At the time it began operations at the property it did not know or have reason to know of any such disposal. Hawker Pacific did a walk-through inspection.

11. **Did you ever transport to the facility or use, purchase, generate, store, treat, dispose, or otherwise handle at the facility any materials, either hazardous or non-hazardous? If the answer to this question is anything but an unqualified "no," identify:**

    a. **In general terms, the nature and quantity of the non-hazardous materials so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;**

b. The common chemical name, specific chemical name, Chemical Abstract Service (CAS) number, chemical composition, characteristics, and physical state (e.g., solid, liquid, gas) of each hazardous material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;

c. The persons who supplied you with such hazardous material or how each such hazardous material was generated by you;

d. How each such hazardous material was transported, used, purchased, stored, treated, disposed, or otherwise handled by you;

e. When each such hazardous material was transported, used, purchased, generated, stored, treated, disposed, or otherwise handled by you;

f. Where each such hazardous material was used, purchased,generated, stored, treated, disposed, or otherwise handled by you, describing the location(s) and providing a map or diagram of such location(s). Location information should include, but is not limited to, information pertaining to tanks, ponds, treatment facilities, and other units which were historically used to generate, store, treat or dispose of hazardous materials, but which may no longer exist;

g. **The persons who transported and/or disposed of each such hazardous material. If disposal off of the facility occurred, provide a detailed description, including copies of manifests, and identify the location where the hazardous material was transported;**

h. **The annual quantity of each such hazardous material used, purchased, generated, stored, treated, transported, disposed, or otherwise handled by you, reported in gallons for liquids and pounds for solids.**

(See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.)

a. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.

b. See Hawker Pacific Inc.'s Response to EPA's First Request, Questions 1 and 2. Hawker Pacific also uses and has used at the facility the following chemicals in the approximate current volumes shown: Sulfuric Acid (2200 lbs/yr); Muriatic (Hydrochloric) Acid (HCL) (1200 lbs/yr); Hydrofluoric Acid (60 gallons); Chromic Acid Flakes (2000 lbs/yr); Fluoroboric Acid (1620 lbs/yr). Material Safety Data Sheets providing further information on the composition and of the

chemicals used by Hawker Pacific are supplied herewith as Exhibit 10.

c. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2. The primary current suppliers of the chemicals referred to in response to paragraph (b) of this Question are:

Millhorn Chemical and Supply Company
6142 Walker Avenue
Maywood, California 90270
(213) 771-8301
Plating chemicals and supplies

Rho-Chem Inc.
Post Office Box 6021
Inglewood, California 90301
Solvents supplier

LT Saver
Shell Oil Distributor
14117 Aetna Street
Van Nuys, California 91401
Oils and fluids supplier lubricating oils and hydraulic fluids

d. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1, 2 and 4.

e. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2. Hawker Pacific has generated or handled the materials described therein throughout the period it has operated at the site.

f. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.

g. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2. Hawker Pacific

provided copies of manifests with its last response. Copies of subsequent manifests are supplied herewith as Exhibit 11.

h. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.

12. **Identify all leaks, spills, releases or threats of releases of any kind into the environment of any hazardous materials that have occurred or may occur at or from the facility. In addition, identify:**

See responses to Questions 5 and 7 above. Without determining or conceding that the materials involved are hazardous as defined, Hawker Pacific states that it has certain air emissions from permitted equipment or from activities exempt from permitting by the South Coast Air Quality Management District. Hawker Pacific will provide additional information on such air emissions upon request.

13. **If any releases or threatened release identified in response to Question 12, above, occurred into any subsurface disposal system, floor drain, sump, or dry well inside or under any buildings located on the facility, further identify:**

a. **Precisely where the disposal system, floor drain, sump, or dry well is and was located;**

b. **When the disposal system, floor drain, sump, or dry well was installed;**

c. **Whether the disposal system, floor drain, sump, or dry well was connected to pipes;**

d. **Where such pipes are or were located, describing the location(s) and providing a map or diagram of such location(s);**

e. **When such pipes were installed;**

f. **How and when such pipes were replaced, repaired, or otherwise changed.**

See responses to Questions 5 and 7 above.

14. **Is the facility currently connected to a sewer line? If so, identify the sewage system, date of connection, and type of wastes discharged. If you are or at some time operated the facility without a sewer line connection, identify the method of waste disposal that you use or did use. Specifically, have you or are you using leach field(s), septic tank(s), or any other method of disposal at the facility. Provide copies of any sewer permits, including but not limited to industrial waste permits.**

Buildings 1, 2 and 5 of the facility are connected to a sewer line. See sewer permit submitted herewith as Exhibit 12. Buildings 3 and 4 have septic tank systems with leach fields for their sanitary sewage discharges.

15. **Describe any acts or omissions of any persons, other than your employees, agents, or those persons with whom you had a contractual relationship, that may have caused**

the release or threat of release of hazardous substances at the facility and damages relating therefrom and identify such persons. In addition:

a. Describe all precautions that you took against foreseeable acts or omissions of any such third parties, and the consequence that could foreseeably result from such acts or omissions;

b. Describe the care you exercised with respect to the hazardous substances found at the facility.

See response to Question 5 above.

16. Identify all liability insurance policies held by Respondent from the time Respondent began operations at, assumed ownership of, or began leasing the facility (whichever occurred earlier) until the present. In identifying such policies, state:

a. The name and address of each insurer and of the insured;

b. The amount of coverage under each policy;

c. The commencement and expiration dates for each policy;

In addition, submit a complete copy of each policy.

Copies of insurance policies are submitted herewith as Exhibits 13 - 17. These policies are confidential and proprietary under 42 U.S.C. § 9604(e)(7)(E) and (F) and are enclosed in separate envelopes so marked.

a. Name and address of insurance company: Chubb Group of Insurance Companies, 15 Mountain View Road, Warren, New Jersey 07060.

b. See policies submitted herewith.

c. Insurance coverages commenced at the date of HPI's acquisition on April 1, 1987 and renew annually on October 1.

17. **Provide copies of all income tax returns including all schedules sent by you to the federal Internal Revenue Service in the last five years.**

Copies of the 1988 and 1989 Federal Income Tax Returns are submitted herewith as Exhibits 18 and 19. These returns are confidential and proprietary under 42 U.S.C. § 9604(e)(7)(E) and (F) and are enclosed in separate envelopes so marked.

18. **Provide all financial statements for the past five fiscal years, including but not limited to those filed with the federal Internal Revenue Service, the Franchise Tax Board, any other state taxing authorities, and the Securities and Exchange Commission.**

Copies of the 1988, 1989 and 1990 Annual Reports of Hawker Siddeley are submitted herewith as Exhibits 20 - 22. Copies of 1989 Financial Statements for Hawker Pacific are submitted herewith as Exhibit 23. Hawker Pacific has no audited financial statements for 1988 or 1990.) These financial statements are confidential and

proprietary under 42 U.S.C. § 9604(e)(7)(E) and (F) and are enclosed in separate envelopes so marked.

19. **Identify all of Respondent's current assets and liabilities.**

See response to Question 18 above.

20. **Identify all subsidiaries and parent corporations of Respondent.**

HPI is a wholly-owned subsidiary of Hawker Pacific Pty Ltd (Australia) which in turn is a wholly-owned subsidiary of Hawker Siddeley Group PLC (UK).

21. **Provide a copy of the most current Articles of Incorporation and By-laws of Respondent.**

Copies of the Articles of Incorporation and By-laws are submitted herewith as Exhibits 24 and 25.

22. **Identify the managers and majority shareholders or partners of Respondent and the nature of their management duties or amount of shares held, respectively.**

As to shareholders, see response to Question 20 above. As to managers, Hawker Pacific has a number of salaried employees who might be considered management. The primary management personnel for the site are: David L. Lokken, Executive Vice President and Chief Operating Officer, responsible for the overall day-to-day management; Jeff B. Belzer, Vice President Finance and Administration, responsible for the financial and

administrative requirements of the company; Robert D. Griswell, Vice President Commercial Operations responsible for factory operations as well as sales and marketing.

Dated: June 14, 1991

Respectfully submitted,

MICHAEL A. MONAHAN
GIBSON, DUNN & CRUTCHER

By:
MICHAEL A. MONAHAN
Attorneys for HAWKER PACIFIC INC.

2825u

LA911630.016

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Attorneys for
HAWKER PACIFIC INC.

BEFORE THE
UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

In re Hawker Pacific, Inc., facility at 11310 Sherman Way, Sun Valley, California; San Fernando Valley Groundwater Investigation	)	EPA Reference T-4-1

RESPONSE OF HAWKER PACIFIC INC.

TO REQUEST FOR INFORMATION

PURSUANT TO 42 U.S.C. § 9604(e)

RESPONSE OF HAWKER PACIFIC INC.

TO REQUEST FOR INFORMATION

PURSUANT TO 42 U.S.C. § 9604(e)

This response is made by Hawker Pacific Inc. ("Hawker Pacific") to the request for information under 42 U.S.C. §§ 9604 and 6907 made by the United States Environmental Protection Agency ("EPA") by letter dated February 1989, addressed to Robert E. (Bob) Wilson, regarding Hawker Pacific's facility at 11310 Sherman Way, Sun Valley, California 91352. This response does not constitute any admission by Hawker Pacific that it has contributed to or is responsible for the San Fernando Valley groundwater contamination referred to in the EPA's request, and Hawker Pacific denies any such contribution or responsibility.

The following sets forth each question in the EPA request, followed by Hawker Pacific's response thereto.

1. A description of the purpose and operations of your facility including a detailed description of any hazardous waste storage, treatment, or disposal operations. Include the dates of operation.

Response:

Hawker Pacific overhauls and repairs, and manufactures, aircraft landing gear and flight control equipment at this facility. It has conducted operations at the site since April 1, 1987, when it purchased assets for that purpose from Inchcape PLC. At that time, its facility included Buildings 1 through 4

(see Response to Request No. 3, below). In December 1987, its facility was expanded to include Building No. 5.

Hawker Pacific's operations at the site consist of receiving and inspection of material and equipment, machining and grinding, plating, painting, assembly and testing of new and reassembled equipment.

Operations at the site generate the following waste streams:

1. Plating shop wastes: (a) Plating shop production trash consisting of tape and masking materials is collected in steel drums. (b) Spent plating baths are periodically pumped out of the equipment and absorbent is added to it in steel drums. (c) Plating tank sludge also is periodically pumped out and absorbent is added in steel drums. (d) Plating operations rinse water is directed to a clarifier tank prior to discharge to the publicly owned treatment works ("POTW"). Clarifier sludge is periodically pumped out, and dewatered using an onsite press. The sludge is placed in steel drums, and the water is returned to the clarifier tank. Steel drums of all these plating shop wastes are hauled offsite to a permitted disposal site.

2. Several other types of miscellaneous liquid wastes are generated by the equipment used at the site: machinery waste oil, water soluble coolant from metal-working machinery, magnetic particle oil used for product testing, spent hydraulic fluids, degreasing solvents and paint thinners and solvent. These liquids are collected in steel drums and shipped offsite for recycling or disposal.

Steel drums in which the waste is accumulated are stored temporarily in a paved storage compound in the yard at the facility. These operations and waste streams have remained essentially the same since Hawker-Pacific began operations at the facility.

2. **A detailed description of all hazardous substances and hazardous wastes that were or are used or produced in operation or in production-related processes at your facility(s). Of particular importance is your information regarding past and present chlorinated solvent usage including but not limited to carbon tetrachloride (CTC), trichloroethylene (TCE), and tetrachloroethylene (PCE). For each substance and each waste used or generated, provide the following information.**

   a. **The common chemical name, specific chemical name, and chemical composition by volume for liquids and weight for solids;**

   b. **The total amount, in gallons for liquids and tons for solids, or annual usage or generation;**

   c. **The methods and processes used to generate, store, treat, and dispose of, and otherwise handle each substance;**

   d. **When and where the above processes occurred and are occurring. Please specify dates and locations as precisely as possible. Location information should include, but not limited to, information pertaining to tanks, ponds, treatment facilities, and other units which were historically used to treat, store and/or dispose of hazardous substances but which may no longer exist.**

Response:

The following is a list of the hazardous materials used, stored, or produced at this site:

<u>Liquid Wastes:</u>
Shell Tellus Oil
Hydrocarbon Mixture 99%
55 Gallons a Year Usage
Used for lubricating machinery in the machine shop areas in Buildings 1 and 2.
Disposed of by recycling off-site

Shell Garia Oil-C-
Hydrocarbon Mixture 99%
50 gallons a year usage
Used for lubricating machinery in the machine shop areas in Buildings 1 and 2
Recycled off-site

Trichloraethane
Trichloraethane 1.1.1. 100%
600 Gallons a Year Usage
Used for degreasing machined parts in the plating shop area in Building 2
Recycled off-site

Red Oil
Hydraulic Fluid H-5606
Mixture 99% CAS# 64742-46-2, 64741-97-5, 64742-53-6
250 gallons a year usage
Used to fill and test hydraulic units before shipment, in the test room in Building 3
Disposed of by recycling off-site

Methylene Chloride
Methylene Chloride 100% CAS# 75-09-2
50 gallons a year usage
Used in assembly of the components in the assembly department in Building 3
Recycled off-site

Rho-Solv 1204
Rho-Solv 1204 100% CAS# 64742-89-8
1200 gallons a year usage
Used to clean parts and machinery in Buildings 2, 3 and 4
Recycled off-site

Mag-Oil-C
Deodorized Kerosene 96% Parafins, 2% Benzene
200 gallons a year usage
Used in magnetic particle inspection equipment in solvent tanks in NDT (non-destructive testing) Department in Building 2
Recycled off-site

Rubbing Alcohol
Isopropyl Alcohol
60 gallons a year usage
Used to clean hydraulic equipment during assembly process in Building 3
Recycled off-site

Chase 310
Lacquer Thinner 22% Toluene, 50% Ketone, 5% Glycolethers, 22% Petroleum Hydrocarbons
150 gallons usage
Used for cleaning parts to be painted, paint gun cleanup and thinning of paints in Building 4
Recycled off-site

MEK
Methyl Ethyl Ketone 100% CASE# 78-93-3
70 gallons a year usage
Used for cleaning parts in plating and assembly and test departments in Buildings 2 and 3
Recycled off-site

Water Soluble Coolant
Waste Oil and Water
3000 gallons a year usage
Used for cooling during grinding and metal working in machine shop areas in Buildings 1 and 2
Recycled off-site

Solid Wastes:

Cyanide/Cadmium Waste
3/4 cubic yards a year
Plating tank sludge, spent plating solution in plating shop in Building 2
Land fill disposal

Nickel Waste
3/4 cubic yards a year
Plating tank sludge, spent plating solution in plating shop in Building 2
Land fill disposal

Chromium Waste
7 cubic yards a year
Plating tank sludge, spent plating solution in plating shop in Building 2
Recycled off-site

Metal Hydroxide Waste
2 cubic yards a year
Waste water treatment solids from the treating of metal finishing rinse water
Recycled off-site

Oil and Grease Waste
3/4 cubic yards a year
Residue from oil product drums, from storage tank for water soluble coolant in yard storage
Recycled off-site

Production Trash:

Masking Tape and Materials
From Building 2 plating shop as described in response to request No. 1 above
Land Fill Disposal

All of the materials referred to above are used in and handled by machinery, vessels, other equipment, piping or drums (both before and after becoming waste or recyclable materials) located above concrete or paved floors or pads so that any liquid leak or release would be promptly visible, with two exceptions: The plating waste water clarifier tank in Building 2 is partially below grade, and hydraulic fluid (red oil) and related compressor oil drips used for testing equipment are captured with compressor condensate water in two small sumps (approx. 18" x 18" x 18" each) located next to each other outside Building 3. A sample boring has been placed in the location of the plating clarifier. (See Response to Request No. 8.) The integrity of the two small sumps is and has been readily ascertained by visual inspection.

3. **Any photographs, maps, diagrams regardless of their date, which show areas where hazardous substances or hazardous wastes have been made or may be located.**

Response:

See enclosed facility diagram, document "A".

4. **A description of past and present disposal practices of hazardous substances and hazardous wastes generated or used at your facility. If off-site disposal of wastes has occurred, please provide a detailed description, including copies of manifests of hazardous substances and hazardous wastes, the names and addresses of transporters that have ever been engaged for the purpose of transporting hazardous substances or hazardous wastes from your facility, and the location to where the waste was hauled.**

Response:

See responses to Requests 1 and 2, above. Hawker Pacific's past and present hazardous waste disposal practices are: All hazardous substances for disposal are profiled (sampled and analyzed), packaged and transported by an approved transporter to a disposal site or recycler that is authorized to accept that substance.

Enclosed are copies of manifests covering from 1987 to present date, document nos. HP000001 - HP000042.

Transporters used:

Disposal Control Inc.
1369 W. 9th Street
Upland, CA 91786

King & King Drain Oil Service
635 Obispo
Long Beach, CA 90814

Locations to which materials were hauled are shown on the manifests.

5. **Locations and detailed descriptions of all monitoring wells, supply wells, injection wells, and underground tanks at your facility.**

Response:

One underground tank, which has not been used by Hawker Pacific, recently has been discovered at the back of Building 1,

between Buildings 1 and 2. (See diagram supplied in Response to Request No. 3.)

6. **Is your facility(s) currently connected to a sewer line? If so, please identify the sewage system, date of connection, and types of wastes discharged. If you are or at some time operated your facility(s) without a sewer line connection, please identify the method of waste water disposal that you use or did use. Specifically, have you or are you using leach field(s), septic tank(s), or any other method of onsite disposal.**

Response:

Site Buildings Nos. 1, 2, and 4 are connected to a POTW sewer line. Waste streams discharged into this sewer are biological waste, and plating rinse waters that have been pretreated as described in Response to Request No. 1, above. These sewer connections have been in place since Hawker Pacific began operations at these portions of the site in April 1987.

Buildings Nos. 3 and 5 are connected to septic tanks with leach lines. These have been in place since Hawker Pacific began operations at these portions of the site, in April and December 1987, respectively.

7. **All analyses from sampling of monitoring and supply wells, underground tanks, soil samples, and soil-gas sampling conducted at your facility. Please include any reports written by consultant(s) about these sample analyses.**

Response:

Pursuant to direction of the California Regional Water Quality Control Board, Los Angeles Region ("LARWQCB"), on December 1, 1988, Law Environmental Inc. performed a subsurface investigation at two locations on this site to determine if any

subsurface contamination to soil or ground water had occurred. The report is produced herewith, document "B".

8. **Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, geohydrology, or air quality on or about the site? If so, please describe the planned investigation(s).**

Response:

Hawker Pacific has been requested by California Regional Water Quality Control Board to perform an additional two borings in the area of Building 3 and 5 to a depth of 40 feet as well as two borings inside Building 2 to a depth of 10 feet. Final results are not yet received. Air emissions testing was conducted February 13, 1989 by Truesdail Labs to determine total and hexavalent chrome from this facility's three hard chrome plating tanks.

9. **A list of all current and former employees, agents, contractors, consultants, company officers, and other personnel who may possess knowledge or information relevant to this inquiry. This list should include each individual's name, address, telephone number, and job title or function.**

Response:

Name	Address & Phone No.	Title	Term. Date
Erik Johnson	6722 Whitsett No.Hollywood, CA 91606 (818) 765-3589	Hazardous Waste/ Process Supervisor	
Harry Gunn	530 N. Myers Burbank, CA 91506 (818) 848-0472	Machine Shop Supv.	
Bud Bailes	6730 Van Noord No.Hollywood, CA 91606 (818) 762-4856	Plater Journeyman/ Lead	
Ed Conley	Deceased 6-8-88		

Name	Address & Phone No.	Title	Term. Date
Stan LaSalle	2414 Minuteman Way Costa Mesa, CA 92626 (714) 545-0036	EPA/Hazardous Waste Engineer	3-4-88
Lewis Augustine	723 E. Chevy Chase Glendale, CA 91205 (818) 247-4229	Supervisor Sr.	7-31-87

10. **Length of time your company has been at the site location and any information you have regarding former occupants of this location and their hazardous waste practices.**

Response:

Hawker Pacific has occupied this site from April 1, 1987, except it has occupied Building 5 since December 1987. Prior operators at the site excluding Building 5, based on information and belief, were:

Inchcape PLC.	6-1-82 to 4-1-87
Parker Corp.	Approx. 1980 to 6-1-82
Bertea	Approx. 1979-1980
Zero Corporation	Approx. 1977-1979
Canoga Industries	Approx. 1968-1977
Stellar Hydraulics	Approx. 1963-1969 (Buildings 1 and 2 only)

Some of these may not have occupied the entire site of Buildings 1 - 4.

The company occupying Building 5 immediately prior to Hawker Pacific was Laura Scudder. Hawker Pacific lacks information as to other prior occupants of Building 5.

11. **Any information regarding use and disposal of chlorinated solvents by any person or business in the San Fernando Valley.**

Response:

Hawker Pacific objects to this request as beyond the scope of EPA's authority. Without waiving this objection, Hawker Pacific produced herewith copies of manifests relating to prior operators at this location that Hawker Pacific possesses, as documents no. HP000043 - HP000128.

12. **A descriptive list of all insurance policies held by your company. The description should include the dates during which each policy was in force, the general type of policy (e.g., comprehensive, general liability, automobile), the insurance company issuing the policy, the policy number, and any specific provision of the policy which may relate to claims for environmental damages.**

Response:

See document entitled "Hawker Pacific Inc. Insurance Policy List, document "C", produced herewith in a separate envelope labelled as confidential information. This document and the information contained therein is confidential and subject to 40 C.F.R. § 2.203(b), and is to be so treated.

13. **A detailed description of all hazardous substance and hazardous waste spills, leaks and incidents, as well as any clean-up actions undertaken during the history of your facility's operation.**

Response:

No known spills, leaks or incidents during Hawker Pacific's operation at this location.

14. **A list of the names and addresses of all solvent suppliers and solvent recyclers from which either products or services were acquired for use by your facility.**

Response:

Rho-Chem Corp P.O. Box 6021 H25-Isis Ave. Inglewood, CA 90301	Supplier and recycler
PRI 1835 E. 29th Street Signal Hill, CA	Recycler
DeMenno-Kerdoon 2000 N. Alameda Street Compton, CA 90222	Recycler
Casmalia Resource Management NTU Road Casmalia, CA 93429	Recycler
Shell Oil Co. 14117 Aetna Van Nuys, CA 91408	Supplier
Holchem Chemical 13546 Desmond Street Pacoima, CA 913131	Supplier

15. **An audited set of financial statements which includes a Statement of Financial Position/Balance Sheet, Income Statement, and Statement of Changes in Working Capital, and any other supplementary information for your company's most recent fiscal year.**

Response:

See financial statements, document "D", produced herewith in a separate envelope labelled as confidential information. This document and the information therein is confidential subject to 40 C.F.R.§ 2.203(b), and is to be so treated.

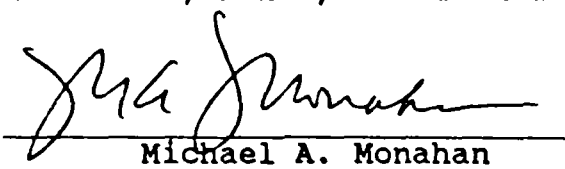
16. **Are you owned by another corporate entity as a subsidiary, division, or otherwise?**

Response:

Yes. See document produced in response to Request No.

DATE: JULY 7, 1989

RICHARD J. DENNEY
MICHAEL A. MONAHAN
LAURA J. CARROLL
McCUTCHEN, BLACK, VERLEGER & SHEA



Michael A. Monahan

Attorneys for HAWKER PACIFIC INC.

I, Robert E. Wilson, Vice President and General Manager of Hawker Pacific Inc. (the "Company"), directed employees under my supervision in a search for records in the possession of the company and in interviewing company employees with knowledge of the company's operations, chemical use and business practices, for purposes of preparing the responses to which this is attached. I believe that the search and interviews were diligent and, based thereon, that the factual responses to which this is attached are correct.

DATE: July 7, 1989

ROBERT E. WILSON

SUBSCRIBED AND SWORN TO BEFORE ME
THIS 14 DAY OF July 1989.

NOTARY PUBLIC

Luis E. Zurita

OFFICIAL SEAL
LUIS E ZURITA
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My comm. expires JAN 8, 1991

EXHIBITS TO RESPONSE OF HAWKER PACIFIC INC.
TO EPA REQUEST FOR INFORMATION
PURSUANT TO CERCLA § 104(e)
(INCLUDING CONFIDENTIAL INFORMATION)

VOLUME I of II

Exhibits 1-12

LA911620.009

INDEX OF EXHIBITS TO RESPONSE OF HAWKER PACIFIC INC. TO EPA REQUEST FOR INFORMATION PURSUANT TO CERCLA § 104(e) (INCLUDING CONFIDENTAL INFORMATION)

Number	Description
1.	Lease from Wagner and Bassinger to Hawker Pacific (Building 1, 2 and 3)
2.	Lease from Industrial Bowling to Hawker Pacific (Building 5).
3.	Lease from Industrial Bowling Corp. to Hawker Pacific
4.	Sealed map of facility.
5.	Law Environmental, Inc. Report (January 4, 1989).
6.	Law Environmental, Inc. Report (August 22, 1989).
7.	Law Environmental, Inc. Report (January 11, 1990).
8.	Law Environmental, Inc. Report (November 26, 1990).
9.	Law Environmental, Inc. Work Proposal (May 22, 1991).
10.	Material Safety Data Sheets
11.	Hazardous Waste Manifests
12.	Sewer Permit
13.	Insurance Policies (1986-1987).
14.	Insurance Policies (1987-1988).
15.	Insurance Policies (1988-1989).
16.	Insurance Policies (1989-1990).
17.	Insurance Policies (1990-1991).
18.	1988 Federal Tax Return.

19. 1989 Federal Tax Return.

20. 1988 Hawker Siddeley Annual Report.

21. 1989 Hawker Siddeley Annual Report.

22. 1990 Hawker Siddeley Annual Report.

23. 1989 Hawker Pacific Financial Statements.

24. Articles of Incorporation.

25. By-Laws.

LA911650.030

Bldgs 1, 2 & 3

LEASE BETWEEN

GORDON N. WAGNER AND JOSEPH W. BASINGER

AS LESSORS AND

HAWKER PACIFIC, INC. AS LESSEE

OF PROPERTY COMMONLY KNOWN AS

11310 SHERMAN WAY, SUN VALLEY, CALIFORNIA

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LEASE

1. PARTIES. This Lease, dated, for reference purposes only, March 26, 1987, is made by and between GORDON N. WAGNER and JOSEPH W. BASINGER ("Lessor") and HAWKER PACIFIC, INC., a California corporation ("Lessee").

2. PREMISES. Lessor hereby leases to Lessee and Lessee leases from Lessor for the term, at the rental, and upon all of the conditions set forth herein, that certain real property situated in the County of Los Angeles, State of California, commonly known as 11310 Sherman Way, Sun Valley, California 91352 and described as:

> That portion of the east 100 feet of the west half of lot 62 of Lankershim Ranch Land and Water Company's subdivision of the east 12,000 acres of the south half of the Ranch X Mission of San Fernando, in the city of Los Angeles, county of Los Angeles, State of California as per map recorded in Book 31, Pages 39 seq. of miscellaneous records in the office of the City Recorder of said county line northerly of a line, extending south 89 degrees 4 feet 25 inches east from a point in the centerline of Tujunga Avenue, 50 feet wide distant north zero degrees 00 feet 30 inches west 406.44 feet from the intersection of said centerline of the westerly prolongation of the southerly line of said lot 62. Except therefrom the southerly 30 feet thereof.

3. TERM.

3.1. Term. The term of this Lease shall be for Ten (10) years commencing on April 1, 1987 and ending on March 31, 1997 unless sooner terminated pursuant to any provision hereof.

3.2. Delay in Commencement. Notwithstanding said commencement date, if for any reason Lessor cannot deliver possession of the Premises to Lessee on said date, Lessor shall not be subject to any liability therefor, nor shall such failure affect the validity of this Lease or the obligations of Lessee thereunder or extend the term hereof, but in such case Lessee shall not be obligated to pay rent until possession of the Premises is tendered to Lessee; provided, however, that if Lessor shall not have delivered possession of the Premises within sixty (60) days from said commencement date, Lessee may, at Lessee's option, by notice in writing to Lessor within ten (10) days thereafter, cancel this Lease, in which event the parties shall be discharged from all obligations hereunder. If Lessee occupies the Premises prior to said commencement date, such occupancy shall be subject to all provisions hereof, such occupancy shall not advance the termination date, and Lessee shall pay rent for such period at the initial monthly rates set forth below.

4. RENT.

4.1. Rent for First Five Years. Lessee shall pay to Lessor as rent for the Premises in accordance with the following schedule:

	Period	Annual Rent	Monthly Rent
1.	April 1, 1987 to March 31, 1988	$204,000	$17,000
2.	April 1, 1988 to March 31, 1989	$209,100	$17,425
3.	April 1, 1989 to March 31, 1990	$229,305	$19,108.75
4.	April 1, 1990 to March 31, 1991	$238,515	$19,876.25
5.	April 1, 1991 to March 31, 1992	$247,200	$20,600

4.2. Rent for Second Five Years. The annual rent shall be adjusted as of the first day of April of each year (the "Adjustment Date") beginning in the year 1992, according to the following computation:

The base for computing the adjustment is the index figure for the month of January, 1987 (the "Base Index"), as shown in the Consumer Price Index ("CPI") for all urban consumers for the Los Angeles area based on the year 1967 as published by the United States Department of Labor's Bureau of Labor Statistics. The Base Index, which is subject to verification, is 335.1.

If the CPI for all urban consumers for the Los Angeles area published for the month of January preceding the month of the Adjustment Date, ("Adjustment Index") has changed over the Base Index, the annual rent for the following one-year period (until the next rent adjustment) shall be set by multiplying the initial annual rent of Two Hundred Four Thousand Dollars ($204,000) by a fraction, the numerator of which is the Adjustment Index and the denominator of which is the Base Index. If the amount of annual rental increase cannot be ascertained at the time it is effective, it shall be paid within thirty (30) days after the time such increase is determined and notice thereof mailed to Lessee at the Premises.

As an example, if the CPI for all urban consumers for the Los Angeles area for January 1992 is 475, then the Annual Rent for April 1, 1992 to March 31, 1993 would be $289,167.41, calculated as follows:

$204,000 x 475/335.1 = $289,167.41

Similarly, if the CPI for January 1993 is 500, the Annual Rent for April 1, 1993 to March 31, 1994 would be $304,386.75, calculated as follows:

$204,000 x 500/335.1 = $304,386.75.

In no event shall the annual rent for April 1, 1992 to March 31, 1993 be less than Two Hundred Fifty-Nine Thousand Five Hundred Sixty Dollars ($259,560).

In no event shall the annual rent for April 1, 1993 to March 31, 1994 be increased by less than three percent (3%) of the annual rent for April 1, 1992 to March 31, 1993.

In no event shall the annual rent for April 1, 1994 to March 31, 1995 be increased by less than three percent (3%) of the annual rent for April 1, 1993 to March 31, 1994.

In no event shall the annual rent for April 1, 1995 to March 31, 1996 be increased by less than three percent (3%) of the annual rent for April 1, 1994 to March 31, 1995.

In no event shall the annual rent for April 1, 1996 to March 31, 1997 be increased by less than three percent (3%) of the annual rent for April 1,1995 to March 31, 1996.

The index for the Adjustment Date shall be the one reported in the United States Department of Labor's newest comprehensive official index when in use and most nearly answering and the foregoing description of the index to be

used. If it is calculated from a base different from the base year 1967 used for the Base Index above, the base figure used for calculating the adjustment percentage shall first be converted under a formula supplied by the Bureau.

If the described index shall no longer be published, another generally recognized as authoritative shall be substituted by agreement of the Lessor and Lessee. If they are unable to agree within thirty (30) days after demand by either the Lessor or Lessee, the substitute index shall, on application of either party, be selected by the chief officer of the San Francisco Regional Office of the Bureau of Labor Statistics or its successor.

Rent for any period during the term hereof which is for less than one month shall be a pro rata portion of the monthly installment. Rent shall be payable in lawful money of the United States to Lessor at the address stated herein or to such other persons or at such other places as Lessor may designate in writing.

4.3. Monthly Rent Payments. Annual rent is payable in equal monthly installments, in advance, on the first day of each month of the period hereof. Lessee shall pay Lessor on April 1, 1987 or on the date this Lease is executed, whichever is later, $17,000 as rent for the first month.

5. CONDITION TO ENFORCEABILITY. Flight Accessory Services, Inc. ("FAS") and HAWKER PACIFIC INC. ("HAWKER PACIFIC") have entered into a purchase and sales agreement (the "Agreement") dated February 25, 1987. The Agreement is

for the purchase by HAWKER PACIFIC of all trade, fixtures, equipment, inventory and supplies of FAS located at, among other places, the Premises which is the subject of this Lease. The enforceability of this Lease is conditioned on the consummation of the Agreement between HAWKER PACIFIC and FAS on March 30, 1987 or within sixty (60) days thereafter.

6. SECURITY DEPOSIT. Lessor currently holds Twenty-Five Thousand Three Hundred Sixty-Eight Dollars ($25,368) as security deposit from FAS pursuant to a lease encompassing the Premises dated November 6, 1975 between GORDON N. WAGNER and JOSEPH W. BASINGER, Lessors, and Stellar Hydraulics Company, Lessee (the "Stellar Lease"). FAS is the assignee of the Stellar Lease.

HAWKER PACIFIC warrants that FAS has agreed to permit GORDON N. WAGNER and JOSEPH W. BASINGER to retain the $25,368 as security deposit for HAWKER PACIFIC under this Lease.

Retention by Lessor of the $25,368 from FAS under the Stellar Lease for the benefit of HAWKER PACIFIC under the present Lease does not obligate HAWKER PACIFIC to GORDON N. WAGNER or JOSEPH W. BASINGER, the lessors under the Stellar Lease, to any of FAS' liabilities, if any, under the Stellar Lease. When this Lease is terminated the security deposit will be returned to HAWKER PACIFIC in accordance with the provisions of this Lease.

HAWKER PACIFIC, as Lessee, however, acknowledges that FAS has made some changes to the structural facilities of the Premises which altered the Premises from its original

state as it existed when FAS first entered the Premises as assignee to the Stellar Lease. HAWKER PACIFIC agrees that, if demand is made by Lessor at the termination of this Lease, it shall restore the Premises to the original state that existed when FAS first entered the Premises.

If Lessee fails to pay rent or other charges due hereunder, or otherwise defaults with respect to any provision of this Lease, Lessor may use, apply or retain all or any portion of said deposit for the payment of any rent or other charge in default or for the payment of any other sum to which Lessor may become obligated by reason of Lessee's default, or to compensate Lessor for any loss or damage which Lessor may suffer thereby. If Lessor so uses or applies all or any portion of said deposit, Lessee shall within ten (10) days after written demand therefor deposit cash with Lessor in an amount sufficient to restore said deposit to the full amount hereinabove stated and Lessee's failure to do so shall be a material breach of this Lease. Lessor shall not be required to keep said deposit separate from its general accounts. If Lessee performs all of Lessee's obligations hereunder, said deposit, or so much thereof as has not theretofore been applied by Lessor, shall be returned, without payment of interest or other increment for its use, to Lessee (or, at Lessor's option, to the last assignee, if any, of Lessee's interest hereunder) at the expiration of the term hereof, and after Lessee has vacated the Premises.

7. USE.

7.1. Use. The Premises shall be used and occupied only for the manufacturing, storage and distribution of Lessee's products and related activities.

7.2. Compliance with Law. Lessee shall, at Lessee's expense, comply promptly with all applicable statutes, ordinances, rules, regulations, orders and requirements in effect during the term or any part of the term hereof regulating the use by Lessee of the Premises. Lessee shall not use or permit the use of the Premises in any manner that will tend to create waste or a nuisance or, if there shall be more than one tenant of the building containing the Premises, which shall tend to disturb such other tenants.

7.3. Condition of Premises. Lessee hereby accepts the Premises in their condition existing as of the date of the commencement hereof, subject to all applicable zoning, municipal, county and state laws, ordinances and regulations governing and regulating the use of the Premises, and accepts this Lease subject thereto and to all matters disclosed hereby and by any exhibits attached hereto. Lessee acknowledges that neither Lessor nor Lessor's agent has made any representation or warranty as to the suitability of the Premises for the conduct of Lessee's business.

8. MAINTENANCE, REPAIRS AND ALTERATIONS.

8.1. Lessee's Obligations. Lessee shall during the term of this Lease keep in good order, condition and repair, the Premises and every part thereof, structural or

non-structural, and all adjacent sidewalks, landscaping, driveways, parking lots, fences and signs located in the areas which are adjacent to and included with the Premises. Lessor shall incur no expense nor have any obligation of any kind whatsoever in connection with maintenance of the Premises, and Lessee expressly waives the benefits of any statute now or hereafter in effect which would otherwise afford Lessee the right to make repairs at Lessor's expense or to terminate this Lease because of Lessor's failure to keep the Premises in good order, condition and repair.

8.2. Surrender. On the last day of the term hereof, or on any sooner termination, Lessee shall surrender the Premises to Lessor in the same condition as when received, broom clean, ordinary wear and tear excepted. Lessee shall repair any damage to the Premises occasioned by the removal of Lessee's trade fixtures, furnishings and equipment pursuant to Paragraph 8.4(c), which repair shall include the patching and filling of holes and repair of structural damage.

8.3. Lessor's Rights. If Lessee fails to perform Lessee's obligations under this Paragraph 8, Lessor may at its option (but shall not be required to) enter upon the Premises, after ten (10) days' prior written notice to Lessee, and put the same in good order, condition and repair, and the cost thereof together with interest thereon at the rate of ten percent (10%) per annum shall become due and payable as additional rental to Lessor together with Lessee's next rental installment.

8.4. Alterations and Additions.

(a) Lessee shall not, without Lessor's prior written consent, make any alterations, improvements, additions, utility installations in, on or about the Premises, except for non-structural alterations not exceeding One Thousand Dollars ($1,000) in cost. As used in this Paragraph 8.4, the term "utility installations" shall include bus ducting, power panels, fluorescent fixtures, space heaters, conduits and wiring. As a condition to giving such consent, Lessor may require that Lessee agree to remove any such alterations, improvements, additions or utility installations at the expiration of the term, and to restore the Premises to their prior condition. As a further condition to giving such consent, Lessor may require Lessee to provide Lessor, at Lessee's sole cost and expense, a lien and completion bond in an amount equal to one and one-half (1-1/2) times the estimated cost of such improvements, to insure Lessor against any liability for mechanics' and materialmen's liens and to insure completion of the work.

(b) Lessee shall pay, when due, all claims for labor or materials furnished or alleged to have been furnished to or for Lessee at or for use in the Premises, which claims are or may be secured by any mechanics' or materialmen's lien against the Premises or any interest therein. Lessee shall give Lessor not less than ten (10) days' notice prior to the commencement of any work in the Premises, and Lessor shall have the right to post notices of non-responsibility in or on the Premises as provided by law.

(c) Unless Lessor requires their removal as set forth in Paragraph 8.4(a), all alterations, improvements, additions, and utility installations (whether or not such utility installations constitute fixtures of Lessee), which may be made on the Premises, shall become the property of Lessor and remain upon and be surrendered with the Premises at the expiration of the term. Notwithstanding the provisions of this Paragraph 8.4(c), Lessee's machinery and equipment, other than that which is affixed to the Premises so that it cannot be removed without material damage to the Premises, shall remain the property of Lessee and may be removed by Lessee subject to the provisions of Paragraph 8.2.

9. INSURANCE; INDEMNITY.

9.1. Insuring Party. As used in this Paragraph 9, the term "insuring party" shall mean the party who has the obligation to obtain the insurance required hereunder. The insuring party in this case shall be designated following the signatures of the parties below. Whether the insuring party is the Lessor or the Lessee, Lessee shall, as additional rent for the Premises, pay the cost of all insurance required hereunder. If Lessor is the insuring party Lessee shall, within ten (10) days following demand by Lessor, reimburse Lessor for the cost of the insurance so obtained.

9.2. Liability Insurance. The insuring party shall obtain and keep in force during the term of this Lease a policy of comprehensive public liability insurance insuring Lessor and Lessee against any liability arising out

of the ownership, use, occupancy or maintenance of the Premises and all areas appurtenant thereto. Such insurance shall be in an amount of not less than Three Hundred Thousand Dollars ($300,000) for injury to or death of one person in any one accident or occurrence and in an amount of not less than Five Hundred Thousand Dollars ($500,000) for injury to or death of more than one person in any one accident or occurrence. Such insurance shall further insure Lessor and Lessee against liability for property damage of at least Fifty Thousand Dollars ($50,000). The limits of said insurance shall not, however, limit the liability of Lessee hereunder. In the event that the Premises constitute a part of a larger property said insurance shall have a Lessor's Protective Liability endorsement attached thereto. If the insuring party shall fail to procure and maintain said insurance the other party may, but shall not be required to, procure and maintain the same, but at the expense of Lessee.

9.3. Property Insurance. The insuring party shall obtain and keep in force during the term of this Lease a policy or policies of insurance covering loss or damage to the Premises, in the amount of the full replacement value thereof, against all perils included within the classification of fire, extended coverage, vandalism, malicious mischief, special extended perils (all risk) and sprinkler leakage. Said insurance shall provide for payment of loss thereunder to Lessor or to the holder of a first mortgage or deed of trust on the Premises. The insuring party shall, in

addition, obtain and keep in force during the term of this Lease a policy of rental income insurance covering a period of six (6) months, with loss payable to Lessor. If the insuring party shall fail to procure and maintain said insurance the other party may, but shall not be required to, procure and maintain the same, but at the expense of Lessee. Lessor and Lessee shall agree in writing each year as to the insurable value of the Premises leased herein.

9.4. Insurance Policies. Insurance required hereunder shall be in companies rated AAA or better in "Best's Insurance Guide." The insuring party shall deliver to the other party copies of policies of such insurance or certificates evidencing the existence and amounts of such insurance with loss payable clauses satisfactory to Lessor. No such policy shall be cancellable or subject to reduction of coverage or other modification except after ten (10) days' prior written notice to Lessor. If Lessee is the insuring party Lessee shall, within ten (10) days prior to the expiration of such policies, furnish Lessor with renewals or "binders" thereof, or Lessor may order such insurance and charge the cost thereof to Lessee, which amount shall be payable by Lessee upon demand. Lessee shall not do or permit to be done anything which shall invalidate the insurance policies referred to in Paragraph 9.3. If Lessee does or permits to be done anything which shall increase the cost of the insurance policies referred to in Paragraph 9.3, then Lessee shall forthwith upon Lessor's demand reimburse Lessor for any additional premiums attrib-

utable to any act or omission or operation of Lessee causing such increase in the cost of insurance. If Lessor is the insuring party, and if the insurance policies maintained hereunder cover other improvements in addition to the Premises, Lessor shall deliver to Lessee a written statement setting forth the amount of any such insurance cost increase and showing in reasonable detail the manner in which it has been computed.

9.5. Waiver of Subrogation. Lessee and Lessor each hereby waive any and all rights of recovery against the other, or against the officers, employees, agents and representatives of the other, for loss of or damage to such waiving party or its property or the property of others under its control to the extent that such loss or damage is insured against under any insurance policy in force at the time of such loss or damage. The insuring party shall, upon obtaining the policies of insurance required hereunder, give notice to the insurance carrier or carriers that the foregoing mutual waiver of subrogation is contained in this Lease.

9.6. Indemnity. Lessee shall indemnify and hold harmless Lessor from and against any and all claims arising from Lessee's use of the Premises, or from the conduct of Lessee's business or from any activity, work or things done, permitted or suffered by Lessee in or about the Premises or elsewhere and shall further indemnify and hold harmless Lessor from and against any and all claims arising from any breach or default in the performance of any obligation on

Lessee's part to be performed, under the terms of this Lease, or arising from any negligence of the Lessee, or any of Lessee's agents, contractors, or employees, and from and against all costs, attorney's fees, expenses and liabilities incurred in the defense of any such claim or any action or proceeding brought thereon; and in case any action or proceeding be brought against Lessor by reason of any such claim, Lessee upon notice from Lessor shall defend the same at Lessee's expense. Lessee, as a material part of the consideration to Lessor, hereby assumes all risk of damage to property or injury to persons, in, upon or about the Premises arising from any cause and Lessee hereby waives all claims in respect thereof against Lessor.

9.7. Exemption of Lessor from Liability. Lessee hereby agrees that Lessor shall not be liable for injury to Lessee's business or any loss of income therefrom or for the damage to the goods, wares, merchandise or other property of Lessee, Lessee's employees, invitees, customers, or any other person in or about the Premises, nor shall Lessor be liable for injury to the person of Lessee, Lessee's employees, agents or contractors, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, or from the breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air conditioning or lighting fixtures, or from any other cause, whether the said damage or injury results from conditions arising upon the Premises or upon other portions of the building of which the Premises are a part, or from

other sources or places, and regardless of whether the cause of such damage or injury or the means of repairing the same is inaccessible to Lessee. Lessor shall not be liable for any damages arising from any act or neglect of any other tenant, if any, of the building in which the Premises are located.

10. DAMAGE OR DESTRUCTION.

10.1. Partial Damage--Insured. Subject to the provisions of Paragraph 10.4, if the Premises are damaged and such damage was caused by a casualty covered under an insurance policy required to be maintained pursuant to Paragraph 9.3, Lessor shall at Lessor's expense repair such damage as soon as reasonably possible and this Lease shall continue in full force and effect. Notwithstanding the above, if the Lessee is the insuring party, and if the insurance proceeds received by Lessor are not sufficient to effect such repair, Lessor shall give notice to Lessee of the amount required in addition to the insurance proceeds to effect such repair. Lessee may, at Lessee's option, contribute the required amount, but upon failure to do so within thirty (30) days following such notice, Lessor's sole remedy shall be, at Lessor's option and with no liability to Lessee, to cancel and terminate this lease. If Lessee shall contribute such amount to Lessor within said thirty (30) day period, Lessor shall make such repairs as soon as reasonably possible and this Lease shall continue in full force and effect. Lessee shall in no event have any right to reimbursement for any such amount so contributed.

10.2. Partial Damage--Uninsured. Subject to the provisions of Paragraph 10.4, if at any time during the term hereof the Premises are damaged, except by a negligent or willful act of Lessee, and such damage was caused by a casualty not covered under an insurance policy required to be maintained pursuant to Paragraph 9.3. Lessor may at Lessor's option either (i) repair such damage as soon as reasonably possible at Lessor's expense, in which event this Lease shall continue in full force and effect, or (ii) give written notice to Lessee within thirty (30) days after the date of the occurrence of such damage of Lessor's intention to cancel and terminate this Lease as of the date of the occurrence of such damage. In the event Lessor elects to give such notice of Lessor's intention to cancel and terminate this Lease, Lessee shall have the right within ten (10) days after the receipt of such notice to give written notice to Lessor of Lessee's intention to repair such damage at Lessee's expense, without reimbursement from Lessor, in which event this Lease shall continue in full force and effect, and Lessee shall proceed to make such repairs as soon as reasonably possible. If Lessee does not give such notice within such ten (10) day period this Lease shall be cancelled and terminated as of the date of the occurrence of such damage.

10.3. Total Destruction. If at any time during the term hereof the Premises are totally destroyed from any cause whether or not covered by the insurance required to be maintained pursuant to Paragraph 9.3 (including any total

destruction required by any authorized public authority) this Lease shall automatically terminate as of the date of such total destruction.

10.4. Damage Near End of Term. If the Premises are partially destroyed or damaged during the last six (6) months of the term of this Lease, Lessor may at Lessor's option cancel and terminate this Lease as of the date of occurrence of such damage by giving written notice to Lessee of Lessor's election to do so within thirty (30) days after the date of occurrence of such damage.

10.5. Abatement of Rent; Lessee's Remedies.

(a) If the Premises are partially destroyed or damaged and Lessor or Lessee repairs or restores them pursuant to the provisions of this Article, the rent payable under Paragraph 4 for the period during which such damage, repair or restoration continues shall be abated in proportion to the degree to which Lessee's use of the Premises is impaired; provided, however, that the aggregate amount of abatement hereunder shall not exceed the total of rent payable under Paragraph 4 for a period of six (6) months. Except for abatement of rent, if any, Lessee shall have no claim against Lessor for any damage suffered by reason of any such damage, destruction, repair or restoration.

(b) If Lessor shall be obligated to repair or restore the Premises under the provisions of this Paragraph 9 and shall not commence such repair or restoration within ninety (90) days after such obligation shall accrue, Lessee may at Lessee's option cancel and terminate

this Lease by giving Lessor written notice of Lessee's election to do so at any time prior to the commencement of such repair or restoration. In such event this Lease shall terminate as of the date of such notice. Any abatement in rent shall be computed as provided in Paragraph 10.5(a).

10.6. Termination--Advance Payments. Upon termination of this Lease pursuant to this Paragraph 10, an equitable adjustment shall be made concerning advance rent and any advance payments made by Lessee to Lessor. Lessor shall, in addition, return to Lessee so much of Lessee's security deposit as has not theretofore been applied by Lessor.

11. REAL PROPERTY TAXES.

11.1. Payment of Taxes.

Lessee shall pay all real property taxes applicable to the Premises during the term of this Lease. All such payments shall be made at least ten (10) days prior to the delinquency date of such payment. Lessee shall promptly furnish Lessor with satisfactory evidence that such taxes have been paid. If any such taxes paid by Lessee shall cover any period of time prior to or after the expiration of the term hereof, Lessee's share of such taxes shall be equitably prorated to cover only the period of time within the tax fiscal year during which this Lease shall be in effect, and Lessor shall reimburse Lessee to the extent required. If Lessee shall fail to pay any such taxes, Lessor shall have the right to pay the same, in which case Lessee shall repay such amount to Lessor with Lessee's next rent installment

together with interest at the rate of ten percent (10%) per annum.

11.2. Definition of "Real Property" Tax. As used herein, the term "real property tax" shall include any form of assessment, license fee, commercial rental tax, levy, penalty, or tax (other than inheritance or estate taxes), imposed by any authority having the direct or indirect power to tax, including any city, county, state or federal government, or any school, agricultural, lighting, drainage or other improvement district thereof, as against any legal or equitable interest of Lessor in the Premises or in the real property of which the Premises are a part, as against Lessor's right to rent or other income therefrom, or as against Lessor's business of leasing the Premises.

11.3. Joint Assessment. If the Premises are not separately assessed, Lessee's liability shall be an equitable proportion of the real property taxes for all of the land and improvements included within the tax parcel assessed, such proportion to be determined by Lessor from the respective valuations assigned in the assessor's work sheets or such other information as may be reasonably available. Lessor's reasonable determination thereof, in good faith, shall be conclusive.

11.4. Personal Property Taxes. Lessee shall pay prior to delinquency all taxes assessed against and levied upon trade fixtures, furnishings, equipment and all other personal property of Lessee contained in the Premises or elsewhere. When possible, Lessee shall cause said trade

fixtures, furnishings, equipment and all other personal property to be assessed and billed separately from the real property of Lessor.

12. UTILITIES. Lessee shall pay for all water, gas, heat, light, power, telephone and other utilities and services supplied to the Premises, together with any taxes thereon. If any such services are not separately metered to Lessee, Lessee shall pay a reasonable proportion to be determined by Lessor of all charges jointly metered with other premises.

13. ASSIGNMENT AND SUBLETTING.

13.1. Lessor's Consent Required. Lessee shall not voluntarily or by operation of law assign, transfer, mortgage, sublet, or otherwise transfer or encumber all or any part of Lessee's interest in this Lease or in the Premises, without Lessor's prior written consent, which Lessor shall not unreasonably withhold. Any attempted assignment, transfer, mortgage, encumbrance or subletting without such consent shall be void, and shall constitute a breach of this Lease.

13.2. No Release of Lessee. Regardless of Lessor's consent, no subletting or assignment shall release Lessee of Lessee's obligation or alter the primary liability of Lessee to pay the rent and to perform all other obligations to be performed by Lessee hereunder. The acceptance of rent by Lessor from any other person shall not be deemed to be a waiver by Lessor of any provision hereof. Consent

to one assignment or subletting shall not be deemed consent to any subsequent assignment or subletting.

13.3. Attorney's Fees. In the event that Lessor shall consent to a sublease or assignment under Paragraph 12.1, Lessee shall pay Lessor's reasonable attorneys' fees not to exceed Five One Hundred Dollars ($500) incurred in connection with giving such consent.

14. DEFAULTS; REMEDIES.

14.1. Defaults. The occurrence of any one or more of the following events shall constitute a material default and breach of this Lease by Lessee:

(a) The vacating or abandonment of the Premises by Lessee.

(b) The failure by Lessee to make any payment of rent or any other payment required to be made by Lessee hereunder, as and when due, where such failure shall continue for a period of three days after written notice thereof from Lessor to Lessee.

(c) The failure by Lessee to observe or perform any of the covenants, conditions or provisions of this Lease to be observed or performed by Lessee, other than described in paragraph (b) above, where such failure shall continue for a period of thirty (30) days after written notice hereof from Lessor to Lessee; provided, however, that if the nature of Lessee's default is such that more than thirty (30) days are reasonably required for its cure, then Lessee shall not be deemed to be in default if Lessee commenced such cure

within said thirty (30) day period and thereafter diligently prosecutes such cure to completion.

(d) (i) The making by Lessee of any general assignment, or general arrangement for the benefit of creditors; (ii) the filing by or against Lessee of a petition to have Lessee adjudged a bankrupt or a petition for reorganization or arrangement under any law relating to bankruptcy (unless, in the case of a petition filed against Lessee, the same is dismissed within sixty (60) days); (iii) the appointment of a trustee or receiver to take possession of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where possession is not restored to Lessee within thirty (30) days; or (iv) the attachment, execution or other judicial seizure of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where such seizure is not discharged within thirty (30) days.

14.2. Remedies. In the event of any such material default or breach by Lessee, Lessor may at any time thereafter, with or without notice or demand and without limiting Lessor in the exercise of any right or remedy which Lessor may have by reason of such default or breach:

(a) Terminate Lessee's right to possession of the Premises by any lawful means, in which case this Lease shall terminate and Lessee shall immediately surrender possession of the Premises to Lessor. In such event Lessor shall be entitled to recover from Lessee all damages incurred by Lessor by reason of Lessee's default including, but not

limited to, the cost of recovering possession of the Premises; expenses of reletting, including necessary renovation and alteration of the Premises, reasonable attorney's fees, and any real estate commission actually paid; the worth at the time of award by the court having jurisdiction thereof of the amount by which the unpaid rent for the balance of the term after the time of such award exceeds the amount of such rental loss for the same period that Lessee proves could be reasonably avoided; that portion of the leasing commission paid by Lessor pursuant to Paragraph 16 applicable to the unexpired term of this Lease. Unpaid installments of rent or other sums shall bear interest from the date due at the rate of ten percent (10%) per annum. In the event Lessee shall have abandoned the Premises, Lessor shall have the option of (i) retaking possession of the Premises and recovering from Lessee the amount specified in this Paragraph 14.2(a), or (ii) proceeding under Paragraph 14.2(b).

(b) Maintain Lessee's right to possession in which case this Lease shall continue in effect whether or not Lessee shall have abandoned the Premises. In such event Lessor shall be entitled to enforce all of Lessor's rights and remedies under this Lease, including the right to recover the rent as it becomes due hereunder.

(c) Pursue any other remedy now or hereafter available to Lessor under the laws or judicial decisions of the State of California.

14.3. Default by Lessor. Lessor shall not be in default unless Lessor fails to perform obligations required of Lessor within a reasonable time, but in no event later than thirty (30) days after written notice by Lessee to Lessor and to the holder of any first mortgage or deed of trust covering the Premises whose name and address shall have theretofore been furnished to Lessee in writing, specifying wherein Lessor has failed to perform such obligations; provided, however, that if the nature of Lessor's obligation is such that more than thirty (30) days are required for performance then Lessor shall not be in default if Lessor commences performance within such thirty (30) days period and thereafter diligently prosecutes the same to completion.

14.4. Late Charges. Lessee hereby acknowledges that late payment by Lessee to Lessor of rent and other sums due hereunder will cause Lessor to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges, and late charges which may be imposed on Lessor by the terms of any mortgage or trust deed covering the Premises. Accordingly, if any installment of rent or any other sum due from Lessee shall not be received by Lessor or Lessor's designee within ten (10) days after such amount shall be due, Lessee shall pay to Lessor a late charge equal to ten percent (10%) of such overdue amount. The parties hereby agree that such late charge represents a fair and reasonable estimate of the

costs Lessor will incur by reason of late payment by Lessee. Acceptance of such late charge by Lessor shall in no event constitute a waiver of Lessee's default with respect to such overdue amount, nor prevent Lessor from exercising any of the other rights and remedies granted hereunder.

15. CONDEMNATION. If the Premises or any portion thereof are taken under the power of eminent domain, or sold under the threat of the exercise of said power (all of which are herein called "condemnation"), this Lease shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever first occurs. If more than ten percent (10%) of the floor area of the improvements on the Premises, or more than twenty-five percent (25%) of the land area of the Premises which is not occupied by any improvements, is taken by condemnation, Lessee may, at Lessee's option, to be exercised in writing only within ten (10) days after Lessor shall have given Lessee written notice of such taking (or in the absence of such notice, within ten (10) days after the condemning authority shall have taken possession) terminate this Lease as of the date the condemning authority takes such possession. If Lessee does not terminate this Lease in accordance with the foregoing, this Lease shall remain in full force and effect as to the portion of the Premises remaining, except that the rent shall be reduced in the proportion that the floor area taken bears to the total floor area of the building situated on the Premises. Any award for the taking of all or any part of the Premises under the power of

eminent domain or any payment made under threat of the exercise of such power shall be the property of Lessor, whether such award shall be made as compensation for diminution in value of this leasehold or for the taking of the fee, or as severance damages; provided, however, that Lessee shall be entitled to any award for loss of or damage to Lessee's trade fixtures and removable personal property. In the event that this Lease is not terminated by reason of such condemnation, Lessor shall, to the extent of severance damages received by lessor in connection with such condemnation, repair any damages to the Premises caused by such condemnation except to the extent that Lessee has been reimbursed therefor by the condemning authority. Lessee shall pay any amount in excess of such severance damages required to complete such repair.

16. BROKER'S FEE. None.

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17. GENERAL PROVISIONS.

17.1. Estoppel Certificate.

(a) Lessee shall at any time upon not less than ten (10) days' prior written notice from Lessor execute, acknowledge and deliver to Lessor a statement in writing (i) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease, as so modified, is in full force and effect) and the date to which the rent and other charges are paid in advance, if any, and (ii) acknowledging that there are not, to Lessee's knowledge, any uncured defaults on the part of Lessor hereunder, or specifying such defaults if any are claimed. Any such statement may be conclusively relied upon by any prospective purchaser or encumbrancer of the Premises.

(b) Lessee's failure to deliver such statement within such time shall be conclusive upon Lessee (i) that

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this Lease is in full force and effect, without modification except as may be represented by Lessor, (ii) that there are no uncured defaults in Lessor's performance, and (iii) that not more than one (1) month's rent has been paid in advance.

(c) If Lessor desire to finance or refinance the Premises, or any part thereof, Lessee hereby agrees to deliver to any lender designated by Lessor such financial statements of Lessee as may be reasonably required by such lender. Such statements shall include the past three (3) years' financial statements of Lessee. All such financial statements shall be received by Lessor in confidence and shall be used only for the purposes herein set forth.

17.2. Lessor's Liability. The term "Lessor" as used herein shall mean only the owner or owners at the time in question of the fee title or a lessee's interest in a ground lease of the Premises, and except as expressly provided in Paragraph 16, in the event of any transfer of such title or interest, Lessor herein named (and in case of any subsequent transfers the then grantor) shall be relieved from and after the date of such transfer of all liability as respects Lessor's obligations thereafter to be performed, provided that any funds in the hands of Lessor or the then grantor at the time of such transfer, in which Lessee has an interest, shall be delivered to the grantee. The obligations contained in this Lease to be performed by Lessor shall, subject as aforesaid, be binding on Lessor's successors and assigns, only during their respective periods of ownership.

17.3. Severability. The invalidity of any provision of this Lease as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision hereof.

17.4. Interest on Past-Due Obligations. Except as expressly herein provided, any amount due to Lessor not paid when due shall bear interest at ten percent (10%) per annum from the date due. Payment of such interest shall not excuse or cure any default by Lessee under this Lease.

17.5. Time of Essence. Time is of the essence.

17.6. Captions. Article and paragraph captions are not a part hereof.

17.7. Incorporation of Prior Agreements; Amendments. This Lease contains all agreements of the parties with respect to any matter mentioned herein. No prior agreement or understanding pertaining to any such matter shall be effective. This Lease may be modified in writing only, signed by the parties in interest at the time of the modification.

17.8. Notices. Any notice required or permitted to be given hereunder shall be in writing and may be served personally or by regular mail, addressed to Lessor and Lessee respectively at the addresses set forth after their signatures at the end of this Lease.

17.9. Waivers. No waiver by Lessor of any provision hereof shall be deemed a waiver of any other provision hereof or of any subsequent breach by Lessee of the same or any other provision. Lessor's consent to or

approval of any act shall not be deemed to render unnecessary the obtaining of Lessor's consent to or approval of any subsequent act by Lessee. The acceptance of rent hereunder by Lessor shall not be a waiver of any preceding breach by Lessee of any provision hereof, other than the failure of Lessee to pay the particular rent so accepted, regardless of Lessor's knowledge of such preceding breach at the time of acceptance of such rent.

17.10. Recording. Lessee may record this Lease or a "short form" memorandum of this Lease without Lessor's prior written consent. Either party shall, upon request of the other, execute, acknowledge and deliver to the other a "short form" memorandum of this Lease for recording purposes.

17.11. Holding Over. If Lessee remains in possession of the Premises or any part thereof after the expiration of the term hereof without the express written consent of Lessor, such occupancy shall be a tenancy from month to month at a rental in the amount of the last monthly rental plus all other charges payable hereunder, and upon all the terms hereof applicable to a month-to-month tenancy.

17.12. Cumulative Remedies. No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

17.13. Covenants and Conditions. Each provision of this Lease performable by Lessee shall be deemed both a covenant and a condition.

17.14. Binding Effect; Choice of Law. Subject to any provisions hereof restricting assignment or subletting by Lessee and subject to the provisions of Paragraph 17.2, this Lease shall bind the parties, their personal representatives, successors and assigns. This Lease shall be governed by the laws of the State of California.

17.15. This section intentionally left blank.

17.16. Attorney's Fees. If either party or the broker named herein brings an action to enforce the terms hereof or declare rights hereunder, the prevailing party in any such action, on trial or appeal, shall be entitled to his reasonable attorney's fees to be paid by the losing party as fixed by the court. The provisions of this paragraph shall inure to the benefit of the broker named herein who seeks to enforce a right hereunder.

17.17. Lessor's Access. Lessor and Lessor's agents shall have the right to enter the Premises at reasonable times for the purpose of inspecting the same, showing the same to prospective purchasers, or lenders, and making such alterations, repairs, improvements or additions to the Premises or to the building of which they are a part as Lessor may deem necessary or desirable. Lessor may at any time place on or about the Premises any ordinary "For Sale" signs and Lessor may at any time during the last one hundred twenty (120) days of the term hereof place on or about the Premises any ordinary "For Lease" signs, all without rebate of rent or liability to Lessee.

17.18. Signs and Auctions. Lessee shall not place any sign upon the Premises or conduct any auction thereon without Lessor's prior written consent.

17.19. Merger. The voluntary or other surrender of this Lease by Lessee, or a mutual cancellation thereof, shall not work a merger, and shall, at the option of Lessor, terminate all or any existing subtenancies or may, at the option of Lessor, operate as an assignment to Lessor of any or all of such subtenancies.

17.20. Corporate Authority. If Lessee is a corporation, each individual executing this Lease on behalf of said corporation represents and warrants that he is duly authorized to execute and deliver this Lease on behalf of said corporation, in accordance with a duly adopted resolution of the Board of Directors of said corporation or in accordance with the Bylaws of said corporation, and that this Lease is binding upon said corporation in accordance with its terms. If Lessee is a corporation Lessee shall, within thirty (30) days after execution of this Lease, deliver to Lessor a certified copy of a resolution of the Board of Directors of said corporation authorizing or ratifying the execution of this Lease.

18. OCCUPANCY BY LESSEE. Should Premises be ready for occupancy prior or subsequent to April 1, 1987, Lessee shall take possession of Premises within one (1) week after being advised by Lessor of Lessor's receipt of said Notice of Completion and the rent shall commence upon the first day of said possession. Should possession take place prior to the

first day of a month or after the first day of a month then rent shall be prorated on a daily basis to the first day of the next month thereafter and Lessee shall pay Lessor upon

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said possession said pro rata rent together with the next month's rent.

The parties hereto have executed this Lease at the place and on the dates specified immediately adjacent to their respective signatures.

Executed at LOS ANGELES CALIFORNIA
on March 30, 1987.
Name and Address for service of notices and payment of rent:

_____
_____
_____

LESSOR:

By: Gordon N. Wagner
GORDON N. WAGNER

By: Joseph W. Basinger
JOSEPH W. BASINGER

Executed at Burbank, California on March __, 1987.
Address: 2721 Empire Avenue
Burbank, CA 91504-3212

HAWKER PACIFIC, INC., LESSEE

By: _____

By: _____

Bldg 5

BUSINESS PROPERTY LEASE

THIS AGREEMENT, made in duplicate this 23 day of March 1987 by and between

INDUSTRIAL BOWLING CORP., a California Corporation, hereinafter referred to as "LESSOR"

and

HAWKER PACIFIC, INC. hereinafter referred to as "LESSEE"

WITNESSETH:

1. That the Lessor, in consideration of the sum of ----------TEN----------

Dollars ($ 10.00) to him in hand paid by the Lessee, the receipt of which is hereby acknowledged, hereby and upon the following terms and conditions, leases to the Lessee, and the Lessee hereby hires and takes from the Lessor, those certain premises in the City of Los Angeles , County of Los Angeles, State of California, more particularly described as follows: That portion of the West 1/2 of the East 1/2 (measured to center lines of adjoining streets)of Lots 62 of the Lankershim Ranch Land & Water Co.Subdivision in the City of Los Angeles, County of Los Angeles, State of California, as per map recorded in Bk.31,pages 33 et seq of Misc. Records in the office of County Recorder of said county, described as follows:Beginning at a point on the westerly line of said the half 619.00 feet southerly of the intersection of the westerly line of said west one half with the southerly line of Sherman Way (formerly 9th St.) 50.00 feet wide as shown on said map, thence northerly along the westerly line of said west one half a distance of 330'; thence easterly parallel with the northerly line of said lot, a distance of 110.00 feet, thence southerly parallel with the westerly line of said west one half a distance of 330'; thence westerly (*)

(*) parallel with the northerly line of said lot a distance of 110.00 feet to the point of beginning. Together with an easement for ingress and egress over the northerly 289' of the easterly 30' of the westerly 110' of said one half.

More commonly known as 11260½ Sherman Way, NOrth Hollywood, California, (Back Metal Building)

3. The Lessee agrees to pay as rent for said demised premises, the total sum

of see below

Dollars ($), for the full term aforesaid, payable in installments of: $3,900.00 per month 4/1/87 through 7/31/87
$4,000.00 per month 8/1/87 through 9/30/89
*SEE ADDENDUM--RENT ESCALATIONS

Said payments shall be made in lawful money of the United States in advance, on the first day of each calendar month during said term, to Lessor or his agent, at such place in the County of Los Angeles as may be designated by the Lessor.

The first monthly installment shall be paid on the signing of this lease.

4. In addition to the rent hereinbefore reserved, the Lessee shall pay before delinquency all charges for water, gas, heat, electricity, power, refrigeration and any and all other services which may be used in or upon demised premises during the term of this lease, whether the same be charged or assessed at flat rates, measured by separate meters or pro rated. Should any such charge be payable by Lessee to Lessor and, after becoming due and payable, be and remain unpaid for five (5) days after presentation of bill therefore by Lessor to Lessee, the Lessor, in addition to any other remedy, at his option, may cause the discontinuance of such service to demised premises until such charge is fully paid and Lessor shall not be liable in any way for such discontinuance or any damage arising therefrom.

5. The Lessee agrees to use the premises for the purpose of storage and or any lawful manufacturing purpose permitted in a M-2 zone in the City of Los Angeles.

together with such other uses as may be incidental thereto and for no other purpose without the written consent of the Lessor. The Lessee shall not use the premises nor permit the same to be used for any unlawful purpose and at all times shall maintain the same in a sanitary and orderly condition, and conform to all laws and ordinances, and all regulations of any governmental body appertaining and shall not do or permit any act or omission which will void or suspend any insurance policy covering the premises, nor do anything which will cause any increase in the fire hazard in said premises or the building of which same may be a part, without the written consent of the Lessor first had and obtained and in the event of any consent by Lessor, express or implied, all increase in insurance premiums by reason thereof shall be paid by the Lessee. No auctions, nuisances, nor anything which will be an unreasonable annoyance to adjoining tenants or which will injure the reputation of the premises shall be done or permitted. This lease and the leasehold estate created hereby are, and shall be subject and subordinate to any encumbrances, or extensions thereof, now covering the demised premises, or any part thereof, or encumbrances hereafter placed on the demised premises. Lessee shall execute any further instrument required by Lessor subordinating this lease to such encumbrances.

6. Should the Lessor in good faith be unable to deliver possession of demised premises at the time herein specified for the commencement of said term, this lease shall not be void or voidable and Lessor shall not be liable in damages to Lessee, but Lessor shall use due diligence to deliver said premises as soon as possible thereafter and in such event Lessee shall have no right of cancellation herein unless said premises are not so delivered within a reasonable time. Lessee shall be entitled to an appropriate credit on the rent reserved hereunder for such period as delivery cannot be made.

7. The Lessee covenants that his taking possession of the herein demised premises shall be an acceptance of the safety and condition thereof; that no representations not herein stated regarding the leased premises, have been made by Lessor or any other person in his behalf. Lessee, as a material part of the consideration to be rendered to the Lessor, hereby waives all claims against Lessor for damage to, or loss of, property in, upon or about said premises and for injuries to persons in or about said premises from any cause arising at any time, and Lessee agrees to hold and save Lessor harmless and indemnified from all loss, damage, liability, expense or injury to any person or to the property of any person arising from the neglect or use of the premises by Lessee or any third person. Any and all elevators or other equipment in or about the premises shall be operated solely at Lessee's risk, except such as are operated entirely by Lessor.

8. The Lessee at his cost shall keep every part of the premises, its equipment and appurtenances, including all exterior glass, in the same good condition or repair as they now are or may later be put by the Lessor, except as otherwise provided herein, ordinary use excepted. The Lessor shall not be called upon to make any repairs, alterations, improvements or additions in, to or about the premises, except as otherwise provided herein, and should Lessee fail to keep said premises properly repaired, Lessor may do so (but is not so obligated), and the cost of such repairs shall be paid by the Lessee with the next installment of and the same as rent due hereunder. The Lessee shall not place or maintain any sign, emblem, or other advertising matter of any kind on the exterior walls, grounds or roof or in or upon the windows or doors of the premises, without the written consent of the Lessor, and Lessor may remove any such sign which is maintained without such consent. The Lessee shall not make any change, alteration, or addition in or to the premises without the written consent of the Lessor first obtained, but this shall not prevent Lessee from installing trade fixtures and temporary office partitions, providing the same comply with all laws, ordinances and regulations applicable thereto, and the same may be removed at any time before the end of this lease, if the premises shall not be injured by such removal or provided that Lessee repairs any such injury; except, however, that any linoleum or other floor covering that has been glued to the floor shall be, and remain a part of the demised premises and shall not be removed at any time without the written consent of the Lessor. The Lessee agrees to save the Lessor harmless from and against all expenses, liens, claims, or damages to either property or person which may or might arise by reason of the making of any repairs, alterations, additions or improvements to the demised

premises, and further agrees to promptly remove any liens which may be filed or imposed against the demised premises. The Lessee on demand shall pay any increase in taxes paid by Lessor by reason of the assessment as improvements of additions and alterations made by Lessee and removable by him. The Lessee shall neither install nor maintain any machinery or apparatus, the weight or operation of which will tend to injure or be detrimental to the premises.

9. The Lessee shall not assign nor hypothecate this lease or the leasehold estate created hereby, nor sublet the whole or any part of the demised premises, without the written consent of the Lessor first had or obtained, and any attempt so to do shall be void and confer no rights on any third party, and shall be cause for cancellation of this lease by the Lessor at his option, and this provision against assignment, hypothecation and subletting shall be deemed to be a continuing covenant and apply not only to the Lessee herein, but to any and all sub-tenants, assignees and mortgagees of said leasehold premises or estate and to anyone who may in any manner acquire any interest therein. This lease shall not be assignable by operation of law. Should the Lessee abandon the premises or should any other person remain in possession thereof for five (5) consecutive days by virtue of any attachment or execution or through any bankruptcy or insolvency proceeding, or assignment for the benefit of creditors; or should Lessee default in any of his covenants or violate any of the provisions hereof, the Lessor at his option may re-enter and take possession of the premises and remove all persons and property therefrom and at his option terminate this lease, with or without due process of law, such process being expressly waived by Lessee. In the event that Lessor elects to re-enter and take possession of said premises but not to terminate this lease, Lessee agrees to pay Lessor on demand, the cost of recovering possession of said premises and cost of reletting, including the usual commissions, and also to pay monthly, on demand, any deficiency in the rent. It is agreed by the Lessor and the Lessee that if this lease shall be terminated by the Lessor by reason of any breach thereof by the Lessee, the Lessor shall thereupon be entitled to recover from the Lessee the worth at the time of such termination, of the excess, if any, of the amount of rent and charges equivalent to rent reserved in this lease for the balance of the term as provided in Paragraph 2 hereof, over the then reasonable rental value of the premises for the same period. The several rights and remedies herein granted to the Lessor shall be cumulative and in addition to any others he may be entitled to by law, and the exercise of one or more rights or remedies shall not impair Lessor's right to exercise any other right or remedy; and the Lessee hereby waives all claims for damages that may be caused by the action of Lessor under the provisions of this paragraph, and all claims for damages to, or loss of, property belonging to Lessee, or any other person, firm or corporation that may be in or upon the premises at the time.

10. Lessee shall pay all real and personal property taxes levied against the demised premises.

11. Lessee shall at all times during the term of this lease maintain and carry at Lessee's own cost and expense, liability insurance in insurance companies satisfactory to Lessor insuring the Lessee, the Lessor and the demised premises against damages or injuries to persons or property with limits of not less than $500,000.00 for damage or injury to any one person and $1,000,000.00 for damages or injuries to more than one person and for property damage in an amount not less than $25,000.00 Lessee shall deposit copies of such insurance policies with Lessor upon request of Lessor. Lessee also to provide fire & extended coverage in the amount of $300,000.00 and name Industrial Bowling Corp. as additional insured.

12. As security for the payment of the rent hereunder provided and for the payment of all monies provided hereunder to be paid by the Lessee, and for the faithful performance of all of the terms, covenants and conditions of this lease

on the part of the Lessee to be kept and performed, the Lessee has, upon the execution of this lease, deposited with the Lessor the sum of $1,950.00 receipt of which is hereby acknowledged by the Lessor, which said sum Lessor shall hold as security without payment of interest thereon to Lessee. Upon the expiration date of the term of this lease or of any extension thereof or any sooner termination thereof, as herein provided, and provided at such time the Lessee be not in default in any of the terms and provisions of this lease, Lessor shall return to the Lessee the aforesaid sum of $ 1,950.00 , deposited by the Lessee as security hereunder.

13. The Lessor reserves the right to enter the premises during reasonable business hours, for the purpose of inspection, exhibition, posting notices or supervising any necessary repairs. The Lessor may maintain such notices on the premises as may be necessary to protect him against loss from mechanics' liens or otherwise. The Lessor shall have the right to alter the said building, or add thereto, and for that purpose may erect scaffolding or other necessary or proper structures, and in such event Lessor shall not be liable to Lessee for any damage or inconvenience occasioned thereby; but any such work or alterations shall be made in such manner as to inconvenience said Lessee as little as possible.

14. In case Lessee holds over after the end of the term herein provided, with the express or implied consent of the Lessor, such tenancy shall be from month to month only, and not a renewal hereof, and the rent shall be at the rate of

*The current rent amount on March 31, 1997..... Dollars ($.), per month; subject, however to every other term, covenant and condition of this lease.

15. At the expiration or other termination of said term or of any extension or hold-over period thereof, the Lessee shall quit and deliver up possession of the premises unto the Lessor, in as good condition as upon delivery of possession to the Lessee, ordinary use thereof and damage by any of the contingencies mentioned in Paragraph Sixteen (16) hereof excepted. Immediately upon vacating said premises the Lessee shall remove all rubbish therefrom, and upon his failure so to do, the Lessor may do so, and the Lessee shall pay to Lessor, upon demand, the reasonable expense thereof.

16. Should the premises be so badly damaged by fire, earthquake, incidents of war, or other sudden violent action of the elements, as to render them wholly unfit for Lessee's occupancy and so that they cannot be restored with reasonable diligence within 90 working days after the commencement of actual work, then this lease may be terminated within the period of 30 days after such disaster, by either party, upon written notice to the other, whereupon Lessee shall surrender the premises and shall not be liable for any further rental, and Lessor shall refund any unearned rent paid in advance by Lessee, calculated at a daily rate, based on the regular monthly rental. Should this lease not be so terminated or in the event of any lesser damage by any such cause, the premises shall be restored with all reasonable speed by the Lessor at his expense, and the Lessee shall pay a reasonable rental during the period of such restoration for such part of the premises as shall be fit for occupancy by Lessee, and shall not be entitled to any damages for any loss occasioned by the injury to, or the destruction of said building or of Lessee's property; nor shall the rent be abated if Lessee is able to carry on his business as usual in the said premises.

17. Lessee will pay and indemnify Lessor against all legal costs and charges, including attorney's fees, reasonably incurred by Lessor in enforcing any covenant or agreement of this lease or in or about the defense or prosecution of any suit in discharging the said premises, or any part thereof, from any lien, judgment, or encumbrance caused or suffered by Lessee, or in any suit or proceeding against the Lessee in which the Lessor may be made a party by reason of being the owner of said demised premises. Whenever it shall be necessary for either party to give notice or present a bill to the other, respecting this lease, such notice or bill may be sent by registered mail, postage prepaid, addressed to the Lessor at:

1819 West Olive Avenue, Burbank, California 91506

or the Lessee at:

2921 Empire Avenue, Burbank, California

and such notice or presentation shall be deemed to be complete twenty-four hours after the same has been deposited in any United States Post Office, or mail box in the County of Los Angeles. This shall be a valid and sufficient service of notice for all purposes. The Lessor reserves the right for himself or his agents, during

the last thirty (30) days of Lessee's tenancy, to place and maintain in one or more conspicuous places in the leased premises, "For Rent", "For Lease", or "For Sale" signs. If, at any time Lessor shall waive any covenant, condition or restriction of this lease, either before or after breach thereof, he shall not thereafter be deemed to have consented to any further breach of the same covenant, condition or to have waived subsequent compliance with any performance of such or any other covenant, condition, or restriction herein.

18. Where the term "Lessor" or "Lessee" is used herein, the same shall apply to the plural if necessary, and all terms used in the singular or in the masculine gender, shall apply to the plural, or to the feminine or neuter genders, where the context so requires.

19. Each and all of the terms and agreements herein contained, shall be binding upon and inure to the benefit of the successors in interest of the Lessor, and wherever the context admits or requires, the successors in interest of the Lessee. Time is of the essence of this lease.

IN WITNESS WHEREOF, the parties hereto have executed this lease at Los Angeles, California, the day and year first above written.

LESSOR INDUSTRIAL BOWLING CORP.

BY: JOHN D. HOWARD, PRESIDENT

LESSEE HAWKER PACIFIC, INC.

BY:

ADDENDUM TO
STANDARD INDUSTRIAL LEASE

Dated March 23, 1987

By and Between INDUSTRIAL BOWLING CORP.

& HAWKER PACIFIC, INC.

20 RENT ESCALATIONS

(a) On October 1, 1989, April 1, 1992, October 1, 1994

the monthly rent payable under paragraph 4 of the attached Lease shall be adjusted by the increase, if any, from the date this Lease commenced, in the Consumer Price Index of the Bureau of Labor Statistics of the U.S. Department of Labor for Urban Wage Earners and Clerical Workers, Los Angeles-Long Beach-Anaheim, California (1967=100), "All Items", herein referred to as "C.P.I."

(b) The monthly rent payable in accordance with paragraph (a) of this Addendum shall be calculated as follows: the rent payable for the first month of the term of this Lease, as set forth in paragraph 4 of the attached Lease, shall be multiplied by a fraction the numerator of which shall be the C.P.I. of the calendar month during which the adjustment is to take effect, and the denominator of which shall be the C.P.I. for the calendar month in which the original Lease term commences. The sum so calculated shall constitute the new monthly rent hereunder, but in no event, shall such new monthly rent be less than the rent payable for the month immediately preceding the date for rent adjustment.

(c) Pending receipt of the required C.P.I. and determination of the actual adjustment, Lessee shall pay an estimated adjusted rental, as reasonably determined by Lessor by reference to the then available C.P.I. information. Upon notification of the actual adjustment after publication of the required C.P.I., any overpayment shall be credited against the next installment of rent due, and any underpayment shall be immediately due and payable by Lessee. Lessor's failure to request payment of an estimated or actual rent adjustment shall not constitute a waiver of the right to any adjustment provided for in the Lease or this addendum.

(d) In the event the compilation and/or publication of the C.P.I. shall be transferred to any other governmental department or bureau or agency or shall be discontinued, then the index most nearly the same as the C.P.I. shall be used to make such calculation. In the event that Lessor and Lessee cannot agree on such alternative index, then the matter shall be submitted for decision to the American Arbitration Association in accordance with the then rules of said association and the decision of the arbitrators shall be binding upon the parties. The cost of said Arbitrators shall be paid equally by Lessor and Lessee.

Initials: _____ _____

Initials: _____ _____

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Bldg 4

BUSINESS PROPERTY LEASE

THIS AGREEMENT, made in duplicate this 1st day of August 1987 by and between

INDUSTRIAL BOWLING CORP., a California Corporation, hereinafter referred to as "LESSOR"

and

HAWKER PACIFIC, INC.
hereinafter referred to as "LESSEE"

WITNESSETH:

1. That the Lessor, in consideration of the sum of ----------TEN----------

Dollars ($ 10.00) to him in hand paid by the Lessee, the receipt of which is hereby acknowledged, hereby and upon the following terms and conditions, leases to the Lessee, and the Lessee hereby hires and takes from the Lessor, those certain premises in the City of Los Angeles , County of Los Angeles, State of California, more particularly described as follows:

See Exhibit "B", Parcel 1

Commonly known as 11258 Sherman Way, Sun Valley, California

2. The term of this lease shall be Approx. Nine Years, Four Months

commencing on the 7th day of December 1987

and ending on the 31st day of March 1997.

3. The Lessee agrees to pay as rent for said demised premises, the total sum

of $4,200 per mo. subject to the rent escalation addendum attached to the lease as Exhit "A" and made a part hereof.

Dollars ($), for the full term aforesaid, payable in installments of: $4,200.00 per mo. *The 1st full month's rent covering the period Jan. 1 through January 31, 1988 shall be paid on the signing of this lease. Lessee shall have a perioc rent-free occupancy commencing Dec. 7, 1987 and ending Dec. 21, 1987. Rent for the peri Dec. 22, 1987 through Dec. 31, 1987 in the amount of $1,380.80 (calculated based on a pe diem rent figure of $138.08) shall be paid to Lessor in addition to the first full month rent as stated above.

Said payments shall be made in lawful money of the United States in advance, on the 1st day of each calendar month during said term, to Lessor or his agent, at such place in the County of Los Angeles as may be designated by the Lessor.

The first monthly* installment shall be paid on the signing of this lease.

4. In addition to the rent hereinbefore reserved, the Lessee shall pay before delinquency all charges for water, gas, heat, electricity, power, refrigeration and any and all other services which may be used in or upon demised premises during the term of this lease, whether the same be charged or assessed at flat rates, measured by separate meters or pro rated. Should any such charge be payable by Lessee to Lessor and, after becoming due and payable, be and remain unpaid for five (5) days after presentation of bill therefore by Lessor to Lessee, the Lessor, in addition to any other remedy, at his option, may cause the discontinuance of such service to demised premises until such charge is fully paid and Lessor shall not be liable in any way for such discontinuance or any damage arising therefrom. JEK

5. The Lessee agrees to use the premises for the purpose of storage and/or any lawful manufacturing purpose permitted in a M-2 Zone in the City of Los Angeles.

together with such other uses as may be incidental thereto and for no other purpose without the written consent of the Lessor. The Lessee shall not use the premises nor permit the same to be used for any unlawful purpose and at all times shall maintain the same in a sanitary and orderly condition, and conform to all laws and ordinances, and all regulations of any governmental body appertaining and shall not do or permit any act or omission which will void or suspend any insurance policy covering the premises, nor do anything which will cause any increase in the fire hazard in said premises or the building of which same may be a part, without the written consent of the Lessor first had and obtained and in the event of any consent by Lessor, express or implied, all increase in insurance premiums by reason thereof shall be paid by the Lessee. No auctions, nuisances, nor anything which will be an unreasonable annoyance to adjoining tenants or which will injure the reputation of the premises shall be done or permitted. This lease and the leasehold estate created hereby are, and shall be subject and subordinate to any encumbrances, or extensions thereof, now covering the demised premises, or any part thereof, or encumbrances hereafter placed on the demised premises. Lessee shall execute any further instrument required by Lessor subordinating this lease to such encumbrances.

6. Should the Lessor in good faith be unable to deliver possession of demised premises at the time herein specified for the commencement of said term, this lease shall not be void or voidable and Lessor shall not be liable in damages to Lessee, but Lessor shall use due diligence to deliver said premises as soon as possible thereafter and in such event Lessee shall have no right of cancellation herein unless said premises are not so delivered within a reasonable time. Lessee shall be entitled to an appropriate credit on the rent reserved hereunder for such period as delivery cannot be made.

7. The Lessee covenants that his taking possession of the herein demised premises shall be an acceptance of the safety and condition thereof; that no representations not herein stated regarding the leased premises, have been made by Lessor or any other person in his behalf. Lessee, as a material part of the consideration to be rendered to the Lessor, hereby waives all claims against Lessor for damage to, or loss of, property in, upon or about said premises and for injuries to persons in or about said premises from any cause arising at any time, and Lessee agrees to hold and save Lessor harmless and indemnified from all loss, damage, liability, expense or injury to any person or to the property of any person arising from the neglect or use of the premises by Lessee or any third person. Any and all elevators or other equipment in or about the premises shall be operated solely at Lessee's risk, except such as are operated entirely by Lessor.

8. The Lessee at his cost shall keep every part of the premises, its equipment and appurtenances, including all exterior glass, in the same good condition or repair as they now are or may later be put by the Lessor, except as otherwise provided herein, ordinary use excepted. The Lessor shall not be called upon to make any repairs, alterations, improvements or additions in, to or about the premises, except as otherwise provided herein, and should Lessee fail to keep said premises properly repaired, Lessor may do so (but is not so obligated), and the cost of such repairs shall be paid by the Lessee with the next installment of and the same as rent due hereunder. The Lessee shall not place or maintain any sign, emblem, or other advertising matter of any kind on the exterior walls, grounds or roof or in or upon the windows or doors of the premises, without the written consent of the Lessor, and Lessor may remove any such sign which is maintained without such consent. The Lessee shall not make any change, alteration, or addition in or to the premises without the written consent of the Lessor first obtained, but this shall not prevent Lessee from installing trade fixtures and temporary office partitions, providing the same comply with all laws, ordinances and regulations applicable thereto, and the same may be removed at any time before the end of this lease, if the premises shall not be injured by such removal or provided that Lessee repairs any such injury; except, however, that any linoleum or other floor covering that has been glued to the floor shall be, and remain a part of the demised premises and shall not be removed at any time without the written consent of the Lessor. The Lessee agrees to save the Lessor harmless from and against all expenses, liens, claims, or damages to either property or person which may or might arise by reason of the making of any repairs, alterations, additions or improvements to the demised

premises, and further agrees to prompt[illegible]ove any liens which may be filed or imposed against the demised premises. The Lessee on demand shall pay any increase in taxes paid by Lessor by reason of the assessment as improvements of additions and alterations made by Lessee and removable by him. The Lessee shall neither install nor maintain any machinery or apparatus, the weight or operation of which will tend to injure or be detrimental to the premises.

9. The Lessee shall not assign nor hypothecate this lease or the leasehold estate created hereby, nor sublet the whole or any part of the demised premises, without the written consent of the Lessor first had or obtained, and any attempt so to do shall be void and confer no rights on any third party, and shall be cause for cancellation of this lease by the Lessor at his option, and this provision against assignment, hypothecation and subletting shall be deemed to be a continuing covenant and apply not only to the Lessee herein, but to any and all sub-tenants, assignees and mortgagees of said leasehold premises or estate and to anyone who may in any manner acquire any interest therein. This lease shall not be assignable by operation of law. Should the Lessee abandon the premises or should any other person remain in possession thereof for five (5) consecutive days by virtue of any attachment or execution or through any bankruptcy or insolvency proceeding, or assignment for the benefit of creditors; or should Lessee default in any of his covenants or violate any of the provisions hereof, the Lessor at his option may re-enter and take possession of the premises and remove all persons and property therefrom and at his option terminate this lease, with or without due process of law, such process being expressly waived by Lessee. In the event that Lessor elects to re-enter and take possession of said premises but not to terminate this lease, Lessee agrees to pay Lessor on demand, the cost of recovering possession of said premises and cost of reletting, including the usual commissions, and also to pay monthly, on demand, any deficiency in the rent. It is agreed by the Lessor and the Lessee that if this lease shall be terminated by the Lessor by reason of any breach thereof by the Lessee, the Lessor shall thereupon be entitled to recover from the Lessee the worth at the time of such termination, of the excess, if any, of the amount of rent and charges equivalent to rent reserved in this lease for the balance of the term as provided in Paragraph 2 hereof, over the then reasonable rental value of the premises for the same period. The several rights and remedies herein granted to the Lessor shall be cumulative and in addition to any others he may be entitled to by law, and the exercise of one or more rights or remedies shall not impair Lessor's right to exercise any other right or remedy; and the Lessee hereby waives all claims for damages that may be caused by the action of Lessor under the provisions of this paragraph, and all claims for damages to, or loss of, property belonging to Lessee, or any other person, firm or corporation that may be in or upon the premises at the time.

10. Lessee shall pay all real and personal property taxes levied against demised premises.

11. Lessee shall at all times during the term of this lease maintain and carry at Lessee's own cost and expense, liability insurance in insurance companies satisfactory to Lessor insuring the Lessee, the Lessor and the demised premises against damages or injuries to persons or property with limits of not less than $500,000.00 for damage or injury to any one person and 1,000,000.00 for damages or injuries to more than one person and for property damage in an amount not less than $25,000.00 Lessee shall deposit copies of such insurance policies with Lessor upon request of Lessor. Lessee also to provide fire & extended coverage in the amount of $300,000.00 and name Industrial Bowling Corp. as additional insured.

12. As security for the payment of the rent hereunder provided and for the payment of all monies provided hereunder to be paid by the Lessee, and for the faithful performance of all of the terms, covenants and conditions of this lease

on the part of the Lessee to be kept and performed, the Lessee has, upon the execution of this lease, deposited with the Lessor the sum of $4,200.00 receipt of which is hereby acknowledged by the Lessor, which said sum Lessor shall hold as security without payment of interest thereon to Lessee. Upon the expiration date of the term of this lease or of any extension thereof or any sooner termination thereof, as herein provided, and provided at such time the Lessee be not in default in any of the terms and provisions of this lease, Lessor shall return to the Lessee the aforesaid sum of $ 4,200.00 , deposited by the Lessee as security hereunder.

13. The Lessor reserves the right to enter the premises during reasonable business hours, for the purpose of inspection, exhibition, posting notices or supervising any necessary repairs. The Lessor may maintain such notices on the premises as may be necessary to protect him against loss from mechanics' liens or otherwise. The Lessor shall have the right to alter the said building, or add thereto, and for that purpose may erect scaffolding or other necessary or proper structures, and in such event Lessor shall not be liable to Lessee for any damage or inconvenience occasioned thereby; but any such work or alterations shall be made in such manner as to inconvenience said Lessee as little as possible.

14. In case Lessee holds over after the end of the term herein provided, with the express or implied consent of the Lessor, such tenancy shall be from month to month only, and not a renewal hereof, and the rent shall be at the rate of

*The current rent amount on March 31, 1997.....Dollars ($ *), per month; subject, however to every other term, covenant and condition of this lease.

15. At the expiration or other termination of said term or of any extension or hold-over period thereof, the Lessee shall quit and deliver up possession of the premises unto the Lessor, in as good condition as upon delivery of possession to the Lessee, ordinary use thereof and damage by any of the contingencies mentioned in Paragraph Sixteen (16) hereof excepted. Immediately upon vacating said premises the Lessee shall remove all rubbish therefrom, and upon his failure so to do, the Lessor may do so, and the Lessee shall pay to Lessor, upon demand, the reasonable expense thereof.

16. Should the premises be so badly damaged by fire, earthquake, incidents of war, or other sudden violent action of the elements, as to render them wholly unfit for Lessee's occupancy and so that they cannot be restored with reasonable diligence within 90 working days after the commencement of actual work, then this lease may be terminated within the period of 30 days after such disaster, by either party, upon written notice to the other, whereupon Lessee shall surrender the premises and shall not be liable for any further rental, and Lessor shall refund any unearned rent paid in advance by Lessee, calculated at a daily rate, based on the regular monthly rental. Should this lease not be so terminated or in the event of any lesser damage by any such cause, the premises shall be restored with all reasonable speed by the Lessor at his expense, and the Lessee shall pay a reasonable rental during the period of such restoration for such part of the premises as shall be fit for occupancy by Lessee, and shall not be entitled to any damages for any loss occasioned by the injury to, or the destruction of said building or of Lessee's property; nor shall the rent be abated if Lessee is able to carry on his business as usual in the said premises.

17. Lessee will pay and indemnify Lessor against all legal costs and charges, including attorney's fees, reasonably incurred by Lessor in enforcing any covenant or agreement of this lease or in or about the defense or prosecution of any suit in discharging the said premises, or any part thereof, from any lien, judgment, or encumbrance caused or suffered by Lessee, or in any suit or proceeding against the Lessee in which the Lessor may be made a party by reason of being the owner of said demised premises. Whenever it shall be necessary for either party to give notice or present a bill to the other, respecting this lease, such notice or bill may be sent by registered mail, postage prepaid, addressed to the Lessor at:

1819 W. Olive Avenue, Burbank, California 91506

or the Lessee at:

2921 Empire Ave, Burbank, California

and such notice or presentation shall be deemed to be complete twenty-four hours after the same has been deposited in any United States Post Office, or mail box in the County of Los Angeles. This shall be a valid and sufficient service of notice for all purposes. The Lessor reserves the right for himself or his agents, during

Exhibit "A"

ADDENDUM TO STANDARD INDUSTRIAL LEASE

Dated August 1, 1987

By and Between INDUSTRIAL BOWLING CORP.

& HAWKER PACIFIC, INC.

20 RENT ESCALATIONS

(a) On October 1, 1989; April 1, 1992; October 1, 1994

the monthly rent payable under paragraph 4 of the attached Lease shall be adjusted by the increase, if any, from the date this Lease commenced, in the Consumer Price Index of the Bureau of Labor Statistics of the U.S. Department of Labor for Urban Wage Earners and Clerical Workers, Los Angeles-Long Beach-Anaheim, California (1967=100), "All Items", herein referred to as "C.P.I."

(b) The monthly rent payable in accordance with paragraph (a) of this Addendum shall be calculated as follows: the rent payable for the first month of the term of this Lease, as set forth in paragraph 4 of the attached Lease, shall be multiplied by a fraction the numerator of which shall be the C.P.I. of the calendar month during which the adjustment is to take effect, and the denominator of which shall be the C.P.I. for the calendar month in which the original Lease term commences. The sum so calculated shall constitute the new monthly rent hereunder, but in no event, shall such new monthly rent be less than the rent payable for the month immediately preceding the date for rent adjustment.

(c) Pending receipt of the required C.P.I. and determination of the actual adjustment, Lessee shall pay an estimated adjusted rental, as reasonably determined by Lessor by reference to the then available C.P.I. information. Upon notification of the actual adjustment after publication of the required C.P.I., any overpayment shall be credited against the next installment of rent due, and any underpayment shall be immediately due and payable by Lessee. Lessor's failure to request payment of an estimated or actual rent adjustment shall not constitute a waiver of the right to any adjustment provided for in the Lease or this addendum.

(d) In the event the compilation and/or publication of the C.P.I. shall be transferred to any other governmental department or bureau or agency or shall be discontinued, then the index most nearly the same as the C.P.I. shall be used to make such calculation. In the event that Lessor and Lessee cannot agree on such alternative index, then the matter shall be submitted for decision to the American Arbitration Association in accordance with the then rules of said association and the decision of the arbitrators shall be binding upon the parties. The cost of said Arbitrators shall be paid equally by Lessor and Lessee.

Initials: _____

Initials: [illegible]

PARCEL 1

That portion of the West one-half of the East one-half (measured to the center line of the adjoining streets) of Lot 62 of the Lankershim Ranch Land and Water Co. Subdivision in the City of Los Angeles, County of Los Angeles, State of California as per map recorded in Book 31 pages 59 et seq., of Miscellaneous Records, in the office of the County Recorder of said County, lying northerly of a line parallel with and distant Northerly 30 feet from a line bearing South 89° 04' 25" East from a point in the center line of Tujunga Avenue, 60 feet wide, distant thereon North 0° 00' 30" West 406.44 feet from the intersection of said center line with the Westerly prolongation of the South line of said Lot 62.

Except the following described parcel:

Beginning at the Southeasterly corner of the above described parcel, thence North 89° 04' 25" West 130.10 feet, thence Northerly parallel with the East line of the West half of the East half of said Lot 62, 160.00 feet, thence North 89° 04' 25" West 89.90 feet to the Westerly line of the Easterly 220.00 feet of the West one-half of the East one-half of said Lot 62, thence North along said last mentioned Westerly line 95.19 feet to the South line of the Northerly 619 feet of said Lot 62, thence Westerly along said last mentioned South line 110.06 feet to the West line of the East one-half of said Lot 62, thence Northerly along said last mentioned West line, 619.00 feet to the North line of Lot 62, thence Easterly along the Northerly line of Lot 62 to the East line of the West one-half of the East one-half of Lot 62, thence Southerly along said last

Survey By Gann

mentioned East line 875.60 feet to the point of beginning of this description.

PARCEL 2

An easement for driveway purposes over the West 20.00 feet of the West 240.00 feet of the North 619.00 feet of the West one-half of the East one-half of said Lot 62

the last thirty (30) days of Lessee's tenancy, to place and maintain in one or more conspicuous places in the leased premises, "For Rent", "For Lease", or "For Sale" signs. If, at any time Lessor shall waive any covenant, condition or restriction of this lease, either before or after breach thereof, he shall not thereafter be deemed to have consented to any further breach of the same covenant, condition or to have waived subsequent compliance with any performance of such or any other covenant, condition, or restriction herein.

18. Where the term "Lessor" or "Lessee" is used herein, the same shall apply to the plural if necessary, and all terms used in the singular or in the masculine gender, shall apply to the plural, or to the feminine or neuter genders, where the context so requires.

19. Each and all of the terms and agreements herein contained, shall be binding upon and inure to the benefit of the successors in interest of the Lessor, and wherever the context admits or requires, the successors in interest of the Lessee. Time is of the essence of this lease.

IN WITNESS WHEREOF, the parties hereto have executed this lease at Los Angeles, California, the day and year first above written.

LESSOR INDUSTRIAL BOWLING CORP.

John D Howard

BY: JOHN D. HOWARD, PRESIDENT

LESSEE HAWKER PACIFIC, INC.

Douglas M. Nestat
Assistant Secretary

STATE OF CALIFORNIA)
) SS.
COUNTY OF LOS ANGELES)

On DEC 17, 1987, before me, the undersigned, a Notary Public in and for said State personally appeared JOHN D. HOWARD, known to me to be the PRESIDENT of the Corporation that executed the within instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation, therein named, and acknowledged to me that such Corporation executed the same.

WITNESS my hand and official seal.

V. M. Holmes
Notary Public in and for said State

OFFICIAL SEAL
V.M. HOLMES
Notary Public-California
Principal Office in
Los Angeles County
My Comm. Exp. Oct. 13, 1990

STATE OF CALIFORNIA)
) SS.
COUNTY OF LOS ANGELES)

On DEC. 17, 1987, before me, the undersigned, a Notary Public in and for said State personally appeared DOUGLAS M. NESTAT, known to me to be the ASSISTANT SECRETARY of the Corporation that executed the within instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation, therein named, and acknowledged to me that such Corporation executed the same.

WITNESS my hand and official seal.

Rebecca Sandra Ward
Notary Public in and for said State

OFFICIAL SEAL
REBECCA SANDRA WARD
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My Comm. Expires June 2, 1989

FACILITY FEATURES SHOWN ON MAP

A. 1,1,1 Trichloroethane Storage Tank

B. Former chemical storage shed (now removed)

C. Former chemical storage shed (now removed)

D. Waste Oil and Water Storage Tank

E. Flammable liquid storage shed for new products (solvents, thinners, kerosene), metal, resting on concrete slab within berm; 14'x14'; next to waste oil and water tank (D)

F. Hazardous Waste Staging Area [in same area as D and E], on paved area sloping down into block wall "L"

G. Cooling Tower

H. Septic Tanks; concrete, one connected to restroom in Building 4 and one to Building 3, with leach lines

I. Underground storage tank, not connected by piping to anything else

J. Sump, concrete, 1'x1'x3'

K & L. 2 sumps [see Response to First EPA Request, description at answer 2]

M & N. 2 chemical storage sheds, metal, each 14'x14', both on one concrete slab, with berm around each shed

O. Flammable liquid storage area, 20'x20' bermed area for lubricating oils, on concrete slab with surrounding 10' high chain link fence

P. Building 2 clarifier, consisting of 5 connected compartments 4x5x5 feet deep; not in use; in floor, extending 2-4 feet below grade

Q. Building 2 plating tank containment pit, concrete, 13' wide x 75' long x 7-8' deep; 4-5' below grade; draining into sump in NW corner which is pumped out whenever liquids collect

R. Hydraulic Test Stand Housing, 40' x 30' stucco, 2 room building on concrete slab (only plumbing is water line in)

PARTIALLY SCANNED
OVERSIZE ITEM(S)

See document # 22031 06
for partially scanned image(s).

For complete hardcopy version of the oversize document
contact the Region IX Superfund Records Center

LAW ENVIRONMENTAL, INC.

3420 N. SAN FERNANDO BLVD.
SUITE 200
BURBANK, CALIFORNIA 91504
818-848-0214
PANAFAX 818-848-1674

January 4, 1989

Hawker Pacific, Inc.
11310 Sherman Way
Sun Valley, California 91352

Project No. 58-8601
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson
Hazardous Waste Engineer

Gentlemen:

REPORT
Subsurface Investigation
AB-1803 Follow-up Program
11310 Sherman Way
Sun Valley, California

INTRODUCTION

Law Environmental, Inc. is pleased to submit this report of subsurface investigation at the above-referenced property. The investigation was requested by the Regional Water Quality Control Board (RWQCB) in their September 6, 1988 letter to Mr. Erik Johnson (Appendix A). This report addresses all elements of the required investigation which concern subsurface investigation and associated laboratory analysis (Items 2 and 4a). Other requirements of the September 6, 1988 letter are/will be addressed in documents provided to the RWQCB by Hawker Pacific.

Our professional services have been performed using that degree of care and skill customarily exercised under similar

circumstances by reputable consulting engineers and geologists practicing in this or equivalent localities. No other warranty, expressed or implied, is made as to the information or professional advice included in this report. This report has been prepared expressly for Hawker Pacific, Inc. to be used solely for the purposes of the required RWQCB AB-1803 investigation. The report has not been prepared for use by other parties and may not contain sufficient information for other parties or other uses.

All findings and conclusions derived from measurements or analyses of soil, water, air and/or gas are based on the conditions which existed only at those particular sample locations and the times of sampling. The analytical results reflect the range of accuracy and detection levels, when specified, for the particular analytical equipment and/or specific analytical method(s) used.

FIELD INVESTIGATION

METHODS

Our field investigation was conducted on December 1, 1988. Three soil borings were completed to a depth of 10 feet at the locations indicated on Plate 1, Site Map. Boring B-1 was drilled

approximately one foot from the berm surrounding the TCA tank at the rear of Building 2. Boring B-2 was drilled approximately two feet from the berm surrounding the waste oil tank. Boring B-3 was drilled within the drum storage area.

All borings were drilled using a truck-mounted hollow-stem auger with an outer diameter of eight inches. Undisturbed samples were collected and preserved in accordance with the Soil Sampling Protocol in Appendix B. Samples from each boring were monitored in the field for the presence of volatile organic compounds using a Foxboro OVA 108GC (OVA). This unit is calibrated to a methane standard and provides a direct readout with a sensitivity of about one part per million (ppm) for most fuel hydrocarbons and organic solvents. Nine soil samples (three from each boring) were transported to Brown and Caldwell Laboratories in Pasadena for analysis.

GEOLOGY

Up to one foot of fill soils consisting of silty sand to sandy silt were encountered in our borings. The fill was underlain by recent alluvium consisting of a light brown, medium to coarse-grained sand with a trace of silt. This sand persisted to the bottom of our borings. Details of the geology are shown on the boring logs included as Appendix C.

Previous work in this vicinity indicates that deeper materials at this location are generally characterized by coarse sands and gravels. Los Angeles County Flood Control District data suggest that the depth to ground water at this location is in excess of 150 feet.

OBSERVATIONS

Ground water was not encountered in any of our borings. No visual or olfactory evidence of soil contamination was observed. No OVA readings were obtained from the borings which were in excess of background values.

ANALYTICAL RESULTS

In accordance with RWQCB requirements, all analyses were performed by a State and EPA-certified laboratory. The laboratory report and associated chain-of-custody documents are included in Appendix D. Samples from depths of 1, 5 and 10 feet in each boring were analyzed discretely for volatile organic compounds by EPA Method 8240.

Only one compound, methylene chloride, was detected in the soil samples. A fairly uniform concentration, 5 to 16 parts per

billion (ppb), was identified in all 9 samples. Methylene chloride is a commonly used solvent in the laboratory. Brown and Caldwell Laboratories has determined that the reported methylene chloride concentrations are due to laboratory contamination. This is stated in the letter from Brown and Caldwell which follows the laboratory report. Even so, the levels detected are well below the Drinking Water Action Level of 40 ppb recommended by the State of California Department of Health Services (January 1987).

CONCLUSIONS

Our investigation has not detected the presence of volatile organic compounds within the investigated areas of the subject property. The low levels of methylene chloride detected by the laboratory are believed to be the result of laboratory contamination.

-oOo-

One copy of this report should be submitted to the RWQCB by January 6, 1989. This extension was granted by Ms. Mila Sylvestre at the request of Law Environmental on December 21, 1988.

It has been a pleasure to have been of service to you on this project. If you have any questions regarding this report, please contact the undersigned.

Yours very truly,

LAW ENVIRONMENTAL, INC.

by Warren W. Gross
Warren W. Gross
Staff Hydrogeologist

by Jack Carmody
Jack Carmody, Manager
Environmental Assessment

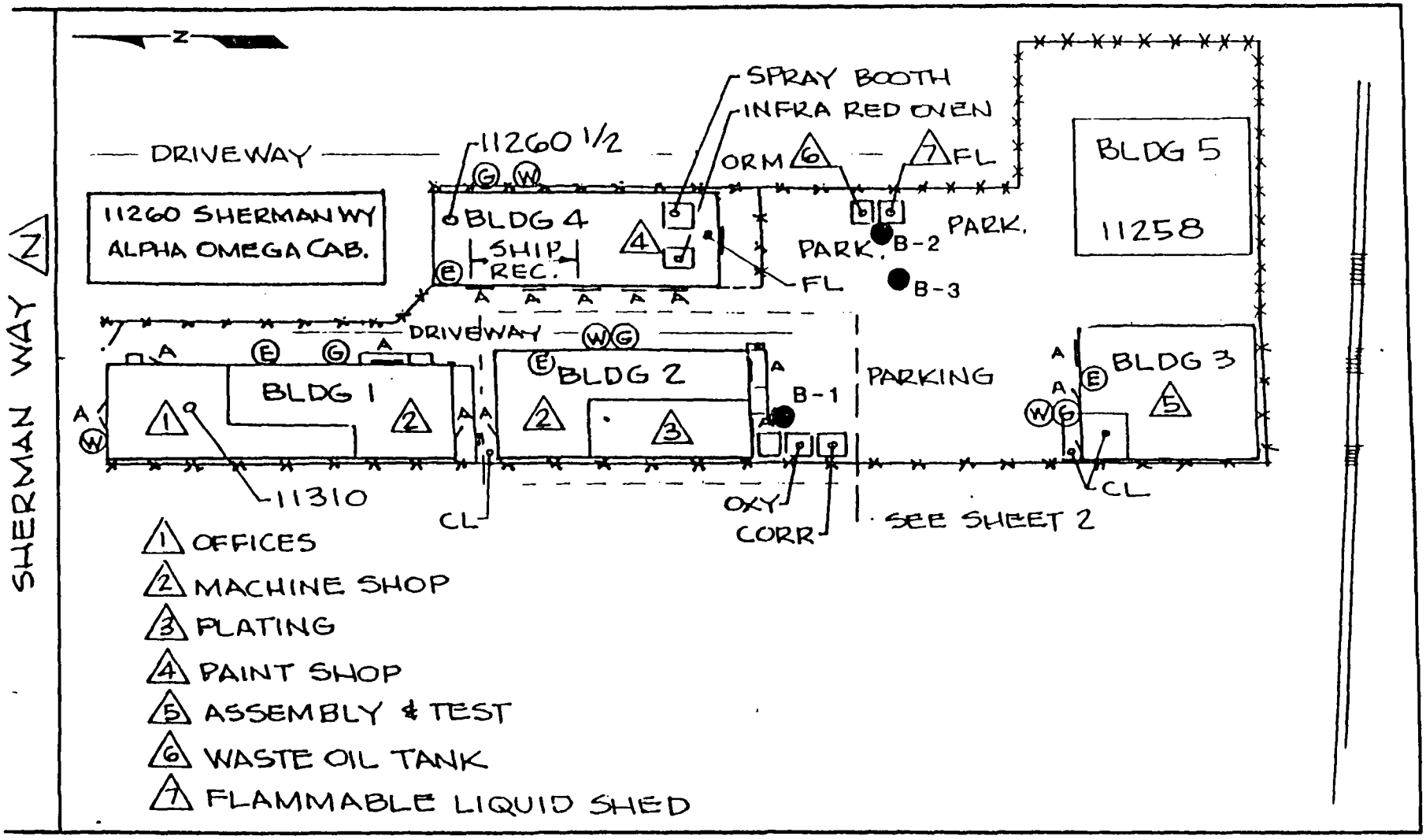
by Glenn A. Brown
Glenn A. Brown, C.E.G. 3
Senior Vice President

WG/gla/8601.RPT
Attachments

(3 copies submitted)

PROJECT No. 58-8601 DATE 1-4-89 PROJ. MGR. WG DFTR. WG

SITE MAP FOR BUSINESS PLAN (BP-6)



BASE MAP BY HAWKER PACIFIC

NO SCALE PROVIDED

B-1 ● BORING LOCATION AND NUMBER

SITE MAP

PLATE 1

LAW ENVIRONMENTAL, INC.

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker Pacific

PROJECT No. 58-8601

LOCATION 11310 Sherman Way, Sun Valley

BORING No. B-1

DRILLED BY Drill-Line

PAGE 1 of 1

DRILLING METHOD Hollow Stem Auger

DATE 12-1-88

BOREHOLE DEPTH 10 feet BOREHOLE DIA. 8 inches

LOGGED BY MM

DEPTH (feet)	BLOW COUNT	GASTECHTOR (ppm hexane)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						3" Asphaltic Paving
1					SM/ML	FILL - SILTY SAND/SANDY SILT - fine-grained, some clay, slightly plastic, damp, medium brown.
2					SP	SAND - medium to coarse grained, trace of silt, dry to damp, white to light brown
3						
4						
5						
6						
7						
8						
9						
0						
1						
2						
3						
4						
5						
6						
7						
8						Remarks:
9						End boring at ten feet. Ground Water not encountered. No Caving. No unusual odors or soil discoloration.
0		interval sampled		interval preserved		

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker Pacific

PROJECT No. 58-8601

LOCATION 11310 Sherman Way, Sun Valley

BORING No. B-2

DRILLED BY Drill-Line

PAGE 1 of 1

DRILLING METHOD Hollow Stem Auger

DATE 12-1-88

BOREHOLE DEPTH 10 feet BOREHOLE DIA. 8 inches

LOGGED BY MM

DEPTH (feet)	BLOW COUNT	CASIECHTOR (ppm hexane)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
					SM	2" Asphaltic Paving FILL-SILTY SAND - very fine grained, trace clay, damp, medium brown
1					SP	SAND - medium to coarse grained, trace silt, dry to damp, white to light brown.
2						
3						
4						
5						
6						
7						
8						
9						
0						
1						
2						
3						
4						
5						
6						
7						
8						Remarks:
9						End boring at ten feet. Ground Water not encountered. No Caving. No unusual odors or soil discoloration.
0		interval sampled		interval preserved		

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker Pacific

PROJECT No. 58-8601

LOCATION 11310 Sherman Way, Sun Valley

BORING No. B-3

DRILLED BY Drill-Line

PAGE 1 of 1

DRILLING METHOD Hollow Stem Auger

DATE 12-1-88

BOREHOLE DEPTH 10 feet BOREHOLE DIA. 8 inches

LOGGED BY MM

DEPTH (feet)	BLOW COUNT	GASTECHTOR (ppm hexane)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						2" Asphaltic Paving
1					SP	SAND - medium to coarse grained, trace silt, damp to moist - moisture increasing with depth, light brown.
2			■			
3						
4						
5			■			
6						
7						
8						
9						
0			■			
1						
2						
3						
4						
5						
6						
7						
8						Remarks: End boring at ten feet. Ground Water not encountered. No Caving. No unusual odors or soil discoloration.
9						
0		interval sampled	■	interval preserved		

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655
FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-12-019

Received: 01 DEC 88
Reported: 09 DEC 88

Mark Miller
Law Environmental
3420 N. San Fernando Rd., Suite 200
Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-1	B-1 1'	01 DEC 88
12-019-2	B-1 5'	01 DEC 88
12-019-3	B-1 10'	01 DEC 88
12-019-4	B-2 1'	01 DEC 88
12-019-5	B-2 5'	01 DEC 88

PARAMETER	12-019-1	12-019-2	12-019-3	12-019-4	12-019-5
Vol.Pri.Poll. (EPA-8240)					
Date Extracted	12/06/88	12/06/88	12/06/88	12/06/88	12/06/88
Dilution Factor, Times 1	1	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethylene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	<5
2-Hexanone, ug/kg	<5	<5	<5	<5	<5
Acetone, ug/kg	<50	<50	<50	<50	<50
Acrolein, ug/kg	<50	<50	<50	<50	<50
Acrylonitrile, ug/kg	<50	<50	<50	<50	<50
Bromodichloromethane, ug/kg	<5	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5	<5

BROWN AND CALDWELL LABORATORIES

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Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

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12-019-1	B-1 1'	01 DEC 88
12-019-2	B-1 5'	01 DEC 88
12-019-3	B-1 10'	01 DEC 88
12-019-4	B-2 1'	01 DEC 88
12-019-5	B-2 5'	01 DEC 88

PARAMETER	12-019-1	12-019-2	12-019-3	12-019-4	12-019-5
Benzene, ug/kg	<5	<5	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5	<5
Chloromethane, ug/kg	<5	<5	<5	<5	<5
Carbon Disulfide, ug/kg	<5	<5	<5	<5	<5
Dibromochloromethane, ug/kg	<5	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5	<5
Methyl Isobutyl Ketone, ug/kg	<5	<5	<5	<5	<5
Methyl Ethyl Ketone, ug/kg	<50	<50	<50	<50	<50
Methylene Chloride, ug/kg	16	6	6	5	5
Tetrachloroethylene, ug/kg	<5	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5	<5
Trichloroethylene, ug/kg	<5	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5	<5
Vinyl Acetate, ug/kg	<50	<50	<50	<50	<50
Vinyl Chloride, ug/kg	<5	<5	<5	<5	<5

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12-019-2	B-1 5'	01 DEC 88
12-019-3	B-1 10'	01 DEC 88
12-019-4	B-2 1'	01 DEC 88
12-019-5	B-2 5'	01 DEC 88

PARAMETER	12-019-1	12-019-2	12-019-3	12-019-4	12-019-5
Total Xylene Isomers, ug/kg	<50	<50	<50	<50	<50
trans-1,2-Dichloroethylene, ug/kg	<5	<5	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-6	B-2 10'	01 DEC 88
12-019-7	B-3 1'	01 DEC 88
12-019-8	B-3 5'	01 DEC 88
12-019-9	B-3 10'	01 DEC 88

PARAMETER	12-019-6	12-019-7	12-019-8	12-019-9
Vol.Pri.Poll. (EPA-8240)				
Date Extracted	12/06/88	12/06/88	12/07/88	12/07/88
Dilution Factor, Times 1	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethylene, ug/kg	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5
2-Hexanone, ug/kg	<5	<5	<5	<5
Acetone, ug/kg	<50	<50	<50	<50
Acrolein, ug/kg	<50	<50	<50	<50
Acrylonitrile, ug/kg	<50	<50	<50	<50
Bromodichloromethane, ug/kg	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5

BROWN AND CALDWELL LABORATORIES

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12-019-6	B-2 10'	01 DEC 88
12-019-7	B-3 1'	01 DEC 88
12-019-8	B-3 5'	01 DEC 88
12-019-9	B-3 10'	01 DEC 88

PARAMETER	12-019-6	12-019-7	12-019-8	12-019-9
Chlorobenzene, ug/kg	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5
Chloromethane, ug/kg	<5	<5	<5	<5
Carbon Disulfide, ug/kg	<5	<5	<5	<5
Dibromochloromethane, ug/kg	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	6	9
Methyl Isobutyl Ketone, ug/kg	<5	<5	<5	<5
Methyl Ethyl Ketone, ug/kg	<50	<50	<50	<50
Methylene Chloride, ug/kg	6	6	6	7
Tetrachloroethylene, ug/kg	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5
Trichloroethylene, ug/kg	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5
Vinyl Acetate, ug/kg	<50	<50	<50	<50
Vinyl Chloride, ug/kg	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<50	<50	<50	<50
trans-1,2-Dichloroethylene, ug/kg	<5	<5	<5	<5

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-12-019

Received: 01 DEC 88
Reported: 09 DEC 88

Mark Miller
Law Environmental
3420 N. San Fernando Rd., Suite 200
Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-6	B-2 10'	01 DEC 88
12-019-7	B-3 1'	01 DEC 88
12-019-8	B-3 5'	01 DEC 88
12-019-9	B-3 10'	01 DEC 88

PARAMETER	12-019-6	12-019-7	12-019-8	12-019-9
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5

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Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-10	B-1 1' BC/QC SPK	01 DEC 88

PARAMETER	12-019-10
Vol.Pri.Poll. (EPA-8240)	
Date Extracted	12/06/88
Dilution Factor, Times 1	1
1,1-Dichloroethylene, Percent	130
Benzene, Percent	100
Chlorobenzene, Percent	105
Trichloroethylene, Percent	85
Toluene, Percent	105
Other Vol.Pri.Poll. (EPA-8240)	---

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ANALYTICAL REPORT

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Received: 01 DEC 88
Reported: 09 DEC 88

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Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-11	B-1 1' BC/QC DUP-SPK	01 DEC 88

PARAMETER	12-019-11
Vol.Pri.Poll. (EPA-8240)	
Date Extracted	12/06/88
Dilution Factor, Times 1	1
1,1-Dichloroethylene, Percent	130
Benzene, Percent	110
Chlorobenzene, Percent	110
Trichloroethylene, Percent	90
Toluene, Percent	110
Other Vol.Pri.Poll. (EPA-8240)	---

BROWN AND CALDWELL LABORATORIES

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ANALYTICAL REPORT

LOG NO: P88-12-019

Received: 01 DEC 88
Reported: 09 DEC 88

Mark Miller
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3420 N. San Fernando Rd., Suite 200
Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, NON-SALINE WATER SAMPLES	DATE SAMPLED
12-019-12	Laboratory Control Standard	

PARAMETER	12-019-12
Vol.Pri.Poll. (EPA-8240)	
Date Extracted	12/06/88
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, Percent	95
1,1,2,2-Tetrachloroethane, Percent	75
1,1,2-Trichloroethane, Percent	110
1,1-Dichloroethane, Percent	95
1,1-Dichloroethylene, Percent	90
1,2-Dichloroethane, Percent	95
1,2-Dichlorobenzene, Percent	100
1,2-Dichloropropane, Percent	90
1,3-Dichlorobenzene, Percent	100
cis-1,3-Dichloropropene, Percent	80
1,4-Dichlorobenzene, Percent	100
2-Chloroethylvinylether, Percent	90
2-Hexanone, Percent	105
Acetone, Percent	85
Acrolein, Percent	69
Acrylonitrile, Percent	71
Bromodichloromethane, Percent	95
Bromomethane, Percent	160
Benzene, Percent	90
Chlorobenzene, Percent	100
Carbon Tetrachloride, Percent	90
Chloroethane, Percent	90

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ANALYTICAL REPORT

LOG NO: P88-12-019

Received: 01 DEC 88
Reported: 09 DEC 88

Mark Miller
Law Environmental
3420 N. San Fernando Rd., Suite 200
Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, NON-SALINE WATER SAMPLES	DATE SAMPLED
12-019-12	Laboratory Control Standard	

PARAMETER	12-019-12
Bromoform, Percent	75
Chloroform, Percent	100
Chloromethane, Percent	80
Carbon Disulfide, Percent	80
Dibromochloromethane, Percent	95
Ethylbenzene, Percent	90
Freon 113, Percent	85
Methyl Isobutyl Ketone, Percent	95
Methyl Ethyl Ketone, Percent	110
Methylene Chloride, Percent	75
Tetrachloroethylene, Percent	85
Styrene, Percent	90
Trichloroethylene, Percent	95
Trichlorofluoromethane, Percent	65
Toluene, Percent	80
Vinyl Acetate, Percent	55
Vinyl Chloride, Percent	205
Total Xylene Isomers, Percent	88
trans-1,2-Dichloroethylene, Percent	80
trans-1,3-Dichloropropene, Percent	80

BROWN AND CALDWELL LABORATORIES

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ANALYTICAL REPORT

LOG NO: P88-12-019

Received: 01 DEC 88
Reported: 09 DEC 88

Mark Miller
Law Environmental
3420 N. San Fernando Rd., Suite 200
Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
12-019-13	Reagent Blank	

PARAMETER	12-019-13
Vol.Pri.Poll. (EPA-8240)	
Date Extracted	12/06/88
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/L	<5
1,1,2,2-Tetrachloroethane, ug/L	<5
1,1,2-Trichloroethane, ug/L	<5
1,1-Dichloroethane, ug/L	<5
1,1-Dichloroethylene, ug/L	<5
1,2-Dichloroethane, ug/L	<5
1,2-Dichlorobenzene, ug/L	<5
1,2-Dichloropropane, ug/L	<5
1,3-Dichlorobenzene, ug/L	<5
cis-1,3-Dichloropropene, ug/L	<5
1,4-Dichlorobenzene, ug/L	<5
2-Chloroethylvinylether, ug/L	<5
2-Hexanone, ug/L	<5
Acetone, ug/L	<50
Acrolein, ug/L	<50
Acrylonitrile, ug/L	<50
Bromodichloromethane, ug/L	<5
Bromomethane, ug/L	<5
Benzene, ug/L	<5
Chlorobenzene, ug/L	<5
Carbon Tetrachloride, ug/L	<5
Chloroethane, ug/L	<5

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ANALYTICAL REPORT

LOG NO: P88-12-019

Received: 01 DEC 88
Reported: 09 DEC 88

Mark Miller
Law Environmental
3420 N. San Fernando Rd., Suite 200
Burbank, CA 91504

Project: 58-8601

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
12-019-13	Reagent Blank	

PARAMETER	12-019-13
Bromoform, ug/L	<5
Chloroform, ug/L	<5
Chloromethane, ug/L	<5
Carbon Disulfide, ug/L	<5
Dibromochloromethane, ug/L	<5
Ethylbenzene, ug/L	<5
Freon 113, ug/L	6
Methyl Isobutyl Ketone, ug/L	<5
Methyl Ethyl Ketone, ug/L	<50
Methylene Chloride, ug/L	9
Tetrachloroethylene, ug/L	<5
Styrene, ug/L	<5
Trichloroethylene, ug/L	<5
Trichlorofluoromethane, ug/L	<5
Toluene, ug/L	<5
Vinyl Acetate, ug/L	<50
Vinyl Chloride, ug/L	<5
Total Xylene Isomers, ug/L	<50
trans-1,2-Dichloroethylene, ug/L	<5
trans-1,3-Dichloropropene, ug/L	<5

Jeffrey A. Erion, Laboratory Manager

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

January 3, 1989

Mr. Warren Gross
Law Environmental
3420 North San Fernando Road, Suite 200
Burbank, California 91504

Project: 58-8601

Subject: Methylene Chloride Contamination in the Laboratory

Dear Mr. Gross:

As we discussed with the low-level 8240 analyses for Brown and Caldwell Laboratories log number P88-12-019, methylene chloride is a common laboratory contaminant used in several organic sample preparation, including Methods 625 and 608. Although we take special precautions to isolate the use of methylene chloride, we cannot eliminate this compound entirely from the laboratory atmosphere. The levels of methylene chloride vary, not only from day to day, but also from morning to evening, depending upon the type of sample preparation activity taking place in the laboratory. We typically see between 2 and 10 ug/L methylene chloride in our laboratory blanks.

We reported a blank value of 9 ug/L methylene chloride with your report. The sample values ranged from 6 to 16 ug/kg methylene chloride. This is laboratory contamination and this variance is within reason.

Should you have any questions, please do not hesitate to call us.

Very truly yours,

BROWN AND CALDWELL

Jane Freemyer

Jane Freemyer
Client Services Manager

JF:lah

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number P88-12-019

Client Name: LAW ENVIRONMENTAL
Project Number: 58-8601
Project Name: HANKER PACIFIC
Report Attention: WARREN GROSS
Sampled by: MARK MILLER

Analyses Required: EPA 8240 CONVERTED

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	EPA 8240 CONVERTED								Remarks
1	12/1/88		SO	B-1@1'	1	✓								LOW LEVEL
2	↓		↓	B-1@5'	1	✓								DETECTION LIMITS
3				B-1@10'	1	✓								(5-10 ppb)
4				B-2@1'	1	✓								
5				B-2@5'	1	✓								INCLUDE QA/QC
6				B-2@10'	1	✓								DOCUMENTS
7				B-3@1'	1	✓								
8				B-3@5'	1	✓								
9	↓		↓	B-3@10'	1	✓								

	Signature	Company	Date	Time
Relinquished by	Mark I. Miller	LAW ENVIRONMENTAL	12/1/88	7:35 pm
Received by	R. E. Tum	BCAL	12/1/88	735 pm
Relinquished by				
Received by				
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4847

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	ND	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California St[illegible] Department Of Health Ser[illegible]s
Southern Californ[illegible] Laboratory - SWQIS Lab ID [illegible] 5091
Vola[illegible]le Organic Chemicals

LAB SAMPLE ID NO.: 905-4848

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 2 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
etrachloroethylene	34475	ND.
oluene	34010	↓
,1,1-Trichloroethane	34506	↓
1,2-Trichloroethane	34511	↓
richloroethylene	39180	↓
richlorofluoromethane	34488	↓
inyl chloride	39175	↓
p-Xylenes		↓
-Xylene		↓

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab ID No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4847

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 2 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	12
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	↓
Trichloroethylene	39180	↓
Trichlorofluoromethane	34488	↓
Vinyl chloride	39175	↓
m,p-Xylenes		↓
o-Xylene		↓

LAW ENVIRONMENTAL, INC.

3420 N. SAN FERNANDO BLVD.
SUITE 200
BURBANK, CALIFORNIA 91504
818-848-0214
(FAX 818-848-1674)

August 22, 1989

Hawker Pacific, Inc.
11310 Sherman Way
Sun Valley, CA 91352

Project No. 58-9558
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson
Hazardous Waste Engineer

Gentlemen:

Our "Report of Environmental Assessment, Private Sewage Disposal System and Industrial Waste Clarifier, 11310 Sherman Way, Sun Valley, California, for Hawker Pacific, Incorporated," is herewith submitted. This investigation was authorized by approval of our Scope of Services letter for Project No. 58-9558, dated April 19, 1989, in response to the Regional Water Quality Control Board's requirement of additional subsurface investigation of the subject property.

Our recommendations for additional investigation in the area of the industrial waste clarifier are discussed in the report.

Following your review of the attached report, one copy should be submitted to the RWQCB for review. Law Environmental appreciates the opportunity to provide our services for this project. Should you have any questions regarding our report, please do not hesitate to call our office.

Respectfully submitted,

LAW ENVIRONMENTAL, INC.

Warren W. Gross

Warren W. Gross
Staff Hydrogeologist

G. H. Kassakhian

Garabet H. Kassakhian, A.M.,Ph.D.
Manager, Special Projects Department
Senior Environmental Scientist

Glenn A. Brown

Glenn A. Brown, C.E.G. 3
Senior Vice President

WWG/ks/9558.RPT

(4 Copies Submitted)

REPORT OF ENVIRONMENTAL ASSESSMENT
PRIVATE SEWAGE DISPOSAL SYSTEM AND INDUSTRIAL WASTE CLARIFIER
FOR
HAWKER PACIFIC, INC.
11310 SHERMAN WAY
SUN VALLEY, CALIFORNIA

INTRODUCTION

This environmental assessment was performed for Hawker Pacific, Inc. in order to comply with the requirements of the Regional Water Quality Control Board (RWQCB). Law Environmental's final Work Plan for the assessment was submitted to the RWQCB and subsequently approved by the Board in their letter dated April 16, 1989.

The reporting deadline of June 26, 1989 specified by the RWQCB was waived by Ms. Mila Silvestre at the request of Law Environmental in order to allow time for the receipt of laboratory data collected by the RWQCB and inclusion of this data within our report.

Law Environmental has previously completed a subsurface investigation on the subject property for Hawker Pacific. The results of this investigation are included in our report dated January 4, 1989 for Project No. 58-8601.

Our professional services have been performed using that degree of care and skill customarily exercised under similar circumstances by reputable environmental professionals practicing in this or

equivalent localities. No other warranty, expressed or implied, is made as to the information or professional advice included in this report. This report has been prepared expressly for Hawker Pacific, Inc. and is directed towards complying with their specific needs. This report has not been prepared for use by other parties and may not contain sufficient information for other parties or other uses. Any other use, interpretation or emphasis, other than that contained herein, is done at the reader's own risk.

All findings and conclusions derived from measurements or analyses of soil, water, air and soil gas are based on the conditions which existed only at those particular sample locations and the times of sampling. They are constrained by detection limits, equipment, and the specific analytical methods used.

PURPOSE

The purpose of this investigation is to determine if subsurface soils on the subject property have been contaminated by the leakage of selected organic and/or inorganic contaminants from the private sewage disposal systems or the industrial waste clarifier and, if so, to what extent area ground water may be threatened.

SCOPE OF INVESTIGATION

Prior to drilling, a review of available aerial photographs of the site and vicinity were examined for evidence of pertinent elements of the developmental history of the subject property. The Los Angeles Department of Sanitation was contacted regarding existing records of private sewage disposal systems (PSDS) on the property. An investigation of the extent of the PSDS system components was also completed.

Two 40 foot soil borings were drilled adjacent to two private sewage disposal systems. Two additional borings, each terminated at a depth of seven feet, were drilled at the location of the industrial waste clarifier in Building 2. Undisturbed soil samples were collected from the borings and submitted to a state-certified analytical laboratory for testing in accordance with RWQCB requirements. At the time of drilling, a RWQCB inspector was present to approve the boring locations, to observe the soil sampling protocol, and to collect split samples. The locations of pertinent features are shown on Figure 1, Site Map.

SUBSURFACE INVESTIGATIVE METHODS

PSDS Location Survey

Law Environmental retained Spectrum E.S.I. in order to probe accessible PSDS components and determine their location and dimensions. Spectrum also utilized several geophysical techniques in an effort to identify any leach fields associated with septic tanks in order to allow determination of whether or not additional borings would be required for the initial characterization of soils in the vicinity of the PSDS installations. Instrumentation utilizing the following methods of detection were employed:

- Ground penetrating radar
- Electromagnetic induction
- Electromagnetic conduction (induced)
- Electromagnetic conduction (ambient)

Drilling and Sampling

PSDS

All field work was conducted on May 30, 1989. One soil boring was drilled at each of the two PSDS locations. Each boring was completed to a depth of 40 feet at the locations shown on Figure 2, Site Detail, PSDS Locations. Soil samples were collected from the borings at five foot intervals, beginning at a depth of five feet.

A truck mounted hollow stem auger drilling rig was employed for the borings. Soil samples were obtained according to procedures outlined in Appendix A, Soil Sampling Protocol. The sampling equipment was thoroughly washed and rinsed before each use. All augers were steam cleaned prior to use. The soil samples were obtained by driving a split-spoon California sampler into the soil ahead of the augers. A soil sample from each sample interval was screened using an organic vapor analyzer. Samples were retained in brass tubes, capped with Teflon® liners and tight-fittings plastic lids secured with vinyl tape. The samples were labeled and placed in an iced cooler.

The soil samples were delivered to West Coast Analytical Services in Santa Fe Springs, a state certified hazardous materials testing facility. All samples were submitted for analyses of volatile organic compounds (EPA Methods 8010/8020). Two samples from each PSDS boring were submitted for analysis of nitrate by EPA Method 300.6.

Industrial Waste Clarifier

Two soil borings were drilled adjacent to the industrial waste clarifier at the locations shown on Figure 3, Site Detail, Industrial Waste Clarifier. The borings were within two feet of the clarifier. An electrically powered drilling apparatus equipped

with solid stem flight augers was employed for the borings. Soil samples were collected at depths of 2.5 and 6.5 feet. Auger refusal was encountered at a depth of 7 feet due to a cobble layer encountered at this depth. Samples were obtained by driving a solid core hand sampler into the soil to ensure an undisturbed sample. All samples were secured and preserved using methods similar to those previously cited for the PSDS borings (see Appendix A). The soil samples were delivered to West Coast Analytical Services, a state certified laboratory in Santa Fe Springs, California, where they were analyzed for volatile organic compounds (EPA Method 8010/8020).

FINDINGS

Records Search

Records from the Sewer Division of the County of Los Angeles Department of Sanitation confirmed the existence of a PSDS on the subject property. The original sewer permit was found to be issued in the year 1954. No indication of the location of the PSDS was available.

Aerial Photograph Review

An air photo search was carried out in an attempt to locate and characterize details of the two private sewage disposal systems on site. Air photos were obtained from the Public Relations Office of the Hollywood Burbank Airport.

Review of a 1958 photo of the property and vicinity revealed the presence of a large pit to the north of the site - probably a sand and gravel pit. Several additional photos which were not dated were observed in the collection. None of these photos provided useful details of the site. A 1969 photo showed that at that time neither rear building now present (Buildings 3 and 5) at the Hawker Pacific facility was in existence. No evidence of a PSDS was seen in the photos. The photo showing the greatest detail was dated 10/31/75. In the photo, the eastern rear building (Building #5) was present at the facility. There appeared to be some surface manifestation of a septic system present along the west side of the building.

The results of the probing and geophysical survey of the PSDS installations revealed the presence of two concrete holding tanks and one brick-lined seepage pit north of Building #3 and one concrete holding tank and one brick lined leach tank west of Building #5, as shown in Figure 2, Site Detail, PSDS Locations.

No leach fields were identified in association with either of the PSDS installations.

PSDS

Alluvial soils were encountered in the PSDS borings, consisting of medium to coarse-grained sand and silt with some gravel. A zone of water-saturated soils, approximately two to three feet thick, was encountered in boring B-1 at a depth of nine feet. This depth corresponds to the bottom depth of the PSDS leach pit. Soils at the same depth in boring B-2 were noted to contain much less moisture. Boring logs are included in Appendix B.

Free ground water was not encountered in either of the borings. Recent water levels in the area are reported to be approximately 247 feet below ground surface, according to the Los Angeles County Flood Control District.

Laboratory analysis of the samples collected from boring B-1 indicated the presence of toluene at all depths. Levels ranged from 9 ug/kg (parts per billion, by weight) to 110 ug/kg. The toluene concentration decreased sharply with depth below 25 feet (from 57 ug/kg to 11 ug/kg). No other volatiles were detected in boring B-1. Nitrate levels in samples collected from Boring B-1

at depths of 35 and 40 feet were found to be 3.5 and 3.9 mg/kg (parts per million, by weight), respectively.

Samples from boring B-2 were also found to contain toluene at all depths, ranging from 12 ug/kg to 120 ug/kg. In addition, tetrachloroethylene (PCE) was detected at the 10 and 15 foot depths (39 ug/kg and 3.9 ug/kg, respectively). Xylene was also detected at 20 feet (2 ug/kg). Nitrate levels in samples collected from Boring B-2 at depths of 35 and 40 feet were found to be 3.1 and 3.2 mg/kg, respectively.

No other volatile compounds were detected in any of the samples recovered from either boring. Analytical data for the PSDS borings are summarized in Table 1. The results of the split sample analyses by the RWQCB, which were provided to Law Environmental by Ms. Mila Silvestre, are also included. Complete analytical results are contained in Appendices B and C.

Additional PSDS Sampling

Law Environmental collected split soil samples from each PSDS boring at depths of 10, 20, 30 and 40 feet. The samples were turned over to the RWQCB inspector for testing by the California State Department of Health Services (DOHS) Laboratory. Each sample was analyzed for volatile organic compounds by EPA Method 8240 and

for total nitrogen by EPA Methods 350.2, 351.3 and 353.2. The laboratory analytical report from the DOHS laboratory is included as Appendix C.

Results of the DOHS volatile organic analysis are also shown in Table 1. No volatiles other than those indicated were detected in any of the PSDS split samples.

Industrial Waste Clarifier

In boring CB-1, adjacent to the waste clarifier, both toluene and PCE were found to be present. Toluene concentrations were 14 ug/kg at 2.5 feet and 28 ug/kg at 6.5 feet. PCE concentrations were 3 ug/kg at 2.5 feet and 4 ug/kg at 6.5 feet.

Traces of toluene and PCE were also found in boring CB-2, although these compounds were present only in the sample recovered from a depth of 6.5 feet. At that depth toluene concentrations were 1 ug/kg, while PCE was found to be present at 7 ug/kg.

No other volatile compounds were detected in the samples collected from boring CB-1 or 2. Analytical data for the clarifier borings are summarized in Table 2.

CONCLUSIONS AND RECOMMENDATIONS

PSDS Locations

Conclusions

Based on the results of our subsurface investigation, it appears that traces of toluene are present at both PSDS locations in concentrations which decrease fairly regularly with depth. Traces of PCE and xylene are observed at shallow depths in boring B-2, but these substances are not present at depth. State action levels for toluene in drinking water are recognized as 100 ug/kg. Based on the observed trend shown on Table 1, it is reasonable to expect that the levels of toluene decrease to below the method detectable limits of 5 ug/kg at depths from 60 to 80 feet below ground surface. Data obtained from the split samples by the California State Department of Health Services are consistent with this conclusion.

Results of the nitrate analyses show that the highest levels of nitrate were found in the split samples collected by the RWQCB in Boring B-1 at depths of 10 and 40 feet below ground surface. Levels of nitrogen as nitrate (NO_3) were found at levels of 26.8 mg/kg and 21.7 mg/kg, respectively. At no other depths were levels of nitrogen found to be above 10 mg/kg. Data obtained from

the nitrate analysis conducted by West Coast Analytical Services for Law Environmental on the PSDS samples collected at depths of 35 and 40 feet yield consistently low nitrate levels of 3 to 4 ppm (ug/kg, by weight). State actions levels for nitrates in drinking water are recognized as 45 mg/kg.

Recommendations

In view of recent ground water levels in the area of the site at approximately 247 feet below ground surface, the two PSDS locations do not appear to pose a threat to the ground water beneath the site. We recommend no further investigation for the PSDS areas.

Industrial Waste Clarifier

Conclusions

Traces of toluene and PCE also appear in the soil adjacent to and below the industrial waste clarifier. At a depth of 6.5 feet, approximately one foot below the depth of the bottom of the clarifier, the highest toluene and PCE concentrations reported were 28 ug/kg and 7 ug/kg respectively. Although these concentrations are quite low, they do represent an increase over the concentrations of the same constituents measured at a depth of 2.5 feet.

Recommendations

In order to more definitively evaluate the potential for significant soil contamination in this area, we recommend that an additional boring be drilled adjacent to the location of Boring CB-1. Undisturbed soil samples should be collected at depths of 10, 15, and 20 feet and analyzed by EPA Method 8240. If field observations indicate evidence of soil contamination at a depth of 20 feet, then the boring should be deepened to 40 feet, if practical, with soil sampling and analysis continued at 5 foot intervals. A small, cart-mounted drilling rig will be appropriate for this additional investigation. Given the observed levels of soil contaminants shown by existing data, it appears unlikely that significant soil contamination from volatile organic compounds has occurred in the area of the clarifier. The recommended boring is to provide data in support of this observation.

- oOo -

TABLES

TABLE 1

CONCENTRATION OF TOLUENE IN ug/kg IN SOIL SAMPLES (PSDS BORINGS)

Depth in Feet	Boring B-1 Toluene*	Boring B-2 Toluene*
5	9	19
10	110/15	120/13
15	32	47
20	33/18	31/10
25	57	12
30	14/16	44/12
35	14	53
40	11/5	17/ND**

* Units are ug/kg, values after the slash (/) are from data collected by RWQCB personnel from the DOHS laboratory.

** Not detected, detection limit equals 5 ug/kg.

TABLE 2

CONCENTRATIONS OF TOLUENE AND TETRACHLOROETHENE (PCE) IN ug/kg IN SOIL SAMPLES FROM CLARIFIER BORINGS

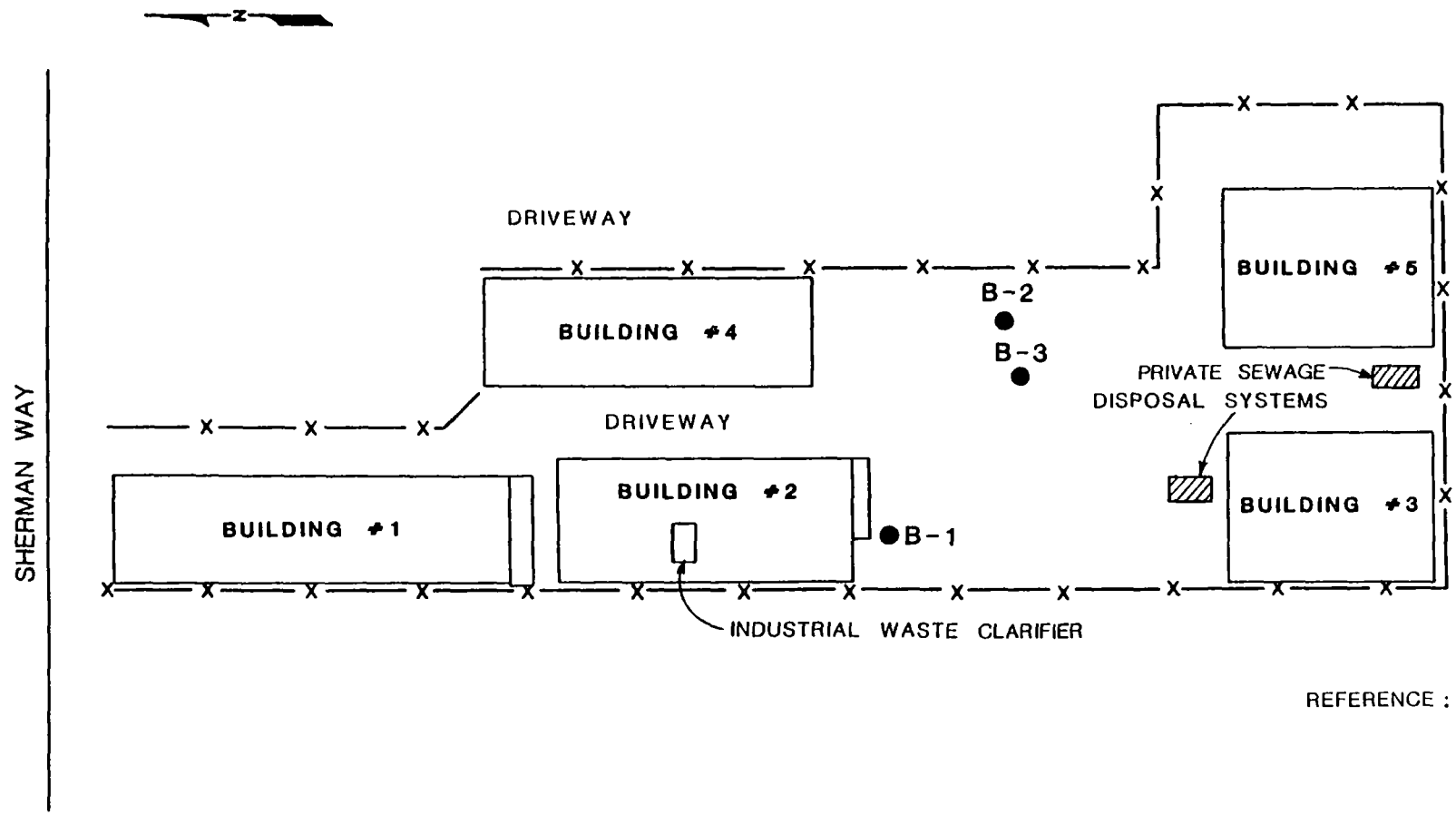
Depth in Feet	Boring CB-1		Boring CB-2	
	Toluene*	PCE*	Toluene*	PCE*
2.5	14	3	ND**	ND
6.5	28	4	1	7

* Units are in ug/kg.

** Not detected, detection limit equals 5 ug/kg.

FIGURES

PROJECT No. 58-9558 DATE 8-2-89 PROJ. MGR. W.G. DFTR. M.N.



REFERENCE : BASE MAP BY HAWKER PACIFIC

LEGEND

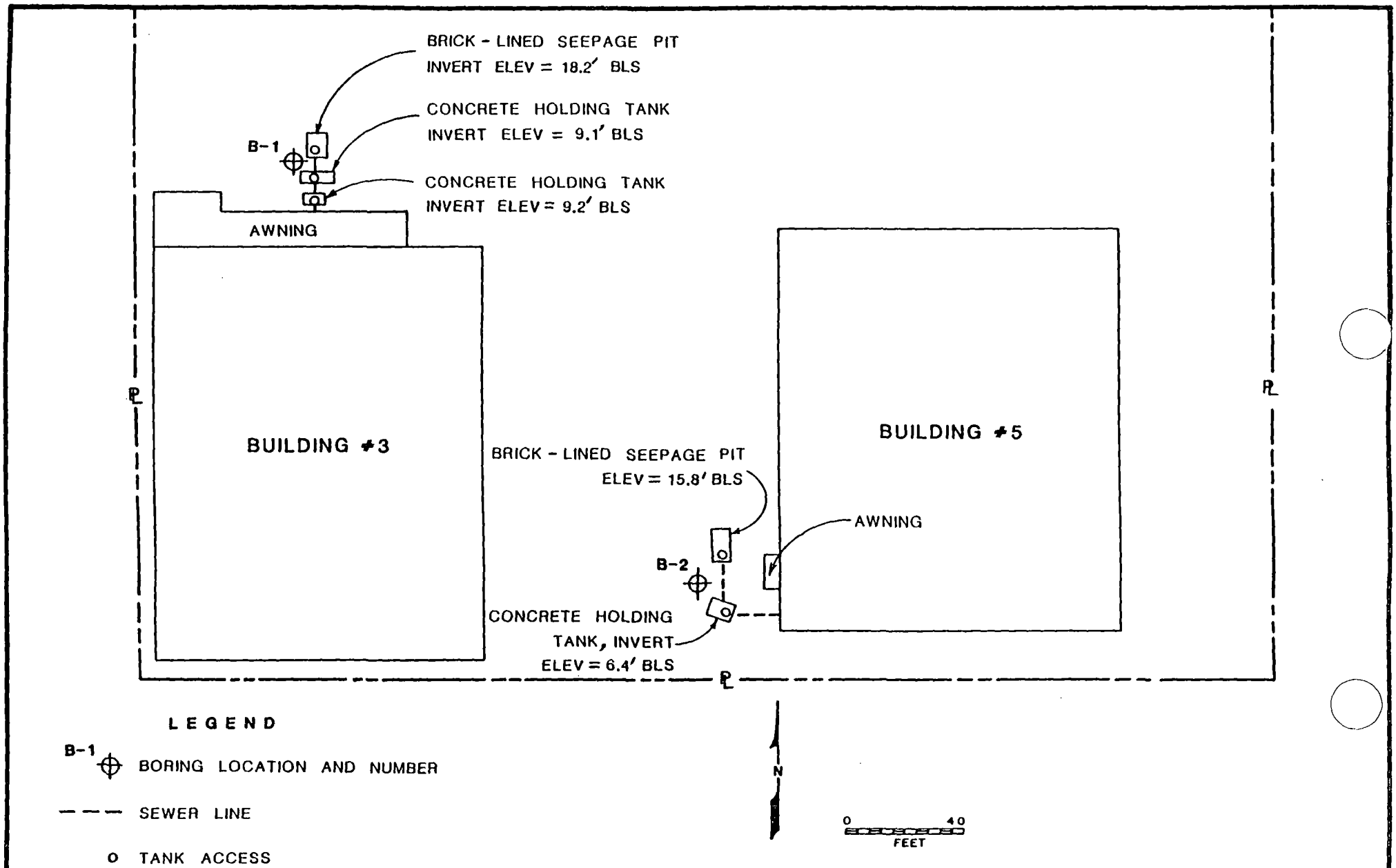
B-1
● BORING LOCATION AND NUMBER

0 115
(APPROX)

HAWKER PACIFIC	SITE MAP	FIGURE 1

LAW ENVIRONMENTAL, INC.

PROJECT No. 58-9558 DATE 8-2-89 PROJ. MGR. W.G. DFTR. M.N.



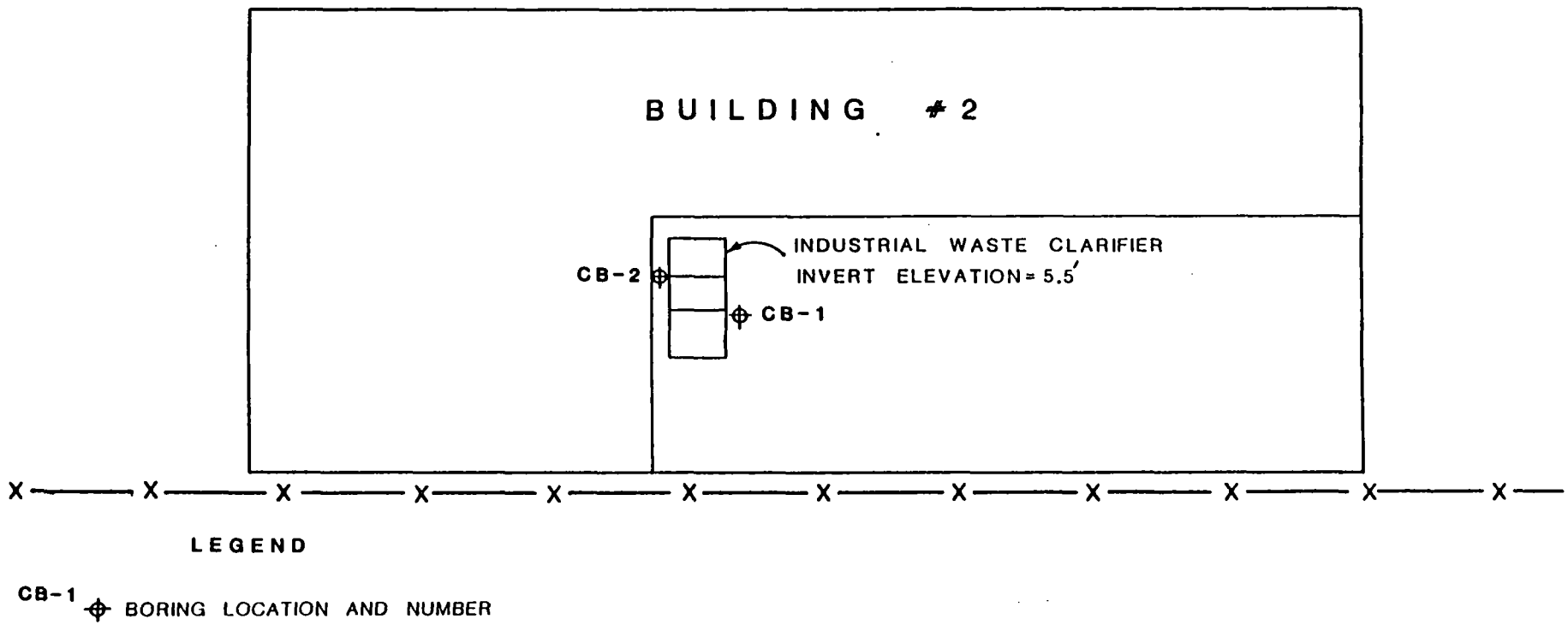
HAWKER PACIFIC

SITE DETAIL
PSDS LOCATIONS

FIGURE 2

LAW ENVIRONMENTAL, INC.

PROJECT No. 58-9558 DATE 8-3-89 PROJ. MGR. W.G. DFTR. M.N.



HAWKER PACIFIC

SITE DETAIL

INDUSTRIAL WASTE CLARIFIER

FIGURE 3

LAW ENVIRONMENTAL, INC.

APPENDIX A

CORRESPONDENCE FROM THE

REGIONAL WATER QUALITY CONTROL BOARD

LAW ENVIRONMENTAL WORK PLAN
(Appendices not included)

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION

101 Centre Plaza Drive
Monterey Park, California 91754-2156
(213) 266-7500

NOV 2 1 1989

November 17, 1989

Mr. Erik Johnson
HAWKER PACIFIC, INC.
11310 Sherman Way
Sun Valley, CA 91352

SITE ASSESSMENT WORKPLAN - AB1803 WELL INVESTIGATION PROGRAM
(FILE NO. AB104.0020)

We are in receipt of your consultant's, Law Environmental, Inc., report dated November 14, 1989, containing the site assessment workplan for your facility.

We have reviewed the workplan and have no objections to its implementation, provided that all work is completed as specified in the proposal. The final locations of the soil test borings will be verified in the field on the day of drilling.

Please notify us at least one week prior to the date you plan to commence work at your facility so we can schedule an inspector to be present. The final report containing the results of the site assessment is due to this Regional Board by January 18, 1990.

If you have any questions, please contact Ms. Mila Silvestre at (213) 266-7529.

David A. Bacharowski

DAVID A. BACHAROWSKI
Environmental Specialist IV

cc: Mr. Warren Gross, Law Environmental, Inc.

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
101 Centre Plaza Drive
Monterey Park, California 91754-2156
(213) 266-7500

September 13, 1989

Mr. Erik Johnson
HAWKER PACIFIC, INC.
11310 Sherman Way
Sun Valley, CA 91352

SUBSURFACE INVESTIGATION - AB1803 WELL INVESTIGATION PROGRAM
(FILE NO. AB104.0436)

Reference is made to your consultant's, Law Environmental, Inc., report dated August 10, 1989, containing the results of the subsurface investigation completed in the private sewage disposal system (PSDS) locations and in the industrial waste clarifier area at your facility.

We have reviewed and evaluated the information contained in the report, which has identified the presence of Toluene consistently with depth down to 40 feet below ground surface in the two PSDS locations. Further, Perchloroethylene and Toluene were identified to be present down to 6.5 feet below ground surface in the industrial waste clarifier area.

In order to further define the vertical extent of contamination beneath the areas of concern, you are required to develop a Site Assessment Workplan that includes the following:

1. A minimum of one (1) soil test boring to a depth of 80 ft below land surface in each of the two PSDS locations. Soil samples shall be taken at every 5-ft interval starting at 45 ft below land surface.

2. A minimum of one (1) soil test boring to a depth of 40 ft below land surface in the industrial waste clarifier area. Soil samples shall be taken at every 5-foot interval starting at 10 ft below land surface.

3. All soil samples shall be analyzed for Volatile Organic Compounds by EPA Method 8240 or EPA Methods 8010 & 8020.

Your Site Assessment Workplan containing all of the items identified above is due to this Regional Board by October 13, 1989. If you have any questions concerning this matter, please contact Mila P. Silvestre at (213) 266-7529.

David A. Bacharowski

DAVID A. BACHAROWSKI
Environmental Specialist IV

cc: Alisa Greene, U.S. EPA Region IX
Bill Jones, L. A. County, Dept. of Health Services
Warren Gross, Law Environmental, Inc.
Publio Aliwalas, City of L. A., Bureau of Sanitation

APPENDIX B

BORING LOGS

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1

DRILLED BY Drill-Line PAGE 1 of 2

DRILLING METHOD Hollow stem auger DATE DRILLED 05-30-89

BOREHOLE DEPTH 40 feet BOREHOLE DIA. 8-1/4 inches LOGGED BY Mike Hernandez

CLAY SILT SAND GRAVEL COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						3 - 4 inches of asphalt
1					SM	SILTY SAND Light brown
2					SW	SAND AND GRAVEL coarser sand with gravel to 3 inches
3						
4						
5	0855	5-10	▨			
6						
7						
8						
9						perched water encountered at 9 feet
10	0905	7-10	▨			
11			▨			
12						less water
13						sand still very moist
14						
15	0930	5-10	▨			
16						
17						
18						
19						
20						

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1

DRILLED BY Drill-Line PAGE 2 of 2

DRILLING METHOD Hollow stem auger DATE DRILLED 05-30-89

BOREHOLE DEPTH 40 feet BOREHOLE DIA. 8-1/4 inches LOGGED BY Mike Hernandez

CLAY SILT SAND GRAVEL COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
					SW	very moist, no odor
21	0945	10				
22						
23						
24	0950	15-20				
25						
26						
27						
28						
29	1000	9				still moist
30						
31						
32						
33						
34	1010	7-8				
35						
36						
37						
38						
39						(perched)
40	1015	7-8				End boring at 40 feet, caving below 10 feet, water at 9 ft.

NOTES: ▨ denotes collection of undisturbed soil sample.

* TIP subject to 5.0 ppm

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2

DRILLED BY Drill-Line PAGE 1 of 2

DRILLING METHOD Hollow stem auger DATE DRILLED 05-30-89

BOREHOLE DEPTH 40 feet BOREHOLE DIA. 8-1/4 inches LOGGED BY Mike Hernandez

CLAY SILT SAND GRAVEL COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						3 - 4 inches of asphalt
1					SW	SAND AND GRAVEL — Brown, some pebbles
2						gravel to 2 - 3 inches
3						
4						
5	1117	10	▨			
6						
7						
8						
9						gravel
10	1120	10	▨			
11			▨			more silt and fine grained sand, less gravel
12						very moist
13						
14	1125	10-15				
15			▨			
16						
17						
18						
19						
20	1133	10				

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2

DRILLED BY Drill-Line PAGE 2 of 2

DRILLING METHOD Hollow stem auger DATE DRILLED 05-30-89

BOREHOLE DEPTH 40 feet BOREHOLE DIA. 8-1/4 inches LOGGED BY Mike Hernandez

CLAY SILT SAND GRAVEL COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
					SAND	Some gravel
21						
22						
23						
24						
25	1140	15				
26						
27						
28						
29						
30	1146	20				
31						
32						
33						
34						
35	1151	25-30				
36						
37						
38						
39						
40	1205	20				End boring at 40 feet.

NOTES: *TIP ambient is 5-8 ppm. ▨ Denotes collection of undisturbed soil sample.

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-1

DRILLED BY AJ's Drilling PAGE 1 of 1

DRILLING METHOD Flight auger DATE DRILLED 05-30-89

BOREHOLE DEPTH 10.5 feet BOREHOLE DIA. 4 inches LOGGED BY Warren Gross

CLAY SILT SAND GRAVEL COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						concrete at surface
1					FILL	Silty sand with gravel; brown to black, slightly damp, possibly contains old asphalt base, no hydrocarbon odor
2						
3	1200		▨		SAND	Medium to coarse grained
4						
5						
6						
7	1330		▨		GRAVELLY SAND	Medium to coarse grained, cobbles to 3 inch diameter, grey, slightly damp, no hydrocarbon odor
8						
9						cannot sample here due to rocks
10						
11						End boring at 10.5 feet, hole sloughed to 6.5 feet, cannot remove rocks to sample, no water encountered, backfilled with soil and patched with concrete.

NOTES: ▨ Denotes collection of undisturbed soil sample. *TIP ambient is 5-8 ppm.

LAW ENVIRONMENTAL, INC.

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-2

DRILLED BY AJ's Drilling PAGE 1 of 1

DRILLING METHOD Flight auger DATE DRILLED 05-30-89

BOREHOLE DEPTH 10 feet BOREHOLE DIA. 4 inches LOGGED BY

CLAY SILT SAND GRAVEL COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						concrete at surface
1					FILL	Silty sand with gravel; brown to black, slightly damp, possibly contains old asphalt base, no hydrocarbon odor
2	1515	2-3	▨			
3					SAND	Medium to coarse grained
4						
5						
6						
7	1535	2-3	▨		GRAVELLY SAND	Medium to coarse grained, cobbles to 3 inch diameter, grey, slightly damp, no hydrocarbon odor
8						
9						cannot sample here due to rocks
10						
11						End boring at 10 feet, hole sloughed to 7 feet, cannot remove rocks to sample, no water encountered, backfilled with soil and patched with concrete.

NOTES: TIP ambient is 5-8 ppm. ▨ Denotes collection of undisturbed soil sample.

APPENDIX C

ANALYTICAL TEST RESULTS AND CHAIN-OF-CUSTODY OF SOIL SAMPLES (LAW ENVIRONMENTAL, INC.)

June 8, 1989

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LAW ENVIRONMNTAL, INC.
3420 N. San Fernando Blvd., Suite 200
Burbank, CA 91504

Attn: Warren Gross

JOB NO. 12851

A

LABORATORY REPORT

Samples Received: Twenty (20) soil samples
Date Received: 5-31-89
Purchase Order No: Proj#: 58-9558/Hawker-Pacific-Environmental

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Twenty (20) soils and one (1) lab blank	Halogenated and Aromatic Volatile Organics by EPA 8010/8020	Data Sheets

James Bonde
Senior Chemist

D.J. Northington, Ph.D.
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @5.0'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	9	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @10.0'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	110	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1@ 15.0'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	32	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1@ 20.0'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	33	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @25'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	57	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @30'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	14	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @35'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	14	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 12851
Date Analyzed: 06-JUNE-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @40'
Matrix: SOIL
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	11	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 12851
Date Analyzed: 06-JUNE-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @5'
Matrix: SOIL
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	19	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 06-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @10'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	39	1.5
Toluene	120	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 12851
Date Analyzed: 06-JUNE-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @15'
Matrix: SOIL
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	3.9	1.5
Toluene	47	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @20'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	31	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	1	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 12851
Date Analyzed: 06-JUNE-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @25'
Matrix: SOIL
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	12	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @30'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	44	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @35'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	53	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @40'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	17	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1 @2.5
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	3	1.5
Toluene	14	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1 @6.5
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	4	1.5
Toluene	28	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-2 @2.5'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-2 @6.5'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	7	1.5
Toluene	1	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 12851
Date Analyzed: 07-Jun-89
Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	4	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	1.5	1
1,4-Dichlorobenzene	1.5	1
1,2-Dichlorobenzene	2	1

ND-Not Detected. The limit of detection is reported above.

1 of 2

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: LAW ENVIRONMENTAL
Project Number: 58-9558
Project Name: Hawker-Pacific Environmental Assessment
Report Attention: Warren Gross
Sampled by: MHH

Analyses Required: 8010/8020

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8010/8020								Remarks
1	5/30/89	8:55 AM	SO	B-1 @ 5.0'	1	X								Please use HS method
2		9:05 A.M.		B-1 @ 10.0'	1	X								for low detection
3		9:30 A.M.		B-1 @ 15.0'	1	X								limits. Include
4		9:45 A.M.		B-1 @ 20.0'	1	X								all Q.A/QC data
5		9:60 A.M.		B-1 @ 25'	1	X								required by the
6		10:00 A.M.		B-1 @ 30'	1	X								RWQCB for AB-1803
7		10:10 A.M.		B-1 @ 35'	1	X								investigations.
8		10:15 A.M		B-1 @ 40'	1	X								
9		11:17 A.M.		B-2 @ 5'	1	X								
10		11:20 A.M.		B-2 @ 10'	1	X								
11		11:26 A.M.		B-2 @ 15'	1	X								
12		11:33 A.M.		B-2 @ 20'	1	X								

	Signature	Company	Date	Time
Relinquished by	[signature]	Law [illegible]	5-31-89	2:00 pm
Received by	[signature]	Reli Express	5-31-89	2 pm
Relinquished by	[signature]	" " "	5-31-89	2:50 pm
Received by	April Richards	WCAS 112851	5-31-89	3:10 pm
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: LAW ENVIRONMENTAL
Project Number: 58-9558
Project Name: Hawker-Pacific - Environmental Assessment
Report Attention: Warren Gross
Sampled by: MHH

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8010/8020								Remarks
13	5/30/89	11:40 A.M.	SO	B-2 @ 25'	1	X								
14	↓	11:46 A.M.	↓	B-2 @ 30'	1	X								
15	↓	11:51 A.M.	↓	B-2 @ 35'	1	X								
16	↓	12:05 P.M.	↓	B-2 @ 40'	1	X								
17	↓	12:00 AM	↓	CB-1 @ 2.5	1	X								
18	↓	1:30 AM	↓	CB-1 @ 6.5	1	X								
19	↓	3:15 P.M.	↓	CB-2 @ 2.5'	1	X								
20	↓	3:35 pm	↓	CB-2 @ 6.5'	1	X								

	Signature	Company	Date	Time
Relinquished by	Mike Hernandez	Law Environmental	5-31-89	2 pm
Received by	[illegible]	Redi-Express	5-31-89	2 pm
Relinquished by	[illegible]	" "	5-31-89	2:50 pm
Received by	April Richards	WCAS No 12851	5-31-89	3:10 pm
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

APPENDIX D

ANALYTICAL TEST RESULTS AND CHAIN-OF-CUSTODY OF SOIL SAMPLES

Tested by Regional Water Quality Control Board and California State Department of Health Services

To: Warren Gross

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

Los Angeles Region

107 South Broadway, Room 4027

Los Angeles, California 90012-4596

The enclosed material is forwarded in response to your recent request. We are pleased to be of service. If there are any further questions, please contact:

MILA SILVESTRE

(213) 620-4930

30398-956 1-84 5M OSP

California State Department Of Health Services
Southern California Laboratory

Analysis Request Form

Name of Sampler: Mila P. Silvestre

Phone No: (ATSS) 640-4930
(213) - 620-4930

Sampler Employed By:
R.W.Q.C.Board No. : [X] 4 [] 6 [] 7 [] 8 [] 9

Sample Source: Hawker Pacific PSDS Locations

Date Collected : 5/30/89 Analysis Task No. 105-03 T2

Sample Type : [] Drinking water : [] Ground water [] Surface water
[] Waste water : Chlorinated : [] Yes [] No
[X] Solid sample : [X] Soil [] Sludge [] Sediment
[] Other

Use your own Bottle ID. No. for each bottle.

For Lab use Log Number	Bottle ID. No.	Sampling Point	Time collected	Type of Analysis required (Be Specific)
905-4841	B-1-10'	PSDS ①	9:00 AM	
905-4842	B-1-20'	PSDS ①		
905-4843	B-1-30'	PSDS ①		All samples to be run for:
905-4844	B-1-40'	PSDS ①		① VOC's - EPA 8240 (5-10 µg/kg detection limits)
905-4845	B-2-10'	PSDS ②		
905-4846	B-2-20'	PSDS ②		② Total Nitrogen
905-4847	B-2-30'	PSDS ②		- Nitrates - Nitrites - Ammonia
905-4848	B-2-40'	PSDS ②	12:30 PM	- Organic N

Warning or Special Instruction on Samples : None - Need sampling tubes back

Seals: [X] Intact [] None [] Broken		Date	Time
Samples Relinquished by	[signature]	5/30/89	12:55 PM
Samples Relinquished by			
Received for Lab by	[signature]	5-30-89	1 PM

(For Lab use only)Total cost for Lab analyses : $ 2944

CALIFORNIA STATE DEPARTMENT OF HEALTH SERVICES
SOUTHERN CALIFORNIA LABORATORY - SWQIS LOG No. 5091

Laboratory Analytical Report

DATE REPORTED: 6-12-89

DATE RECEIVED: 5-30-89 SAMPLER: Mila Silvestre

Lab ID. Number	CONSTITUENT	EPA METHOD	STORET CODE	UNITS	ANALYSIS RESULTS	REPORTING LIMIT
905-4841	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	12.9	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	26.8	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	2.2	0.3
	Organic-Nitrogen	351.3		mg/Kg	5	0.5
905-4842	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	7.2	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	7	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	9	0.5
905-4843	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	6.6	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	3	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	6.6	0.5
905-4844	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	9.3	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	21.7	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	7.2	0.5
905-4845	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	7.5	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	3.6	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	2.4	0.3
	Organic-Nitrogen	351.3		mg/Kg	7.2	0.5
905-4846	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	6.6	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	4	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	4.8	0.5
905-4847	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	5.1	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	2.7	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	0.3	0.3
	Organic-Nitrogen	351.3		mg/Kg	8.1	0.5
905-4848	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	4.8	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	4	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	5.1	0.5

N.D. = None detected. mg/Kg= Milligram/Kilogram (ppm)

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab I[illegible]. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4841

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	NO	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4541

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 2 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	15
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	
Trichloroethylene	39180	
Trichlorofluoromethane	34488	
Vinyl chloride	39175	
m,p-Xylenes		
o-Xylene		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4542

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ug

METHOD USED : EPA 8240 page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	NO	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4842

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	18
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	
Trichloroethylene	39180	
Trichlorofluoromethane	34488	
Vinyl chloride	39175	
m,p-Xylenes		
o-Xylene		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4843

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	NO	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4843

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	16
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	
Trichloroethylene	39180	
Trichlorofluoromethane	34488	
Vinyl chloride	39175	
m,p-Xylenes		
o-Xylene		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4844

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	ND	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4844

DATE REPORTED : 6/6/59 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	5.0
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	
Trichloroethylene	39180	
Trichlorofluoromethane	34488	
Vinyl chloride	39175	
m,p-Xylenes		
o-Xylene		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4845

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	ND	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4845

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = µg/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	13
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	
Trichloroethylene	39180	
Trichlorofluoromethane	34488	
Vinyl chloride	39175	
m,p-Xylenes		
o-Xylene		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4846

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS	
Acrolein	34210	ND	
Acrylonitrile	34215		
Benzene	34030		
Bromodichloromethane	32101		
Bromoform	32104		
Bromomethane	34413		
Carbon tetrachloride	32102		
Chlorobenzene	34301		
Chloroethane	34311		
2-Chloroethylvinyl ether	34576		
Chloroform	32106		
Chloromethane	34418		
Dibromochloromethane	32105		
1,2-Dichlorobenzene	34536		
1,3-Dichlorobenzene	34566		
1,4-Dichlorobenzene	34571		
Dichlorodifluoromethane	34668		
1,1-Dichloroethane	34496		
1,2-Dichloroethane	34531		
1,1-Dichloroethylene	34501		
cis-1,2-Dichloroethylene	77093		
trans-1,2-Dichloroethylene	34546		
1,2-Dichloropropane	34541		
cis-1,3-Dichloropropylene	34704		
trans-1,3-Dichloropropylene	34699		
Ethyl benzene	34371		
Ethylene dibromide	77651		
Methylene chloride	34423		
Methyl Ethyl Ketone	81595		
Methyl Isobutyl Ketone	81596		
Styrene	77128		
1,1,2,2-Tetrachloroethane	34516		

California State Department Of Health Services
Southern California Laboratory - SWQIS Lab No. 5091
Volatile Organic Chemicals

LAB SAMPLE ID NO.: 905-4846

DATE REPORTED : 6/6/89 SAMPLER :

All reporting units = ug/kg N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240 page 2 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Tetrachloroethylene	34475	ND
Toluene	34010	10
1,1,1-Trichloroethane	34506	ND
1,1,2-Trichloroethane	34511	
Trichloroethylene	39180	
Trichlorofluoromethane	34488	
Vinyl chloride	39175	
m,p-Xylenes		
o-Xylene		

LAW ENVIRONMENTAL, INC.

3320 N. SAN FERNANDO BLVD.
BURBANK, CALIFORNIA 91504
TEL. (818) 848-0214
FAX (818) 848-1674

January 11, 1990

Hawker Pacific, Inc.
11310 Sherman Way
Sun Valley, CA 91352

Project No. 58-9661
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson
Hazardous Waste Engineer

Gentlemen:

Our "Report of Additional Subsurface Investigation, Private Sewage Disposal System and Industrial Waste Clarifier, 11310 Sherman Way, Sun Valley, California, for Hawker Pacific, Incorporated," is herewith submitted. This investigation was authorized by approval of our proposal for Project No. 58-9661, dated October 23, 1989, in response to the Regional Water Quality Control Board's requirement of additional subsurface investigation of the subject property.

Following your review of the attached report, one copy should be submitted to the RWQCB. Law Environmental appreciates the opportunity to provide our services for this project. Should you have any questions regarding our report, please do not hesitate to call our office.

Respectfully submitted,

LAW ENVIRONMENTAL, INC.

Michael H. Hernandez
Staff Environmental Geologist

Warren W. Gross
Staff Hydrogeologist

Glenn A. Brown, C.E.G. 3
Senior Vice President

MHH/ks/9661.RPT
(4 Copies Submitted)

REPORT OF ADDITIONAL SUBSURFACE INVESTIGATION
PRIVATE SEWAGE DISPOSAL SYSTEM
AND INDUSTRIAL WASTE CLARIFIER
FOR
HAWKER PACIFIC, INC.
11310 SHERMAN WAY
SUN VALLEY, CALIFORNIA

INTRODUCTION

This subsurface investigation was performed for Hawker Pacific, Inc. in order to comply with the requirements of the Regional Water Quality Control Board (RWQCB) as stated in their letter dated September 13, 1989 (Appendix A). Law Environmental's final Work Plan for the investigation was submitted to the RWQCB and subsequently approved by the Board in their letter dated November 17, 1989 (Appendix A).

Law Environmental has previously completed two subsurface investigations on the subject property for Hawker Pacific. The results of these investigations are included in our reports dated January 4, 1989 for Project No. 58-8601, and August 10, 1989 for Project No. 58-9558.

Our professional services have been performed using that degree of care and skill customarily exercised under similar circumstances by reputable environmental professionals practicing in this or equivalent localities. No other warranty, expressed or implied, is made as to the information or professional advice included in

this report. This report has been prepared expressly for Hawker Pacific, Inc. and is directed towards complying with their specific needs. This report has not been prepared for use by other parties and may not contain sufficient information for other parties or other uses. Any other use, interpretation or emphasis, other than that contained herein, is done at the reader's own risk.

All findings and conclusions derived from measurements or analyses of soil, water, air and soil gas are based on the conditions which existed only at those particular sample locations and the times of sampling. They are constrained by detection limits, equipment, and the specific analytical methods used.

PURPOSE

The purpose of this investigation was to determine if subsurface soils on the subject property have been contaminated by the leakage of selected organic and/or inorganic contaminants from the private sewage disposal systems (PSDS) or the industrial waste clarifier and, if so, to what extent area ground water may be threatened.

SCOPE OF INVESTIGATION

Two 80 foot soil borings were drilled adjacent to two private sewage disposal systems. One additional boring, terminated at a depth of 40 feet, was drilled at the location of the industrial

waste clarifier in Building 2 (Figure 1). Undisturbed soil samples were collected from the borings and submitted to a State-certified analytical laboratory, West Coast Analytical Service, Inc., for testing in accordance with RWQCB requirements. At the time of drilling, a RWQCB inspector was present to approve the boring locations, to observe the soil sampling protocol, and to collect split samples at selected depths in Borings CB-1D and 2D. The locations of pertinent features are shown on Figure 1, Site Map, and the site details in Figures 2 and 3.

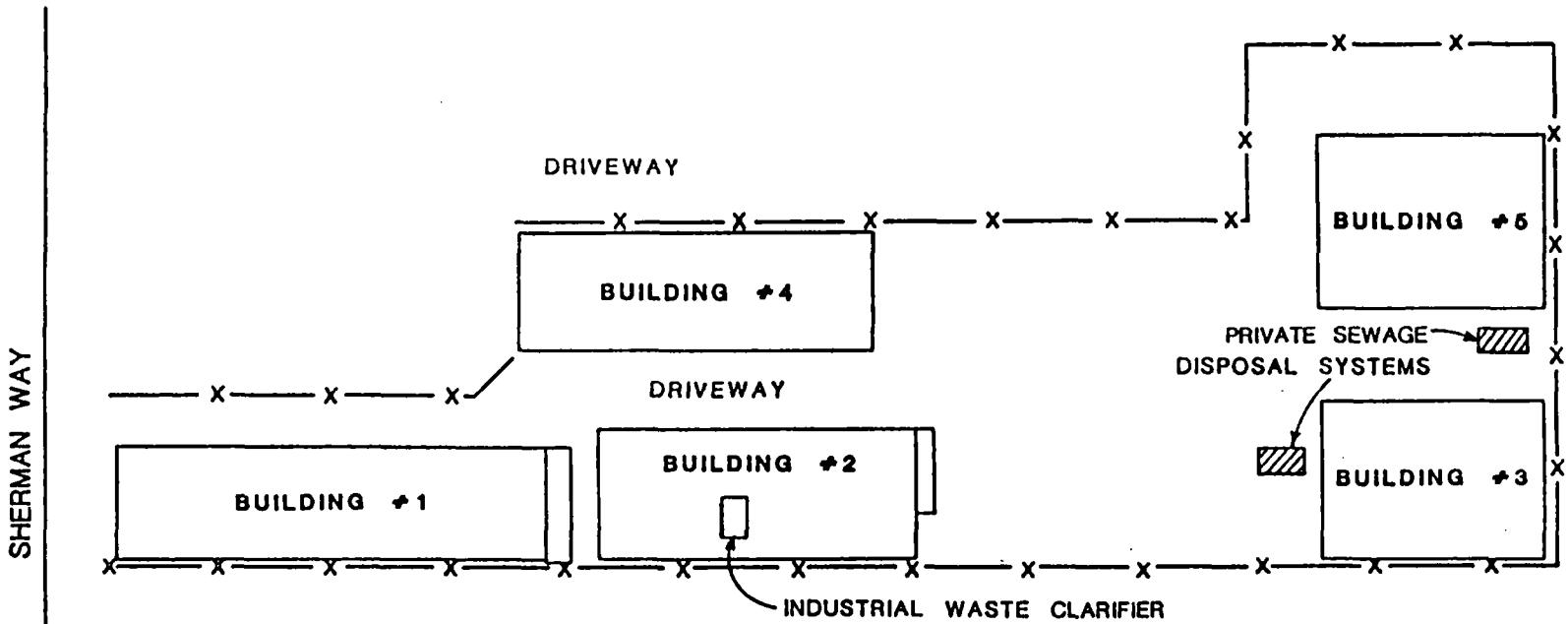
SUBSURFACE INVESTIGATIVE METHODS

Drilling and Sampling

Private Sewage Disposal System

All field work was conducted on December 7, 1989. One soil boring was drilled at each of the two PSDS locations. These boring locations were the same as those selected for the borings of our previous investigation. The borings were designated as B-1D and B-2D. Each boring was completed to a depth of 80 feet at the locations shown on Figure 2, Site Detail, PSDS Locations. Soil samples were collected from the borings at five foot intervals, beginning at a depth of 45 feet. A truck mounted hollow stem auger drilling rig was employed for the borings. Soil samples were obtained according to procedures outlined in Appendix B, Soil

PROJECT No. 58-9558 DATE 8-2-89 PROJ. MGR. W.G. DFTR. M.N.



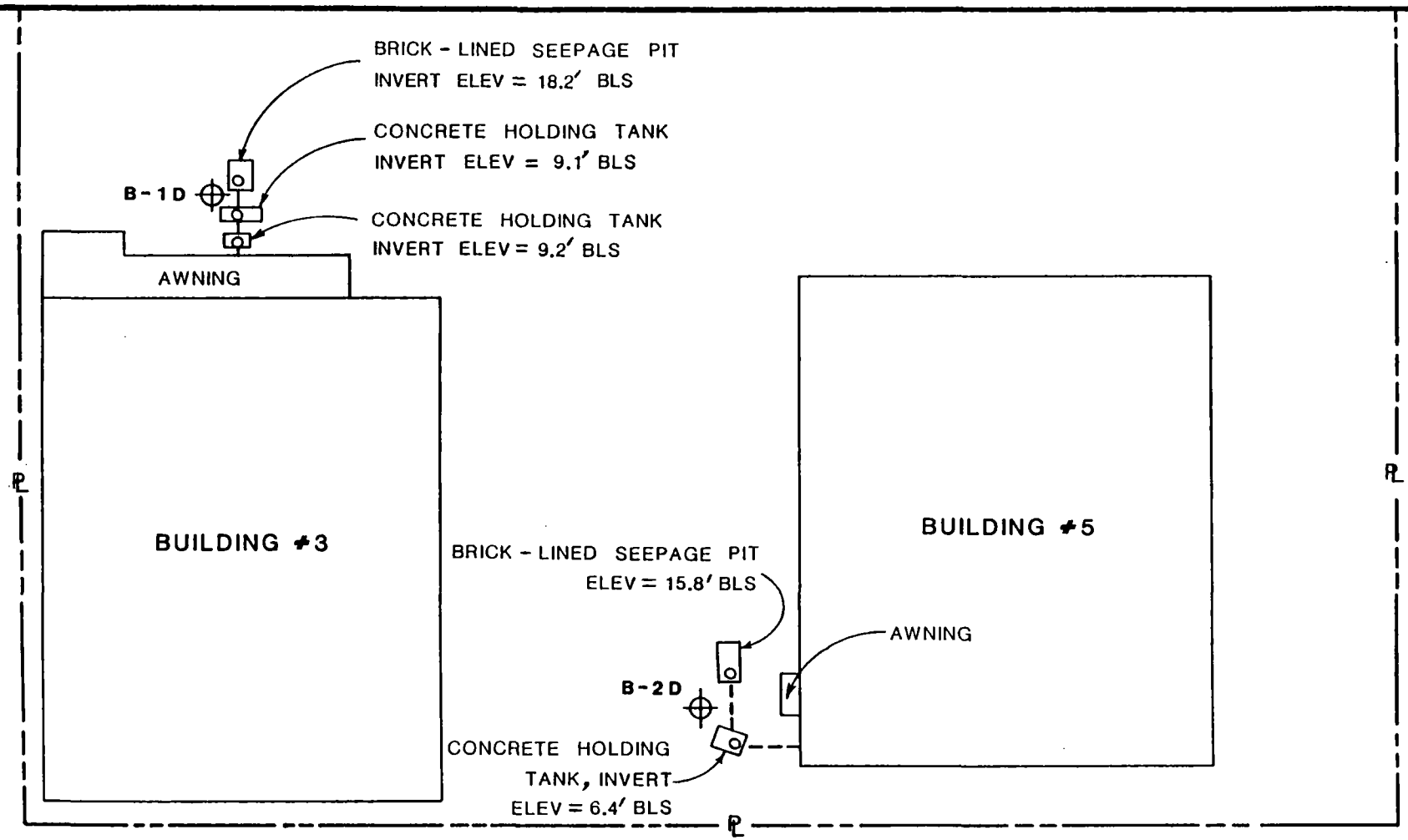
REFERENCE : BASE MAP BY HAWKER PACIFIC

0 115 (APPROX)

HAWKER PACIFIC	SITE MAP	FIGURE 1

LAW ENVIRONMENTAL, INC.

PROJECT No. 58-9661 DATE 8-2-89 PROJ. MGR. W.G. DFTR. M.N.



LEGEND

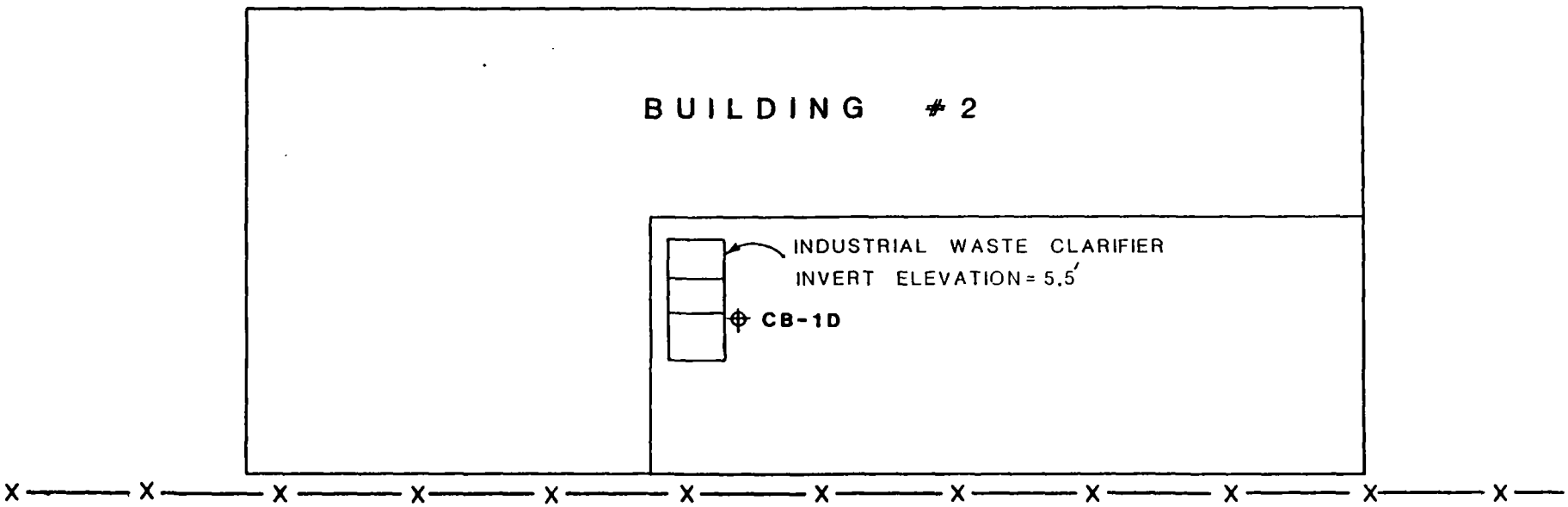
B-1D ⊕ BORING LOCATION AND NUMBER

— — — SEWER LINE

o TANK ACCESS

HAWKER PACIFIC	SITE DETAIL PSDS LOCATIONS	FIGURE 2 LAW ENVIRONMENTAL, INC.

PROJECT No. 58-966 DATE 8-3-89 PROJ. MGR. W.G. DFTR. M.N.



LEGEND

CB-1D ⊕ BORING LOCATION AND NUMBER

0 30
FEET

HAWKER PACIFIC	SITE DETAIL INDUSTRIAL WASTE CLARIFIER	FIGURE 3 LAW ENVIRONMENTAL, INC.

Sampling Protocol. The sampling equipment was thoroughly washed and rinsed before each use. All augers were steam cleaned prior to use. The soil samples were obtained by driving a split-spoon California sampler into the soil ahead of the augers. A soil sample from each sample interval was screened using an organic vapor analyzer (a Foxboro OVA 108GC) to quantify organic vapor concentrations above a soil sample contained in a plastic sample bag. Samples were retained in brass tubes and capped with Teflon® liners and tight-fitting plastic lids secured with vinyl tape. The samples were labeled and placed in an iced cooler.

Borings CB-1D and CB-2D were not logged from 0 to 40 feet in this investigation. The boring logs from our previous investigation in which those intervals were logged are included in Appendix C.

The soil samples were delivered to West Coast Analytical Services in Santa Fe Springs, a State certified hazardous materials testing facility. Samples collected at 50, 60, 70 and 80 foot depths were submitted for analyses of volatile organic compounds (EPA Methods 8010/8020).

Industrial Waste Clarifier

One soil boring was drilled adjacent to the industrial waste clarifier at the location shown on Figure 3, Site Detail, Industrial Waste Clarifier. The boring was within two feet of the

clarifier at the same location as Boring CB-1 of our previous investigation. A cart mounted hollow stem auger drilling rig was employed for the borings. Soil samples were collected at five-foot intervals beginning at a depth of 10 feet. The sampling equipment was thoroughly washed and rinsed before each use. All augers were steam cleaned prior to use. Samples were obtained by driving a split-spoon California sampler into the soil to collect an undisturbed sample. A soil sample from each sample interval was screened using an organic vapor analyzer in the same manner as for the PSDS borings. All samples were secured and preserved using methods similar to those previously cited for the PSDS borings (see Appendix B). The soil samples were delivered to West Coast Analytical Services, Inc., where they were analyzed for volatile organic compounds (EPA Method 8010/8020).

FINDINGS

Private Sewage Disposal System

Alluvial soils were encountered in the PSDS borings, consisting of medium to coarse-grained sand and gravel with some cobbles. No soil staining, hydrocarbon odors, or elevated OVA readings were noted. Boring logs are included in Appendix C.

Free ground water was not encountered in either of the borings. Recent water levels in the area are reported to be approximately

219 feet below ground surface, according to the Los Angeles County Flood Control District (L.A.C.F.C.D. Well No. 3820B, measured in April, 1989).

Laboratory analysis of the soil samples collected from Boring B-1D and B-2D, adjacent to the two PSDS systems, did not indicate the presence of volatile organic compounds in the soil from a depth of 50 feet down to a depth of 80 feet. Analytical data for the two PSDS borings are contained in Appendix D.

Industrial Waste Clarifier

Two feet of silty sand fill were found to overlie alluvial soils consisting of medium to coarse-grained sands with gravel and some cobbles. No soil staining, hydrocarbon odors or elevated OVA readings were observed. The boring log is included in Appendix C.

In Boring CB-1D, adjacent to the waste clarifier, toluene was found to be present in one soil sample. Toluene was detected at 4.2 µg/kg in the soil sample recovered from a depth of 35 feet; however, analysis of the laboratory blank samples detected the presence of toluene in all three blank samples at concentrations up to 2 µg/kg (Appendix D). No other volatile organic compounds were detected in any of the samples collected from the industrial waste clarifier boring.

CONCLUSIONS AND RECOMMENDATIONS

Private Sewage Disposal System Locations

Based on the results of this subsurface investigation, it appears that the traces of toluene detected during the initial investigation do not extend into the deeper soil underlying the PSDS locations. Data from Law Environmental's initial subsurface investigation demonstrated that concentrations of toluene in the soil decreased fairly regularly with depth, extending down to 40 feet below ground surface. Data from the current investigation indicate that no toluene above laboratory detection limits are present in the soil samples from 50 to 80 feet below ground surface.

In view of recent ground water levels in the area of the site of approximately 219 feet below ground surface, and based on the results of this limited investigation, the two PSDS locations do not appear to pose a threat to the ground water beneath the site. We recommend no further investigation for the PSDS areas.

Industrial Waste Clarifier

Based on the results of our investigation, it appears that the traces of toluene and tetrachloroethene (PCE) detected during the earlier investigation do not extend into the deeper soil beneath

the industrial waste clarifier in significant concentrations. Data from this investigation shows that no traces of PCE were encountered above laboratory detection limits in any of the soil samples recovered from depths of 10 to 40 feet in Boring CB-1D.

Toluene, at a concentration of 4.2 μg/kg was encountered in one soil sample recovered from a depth of 35 feet. State action levels for toluene in drinking water are recognized as 100 mg/kg. No other volatiles were detected in any other soil samples taken from Boring CB-1D.

Based on our findings in this limited investigation and the reported depth to ground water in the area, we recommend no further investigation of the industrial waste clarifier.

-oOo-

APPENDIX A

CORRESPONDENCE FROM THE

REGIONAL WATER QUALITY CONTROL BOARD

LAW ENVIRONMENTAL WORK PLAN
(Appendices not included)

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION

101 Centre Plaza Drive
Monterey Park, California 91754-2156
(213) 266-7500

NOV 2 1989

November 17, 1989

Mr. Erik Johnson
HAWKER PACIFIC, INC.
11310 Sherman Way
Sun Valley, CA 91352

SITE ASSESSMENT WORKPLAN - AB1803 WELL INVESTIGATION PROGRAM
(FILE NO. AB104.0020)

We are in receipt of your consultant's, Law Environmental, Inc., report dated November 14, 1989, containing the site assessment workplan for your facility.

We have reviewed the workplan and have no objections to its implementation, provided that all work is completed as specified in the proposal. The final locations of the soil test borings will be verified in the field on the day of drilling.

Please notify us at least one week prior to the date you plan to commence work at your facility so we can schedule an inspector to be present. The final report containing the results of the site assessment is due to this Regional Board by January 18, 1990.

If you have any questions, please contact Ms. Mila Silvestre at (213) 266-7529.

David A. Bacharowski

DAVID A. BACHAROWSKI
Environmental Specialist IV

cc: Mr. Warren Gross, Law Environmental, Inc.

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
101 Centre Plaza Drive
Monterey Park, California 91754-2156
(213) 266-7500

September 13, 1989

Mr. Erik Johnson
HAWKER PACIFIC, INC.
11310 Sherman Way
Sun Valley, CA 91352

SUBSURFACE INVESTIGATION - AB1803 WELL INVESTIGATION PROGRAM
(FILE NO. AB104.0436)

Reference is made to your consultant's, Law Environmental, Inc., report dated August 10, 1989, containing the results of the subsurface investigation completed in the private sewage disposal system (PSDS) locations and in the industrial waste clarifier area at your facility.

We have reviewed and evaluated the information contained in the report, which has identified the presence of Toluene consistently with depth down to 40 feet below ground surface in the two PSDS locations. Further, Perchloroethylene and Toluene were identified to be present down to 6.5 feet below ground surface in the industrial waste clarifier area.

In order to further define the vertical extent of contamination beneath the areas of concern, you are required to develop a Site Assessment Workplan that includes the following:

1. A minimum of one (1) soil test boring to a depth of 80 ft below land surface in each of the two PSDS locations. Soil samples shall be taken at every 5-ft interval starting at 45 ft below land surface.

2. A minimum of one (1) soil test boring to a depth of 40 ft below land surface in the industrial waste clarifier area. Soil samples shall be taken at every 5-foot interval starting at 10 ft below land surface.

3. All soil samples shall be analyzed for Volatile Organic Compounds by EPA Method 8240 or EPA Methods 8010 & 8020.

Your Site Assessment Workplan containing all of the items identified above is due to this Regional Board by October 13, 1989. If you have any questions concerning this matter, please contact Mila P. Silvestre at (213) 266-7529.

David A. Bacharowski

DAVID A. BACHAROWSKI
Environmental Specialist IV

cc: Alisa Greene, U.S. EPA Region IX
Bill Jones, L. A. County, Dept. of Health Services
Warren Gross, Law Environmental, Inc.
Publio Aliwalas, City of L. A., Bureau of Sanitation

LAW ENVIRONMENTAL, INC.

3320 N. SAN FERNANDO BLVD.
BURBANK, CALIFORNIA 91504
TEL. (818) 848-0214
FAX (818) 848-1674

November 14, 1989

Hawker Pacific, Inc.
11310 Sherman Way
Sun Valley, California 91352

Project No. 58-9661
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson
Hazardous Waste Engineer

Gentlemen:

WORK PLAN
Additional Soil Borings
Hawker Pacific, Inc.
11310 Sherman Way
Sun Valley, California

INTRODUCTION

Law Environmental, Inc. is pleased to submit this work plan to perform additional subsurface investigations at the above referenced property. This investigation was required by the Regional Water Quality Control Board (RWQCB) in their September 13, 1989 letter to Mr. Erik Johnson (RWQCB File No. AB104.0436) attached as Appendix C. This work plan addresses all elements of the required investigation. The results of previous subsurface investigation of the subject property by Law Environmental are contained in our report No. 58-8601, dated January 4, 1989 and our report No. 58-9558 dated August 10, 1989. The latter report detailed our finding of toluene in soils adjacent to the private

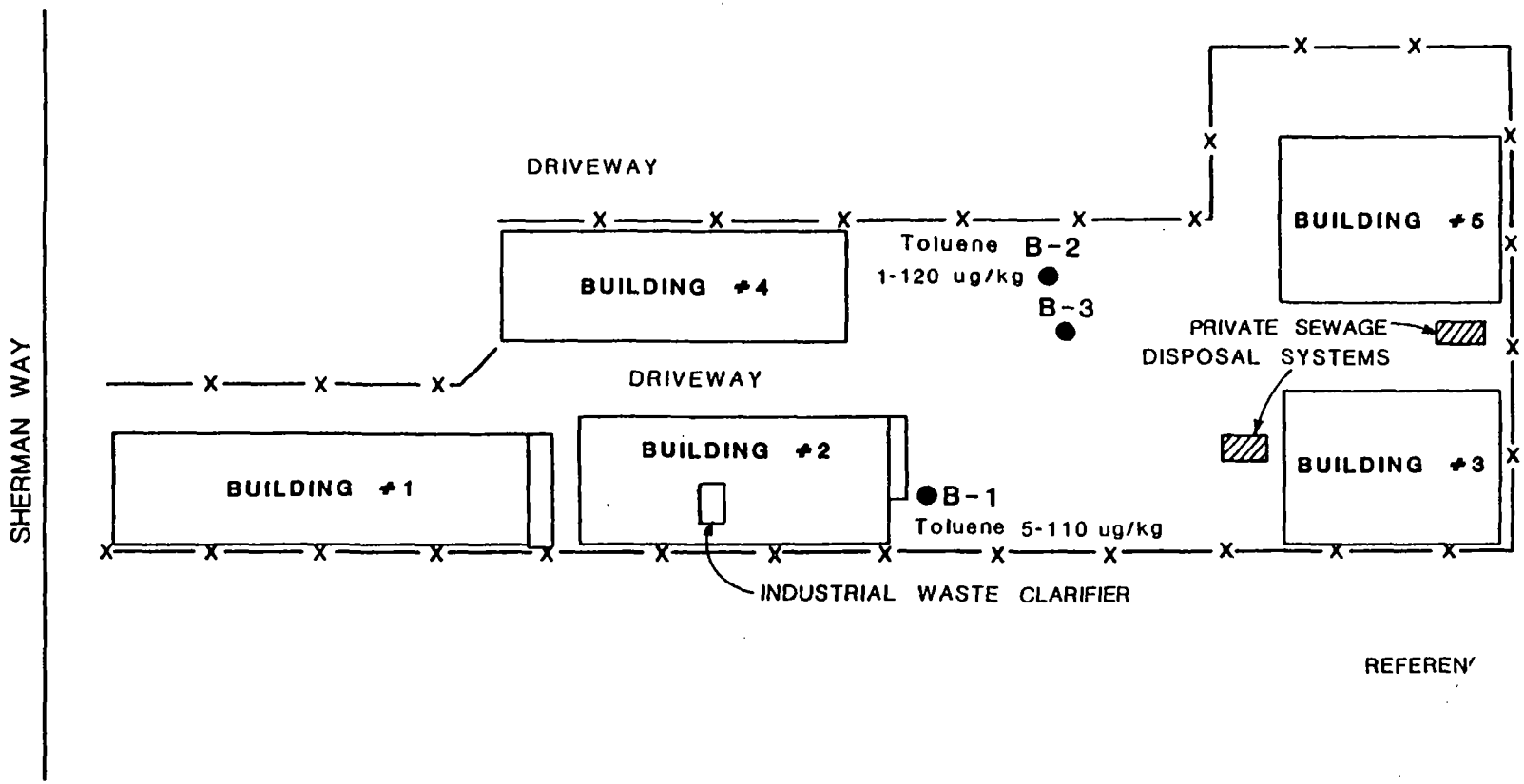
sewage disposal system (PSDS) installations at depths up to 40 feet (see Figures 1 and 2). Maximum concentrations of toluene, 110 and 120 µg/kg were reported at the 10-foot depth, with concentrations declining to values of 11 and 53 µg/kg at a depth of 40 feet. In addition, soil samples from shallow (6.5 feet) borings adjacent to the industrial waste clarifier were found to contain up to 28 µg/kg toluene and up to 4 µg/kg tetrachloroethylene (PCE) (see Figures 1 and 3).

The investigations presently required by the RWQCB include additional soil borings at the location of the PSDS and adjacent to the industrial waste clarifier in Building 2, with soil sampling to depths of 80 and 40 feet respectively.

HEALTH AND SAFETY PLAN

Law Environmental has prepared a site-specific health and safety plan for this investigation in accordance with RWQCB requirements. The plan is included in Appendix B. All field personnel will be required to sign on page 5 indicating that they have read, understand, and will comply with the requirements of the health and safety plan.

PROJECT No. 58-9661 DATE 8-2-89 PROJ. MGR. W.G. DFTR. M.N.



REFEREN BASE MAP BY
KER PACIFIC

LEGEND

B-1
● BORING LOCATION AND NUMBER

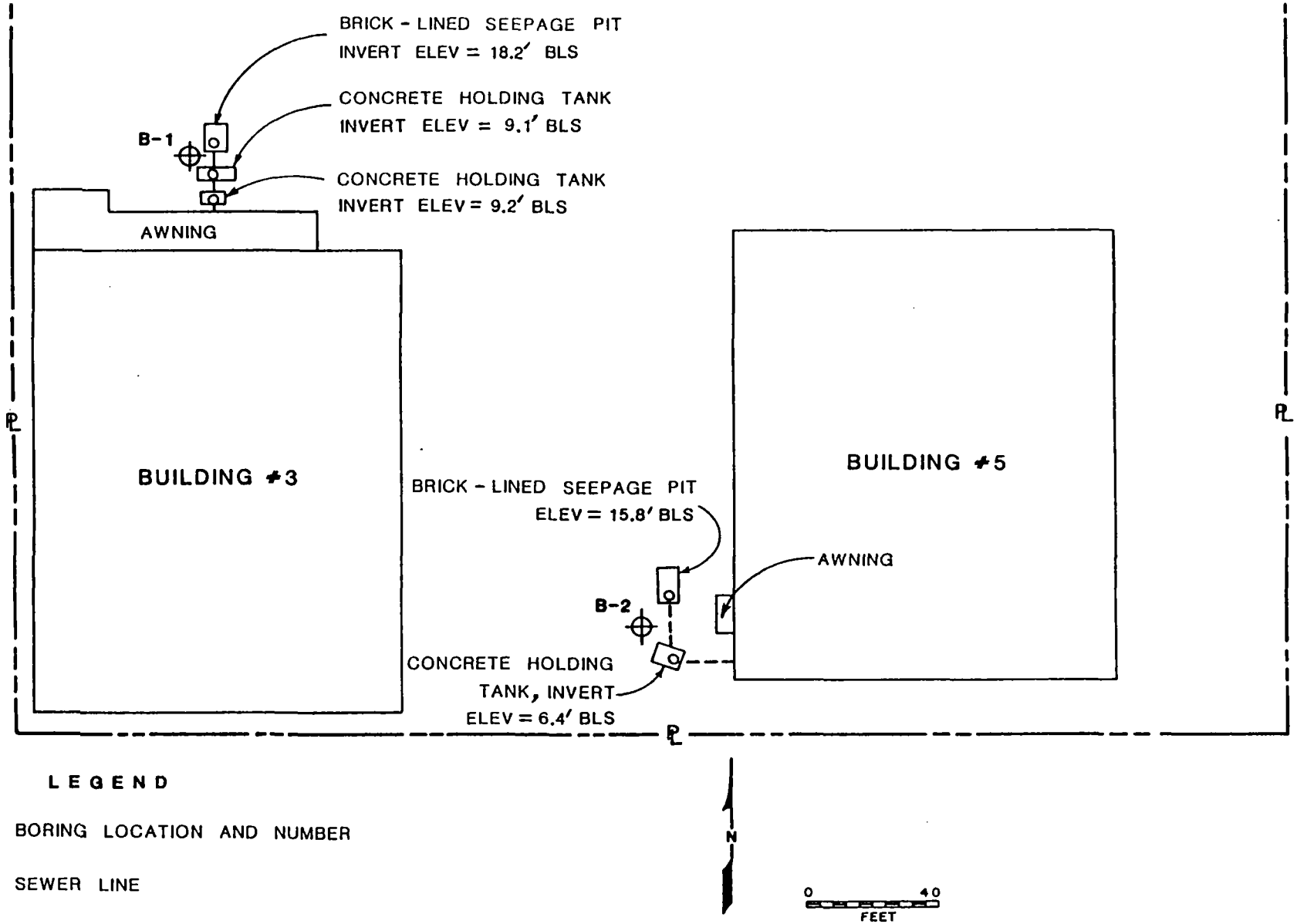
HAWKER PACIFIC

PLOT PL

FIGURE 2

LAW ENVIRONMENTAL, INC.

PROJECT No. 58-9661 DATE 8-2-89 PROJ. MGR. W.G. DFTR. M.N.



LEGEND

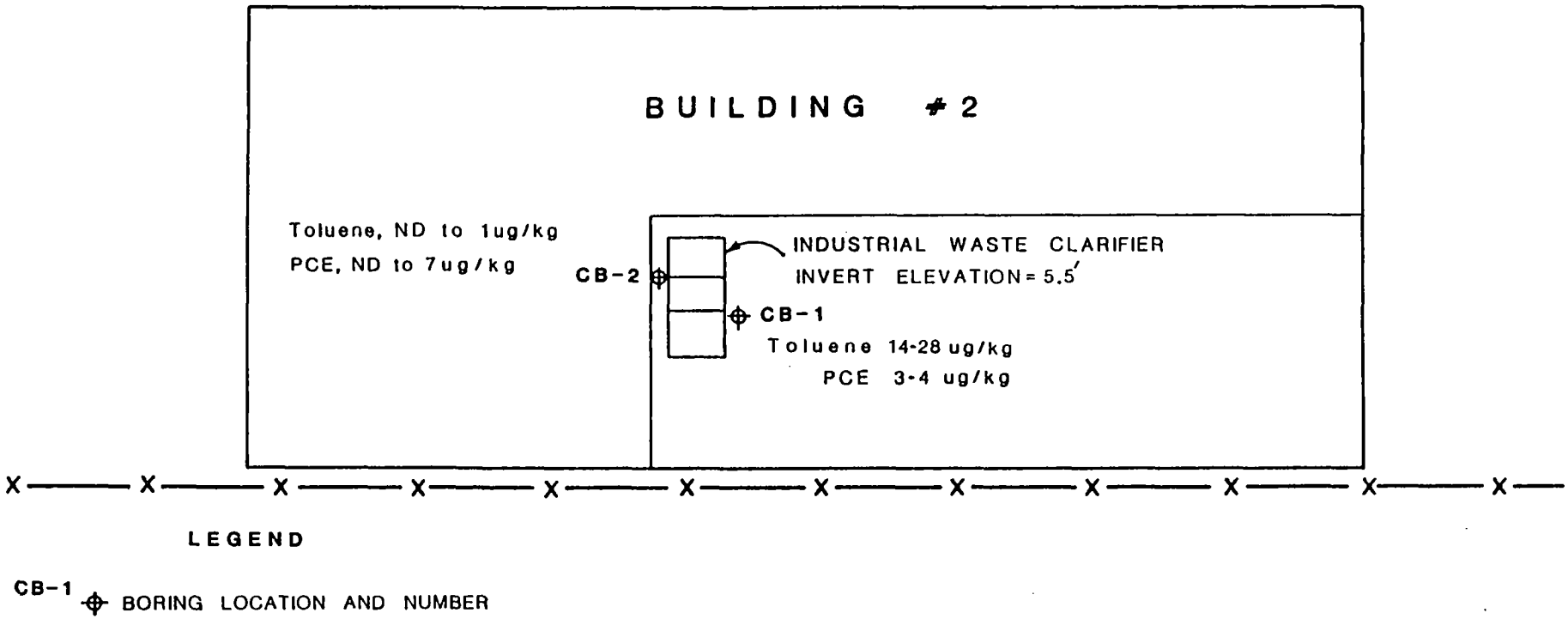
B-1 ⊕ BORING LOCATION AND NUMBER

— — — SEWER LINE

o TANK ACCESS

HAWKER PACIFIC	SITE DETAIL PSDS LOCATIONS	FIGURE 2 LAW ENVIRONMENTAL, INC.

PROJECT No. 58-966 DATE 8-3-89 PROJ. MGR. W.G. DFTR. M.N.



HAWKER PACIFIC	SITE DETAIL INDUSTRIAL WASTE CLARIFIER	FIGURE 3 LAW ENVIRONMENTAL, INC.

PROPOSED SOIL SAMPLING AND ANALYSIS PROGRAM

PSDS

The location of each PSDS is indicated on Figure 1, Site Map. Law Environmental will observe the drilling by a qualified drilling contractor, of one boring to a depth of 80 feet (or to auger refusal, whichever is first) at the location of each PSDS. The borings will be located as close as practical to our previous borings in these areas. Drilling will be accomplished by the hollow-stem auger method. Steam-cleaned augers will be used. Undisturbed soil samples will be collected at 5-foot intervals in each boring, unless precluded by cobble zones or unanticipated conditions. Soil samples from the 50, 60, 70 and 80-foot depths of each boring will be analyzed for selected volatile organic compounds by EPA Methods 8010 and 8020. Soil samples will not be tested for any additional parameters unless specifically requested by the client in writing. All RWQCB QA/QC requirements and detection limits will be specified. All soil samples will be monitored for the presence of volatile organic compounds using a portable organic vapor detector. Soil samples from depths other than those specified above which yield significant vapor readings will also be submitted for laboratory analysis. The borings will be logged and samples collected in accordance with the procedures specified in Appendix A, Soil Sampling Protocol.

INDUSTRIAL WASTE CLARIFIER

One soil boring will be drilled adjacent to the clarifier at the location of our previous boring, CB-1, as shown on Figure 3. We will attempt to collect undisturbed soil samples at depths of 5, 10, 15, 20, 25, 30, 35 and 40 feet, as requested by the RWQCB. These samples will be analyzed for selected volatile organic compounds by EPA Methods 8010 and 8020.

Due to the limited access adjacent to the clarifier, we will utilize a hollow-stem auger drilling rig specially designed for indoor use. Soil samples will be collected in accordance with the procedure specified in Appendix A.

REPORTING

Following receipt of the results of laboratory analyses we will submit a report of our findings and recommendations. The report will include all boring locations, boring logs, and laboratory reports.

- oOo -

If you have any questions regarding this work plan, please contact the undersigned. We will begin implementation of this work plan following your receipt of written approval from the RWQCB. We estimate that our report can be submitted within eight weeks of work plan approval.

Sincerely,

LAW ENVIRONMENTAL, INC.

Warren W. Gross
Staff Environmental Geologist

Garabet H. Kassakhian, A.M.,Ph.D.
Manager Special Projects
Senior Environmental Scientist

Glenn A. Brown, C.E.G. 3
Senior Vice President

WWG/pr/9661WP.RPT
(3 copies submitted)

APPENDIX B

SOIL SAMPLING PROTOCOL

SOIL SAMPLING PROTOCOL

The following procedures are followed when sampling soil with the hollow-stem auger drilling technique.

1. Continuous flight, hollow-stem augers are used.

2. All augers, samplers and downhole equipment are steam cleaned prior to use and between borings. This minimizes the possibility of cross-contamination occurring.

3. A registered geologist or other appropriately trained personnel observes the drilling, visually logs the soils, and obtains soil samples at appropriate intervals (usually 5 feet) as determined by field conditions.

4. The Unified Soils Classification System (USCS) is utilized to classify the soils. Rocks are classified according to the Colorado School of Mines "Classification of Rocks."

5. The soil samples are obtained using a modified California split-spoon sampler, which accommodates two to six sample tubes. Various tubes are utilized to accommodate the different analyses required:

   <u>Brass Tubes</u>: 2 1/2 by 3 or 6 inches - for all organics and general analyses, excluding copper and zinc.

Stainless Steel Tubes: 2 1/2 by 3 or 6 inches - for all organics and metals analyses excluding chrome and nickel.

6. The tubes are scrubbed with a brush and TSP or equivalent cleaning agent, then rinsed with tap water. If required, the tubes are steam cleaned. Tubes are given a final rinse with distilled water and delivered to the drilling site in closed buckets or equivalent to preclude recontamination.

7. After the sample tubes are removed from the sampler, the latter is completely disassembled and scrubbed in TSP or equivalent and tap water. The sampler is rinsed with tap water, and distilled water (if required) and reassembled with the required number of clean tubes.

8. Unclean tubes are washed with TSP or equivalent solution, rinsed with tap water, etc. as described in 6 above.

9. In loose soils, a sand catcher is used to prevent soil from falling out of the sampler.

10. The sampler is driven 12 or 18 inches at each sampling. Generally, the lowest tube is retained for analysis. The other tube or tubes are retained for split sampling or as a back-up.

11. The sample is logged in. After testing for the presence of combustible gases or volatile organic compounds, the sample is capped with Teflon liners and tight-fitting plastic caps to minimize leaching and cross-contamination. Black vinyl electrical tape is used to tightly secure the caps to the sample tube. The samples are labeled and preserved in clean ice chests containing Blue Ice or equivalent, to keep the samples at or about 4 degrees Celsius.

12. The samples are kept in the ice chest until delivered to a State and EPA certified testing laboratory, the same day if physically possible. The undelivered samples are stored or archived in secured Law Environmental sample storage at or about 4 degrees Celsius. A freezer is also available at Law Environmental if freezing samples is required or recommended.

13. All samples are accompanied by a chain-of-custody form, documenting the time, date, and person-in-charge since retrieval of the sample from the sampler.

14. In case of visual and/or olfactory evidence of contamination, soil cuttings are impounded in drums carrying cautionary labels. The drums are secured from random contact. Custody of the drums and their content will remain with the client at all times.

15. If chemical analysis of the soil indicates the presence of elevated levels of pollutants, then the Client will be informed of the test results and advised as to the lawful means of disposal or detoxification. Upon the written request and authorization by the Client, Law Environmental will organize the disposal or detoxification of the impounded soil in accordance with all applicable federal, state, county and local regulations.

16. The soil sample tube label includes:

    Job Number
    Boring Number and Depth
    Sampling Date
    Sampler's Initials
    Test to be Performed (if known at the time of sampling).

17. An indelible marking pen or a ball-point pen is used to mark the sample tubes.

18. A detailed log is kept of all field activities.

APPENDIX C

BORING LOGS

BORING LOG

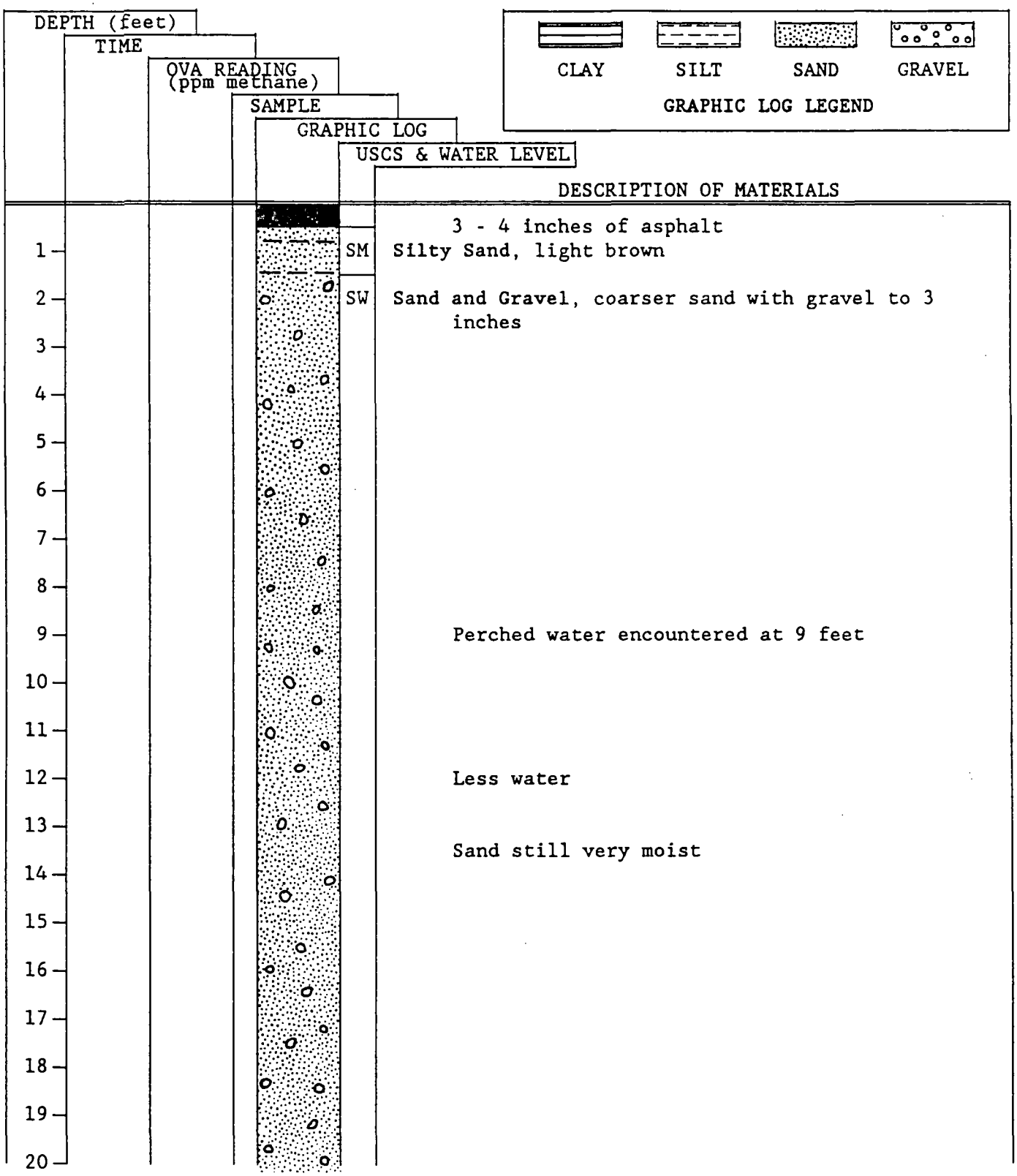
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D

DRILLED BY Datum Exploration PAGE 1 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



3 - 4 inches of asphalt

Silty Sand, light brown

Sand and Gravel, coarser sand with gravel to 3 inches

Perched water encountered at 9 feet

Less water

Sand still very moist

(continued on next page)

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D

DRILLED BY Datum Exploration PAGE 2 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH

CLAY SILT SAND GRAVEL

GRAPHIC LOG LEGEND

DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	GRAPHIC LOG	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
					SW	Very moist, no odor
21						
22						
23						
24						
25						
26						
27						
28						
29						Still moist
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

(continued on next page)

BORING LOG

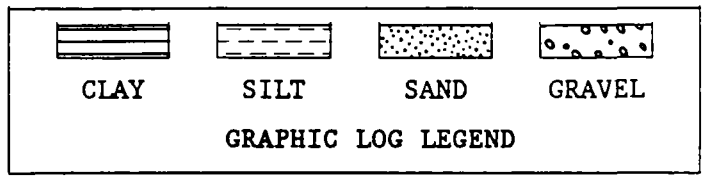
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D

DRILLED BY Datum Exploration PAGE 3 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	GRAPHIC LOG	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
41						
42						
43						
44						
45	0830	0				No odor
46						
47					SW	
48						
49						
50	0840	0	*			Sand with less gravel
51						
52						
53						
54						No odor
55	0850	0				
56						
57						
58						
59						
60	0900	0				Gravel to 3/4"

* Denotes sample preserved and given to RWQCB personnel (cont. on next page)

BORING LOG

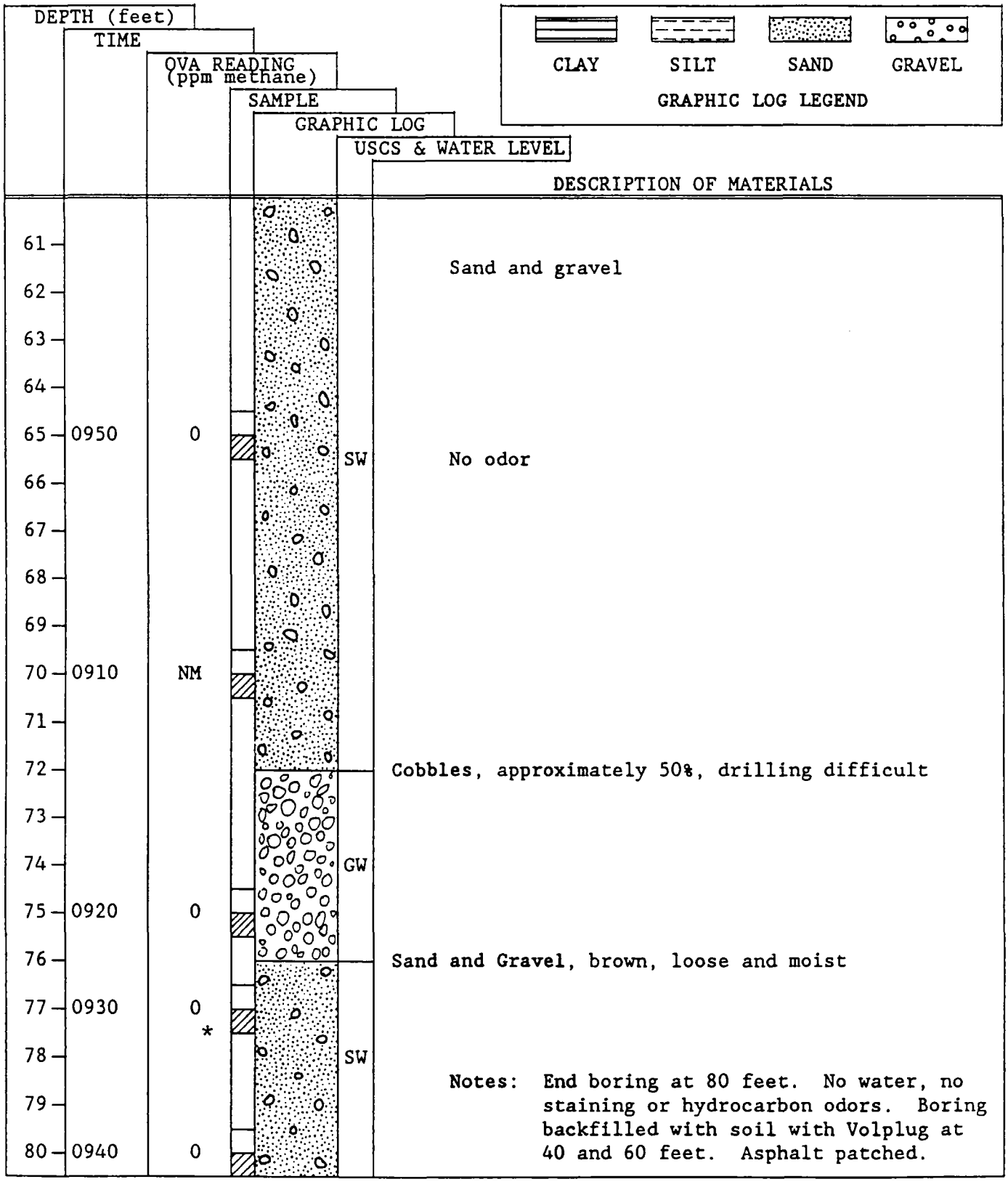
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D

DRILLED BY Datum Exploration PAGE 4 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
61					Sand and gravel
62					
63					
64					
65	0950	0		SW	No odor
66					
67					
68					
69					
70	0910	NM			
71					
72					Cobbles, approximately 50%, drilling difficult
73					
74				GW	
75	0920	0			
76					Sand and Gravel, brown, loose and moist
77	0930	0 *			
78				SW	
79					Notes: End boring at 80 feet. No water, no staining or hydrocarbon odors. Boring backfilled with soil with Volplug at 40 and 60 feet. Asphalt patched.
80	0940	0			

* Denotes sample preserved and given to RWQCB personnel.

BORING LOG

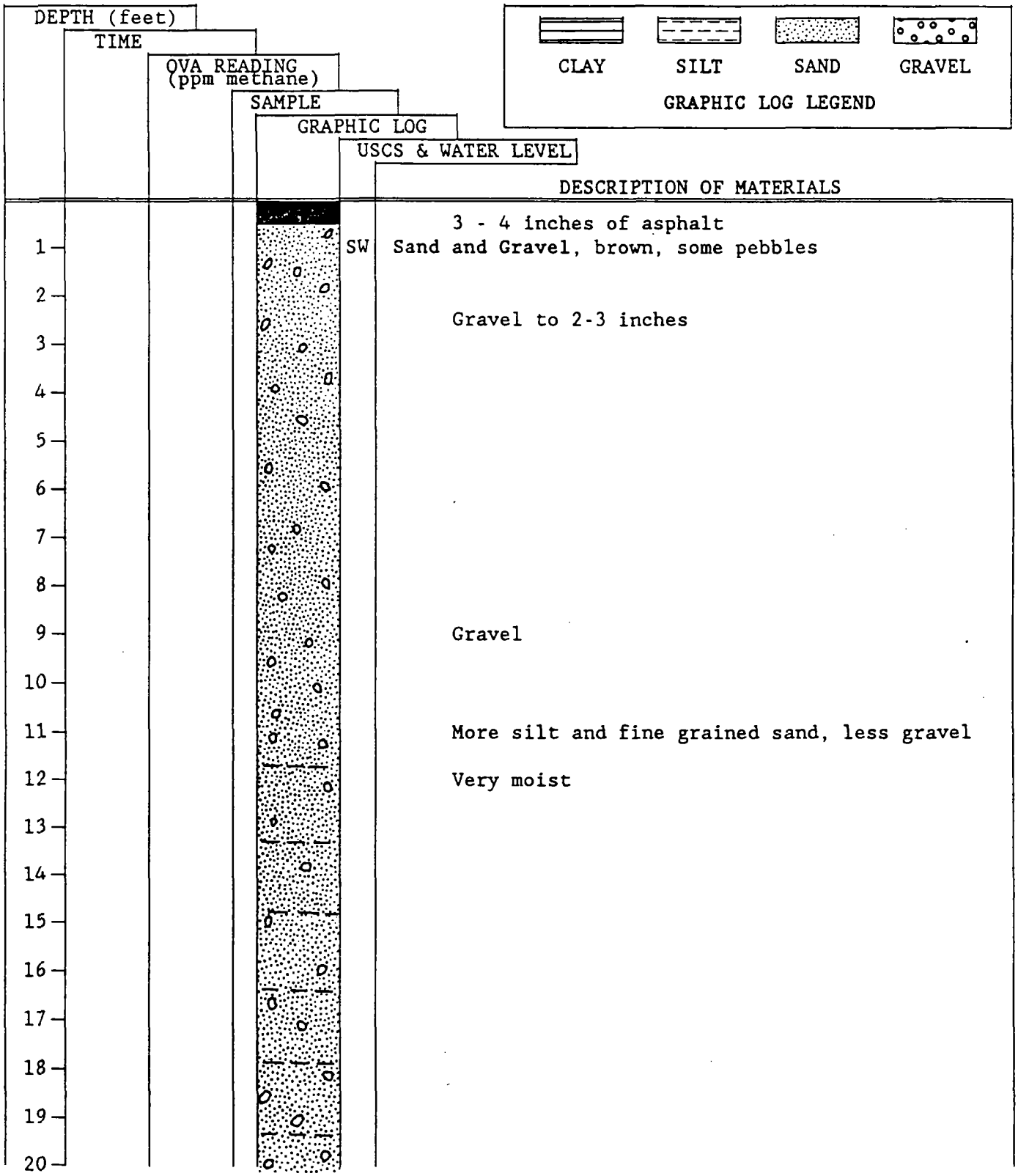
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D

DRILLED BY Datum Exploration PAGE 1 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



(continued on next page)

BORING LOG

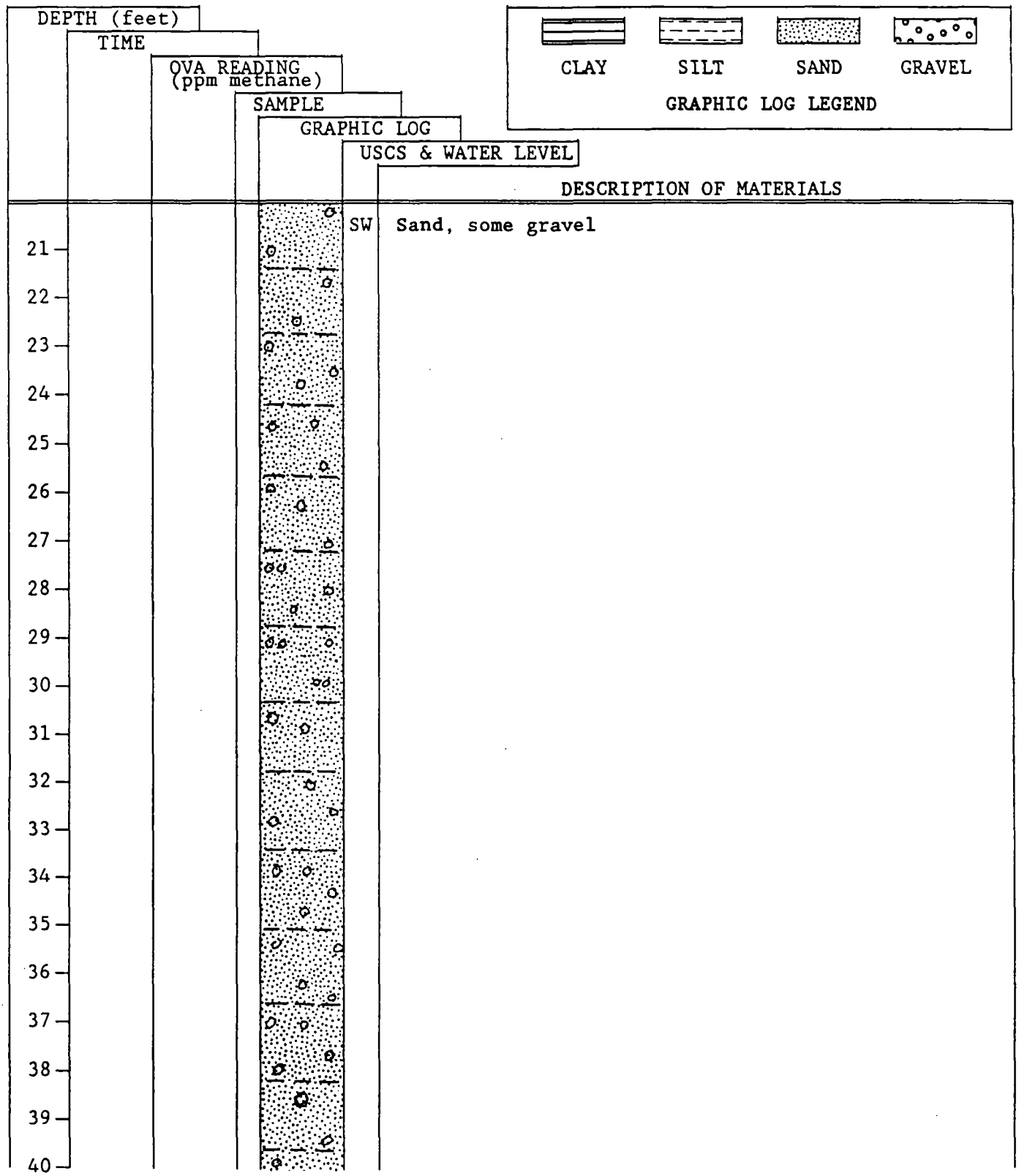
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D

DRILLED BY Datum Exploration PAGE 2 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



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BORING LOG

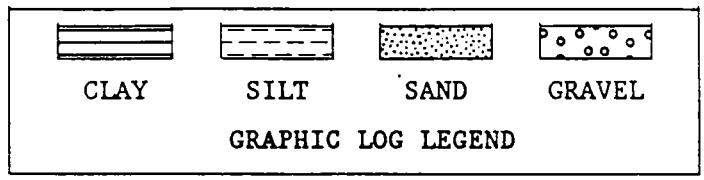
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D

DRILLED BY Datum Exploration PAGE 3 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	GRAPHIC LOG	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
41						
42						Sand, medium grained, no odor
43						
44						
45	1200	1				
46						
47					SW	
48						
49						
50	1210	1	*			Sand, medium to coarse grained
51						
52						
53						
54						
55	1220	1				
56						
57						
58					SW	Sand and Gravel, light brown, fine to coarse grained sand, slightly moist and loose, gravel to 2-1/2" diameter No odor
59						
60	1230	0.5			SW	

* Denotes sample preserved and given to RWQCB personnel (cont. on next page)

BORING LOG

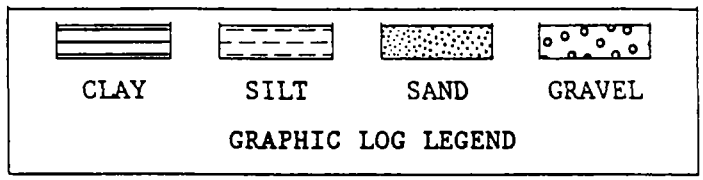
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D

DRILLED BY Datum Exploration PAGE 4 of 4

DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89

BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	GRAPHIC LOG	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
61						Sand, gray, medium grained, loose and slightly moist with gravel to 1-1/2" No odor
62						
63						
64						
65	1235	2.5				Now more cobbles
66						
67						
68					SW	
69						
70	1240	0				
71						
72						
73						
74						
75	1250	0.5				Gravelly Sand, brown, medium to coarse grained, loose and slightly moist, gravel to 2-1/2" No odor
76	1300	0.5 *				
77					SP	
78						
79						Notes: End boring at 80 feet. No ground water, no staining or hydrocarbon odor. Boring back-filled with soil with Volplug at 57 feet and 40 feet. Asphalt patched.
80	1310	2				

* Denotes sample preserved and given to RWQCB personnel

BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-1D

DRILLED BY Datum Exploration PAGE 1 of 2

DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89

BOREHOLE DEPTH 40 feet BOREHOLE DIA. 6 inches LOGGED BY WWG

CLAY SILT SAND GRAVEL

GRAPHIC LOG LEGEND

DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	GRAPHIC LOG	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
						4" of concrete at surface
1						Fill, silty sand, dark brown, some gravel, slightly moist, moderately firm with no hydrocarbon odor
2						
3						Sand, brown, medium to coarse grained, moderately loose and damp, some fine sand and gravel to 1" in diameter, no hydrocarbon odor
4						
5						
6					SW	cobbles (granite)
7						
8						
9						
10						
11	1040	1				
12						
13						
14						
15	1050	1				sand, medium grained, with a trace of clay
16						
17						
18						
19						
20						

(continued on next page)

BORING LOG

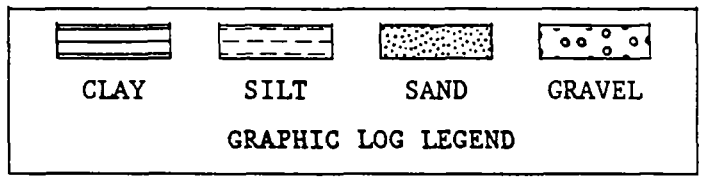
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661

LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-1D

DRILLED BY Datum Exploration PAGE 2 of 2

DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89

BOREHOLE DEPTH 40 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



DEPTH (feet)	TIME	OVA READING (ppm methane)	SAMPLE	GRAPHIC LOG	USCS & WATER LEVEL	DESCRIPTION OF MATERIALS
	1105	4			SW	
21						
22						
23						
24						
25						sand, coarse grained with gravel to 3/4" in diameter, with some medium grained sand
	1120	3				
26						
27						
28						
29						
30						
	1145	3				
31						
32						
33						
34						
35						
	1201	1				
36						
37						Notes: End boring at 40 feet, no water, no hydrocarbon odor or staining. Boring backfilled with soil with Volplug pellets placed at 20 and 30 foot depths. The boring was sealed at the surface with Volplug pellets and the concrete was patched.
38						
39						
40	1220	0.5				

APPENDIX D

ANALYTICAL TEST RESULTS AND CHAIN-OF-CUSTODY OF SOIL SAMPLES

December 18, 1989

WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd, Suite 200
Burbank, CA 91504

Attn: Warren Gross

JOB NO. 14339

A

LABORATORY REPORT

Samples Received: Twenty-three (23) soils
Date Received: 12-8-89
Purchase Order No: Proj#: 58-9661/Hawker Pacific

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Fifteen (15) soils	Halogenated and Aromatic Volatile Organics by EPA 8010/8020	Data Sheets
One (1) soil	Matrix Spike/Matrix Spike Duplicate by EPA 8010/8020	Data Sheet

Michael Shelton
Senior Chemist

B. Michael Hovanec
Senior Staff Chemist

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 13-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 50'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 13-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 60'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 13-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 70'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 13-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 80'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 13-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 50'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 60'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 70'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 80'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 10'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 15'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 20'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 25'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 30'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 35'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	4.2	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 40'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	1	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 14339
Date Analyzed: 14-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	2	1
Chlorobenzene	3	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL
Job No: 14339
Date Analyzed: 13-Dec-89
Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	2	1
Chlorobenzene	2	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: Hawker Pacific
Project Number: 58-9661
Project Name:
Report Attention: Warren Gross
Sampled by: Warren Gross

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8010	8020	HOLD						Remarks
1	12/7/89	0830	SO	B-1D @ 45' ✓	1			X						Please use methods
2	↓	0840	↓	50' ✓	1	X	X							to obtain low detection
3		0850		55' ✓	1			X						limits required by
4		0900		60' ✓	1	X	X							RWQCB AB1803
5		0905		65' ✓	1			X						program and include
6		0910		70' ✓	1	X	X							with report the
7		0920		75' ✓	1			X						QA/QC package
8		0940		80' ✓	1	X	X							required by the
9		1200		B-2D @ ~~[illegible]~~ NA 45' ✓	1			X						RWQCB
10		1210		~~[illegible]~~ NA 50' ✓	1	X	X							Please report
11		1220		~~[illegible]~~ NA 55' ✓	1			X						sample description
12	↓	1230	↓	~~[illegible]~~ NA 60' ✓	1	X	X							on final report

	Signature	Company	Date	Time
Relinquished by	Warren W Gross	Law Environmental, Inc.	12/8/89	~~0900~~ 1000 NA
Received by	Bob DeBuy	Redd'i X press	12/8/8	10:00 AM
Relinquished by				
Received by	Mary Cederwall	WCAS	12-8	11:50
Relinquished by				A.M.
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

No 14339

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: Hawker Pacific
Project Number: 58-9661
Project Name:
Report Attention: Warren Gross
Sampled by: Warren Gross

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8010	8020	HOLD						Remarks
13	11/7/89	1235	SO	B-2D @ ~~[illegible]~~ 65'	1			X						
14		1240		~~[illegible]~~ 70'	1	X	X							
15		1250		~~[illegible]~~ 75'	1			X						
16		1310		~~[illegible]~~ 80'	1	X	X							
17		1040		CB - 1D ~~[illegible]~~ @ 10'	1	X	X							
18		1050		15'	1	X	X							
19		1105		20'	1	X	X							
20		1120		25'	1	X	X							
21		1145		30'	1	X	X							
22		1205		35'	1	X	X							
23		1220		40'	1	X	X							

	Signature	Company	Date	Time
Relinquished by	Warren N. Gross	Law Environmental, Inc.	12/8/89	1000 ~~[illegible]~~
Received by	Bob DeBay	Redi-X Pick-up	12/8/89	10:00 A.M.
Relinquished by				
Received by	Mary Cedernell	WCAS	12/8	11:50 A.m
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

014339

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

BACKGROUND

A preliminary subsurface investigation was conducted at the site in June 1990 (Active Leak Testing, Inc. [ALT], Hawker Pacific), to determine the presence of contamination from a small (approximately 200 gallon) underground storage tank. A geophysical survey at the site was conducted by Spectrum E.S.I. in August 1990. The survey indicated that the tank was four feet in length, four feet in diameter, and at one time contained waste oil. The tank was located within a concrete containment area at the west end of the alley. A sump, one foot by one foot by three feet deep, was discovered during this investigation.

During the ALT investigation, three borings (B-1, B-2 and B-3) were drilled in the area of the underground storage tank and the sump. Borings B-1 and B-2, located adjacent to the underground storage tank, were slant-drilled and completed to a depth of 20 feet. Boring B-3, located adjacent to the sump, was slant-drilled to a depth of 15 feet. All samples were tested for total recoverable hydrocarbons (EPA Method 418.1) and one sample (Boring B-3 at five feet) was analyzed for purgeable organics (EPA Method 8240). Table 1 presents the analytical laboratory results of the soil samples.

TABLE 1

RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES
FOR TOTAL RECOVERABLE HYDROCARBONS AND PURGEABLE ORGANICS
FROM ALT REPORT, JUNE 1990

SAMPLE NUMBER AND DEPTH	TRH (ppm)	1,1,1-TCA (ppb)	TCE (ppb)	TOLUENE (ppb)	PCE (ppb)	TOTAL XYLENES (ppb)
B-1 @ 15'	36.3	NT	NT	NT	NT	NT
B-1 @ 20'	36.3	NT	NT	NT	NT	NT
B-2 @ 15'	220	NT	NT	NT	NT	NT
B-2 @ 20'	136	NT	NT	NT	NT	NT
B-3 @ 1'	38,637	NT	NT	NT	NT	NT
B-3 @ 3'	22,251	NT	NT	NT	NT	NT
B-3 @ 5'	3,245	6.6	19.2	550,000	555,000	584
B-3 @ 10'	17,104	NT	NT	NT	NT	NT
B-3 @ 15'	354	NT	NT	NT	NT	NT

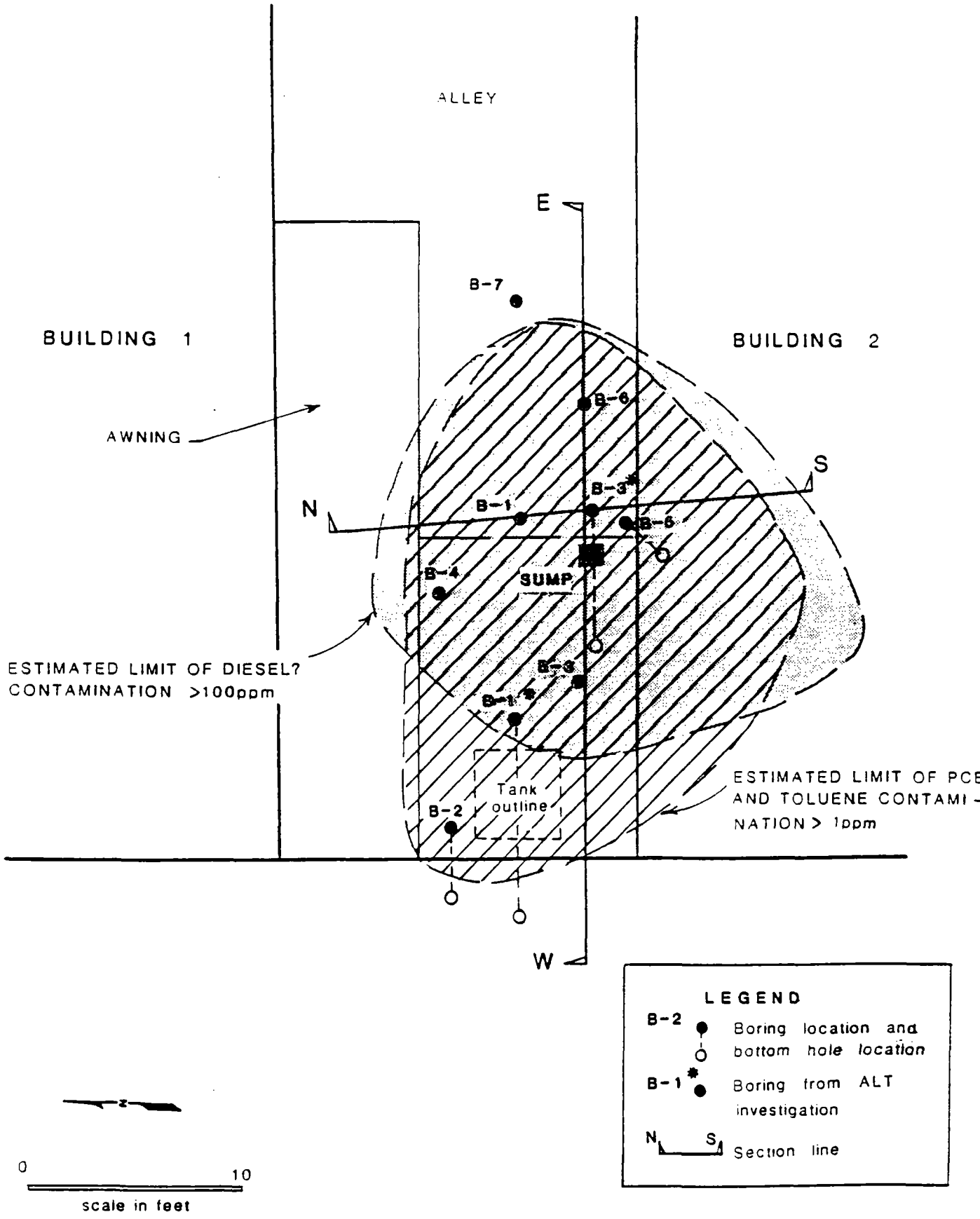
TRH = Total Recoverable Hydrocarbons
1,1,1-TCA = 1,1,1-Trichloroethane
TCE = Trichloroethene
PCE = Tetrachloroethene
NT = Not Tested

PURPOSE

The purpose of the current investigation was to delineate the vertical and horizontal extent of contamination that occurred as a result of the discharge from the underground storage tank and/or the sump.

SCOPE OF INVESTIGATION

Seven soil borings were drilled in the alley as shown on Figure 2. One boring (B-1) was drilled to 80 feet, one (B-2) to 40 feet, one (B-5) to 25 feet, and four borings (B-3, B-4, B-6, and B-7) were drilled to a depth of 20 feet. Undisturbed soil samples were



PROJECT No. 58-0605 DATE 10/9/90 PROJ MGR. J.O. DFTR. M.G.

HAWKER PACIFIC SUN VALLEY, CALIFORNIA	SITE PLAN	Proj. No. FIGURE

collected at 5-foot intervals in all borings. Based on field observations, selected soil samples were submitted to Curtis and Tompkins, Ltd. of Los Angeles, California, a state-certified analytical laboratory. The selected samples were analyzed for total extractable petroleum hydrocarbons (EPA Method 8015, Modified) and volatile organics (EPA Method 8240).

SUBSURFACE INVESTIGATIVE METHODS

Field work was conducted from August 28 through August 31, 1990. Seven soil borings, designated B-1 through B-7 were drilled in the alley (Figure 2). All work was performed in accordance with a site-specific Health and Safety Plan (Appendix A). Soil samples were obtained according to procedures outlined in Appendix B, Soil Sampling Protocol. The sampling equipment was thoroughly washed and rinsed prior to and during sampling. The soil samples were obtained by driving a split-spoon California sampler into the soil ahead of the augers. A soil sample from each sample interval was screened using an organic vapor analyzer (Foxboro OVA 108 GC) and Gastechtor 1238 to quantify organic vapor concentrations and combustible gas concentrations, respectively. Samples were collected in brass tubes, capped with Teflon® liners and tight-fitting plastic lids, and secured with vinyl tape. The samples were labeled and placed in an ice-filled cooler until delivery to the laboratory.

All findings and conclusions derived from measurements and/or analyses of soil, water, air and/or gas are based on the conditions which existed only at those particular sample locations and the times of sampling. The analytical results reflect the range of accuracy and detection levels, when specified, for the particular analytical equipment and/or specific analytical method(s) used.

Drilling was conducted by Layne Environmental Services, formerly Datum Exploration of Long Beach, California using B-53 and CME75 truck-mounted, hollow-stem auger drilling rigs and a SIMCO golf cart-mounted, hollow-stem drilling rig. Boring B-1 was completed to a depth of 80 feet. Boring B-2 was slant-drilled five degrees from vertical in a westward direction to a depth of 40 feet. Boring B-5 was slant-drilled five degrees from vertical in a southwest direction to a depth of 25 feet. Borings B-3, B-4, B-6, and B-7 were drilled to depths of 20 feet. Soil samples were collected from all borings at 5-foot intervals. All borings were backfilled with soil and patched with concrete or capped with the concrete plug that was cut for the boring.

FINDINGS

Field Observations

A thin layer of fill exists beneath the site. The fill soils consist of brown, medium to coarse-grained sand. Alluvial soil was

encountered in all borings. The alluvium consists generally of medium to very coarse-grained sand with gravel up to two inches in diameter and minor lenses of silty sand with gravel. Gravel lenses were encountered in Boring B-1 at depth which made drilling below 70 feet very difficult. Ground water was not encountered in any of the borings.

Conspicuous solvent odors were detected in drill cuttings from Borings B-1, B-3 and B-5. No visual evidence of contamination was noted in the drill cuttings. A Gastechtor 1238 was used to monitor combustible gases in the samples from Boring B-1. The values ranged from 450 parts per million ([ppm], relative to hexane) at 49 feet, to 240 parts per million (ppm) at 69 feet. The Foxboro 108 GC OVA was used to screen samples in all other borings. Organic vapor concentrations in Boring B-3 ranged from 75 ppm to 5 ppm (relative to methane), and in Boring B-5 from 44 ppm to 1 ppm (relative to methane). All boring logs are included in Appendix C.

OVA and Gastechtor readings were used as a relative indicator of the volatile organic compound content (including methane) of the soil in order to aid in the selection of samples for laboratory analyses. All equipment readings are included on the boring logs.

Analytical Results

Analytical reports containing the results of testing of soil samples are included in Appendix D. Chain-of-Custody and QA/QC documentation are also included in Appendix D. Tables 2 and 3 present the analytical data obtained from testing 18 soil samples for extractable petroleum hydrocarbons by U.S. EPA Method 8015 (Modified) and purgeable organics by U.S. EPA Method 8240, respectively.

TABLE 2

RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES FOR EXTRACTABLE PETROLEUM HYDROCARBONS BY MODIFIED U.S. EPA METHOD 8015

BORING NO.	DEPTH (in feet)	CONCENTRATION (in ppm)		
		GASOLINE	KEROSENE	DIESEL
B-1	9	ND <.5	NR	NR
	29	ND <.5	NR	NR
	49	ND <.5	NR	NR
	69	ND <.5	NR	NR
	74	ND <10	ND <10	ND <10
B-2	5	ND <10	ND <10	ND <10
	20	ND <10	ND <10	ND <10
	30	ND <10	ND <10	ND <10
	40	ND <10	ND <10	ND <10
B-3	10	ND <10	ND <10	ND <10
	20	ND <10	ND <10	ND <10
B-4	5	ND <10	ND <10	110*
	20	ND <10	ND <10	ND <10
B-5	5	ND <50	ND <50	7,300*
	20	ND <10	ND <10	88*
B-6	20	ND <10	ND <10	ND <10
B-7	5	ND <10	ND <10	ND <10
	20	ND <10	ND <10	ND <10

ND<10 = Not detected, detection limit noted
NR = Not reported
* Hydrocarbons in diesel range, did not match standards

TABLE 3

RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES FOR PURGEABLE ORGANICS BY U.S. EPA METHOD 8240

SAMPLE NUMBER AND DEPTH	CONCENTRATION (in ppb)					
	PCE	TOLUENE	TCE	1,1,1-TCA	1,1-DCE	1,1-DCA
B-1 @ 9'	ND <5	TR ≈4	ND <5	ND <5	ND <5	ND <5
B-1 @ 29'	ND <5	8	ND <5	ND <5	ND <5	ND <5
B-1 @ 49'	ND <5	5	ND <5	ND <5	ND <5	ND <5
B-1 @ 69'	ND <5	8	ND <5	ND <5	ND <5	ND <5
B-1 @ 74'	ND <5	TR ≈4	ND <5	ND <5	ND <5	ND <5
B-2 @ 5'	450	70	ND <5	ND <5	ND <5	ND <5
B-2 @ 20'	42	18	ND <5	ND <5	ND <5	ND <5
B-2 @ 30'	7	10	ND <5	ND <5	ND <5	ND <5
B-2 @ 40'	ND <5	TR ≈4	ND <5	ND <5	ND <5	ND <5
B-3 @ 10'	21	18	ND <5	ND <5	ND <5	ND <5
B-3 @ 20'	20	25	ND <5	ND <5	ND <5	ND <5
B-4 @ 5'	370	40	ND <5	ND <5	ND <5	ND <5
B-4 @ 20'	26	14	ND <5	ND <5	ND <5	ND <5
B-5 @ 5'	130,000	150	260	290	42	28
B-5 @ 25'	16	TR ≈3	ND <5	ND <5	ND <5	ND <5
B-6 @ 20'	ND <5	ND <5	ND <5	ND <5	ND <5	ND <5
B-7 @ 5'	ND <5	13	ND <5	ND <5	ND <5	ND <5
B-7 20'	ND <5	ND <5	ND <5	ND <5	ND <5	ND <5

PCE = Tetrachloroethene
TCE = Trichloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCE = 1,1-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
ND <5 = Not detected, detection limit noted
TR = Trace

Elevated concentrations of tetrachloroethene (PCE) (130,000 parts per billion [ppb]) and diesel-like petroleum hydrocarbons (7,300 ppm) were detected in samples from the sump area boring (B-5) at 5 feet. The concentration of these constituents (PCE and diesel) decreased in B-5 at 25 feet to 16 ppb and 88 ppm, respectively. Slightly elevated levels of PCE and toluene were also found in soil samples from the adjacent borings (B-1, B-2, B-3, and B-4).

The concentrations of petroleum hydrocarbons in soil reported in the diesel category were not an exact match to the diesel standard. Mr. Tony Hart, laboratory manager for Curtis and Tompkins Laboratory, indicated that aged diesel can give similar responses. Other solvents, such as Stoddard solvent, can also show up in the diesel range in analyses for extractable petroleum hydrocarbons.

CONCLUSIONS

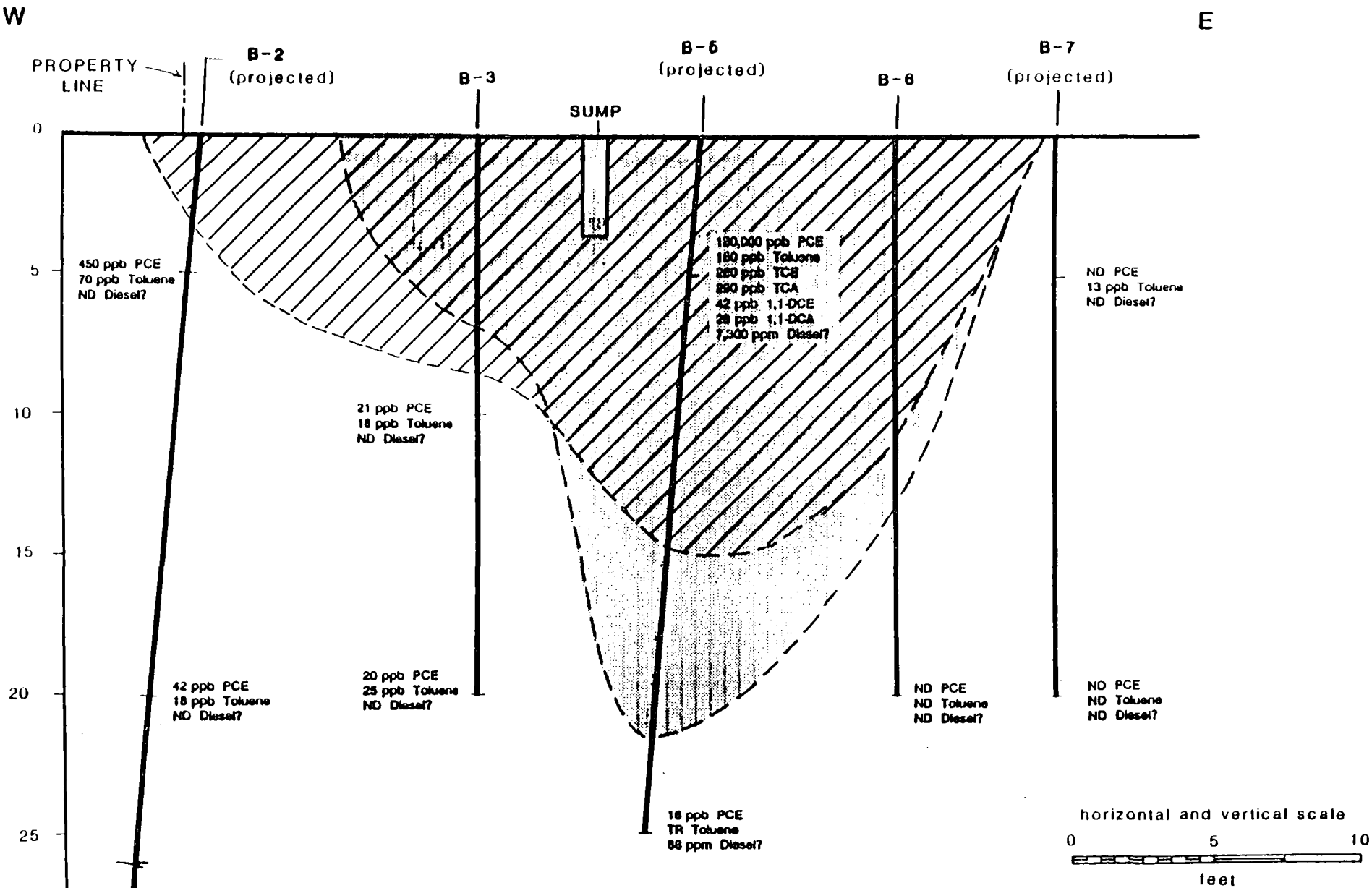
Based on the high concentration of PCE, toluene and the diesel range petroleum hydrocarbons beneath the small sump area, we conclude that a release of hazardous constituents has occurred at that location. A leak in the underground storage tank may be responsible for some of the contamination; however, the sump is the most probable origination point for the release. PCE, toluene and petroleum hydrocarbon contamination extends vertically down to approximately 25 feet at the sump location.

Figure 2 shows approximate limits of the horizontal extent of PCE, toluene and diesel-like contamination. The analytical results indicate that the limits of the combined toluene and PCE contamination extend further west than the diesel-like contamination. This may reflect an additional discharge point, but more likely indicates different migration characteristics of the constituents or a difference in soil type. The Los Angeles County Department of Public Works has set a cleanup level of 100 ppm for

diesel compounds encountered in soils. This is the maximum level of diesel contamination in soil that may be allowed to remain in place without undergoing removal or remediation. Contamination near Boring B-5 is present down to approximately 15 to 20 feet (Figures 3 and 4). Concentrations of PCE, toluene and diesel-like constituents decrease rapidly with lateral distance from B-5. It is likely that the contamination extends beneath Buildings 1 and 2 near B-4 and B-5, respectively. The contours depicted on Figure 2 were approximated by the interpolation of known lateral reductions in concentrations of the constituents tested. Contamination is present to the east of the sump area, but does not extend to B-6.

PCE, among others, is a solvent commonly used in the manufacturing industry. Toluene can be a component of certain solvents or fuel. If the toluene present at the site was a component of fuel, we would expect to detect a substantial concentration of other fuel constituents, such as benzene, ethylbenzene and xylenes, in the purgeable organics analyses. However, none of these latter fuel additives were detected in the samples tested. Therefore, the observed levels of toluene suggest that they may be attributable to solvent and may either be a result of weathering of the solvent or the boosting of solvent to improve a particular property. The petroleum hydrocarbons detected in the diesel range could also be either weathered diesel or a C12 to C30 solvent.

PROJECT No. 58-0605 DATE 10/17/90 PROJ. MGR. J.O. DFTR. M.G.



HAWKER PACIFIC

SUN VALLEY, CALIFORNIA

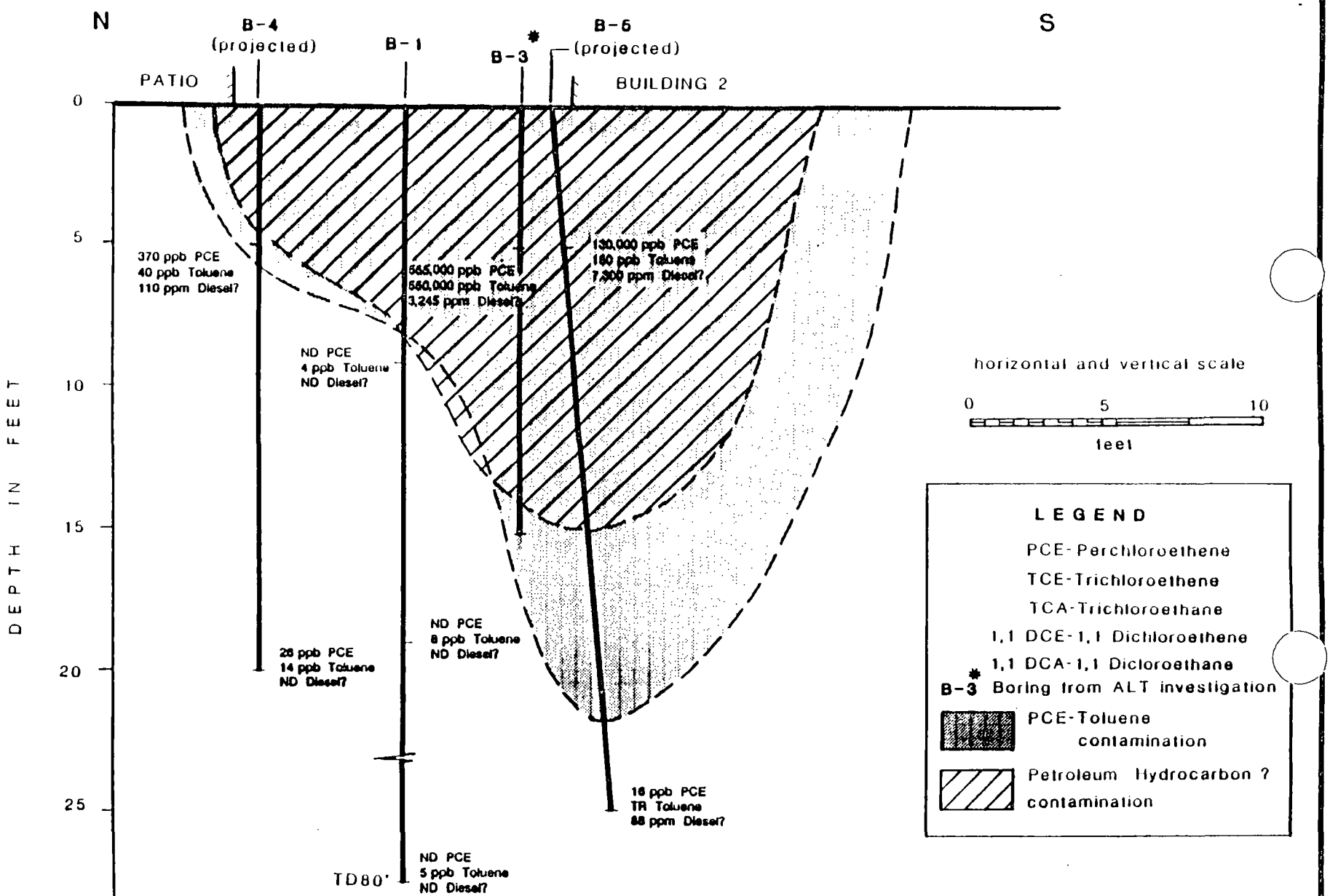
EAST-WEST CROSS SECTION

Proj. No. 58-0605

FIGURE 3

LAW ENVIRONMENTAL, INC.

PROJECT No 58-0605 DATE 10/18/90 PROJ. MGR. J. O. DFTR. M. G.



HAWKER PACIFIC

SUN VALLEY, CALIFORNIA

NORTH-SOUTH CROSS SECTION

Proj. No. 58-0605

FIGURE 4

LAW ENVIRONMENTAL INC

RECOMMENDATIONS

- Law Environmental recommends that steps be taken to remove the underground storage tank at the west end of the alley between Buildings 1 and 2. The data from analyses of the samples collected in this investigation and the previous assessment should be sufficient information for the lead agency to complete a tank closure report.

- It is recommended that the PCE and toluene-contaminated soil either be removed or remediated in-place. If soil is to be excavated, we recommend that a structural engineer be consulted to determine the stability of adjacent structures during and after removal of the material. Under the August 8, 1988 Land Disposal Restrictions, land disposal of this soil is prohibited. The specific test to determine the Toxicity Characteristic Leaching Program (TCLP) concentration of PCE for site soils has not been performed. The data we do have, which indicates up to 555 ppm of PCE, suggests that the TCLP limit of 0.7 mg/l is probably exceeded. Toluene is not a TCLP regulated constituent, however, it is on the proposed list.

Remediation Alternatives

Excavation and incineration appears, at this point, to be the most costly, although most rapid, remedial measure. We estimate that a

minimum of 50 cubic yards of soil and an approximate maximum of 110 cubic yards may require remediation.

Soil vapor extraction is the preferred method of remediation at the site. Law Environmental is confident that soil vapor extraction will prove to be an effective method of significantly reducing PCE and toluene concentrations within site soils. We base this opinion on the nature of the underlying alluvial soils which are predominantly composed of sand and gravel.

Soil vapor extraction is generally considered a fairly long-term remedial measure, commonly requiring one to two years or more for completion. We estimate that 90 percent removal of recoverable PCE and toluene may be achieved within the first six months of operation of a full-scale system. Operation and maintenance costs should be minimal following the initial six months of operation, exclusive of many restrictions and monitoring requirements which may be imposed by regulatory agencies.

-oOo-

APPENDIX A

HEALTH AND SAFETY PLAN

JOB NAME Hawker Pacific **JOB NO.** 58-0605

HEALTH AND SAFETY PLAN

Health and Safety Officer _____ Date _____
Elaine Silvestro

Principal Engineer/Scientist _____ Date _____
Glenn A. Brown

Field Safety Coordinator _____ Date _____
Juli Oborne

DATE PREPARED	FIELD DATES
08/24/90	8/27-31/90

Site location: 11310 Sherman Way
Sun Valley, California

MEDICAL SURVEILLANCE

All Law Environmental field personnel participate in the corporate medical program.

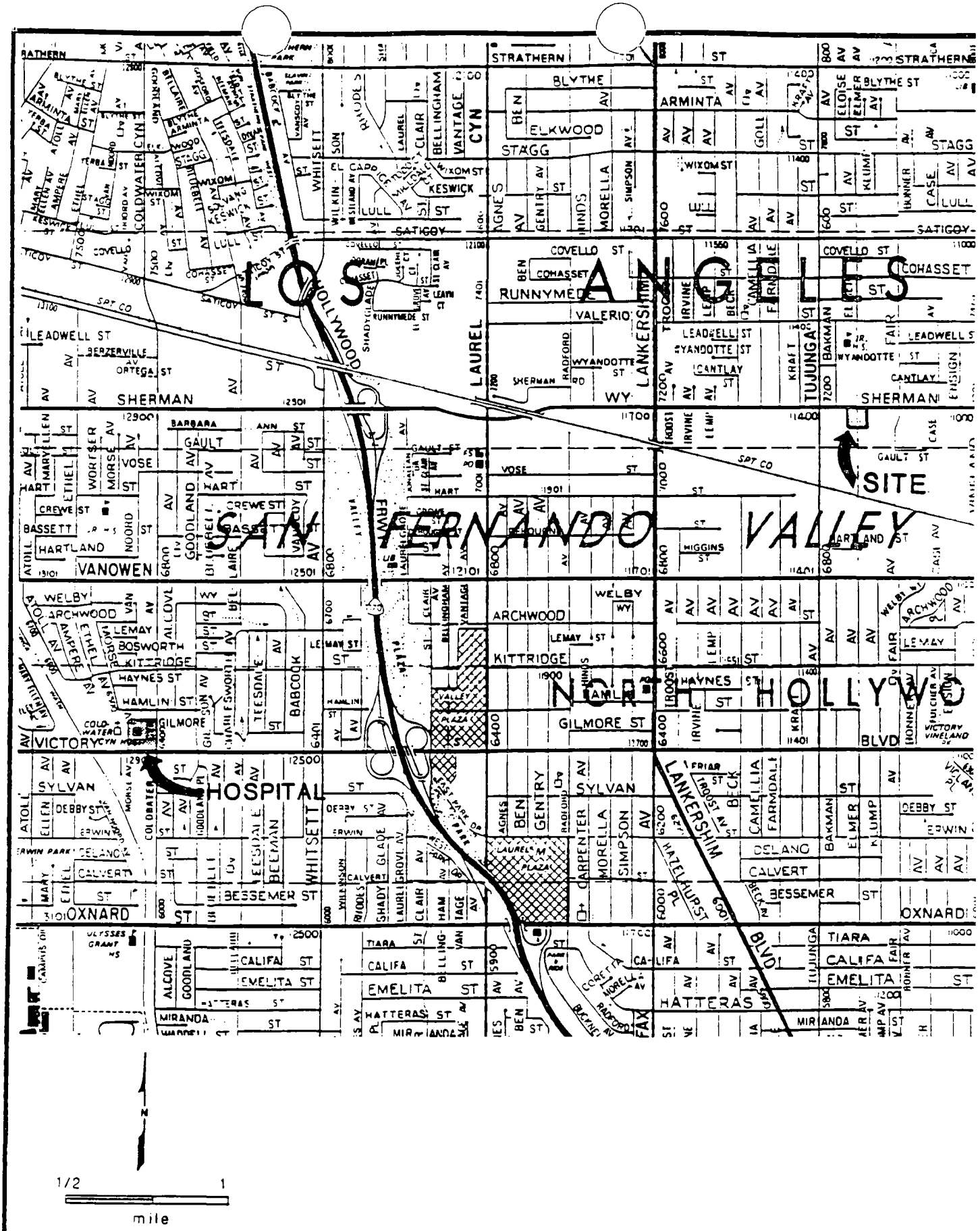
EMERGENCY TELEPHONE NUMBER

Emergency phone numbers, and direction to phone or medical facility are to be determined by the Field Safety Coordinator prior to beginning work.

HOSPITAL: (818) 984-2000 Coldwater Canyon Hospital
FIRE: 911
POLICE: 911
SAFETY: Jack Peng (404) 447-0544
Elaine Silvestro (818) 848-0214

HOSPITAL LOCATION

Coldwater Canyon Hospital is located at 6421 Coldwater Canyon Avenue, North Hollywood, California.



PROJECT No. 58-0612 DATE 10/8/90 PROJ. MGR. J.O. DFTR. M.G.

HAWKER PACIFIC
SAN FERNANDO VALLEY, CA.

HOSPITAL
LOCATION MAP

Proj. No.
58-0612

FIGURE

DIRECTIONS TO HOSPITAL

Travel west (left) on Sherman Way for approximately 2 miles. Turn south (left) on Coldwater Canyon Avenue and drive approximately one mile. Turn right into the hospital parking lot prior to Victory Boulevard.

EMERGENCY PROCEDURES

Exposures

Skin - remove contaminated clothing immediately, wash with soap and water.

Inhalation - remove to fresh air.

Eye Contact - flush with eye wash or water; get medical help if indicated. Contaminants may be absorbed through eyes.

Ingestion - get medical help if indicated.

Injuries - Administer first aid if appropriate. Medical emergencies take precedence over decontamination. Have change ready for telephone.

Fire/Explosion - Use hand extinguishers if appropriate and safety permits. Contact Project Manager and client officials. Evacuate if necessary to upwind location.

Accidental Spill/Release - (1) Pick up, isolate, or contain spill; (2) Evacuate area if necessary; (3) Contact project manager, Jack Peng, or Branch Manager.

SITE INFORMATION

HAZARDOUS/TOXIC MATERIALS

Chemical data sheets for the compounds listed below may be found at the end of the text.

Tetrachloroethene
Toluene

HAZARDOUS ASSESSMENT

Tetrachloroethene and toluene have been released to the soil from a sump located in the alley between Buildings 1 and 2.

CLEAN AREA/DECONTAMINATION

To be determined at the site by the Field Safety Coordinator.

WORK PROCEDURES

PLANNED FIELD ACTIVITIES

Drilling of soil borings and collection of soil samples. Obtain samples at five-foot intervals using a California split-spoon sampler.

SITE AND/OR PERSONNEL MONITORING

An organic vapor detector will be used to monitor borings and excavated soils. Areas of airborne dust and odor should be avoided. All contact with soil should be avoided.

CLOTHING AND PROTECTIVE GEAR

Subcontractors and others not employed by Law Environmental will not be furnished protective equipment unless prior arrangements have been made.

Required at the Work Site

Level C Protection
Tyvek suits, half or full-face cartridge respirator with appropriate organic vapor cartridges, rubber boots and gloves, hard-hats, protective eyewear.

The Field Safety Coordinator will determine the appropriate level of personal protective equipment required to be worn based on conditions encountered in the field.

DECONTAMINATION PROCEDURES

Reusable safety gear will be washed prior to reuse or removing from site. Sampling tools, etc., will be decontaminated as prescribed in the Work Plan, or as directed by the Field Safety Coordinator.

DISPOSAL PROCEDURES

Contaminated items should be: (1) disposed of as directed by client officials; or (2) bagged or containerized and left on-site if possible.

WORK PRECAUTIONS

1. Prior to going on-site, the Field Safety Coordinator will review available data and information pertaining to site conditions, potential contaminants, and work to be accomplished.

2. Prior to beginning any work on the site, the FSC shall brief all field personnel on the contents of this plan.

3. No eating, drinking, smoking, chewing gum, or tobacco is permitted at the work site.

4. Wear prescribed safety equipment as directed in this Plan.

5. Remove and discard any clothing that becomes contaminated.

6. Do not go anywhere on-site other than where directed by the FSC.

7. Wash exposed skin with soap and water before leaving site.

8. Potable water shall be provided in sufficient quantity to provide emergency washing.

9. Use safe and legal procedures for sample storage and shipment.

PERSONNEL AUTHORIZED TO ENTER SITE

By initialing and dating this form, the listed individual acknowledges that he has read, understands, and will comply with the requirements of this Health and Safety Plan.

Name	Date	Initials

Other personnel who may handle hazardous materials

_____

_____

_____

_____

_____

_____

****

FIELD SAFETY COORDINATOR'S SUMMARY

To be completed after each phase of work.

a. There was no violation of this Health and Safety Plan and no obvious contamination of any personnel.

b. The following incidents, violations, exposures, or contamination occurred. (Tell who, when, contaminants, circumstances, first aid or medical assistance needed.)

Field Safety Coordinator _____ **Date** _____

*** * * RETURN TO HEALTH AND SAFETY OFFICER * * ***

ALL accidents or incidents resulting in **POTENTIAL** exposure to hazardous materials must be reported as soon as possible to:

1. Health/Safety Officer, or
2. Project Manager, or
3. Chief Engineer, or
4. Branch Manager

Complete for all jobs:

Job name _____ Job no. _____

Dates in field

_____

Next phase of work scheduled

_____

****

!!! RETURN COPY OF THIS PAGE TO HEALTH AND SAFETY OFFICER !!!

****

APPENDIX B

SOIL SAMPLING PROTOCOL

SOIL SAMPLING PROTOCOL

The following procedures are followed when sampling soil with the hollow-stem auger drilling technique.

1. Continuous flight, hollow-stem augers are used.

2. All augers, samplers and downhole equipment are steam cleaned prior to use and between borings. This minimizes the possibility of cross-contamination occurring.

3. A registered geologist or other appropriately trained personnel observes the drilling, visually logs the soils, and obtains soil samples at appropriate intervals (usually 5 feet) as determined by field conditions.

4. The Unified Soils Classification System (USCS) is utilized to classify the soils. Rocks are classified according to the Colorado School of Mines "Classification of Rocks."

5. The soil samples are obtained using a modified California split-spoon sampler, which accommodates two to six sample tubes. Various tubes are utilized to accommodate the different analyses required:

Brass Tubes: 2-1/2 by 3 or 6 inches - for all organics and general analyses, excluding copper and zinc.

Stainless Steel Tubes: 2-1/2 by 3 or 6 inches - for all organics and metals analyses excluding chrome and nickel.

6. The tubes are scrubbed with a brush and TSP or equivalent cleaning agent, then rinsed with tap water. If required, the tubes are steam cleaned. Tubes are given a final rinse with distilled water and delivered to the drilling site in closed buckets or equivalent to preclude recontamination.

7. After the sample tubes are removed from the sampler, the latter is completely disassembled and scrubbed in TSP or equivalent and tap water. The sampler is rinsed with tap water, and distilled water (if required) and reassembled with the required number of clean tubes.

8. Unclean tubes are washed with TSP or equivalent solution, rinsed with tap water, etc. as described in 6 above.

9. In loose soils, a sand catcher is used to prevent soil from falling out of the sampler.

10. The sampler is driven 12 or 18 inches at each sampling. Generally, the lowest tube is retained for analysis. The

other tube or tubes are retained for split sampling or as a back-up.

11. The sample is logged in. After testing for the presence of combustible gases or volatile organic compounds, the sample is capped with Teflon liners and tight-fitting plastic caps to minimize leaching and cross-contamination. Black vinyl electrical tape is used to tightly secure the caps to the sample tube. The samples are labeled and preserved in clean ice chests containing Blue Ice or equivalent, to keep the samples at or about 4 degrees Celsius.

12. The samples are kept in the ice chest until delivered to a State and EPA certified testing laboratory, the same day if physically possible. The undelivered samples are stored or archived in secured Law Environmental sample storage at or about 4 degrees Celsius. A freezer is also available at Law Environmental if freezing samples is required or recommended.

13. All samples are accompanied by a chain-of-custody form, documenting the time, date, and person-in-charge since retrieval of the sample from the sampler.

14. In case of visual and/or olfactory evidence of contamination, soil cuttings are impounded in drums carrying

cautionary labels. The drums are secured from random contact. Custody of the drums and their content will remain with the client at all times.

15. If chemical analysis of the soil indicates the presence of elevated levels of pollutants, then the Client will be informed of the test results and advised as to the lawful means of disposal or detoxification. Upon the written request and authorization by the Client, Law Environmental will organize the disposal or detoxification of the impounded soil in accordance with all applicable Federal, State, County and local regulations.

16. The soil sample tube label includes:

    Job Number
    Boring Number and Depth
    Sampling Date
    Sampler's Initials
    Test to be Performed (if known at the time of sampling).

17. An indelible marking pen or a ball-point pen is used to mark the sample tubes.

18. A detailed log is kept of all field activities.

SUBSURFACE COMBUSTIBLE GAS OR VOLATILE ORGANIC COMPOUND SAMPLING PROTOCOL

1. The contents of one of the sample tubes is placed into a resealable plastic bag. The soil in the bag is broken up and left in the sun for approximately 10 minutes. A hole is then made in the plastic bag.

2. The end of the analyzer probe, such as GasTechtor 1238, Foxboro 108 GC, or equivalent, is inserted into the hole, and the Parts Per Million (PPM) or Lower Explosive Limit (LEL) scale read for indications of combustible gas or volatile organic compounds. The reading is taken only after the instrument needle ceases drifting and stabilizes. Readings are recorded on the boring logs.

APPENDIX C

BORING LOGS

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amt. of fines)	SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

PARTICLE SIZE LIMITS

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

NO. 200 NO. 40 NO. 10 NO. 4 3/4 in. 3 in. (12 in.)

U. S. STANDARD SIEVE SIZE

Reference: The Unified Soil Classification System, Corps of Engineers, U.S. Army Technical Memorandum No 3-357, Vol. 1, March 1953, 10

GRAPHIC LOG

PROJECT No. ____ DATE ____ PROJ. MGR. ____ DFTR. ____

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				0			Four inches of concrete
				1	SW		**Sand** - medium brown, medium to coarse-grained, poorly sorted, with pebbles to 1/2 inch in diame loose, slightly moist, slight solvent odor
				2			
				3			
09:38	350		☒	4			- color change to medium-light brown, slight solvent odor
				5			
				6			
				7			
				8			
09:44	300		☒	9			- medium brown, very poorly sorted, pebbles to 1 inch in diameter, solvent odor
				10			
				11			
				12			
				13			
				14			**Gravel** - large gravel lense, approximately 6 inches thick
09:52	300		☒	15	SW		**Sand** - medium brown, medium to coarse grained, poorly sorted, loose, slightly moist, slight solvent odor
				16			
				17			
				18			
10:02	275		☒	19			- becoming more coarse-grained, pebbles to 1/4 inch in diameter, decreasing moisture, dry
				20			
				21			
				22			
				23			
10:02	300		☒	24			- medium to coarse-grained, slight solvent odor
				25			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane - Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 70 feet
BOREHOLE DIAMETER: 8 inches
DATE DRILLED: 08/28/90
LOGGED BY: JGO

PROJECT No. 58-0605 DATE 09/26/1990 PROJ. MGR. _____ DFTR. _____

HAWKER PACIFIC

BORING LOG

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				25	SW		
				26			
				27			
				28			
10:13	400		☒	29			- coarse-grained, slight solvent odor
				30			
				31			
				32			
				33			
10:21	400		☒	34			- medium to coarse-grained, pebbles to 1/2 inch in diameter, slight solvent odor
				35			
				36			
				37			
				38			
10:31	400		☒	39			- pebbles to 1/4 inch in diameter, slight solven odor
				40			
				41			
				42			
				43			
10:41	350		☒	44			- becoming medium-grained with some coarse sand, moderately sorted, slight solvent odor
				45			
				46			
				47			
				48			
10:47	450		☒	49			- pebbles to 1/2 inch in diameter, slight solven odor
				50			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane - Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 70 feet
BOREHOLE DIAMETER: 8 inches
DATE DRILLED: 08/28/90
LOGGED BY: JGO

DATE 09/26/1990 PROJ. MGR. _____ DFTR. _____

PROJECT No. 58-0605

HAWKER PACIFIC | BORING LOG | PAGE 2 of 3

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				50	SW		
				51			
				52			
				53			
10:55			☒	54			- slight solvent odor
				55			
				56			
				57			
				58			
	325		☒	59			- medium to coarse grained, pebbles to 1/4 inch in diameter, slight solvent odor
				60			
				61			
				62			
				63			
11:41	250		☒	64			- color change to greyish green to medium brown, fine to very coarse-grained, slightly firm, slightly moist, very slight odor
				65			
				66			
				67			
				68			
12:20	240		☒	69			- color grey-brown, medium to very coarse-graine loose, dry, slight odor
				70			NOTES: Refusal at 70 feet. End of boring at 70 feet. No ground water encountered. Backfille boring with soil to 3 feet then hole-plug.
				71			
				72			
				73			
				74			
				75			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane - Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 70 feet
BOREHOLE DIAMETER: 8 inches
DATE DRILLED: 08/28/90
LOGGED BY: JGO

PROJ. MGR. _____ OFTR. _____
DATE 09/26/1990
ECT No. 58-0605

HAWKER PACIFIC | BORING LOG | PAGE 3 of 3

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
12:01				70	SW		- DRILL TO 70 FEET. THEN TAKE SAMPLES **Sand** - grey-brown. medium to very coarse-grained. poorly sorted. loose. dry. slight odor
				71			
				72			
				73			
13:01	5/5			74	SM		**Silty Sand** - grey to brown. coarse to fine-grained. with granitic pebbles up to 3 inches in diameter. poorly sorted. angular to subangu loose. damp. no odor detected
				75			
				76			
				77			- penetration rate very slow
				78			
17:30	2/2			79	GM		**Silty Sandy Gravel** - brown. very coarse to fine-grained. with pebbles to 1 inch in diameter. poorly sorted. moderately firm. damp
				80			**NOTES:** End boring at 80 feet. No ground water encountered. Backfilled boring with soil and patched with concrete.
				81			
				82			
				83			
				84			
				85			
				86			
				87			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 80 feet
BOREHOLE DIAMETER: 8 inches
DATE DRILLED: 08/31/90
LOGGED BY: ASH

PROJECT No. 58-0605 DATE 09/26/1990 PROJ. MGR. _____ DFTR. _____

HAWKER PACIFIC | BORING LOG | PAGE 1 of 1

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				0			Four inches of concrete
				1			Fill - dark brown, medium to coarse-grained, poorly sorted, pebbles to 1 inch in diameter.
				2			
				3			
				4			
10:55	10		☒	5	SW		Sand - medium brown, medium to very coarse-grained, pebbles to 1/4 inch in diameter, very poorly sorted, loose, dry, no odor
				6			
				7			
				8			
				9			
11:15	5		☒	10			- medium brown-gray, pebbles to 1 inch in diameter, no odor
				11			
				12			
				13			
				14			
11:40	5		☒	15			- same as above, no odor
				16			
				17			
				18			
				19			
12:38	2		☒	20			- medium brown, fine to very coarse-grained, no odor
				21			
				22			
				23			
				24			
				25			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 40 feet
BOREHOLE DIAMETER: 6 inches
DATE DRILLED: 08/29/90
LOGGED BY: JGO

PROJECT No. 58-0605 DATE 09/28/1990 PROJ. MGR. ____ DFTR. ____

HAWKER PACIFIC

BORING LOG

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
12:59	1		☒	25	SW		- pebbles to 1/4 inch in diameter, no odor
				26			
				27			
				28			
				29			
01:25	1		☒	30			- as above, pebbles to 1 inch in diameter
				31			
				32			
				33			
				34			
02:00	0		☒	35			- pebbles to 1/4 inch in diameter, no odor
				36			
				37			
				38			
				39			
02:35	0		☒	40			
				41			
				42			
				43			
				44			
				45			
				46			
				47			
				48			
				49			
				50			

NOTES: End of boring at 40 feet. No ground water encountered. Backfilled boring with sc and patched with concrete.

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 40 feet
BOREHOLE DIAMETER: 6 inches
DATE DRILLED: 08/29/90
LOGGED BY: JGO

DATE 09/26/1990 PROJ. MGR. _____ DFTR. _____

JECT No. 58-0605

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				0			One inch of concrete
							Fill - dark brown, heavy odor
				1			
				2			
				3			
				4			
10:55	10		☒	5	SW		Sand - grey-brown, medium to very coarse-grained, with pebbles to 1/2 inch in diameter, poorly sorted, loose, dry, heavy chlorinated solvent odor
				6			
				7			
				8			
				9			
11:15	5		☒	10			- medium brown, pebbles to 1 inch in diameter, slightly moist, heavy chlorinated solvent odor
				11			
				12			
				13			
				14			
11:40	5		☒	15			- same as above
				16			
				17			
				18			
				19			
12:38	2		☒	20			- medium-light brown, dry, slight chlorinated odor
				21			NOTES: End of boring at 20 feet. No ground water encountered, no caving. Backfilled boring with soil.
				22			
				23			
				24			
				25			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 20 feet
BOREHOLE DIAMETER: 6 inches
DATE DRILLED: 08/29/90
LOGGED BY: JGO

PROJ. MGR. _____ DFTR. _____
DATE 09/27/1990
CT No. 58-0605

HAWKER PACIFIC

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				0			Four inches of concrete
				1–5			Fill
08:51	105/30		☒	5–14	SW		Sand - grey-brown, medium to coarse-grained, with pebbles to 1/4 inch in diameter, poorly sorted, loose, dry.
08:55	80/15		☒	10–14			- medium brown, pebbles to 1 inch in diameter, very poorly sorted, slight solvent odor
09:11	1/0		☒	15–19	SP		Sand - dark brown, fine grained, well sorted, loose, dry, no odor
09:27	1/1		☒	19–20	SW		Sand - light brown, fine to coarse-grained with gravel to 1 inch diameter, poorly sorted, some pyrite, loose, dry, no odor
				20			NOTES: End of boring at 20 feet. No ground water encountered, no caving. Backfilled boring with soil.

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Datum
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 20 feet
BOREHOLE DIAMETER: 8 inches
DATE DRILLED: 08/31/90
LOGGED BY: JGO

PROJECT No. 58-0605 DATE 09/26/1990 PROJ. MGR. _____ DFTR. _____

HAWKER PACIFIC | BORING LOG | PAGE 1 of 1

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
09:57				0			Five inches of concrete
				1			Fill
				2			
				3			
				4			
10:02	44/70		X	5	SW		**Sand** - light brown, fine to coarse-grained, poorly sorted, angular, occasional granite cobble: up to 2 inches in diameter, some pyrite, biotite, muscovite, loose, damp, odor detected
				6			
				7			
				8			
				9			
10:08	24/18		X	10			- brown, occasional granite cobbles to 1 inch in diameter, no odor detected
				11			
				12			
				13			
				14			
10:13	1/2		X	15			
				16	SM		**Silty Sand** - brownish gray, fine to coarse-grained, moderately firm, damp
				17			
				18			
				19			
10:21	8/8		X	20	SP		**Sand** - tan, medium to fine-grained with occasional pebbles to 1/2 inch diameter, moderately well sor angular to subrounded, muscovite, biotite, loose, damp, no odor detected
				21			
				22			
				23			
				24	SW		**Sand** - Light gray with rust red clay layer, fine to coarse-grained, scattered granite pebbles up to 1 inch in diameter, poorly sorted, angular, biotite, muscovite, clay is plastic, very wet, sand is loose, damp, no odors detected
				25			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane Environmental
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 26 feet
BOREHOLE DIAMETER: 6 inches
DATE DRILLED: 08/31/90
LOGGED BY: ASH

DATE 09/27/1990 PROJ. MGR. _____ DFTR. _____
PROJECT No. 58-0605

HAWKER PACIFIC
11310 SHERMAN WAY

BORING LOG

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
10:38	1/4		X	25	SW		
				26			NOTES: End of boring at 26 feet. No ground water encountered. no caving. Backfilled boring with soil, patched with concrete.
				27			
				28			
				29			
				30			
				31			
				32			
				33			
				34			
				35			
				36			
				37			
				38			
				39			
				40			
				41			
				42			
				43			
				44			
				45			
				46			
				47			
				48			
				49			
				50			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane Environmental
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 26 feet
BOREHOLE DIAMETER: 6 inches
DATE DRILLED: 08/31/90
LOGGED BY: ASH

PROJ. MGR. _____ DFTR. _____ DATE 09/27/1990 PROJECT No. 58-0605

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
11:04				0			One inch of concrete
				1–4			Fill
11:12	1/2		X	5–7	SW		Sand - light grey to grey, fine to coarse-grained, poorly sorted, with clay layer. (clay is brown, plastic, damp, with silt and fine sand) sand has pebbles up to 1 inch in diameter, loose, damp, no odor
11:19	2/2.5		X	10–11			- color change to grey brown, minor clay layer. (clay is brown, with silt and fine sand, plast: no odor
11:27	2/2.5		X	15–16			- color change to brown, fragments of cobbles (broken by sampler)
11:31	2/1.5		X	19–20			- color change to grey-brown, some silt, pebbles to 1/2 inch in diameter
				20			NOTES: End of boring at 20 feet. No ground water encountered, no caving. Backfilled boring with soil.

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane - Western
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 20 feet
BOREHOLE DIAMETER: 6 inches
DATE DRILLED: 08/31/90
LOGGED BY: ASH

HAWKER PACIFIC

BORING LOG

PROJECT No. 58-0605 DATE 09/27/1990 PROJ. MGR. DFTR.

GRAPHIC LOG LEGEND: SEE PAGE C-1

TIME	OVA READING ppm methane	SAMPLE Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
				0			One inch of concrete
							Fill
				1			
				2			
				3			
				4			
09:03	1/0		☒	5	SW		**Sand** - medium brown, medium to very coarse-grained, moderately poorly sorted, with pebbles to 1/4 in in diameter, loose, dry, no odor
				6			
				7			
				8			
				9			
	0/0		☒	10			- pebbles to 1/2 inch in diameter, poorly sorted no odor
				11			
				12			
				13			
				14			
09:22	1/0		☒	15			- medium to coarse-grained, moderately sorted, no odor
				16			
				17			
				18			
				19			
09:27			☒	20			- as above
							NOTES: End of boring at 20 feet. No ground water encountered, no caving. Backfilled boring with soil.
				21			
				22			
				23			
				24			
				25			

OWNER: Hawker Pacific
LOCATION: 11310 Sherman Way
DRILLED BY: Lane - Western
METHOD: Hollow-stem auger

BOREHOLE DEPTH: 20 feet
BOREHOLE DIAMETER: 8 inches
DATE DRILLED: 08/31/90
LOGGED BY: JGO

PROJECT No. 58-0605 DATE 09/27/1990 PROJ. MGR. _____ DFTR. _____

HAWKER PACIFIC

BORING LOG

APPENDIX D

LABORATORY ANALYSES OF SOIL SAMPLES

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
1250 S. Boyle Ave., Los Angeles, CA 90023. Phone (213) 269-7421. Fax (213) 268-5328

DATE RECEIVED: 08/29/90
DATE REPORTED: 09/05/90

LAB NUMBER: 200524

CLIENT: LAW ENVIRONMENTAL, INC.

REPORT ON: FOUR SOIL SAMPLES

PROJECT #: 58-0605

LOCATION: HAWKER PACIFIC

RESULTS: SEE ATTACHED

Reviewed By

Laboratory Director

Curtis & Tompkins, L

LABORATORY NUMBER: 200524
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
LOCATION: HAWKER PACIFIC

DATE RECEIVED: 08/29/9(
DATE ANALYZED: 08/31-01
DATE REPORTED: 09/05/9(

METHOD: EPA 8015 (MODIFIED)
TOTAL VOLATILE HYDROCARBONS AS GASOLINE IN SOILS & WASTES
EXTRACTION: EPA 5030 PURGE & TRAP

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/Kg)
1	B-1-9	ND (500)
2	B-1-29	ND (500)
3	B-1-49	ND (500)
4	B-1-69	ND (500)

ND = NOT DETECTED; LIMIT OF DETECTION IN PARENTHESES.

QA/QC DATA SUMMARY:

Precision (Relative % Difference):	2
Accuracy (Spike % Recovery):	101

Curtis & Tompkins, L

LABORATORY NUMBER: 200524-1
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-1-9

DATE RECEIVED: 08/29/9
DATE ANALYZED: 08/31/9
DATE REPORTED: 09/05/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	TRACE (~4)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	97 %
Toluene-d8	100 %
Bromofluorobenzene	96 %

Curtis & Tomkins, L

LABORATORY NUMBER: 200524-2
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-1-29

DATE RECEIVED: 08/29/9
DATE ANALYZED: 08/31/9
DATE REPORTED: 09/05/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	8	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	99 %
Toluene-d8	101 %
Bromofluorobenzene	98 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200524-3
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-1-49

DATE RECEIVED: 08/29/9
DATE ANALYZED: 08/31/9
DATE REPORTED: 09/05/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	5	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	97 %
Toluene-d8	102 %
Bromofluorobenzene	95 %

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 200524-4
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-1-69

DATE RECEIVED: 08/29/90
DATE ANALYZED: 08/31/90
DATE REPORTED: 09/05/90

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	8	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	96 %
Toluene-d8	101 %
Bromofluorobenzene	95 %

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: Law Environmental
Project Number: 58-0605
Project Name: Hawker Pacific
Report Attention: Julie Oborne
Sampled by: Julie Oborne

Analyses Required

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8240	8015/[illegible]							Remarks
1	8-28-90	9:44	SO	B-1-9	1	X	X							TVH
2	8-28/90	10:13	SO	B-1-29	1	X	X							↓
3	8-28/90	10:47	SO	B-1-49	1	X	X							↓
4	8-28/90	12:20	SO	B-1-69	1	X	X							↓

Signature	Company	Date	Time
Relinquished by: Kristin Williamson	Law Environmental	8/29/90	2:50
Received by: [signature]			
Relinquished by			
Received by			
Relinquished by			
Received by			

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
1250 S. Boyle Ave., Los Angeles, CA 90023. Phone (213) 269-7421. Fax (213) 268-5328

DATE RECEIVED: 09/04/90
DATE REPORTED: 09/10/90

LAB NUMBER: 200541

CLIENT: LAW ENVIRONMENTAL, INC.

REPORT ON: EIGHT SOIL SAMPLES

PROJECT #: 58-0605

LOCATION: HAWKER PACIFIC

RESULTS: SEE ATTACHED

Reviewed By Victoria Michalka

Laboratory Director

Curtis & Tompkins, L

LABORATORY NUMBER: 200541
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
LOCATION: HAWKER PACIFIC

DATE RECEIVED: 09/04/90
DATE ANALYZED: 09/06/90
DATE REPORTED: 09/10/90

METHOD: EPA 8015 (MODIFIED)
EXTRACTABLE PETROLEUM HYDROCARBONS IN SOIL
EXTRACTION: DHS LUFT PROCEDURE

LAB ID	SAMPLE ID	GASOLINE (mg/Kg)	KEROSENE (mg/Kg)	DIESEL (mg/Kg)
1	B-4-5	ND (10)	ND (10)	110*
2	B-4-20	ND (10)	ND (10)	ND (10)
3	B-5-5	ND (50)	ND (50)	7,300**
4	B-5-25	ND (10)	ND (10)	88***
5	B-6-20	ND (10)	ND (10)	ND (10)
6	B-8-5	ND (10)	ND (10)	ND (10)
7	B-8-20	ND (10)	ND (10)	ND (10)
8	B1A-74'	ND (10)	ND (10)	ND (10)

* HYDROCARBONS IN DIESEL RANGE, DOES NOT MATCH STD (C19-C30)
** HYDROCARBONS IN DIESEL RANGE, DOES NOT MATCH STD (C12-C30)
*** HYDROCARBONS IN DIESEL RANGE, DOES NOT MATCH STD (C17-C30)

ND = NOT DETECTED; PRACTICAL QUANTITATION LIMIT IN PARENTHESES.

QA/QC DATA SUMMARY:

Precision (Relative % Difference):	18
Accuracy (Spike % Recovery):	83

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 200541-1
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-4-5

DATE RECEIVED: 09/04/90
DATE ANALYZED: 09/04-05
DATE REPORTED: 09/10/90

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND		RESULT	PQL
		--ug/Kg--	
Chloromethane		ND	10
Bromomethane		ND	10
Vinyl chloride		ND	10
Chloroethane		ND	10
Methylene chloride		ND	5
Acetone		ND	10
Carbon disulfide		ND	5
Trichlorofluoromethane		ND	5
1,1-Dichloroethene		ND	5
1,1-Dichloroethane		ND	5
cis-1,2-Dichloroethene		ND	5
trans-1,2-Dichloroethene		ND	5
Chloroform		ND	5
Freon 113		ND	5
1,2-Dichloroethane		ND	5
2-Butanone		ND	10
1,1,1-Trichloroethane		ND	5
Carbon tetrachloride		ND	5
Vinyl acetate		ND	10
Bromodichloromethane		ND	5
1,2-Dichloropropane		ND	5
cis-1,3-Dichloropropene		ND	5
Trichloroethylene		ND	5
Dibromochloromethane		ND	5
1,1,2-Trichloroethane		ND	5
Benzene		ND	5
trans-1,3-Dichloropropene		ND	5
2-Chloroethylvinyl ether		ND	10
Bromoform		ND	5
2-Hexanone		ND	10
4-Methyl-2-pentanone		ND	10
1,1,2,2-Tetrachloroethane		ND	5
Tetrachloroethene	*	370	5
Toluene		40	5
Chlorobenzene		ND	5
Ethyl benzene		ND	5
Styrene		ND	5
Total xylenes		ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	* 1:5 DIL	101 %
Toluene-d8		103 %
Bromofluorobenzene		93 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200541-2
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-4-20

DATE RECEIVED: 09/04/9
DATE ANALYZED: 09/04/9
DATE REPORTED: 09/10/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	26	5
Toluene	14	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	97 %
Toluene-d8	102 %
Bromofluorobenzene	95 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 200541-3
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-5-5

DATE RECEIVED: 09/04/90
DATE ANALYZED: 09/04-05
DATE REPORTED: 09/10/90

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND		RESULT	PQL
		--ug/Kg--	
Chloromethane		ND	10
Bromomethane		ND	10
Vinyl chloride		ND	10
Chloroethane		ND	10
Methylene chloride		ND	5
Acetone		ND	10
Carbon disulfide		ND	5
Trichlorofluoromethane		ND	5
1,1-Dichloroethene		42	5
1,1-Dichloroethane		28	5
cis-1,2-Dichloroethene		ND	5
trans-1,2-Dichloroethene		ND	5
Chloroform		ND	5
Freon 113		ND	5
1,2-Dichloroethane		ND	5
2-Butanone		ND	10
1,1,1-Trichloroethane	*	290	5
Carbon tetrachloride		ND	5
Vinyl acetate		ND	10
Bromodichloromethane		ND	5
1,2-Dichloropropane		ND	5
cis-1,3-Dichloropropene		ND	5
Trichloroethylene	*	260	5
Dibromochloromethane		ND	5
1,1,2-Trichloroethane		ND	5
Benzene		ND	5
trans-1,3-Dichloropropene		ND	5
2-Chloroethylvinyl ether		ND	10
Bromoform		ND	5
2-Hexanone		ND	10
4-Methyl-2-pentanone		ND	10
1,1,2,2-Tetrachloroethane		ND	5
Tetrachloroethene	**	130,000	5
Toluene		150	5
Chlorobenzene		ND	5
Ethyl benzene		ND	5
Styrene		ND	5
Total xylenes		ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	*	1:5 DIL	105 %
Toluene-d8	**	1:1000 DIL	96 %
Bromofluorobenzene			75 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200541-4
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-5-25

DATE RECEIVED: 09/04/9
DATE ANALYZED: 09/05/9
DATE REPORTED: 09/10/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	16	5
Toluene	TRACE (~3)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	105 %
Toluene-d8	103 %
Bromofluorobenzene	97 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200541-5
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-6-20

DATE RECEIVED: 09/04/
DATE ANALYZED: 09/04/
DATE REPORTED: 09/10/

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	91 %
Toluene-d8	102 %
Bromofluorobenzene	96 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200541-6
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-8-5

DATE RECEIVED: 09/04/9
DATE ANALYZED: 09/04/9
DATE REPORTED: 09/10/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	13	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	90 %
Toluene-d8	100 %
Bromofluorobenzene	91 %

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 200541-7
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-8-20

DATE RECEIVED: 09/04/9
DATE ANALYZED: 09/05/9
DATE REPORTED: 09/10/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	92 %
Toluene-d8	101 %
Bromofluorobenzene	95 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200541-8
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B1A-74'

DATE RECEIVED: 09/04/9
DATE ANALYZED: 09/05/9
DATE REPORTED: 09/10/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	TRACE (~4)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	90 %
Toluene-d8	102 %
Bromofluorobenzene	93 %

LAW ENVIRONMENTAL, INC.
3320 N. San Fernando Blvd.
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: Law Environmental
Project Number: 58-0605
Project Name: Hawker Pacific
Report Attention: Juli Oborne
Sampled by: Juli Oborne

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8240	8015							Remarks
DIA-74'	8-31-90	1301	SO	6" Brass Tube	1	X	X							USE CAUTION may have high levels of PCE + Toluene - up to 500 ppm

Analyses Required

Signature	Company	Date	Time
Relinquished by D. Higgins	Law Environmental	9/4	12:45
Received by [illegible]	Curtis & Tompkins	9/4/90	12:45
Relinquished by			
Received by			
Relinquished by			
Received by			

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

LAW ENVIRONMENTAL, INC.
2320 N. San Fernando Blvd.
~~Suite 200~~
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: LAW Environmental
Project Number: 58-0605
Project Name: Hawker Pacific
Report Attention: Juli Oborne
Sampled by: Juli Oborne

Analyses Required: 8240, 8015

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8240	8015							Remarks
B-4-5	8-31-90	8:51	SO	6" Brass Tube	1	X	X							may have high lvls of PCE & Toluene up to 500 ppm
B-4-20	8-31-90	9:27	SO	6" " "	1	X	X							
B-5-5	8-31-90	10:02	SO	" " "	1	X	X							
B-5-25	8-31-90	10:38	SO	" " "	1	X	X							
B-6-20	8-31-90	11:31	SO	" " "	1	X	X							Expect low lvls of volatiles
B-8-5	8-31-90	9:03	SO	" " "	1	X	X							
B-8-20	8-31-90	9:32	SO	" " "	1	X	X							

	Signature	Company	Date	Time
Relinquished by	Elaine Silverstro	Law Environmental	9-4-90	11:15
Received by	[illegible]	Curtis + Tompkins	9-4-90	11:16
Relinquished by				
Received by				
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
1250 S. Boyle Ave., Los Angeles, CA 90023. Phone (213) 269-7421. Fax (213) 268-5328

DATE RECEIVED: 08/30/90
DATE REPORTED: 09/13/90

LAB NUMBER: 200529

CLIENT: LAW ENVIRONMENTAL, INC.

REPORT ON: SIX SOIL SAMPLES

PROJECT #: 58-0605

LOCATION: HAWKER PACIFIC

RESULTS: SEE ATTACHED

Reviewed By _____

_____
Laboratory Director

Curtis & Tompkins, L

LABORATORY NUMBER: 200529
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
LOCATION: HAWKER PACIFIC

DATE RECEIVED: 08/30/90
DATE ANALYZED: 09/12/90
DATE REPORTED: 09/13/90

METHOD: EPA 8015 (MODIFIED)
EXTRACTABLE PETROLEUM HYDROCARBONS IN SOIL
EXTRACTION: DHS LUFT PROCEDURE

LAB ID	SAMPLE ID	GASOLINE (mg/Kg)	KEROSENE (mg/Kg)	DIESEL (mg/Kg)
1	B-2-5	ND (10)	ND (10)	ND (10)
2	B-2-20	ND (10)	ND (10)	ND (10)
3	B-2-30	ND (10)	ND (10)	ND (10)
4	B-2-40	ND (10)	ND (10)	ND (10)
5	B-3-10	ND (10)	ND (10)	ND (10)
6	B-3-20	ND (10)	ND (10)	ND (10)

ND = NOT DETECTED; PRACTICAL QUANTITATION LIMIT IN PARENTHESES.

QA/QC DATA SUMMARY:

Precision (Relative % Difference):	5
Accuracy (Spike % Recovery):	95

Curtis & Tompkins,

LABORATORY NUMBER: 200529-1
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-2-5

DATE RECEIVED: 08/30/9
DATE ANALYZED: 09/04/9
DATE REPORTED: 09/13/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND		RESULT	PQL
		--ug/Kg--	
Chloromethane		ND	10
Bromomethane		ND	10
Vinyl chloride		ND	10
Chloroethane		ND	10
Methylene chloride		ND	5
Acetone		ND	10
Carbon disulfide		ND	5
Trichlorofluoromethane		ND	5
1,1-Dichloroethene		ND	5
1,1-Dichloroethane		ND	5
cis-1,2-Dichloroethene		ND	5
trans-1,2-Dichloroethene		ND	5
Chloroform		ND	5
Freon 113		ND	5
1,2-Dichloroethane		ND	5
2-Butanone		ND	10
1,1,1-Trichloroethane		ND	5
Carbon tetrachloride		ND	5
Vinyl acetate		ND	10
Bromodichloromethane		ND	5
1,2-Dichloropropane		ND	5
cis-1,3-Dichloropropene		ND	5
Trichloroethylene		ND	5
Dibromochloromethane		ND	5
1,1,2-Trichloroethane		ND	5
Benzene		ND	5
trans-1,3-Dichloropropene		ND	5
2-Chloroethylvinyl ether		ND	10
Bromoform		ND	5
2-Hexanone		ND	10
4-Methyl-2-pentanone		ND	10
1,1,2,2-Tetrachloroethane		ND	5
Tetrachloroethene	*	450	5
Toluene		70	5
Chlorobenzene		ND	5
Ethyl benzene		ND	5
Styrene		ND	5
Total xylenes		ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	98 %
Toluene-d8	110 %
Bromofluorobenzene	87 %

Curtis & Tompkins, Lt

LABORATORY NUMBER: 200529-2
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-2-20

DATE RECEIVED: 08/30/90
DATE ANALYZED: 09/04/90
DATE REPORTED: 09/13/90

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	42	5
Toluene	18	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	107 %
Toluene-d8	103 %
Bromofluorobenzene	106 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200529-3
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-2-30

DATE RECEIVED: 08/30/9
DATE ANALYZED: 09/04/9
DATE REPORTED: 09/13/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	7	5
Toluene	10	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	103 %
Toluene-d8	101 %
Bromofluorobenzene	109 %

Curtis & Tompkins, Lt

LABORATORY NUMBER: 200529-4
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-2-40

DATE RECEIVED: 08/30/9(
DATE ANALYZED: 09/04/9(
DATE REPORTED: 09/13/9(

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	TRACE (~4)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	105 %
Toluene-d8	102 %
Bromofluorobenzene	113 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200529-5
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-3-10

DATE RECEIVED: 08/30/9
DATE ANALYZED: 09/06/9
DATE REPORTED: 09/13/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	21	5
Toluene	18	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	105 %
Toluene-d8	104 %
Bromofluorobenzene	96 %

Curtis & Tompkins, L

LABORATORY NUMBER: 200529-6
CLIENT: LAW ENVIRONMENTAL, INC.
PROJECT #: 58-0605
SAMPLE ID: B-3-20

DATE RECEIVED: 08/30/9
DATE ANALYZED: 09/06/9
DATE REPORTED: 09/13/9

METHOD: EPA 8240
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	20	5
Toluene	25	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	102 %
Toluene-d8	104 %
Bromofluorobenzene	95 %

LAW ENVIRONMENTAL, INC.
3420 N. San Fernando Blvd.
Suite 200
Burbank, California 91504
(818) 848-0214

CHAIN OF CUSTODY RECORD

Lab Log Number _____

Client Name: Law Environmental
Project Number: 5R-0605
Project Name: Hawker Pacific
Report Attention: Juli Oborne
Sampled by: Juli Oborne

Analyses Required: 8240, 8015 (TEH)

Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	8240	8015 (TEH)							Remarks
B-2-5	8-29-90	10:55	SO	6" Brass Tube	1	X	X							Expect high levels
B-2-10		12:38				X	X							of PCE + Toluene
B-2-30		1:35					X							in samples from
B-2-40		2:35				X	X							B-3.
B-3-10		3:50				X	X							
B-3-20		4:30				X	X							

	Signature	Company	Date	Time
Relinquished by	Juli Oborne	Law Environmental	8-30-90	1:59
Received by	Paul Mach	Curtis + Tompkins	8-30-90	13:59
Relinquished by				
Received by				
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

LAW ENVIRONMENTAL

SUBSURFACE SOIL INVESTIGATION

SUMP AND UNDERGROUND STORAGE TANK LOCATIONS
11310 SHERMAN WAY
SUN VALLEY, CALIFORNIA

29009

Prepared fo

Hawker Pacific

LAW ENVIRONMENTAL, INC.

3320 N. SAN FERNANDO BLVD.
BURBANK, CALIFORNIA 91504
TEL. (818) 848-0214
FAX (818) 848-1674

November 26, 1990

Hawker Pacific
11310 Sherman Way
Sun Valley, CA 91352

Project No. 58-0605

Attention: Mr. Erik Johnson

Gentlemen:

We are pleased to present our report entitled "Subsurface Soil Investigation, Sump and Underground Storage Tank Locations, 11310 Sherman Way, Sun Valley, California". This report presents the results of our limited subsurface investigation conducted at the sump and underground storage tank locations in the alley between Buildings 1 and 2 at the above-referenced property. The investigation was authorized by Mr. Erik Johnson of Hawker Pacific on August 6, 1990 (your Purchase Order No. 32727).

We appreciate the opportunity to have worked with you on this project. If you have any questions or require further assistance, please do not hesitate to call us.

Respectfully submitted,

LAW ENVIRONMENTAL, INC.

Juli G. Oborne
Staff Environmental Geologist

Thomas M. Regan
Project Environmental Geologist

Glenn A. Brown, C.E.G. 3
Principal Geologist

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C. BORING LOGS

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SUBSURFACE SOIL INVESTIGATION

SUMP AND UNDERGROUND STORAGE TANK LOCATIONS

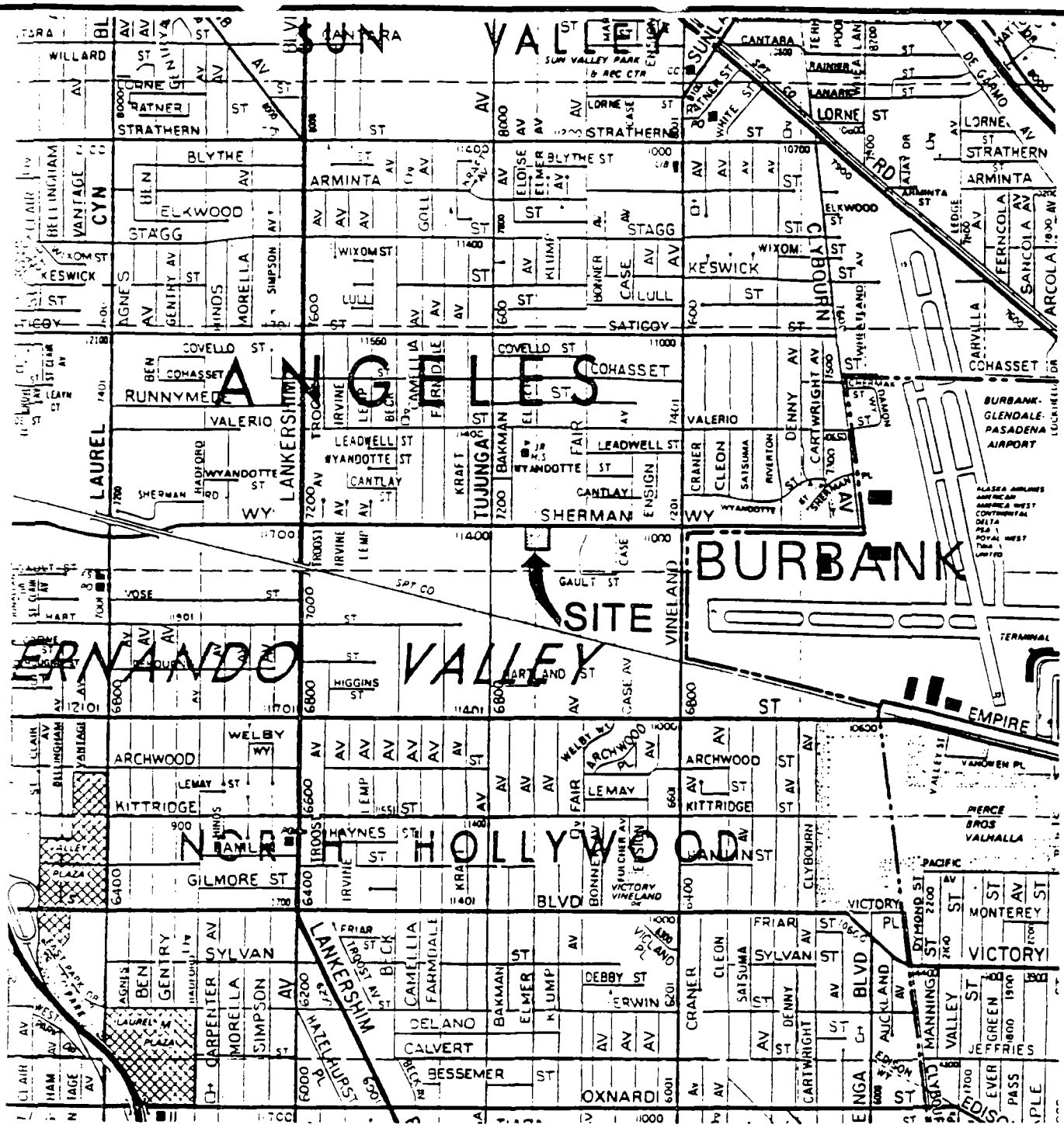
11310 SHERMAN WAY

SUN VALLEY, CALIFORNIA

INTRODUCTION

Law Environmental, Inc., (LAW) was retained by Hawker Pacific to perform a limited subsurface soil investigation in the alley located between Building 1 and Building 2 at 11310 Sherman Way in Sun Valley, California (Figure 1). This investigation was authorized by Mr. Erik Johnson on August 6, 1990 (your Purchase Order No. 32727).

Our professional services have been performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Hawker Pacific and is directed towards complying with their specific needs. The report has not been prepared for use by other parties, and may not contain sufficient information for the purposes of other parties or other uses. Any use, interpretation, or emphasis other than that contained herein, is done at the reader's own risk.



PROJECT No. 58-0612 DATE 10/8/90 PROJ. MGR. J.O. DFTR. N.G.

HAWKER PACIFIC

SAN FERNANDO VALLEY, CA.

LOCATION MAP

Proj. No. 58-0612

FIGURE 1

LAW ENVIRONMENTAL, INC.

3320 N. SAN FERNANDO BLVD.
BURBANK, CALIFORNIA 91504
TEL. (818) 848-0214
FAX (818) 848-1674

May 22, 1991

Hawker Pacific
11310 Sherman Way
Sun Valley, CA 91352

Attention: Mr. Erik Johnson

Subject: Proposal for Tank Removal
Contamination Assessment and Remediation
11310 Sherman Way, Sun Valley, California
Law Environmental Proposal No. 58-0225

As we discussed in our phone conversation on December 28, 1990, Law Environmental, Inc. (Law) is pleased to present this proposal for a tank removal, contamination assessment and remediation at this site. Previous investigations at the site (Subsurface Soil Investigation, Law Project No. 58-0605, November 26, 1990) indicate the presence of a small underground storage tank and a sump on-site. The soils beneath the tank and sump are contaminated with tetrachloroethene (PCE). We understand that Hawker Pacific is requesting further assessment of the vertical and lateral extent of contamination at the site, and that remediation of the soil by vapor extraction be conducted. The proposed investigation is based on our current understanding of the project requirements and knowledge of general soil conditions in the area.

SCOPE OF SERVICES

Underground Storage Tank Removal

Underground fuel storage tank removal requires a permit from the Los Angeles County Department of Public Works (DPW), Waste Management Division. The DPW permit requirements include notification of DPW, the City of Los Angeles Fire Department, and the South Coast Air Quality Management District (AQMD). They must be notified 72 hours before the tank removal so inspectors from the county and the fire department can be present to observe tank removal activities. The permit also requires samples to be collected from beneath the tank. Because personnel at Hawker Pacific do not know the

former contents of the tank, Los Angeles County DPW requires that soil samples must be analyzed for volatile organics (EPA Method 8240), base neutral/acids extractables (EPA Method 8270), pesticides/PCBs (EPA Method 8080), metals (EPA Method 6010/7000) and total petroleum hydrocarbons (EPA Method 8015).

When the tank is removed, excavation and removal must be monitored with a device capable of detecting parts per million (ppm) levels of hydrocarbon vapors in the air. If readings over 50 ppm are observed, the work must stop, and a permit from the AQMD must be obtained. The AQMD permit conditions may include continuous air monitoring, restrictions on methods of excavation, and covering the excavation, as well as other requirements.

We understand from a memo dated January 23, 1990, to Mr. Erik Johnson from M. H. Loe, that the Fire Department will allow the tank to be pulled on the original permit. Law personnel will observe the removal of the tank and appurtenances, and will monitor the excavation with an AQMD-approved organic vapor detector. Law will collect a soil sample from beneath the tank as required by DPW. A letter-report will be prepared describing soil sampling procedures, soil gas readings, and an evaluation of analytical findings. At this time, information from previous studies at the site may be included in the report to DPW.

Soil Contamination Assessment

The lateral extent of PCE contamination at the site was found in a previous investigation, as shown on Figure 1. This study found that the contamination extended to a depth of 74 feet (toluene ≈ 4 parts per billion [ppb], PCE = ND <5 ppb). Law proposes to drill a deep boring to confirm that the contamination has not migrated to the water table. We propose to drill one 120-foot deep boring at the western end of the alley between Buildings 1 and 2. Because the alley is inaccessible, the drill rig would have to be located in the parking lot of the neighboring property. The borings will be drilled using 8 or 10-inch diameter, hollow-stem flight auger drilling equipment. All augers will be steam-cleaned before starting work, and upon completion of each boring to preclude cross-contamination. Soil samples will be collected at 5-foot intervals using a modified California split-spoon sampler. Ten to 15 samples will be analyzed for purgeable organics and extractable petroleum hydrocarbons by EPA Method 8240 and Modified EPA Method 8015, respectively. The soil samples will not be tested for any additional parameters, unless these are specifically requested by the client in writing.

All drill cuttings with visual or olfactory evidence of contamination will be impounded in DOT 17H rated drums. Contaminated cuttings will be turned over to the client for lawful disposal in accordance with all applicable federal, state and local regulations and ordinances. The client will be informed of the results of the chemical analyses, and advised as to the proper means of disposal. If contaminated soils are encountered, the borings will be sealed with a bentonite/cement slurry, or the equivalent, and patched with asphalt or concrete. THE ESTIMATED FEE DOES NOT INCLUDE THE COST OF ALTERNATIVE

BACKFILL MATERIALS, SOIL CONTAINERIZATION OR DISPOSAL BY LAW ENVIRONMENTAL, INC.

Soil Vapor Extraction

Law is confident that soil vapor extraction, when compared to alternative methods, will be an effective way to significantly reduce PCE and toluene concentrations within site soils. The underlying alluvial soils are predominantly composed of sand and gravel, but a small amount of clay may be present. Therefore, we cannot say that levels can be reduced to one ppm or less, because the clay content of the site soil will affect the amount of adsorption.

Soil vapor extraction is generally considered a fairly long-term remedial measure, commonly requiring one to two years or more for completion. We estimate that 90 percent removal of recoverable PCE and toluene may be achieved within the first six months of operation of a full scale system. Operation and maintenance costs should be minimal following the initial six months of operation, exclusive of many restrictions and monitoring requirements which may be imposed by regulatory agencies.

Vapor extraction methodology involves mechanically inducing a reduced pressure within the entire zone of soil contamination by means of an electrically powered blower manifolded to the extraction wells. The soil vapor extraction system will utilize activated carbon canisters as a means of collecting extracted organic vapors. Spent activated carbon canisters, a hazardous waste, are transported to a hazardous waste disposal facility for incineration. This process destroys the organic compounds and terminates the associated environmental liability for the generator of the hazardous waste.

Six 25-foot deep extraction wells will be installed adjacent to the sump area (Figure 1). The borings will be logged by a geologist and cuttings will be screened using a Foxboro 108GC Organic Vapor Analyzer (OVA). The wells will consist of PVC pipe, slotted in the lower part, surrounded by an appropriate granular packing material (coarse sand or gravel) and sealed with moistened granular bentonite. The wells will be connected to a manifold leading to the suction/blower assembly and carbon canisters.

All well header assemblies and pipe leading to the manifold can be placed beneath the existing parking lot, if necessary. We propose to place the manifold along the perimeter of the alley and place all other aboveground equipment on the cement platform to the north of the tank and sump (see Figure 1). If not already present, a 110/220 volt electrical service must be extended to the building exterior at this location.

After an operating permit is received from the South Coast Air Quality Management District (SCAQMD), we will begin system operation. The air stream from the blower assembly will be monitored at intervals with a portable organic vapor analyzer calibrated to provide a direct readout concentration in parts per million (ppm).

FEE ESTIMATE

We propose to perform the investigation in three phases. Estimated fees for each phase are outlined below:

Phase 1: Tank Pull

• Subcontractor services (includes permits, tank removal and disposal, sampling and analysis, clean fill)*	$ 5,570
• Consulting services (includes observation of on-site work, data evaluation and report preparation)	$ 3,000
• Expenses (vehicle, equipment rental)	$ 250
Subtotal	**$ 8,820**

Phase 2: Contamination Assessment

• Subcontractor services (drilling)*	$ 5,610
• Laboratory analyses (30 samples by EPA Method 8240 and Modified EPA Method 8015)*	$ 8,000
• Consulting services (includes observation of on-site work, sampling, data evaluation and report preparation)	$ 7,250
• Expenses (includes travel, sampling supplies, equipment rental and miscellaneous fees)	$ 1,350
Subtotal	**$22,210**

Phase 3: Soil Vapor Extraction System

• Work Plan (includes Health and Safety Plan)	$ 2,100
• Vapor Extraction System (includes purchase and delivery of skid-mounted unit)	$18,440
• Installation of system	$ 2,960
• Supervision of installation of vapor extraction system and quality control (includes periodic monitoring as required by permit)	$ 2,400
• Expenses (includes system materials, permits, equipment rental, vehicles and miscellaneous fees)	$ 2,000
Subtotal	**$27,900**
TOTAL	**$58,930**

* Fees for contractor services will be billed directly to the client. Contractor fees in this estimate are shown without the 15 percent surcharge.

Law proposes to perform the above-mentioned services for an estimated cost of $58,930; $18, 350 is the fee estimated for consulting services, $40,580 is the estimated fee for the contractor services. The fee for consulting services will not be exceeded by more than 10 percent without prior authorization of Hawker Pacific.

TERMS AND CONDITIONS

The fee for our service is based on the rates given in the attached Schedule of Charges. If acceptable, please indicate your acceptance of this proposal by signing the attached Proposal Acceptance Sheet and returning one copy to our office. It should be noted that Law Environmental, Inc. is on a computerized accounting system that issues invoices every 28 days. The invoices are for charges during the preceding billing period and are not cumulative. Invoices may be received before the particular project assignment or task is completed. Final billing will be so noted on the final invoice.

The terms on the reverse side of the Proposal Acceptance Sheet are an integral part of our contract for professional services. By authorizing our services, you confirm that you have read this contract and the terms, and accept the Limitation of Liability provided for in the paragraph titled "Professional Liability". If you wish to increase our liability coverage as computed in the paragraph, please provide a written request at the time of the proposal acceptance.

We appreciate the opportunity to provide our services for your project. We look forward to receiving your written authorization to proceed. If you have any questions regarding this proposal, please do not hesitate to contact our office.

Sincerely,

LAW ENVIRONMENTAL, INC.

Juli G. Oborne
Project Environmental Geologist

Glenn A. Brown, C.E.G. 3
Principal Geologist

JO/ks/0225.PRO
Attachment

LAW ENVIRONMENTAL
engineering, scientific, and regulatory consultants

PROPOSAL ACCEPTANCE SHEET

Identification of Services Tank Removal, Contamination Assessment, Remediation

Project Name Hawker Pacific

Project Location 11310 Sherman Way, Sun Valley, CA

Proposal No. and Date 58-0225 May 22, 1991

Consultant's Branch Designation Burbank

CLIENT

Name Hawker Pacific

Address 11310 Sherman Way

Sun Valley, CA Zip Code 91352 Phone number (818) 765-6201

Attention: Erik Johnson Title Hazardous Waste Engineer

FOR NOTICES: (if different)

Client: Name

Address

Phone number

Consultant: Name

Address

Phone number

SPECIAL INSTRUCTIONS:

PROPOSAL ACCEPTANCE

The Terms and Conditions of this Proposal, including the terms and conditions on this and the attached pages are:

Accepted this 31ST day of May 19 91

HAWKER PACIFIC, INC.

Print or type individual, firm or corporate body name

Jeff B Belzer

Signature of authorized representative

JEFF B. BELZER, VICE PRESIDENT, ADMINISTRATION & FINANCE

Print or type name of authorized representative and title

TERMS AND CONDITIONS

1. **SERVICES TO BE PROVIDED.** Law Environmental, (hereinafter LAW) is an independent consultant and agrees to provide Client, for its sole benefit and exclusive use, consulting services set forth in our proposal.

2. **PAYMENT TERMS.** Client agrees to pay our invoice upon receipt. If payment is not received within 30 days from the invoice date, Client agrees to pay a service charge on the past due amount at the prevailing legal rate, including reasonable attorney's fees if collected through an attorney, and LAW reserves the right to suspend all work until payment is received. No deduction shall be made from our invoice on account of liquidated damages or other sums withheld from payments to contractors or others.

Either party may terminate this Agreement without cause upon 30 days written notice. In the event Client requests termination prior to completion of the proposed services, Client agrees to pay LAW for all costs incurred plus reasonable charges associated with termination of the work.

3. **STANDARD OF CARE.** LAW will perform its services using that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE OR INTENDED BY OUR PROPOSAL OR BY OUR ORAL OR WRITTEN REPORTS.

4. **INSURANCE.** LAW maintains insurance coverage as follows:
   (a) Worker's Compensation Insurance - statutory.
   (b) Employer's Liability Insurance - $1,000,000.
   (c) Commercial General Liability Insurance - $2,000,000/ $3,000,000.
   (d) Automobile Liability Insurance - $1,000,000/ $1,000,000.
   (e) Excess Umbrella - $1,000,000 (on c & d)

5. **PROFESSIONAL LIABILITY:** Client agrees that LAW's liability to Client or any third party due to any negligent professional acts, errors or omissions or breach of contract will be limited to an aggregate of $50,000 or our total fee, whichever is greater. If Client prefers to have higher limits of professional liability, we agree to increase the limit up to a maximum of $1,000,000 upon Client's written request at the time of accepting our proposal, provided Client agrees to pay an additional consideration of ten percent of our total fee, or $500, whichever is greater. The additional charge for the higher liability limit is because of the greater risk assumed by us and is not a charge for additional professional liability insurance.

6. **SITE OPERATIONS.** Client will arrange for right-of-entry to the property for the purpose of performing studies, tests and evaluations pursuant to the agreed services. Client represents that it possesses necessary permits and licenses required for its activities at the site.

LAW's field personnel are trained to initiate field testing, drilling and/or sampling within a reasonable distance of each designated location. Our field personnel will avoid hazards or utilities which are visible to them at the site. If we are advised or given data in writing that reveals the presence or potential presence of underground or overground obstructions, such as utilities, we will give special instructions to our field personnel. LAW is not responsible for any damage or loss due to undisclosed or unknown surface or subsurface conditions, owned by Client or third parties. Except as such damage or loss is a result of our sole negligence, Client agrees to indemnify us from any such claims, suits or losses, including reasonable attorney's fees, resulting therefrom.

We will take reasonable precautions to minimize damage to the property caused by our operations. Unless otherwise stated in our proposal, our fee does not include cost of restoration due to any related damage which may result. If Client requests us to repair such damage, we will do so at an additional cost.

Field tests or boring locations described in our report or shown on sketches are based on specific information furnished by others or estimates made in the field by our personnel. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in our proposal or report.

7. **FIELD REPRESENTATIVE.** The presence of our field personnel, either full-time or part-time, may be for the purpose of providing project administration, assessment, observation and/or field testing of specific aspects of the project as authorized by Client. Should a contractor(s) not retained by us be involved in the project, Client will advise contractor(s) that our services do not include supervision or direction of the actual work of the contractor(s), his employees or agents. Client will also inform contractor that the presence of our field representative for project administration, assessment, observation or testing will not relieve the contractor of his responsibilities for performing the work in accordance with the plans and specifications.

If a contractor (not a subcontractor of LAW) is involved in the project, Client agrees, in accordance with generally accepted construction practices, that the contractor will be solely and completely responsible for working conditions on the jobsite, including safety of all persons and property during performance of the work, and compliance with OSHA regulations. These requirements will apply continuously and will not be limited to normal working hours. It is agreed that LAW will not be responsible for job or site safety on the project, other than for our employees and subcontractors, and that we do not have the duty or right to stop the work of the contractor.

8. **UNFORESEEN CONDITIONS OR OCCURRENCES.** It is possible that unforeseen conditions or occurrences may be encountered which could substantially alter the necessary services or the risks involved in completing our services. If this

occurs, we will promptly notify and consult with Client, but will act based on our sole judgment where risk to our personnel is involved. Possible actions could include:

(a) Complete the original Scope of Services in accordance with the procedures originally intended in our Proposal, if practicable in our judgment;
(b) Agree with Client to modify the Scope of Services and the estimate of charges to include study of the unforeseen conditions or occurrences, with such revision agreed to in writing;
(c) Terminate the services effective on the date specified by us in writing.

9. **SAMPLE DISPOSAL.** Test specimens or samples generally are consumed or substantially altered during testing and are disposed of immediately upon completion of tests. Drilling samples and other specimens are disposed of 30 days after submission of our report.

a. NON-HAZARDOUS SAMPLES. At Client's written request, LAW will retain preservable test specimens or the residue therefrom for 30 days after submission of our report free of storage charges. After the initial 30 days and upon written request, we will retain test specimens or samples for a mutually acceptable storage charge and period of time. Client agrees that we are not responsible or liable for any loss of test specimens or samples retained in storage.

b. *HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES. In the event that test samples contain constituents deemed hazardous by federal, state or local regulations, LAW will: 1) return such samples to Client; or, 2) using a manifest signed by Client as generator and at additional cost, have such samples transported to a location selected by Client for proper final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of samples. Client recognizes and agrees that LAW is acting as a bailee and at no time assumes title to said materials.

10. ***CLIENT DISCLOSURE.** Client agrees to advise LAW upon execution of this Agreement of any hazardous substance or any condition, known or that reasonably should be known by Client, existing in, on, or near the site that present a potential danger to human health, the environment, or equipment. Client agrees to provide continuing information as it becomes available to the Client in the future. By virtue of entering into this Agreement or providing services hereunder, we do not assume control of or responsibility for the site or the person in charge of the site, or undertake responsibility for reporting to any federal, state or local public agencies any conditions at the site that may present a potential danger to public health, safety or the environment. Client agrees under advice of Client counsel to notify the appropriate federal, state or local public agencies as required by law, or otherwise to disclose, in a timely manner, any information that may be necessary to prevent damage to human health, safety, or the environment.

11. ***ENVIRONMENTAL INDEMNITY.** In connection with toxic or hazardous substances or constituents and to the maximum extent permitted by law, Client agrees to defend, hold harmless and indemnify LAW from and against any and all claims and liabilities, unless caused by our sole negligence or willful misconduct, resulting from:

(a) Client's violation of any federal, state, or local statute, regulation or ordinance relating to the management or disposal of toxic or hazardous substances or constituents;
(b) Client's undertaking of or arrangement for the handling, removal, treatment, storage, transportation or disposal of toxic or hazardous substances or constituents found or identified at the site;
(c) Toxic or hazardous substances or constiuents introduced at the site by Client or third persons before or after the completion of services herein; and,
(d) Allegations that LAW is a handler, generator, operator, treater, storer, transporter, or disposer under the Resource Conservation and Recovery Act of 1976 as amended or any other similar federal, state or local regulation or law due to the services provided under this Agreement.

If a third party brings suit or claim for damages against LAW alleging personal injury (including death) or property damage from exposure to or release of toxic or hazardous substances or constituents at or from the project site before, during or after the services of this Agreement, Client agrees to the maximum extent permitted by law to defend LAW and pay on our behalf any judgment resulting against us, including interest thereon, unless such injury or damage is caused by our sole negligence or willful misconduct.

12. ***EQUIPMENT CONTAMINATION.** We will endeavor to clean our laboratory and field equipment which may become contaminated in the conduct of our services. Occasionally, such equipment cannot be completely decontaminated because of the type of hazardous materials encountered. If this occurs, it will be necessary to dispose of the equipment in a manner similar to that indicated for hazardous samples and to charge Client for the loss. Client agrees to pay the fair market value of any such equipment and reasonable disposal costs.

13. **DOCUMENTS.** LAW will furnish to Client the agreed upon number of reports and supporting documents. These instruments of services are furnished for Client's exclusive internal use and reliance in connection with the project or services provided for in this Agreement, not for advertising or other type of distribution or general publication, and are subject to the following. For any other purposes, all documents generated by LAW under this Agreement shall remain the sole property of LAW. Client agrees to obtain our written permission for any exception for use not described here. Any unauthorized

use or distribution shall be at Client's and recipient's sole risk and without liability to LAW.

If Client desires LAW to provide our report(s) to a third party (other than Client's counsel or appropriate regulatory bodies) for that party's reliance, LAW will agree to such release provided we obtain written acceptance from the third party to be bound by the similar terms and conditions of our "Secondary Client" agreement which is available on request. Reports provided for information only will not require the Secondary Client agreement. Client acknowledges and agrees to inform any such third party that the LAW report(s) reflects conditions only at the time of the study and may not reflect conditions at a later time.

Client agrees that all documents furnished to Client or Client's agents or designees, if not paid for, will be returned upon demand and will not be used by Client or any other entity for any purpose whatsoever. Client further agrees that documents produced by LAW pursuant to this Agreement will not be used at any location or for any project not expressly provided for in this Agreement without our written approval.
Client shall furnish documents or information reasonably within Client's control and deemed necessary by us for proper performance of our services. LAW may rely upon Client-provided documents in performing the services required under this Agreement; however, LAW assumes no responsibility or liability for their accuracy. Client-provided documents will remain the property of Client.

14. **CLAIMS.** The parties agree to attempt to resolve any dispute without resort to litigation. However, in the event a claim is made that results in litigation, and the claimant does not prevail at trial, then the claimant shall pay all costs incurred in defending the claim, including reasonable attorney's fees. The claim will be considered proven if the judgment obtained and retained through any applicable appeal is at least ten percent greater than the sum offered to resolve the matter prior to the commencement of trial.

15. **OPINIONS OF COST.** If requested, LAW will use its best efforts and experience on similar projects to provide realistic opinions or estimates of costs for installation of materials, remediation or construction as appropriate based on reasonably available data, our designs or our recommendations. However, such opinions are intended primarily to provide information on the order of magnitude or scale of such costs and are not intended for use in firm budgeting or negotiation unless specifically agreed otherwise in advance, in writing with LAW. Client understands actual costs of such work depend heavily on regional economics, local construction practices, material availability, site conditions, weather conditions, contractor skills, and many other factors beyond our control.

16. **TESTIMONY.** Should LAW or any employee of LAW be called or asked to provide testimony or other evidence by any party, whether at deposition, hearing or trial, in relation to services provided under this Agreement, LAW shall be compensated by Client for the associated reasonable expenses and labor at appropriate unit rates to the extent the party compelling or requesting the testimony does not provide such compensation.

17. **CONFIDENTIALITY.** LAW will maintain as confidential any documents or information provided by Client indicated to be confidential and will not release, distribute or publish to any third party without prior permission from Client, except as compelled by order of a court or regulatory body of competent jurisdiction and then only after notice to Client.

18. **SEVERABILITY.** In the event that any provision of this Agreement is found to be unenforceable, the other provisions shall remain in full force and effect.

19. **SURVIVAL.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between Client and LAW shall survive the completion of the services and the termination of this Agreement.

20. **INTEGRATION.** This Agreement, the attached documents and those incorporated herein constitute the entire Agreement between the parties and cannot be changed except by a written instrument signed by both parties.

21. **GOVERNING LAW.** This Agreement shall be governed in all respects by the laws of the State of Georgia.

* Applies only if toxic or hazardous substances or constituents are anticipated or encountered.

END OF DOCUMENT

OCCUPATIONAL CONTROL PROCEDURES (Continued)

Respiratory Protection: Use NIOSH approved equipment when exposure to mist or aerosols is possible or when working with product at elevated temperature. Consult respirator manufacturer to determine appropriate type equipment for given application.

Ventilation: Provide ventilation to minimize exposure. Local exhaust ventilation preferred.

Airborne Exposure Limits: No permissible exposure limit or threshold limit value has been established by OSHA or the ACGIH for SKYDROL 500B-4 fire resistant hydraulic fluid, although two constituents of the product does have exposure guidelines.

Tributyl Phosphate (CAS No. 126-73-8)

OSHA PEL/TWA: 5 mg/m³ (0.4 ppm)
ACGIH TLV®/TWA: 2.5 mg/m³ (0.2 ppm)
ACGIH TLV/STEL: 5 mg/m³ (0.4 ppm) SHORT TERM EXP. LIMIT 8 HOUR DAY

2,6-di-tert-butyl-p-cresol (CAS No. 128-37-0)

ACGIH TLV/TWA: 10 mg/m³
ACGIH TLV/STEL: 20 mg/m³ SHORT TERM EXP. LIMIT

FIRE PROTECTION INFORMATION

Auto Ignition Temperature:	750°F (Min.)	***Method:***	ASTM D-2155
Flash Point:	320°F (Min.)	***Method:***	Cleveland Open Cup
Fire Point:	350°F (Min.)	***Method:***	Cleveland Open Cup

Extinguishing Media: Water spray, foam, dry chemical, CO_2 or other agents suitable for Class B fires.

Special Firefighters Procedures: Wear self-contained breathing apparatus when exposed to products of combustion. Wear protective equipment to minimize skin contact.

Unusual Fire Hazards: Phosphorus oxide fumes may be produced during fires.

REACTIVITY DATA

Stability: Product is stable under normal conditions of storage and under continued use up to approximately 200-225°F.

Materials to Avoid: Exposure to strong oxidizing agents may result in generation of heat and combustion products.

Hazardous Decomposition Products: Oxides of phosphorus may form. No other uniquely hazardous decomposition products are expected. If the product is burned, as with any organic material, carbon monoxide and soot can be produced.

Hazardous Polymerization: Does not occur.

PHYSIOLOGICAL EFFECTS SUMMARY

Human Experience

Repeated contact with SKYDROL 500B-4 fire resistant hydraulic fluid may cause drying or cracking of exposed skin. Eye contact may produce marked pain but does not cause eye damage.

(Physiological Effects Summary Continued On Next Page)

PHYSIOLOGICAL EFFECTS SUMMARY (Cont'd)

Animal Data

Oral LD_{50} (Rat): 2,200 mg/kg, Slightly Toxic
Dermal LD_{50} (Rabbit): Greater than 7,940 mg/kg, Practically Nontoxic
Eye Irritation (Rabbit): (FHSA) 2.4 on a scale of 110.0, Slightly Irritating
Skin Irritation (Rabbit): (FHSA) 2.5 on a scale of 8.0, Slightly Irritating

Patch testing of 53 human volunteers with SKYDROL 500B-4 fluid produced no positive reaction following initial application; 16 out of 53 subjects displayed reactions during subsequent exposures. No reaction was observed on rechallenge 2 weeks later. SKYDROL 500B-4 fluid is not considered a primary irritant or a sensitizing agent, but on repeated exposure, may be a cumulative irritant to some individuals.

PHYSICAL DATA

Appearance:	Clear, purple, oily liquid
Boiling Point @ 267 mm Hg (Based on Vapor Pressure Data):	~257°F
Pour Point:	-80°F (Maximum)
Specific Gravity @ 25/25°C:	1.052-1.060
Viscosity @ 100°F:	11.3-12.10 cs
Refractive Index, n 25/D:	1.466 - 1.474

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

SPILL, LEAK & DISPOSAL INFORMATION

Waste Disposal: Waste should be incinerated or disposed of in a hazardous waste landfill. Either disposal route should be in accordance with all local, state or federal regulations. This material should not be spilled, dumped, rinsed, or washed into sewers or public waterways.

Spill or Leakage Procedures: Absorb spilled or leaked material on clay, sawdust, or other absorbent material.

ADDITIONAL COMMENTS

Environmental Toxicity Information:

96-hr LC_{50} Trout: 2.6 ppm, Moderately Toxic
96-hr LC_{50} Fathead Minnow: 3.0 ppm, Moderately Toxic
48-hr EC_{50} *Daphnia*: 6.5 ppm, Moderately Toxic
96-hr EC_{50} Algae - Cell Count: 8.9 ppm, Moderately Toxic
96-hr EC_{50} Algae - Chlorophyll: 7.1 ppm, Moderately Toxic

Product Qualifies under the following specifications:

BMS 3-11F, Type IV, Class 2, Grade A
DMS 2014C, Type IV, Class 2
LAC MS C-34-1224, Type IV
SAE AS 1241A, Type IV, Class 2
NSN 9150-00-857-9969

DATE: 12-21-84 **SUPERSEDES:** 11/1/83

MSDS NO.: M00006729

FOR ADDITIONAL NON-EMERGENCY INFORMATION, CONTACT:

Monsanto Company
800 North Lindbergh Boulevard
St. Louis, MO 63167
314-694-1000

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Monsanto Company be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

This form has been approved by the Occupational Safety and Health Administration as "equivalent to" OSHA Form 20.

Skydrol® is a registered trademark of Monsanto Company.

Dear Customer: This Bulletin contains important environmental, health and toxicology information for your employees who recently ordered this product. Please make sure this information is given [illegible] If you resell this product, this Bulletin should be given to the Bu[illegible]m may be reproduced without permission.

#1.23

Chevron U.S.A. Inc.

Material Information Bulletin

Chevron

(Approved – "Essentially Similar" to Form OSHA 20, Material Safety Data Sheet)

CHEVRON PEARL KEROSENE

CMS 217105

DANGER! HARMFUL OR FATAL IF SWALLOWED
COMBUSTIBLE
KEEP OUT OF REACH OF CHILDREN

TYPICAL COMPOSITION

Paraffins (incl. naphthenes)	98%
Aromatics	
C_8+	2%
Benzene	<0.1%

EXPOSURE STANDARD

The suggested Threshold Limit Value is 275 ppm (parts of vapor per million parts of air) for a daily 8-hour exposure. No OSHA exposure standard has been established.

PHYSIOLOGICAL & HEALTH EFFECTS / EMERGENCY & FIRST AID PROCEDURES

Eyes

Not expected to cause eye irritation. Application into the eyes of rabbits produced no observable signs of membrane irritation.

Wash eyes with fresh water for at least 15 minutes. If irritation continues, see a doctor.

Skin

Prolonged or frequently repeated contact may cause skin irritation or may cause the skin to become cracked or dry from the defatting action of this material. Application onto the skin of rabbits produced moderate erythema and edema. See Additional Health Data.

Wash thoroughly with soap and water following skin contact. Launder contaminated clothing.

L.T. "LEE" SAWYER, INC.
JOBBER
SHELL OIL & SHELL CHEMICAL PRODUCTS
14117 Aetna St., Van Nuys, CA
785-8180 Box 369, Van Nuys, CA 91408

Inhalation

Breathing the vapors at concentrations above the exposure standard can cause central nervous system depression. See Additional Health Data.

If there are signs or symptoms, as described in this bulletin, due to breathing this material, move the person to fresh air. If breathing has stopped, apply artificial respiration. Call a doctor immediately.

Ingestion

Not expected to be acutely toxic by ingestion. The acute oral LD_{50} (rat) was greater than 10 g/kg. See Additional Health Data.

If swallowed, DO NOT make person vomit. Call a doctor immediately.

ADDITIONAL HEALTH DATA

See Page 3

SPECIAL PROTECTIVE INFORMATION

Eye Protection: Avoid contact with eyes. Eye contact can be avoided by wearing chemical safety goggles.

Skin Protection: Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective clothing including rubber gloves.

Respiratory Protection: Wear approved respiratory protection such as an organic vapor cartridge or an air-supplying respirator unless ventilation equipment is adequate to keep airborne concentrations below the exposure standard.

Ventilation: Use adequate ventilation to keep airborne concentrations of this material below the exposure standard.

FIRE PROTECTION

Liquid evaporates and forms vapors (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85°F.

Flash Point: (TCC) 52°C (125°F) Min.
Autoignition Temp.: 260°C (500°F)
Flammability Limits: 0.9 - 6.0%

Extinguishing Media: CO_2, Dry Chemical, Foam, Water Spray

Special Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire bulletin.

SPECIAL PRECAUTIONS

See Page 3

ENVIRONMENTAL PROTECTION

Environmental Impact: This material is not expected to present any environmental problems other than those associated with oil spills.

Precautions if Material is Released or Spilled: Eliminate all open flames in vicinity of spill or released vapor. Clean up spills as soon as possible, observing precautions in Special Protective Information and on product label. Absorb large spills with absorbent clay, diatomaceous earth or other suitable material. A fire or vapor hazard may exist since these cleanup materials will only absorb liquid; they will not absorb vapor.

Waste Disposal Methods: Place contaminated materials in disposable containers and bury in an approved dumping area.

REACTIVITY DATA

Stability (Thermal, Light, etc.): Stable

Incompatibility (Materials to Avoid): May react with strong oxidizing materials.

Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

Hazardous Polymerization: Will not occur.

PHYSICAL PROPERTIES

Solubility: Miscible with hydrocarbon solvents; insoluble in water.

Appearance (Color, odor, etc.): Colorless liquid.

Boiling Range: 350-510°F
Melting Point: n/a
Specific Gravity: 0.81 @ 60/60°F
Vapor Pressure: 1 mm Hg @ 77°F
Vapor Density (Air = 1): 5.7
Percent Volatile (Volume %): 99+%
Evaporation (Bu Ac = 1): 0.03
Molecular Weight: 166 (Avg.)
Viscosity: 1.50 cSt @ 100°F

n/a = Not Applicable

The above information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

SUPPLEMENT

Material Information Bulletin

CHEVRON Pearl Kerosene CMS 217105

ADDITIONAL HEALTH DATA

Signs and symptoms of central nervous system depression may include one or more of the following: headache, dizziness, loss of appetite, weakness and loss of coordination. Affected persons usually experience complete recovery when removed from the exposure area.

Not expected to produce systemic toxicity by skin contact; the acute dermal LD_{50} for rabbits was 19.6 g/kg.

Note to Physician: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

SPECIAL PRECAUTIONS

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL

Contains Petroleum Distillate
DO NOT USE OR STORE near flame, sparks, or hot surfaces. USE ONLY IN WELL VENTILATED AREA.
DO NOT weld, heat or drill container.
Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid.

CAUTION! Do not use pressure to empty drum or explosion may result.

MATERIAL SAFETY DATA SHEET

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P.O. BOX 2219 COLUMBUS, OHIO 43216 • (614) 889-3333

002172 METHYL ETHYL KETONE PAGE 1

ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20

24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

ASHLAND PRODUCT NAME METHYL ETHYL KETONE

MILLHORN CHEMICAL
P O BOX 460
MAYWOOD, CA 90270

ATTN PURCHASING/SAFETY DEPT.

05 50 033 6038800-
DATA SHEET NO: 0000017-001
LATEST REVISION DATE 02/20-78044
PRODUCT: 3540000
INVOICE: 925326
INVOICE DATE: 05/12/81
TO: MILLHORN CHEMICAL
6142 WALKER AVE.
MAYWOOD, CA 90270
(213) 77 90270

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID KETONE

HAZARD CLASSIFICATION (03) FLAMMABLE LIQUID (173 115)

SECTION II-HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	PEL
METHYL ETHYL KETONE	>60 %	200 PPM

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR PRODUCT	175 00 DEG F (79 44 DEG C) @ 760 00 MMHG
VAPOR PRESSURE	FOR PRODUCT	70.00 MMHG @ 68 00 DEG F (20 00 DEG C)
VAPOR DENSITY	AIR = 1	2 5
SPECIFIC GRAVITY		.806 @ 68 00 DEG F (20 00 DEG C)
PERCENT VOLATILES		100 00 %
EVAPORATION RATE	(BU AC=1 = 1)	5 70

SECTION IV-FIRE AND EXPLOSION DATA

FLASH POINT(CLOSED CUP) 20 00 DEG F
(-6 66 DEG C)

LOWER EXPLOSIVE LIMIT 2 0 %

EXTINGUISHING MEDIA ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC

SPECIAL FIREFIGHTING PROCEDURES. SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE

UNUSUAL FIRE & EXPLOSION HAZARDS VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
MATERIAL IS HIGHLY VOLATILE AND READILY GIVES OFF VAPORS WHICH MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 200 PPM

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA

SECTION V-HEALTH HAZARD DATA (CONTINUED)

FIRST AID

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.

IF SWALLOWED: GIVE TWO GLASSES OF WATER. INDUCE VOMITING IMMEDIATELY BY STICKING FINGER DOWN THROAT. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE

INCOMPATABILITY: AVOID CONTACT WITH , STRONG OXIDIZING AGENTS

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING MATERIAL BY BURNING IN AN IRON PAN.

LARGE SPILL: DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NATURAL RUBBER, NEOPRENE

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED. HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: , OVEREXPOSURE TO COMPONENTS HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: , LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE, SPLEEN DAMAGE, BRAIN DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHOLLY ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

2-10-12

MATERIAL SAFETY DATA SHEET

RECEIVED JAN 06 1986

Ans'd.....

3M
3M Center
St. Paul, Minnesota 55144
(612) 733-1110

3M

Form 18893-C PWO

DUNS NO.: 00-617-3082

Chemical Family

Trade Name: 3M Brand Adhesive EC-750

3M I. D. Number: 62-0750-9530-7 AC&S Division

1. INGREDIENTS

	CAS. #	%	TLV® (unit)
Methyl ethyl ketone (MEK)	78-93-3	38	200 ppm
Methyl isobutyl ketone (MIBK)	108-10-1	~ 10	50 ppm
Asbestos (bound, not free fibers)		~ 2	2 fibers/cc>5u in length
Acrylonitrile/butadiene elastomer, mixed			
glycerol esters of abietic acid, terpene resin, clay			8 HR. LIMIT
filler, tributoxyethyl phosphate, salicylic			working Limits
acid, antioxidant and zinc oxide		~ 50	

2. PHYSICAL DATA

Boiling Point	MEK	175° F.	Solubility in Water	Slight
Vapor Pressure	@ 68° F.	80	Specific Gravity (H_2O=1)	0.98
Vapor Density (Air = 1)		<3	Percent Volatile	~48
Evaporation Rate (ether =1)		~3	pH	N.A.

Appearance and Odor: Brown syrup--ketone odor

3. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 20° F. (C.C.)

Flammable Limits: LEL = 1.4 UEL = 11.5

Extinguishing Media: CO_2, foam, dry chemical

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

4. ENVIRONMENTAL INFORMATION

Spill Response

Extinguish ignition sources. Collect spilled material and place in closed metal container.

Recommended Disposal

Contains heavy metals and solvents. Flash point is less than 140°F. (60°C). Send to hazardous waste management facility. Recommended disposal is in a secure landfill or by incineration. Contact your state agency or the appropriate EPA regional solid waste office for the location of such permitted facilities. Discarded and off-specification product has an EPA Hazardous Waste Number of D-001.

29013

TRADE NAME: 3M Brand Adhesive EC-750

5. HEALTH HAZARD DATA

Eye Contact

Liquid and vapors irritating to the eyes.

Skin Contact

Prolonged skin contact may defat skin leading to irritation and dermatitis.

Inhalation

Concentrated vapors may cause dizziness, headache, nausea and lack of coordination.

Ingestion

May produce gastrointestinal irritation and nausea.

Suggested First Aid

Eye contact: Immediately flush eyes with plenty of water for 10 minutes and call a physician.
Skin contact: Wash with soap and water.
Inhalation: Provide fresh air.
Ingestion: Call a physician.

6. REACTIVITY DATA

STABILITY	☐ Unstable ☒ Stable	Conditions to Avoid
INCOMPATABILITY		Materials to Avoid
HAZARDOUS POLYMERIZATION	☐ May Occur ☒ May Not Occur	Conditions to Avoid

Hazardous Decomposition Products

CO, CO_2, and smoke particles

7. SPECIAL PROTECTION INFORMATION

Eye Protection	Skin Protection
Chemical goggles	Rubber gloves

Ventilation

Local exhaust

Respiratory and Special Protection

Organic vapor mask if ventilation is not adequate.

Other Protection

8. PRECAUTIONARY INFORMATION

Keep away from heat, sparks and open flame. Use only in areas adequately ventilated to remove vapors and prevent vapor buildup. Avoid eye contact. Avoid prolonged breathing of vapors and prolonged or repeated skin contact. Keep container closed when not in use.

9. DEPARTMENT OF TRANSPORTATION

DOT Proper Shipping Name	DOT Hazard Class
FLAMMABLE LIQUID, NOS	FLAMMABLE LIQUID

Issue Date	Supersedes
Nov.1980	Oct.1979

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any process is the responsibility of the user.

Shell

97002 (1-83)

MSDS NUMBER ▶ 5,120-5 PAGE

SECTION I	NAME
PRODUCT ▶	Isopropyl Alcohol
CHEMICAL/ SYNONYMS ▶	IPA, Isopropanol, Propanol-2
CHEMICAL FAMILY ▶	Alcohol
SHELL CODE ▶ 31105	C.A.S. NUMBER ▶ 67-63-0

24 HOUR EMERGENCY ASSISTA

SHELL 713-473-9461
CHEMTREC 800-424-9300

HAZARD RATING

LEAST 0 ▶ SLIGHT 1 ▶ MODERATE 2 ▶ HIGH 3 ▶ EXTREME 4

HEAL
FIRE
REACTI

SECTION II INGREDIENTS

COMPOSITION	%	TOXICITY DATA
Isopropyl Alcohol	100	Oral LD_{50} (rat) = 5.8g/kg Dermal LD_{50} (rabbit) = 16.4ml Inhalation LC_{50} (rat) = 12,000ppm (8 hrs.)

SECTION III HEALTH INFORMATION

Symptoms of overexposure include such affects as headache, dizziness, nausea, incoordination, drowsiness and loss of consciousness.

Eye Contact: Liquid or vapor contact can cause irritation.

Skin Contact: Prolonged and repeated contact can cause dryness and irritation.

Inhalation: High concentrations of vapor can irritate respiratory trac and may cause bronchopneumonia or pulmonary edema.

Ingestion: May cause marked and persistent nausea, vomiting and abdomi pain. If vomiting occurs following ingestion, aspiration (breathing) o vomitus into the lungs can cause bronchopneumonia or pulmonary edema.

T. "LEE" SAWYER, INC.
JOBBER
SHELL OIL & SHELL CHEMICAL PRODUCTS
14117 Aetna St., Van Nuys, CA
786-8180 Box 360, Van Nuys, CA 91408

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

OSHA-PEL/TWA = 400ppm
ACGIH-TLV/TWA = 400ppm
-TLV/STEL = 500ppm

SECTION V — EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with water for 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and shoes; do not reuse until cleaned. If persistent irritation occurs, get medical attention.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

INGESTION: Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30cc (2 tablespoons) Syrup of Ipecac. If Ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Get medical attention.

SECTION VI — PHYSICAL DATA

BOILING POINT (°F) ▶ 180	MELTING POINT (°F) ▶ -127	VAPOR PRESSURE (mmHg) ▶ 33@68°F
SPECIFIC GRAVITY (H_2O=1) ▶ 0.79	% VOLATILE BY VOLUME ▶ 100	VAPOR DENSITY (AIR=1) ▶ 2.1
SOLUBILITY IN WATER ▶ Complete	EVAPORATION RATE (BUTYL ACETATE=1) ▶ 1.4	

APPEARANCE AND ODOR

Colorless, mobile liquid. Mild odor.

SECTION VII — FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD USED	FLAMMABLE LIMITS/% VOLUME IN AIR ▶ LOWER	UPPER
53°F (TCC)	2	12

EXTINGUISHING MEDIA

Use water fog, "alcohol" foam, dry chemical or CO_2.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

Evacuate hazard area of unprotected personnel. Wear proper protective clothing including a NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water.

In the case of large fires, also cool surrounding equipment and structures with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS

--

SECTION VIII — REACTIVITY

STABILITY ▶ [ ] UNSTABLE [X] STABLE

HAZARDOUS POLYMERIZATION ▶ [ ] MAY OCCUR [X] WILL NOT

CONDITIONS AND MATERIALS TO AVOID

Avoid heat, sparks, open flames and contact with strong oxidizing agent

Will attack aluminum if the surface oxide film is penetrated (e.g. by abrasion or high temperature).

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide and unidentified organic compounds may be formed during combustion.

SECTION IX — EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

If exposure may or does exceed occupational exposure limits (Sec.IV) us NIOSH-approved respirator to prevent overexposure. In accord with 29 C 1910.134 use either a full-face, atmosphere-supplying respirator or air purifying respirator for organic vapors.

PROTECTIVE CLOTHING

Wear impervious gloves and other protective clothing as required to pre vent skin contact. Wear chemical goggles to prevent eye contact.

ADDITIONAL PROTECTIVE MEASURES

Use explosion-proof ventilation as required to control vapor concentrations.

SECTION X — ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

WARNING. Flammable. Eliminate all ignition sources. Handling equipm must be grounded to prevent sparking.
Large spills: Evacuate the hazard area of unprotected personnel. Wea appropriate respirator and protective clothing. Shut off source of le only if safe to do so. Dike and contain. If vapor cloud forms, water may be used to suppress; contain run-off. Remove with vacuum trucks o pump to storage/salvage vessels. Soak up residue with an absorbent su as clay, sand or other suitable material; place in non-leaking contain for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above.
Small spills: take up with an absorbent material and place in non-lea containers; seal tightly for proper disposal.

WASTE DISPOSAL

Place in a disposal facility approved under RCRA regulations for hazar waste (See Sec. XIII). Use non-leaking containers, seal tightly and l properly.

ENVIRONMENTAL HAZARDS

--

SECTION XI SPECIAL PRECAUTIONS

WARNING. Flammable liquid.
Keep away from heat, sparks and open flames. Keep containers tightly closed. Store away from strong oxidizing agents in a cool, dry place with adequate explosion-proof ventilation. Ground equipment to prevent accumulation of static charge. If pouring or transferring materials, containers must be bonded and grounded.
Do NOT weld, heat or drill on or near container; even emptied containers can contain explosive vapors.

Aluminum containers are not recommended for storage.

Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

SECTION XII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION

[X] FLAMMABLE LIQUID	[ ] COMBUSTIBLE LIQUID	[ ] OXIDIZING MATERIAL	[ ] NON-FLAMMABLE GAS
[ ] FLAMMABLE SOLID	[ ] POISON,CLASS A	[ ] CORROSIVE MATERIAL	[ ] NOT HAZARDOUS BY D.O.T. REGULATIONS
[ ] FLAMMABLE GAS	[ ] POISON,CLASS B	[ ] IRRITATING MATERIAL	[ ] OTHER-Specify below

D.O.T. PROPER SHIPPING NAME

Isopropanol

OTHER REQUIREMENTS

D.O.T. Identification Number = UN1219. Guide Sheet 26.

SECTION XIII OTHER REGULATORY CONTROLS

EPA,FDA,OSHA,USDA,CPSC,etc.

EPA - Resource Conservation and Recovery Act (RCRA) Regulations
As produced, this material is a product and not a waste. If discarded or intended to be discarded as is, it is an ignitable hazardous waste as defined in RCRA (40 CFR 261.21). The EPA hazardous waste number is D001.

The information contained herein is based on data considered accurate. However,no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.
Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally,vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore,vendee assumes the risk in his use of the material.

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION
. . . AND
PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

John P Lepori
Manager
SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
OIL AND CHEMICAL PRODUCTS
P.O. BOX 4320
HOUSTON,TEXAS 77210

DATE PREPARED
June 17, 1982

CHASE CHEMICAL COMPANY
TRIAL CHEMICAL & SOLVENTS DIVISION • 1[illegible] ESMOND STREET • PACOIMA, CALIFORNIA [illegible] • TELEPHONE ([illegible]) 899-7411

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 214-B

97002 (REV 1-83)

SECTION I	NAME
PRODUCT ▶	LACQUER THINNER
CHEMICAL/ SYNONYMS ▶	THINNER
CHEMICAL FAMILY ▶	BLEND
CODE ▶ 214	C.A.S. NUMBER ▶

24 HOUR EMERGENCY ASSISTANCE

713-473-9461
CHEMTREC 800-424-9300

HAZARD RATING
LEAST 0 ▶ SLIGHT 1 ▶ MODERATE 2 ▶ HIGH 3 ▶ EXTREME 4

HEALTH	2
FIRE	3
REACTIVITY	0

SECTION II INGREDIENTS

COMPOSITION	%	TOXICITY DATA
TOLUENE	22.5	Oral LD_{50} (rat) ~ 3 g/kg
KETONES	50	Dermal LD_{50} (rbt) = 4 g/kg
PETROLEUM HYDROCARBONS	22.5	Inh LC_{50} (rat) = 72000 ppm (4 hr)
GLYCOL ETHERS	5	

SECTION III HEALTH INFORMATION

Acute Toxicity: Overexposure can lead to central nervous system depression producing such effects as headache, dizziness, nausea, and loss of consciousness.

Eye Contact: Short-term liquid or vapor contact may result in slight eye irritation. Prolonged and repeated contact may be more irritating.

Skin Contact: Prolonged and repeated liquid contact can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Inhalation: High concentrations or prolonged exposure to lower concentrations may be slightly irritating to mucous membranes. Irritating to Nose & Throat. Overexposure can cause headache, nausea, vomiting and drowsiness.

Ingestion: Liquid ingestion may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities in the lungs may result in chemical pneumonitis and pulmonary edema/hemorrhage.

NOTE: Minor embryotoxic/fetotoxic effects have been observed in laboratory rats exposed for most of the gestation period by the inhalation route.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

ACGIH-TLV/TWA = 160 ppm (skin)
-TLV/STEL = 210 ppm (skin)
OSHA-PEL/TWA = 125 ppm
-PEL/Ceiling = [illegible]

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with water for 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT: Flush with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

INGESTION: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.*

*NOTE TO THE PHYSICIAN: If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

SECTION VI PHYSICAL DATA

BOILING POINT (°F) ▶ 235-242	MELTING POINT (°F) ▶ --	VAPOR PRESSURE (mmHg) ▶ 40-45
SPECIFIC GRAVITY (H_2O=1) ▶ .83-.835	% VOLATILE BY VOLUME ▶ 50	VAPOR DENSITY (AIR=1) ▶ 3.3
SOLUBILITY IN WATER ▶ Negligible	EVAPORATION RATE (BUTYL ACETATE=1) ▶ 2.37	

APPEARANCE AND ODOR

Colorless, mobile liquid. Aromatic, pungent odor.

SECTION VII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD USED

55.5°F (TCC)

FLAMMABLE LIMITS/% VOLUME IN AIR ▶ LOWER UPPER

EXTINGUISHING MEDIA

Use water fog, foam, dry chemical or CO_2. Do not use a direct stream of water. Product will float and can be reignited on surface of water.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

Evacuate hazard area of unprotected personnel. Wear proper protective clothing including a NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water.

In the case of large fires, also cool surrounding equipment and structures with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS

--

SECTION VIII — REACTIVITY

STABILITY ▶ [ ] UNSTABLE [X] STABLE

HAZARDOUS POLYMERIZATION ▶ [ ] MAY OCCUR [X] WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID

Avoid heat, sparks, open flames and contact with strong oxidizing agents. Will attack aluminum if the surface oxide film is penetrated which can result in the release of hydrogen gas.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide and unidentified organic compounds may be formed during combustion.

SECTION IX — EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR 1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

PROTECTIVE CLOTHING

Wear impervious gloves and protective clothing as required to prevent skin contact. Wear chemical goggles to prevent eye contact.

ADDITIONAL PROTECTIVE MEASURES

Use explosion-proof ventilation as required to control vapor concentrations.

SECTION X — ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

WARNING. Flammable. Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking.
Large spills: Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak only if safe to do so. Dike and contain. If vapor cloud forms, water fog may be used to suppress; contain run-off. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above.
Small spills: take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal.

WASTE DISPOSAL

Place in a disposal facility approved under RCRA regulations for hazardous waste (See Sec. XIII). Use non-leaking containers, seal tightly and label properly.

ENVIRONMENTAL HAZARDS

This product is designated as a hazardous substance under the Clean Water Act. KEEP OUT OF SURFACE WATERS OR SEWERS ENTERING OR LEADING TO SURFACE WATERS. (See Section XIII).

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶

97005 (REV. 7-82)

SECTION XI — SPECIAL PRECAUTIONS

WARNING. Flammable Liquid.
Keep away from heat, sparks and open flames. Keep containers tightly closed. Store away from strong oxidizing agents in a cool, dry place with adequate explosion-proof ventilation. Ground equipment to prevent accumulation of static charge. If pouring or transferring materials, containers must be bonded and grounded.

Do NOT weld, heat or drill on or near container; even emptied containers can contain explosive vapors.

Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles, including shoes, that cannot be decontaminated.

SECTION XII — TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION ▶

[X] FLAMMABLE LIQUID	[ ] COMBUSTIBLE LIQUID	[ ] OXIDIZING MATERIAL	[ ] NON-FLAMMABLE GAS
[ ] FLAMMABLE SOLID	[ ] POISON,CLASS A	[ ] CORROSIVE MATERIAL	[ ] NOT HAZARDOUS BY D.O.T. REGULATIONS
[ ] FLAMMABLE GAS	[ ] POISON,CLASS B	[ ] IRRITATING MATERIAL	[ ] OTHER-Specify below

D.O.T. PROPER SHIPPING NAME

LACQUER THINNER. PAINT RELATED MATERIAL

OTHER REQUIREMENTS

D.O.T. ID.# = NA1263. RQ Paint Related Material (1000 lb). Also see Sec. XIII, Clean Water Act.

SECTION XIII — OTHER REGULATORY CONTROLS

EPA,FDA,OSHA,USDA,CPSC,etc.

EPA - Clean Water Act (CWA)
This product is designated as a hazardous substance under Section 311 of the Clean Water Act. Spills entering (a) surface waters or (b) any water-courses or sewers entering/leading to surface waters MUST be reported immediately to the National Response Center, 800-424-8802. The reportable quantity for Lacquer Thinner is 1000 lb (145 gal).

EPA - Resource Conservation and Recovery Act (RCRA) Regulations
This product has been designated by the EPA (RCRA 40 CFR 261.33) as a hazardous waste if it is spilled, discarded or intended to be discarded as is.

The information contained herein is based on data considered accurate. However,no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.
Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally,vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore vendee assumes the risk in his use of the material

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON
[PRODUCT LIABILITY LAW REQUIRES IT]

DATE PREPARED

Sx1244

MATERIAL SAFETY DATA SHEET

SECTION I

Manufacturer's Name: MCB Manufacturing Chemists	Emergency Telephone No.: 513-631-0445
Address (Number, Street, City): 2909 Highland Avenue, Norwood, Ohio 45212	
Chemical Name and Synonyms: Sulfuric Acid	Trade Name and Synonyms: Oleum
Chemical Family: Acid	Formula: H_2SO_4

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
Pigments			Base Metal		
Catalyst			Alloys		
Vehicle			Metallic Coatings		
Solvents			Filler Metal Plus Coating or Core Flux		
Additives			Others		
Others					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III PHYSICAL DATA

Boiling Point (°F.) Fp	37°F	Specific Gravity (H_2O=1)	1.8438
Vapor Pressure (mm Hg.)		Percent Volatile By Volume (%)	
Vapor Density (Air=1)		Evaporation Rate (_____=1)	
Solubility in Water			

Appearance and Odor: Colorless liquid.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): Not	Flammable Limits	Lel	Uel

Extinguishing Media

Special Fire Fighting Procedures

Unusual Fire and Explosion Hazards: Emits toxic SO, fumes when heated. Forms corrosive liquid from the gas.

Pkg. Dim. (OD): Gross Wgt.:

SECTION V HEALTH HAZARD DATA

Threshold Limit Value	1 mg/M^3
Effects of Overexposure	Causes severe burns to skin.
Emergency and First Aid Procedures	Flush immediately with water. Call doctor.

See MCA Chemical Safety Data Sheet SD-20.*

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	Contact with metals.
Incompatability (Materials to avoid)			
Hazardous Decomposition Products			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will not Occur	X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled	Wash area with water.
Waste Disposal Method	Neutralize with alkali and flush with water.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify type)			
Ventilation	Local Exhaust		Special
	Mechanical (General)	X	Other
Protective Gloves	rubber	Eye Protection	goggles
Other Protective Equipment	rubber lab apron		

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing	Corrosive liquid, White label

IATA, ICC.

Other Precautions

*SD-20 can be obtained from the Manufacturing Chemists Association
1825 Connecticut Avenue, N. W.
Washington, D. C. 20009

ORIGINAL

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917).

SECTION I

MANUFACTURER'S NAME: GPS Industries	EMERGENCY TELEPHONE NO.: (213) 337-1255
ADDRESS (Number, Street, City, State, and ZIP Code): 13280 Amar Rd.; Industry, CA 91746	
CHEMICAL NAME AND SYNONYMS: Muriatic (Hydrochloric) Acid	TRADE NAME AND SYNONYMS: Muriatic Acid
CHEMICAL FAMILY:	FORMULA: HCl

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) 20.2° Be Mix	230°	SPECIFIC GRAVITY (H_2O=1) 20.0°	1.160
VAPOR PRESSURE (mm Hg.) 230°F	760mm	PERCENT, VOLATILE BY VOLUME (%)	100%
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	Infinite		

APPEARANCE AND ODOR: Clear, colorless to faint yellow, liquid with pungent odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): none	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS: Reacts upon contact with metals to produce hydrogen which may form explosive mixtures with air.

SECTION V · HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
(Ceiling) - 5 ppm; 7 milligrams per cubic meter of air

EFFECTS OF OVEREXPOSURE
Irritant to skin, eyes and mucous membranes of respiratory and gastrointestinal tract.

EMERGENCY AND FIRST AID PROCEDURES
Speed in removal of hydrochloric acid is important.
EYES: Flush with large amount of water. SKIN: Flush thorughtly with water, removing contaminated clothing. INHALATION: Remove to fresh air; administer oxygen as required.
INGESTION: Dilute by drinking water, lime water or milk of magnesia. Do not use sodium bicarbonate. Do not induce vomiting, although spontaneous vomiting may occur. Get medical attention for all over-exposures. Do not apply oils or ointments unless directed to do so by a physician.

SECTION VI · REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE		

INCOMPATABILITY (Materials to avoid)
Contact with metals releases hydrogen; contact with sulfides releases poisonous, flammable H_2S

HAZARDOUS DECOMPOSITION PRODUCTS
Hydrogen Chloride

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		Store separately from other chemicals, especial
	WILL NOT OCCUR		oxidizing agents, nitric acid, chlorates, sulfides and cyanides.

SECTION VII · SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Neutralize with soda ash or lime and flush with water; or flush to holding pond for pH adjustment before discharge to sewer; or add caustic directly to sewer to protect sewer system piping.

WASTE DISPOSAL METHOD
Neutralize with soda ash, limestone, lime or caustic before discharging to stream or to sewer system.

SECTION VIII · SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)
Acid gas type canister; for emergencies, self-contained breathing apparatus.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Rubber, neoprene or vinyl	Chemical safety goggles; plus face shield where appropriate.

OTHER PROTECTIVE EQUIPMENT
Woolen outer clothing, rubber shoes or boots, rubber aprons for splash protection.

SECTION IX · SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store in cool, well-ventilated or open, area separate from oxidizing agents, nitric acid, chlorates, sulfides, etc. Rubber-lined stell, Haveg, glass and ceramic ware used for handling hydrochloric acid.

OTHER PRECAUTIONS

Chemtech

MATERIAL SAFETY DATA SHEET

1038

MANUFACTURED PRODUCTS DIVISION

Approved by U. S Department of Labor Essentially Similar to Form OSHA-20

SUPPLIER	Chemtech Industries, Inc. Phone: 800-325-3332 or 314-966-9900		
ADDRESS	9909 Clayton Road, St. Louis, MO 63124		
CHEMICAL NAME AND SYNONYMS	Hydrofluoric Acid 70% Solution	TRADE NAME	Hydrofluoric Acid Solution
CHEMICAL FAMILY	Inorganic Acid	FORMULA	HF

I. PHYSICAL DATA

BOILING RANGE	152°F	API GRAVITY	na
SPECIFIC GRAVITY (Water=1)	1.26	POUNDS/GAL	10.5
VAPOR PRESSURE (mm of Hg) at 20°C	130	VAPOR DENSITY (Air=1)	1.0
SOLUBILITY IN WATER	complete	SOLUBILITY IN ACID (85% H_2SO_4)	complete
EVAPORATION RATE (Ether=1)	less than 1	PER CENT VOLATILE BY VOLUME	~40%
APPEARANCE	clear, colorless liquid	ODOR	penetrating odor
KAURI BUTANOL SOLVENCY	na	ODOR	na

II. HAZARDOUS INGREDIENTS

MATERIAL	VOLUME PER CENT	TLV (Units)

III. FIRE AND EXPLOSION HAZARD DATA

LOWER FLAMMABLE LIMIT IN AIR (Per Cent by Volume)	na	D.O.T. CLASSIFICATION	corrosive
FLASH POINT (Test Method)	na	FLAMMABILITY CLASSIFICATION	none
EXTINGUISHING MEDIA	na		
SPECIAL FIRE FIGHTING PROCEDURES	non-combustible but difficult to contain because it corrodes most substances.		
UNUSUAL FIRE AND EXPLOSION HAZARDS	May generate hydrogen gas in contact with some metals. Vapors are extremely corrosive.		

IV. HEALTH HAZARD DAT

THRESHOLD LIMIT VALUE	3ppm (vapor)
E CTS OF C EXPOSURE	Causes severe burns to eyes and skin which may not be immediately painful or visible. Excessive inhalation of vapors may cause pain behind the breastbone, cough, muscle spasms, shock, convulsions.
EMERGENCY AND FIRST AID PROCEDURES	In all cases of contact or overexposure to vapors: Get Medical Attention. Skin: Wash with soap and water (Washing with a 3% solution of aqueous ammonia will be beneficial. Eyes: Flush with water until medical attention is available. Inhalation: Remove to fresh air. Ingestion: Get medical attention.

V. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID		INCOMPATIBILITY (Materials to Avoid)	Corrodes most materials Store only in approved containers.
UNSTABLE	STABLE X				
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID		HAZARDOUS DECOMPOSITION PRODUCTS	Hydrogen gas from contact with some metals.
MAY OCCUR	WILL NOT OCCUR X				

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Avoid breathing vapors. Avoid contact with skin, eyes or clothes. Wear protective equipment. Neutralize with soda ash. Flush with plenty of water applied quickly to entire spill area. Notify proper authorities.
WASTE DISPOSAL METHOD	Dispose of in accordance with local pollution regulations.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		Self contained breathing device or air line.	
VENTILATION	LOCAL EXHAUST	Usually required to maintain below TLV.	Materials of construction must be corrosion resistant.
	MECHANICAL (General)		
PROTECTIVE GLOVES		Neoprene gloves	full face shield.
OTHER PROTECTIVE EQUIPMENT		Rubberized boots, hat, and acid resistant suit.	

PRECAUTIONARY LABELING	DANGER!!! CORROSIVE!!! Avoid contact with eyes or skin. Avoid breathing vapors. May cause serious burns which may not be immediately painful or visible. In case of contact, flush with large quantities of cold water -up to 3-4 hours or until medical attention is obtained. Remove and wash clothing before re-use. For eye contact, flush immediately with cold water; prompt medical attention is absolutely necessary.
OTHER HANDLING AND STORAGE PRECAUTIONS AND CONDITIONS	Containers should be stored in cool place with closure up. Avoid contact with oils or greases. Avoid direct sunlight. Do not store longer than necessary; containers may deteriorate under condition of prolonged storage.

DATE	4/81	SIGNATURE OF PERSON RESPONSIBLE FOR DATA	J. L. Chollet

CHROMIC ACID - FLAKE OR GROUND

Slight Reactivity Hazard: 1

Non-combustible: 0

High Health Hazard: 3

Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974)

Soda Products Divisi[illegible]
Diamond Shamrock [illegible]tion
351 Phelps Court
P.O. Box 2300
Irving, Texas 75061
Phone 214 659-7000

Ma[illegible]rial Safety

Diamond Shamrock

GENERAL INFORMATION

Data Sheet

1505

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: DIAMOND SHAMROCK CORPORATION	REGULAR TELEPHONE NO / EMERGENCY TELEPHONE NO: Contact Local Sales Offic[illegible] 216 357-7070
ADDRESS: Divisional Technical Center, P.O. Box 191, Painesville, Ohio 44077	
TRADE NAME: CHROMIC ACID - TECHNICAL - FLAKE OR GROUND	
SYNONYMS: Chromic Trioxide, Chromic Anhydride, CrO_3	

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
Chromic Trioxide	100	PEL* = 0.05 mg/m³ (as Cr)
*OSHA Permissible Exposure Limit (PEL)		

III PHYSICAL DATA

BOILING POINT 760 MM HG: N/A	MELTING POINT: 387°F	FREEZING POINT: N/A
SPECIFIC GRAVITY (H_2O 1): 2.7 @ 20°C	VAPOR PRESSURE: N/A	
VAPOR DENSITY (AIR 1): N/A	SOLUBILITY IN H_2O % BY WT: 62%	
% VOLATILES BY VOL: N/A	EVAPORATION RATE (BUTYL ACETATE/1): N/A	
APPEARANCE AND ODOR: Solid dark red flakes or powder; no odor	Density @ 20°C 40-80 Lbs/Cu. Ft.	
pH: 0.2 - 2.0 depending on concentration	A regulated D.O.T. Oxidizer	

N/A Not Applicable

SP-MSI

A[illegible] recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable, however it is the [illegible] to determine the safety, [illegible] and suitability for his own use of the product described herein [illegible] use by others is beyond our control, no guar[illegible] [illegible] safety and toxicity of the product [illegible] does Dia[illegible]

Data Sheet

FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	AUTOIGNITION TEMPERATURE
N/A	N/A

FLAMMABLE LIMITS IN AIR % BY VOL	LOWER	UPPER
N/A	N/A	N/A

EXTINGUISHING MEDIA

CO_2, dry chemical, or water

SPECIAL FIRE FIGHTING PROCEDURES

Under fire conditions, decomposing material may form a hot viscous foam.

UNUSUAL FIRE AND EXPLOSION HAZARD

Chromic acid is not combustible, but it may ignite oxidizable substances.

V HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA

Oral LD_{50} >50 <500 mg/kg (rat)
Dermal LD_{50} > 20 <200 mg/kg (rabbit) LC_{50} >0.396 mg/l air (rat)

ROUTES OF EXPOSURE

INHALATION

Inhalation of dusts or mists may cause irritation of the nasal septum and respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.

SKIN CONTACT

In case of contact, wash immediately with soap and water. Contact with broken skin may lead to formation of firmly margined "chrome sores".

SKIN ABSORPTION

Massive overexposure to solutions could lead to electrolyte imbalance, kidney failure, and death.

EYE CONTACT

Overexposure will cause extreme burns that may result in permanent damage to the eyes and even blindness. Exposure to low level concentrations may cause moderate irritation or conjunctivitis.

INGESTION

Can cause extreme tissue destruction and death as a result of electrolyte imbalance and kidney failure.

EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE Causes extreme and rapid burns to eyes. Contact with broken skin may cause "chrome sores". May cause severe irritation of nasal septum and respiratory tract.

CHRONIC OVEREXPOSURE Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact, especially with broken skin, may cause "chrome sores", ulceration and perforation of the nasal septum may result from prolonged or repeated inhalation of chromic acid.

EMERGENCY AND FIRST AID PROCEDURES **Object is to seek medical attention immediately**

EYES

Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of entire eye surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.

SKIN

Wash contaminated areas with plenty of soap and water. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately.

INHALATION

Get person out of contaminated area to fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered, if readily available. Irrigate nasal passages and mouth with salt water. Seek medical attention immediately.

INGESTION

If swallowed. Do Not Induce Vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Cover eyes to exclude light. Seek Medical Attention Immediately.

NOTES TO PHYSICIAN

Massive dermal overexposure to solutions of chromic acid could lead to electrolyte imbalance, kidney failure, and death. Death has been avoided in several such cases through the use of early renal dialysis. Skin ulcers may be treated by removal from exposure, daily cleansing and debridement, and application of antibiotic cream and dressing. [illegible] contamination.

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Under normal use conditions, chromic acid is stable

INCOMPATIBILITY

Chromic acid is a strong oxidizing agent, even in solution. Avoid contact with organic materials, oils, greases or any easily oxidizable material. Chromic acid is hydroscopic Do not store in humid places

HAZARDOUS DECOMPOSITION PRODUCTS

None

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

None

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Leaks should be stopped Solids should be cleaned up immediately with a shovel to remove as much material as possible Remaining traces of material should be neutralized, then dampened with water Dampened material should be covered with absorbent material Place material in closed containers, label, and dispose of in approved chemical waste disposal area after treating waste material with appropriate waste disposal method (see below)

NEUTRALIZING CHEMICALS

Reducing hexavalent chromium with sodium bisulfite, sodium sulfite, ferrous chloride, ferrous sulfate Neutralize with sodium bicarbonate (soda ash) or lime

WASTE DISPOSAL METHOD

Hexavalent chromium in solution may be reduced to trivalent chromium by reducing agents, such as sodium bisulfite, sodium sulfite, sulfur dioxide, or ferrous sulfate or chloride. The reduced chromium may then be precipitated as the chromic oxide by neutralizing to a pH of 7 5 with soda ash, caustic soda or lime The solid material may be disposed of via an approved chemical waste landfill Dispose of in accordance with all Federal, state and local health pollution requirements

VIII INDUSTRIAL HYGIENE CONTROL MEASURES

VENTILATION REQUIREMENTS

Good industrial hygiene practice dictates that the work area be provided with adequate local exhaust ventilation to maintain the air concentration of chromic trioxide below 0.05 mg/m³ (as Cr) as required by OSHA. The number of persons exposed should be minimized A NIOSH-approved respirator for acid dusts, mists, or vapors must be used if exposure levels are above the PEL until exposures are controlled.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL)

A NIOSH-approved respirator for acid dusts, mists, or vapors.

EYE

Chemical splash goggles.

GLOVES

Industrial grade rubber or plastic gloves

OTHER CLOTHING AND EQUIPMENT

Clean hard hats, rubber safety shoes or boots, and protective clothing should be worn when handling chromic trioxide Protective clothing should be changed at least daily Eye bath and safety shower should be provided in all areas in which [illegible] and or handled

Data Sheet

SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS

OTHER HANDLING AND STORAGE REQUIREMENTS

Do not store in areas of high humidity.

Do not store in close proximity to combustible materials as chromic acid is an oxidizing agent (yellow label).

Store in tightly closed containers away from sources of heat.

DEPARTMENT OF TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Chromic Acid, Solid
HAZARD CLASS: Oxidizer NA1463
HAZARDOUS SUBSTANCE: RQ 1,000 lbs or more in a single container

PREPARED BY Diamond Shamrock Corporation
Technical [illegible]

DATE [illegible]

CAUSTIC SODA - ANHYD JS

Slight Reactivity Hazard

1

Nonflammable

0

Highly Hazardous

3

Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974)

Electro Chemicals Division
Diamond Shamrock Corp
1100 Superior Avenue
Cleveland, Ohio 44114
216/694-5000

Material Safety

Diamond Shamrock

GENERAL INFORMATION
Anhydrous Caustic Soda is a white, hygroscopic corrosive solid with no distinct odor.

Data Sheet

1181-A

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME DIAMOND SHAMROCK CORPORATION	REGULAR TELEPHONE NO EMERGENCY TELEPHONE NO Contact Local Sales Office 216/357-7070
ADDRESS Divisional Technical Center, P.O. Box 191, Painesville, Ohio 44077	
TRADE NAME CAUSTIC SODA - Anhydrous	
SYNONYMS SODIUM HYDROXIDE - NaOH	

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
SODIUM HYDROXIDE	100	PEL* - 2.0 mg/m³
*OSHA Permissible Exposure Limit (PEL)		

III PHYSICAL DATA

BOILING POINT, 760 MM HG 1388°C; 2530°F	MELTING POINT	FREEZING POINT 318°C; 604°F
SPECIFIC GRAVITY (H_2O=1) 2.13 @ 20°C	VAPOR PRESSURE 42 mm Hg @ 1000°C	
VAPOR DENSITY (AIR=1) Not applicable	SOLUBILITY IN H_2O, % BY WT. Completely soluble	
% VOLATILES BY VOL. Not volatile	EVAPORATION RATE (BUTYL ACETATE=1) Does not apply	
APPEARANCE AND ODOR Clear - no odor		
pH 0.01 moles/liter has pH 12		

EC-DC-1

All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use. The product described herein. Since the actual use by others is beyond our control, no guarantee [illegible] Diamond Shamrock Corporation as to the results to be obtained or the safety and toxicity of the product or its Division [illegible] be construed as a license [illegible]

Data Sheet

IV FIRE AND EXPLOSION DATA

F POINT (TEST METHOD)	AUTOIGNITION TEMPERATURE
None	Nonflammable

FLAMMABLE LIMITS IN AIR, % BY VOL	LOWER	UPPER
	Nonflammable	Nonflammable

EXTINGUISHING MEDIA

Use carbon dioxide, "alcohol" foam or dry chemicals in areas where caustic soda is stored. Caustic soda is nonflammable.

SPECIAL FIRE FIGHTING PROCEDURES

Pressure-demand, self-contained respiratory protection and protective clothing should be worn by firefighters in areas where caustic soda is stored. Caustic soda is nonflammable.

UNUSUAL FIRE AND EXPLOSION HAZARD

None

V HEALTH HAZARD INFORMATION

TOXICOLOGICAL DATA

PEL 2.0 mg/m³ Acute LC_{50} > 0.018 < 0.20 mg/L
Acute LD_{50} 140-340 mg/kg (oral - rat)
Acute LD_{50} 1,350 mg/kg (dermal - rabbit)

EFFECTS OF EXPOSURE

Caustic soda is a corrosive material.

INHALATION

Airborne concentrations of dust, mist, or spray of caustic soda may cause damage to the respiratory tract and to the lung tissue proper which could produce chemical pneumonia, depending upon severity of exposure.

SKIN CONTACT

Caustic soda is destructive to tissues contacted and produces severe burns.

SKIN ABSORPTION

See "Skin Contact" above.

EYE CONTACT

Caustic soda is destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and even blindness.

INGESTION

Caustic soda can cause severe burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus, and stomach if swallowed.

EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE Burns, resulting in frequently deep ulceration and ultimate scarring.

CHRONIC OVEREXPOSURE

The chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray, or mist may result in varying degrees of irritation or damage to the respiratory tract tissues and an increased susceptibility to respiratory illness.

EMERGENCY AND FIRST AID PROCEDURES **Object is to Seek Medical Attention Immediately.**

EYES Immediately flush eyes with large amounts of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Flushing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.

SKIN Immediately wash contaminated skin with plenty of water. This may be followed with a rinse with vinegar or dilute acetic acid (3% solution) if available. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately.

INHALATION

Get person out of contaminated area to fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered, if readily available. Seek medical attention immediately.

INGESTION

If swallowed, DO NOT induce vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

NOTE TO PHYSICIAN

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Under normal use conditions, anhydrous caustic soda is stable.

INCOMPATIBILITY

When handling caustic soda, avoid contact with aluminum, leather, wool, tin, zinc, and alloys containing these metals. Do not mix with strong acids without dilution and agitation to prevent violent or explosive reaction.

HAZARDOUS DECOMPOSITION PRODUCTS

None

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

None

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Stop leaks. Contain spill. Remove as much as possible (e.g., shovel up). Neutralize remaining traces of material with dilute acid then flush area with water followed by liberal covering of sodium bicarbonate. Reuse spilled material, if possible, otherwise place in a closed labled, container and store in a safe place to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing. **Caution**: Anhydrous caustic soda may react violently with acids and water.

NEUTRALIZING CHEMICALS

Neutralize with any dilute inorganic acid such as hydrochloric, sulfuric, nitric, phosphoric, and acetic acid.

WASTE DISPOSAL METHOD

Dispose in accordance with all federal, state and local regulations concerning health and pollution. Dispose via approved chemical waste disposal method, if regulations permit.

VIII INDUSTRIAL HYGIENE CONTROL MEASURES

VENTILATION REQUIREMENTS

Good industrial hygiene practice dictates that the work area should be isolated and contained, and provided with adequate local exhaust ventilation or other controls to maintain the air concentration of caustic soda below 2.0 mg/m³ as required by OSHA. Air concentration of carbon monoxide formed by reaction of caustic soda and reducing sugars should not exceed 50 ppm for an eight (8) hour TWA.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL)

Use NIOSH-approved respirator for dusts and mists. Use air purifying respirator where caustic soda is in contact with reducing sugars.

EYE

Chemical splash goggles and face shield should be worn when working with or around caustic soda.

GLOVES

Gloves coated with rubber, synthetic elastomers, PVC, or other plastic should be worn when handling caustic soda to minimize skin contact.

OTHER CLOTHING AND EQUIPMENT

Hard hats, safety shoes, and rubber boots should be worn along with rubber apron when handling caustic soda. Safety showers and eyewash stations should be provided in all areas in which caustic soda is handled.

IX SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS

DANGER!

Causes Severe Burns to Skin and Eyes

Do NOT get in eyes, on skin, on clothing.
Avoid breathing dust, mist, or spray.
Do NOT take internally.
Use with adequate ventilation and employ respiratory protection when exposed to dust, mist or spray
When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing.
Wash thoroughly after handling.
Avoid contact with strong acids to prevent violent or explosive reactions.
Keep container closed.
Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures (ANSI Z117.1-1977).

First Aid:

In case of contact:

For eyes: Immediately flush with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. **Seek medical attention immediately.**

Skin: Immediately wash with plenty of water. If available, rinse with vinegar or dilute acetic acid (3% solution). Remove contaminated clothing and footwear. Wash clothing before reuse and discard footwear which cannot be decontaminated. **Seek medical attention immediately.**

Inhalation: Remove person from contaminated area to fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered if readily available. **Seek medical attention immediately.**

Ingestion: If swallowed, DO NOT induce vomiting. Give large quantities of water. If available, give several glasses of milk. NEVER give anything by mouth to an unconscious person. **Seek medical attention immediately.**

Special instructions for dissolving anhydrous caustic soda:

When making solution, **always** add slowly to liquid surface with constant stirring. **Never add the liquid to the caustic soda**

Always start with lukewarm liquid (80°-100°F.) **Never** start with hot or cold liquid

If caustic soda becomes concentrated in one area, or if added too rapidly, or if added to hot or cold liquid, a rapid temperature increase can result in **DANGEROUS** boiling and/or spattering which may cause an immediate **VIOLENT ERUPTION**

Spill or Leak: Leaks should be stopped. Spills, after containment, should be shoveled up and removed to chemical waste area or removed by vacuum truck if liquid. Neutralize residue with dilute acid, flush spill area with water followed by liberal covering of sodium bicarbonate. Dispose of wash water according to Federal, State and Local regulations

For Industrial Use Only

OTHER HANDLING AND STORAGE REQUIREMENTS

Caustic soda is classified by D.O.T. as a corrosive material.

Considerable heat is generated when water is added to caustic soda; therefore, when making solutions **always** add the caustic soda to the water with constant stirring. The water should always be lukewarm (80°-100°F) **Never** start with hot or cold water. If caustic soda becomes concentrated in one area, or if added too rapidly, or if added to hot or cold water, a rapid temperature increase can result in DANGEROUS BOILING and/or spattering or may cause an immediate VIOLENT ERUPTION. Caustic soda can react violently or explosively with acids and many organic chemicals.

Caustic soda reacts with reducing sugars such as fructose, lactose, maltose, galactose, levulose and arabinose to form carbon monoxide. While the potential for worker exposure to carbon monoxide may be small, a potential does exist during cleaning of certain dairy and possibly other industry equipment.

Returnable containers should be shipped in accordance with supplier's recommendations. Return shipments should comply with all federal, state and DOT regulations. All residual caustic soda should be removed from containers prior to disposal.

More information on the hazards and handling of caustic soda appear in Diamond Shamrock Corporation's Caustic Soda Handbook EC-LDC-1c.

DEPARTMENT OF TRANSPORTATION INFORMATION
PROPER SHIPPING NAME: Caustic Soda, Dry
HAZARD CLASS: Corrosive Material

PREPARED BY: Diamond Shamrock Corporation
Technical Service Group

DATE

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

NAME
Sodium Cyanide

GRADE
Cyanobrik*; Cyanogran*;
Compounders Grade

SYNONYMS
Cyanide of Sodium; Prussiate of Soda

CAS NAME Sodium Cyanide

I.D. NOS./CODES
NIOSH Registry No. VZ7525000

MANUFACTURER/DISTRIBUTOR
E. I. du Pont de Nemours & Co. (Inc.)

ADDRESS Wilmington, DE 19898

CHEMICAL FAMILY
Alkali Metal Cyanide

FORMULA NaCN

CAS REGISTRY NO. 143-33-9

PRODUCT INFORMATION PHONE
(800) 441-9442

MEDICAL EMERGENCY PHONE
(800) 441-3637

TRANSPORTATION EMERGENCY PHONE
Du Pont Cyanide HOTLINE
(For emergencies only)
(901) 357-1546
CHEMTREC (800) 424-9300

PHYSICAL DATA

BOILING POINT, 760 mmHg
1496°C (2725°F)

SPECIFIC GRAVITY 1.6

VAPOR DENSITY
Not volatile

pH INFORMATION 11.3 to 11.7
(Typical for 5 to 25% solutions with no pH adjustment)

FORM Solid

COLOR White

MELTING POINT
564°C (1047°F)

VAPOR PRESSURE Negligible

SOLUBILITY IN H_2O
37% at 20°C (68°F)

EVAPORATION RATE (BUTYL ACETATE=1)
Not applicable

APPEARANCE Granular or Briquettes

ODOR None (but can have slight ammonia and/or HCN odor if damp)

*Reg. U.S. Pat. & Tm Off., Du Pont Company. Cyanobrik® and Cyanogran® Sodium Cyanide are made only by Du Pont.

HAZARDOUS COMPONENTS

MATERIAL(S)	APPROXIMATE %
Sodium Cyanide	100

HAZARDOUS REACTIVITY

INSTABILITY
Very stable when dry.

INCOMPATIBILITY
Large amounts of highly toxic, flammable hydrogen cyanide (HCN) gas will be evolved from contact with acids. Reacts violently with strong oxidizing agents. Water or weak alkaline solution can produce dangerous amounts of HCN in confined areas.

DECOMPOSITION
Moisture will cause slow decomposition, releasing poisonous HCN and ammonia gas.

POLYMERIZATION
Will not occur.

FIRE AND EXPLOSION DATA

FLASH POINT Will not burn.

AUTOIGNITION TEMPERATURE
Not applicable.

FLAMMABLE LIMITS IN AIR, % BY VOL.
LOWER Not applicable.
UPPER Not applicable.

FIRE AND EXPLOSION HAZARDS
Will not burn. Sodium cyanide will not be destroyed in an ordinary fire involving combustible materials such as paper or wood.

EXTINGUISHING MEDIA
Water on fires near sodium cyanide, but minimize amount of water if containers are opened or burned (see "Incompatibility", above) DO NOT use carbon dioxide (CO_2) which reacts with sodium cyanide to produce hydrogen cyanide if moisture is present.

SPECIAL FIRE FIGHTING INSTRUCTIONS
Sodium cyanide dissolves readily in water, therefore cyanide solution runoff may occur if containers are opened or burned. Runoff should be contained to avoid environmental or safety problems. Contained cyanide solution can be detoxified with hypochlorite.

HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS (Including Significant Routes, Effects, Symptoms of Over-Exposure, and Medical Conditions Aggravated by Exposure)

May be fatal if inhaled, swallowed, or absorbed through skin. Contact with acids or weak alkalis liberates poisonous gas. Causes eye burns and may irritate skin.

Oral LD50: 6 mg/kg in rats

Toxic effects described in animals from exposure include asphyxia, dyspnea, ataxia, tremors, coma, and lethality by disrupting oxidative metabolism. Tests in bacterial and mammalian cell cultures demonstrate no mutagenic activity. Tests in some animals indicate that the compound may affect the fetus, that is, it may be a developmental toxin.

Human health effects of overexposure may initially include: skin irritation with discomfort or rash, eye irritation or burns with discomfort, tearing, or blurring of vision, and possible permanent eye damage; and nonspecific discomfort such as nausea, headache, dizziness, vomiting, and weakness. Higher exposures may lead to these effects: rapid respiration; lowered blood pressure; unconsciousness; convulsions; and fatality. Evidence suggests that significant skin permeation can occur. Individuals with preexisting diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures.

CARCINOGENICITY

Not listed as a carcinogen by IARC, NTP, OSHA, ACGIH, or Du Pont.

EXPOSURE LIMITS (PEL (OSHA), TLV (ACGIH), AEL (DU PONT), ETC.)

The OSHA 8-hour Time Weighted Average (TWA) and ACGIH TLV®-TWA are 5 mg/m^3, as CN. Both carry a "skin" notation indicating that cyanide may penetrate the skin (especially if the skin is broken). Control of vapor, dust, and mist inhalation alone may not be sufficient to prevent absorption of an excessive dose.

SAFETY PRECAUTIONS

Do not breathe dust, mist, or HCN gas. Do not get in eyes. Avoid contact with skin and clothing. Do not carry foodstuffs, beverages, or tobacco where contamination with cyanide is possible. Wash thoroughly after handling. Wash contaminated clothing before reuse.

FIRST AID AND MEDICAL TREATMENT

Actions to be taken in case of cyanide exposure should be planned and practiced before beginning work with cyanides. In most cases, cyanide poisoning causes a deceptively healthy pink to red skin color; however, if a physical injury or lack of oxygen is involved, the skin color may be bluish.

Treatment for cyanide poisoning can be provided in two ways, "First Aid" and "Medical Treatment". Both require immediate action to prevent further harm or death. First aid using amyl nitrite and oxygen is generally given by a layman before medical help arrives. Medical treatment involves

intravenous injections and must be administered by qualified medical personnel. Even if a doctor or nurse is present, the need for fast treatment dictates using first aid treatment with amyl nitrite and oxygen while medical treatment materials for intravenous injection are being prepared. Experience shows that first aid given promptly is usually the only treatment needed.

Medical treatment is given if the victim does not respond to first aid. It provides a larger quantity of antidote including sodium thiosulfate to chemically destroy cyanide in the body. However, even under optimum conditions, amyl nitrite can be administered faster and should be used even if medical treatment follows. Do not overreact. Fast treatment is needed, but a conscious person usually does not need treatment beyond oxygen. Amyl nitrite and medical treatment kits for cyanide poisoning are available, with doctor's prescription, from pharmacies.

A. First Aid - Directions for Giving Amyl Nitrite Antidote and Oxygen

1. Conscious:- For inhalation and/or absorption if the victim is alert, oxygen may be all that is needed. But if he is not fully conscious or shows signs of poisoning, follow paragraph A-2 below. For swallowing, see below paragraph C, "First Aid - Swallowing Cyanide".

2. Unconscious But Breathing: Break up amyl nitrite ampule in a cloth and hold lightly under the victim's nose for 15 seconds, then take away for 15 seconds. Repeat 5-6 times. If necessary, use a fresh ampule every 3 minutes until the victim regains consciousness (usually 1-4 ampules). Give oxygen to aid recovery. Where more severe poisoning has occurred, consider holding the amyl nitrite under the nose continuously for the first ampule or more.

3. Not Breathing:
   a. Give artificial respiration, preferably with an oxygen resuscitator. Give amyl nitrite antidote by placing a broken ampule inside the resuscitator face piece, being careful that the ampule does not enter the victim's mouth and cause choking.
   b. If using manual artificial respiration, give amyl nitrite antidote as in paragraph A-2 above except keep the first amyl nitrite ampule under the nose with replacement every 3 minutes.

4. Amyl Nitrite Notes:
   a. Amyl nitrite is highly volatile and flammable; do not smoke or use around source of ignition.
   b. If treating poison victim in a windy or drafty area, provide something - a rag, shirt, wall, drum, cupped hand, etc. - to prevent the amyl nitrite vapors from being blown away. Keep the ampule upwind from the nose. The objective is to get amyl nitrite into the victim's lungs.
   c. Rescuers should avoid amyl nitrite inhalation so they won't become dizzy and lose competence.
   d. Lay the victim down for treatment to maintain a good blood supply to the victim's head. Since amyl nitrite dilutes the blood vessels and lowers blood pressure, lying down will help prevent unconsciousness.

e. Do not overuse; excessive use might put the victim in shock. This has not occurred in practice at Du Pont plants and we are not aware of any death or serious after effects from treatment with amyl nitrite. (See paragraph E, "Medical Treatment".)

B. **First Aid - Inhalation of Cyanide** - Carry the victim to fresh air. Lay victim down. Administer amyl nitrite antidote and oxygen (Paragraph A). Check for and remove contaminated clothing. Keep patient quiet and warm. Call a physician.

C. **First Aid - Swallowing Cyanide**

1. Conscious: Immediately give patient one pint of 1% sodium thiosulfate solution (or plain water) by mouth and induce vomiting with finger in throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Call a physician.

2. Unconscious: Follow first aid procedure as in paragraphs A-2 and A-3 (and/or medical treatment in paragraph E) and call a physician. If the victim revives, then proceed with paragraph C-1.

D. **First Aid - Skin or Eye Contact (Skin Absorption)**

1. Eye Contact: Immediately flush eyes with plenty of water, remove contaminated clothing, and keep victim quiet and warm. Call a physician.

2. Skin Contact: Wash skin to remove the cyanide while removing all contaminated clothing, including shoes. Do not delay. Skin absorption can occur from cyanide dust, solutions, or HCN vapor. Absorption is slower than inhalation, usually measured in minutes compared to seconds for inhalation.

   Follow First Aid procedures in Paragraph A if treatment is needed, but even severe skin contact usually will not require treatment if 1) no inhalation or swallowing has occurred and 2) the cyanide is promptly washed from the skin and contaminated clothing and shoes are removed. If skin contact is prolonged, HCN poisoning may occur with nausea, unconsciousness, and then death possible if the source of cyanide intake is not removed and treatment provided. Even after washing the skin, the victim should be watched for at least 1 to 2 hours because absorbed cyanide can continue to work into the bloodstream. Wash clothing before reuse and destroy contaminated shoes.

E. **Medical Treatment**

Medical treatment is normally provided by a physician, but might be provided by a professionally trained "qualified medical person" where a need exists and where state and local laws permit.

While preparing for sodium nitrite and sodium thiosulfate injections, use amyl nitrite and oxygen as outlined in paragraph A. When ready and if the victim is not responding to first aid, first inject the solution

of sodium nitrite (10 mL of a 3% solution) intravenously at the rate of 2.5 mL/minute, then immediately inject the sodium thiosulfate (50 mL of a 25% solution) at the same rate, taking care to avoid extravasation.

This is a fairly lengthy treatment (24 minutes) since a total of 10 + 50, or 60 mL is injected at a rate of 2.5 mL/minute. Consideration should be given to the size and condition of the victim as treatment is proceeding. The above sodium nitrite injection is about one third of a lethal dose, so care should be taken to avoid excessive use. It is not essential that full quantities be given, just because treatment was started. Injections can be stopped at any point if recovery is evident.

Watch patient continuously for 24-48 hours if cyanide exposure was severe. If there is any return of symptoms during this period, repeat this treatment using one-half the amounts of sodium nitrite and sodium thiosulfate solutions. Caution should be used to avoid overuse of medical treatment chemicals as the prescribed dose is about 1/3 the lethal dose for an average individual.

If signs of excessive methemoglobinemia develop (i.e., blue skin and mucous membranes, vomiting, shock and coma), 1% methylene blue solution should be given intravenously. A total dose of 1 to 2 mg/kg of body weight should be administered over a period of five to ten minutes and should be repeated in one hour if necessary. In addition, oxygen inhalation will be helpful. Transfusion of whole fresh blood may be considered if there has been mechanical injury with external or internal bleeding and simultaneous cyanide exposure.

Du Pont's experience in treating cyanide poison cases is that first aid procedures using amyl nitrite and oxygen were effective and the only treatment needed in most cases. Medical treatment, using intravenous injections, was used in a few cases. Both procedures have been successful.

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES

Good general ventilation should be provided to keep dust, mist, and HCN gas below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Recommended Minimum Protection - chemical splash goggles and rubber gloves (butyl or neoprene preferred).

Have available and use as appropriate: face shields; rubber suits, aprons, and boots; disposable toxic dust and mist respirators; self-contained breathing air supply (in case of emergency); HCN detector; first aid and medical treatment supplies*, including oxygen resuscitators.

*See Du Pont Sodium Cyanide Storage and Handling Bulletin for list of supplies.

DISPOSAL INFORMATION

AQUATIC TOXICITY
The compound is highly toxic (96-hour LC50 = 0.5 - 1 mg/L).

SPILL, LEAK OR RELEASE
Sweep up and shovel into a covered container or plastic bag, pending transfer, to secure the spill. Cover and keep spillage dry. Flush spill area with a dilute solution of sodium or calcium hypochlorite. Comply with Federal, State, and local regulations on reporting releases.

WASTE DISPOSAL
Comply with Federal, State, and local regulations. Do not flush cyanide into sewers which may contain an acid. Detoxify with sodium hypochlorite, or hydrogen peroxide; flush to waste water treatment system; or call a licensed disposal contractor.

SHIPPING INFORMATION

DOT (172.101)

PROPER SHIPPING NAME
Sodium Cyanide, Solid

HAZARD CLASS
Poison B

UN NO. 1689

DOT LABEL(S) Poison

DOT/IMO (172.102)

PROPER SHIPPING NAME
Sodium Cyanide

HAZARD CLASS
Poison B, 6.1

UN NO. 1689

IMO (PAGE 6167)

PROPER SHIPPING NAME
Sodium Cyanide

HAZARD CLASS 6.1

UN NO. 1689

IMO LABEL(S) Poison

IATA/ICAO

PROPER SHIPPING NAME
Sodium Cyanide

HAZARD CLASS 6.1

UN NO. 1689

LABEL(S) Poison

PACKAGING GROUP NO. I

OTHER INFORMATION

REPORTABLE QUANTITY 10 lb/4.54 kg

SHIPPING CONTAINERS
"Wet Flo" railcars and trucks; hopper railcars; Flo-Bins® (3000 lb. net); 2000 lb. bag in a box; 100 kilo, 100 lb., and 200 lb. steel drums

STORAGE CONDITIONS
Store in properly labeled containers in dry, ventilated, secured areas. Keep containers closed and contents dry. Do not store with acids or acid salts, containers with water or weak alkalis, or oxidizing agents. Do not handle or store food, beverages, or tobacco in cyanide areas. Do not store near combustibles or flammables because of cyanide solution runoff from water used for fire fighting.

ADDITIONAL INFORMATION AND REFERENCES

For further information, see Du Pont Sodium Cyanide Storage and Handling Bulletin.

DATE OF LATEST REVISION/REVIEW: 8/85
PERSON RESPONSIBLE FOR MSDS: J. C. Watts, Du Pont Co., C&P Dept., Chestnut Run, Wilmington, DE 19898, (302) 999-4946

U.S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME: Various (Talco as Distributor)
ADDRESS: 5201 Unruh Avenue, Philadelphia, PA 19135
CHEMICAL NAME AND SYNONYMS: Cadmium
CHEMICAL FAMILY: Cadmium

EMERGENCY TELEPHONE NUMBER: Chemtrec -- 800-424-9300
TRADE NAME AND SYNONYMS: Cad Balls
FORMULA: Cd

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES AND SOLVENTS	%	TLV (UNITS)
PIGMENTS:	NA	
CATALYST:	NA	
VEHICLE:	NA	
SOLVENTS:	NA	
ADDITIVES:	NA	
OTHERS:	NA	

ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
BASE METAL:	NA	
ALLOYS:	NA	
METALLIC COATINGS:	NA	
FILLER METAL PLUS COATING OR CORE FLUX:	NA	
OTHERS:	NA	

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES: NA

SECTION III - PHYSICAL DATA

BOILING POINT (^{o}C): 766°
VAPOR PRESSURE (mm Hg.): NA
VAPOR DENSITY (AIR=1): NA
SOLUBILITY IN WATER: Insoluble.
APPEARANCE AND ODOR: Bluish silver white metal, no odor.

SPECIFIC GRAVITY (H_2O=1): 8.64
PERCENT, VOLATILE BY VOLUME (%): NA
EVAPORATION RATE (_____)=1: NA

SECTION IV - FIRE AND EXPOSION HAZARD DATA

FLASH POINT (METHOD USED): NA
FLAMMABLE LIMITS: NA
EXTINGUISHING MEDIA: Dry Chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Use approved self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Water contact with molten metal may cause explosion.

(CONTINUED ON PAGE 2)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: .02 mg/cu.m. - dust -- .01 mg/cu.m. - fume.
EFFECTS OF OVEREXPOSURE: Cadmium is transported via blood and stored mainly in liver and kidneys. Cadmium can cause kidney damage, nausea, vomiting, headache.
EMERGENCY AND FIRST AID PROCEDURES: Inhalation: Remove from exposure; place individual under care of physician. Ingestion: Induce vomiting in conscious individual and call a physician.

SECTION VI - REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: X
INCOMPATABILITY (MATERIALS TO AVOID): Strong acids and alkalis.
HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures above the melting point, 321°C, cadmium oxide fumes may be formed.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X
CONDITIONS TO AVOID: NA

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: If Cadmium is spilled, it can be picked up by hand and returned to original container. Gloves should be used.
WASTE DISPOSAL METHOD: Cadmium wastes must be disposed in accordance with OSHA and EPA regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): Approved respirator for dust or fumes.

VENTILATION: The area surrounding any plating tank should be suitably ventilated to prevent gases, mists, and particulate matter evolved from the plating tank from collecting to injurious levels.

PROTECTIVE GLOVES: Required for hot metal. EYE PROTECTION: Required for fumes, dust or heat.
OTHER PROTECTIVE EQUIPMENT: Appropriate for handling molten metal

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: NA
OTHER PRECAUTIONS:

THIS MATERIAL SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.
TALCO COMPANY PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.

Rho-Chem
Rho-Chem Corporation
425 Isis Avenue
Inglewood, CA 90301

MATERIAL SAFETY DATA SHEET

Essentially similar to OSHA Form 20

REV. 082279

SECTION I. PRODUCT IDENTIFICATION

PRODUCT NAME	1,1,1 Trichloroethane	STOCK NO.	2404 Reconstituted 2004 Technical Grade 2354 Electronic/Semiconduct 3354 Reagent U.S.P. Grade
CHEMICAL NAME AND SYNONYMS	Methyl Chloroform	FORMULA	CH_3CCl_3
CHEMICAL FAMILY	Chlorinated hydrocarbon	EMERGENCY PHONE NO.	(213) 776-6233

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD IDENTIFICATION	0 / 2 / 0	AIR QUALITY MANAGEMENT DISTRICT PHOTOCHEMICAL REACTIVITY Non-photochemically reactive (less than 4%)	DEPARTMENT OF TRANSPORTATION HAZARD CLASS ORM-A

SECTION II. HAZARDOUS INGREDIENTS

MATERIAL	TLV (UNITS)	%	MATERIAL	TLV (UNITS)	%
1,1,1 Trichloroethane	350	100			

SECTION III. PHYSICAL DATA

BOILING POINT ONE atm.	165°F	FREEZING POINT	-34.4°F
SPECIFIC GRAVITY (H_2O = 1)	1.312 @ 25/25°C.	VAPOR PRESSURE AT 20°C	104.5 mm Hg
VAPOR DENSITY (AIR = 1)	4.55	SOLUBILITY IN WATER % BY WT. AT 20°C	0.07
PERCENT VOLATILES BY VOLUME	100%	EVAPORATION RATE	100 (CCl_4=100)
APPEARANCE	Colorless liquid	ODOR	Somewhat ethereal

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD)	None (T.O.C.)	FLAMMABLE LIMITS IN AIR (% BY VOLUME)	Upper: Non flammable
AUTOIGNITION TEMPERATURE	No available data		Lower: Non flammable

EXTINGUISHING MEDIA	Its presence in a fire does not hinder the use of any standard extinguishing media.
SPECIAL FIREFIGHTING PROCEDURES	Wear self contained breathing apparatus approved by NIOSH. Use water spray to knock down vapors and to cool containers.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Vapors exposed to high temperatures that occur in open flames, welding arcs, and open electric heaters decompose to give off hydrogen chloride and other toxic and irritating vapors.

SECTION V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	350ppm	MAXIMUM CONCENTRATION PER DURATION LEVEL	800ppm/5 minutes in 2 hours
EFFECTS OF OVER EXPOSURE	Eyes - can cause severe irritation, redness, tearing, blurred vision. Skin - prolonged or repeated contact can cause moderate irritation, defattir dermatitis. Breathing - excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, poss unconsciousness, and even asphyxiation. Swallowing - can cause gastrointesti irritation, nausea, vomiting, diarrhea.		
EMERGENCY AND FIRST AID PROCEDURES	Eyes - flush with large amounts of water. Skin - thoroughly wash exposed are with soap and water. Remove contaminated clothing and launder before re-use. Breathing - if affected remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Do not give stimulants. Epinephrine or ephedine may adversely affect the heart with fatal results. Swallowed - induce vomiting. Never give anything by mout to an unconscious person.		

SECTION VI. REACTIVITY DATA

STABILITY	_____ Unstable X Stable	Hazardous Polymerization	_____ May Occur X Will Not Occur

SECTION VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Absorb liquid on rags, mops, or floor absorbent and place in closed containers. Provide adequate ventilation and wear adequate personal protective equipment.
WASTE DISPOSAL METHOD	Depending on size of spill, absorbent materials used may be dried in a safe place out of doors, or deposited in a posted toxic substance landfill in accordance with local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	None for normal use. NIOSH/MESA approved self-contained breathing apparatus, positive pressure hose masks, air-line mask for spills or extreme conditions		
VENTILATION	Provide sufficient mechanical and/or local exhaust ventilation to maintain exposure below threshold limit value.		
PROTECTIVE GLOVES	Polyvinyl alcohol, polyethylene	EYE PROTECTION Chemical safety goggles	OTHER PROTECTIVE EQUIPMENT Rubber apron

SECTION IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store drums in a cool place, bung up and tightly closed. Empty containers continue to be hazardous because they retain product residues; vapor or liquid. Storage tanks should be adequately vented for filling and pressure equalization. Vents from indoor tanks should terminate outdoors. Avoid contact with strong oxidizing agents (nitric acid, permanganates, etc.), strong alkalies (sodium hydroxide, ammonium hydroxide, etc.) and alkali meta
OTHER PRECAUTIONS	If product is used in a vapor degreaser: DO NOT POUR COLD SOLVENT INTO BOILI SOLVENT. A violent eruption may occur similar to the reaction of cold water poured into hot oil or grease. Severe body and facial burns and/or fire may occur. Add cold solvent in the morning before degreaser start-up. DO NOT EXC RECOMMENDED CLEAN-OUT TEMPERATURE or recommended clean-out specific gravity. Solvent decomposition or auto ignition of combustible contaminants may occur

We believe all information given is accurate. It is offered in good faith, but without guarantee. Since conditions of use are beyond our control, all risks of use are assumed by the user. Nothing herein shall be construed as a recommendation for used which infringe valid patents or as extending a license under valid patents.

MATERIAL SAFETY DATA SHEET

RHO-CHEM CORP.
425 13IS AVE.
INGLEWOOD. CA 90301
(213)776-6233

RHO SOLV 1213
PETROLEUM NAPHTHA

SECTION 1 IDENTIFICATION

PRODUCT: RHO SOLV 1213
CHEMICAL FAMILY: HYDROCARBON NAPHTHA
SYNONYM: PETROLEUM NAPHTHA
STOCK NUMBERS:

TECHNICAL GRADE:	1213	RECONSTITUTED GRADE:	N/A
ELECTRONIC/SEMI GRADE:	N/A	A.C.S. REAGENT GRADE:	N/A

DEPARTMENT OF TRANSPORTATION (DOT) IDENTIFICATION

DOT PROPER SHIPPING NAME: PETROLEUM NAPHTHA
DOT HAZARD CLASS: FLAMMABLE LIQUID
DOT IDENTIFICATION NUMBER: UN-1255

HAZARDOUS WASTE IDENTIFICATION

WASTE NUMBER: US EPA D001 CALIFORNIA: 213

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT:
THIS CHEMICAL IS NOT PHOTOCHEMICALLY REACTIVE

SECTION 2 PRODUCT/COMPOSITION DATA

COMPONENT #	COMPONENT	CAS NUMBER	PERCENT
	RHO SOLV 1213	64742-89-9	100
1	PARAFFINS AND NAPHTHENES	NOT APPL.	91
2	XYLENE	1330-20-7	7
3	ETHYLBENZENE	100-41-4	2
4	OLEFINS	NOT APPL.	<0.1

SECTION 3 PHYSICAL DATA

BOILING POINT OR RANGE (DEG. F)	SPECIFIC GRAVITY (25/25C)	SOLUBILITY IN WATER @25C (WT %)
246-279	0.73	NEGLIGIBLE

29018

VAPOR PRESSURE (mm Hg)	VAPOR DENSITY IN AIR (AIR=1)	% VOLATILE BY VOLUME	EVAPORATION RATE n-BUTYL ACETATE = 1
26 @ 100F	3.8	100	1.2

APPEARANCE: CLEAR COLORLESS LIQUID
ODOR: HYDROCARBON ODOR

SECTION 4A HEALTH INFORMATION-HEALTH RATING

HAZARDOUS MATERIALS IDENTIFICATION SYSTEMS (HMIS)

HEALTH (2) FIRE (3)

REACTIVITY (0) PERSONAL PROTECTION (C) SAFETY GLASSES GLOVES / APRON

SECTION 4B HEALTH INFORMATION-ACUTE TOXICITY DATA

COMPONENT #	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	RAT: >4 ML/KG	RAT: >4 ML/KG	RAT: 3400 PPM/4HR
2	RAT: 4.3 G/KG	RABBIT: >4 ML/KG	RAT: 6700 PPM/4HR

SECTION 4C HEALTH INFORMATION-OCCUPATIONAL EXPOSURE LIMITS

COMPONENT	(OSHA) PEL/TWA	(OSHA) PEL CEILING	(ACGIH) TLV/TWA	(ACGIH) TLV/STEL
1	NONE ESTABLISHED		300 PPM	400 PPM
2	100 PPM	300 PPM	100 PPM	130 PPM

SECTION 4D HEALTH INFORMATION - EFFECTS OF EXPOSURE

EFFECTS DESCRIBED IN THIS SECTION ARE BELIEVED NOT TO OCCUR IF EXPOSURES TO THE PRODUCT ARE MAINTAINED AT OR BELOW THE OCCUPATIONAL EXPOSURE LIMITS LISTED IN SECTION 4C. PREEXISTING SKIN, EYE, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE.

POTENTIAL ROUTE OF ENTRY
INHALATION _X_ SKIN ___ INGESTION ___

INHALATION:

VAPORS MAY BE IRRITATING TO NOSE, THROAT, AND RESPIRATORY TRACT. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION.

SKIN:

LIQUID IS IRRITATING TO THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE SKIN TO BECOME REDDENED, ROUGH, AND DRY DUE TO THE REMOVAL OF NATURAL OILS, AND MAY RESULT IN DERMATITIS.

EYES:

LIQUID IS MILDLY IRRITATING TO THE EYES.

INGESTION:

SWALLOWING PRODUCT MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA VOMITING, DIARRHEA.

ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITUS AND SYSTEMIC EFFECTS.

SIGNS AND SYMPTOMS OF EXCESSIVE EXPOSURE:

INTENTIONAL ABUSE, MISUSE, OR OTHER MASSIVE EXPOSURE MAY RESULT IN DIFFICULT BREATHING, NAUSEA, VOMITING AND HEADACHE. COMA AND OR DEATH ARE POSSIBLE.

CENTRAL NERVOUS SYSTEM DEPRESSION RANGES FROM LIGHT HEADEDNESS TO UNCONSCIOUSNESS AND DEATH. CNS DEPRESSION IS EVIDENCED BY DIZZINESS, DIZZINESS AND NAUSEA.

ASPIRATION PNEUMONITUS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN). IN SEVERE CASES DEATH MAY OCCUR.

SECTION AE SUPPLEMENTAL HEALTH INFORMATION

IS THE PRODUCT OR A COMPONENT OF THE PRODUCT LISTED AS A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM (NTP), INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) OR IS IT THE SUBJECT OF A HAZARD EVALUATION SYSTEM AND INFORMATION SERVICE (HESIS) HAZARD ALERT?

COMPONENT NUMBER	NTP CARCINOGEN	OSHA CARCINOGEN	IARC CARCINOGEN	HESIS HAZARD ALERT
1	NO	NO	NO	NO
2	NO	NO	NO	NO

COMPONENT INFORMATION

PARAFFINS AND NAPHTHENES

MALE RATS EXPOSED FOR 90 DAYS BY INHALATION TO VAPORS OF SIMILAR SOLVENTS SHOWED EVIDENCE OF KIDNEY DAMAGE. THE RELEVANCE OF THIS EFFECT TO MAN IS UNKNOWN. IN ONE OF THE STUDIES A LOW GRADE ANEMIA WAS ALSO OBSERVED.

XYLENE

LABORATORY ANIMALS EXPOSED BY VARIOUS ROUTES TO HIGH DOSES OF XYLENE SHOWED EVIDENCE OF EFFECTS IN THE LIVER, KIDNEYS, LUNGS, SPLEEN, HEART AND ADRENALS. RATS EXPOSED TO XYLENE VAPOR DURING PREGNANCY SHOWED EMBRYO/FETOTOXIC EFFECTS. MICE EXPOSED ORALLY TO DOSES PRODUCING MATERNAL TOXICITY ALSO SHOWED EMBRYO/FETOTOXIC EFFECTS.

SECTION 3 EMPLOYEE PROTECTION

VENTILATION:

MAINTAIN WORKPLACE VAPOR CONCENTRATIONS AT OR BELOW THE OCCUPATIONAL EXPOSURE LIMITS LISTED IN SECTION 4C.

PROTECTIVE MEASURES FOR MAINTENANCE:

EXERCISE REASONABLE CARE AND CAUTION. AVOID BREATHING VAPORS. STORE IN A COOL PLACE. CONCENTRATED VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS SUCH AS PITS, DEGREASERS, STORAGE TANKS, AND OTHER CONFINED AREAS. DO NOT ENTER THESE AREAS WHERE VAPORS OF THIS PRODUCT ARE SUSPECTED UNLESS SPECIAL BREATHING APPARATUS IS USED AND AN OBSERVER IS PRESENT FOR ASSISTANCE. DO NOT PRESSURE PRODUCT OUT OF VESSEL OR TRANSPORT CONTAINER WITH AIR.

RESPIRATORY PROTECTION:

AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION 4C) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER A FULL-FACE, ATMOSPHERE-SUPPLYING RESPIRATOR OR AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

SKIN PROTECTION:

FOR BRIEF CONTACT, NO PRECAUTIONS OTHER THAN CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED. WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR, USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS GLOVES, BOOTS, APRON OR FULL-BODY SUIT WILL DEPEND ON OPERATION.

EYE PROTECTION:

USE SAFETY GLASSES. WHERE CONTACT WITH LIQUID IS LIKELY, CHEMICAL GOGGLES ARE RECOMMENDED BECAUSE EYE CONTACT WITH THIS MATERIAL MAY CAUSE PAIN, EVEN THOUGH IT IS UNLIKELY TO CAUSE INJURY. CONTACT LENSES SHOULD NOT BE WORN.

HYGIENE:

AVOID CONTACT WITH SKIN AND AVOID BREATHING VAPORS. DO NOT EAT, DRINK OR SMOKE IN WORK AREA. WASH HANDS PRIOR TO EATING, DRINKING, OR USING RESTROOM.

SECTION 6 EMERGENCY AND FIRST AID

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT:

REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION. SEE NOTE TO PHYSICIAN.

NOTE TO PHYSICIAN:

BECAUSE RAPID ABSORPTION MAY OCCUR THROUGH LUNGS IF ASPIRATED AND CAUSE SYSTEMIC EFFECTS, THE DECISION OF WHETHER TO INDUCE VOMITING OR NOT SHOULD BE MADE BY AN ATTENDING PHYSICIAN. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGEAL CONTROL. DANGER FROM LUNG ASPIRATION MUST BE WEIGHED AGAINST TOXICITY WHEN CONSIDERING EMPTYING THE STOMACH. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. EXPOSURE MAY INCREASE "MYOCARDIAL IRRITABILITY". DO NOT ADMINISTER SYMPATHOMIMETIC DRUGS UNLESS ABSOLUTELY NECESSARY. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGEMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

SECTION 7 FIRE AND EXPLOSION HAZARDS

FLASH POINT 36 F (TCC)

FLAMMABLE LIMITS: VOLUME IN AIR UPPER LIMITS: 7.0%
LOWER LIMITS: 1.0%

EXTINGUISHING MEDIA:

USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

WARNING. FLAMMABLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS) INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SECTION 8 REACTIVITY

STABILITY: THIS PRODUCT IS STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION 9 SPILL AND DISPOSAL PRACTICES

SPILL:

EVACUATE THE AREA, VENTILATE, AND AVOID BREATHING VAPORS. DIKE AREA TO CONTAIN SPILL. CLEAN UP AREA (WEAR PROTECTIVE EQUIPMENT) BY MOPPING OR WITH ABSORBENT MATERIAL AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. AVOID CONTAMINATION OF GROUND AND SURFACE WATERS. DO NOT FLUSH TO SEWER.

WASTE DISPOSAL:

RECOVERED LIQUIDS MAY BE SENT TO A LICENSED RECLAIMER OR INCINERATION FACILITY. CONTAMINATED MATERIAL MUST BE DISPOSED OF IN A PERMITTED HAZARDOUS WASTE MANAGEMENT FACILITY. CONSULT FEDERAL, STATE OR LOCAL DISPOSAL AUTHORITIES FOR APPROVED PROCEDURES.

SECTION 10 SPECIAL PRECAUTIONS

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHT, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE: FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION.

CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS.

STATIC ELECTRICITY MAY ACCUMULATE AND CREATE A FIRE HAZARD. GROUND FIXED EQUIPMENT. BOND AND GROUND TRANSFER CONTAINERS AND EQUIPMENT.

HANDLING AND STORAGE:

HANDLE WITH REASONABLE CARE AND CAUTION. AVOID BREATHING VAPORS. VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS SUCH AS PITS, DEGREASERS, STORAGE TANKS, AND OTHER CONFINED AREAS. DO NOT ENTER THESE AREAS WHERE VAPORS OF THIS PRODUCT ARE SUSPECTED UNLESS SPECIAL BREATHING APPARATUS IS USED AND AN OBSERVER IS PRESENT FOR ASSISTANCE.

STORE DRUMS IN A COOL PLACE, BUNG UP AND TIGHTLY CLOSED. STORAGE TANKS SHOULD BE ADEQUATELY VENTED FOR FILLING AND PRESSURE EQUALIZATION. VENTS FROM INDOOR TANKS SHOULD TERMINATE OUTDOORS.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED IS MADE. SINCE THE ACTUAL USE OF THIS PRODUCT BY OTHERS IS BEYOND THE CONTROL OF RHO-CHEM CORPORATION, IT IS THE USER'S RESPONSIBLITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY FOR HIS USE OF THIS PRODUCT.

CHASE CHEMICAL COMPANY

• 1354 [illegible]MOND STREET • PACOIMA, CALIFORNIA 91[illegible]

Material Safety

METHYLENE CHLORIDE

No Reactivity Hazard

0

Slightly Combustible

1

Moderate Health Hazard

2

Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974)

Diamond Shamrock

GENERAL INFORMATION

Methylene Chloride is a clear, colorless nonflammable liquid with a sweet odor perceptible at concentrations below 250 ppm.

Data Sheet

349-A

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME DIAMOND SHAMROCK CORPORATION	REGULAR TELEPHONE NO. Contact Local Sales Office EMERGENCY TELEPHONE NO. 216-357-7070

ADDRESS
Divisional Technical Center, P. O. Box 191, Painesville, Ohio 44077

TRADE NAME
METHYLENE CHLORIDE

SYNONYMS
Dichloromethane (CH_2Cl_2)

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
METHYLENE CHLORIDE	100	PEL* = 500 ppm (8-hr. TWA)
*OSHA Permissible Exposure Limit (PEL)		

III PHYSICAL DATA

BOILING POINT, 760 MM HG 39.8°C (104°F)	MELTING POINT Not applicable	FREEZING POINT -96.7°C (-142°F)
SPECIFIC GRAVITY (H_2O=1) 1.32	VAPOR PRESSURE 420 mm Hg @ 25°C	
VAPOR DENSITY (AIR=1) 2.93	SOLUBILITY IN H_2O, % BY WT. 1.3	
% VOLATILES BY VOL. 100	EVAPORATION RATE (Ether = 1) 0.62	
APPEARANCE AND ODOR Clear colorless liquid with ether-like odor		
pH Not applicable		

EC-S-59

29019

All information recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable, however, it is the use responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarant expressed or implied, is made by Diamond Shamrock C[illegible]

Data Sheet

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	AUTOIGNITION TEMPERATURE
None (TCC)	662°C (1224°F)

FLAMMABLE LIMITS IN AIR, % BY VOL. @ 25°C (77°F)	LOWER	UPPER
	14	25

EXTINGUISHING MEDIA

Fires involving methylene chloride are unlikely, but should one occur, it may be controlled by carbon dioxide, dry chemicals, or water fog.

SPECIAL FIRE FIGHTING PROCEDURES

Self-contained respiratory protection should be provided for firemen fighting fires in buildings or confined areas where methylene chloride is stored. Storage containers exposed to fire should be kept cool with a water spray, in order to prevent pressure buildup.

UNUSUAL FIRE AND EXPLOSION HAZARD

Methylene chloride is nonflammable and nonexplosive under normal conditions of use. At high temperatures, methylene chloride decomposes to give off hydrochloric acid as gas plus other toxic and irritating vapors such as phosgene. If storage containers are exposed to excessive heat, overpressurization of the containers can result.

V HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA

PEL = 500 ppm (8-hour TWA)

ROUTES OF EXPOSURE

INHALATION

Irritates respiratory tract.

SKIN CONTACT

Mildly irritating to skin. Skin contact may produce a burning sensation. Prolonged or repeated contact may cause skin to become red, rough and dry due to the removal of natural oils and may result in dermatitis.

SKIN ABSORPTION

Methylene Chloride is rapidly absorbed through the skin.

EYE CONTACT

An irritant of the eyes causing pain, lacrimation, and general inflammation.

INGESTION

In industrial environments, ingestion is unlikely, but, if ingested, it can irritate the gastointestinal tract. It could produce chemical pneumonia if vomiting results in aspiration into the lungs. It may ultimately result in unconsciousness and even death.

EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE: Inhalation of vapors can cause headache, dizziness and stupor, nausea, and vomiting. Severe overexposure may cause muscular incoordination, unconsciousness, and death.

CHRONIC OVEREXPOSURE

Can cause headache, mental confusion, depression, fatigue, loss of appetite, nausea, vomiting, cough, loss of sense of balance, and visual disturbances. Prolonged or repeated skin contact may cause dermatitis.

EMERGENCY AND FIRST AID PROCEDURES **Object is to Seek Medical Attention Immediately**

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire eye surface. Seek medical attention immediately.

SKIN: Wash contaminated area with soap and water. A soothing ointment may be applied to irritated skin after cleansing. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention.

INHALATION:

Get person out of contaminated area to fresh air. If breathing has stopped artificial respiration should be started. Oxygen may be administered, if readily available. Seek medical attention immediately.

INGESTION:

If swallowed, DO NOT induce vomiting. If vomiting occurs spontaneously, position individual's head to keep airway clear. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

NOTES TO PHYSICIAN

Methylene chloride overexposure can produce elevated carboxyhemoglobin levels.

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Under normal conditions of use, Methylene Chloride is stable.

INCOMPATIBILITY

Avoid contacting Methylene Chloride with pure oxygen, alkali metals, open flames, and electrical arcs.

HAZARDOUS DECOMPOSITION PRODUCTS

At high temperatures, Methylene Chloride decomposes to give off hydrogen chloride vapor and small quantities of other toxic and irritating vapors such as phosgene. GAS TOXIC ATTACKS LUNGS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

NONE

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Leaks should be stopped. Spills should be cleaned up immediately. Large spills should be contained and removed by vacuum truck. Smaller spills may be soaked up with absorbent materials, which should be placed in closed containers, labeled and stored in a safe place out of doors to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing.

NEUTRALIZING CHEMICALS

NONE

WASTE DISPOSAL METHOD

Dispose in accordance with all federal, state and local health pollution regulations. Methylene Chloride is normally recovered from residues by distillation. Small quantities may be disposed via an incineration-scrubber system or a licensed waste hauler. If regulations permit, wet absorbent materials may be air dried in a safe open, unoccupied area.

VIII INDUSTRIAL HYGIENE CONTROL MEASURES

VENTILATION REQUIREMENTS

Work areas employing Methylene Chloride should be isolated and contained, and provided with adequate local exhaust ventilation to maintain the air concentration of Methylene Chloride below 500 ppm (8-hour TWA) as required by OSHA.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL)

Self-contained breathing apparatus (compressed oxygen should not be used in tanks or other confined spaces), positive-pressure hose mask, air-lined masks, and NIOSH-approved industrial canister-type gas masks (concentration not exceeding 2% by volume used for short periods of exposure only) are acceptable.

EYE

Chemical safety goggles and plastic face shield should be worn when there is a danger of splashing. Spectacle-type glasses do not provide satisfactory protection.

GLOVES

Gloves of polyvinyl alcohol or other solvent-resistant materials should be worn to minimize skin contact.

OTHER CLOTHING AND EQUIPMENT

Hard hats, chemical-resistant safety shoes, and plastic apron should be worn when handling Methylene Chloride. Eye bath and safety shower should be provided in all areas in which Methylene Chloride is used and/or handled.

Data Sheet

IX SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS

WARNING!
VOLATILE SOLVENT

Causes irritation of the eyes, skin, and respiratory tract.
Prolonged breathing of vapor can cause loss of consciousness and may result in death.
DO NOT get in eyes, on skin, on clothing.
DO NOT take internally.
Avoid breathing vapors.
When handling, wear chemical splash goggles, protective clothing, and solvent-resistant gloves.
Wash thoroughly after handling
Use adequate ventilation in work area.
Employ respiratory protection when overexposed to vapors.
Avoid contact with flame or hot glowing surfaces to prevent decomposition resulting in toxic and irritating vapors.
Keep container tightly closed.
Store in a cool, ventilated place.

First Aid:
In case of contact:
For eyes: Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. **Seek medical attention immediately.**

For skin: Wash with plenty of soap and water. A soothing ointment may by applied to irritated skin after cleansing. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. **Seek medical attention.**

Inhalation: Get person out of contaminated area to fresh air. If breathing has stopped artificial respiration should be started. Oxygen may be administered, if available. **Seek medical attention immediately.**

Ingestion: If swallowed, DO NOT induce vomiting. If vomiting occurs spontaneously, position individual's head to keep airway clear. NEVER give anything by mouth to an unconscious person. **Seek medical attention immediately.**

Note to physician: Methylene Chloride overexposure can produce elevated carboxyhemoglobin levels.

For Fire: Use CO_2, dry chemicals, or water fog.

Spill or Leak: Leaks should be stopped. Spills should be cleaned up immediately. Large spills should be contained and removed by vacuum truck. Smaller spills may be soaked up with absorbent materials, which should be placed in closed containers, labeled, and stored in a safe place out of doors to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing.

For Industrial Use Only

OTHER HANDLING AND STORAGE REQUIREMENTS

Under normal conditions, Methylene Chloride may be stored satisfactorily in galvanized iron, black iron or steel. Aluminum is not generally recommended for storage or handling. Store drums in a cool place, bung up and closed tightly. Ventilation should be provided at the floor level. Do not store in pits, depressions, basements or unventilated areas. All tanks should have a top and bottom manhole and a vent of a diameter at least equal to that of the fill or discharge pipe. Vent indoor tanks outside in a location such that escaping vapor will not contaminate any work space air. Vertical tanks should be of the closed top design. Normally, a dryer and safety seal on the vent is recommended.

DEPARTMENT OF TRANSPORTATION INFORMATION
PROPER SHIPPING NAME: Methylene Chloride*
HAZARD CLASS: ORM-A*

*Regulated Only for Air Transportation

DATE
April 1, 1980

INGESTION
LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN SLIGHTLY TOXIC IF SWALLOWED.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV — OCCUPATIONAL EXPOSURE LIMITS

NO	OSHA PEL/TWA	OSHA PEL/CEILING	ACGIH TLV/TWA	ACGIH TLV/STEL	OTHER
F	5 MG/M3*	NONE	5 MG/M3*	10 MG/M3*	NONE

*OIL MIST, MINERAL

PEL — PERMISSIBLE EXPOSURE LIMIT
TLV — 8 HR OCCUPATIONAL EXPOSURE WORKING LIFE TIME

SECTION V — EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT
REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.

NOTE TO PHYSICIAN
IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.

SECTION VI — SUPPLEMENTAL HEALTH INFORMATION

NONE IDENTIFIED.

SECTION VII — PHYSICAL DATA

BOILING POINT (DEG F): NOT AVAILABLE
SPECIFIC GRAVITY (H2O=1): 0.8718
VAPOR PRESSURE (MM HG): NOT AVAILABLE

MELTING POINT (DEG F): -75 (POUR POINT)
SOLUBILITY (IN WATER): NEGLIGIBLE
LITTLE IMPORTANCE
VAPOR DENSITY (AIR=1): NOT AVAILABLE

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE
VIS, CS (40 DEG C): 20

APPEARANCE AND ODOR AMBER LIQUID SLIGHT HYDROCARBON ODOR

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
210 DEG F (COC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER N/AV UPPER N/AV

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

SECTION IX REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CHEMICAL BRACKDOWN IN WHICH ONE LARGE MOLECULE

CONDITIONS AND MATERIALS TO AVOID.
AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS – CHEMICAL BREAKDOWN
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION
IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES.

PROTECTIVE CLOTHING
WEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. WEAR SAFETY GOGGLES TO AVOID EYE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES
MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACCUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ADSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

WASTE DISPOSAL
PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

ENVIRONMENTAL HAZARDS
THIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311 OF THE CLEAN WATER ACT. SPILLS ENTERING (A) SURFACE WATERS OR (B) ANY WATER COURSES OR SEWERS ENTERING/LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER. 800-424-8602.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION. NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA TSCA INVENTORY OF CHEMICAL SUBSTANCES

TSCA - TOXIC SUBSTANCE CONTROL ACT

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 21, 1985

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

JOHN P. SEPESI

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

L.T. "LEE" SAWYER, INC.
JOBBER
SHELL OIL & SHELL CHEMICAL PRODUCTS
14117 Aetna St., Van Nuys, CA
786-8180 Box 369, Van Nuys, CA 91408

~~MASTER COPY~~ MISC

MATERIAL SAFETY DATA SHEET

Shell

MSDS NUMBER ▶ 58,100-2 PAGE 1

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

HEALTH 1 FIRE 1 REACTIVITY 0 HAZARD RATING ▶ LEAST 1 SLIGHT 2 MODERATE 3 HIGH 3 EXTREME 4

*For acute and chronic health effects refer to the discussion in Section III.

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ....AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

SECTION I	NAME
PRODUCT ▶	AEROSHELL® FLUID 4
CHEMICAL NAME ▶	MIXTURE (SEE SEC. II-A)
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON: AVIATION OIL EPA - AQMD.
SHELL CODE ▶	60421

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	AEROSHELL FLUID 4	MIXTURE	100
1	SOLVENT REFINED, HYDROTREATED, MIDDLE DISTILLATE	64742-46-7	75-80
2	SOLVENT REFINED, HYDROTREATED, HEAVY NAPHTHENIC DISTILLATE	64742-52-5	5-10
3	POLYMERIC ADDITIVE IN OIL	MIXTURE	10-15
4	MINOR ADDITIVES	MIXTURE	<1

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NOT AVAILABLE		

BASED ON DATA AVAILABLE TO SHELL, COMPONENTS 3 AND 4 IN THIS PRODUCT ARE NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICATION (29 CFR 1910.1200).

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRRITATING TO THE EYES.

SKIN CONTACT
LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MILDLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT MAY LEAD TO VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, OIL ACNE OR FOLLICULITIS.

INHALATION
INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST FROM THIS PRODUCT MAY CAUSE MILD IRRITATION OF THE UPPER RESPIRATORY TRACT.

MATERIAL SAFETY DATA SHEET

(Essentially similar to Form OSHA-20) <C[illegible]s with 29CFR 1910.1200>

DAY: (213) 928-3311
EMERGENCY 24 HOURS:
CHEMTREC: [illegible]

SECTIO[illegible]

CODE NUMBER: A0600 DATE 880107

TRADE NAME: MIL-H-5606E AM1 #MLS 84-136 SUPERCEDES 870203

CHEMICAL FAMILY: PETROLEUM

CARCINOGENIC INGREDIENTS/OSHA/NTP/IARC: NONE C.A.S. NO.: "MIXTURE"

TSCA INFORMATION: NOT CURRENTLY LISTED

SECTION II — HAZARDOUS INGREDIENTS

COMPONENTS	C.A.S. NOS.:	TLV/PEL PPM	TLV/PEL mg/m³	PERCENT BY WEIGHT/VOLUME
SOLV REF PETR BASE STOCK	64742-46-7 64741-97-5 64742-53-6		5	<85WT

THIS PRODUCT DEFINED AS NON-HAZARDOUS EXCEPT AS STATED ABOVE. DISCLOSURE OF INGREDIENTS AVAILIBLE TO PHYSICIAN OR NURSE IN EVENT OF MEDICAL EMERGENCY.

SECTION III — FIRE AND EXPLOSION HAZARD DATA

HAZARDOUS THERMAL DECOMPOSITION: CARBON MONOXIDE AND ASPHYXIANTS

FLAMMABLE LIMITS: LEL — UEL N/A

FLASH POINT: ASTM D93(PMCC) 82 °C <182° F>

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATERFOG

DOT INFORMATION: COMBUSTIBLE LIQUID, N.O.S.

UNUSUAL FIRE AND EXPLOSION HAZARDS: SLIGHTLY COMBUSTIBLE, WHEN HEATED ABOVE FLASH POINT WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN IN OPEN OR BE EXPLOSIVE IN CONFINED SPACES IF EXPOSED TO SOURCE OF IGNITION.

SPECIAL FIRE FIGHTING PROCEDURES: DO NOT ENTER ANY ENCLOSED OR CONFINED AREA WITHOUT PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS.

SECTION IV — PHYSICAL DATA

BOILING RANGE: 175° C SOLUBILITY: NEG PH: N/D

VAPOR PRESSURE: <0.01mm Hg @ 20 °C APPEARANCE AND ODOR: RED, OILY LIQUID PETROLEUM ODOR

VAPOR DENSITY	EVAPORATION RATE	SPECIFIC GRAVITY	WEIGHT PER GALLON	% VOLATILE BY VOLUME
HEAVIER THAN AIR	LESS THAN ETHER	0.868	7.23	NIL

SECTION V — REACTIVITY DATA

INCOMPATIBILITY <MATERIALS TO AVOID>: STRONG OXIDIZING AGENTS

STABILITY: STABLE CONDITIONS TO AVOID: DO NOT HEAT ABOVE FLASH POINT. 182°

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND ASPHYXIANTS

HAZARDOUS POLYMERIZATION: NONE

OCCUPATIONAL EXPOSURE LIMIT

TLV = 5mg/m³ AS OIL MIST

MIL-H-5606E AM1 #MLS 64-135

SECTION VI — HEALTH HAZARD DATA

ROUTE OF EXPOSURE	ADVERSE EFFECTS:	FIRST AID PROCEDURES:	NFPA
ORAL INGING	NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	DO NOT INDUCE VOMITING. CONSULT PHYSICIAN	
BREATHING INH	NO SIGNIFICANT ADVERSE HEALTH EFFECTS ARE EXPECTED TO OCCUR ON SHORT TERM EXPOSURE	REMOVE FROM CONTAMINATED AREA. APPLY ARTIFICIAL RESPIRATION IF UNCONCIOUS CONSULT PHYSICIAN	
EYE CON	NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION DEVELOPES CONSULT PHYSICIAN	
ACUTE SKIN CON	NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	WASH WITH SOAP AND WATER. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.	
CHRONIC SKIN CON	PROLONGED AND/OR REPEATED CONTACT MAY PRODUCE MILD SKIN IRRITATION AND INFLAMMATION. PERSONNEL WITH PRE-EXISTING SKIN DISORDER SHOULD AVOID CONTACT.	WEAR PROTECTIVE CLOTHING TO AVOID SKIN CONTACT. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.	

<DOT> SECTION VII — SPILL OR LEAK PROCEDURES <EPA>

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: STOP FLOW. WIPE OR MOP UP OR ABSORB WITH DIATOMACEOUS EARTH OR OTHER INERT MATERIAL. STORE IN APPROPRIATE CONTAINER FOR DISPOSAL.

WASTE DISPOSAL METHOD: IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TRANSPORTATION INFORMATION: CONSULT 49 CFR PARTS 1-300 AND REFER TO SECTION III OF THIS MSDS FOR ADDITIONAL RECCOMMENDATIONS CONCERNING PLACARDING.

SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED

PROTECTIVE GLOVES: RECCOMMENDED

EYE PROTECTION: REQUIRED

OTHER PROTECTIVE EQUIPMENT: CHEMICALLY RESISTANT BOOTS AND APRONS RECCOMMENDED.

VENTILATION: SUFFICIENT TO MAINTAIN ATMOSPHERE BELOW TLV LIMIT

SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN WHEN HANDLING OR STORING: AVOID STORAGE NEAR OPEN FLAME OR OTHER SOURCES OF IGNITION. EXCESSIVE MISTING MAY CAUSE SLIPPERY FLOORS. PROPER FOOTWEAR REQUIRED.

PERSONAL HYGIENE: WASH HANDS WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

OTHER PRECAUTIONS: WASH OR TAKE SHOWER IF GENERAL CONTACT OCCURS. REMOVE OIL-SOAKED CLOTHING AND LAUNDER BEFORE REUSE. DISCARD CONTAMINATED LEATHER GLOVES AND SHOES.

APPROVED BY: RICHARD J. EBERHARDT
LABORATORY MANAGER

DATE: 880224

CODE NUMBER A0600

HEALTH 1 0 FIRE REACTIVITY

PERSONAL PROTECTION (NFPA)

DEFINITIONS

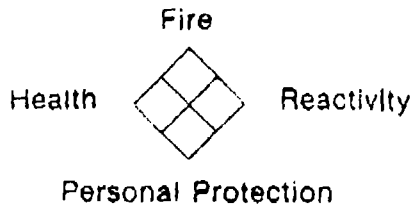
ACGIH: American Conference of Governmental Industrial Hygienists

DOT: Department of Transportation

LC50: Lethal Concentration Fifty: A calculated concentration of a substance which is expected to cause death of 50% of an entire defined experimental animal population.

LD50: Lethal Dose Fifty: A calculated dose of a substance expected to cause death of 50% of an experimental animal population.

LEL: Lower Explosive Limit



Hazard Category Scheme: This scheme rates health, fire, reactivity and special hazards on a scale of 0 to 4.

0 = no significant hazard
1 = slight hazard
2 = moderate hazard
3 = high hazard
4 = extreme hazard.

PEL: Permissible Exposure Limit

N/A: Not Applicable

N/D: Not Determined

NFPA: National Fire Protection Association

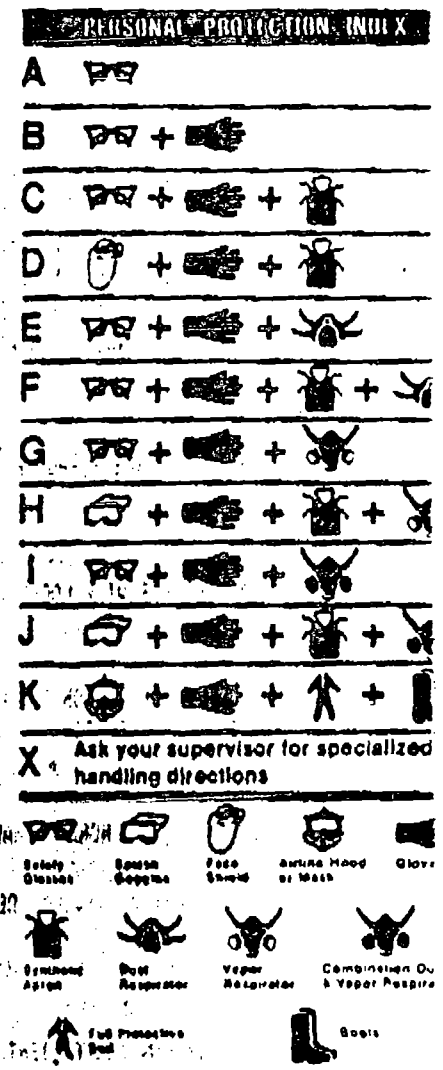
TLV: Threshold Limit Value. A recommended upper limit or TWA concentration of a substance to which most workers can be exposed without adverse effect.

TWA: Time Weighted Average

ING: Ingestion

INH: Inhalation

CON: Contact



Lubricating Specialties Company

6015 Paramount Blvd.
Pico Rivera, CA 90660-4680
Telephone (213) 928-3311

MONSANTO PRODUCT NAME

SKYDROL® 500B-4 FIRE RESISTANT HYDRAULIC FLUID

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MO 63167

Emergency Phone No.
(Call Collect)
314-694-1000

PRODUCT IDENTIFICATION

SKYDROL® 500B-4 fire resistant hydraulic fluid is a proprietary product. The formulation is a trade secret of Monsanto Company. See the section on OCCUPATIONAL CONTROL PROCEDURES for the identity of two components regulated by a standard of the Occupational Safety and Health Administration (OSHA). All components of SKYDROL 500B-4 fluid appear on the Inventory of Chemical Substances published by the U.S. Environmental Protection Agency (EPA).

Chemical Family: Phosphate esters with performance additives.

DOT Hazard Class: This product is not classified as a hazardous material by the U.S. Department of Transportation.

Label Requirement: Product Label

Reportable Quantity (RQ) Under U.S. Clean Water Act Regulations: Not Listed

U.S. Surface Freight Classification: Hydraulic System Fluid, Other Than Petroleum

WARNING STATEMENTS

CAUTION!
MAY CAUSE IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT

PRECAUTIONARY MEASURES

Avoid prolonged or repeated skin contact. Wear impervious gloves of n butyl nitrile rubber.

Do not get in eyes. Wear chemical safety goggles.

Avoid breathing mist or vapor. Wear a NIOSH approved respirator when mist or vapor is possible.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. DO NOT REUSE CONTAINER.

EMERGENCY AND FIRST AID PROCEDURES

FIRST AID: IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Call a physician.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing. Wash clothing before reuse.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: Wear chemical safety goggles to prevent eye contact.

Skin Protection: Wear appropriate impervious gloves and protective clothing to prevent skin contact. Wear face shields and aprons when splashing is likely. Launder contaminated clothing and clean protective equipment before re-use.

1987

...aith and Welfare Ag...
(Form designed for use ... (12-pitch) typewriter.)

Department of Health Services
Toxic Substances Control Division
Sacramento, California

...NIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FLIGHT ACCESSORY SERVICES, [illegible] SHERMAN WAY, [illegible] VALLEY CA
4. Generator's Phone (213) 875-[illegible]

A. State Manifest Document Number: 86132974
B. State Generator's ID: CAD981423320
C. State Transporter's ID: [illegible]
D. Transporter's Phone: 217-[illegible]-8500
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAT080011059
H. Facility's Phone: 213-595-6577

5. Transporter 1 Company Name: [illegible] KING DRAIN OIL
6. US EPA ID Number: CAD981423320
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: PRI. 1835 E. 24th ST. SIGNAL HILL CA
10. US EPA ID Number: CAT080011059

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE OIL & WATER NOS NA1270 COMBUSTIBLE LIQUID	001	TT	00250	G	221
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above: R.O.1

15. Special Handling Instructions and Additional Information: RUBBER GLOVES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: LEWIS AUGUSTINE
Signature: [signature]
Month Day Year: 04 30 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] CALIFORNIA
Signature: [signature]
Month Day Year: 04 [illegible] 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: VIC TRIPPLE
Signature: [signature]
Month Day Year: [illegible]

GENERATOR

TRANSPORTER

FACILITY

86132974

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

3-10090

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...nt or type. (Form designed for use on ... 12-pitch) typewriter.)

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ... Manifest Document No. ...

GENERATOR COPY

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 Sherman Way
Sun Valley, CA

Return To Generator

4. Generator's Phone 213 875-2930

A. State Manifest Document Number: 86126098

B. State Generator's ID: [illegible]

5. Transporter 1 Company Name: CHEM-RAN PUMPING SERVICES, INC

6. US EPA ID Number: CAD 9 8 07 36 4 25

C. State Transporter's ID: 70[illegible]

D. Transporter's Phone: 213 [illegible]

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU ROAD
CASMALIA, CA

10. US EPA ID Number: CAD 0 20 7 48 1 25

G. State Facility's ID: CAD020708125

H. Facility's Phone: 805 937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE POISONOUS SOLID, N.O.S., POISON B UN #2811	008	DM	01600	P	81
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Nickel Chloride 20%
Cyanide 2%
Absorbant 78%

K. Handling Codes for Wastes Listed Above: 03/F009

15. Special Handling Instructions and Additional Information
Gloves

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: LEW AUGUSTINE — Signature: [signature] — Month Day Year: 04 23 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: RUDY GILLIAM, DRIVER — Signature: [signature] — Month Day Year: 04 23 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space
#79864

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Casmalia Resources Dennis Fraley — Signature: Dennis Fraley — Month Day Year: 04 23 87

GENERATOR

TRANSPORTER

FACILITY

86126098

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

...rnia—Health and Welfare Agency

...nt or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Department of Health Service
Toxic Substances Control Divisio
Sacramento, Californi

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
[illegible]

4. Generator's Phone ([illegible])

A. State Manifest Document Number: 86132973

B. State Generator's ID: CAD 981423320

5. Transporter 1 Company Name: [illegible]

6. US EPA ID Number: [illegible]

C. State Transporter's ID: [illegible]

D. Transporter's Phone: [illegible]-8800

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
[illegible] 1835 E. [illegible] ST.
[illegible] HILL CA

10. US EPA ID Number: [illegible]

G. State Facility's ID: CAT080011059

H. Facility's Phone: 213-595-6597

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE OIL / WATER NOS. NA 1270 [illegible]	[illegible]	[illegible]	[illegible]	G	221
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
WASTE OIL
WATER

K. Handling Codes for Wastes Listed Above
R.O.I

15. Special Handling Instructions and Additional Information
[illegible]

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: [illegible] | Signature: [illegible] | Month Day Year: 04 07 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] CARRERA | Signature: [illegible] | Month Day Year: 04 07 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
WO 97%
J H2O 2%

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible] TRIPPLE | Signature: [illegible] | Month Day Year: [illegible]

86132973

...of California—Health and Welfare A...
...se print or type. (Form designed for us... ...te (12-pitch) typewriter.)

Department of Health Servic...
Toxic Substances Control Divisi...
Sacramento, Californ...

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAT000646257
Manifest Document No.:
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: [illegible] Accessory Services, [illegible] Sherman Way, Van Valley CA 91352
4. Generator's Phone (213) 875-[illegible]

A. State Manifest Document Number: 86132972
B. State Generator's ID: CAT000[illegible]
C. State Transporter's ID: [illegible]
D. Transporter's Phone: [illegible]
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAT0800[illegible]
H. Facility's Phone: [illegible]

5. Transporter 1 Company Name: King & King Drain Oil
6. US EPA ID Number: CAD[illegible]
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: [illegible] 29th St, Sunnyhill Hill CA.
10. US EPA ID Number: CAT0800[illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE OIL NAS NA. 1270 COMPOSTABLE LIQUID	001	TT	00600	G	[illegible]
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: WASTE OIL WATER
K. Handling Codes for Wastes Listed Above: [illegible]

15. Special Handling Instructions and Additional Information: RUBER GLOVES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: LEWIS E. AUGUSTINE
Signature: [signature]
Month Day Year: 04 08 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: KENNETH T. KING
Signature: [signature]
Month Day Year: 04 08 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space: [illegible] Waste Oil 90% H2O 10%

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] Madrid
Signature: [signature]
Month Day Year: 04 08 87

GENERATOR

TRANSPORTER

FACILITY

86132972

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

Health and Welfare Age
(Form designed for use on (12-pitch) typewriter.)

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD[illegible]
Manifest Document No.: [illegible]
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT [illegible]
11310 SHERMAN WAY
SUN VALLEY CA 91352
4. Generator's Phone ([illegible]) 875-[illegible]

A. State Manifest Document Number: 86132975
B. State Generator's ID: CAD[illegible]
C. State Transporter's ID: [illegible]
D. Transporter's Phone: 776-[illegible]
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAD[illegible]
H. Facility's Phone: 213-776-[illegible]

5. Transporter 1 Company Name: [illegible]
6. US EPA ID Number: CAD[illegible]
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: [illegible] 4[illegible] [illegible] AVE [illegible]
10. US EPA ID Number: CAD[illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. 1,1,1 TRICHLOROETHANE WASTE [illegible] LIQUID [illegible]	004	DM	[illegible]	[illegible]	2[illegible]
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
1,1,1 TRICHLOROETHANE — 90%
OIL — — — — — 10%

K. Handling Codes for Wastes Listed Above
[illegible]
01

15. Special Handling Instructions and Additional Information
[illegible] GOGGLES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: [illegible]
Signature: [illegible]
Month Day Year: 05 [illegible] 27

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] GERALD RIES
Signature: [illegible]
Month Day Year: 05 [illegible] 27

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: [illegible] SAMUEL
Signature: [illegible]
Month Day Year: 05 [illegible] 27

GENERATOR
TRANSPORTER
FACILITY

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

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UNIFORM HAZARDOUS WASTE MANIFEST

(Please Read Instructions. Print or Type. Form designed for use on elite (12 pitch typewriter).)

Generator's US EPA ID No.: C A D 0 0 0 6 4 6 7 5 7

Manifest Document No.:

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Services 91352
11310 Sherman Way
Sun Valley, Ca.

4. Generator's Phone: 213-875-2930

A. State Manifest Document Number: 87185543

B. State Generator's ID: EXEMPT

5. Transporter 1 Company Name: Chem-Ran Pumping Services In

6. US EPA ID Number: CAD 980 736 425

C. State Transporter's ID: 709055

D. Transporter's Phone: 213-191-4508

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Casmalia Respurces Inc
NTU Road
Casmalia, Ca

10. US EPA ID Number: C A D 0 2 0 7 4 8 1 2 5

G. State Facility's ID: C A D 0 2 0 7 4 8 1 2 5

H. Facility's Phone: 805-937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	State
a. HAZARDOUS WASTE SOLID, N.O.S., ORM-E, NA9189	00 16	DM	0 1000 ~~0007~~	P	CA
b.					
c.					
d.					

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
Nickel Chloride 25 %
Absorbant 75 %

K. Handling Codes for Wastes Listed Above
a. 9 F
b.
c.
d.

15. Special Handling Instructions and Additional Information
Wear appropriate safety attire

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Lew Augustine — Signature: Lew Augustine — Month Day Year: 07 09 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Joe Davidson — Signature: Joe Davidson — Month Day Year: 07 09 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Camelia Lesowe #93496 — Signature: Judy Blume Judy Blume — Month Day Year: 07 13 87

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Department of Health Services
Toxic Substances Control Division
Sacramento, California

(12-pitch) typewriter.)

HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD006614612517 | Manifest Document No.

2. Page 1 of

Information in the shaded areas is not required by Federal law.

Generator's Mailing Address: ACCESSORY SERVICES, FOREMAN WAY, LA VALLEY CA. 91352
Generator's Phone: (213) 875-2930

A. State Manifest Document Number: 86132977
B. State Generator's ID: CAD 006 614 259
C. State Transporter's ID: 56
D. Transporter's Phone: 213-[illegible]-9500
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAD 006 [illegible] 59
H. Facility's Phone: 213-595-6597

5. Transporter 1 Company Name: KING & KING DRAIN OIL — 6. US EPA ID Number: CAD 078114212000

7. Transporter 2 Company Name — 8. US EPA ID Number:

9. Designated Facility Name and Site Address: PRI, 1855 E. 29th St., Signal Hill CA — 10. US EPA ID Number:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE OIL & WATER NOS NA 1270 COMBUSTIBLE LIQUID	011	TT	01800	G	[illegible]
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above: R.O. [illegible]

15. Special Handling Instructions and Additional Information: RUBBER GLOVES & SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

GENERATOR — Printed/Typed Name: LEW AUGUSTINE — Signature: [signature] — Month Day Year: 10 17 17 87

TRANSPORTER — 17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: 10 17 17 87

18. Transporter 2 Acknowledgement of Receipt of Materials — Printed/Typed Name — Signature — Month Day Year

FACILITY — 19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Printed/Typed Name: VIC TRIPPE — Signature: [signature] — Month Day Year: 10 17 17

86132977

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

Department of Health Services
Toxic Substances Control Division
Sacramento, California

typewriter.)

MANIFEST

1. Generator's US EPA ID No. CAD 980 614 523 | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11215 SHENANDOAH
SUN VALLEY CA 91352

A. State Manifest Document Number: 86132978
B. State Generator's ID: CAD 980 614 523

4. Generator's Phone (213) 875-1730

5. Transporter 1 Company Name: KING & KING DRAIN OIL
6. US EPA ID Number: CAD 981 142 330
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29TH ST
SIGNAL HILL CA
10. US EPA ID Number: CAT 080 011 059
G. State Facility's ID: CAT 080 011 059
H. Facility's Phone:

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. WASTE OIL & WATER NOS NA 1270 COMBUSTABLE LIQUID	011	TT	018 00	G
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above: WASTE OIL & GLASSES
K. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information
RUBBER GLOVES & SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name: LEWIS AUGUSTINE | Signature: [signature] | Month Day Year: 10 17 11 8 17

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: CONCEPCION CARRERA | Signature: [signature] | Month Day Year: 10 17 01 17

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: VIC TRIPPE | Signature: [signature] | Month Day Year: 10 17 17

86132978

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

(Form designed for use on (12-pitch) typewriter.)

FORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD000646257

Manifest Document No.

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
WRIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CA 91352

4. Generator's Phone (213) 875-2930

A. State Manifest Document Number 84610020

B. State Generator's ID

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID

D. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter 2 Phone

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29th. STREET
SIGNAL HILL CA.

10. US EPA ID Number: CAT080011059

G. State Facility ID

H. Facility Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. WASTE OIL & WATER NOS NA 1270	001	TT	100	G
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above
WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
RUBBER GLOVES - SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

GENERATOR

Printed/Typed Name	Signature	Date (Month Day Year)
STAN G. LA SALLE	Stanley G. La Salle	8 28 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
[illegible]	[illegible]	8 28 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

TRANSPORTER

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
[illegible]	[illegible]	03 28 87

FACILITY

84610020

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DHS 8022 A (11/84)
(EPA 8700-22)

84 89641

Department of Health Services
Toxic Substances Control Division
Sacramento, California

...Agency

...designed for use on elite (12-pitch) typewriter.)

HAZARDOUS ...E MANIFEST	1. Generator's US EPA ID No. C.A.D. 0.0.0. 6.4.6257.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

...'s Name and Mailing Address ... ACCESSORY SERVICES ... SHERMAN WAY, SUN VALLEY CA 91352 ...rator's Phone (213) 875-2930		A. State Manifest Document Number: 84610019 B. State Generator's ID: CAD981423320
3. Transporter 1 Company Name: KING & KING DRAIN OIL	6. US EPA ID Number: CAD981423320	C. State Transporter's ID: [illegible] D. Transporter's Phone: [illegible]
4. Transporter 2 Company Name	8. US EPA ID Number	E. State Transporter's ID: F. Transporter's Phone:
9. Designated Facility Name and Site Address P.R.I. 1835 E. 29th. STREET SIGNAL HILL CA	10. US EPA ID Number: CAT080011059	G. State Facility's ID: CAT080011059 H. Facility's Phone: [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. WASTE OIL & WATER NOS NA 1270	001	TT	700	G
b.				
c.				
d.				

15. Additional Description ... Listed Above	Handling Codes for ... Listed Above
WASTE OIL & WATER	[illegible]

15. Special Handling Instructions and Additional Information

RUBBER GLOVES - SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name	Signature	Date Month Day Year
STAN G. LA SALLE	Stanley G. La Salle	8 20 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
1 Concepcion Carrera	1 Concepcion Carrera	08 20 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. PRI 1835 E 29th ST SIGNAL HILL CA

Printed/Typed Name	Signature	Date Month Day Year
VIC TRIPPLE	Vic Tripple	8 20 87

GENERATOR

TRANSPORTER

FACILITY

84610019

DHS 8022 A (11/84)

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...ith and Welfare Agency
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Department of Health Services
Toxic Substances Control Division
Sacramento, California

...RM HAZARDOUS WASTE MANIFEST

...enerator's US EPA ID No.: CAD000646257
Manifest Document No.:
...age 1 of
Information in the shaded areas is not required by Federal law.

...rator's Name and Mailing Address: FLIGHT ACCESSORY SERVICES, 11310 SHERMAN WAY, SUN VALLEY CA
Generator's Phone (213) 875-2930

A. State Manifest Document Number: 86132976
B. State Generator's ID:

5. Transporter 1 Company Name: KING & KING DRAIN OIL
6. US EPA ID Number: CAD984233320
C. State Transporter's ID: 54200
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: PRI, 835 E. 29th ST, SIGNAL HILL CA
10. US EPA ID Number: CAT080011059
G. State Facility's ID: CAT080011059
H. Facility's Phone: 595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL & WATER NOS NA1270 COMBUSTIBLE LIQUID	001	TT	00800	G	221
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: WASTE OIL & WATER
K. Handling Codes for Wastes Listed Above: R.O.1

15. Special Handling Instructions and Additional Information: RUBBER GLOVES & SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: S. G. LA SALLE
Signature: Stanley G. La Salle
Month Day Year: 08 06 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: KENNETH T. KING
Signature: Kenneth T. King
Month Day Year: 08 06 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space: T. NO H30

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: VIC TRIPPLE
Signature: Vic Tripple
Month Day Year: 8 4 87

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

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Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD000646257

Manifest Document No.

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
TARGET ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CA 91352

4. Generator's Phone (213) 875-2930

A. State Manifest Document Number: 84610021

B. State Generator's ID:

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID:

D. Transporter's Phone:

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29th. STREET
SIGNAL HILL CA.

10. US EPA ID Number: CAT080011059

G. State Facility's ID:

H. Facility's Phone:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL & WATER NOS NA 1270	001	TT	00850		
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information

RUBBER GLOVES - SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

GENERATOR

Printed/Typed Name: S. LA SALLE

Signature: Shirley L. La Salle

Date: Month 9 Day 10 Year 87

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible]

Signature: [illegible]

Date: Month 09 Day 11 Year 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible]

Signature: [illegible]

Date: Month 09 Day 11 Year 87

84610021

DHS 8022 A (11/84)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89641

...l and Welfare Agency
...o. 2050—0039 (Expires 9-30
...e. (Form designed for use on ... pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257

Manifest Document No.:

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CA 91352

4. Generator's Phone 213 847-2930

A. State Manifest Document Number: 87646448

B. State Generator's ID: CAD000646257

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: 213-459-8500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29 ST
SIGNAL HILL CA

10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE WATER & OIL	001	TT	1150	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES - SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: STANLEY G. LA SALLE
Signature: Stanley G. La Salle
Month Day Year: 1 1 0 1 9 8 7

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: KENNETH T. KING
Signature: Kenneth T. King
Month Day Year: 1 1 0 1 9 8 7

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: VIC TRIPPE
Signature: Vic Trippe
Month Day Year: 1 1 0 1 9 8 7

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Health and Welfare Agency
No. 2050—0039 (Expires 9-30-
Type. (Form designed for use on el itch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD009646257 | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY SUN VALLEY CA 91352

4. Generator's Phone (213) 875 2930

A. State Manifest Document Number 87646449

B. State Generator's ID CAD009646257

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID 54200

D. Transporter's Phone 213-839-8500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I 1835 E.29 ST.
SIGNAL HILL, CA.

10. US EPA ID Number: CAT080011059

G. State Facility's ID CAT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE WATER & OIL	001	TT	01175	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. R01 b. c. d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES - SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: STANLEY G. LASALLE | Signature: Stanley G. LaSalle | Month Day Year: 1 1 1 2 8 7

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: KENNETH T. KING | Signature: Kenneth T. King | Month Day Year: 1 1 1 2 8 7

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: VIC TRIPPE | Signature | Month Day Year

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Health and Welfare Agency
OMB No. 2050-0039 Expires 9-30-88
Print or type. (Form designed for use on elite or pica typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD009646257 Manifest Document No. 9093

Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY, CA, 91352

4. Generator's Phone (213) 875 2930

A. State Manifest Document Number 87646451

B. State Generator's ID HAHQ360220GG

5. Transporter 1 Company Name
RHO-CHEM CORP

6. US EPA ID Number CAD008364432

C. State Transporter's ID 70 9985

D. Transporter's Phone 776-6253

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
RHO CHEM
425 ISIS AVE
INGLEWOOD CA 90301

10. US EPA ID Number CAD008364432

G. State Facility's ID CAD008364432 1

H. Facility's Phone 213-776-6253

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE ORM-A LIQUID N.O.S. NA-1693 RQ 1000/454	003	DM	1150	G	State 211 / EPA/Other F-001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
1,1,1, TRICHLOROETHANE - 90%
OIL 10%

K. Handling Codes for Wastes Listed Above
a. 01
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES & GOGGLES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: STANLEY G. LA SALLE
Signature: Stanley G. La Salle
Month Day Year: 11 11 87

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: GERALD RIES
Signature: Gerald Ries (3) # 46450
Month Day Year: 11 11 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Cosme Cerritos
Signature:
Month Day Year: 11 17 87

DHS 8022.A (1/87)
EPA 8700-22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Department of Health Services
Toxic Substances Control Division
Sacramento, California

...EST	...nerator's US EPA ID No. CAD000646257	Manifest Document No.	2. Page 1 of

Information in the shaded areas is not required by Federal law.

...me and Mailing Address FLIGHT ACCESSORY SERVICES 11310 SHERMAN WAY, SUN VALLEY, CA 91352	A. State Manifest Document Number 87646452
4. Generator's Phone (213) 875 2930	B. State Generator's ID HAHQ36022066
5. Transporter 1 Company Name: KING & KING DRAIN OIL — 6. US EPA ID Number: CAD981423320	C. State Transporter's ID 54200
	D. Transporter's Phone 213 439 8500
7. Transporter 2 Company Name — 8. US EPA ID Number	E. State Transporter's ID
	F. Transporter's Phone
9. Designated Facility Name and Site Address: P.R.I. 1835 E. 29 ST SIGNAL HILL, CA. — 10. US EPA ID Number: CAT080011059	G. State Facility's ID CAT080011059
	H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE WATER & OIL N.O.S. NA. 1270 COMBUSTABLE LIQUID	001	TT	00800	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information

RUBBER GLOVES — SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
STANLEY G. LA SALLE	Stanley G. La Salle	12 1 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
KENNETH T. KING	Kenneth T. King	12 1 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
VIC TRIPPLE	Victor Tripple	12 1 87

GENERATOR — TRANSPORTER — FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS — INSTRUCTIONS ON THE BACK

Health and Welfare Agency
Form No. 2050—0039 (Expires 9-30-88)
(Form designed for use on elite (12 ... typewriter).

1988

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAT000646257
Manifest Document No.: 64156

Page 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CA 91352

4. Generator's Phone (213) 875 2930

A. State Manifest Document Number: 87646456

B. State Generator's ID: HAHQ36022066

5. Transporter 1 Company Name: KING & KING DRAIN

6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: 213 439 8500

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29 ST.
SIGNAL HILL, CA

10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE WATER & OIL	001	TT	99505	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES, SAFETY GLASSES.

16.
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Printed/Typed Name: STANLEY G. LASALLE
Signature: Stanley G. La Salle
Month Day Year: 01 11 88

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: KENNETH T. KING
Signature: Kenneth T. King
Month Day Year: 01 11 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] TRIPPLE
Signature: [illegible]
Month Day Year:

GENERATOR — TRANSPORTER — FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Form Approved. OMB No. 2050-0039 (Expires 9-30-88)

Please print or type. (Form designed for use on elite (12-pitch typewriter).)

Instructions on the Back

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CA D 0 0 0 6 4 6 2 5 7 | Manifest Document No. 1 0 2 1 5 | 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY SUN VALLEY CAL.

4. Generator's Phone (818) 765-6201 91352.

A. State Manifest Document Number: 88076221

B. State Generator's ID: H A H 0 3 6 0 2 2 0 6 6

5. Transporter 1 Company Name: KING + KING OIL

6. US EPA ID Number: C A D 9 8 1 4 2 3 3 2 0

C. State Transporter's ID: C 4200

D. Transporter's Phone: 213-439-8500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
PEI., 1835 E 25TH ST
SIGNAL HILL. CAL.

10. US EPA ID Number: C A T 0 8 0 0 1 1 0 5 9

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. COMBUSTIBLE LIQUID. WASTE OIL + WATER NOS NA 1270	001	TT	1300	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: WASTE OIL - WATER

K. Handling Codes for Wastes Listed Above: a. D01 b. c. d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES + SAFETY GLASSES.

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Printed/Typed Name: ERIK JOHNSON. Signature: Erik H Johnson Month Day Year: 0 2 5 8 8

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JOAQUIN CARRERA Signature: J. Carrera Month Day Year: 0 2 5 8 8

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: LUIS PAZ Signature: L. Luis Paz Month Day Year: 0 2 5 8 8

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700-22
(Rev. 9-86) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DA

Department of Health Services
Toxic Substances Control Division
Sacramento, California

HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAT000646257 | Manifest Document No. 64157 | Page 1 of

Information in the shaded areas is not required by Federal law.

Generator's Name and Mailing Address: FLIGHT ACCESSORY SERVICES, 11310 SHERMAN WAY, SUN VALLEY CA 91352

4. Generator's Phone (213) 875-2930

A. State Manifest Document Number: 87046457

B. State Generator's ID: HAH936022066

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: 213 4398500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: PRI 1835 E. 29 ST. SIGNAL HILL CA

10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE WATER & OIL	001	TT	00870	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a. P07 b. c. d.

15. Special Handling Instructions and Additional Information: RUBBER GLOVES, SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: STANLEY G. LA SALLE | Signature: Stanley G. La Salle | Month Day Year: 01 28 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] CARRERA | Signature: [illegible] Carrera | Month Day Year: 01 29 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: VIC TRIPPIE | Signature: [illegible] | Month Day Year: 1 1 [illegible]

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

...nia—Health and Welfare Agency
...ed OMB No. 2050—0039 (Expires ...
...pt or type. (Form designed for use o... 12-pitch typewriter).

Instructions on ... Back

Department of Health Servic...
Toxic Substances Control Divis...
Sacramento, Califor...

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CA[illegible] | Manifest Document No.: 9 0 0 0 2
2. Page 1 of 5

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Services
11310 Sherman Way, Sun Valley, CA 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 88076222

B. State Generator's ID: HAHQ36022066

5. Transporter 1 Company Name: Disposal Control
6. US EPA ID Number: CAT0[illegible]

C. State Transporter's ID:

D. Transporter's Phone: 1-800-824-3345

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
Kettleman Hills Facility
35251 Skyline Rd.
Kettleman Hill City, CA

10. US EPA ID Number: CAT006461117

G. State Facility's ID: [illegible]

H. Facility's Phone: [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solid R.Q. NOS-ORM-E-NA 9189		DM			State 181 EPA/Other F008/D006
b. Hazardous Waste Solid R.Q. NOS-ORM-E-NA 9189		DM			State 181 EPA/Other F008/D006
c. Hazardous Waste Solid R.Q. NOS-ORM-E-NA 9189		DM			State 181 EPA/Other D006 D008/D007
d. Hazardous Waste Solid R.Q. NOS-ORM-E-NA 9189		DM			State 181 EPA/Other D006 D006/D007

J. Additional Descriptions for Materials Listed Above
A) See Profile H-65268
B) See Profile J-15003
C) See Profile J-15004
D) See Profile J-15002

K. Handling Codes for Wastes Listed Above
a. b.
c. d.

15. Special Handling Instructions and Additional Information
Gloves, Goggles

16.
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Printed/Typed Name: Erik Johnson | Signature: [signature] | Month Day Year: [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] | Signature: [illegible] | Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space
11 A Reject 1dm 11C REJECT 10dm
11 B Reject 1dm

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: | Signature: | Month Day Year:

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

00010222

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Do Not Write Below This Line

GREEN: HAULER RETAINS

...nia—Health and Welfare Agency
...ed OMB No. 2050—0039 (Expires 9-30-...
...nt or type. (Form designed for use on e... ...itch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAT000646257
Manifest Document No.
2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY SUNVALLEY CA. 91352
4. Generator's Phone (213) 875-2930

A. State Manifest Document Number 87646461
B. State Generator's ID HAHQ360220 66
C. State Transporter's ID CA200
D. Transporter's Phone 213 439 8500
E. State Transporter's ID
F. Transporter's Phone

5. Transporter 1 Company Name: KING & KING DRAIN OIL
6. US EPA ID Number: CAD981423320
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29 ST.
SIGNAL HILL CA
10. US EPA ID Number: CAT080011059

G. State Facility's ID CAT080011059
H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE WATER AND OIL NOS NA. 1270 COMBUSTABLE LIQUID	001	TT	01350	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL AND WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
RUBER GLOVES, SAFETY GLASSES

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Printed/Typed Name: FRANK RAGER
Signature: Frank Rager
Month Day Year: 03 07 88

GENERATOR

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA
Signature: J. Concepcion Carrera
Month Day Year: 03 07 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

TRANSPORTER

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: VIC TRIPPE
Signature: Vic Tripe
Month Day: 3

FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

INSTRUCTIONS ON THE BA...

(Expires 9-30-88)
(Designed for use on 12-pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD000646257
Manifest Document No.: 042118
2. Page 1 of 1
Information in the Shaded Area is not required by Federal Law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CALIF. 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87758182
B. State Generator's ID: HAHQ36022066

5. Transporter 1 Company Name: RHO-CHEM CORP.
6. US EPA ID Number: CAD008364432
C. State Transporter's ID: 8MMG
D. Transporter's Phone: 213-776-6233

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
RHO-CHEM CORP.
425 ISIS AVE. INGLEWOOD. CALIF. 90301
10. US EPA ID Number: CAD008364432
G. State Facility's ID: CAD008364432
H. Facility's Phone: 213-776-6233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE ORM-A LIQUID NOS-NA-1693	007	DM	350	G	State: 211; EPA/Other: F-001
b.					State: ; EPA/Other:
c.					State: ; EPA/Other:
d.					State: ; EPA/Other:

J. Additional Descriptions for Materials Listed Above
TRI. 1,1,1, - WATER + METAL FINES
80% TRI. 111 1% METAL FINES
19% WATER

K. Handling Codes for Wastes Listed Above
a. 01
b.
c.
d.

15. Special Handling Instructions and Additional Information
ARRON, GLOVES, GOGGLES

16.
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Printed/Typed Name: ERIK JOHNSON
Signature: Erik W Johnson
Month Day Year: 04 [illegible] 88

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: GERALD RIES
Signature: Gerald Ries
7 47A 97
Month Day Year: 04 [illegible] 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Cosme Cerritos
Signature: [signature]
Month Day Year: 04 26 88

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-[illegible]

DHS 8022-A (1/87)
EPA 8700—22
(Rev. 6-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

California—Health and Welfare Agency
Approved OMB No. 2050—0039 (Expires 9-30-
Print or type. (Form designed for use on elite pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD009614257 | Manifest Document No.: 40788 | 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CA. 91352

4. Generator's Phone (213) 875-2930

A. State Manifest Document Number: 87648460

B. State Generator's ID: HAH036022066A

5. Transporter 1 Company Name: KING + KING OIL
6. US EPA ID Number: CAD981142313210

C. State Transporter's ID: 54200

D. Transporter's Phone: 213-439-8500

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I., 1835 E. 29 ST.
SIGNAL HILL, CA.
10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. COMBUSTABLE LIQUID WASTE OIL + WATER NOS. N.A. 1270	001	TT	17510	G	State 221 EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
~~RUBBER GLOVES + SAFETY GLASSES~~

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES + SAFETY GLASSES

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GENERATOR

Printed/Typed Name: ERIK K. JOHNSON
Signature: Erik K Johnson
Month Day Year: 04 07 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Cornelison Cardenas
Signature: J Cornelison Cardenas
Month Day Year: 04 07 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: VIC TRIPPE
Signature: Vic Trippe
Month Day Year: 04 07 88

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite (12-pitch typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD980164617 | Manifest Document No. 04212 | Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CAL. 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87646462

B. State Generator's ID: HAH031212066

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981113213

C. State Transporter's ID:

D. Transporter's Phone: 213-589-8500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 27TH ST.
SIGNAL HILL CA

10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone: 213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL N.O.S. N.A. 1270 COMBUSTABLE LIQUID	001	TT	013215	G	State / EPA/Other 221
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above
a. R01 b. c. d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES, SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** *I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.*

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 04 21 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] | Signature: [signature] | Month Day Year: 04 21 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: VIC TRIPPE | Signature: [signature] | Month Day Year

GENERATOR

TRANSPORTER

FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite (12 ... typewriter).

Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257 | Manifest Document No.: 06208 | Page 1: 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY, SUN VALLEY, CALIF

4. Generator's Phone 818 765 6701

A. State Manifest Document Number: 87646475

B. State Generator's ID: HAHQB6022066

5. Transporter 1 Company Name: DISPOSAL CONTROL
6. US EPA ID Number: CAT080034154

C. State Transporter's ID: 809885

D. Transporter's Phone: 1-800-824-3345

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CASMALIA RESOURCE MANAGEMENT
NTU ROAD
CASMALIA, CA 93429
10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

H. Facility's Phone: 1-805-937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID NOS-ORM-E, N.A. 9189	003	DM	3/4	Y	State 352 / EPA/Other N/A
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
CHLORINATED SOLVENTS - 3.999.61 PPM
OIL + GREASE - 5.09 mg/kg.

K. Handling Codes for Wastes Listed Above
a. | b. | c. 03 | d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES, SAFETY GLASSES

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 06 29 88

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jimmy Lizardo | Signature: Jimmy Lizardo | Month Day Year: 06 20 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Casmalia Resources | Signature: Dennis Fraley Dennis Fraley | Month Day Year: 06 21 88

GENERATOR / TRANSPORTER / FACILITY

DHS 8022-A (1-87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

... RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Manifest Document No. [illegible]D000646257[illegible]6098

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 87646464

B. State Generator's ID: HAH036022066

C. State Transporter's ID: 809931

D. Transporter's Phone: 1-800-824-3345

E. State Transporter's ID:

F. Transporter's Phone:

G. State Facility's ID: CAT080013352

H. Facility's Phone: 1-213-537-7100

[illegible]CCESSORY SERVICE
[illegible]SHERMAN WAY, SUN VALLEY, CA [illegible]352
Generator's Phone (818) 765-6201

5. Transporter 1 Company Name: DISPOSAL CONTROL
6. US EPA ID Number: CAT080013184

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address: DE MENNO-KERDOON
2000 N. ALAMEDA ST.
COMPTON, CALIF. 90222
10. US EPA ID Number: CAT080013352

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. HAZARDOS WASTE LIQUID NOS ORM-E. N.A. 9189	001	TT	01500	
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above: WASTE OIL. - WATER SOLUABLE OIL.

K. Handling Code: a. 01 c.

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately descri[illegible] name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by [illegible] international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of [illegible] determined to be economically practicable and that I have selected the practicable method of treatment, storage, [illegible] me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity g[illegible] faith effort to minimize my waste generation and select the best waste management method that is available to me and th[illegible]

Printed/Typed Name: ERIK JOHNSON
Signature: Erik W Johnson

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible] Wetzel
Signature: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except a[illegible]

Printed/Typed Name: [illegible]
Signature: [illegible]

GENERATOR

TRANSPORTER

FACILITY

BP12496 VU 7286

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DA[illegible]

WASTE MANI...

3. Generator's Name and Mailing Address FLIGHT ACCESSORY SERVICES 11310 SHERMAN WAY, SUN VALLEY CA 91352	A. State Manifest Document Number 87646455
4. Generator's Phone (213) 875-2930	B. State Generator's ID HAHQ3602[illegible]
5. Transporter 1 Company Name RHO-CHEM 6. US EPA ID Number CAD008364432	C. State Transporter's ID [illegible] D. Transporter's Phone 213-776-6233
7. Transporter 2 Company Name 8. US EPA ID Number	E. State Transporter's ID F. Transporter's Phone
9. Designated Facility Name and Site Address RHO-CHEM.CORP. 425 ISIS AVE. INGLEWOOD CALIF. 90301 10. US EPA ID Number CAD008364432	G. State Facility's ID CAD008364432 H. Facility's Phone 213-776-6233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE ORM-A · LIQUID NOS N.A 1693	3	DM	165	G	State 211 EPA/Other F-001
b. WASTE FLAMABLE LIQUID UN 1255	2	DM	65	G	State 213 EPA/Other D-001
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above	
11.a. TRI 111 80% WATER 19% METAL FINES 1% 11b Petroleum Naphtha 90% Toulene 10%	a. 01	b. 01
	c.	d.

15. Special Handling Instructions and Additional Information

AFRON, GLOVES, GOGGLES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
[signature] (5)	ERIK JOHNSON 355572	08 11 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
ANTHONY GILLIAM	[signature]	

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Cosme Cerritos	[signature]	08 15 88

GENERATOR

TRANSPORTER

FACILITY

8022 A (1/87)
8700—22
(9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

CASE OF AN EMERGENCY OR SPILL CALL THE NATIONAL ...

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-
Please print or type. (Form designed for use on el itch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: LAT000646257 | Manifest Document No.: 38618 | 2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FLIGHT ACCESSORY SERVICES, 11310 SHERMAN WAY, SUNVALLEY CA. 91352

4. Generator's Phone: (213) 875-2930

A. State Manifest Document Number: 87553868

B. State Generator's ID: HAHQ360220066

5. Transporter 1 Company Name: KING & KING DRAIN OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: (213) 439-8500

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: PRI 1835 E. 29th ST, SIGNAL HILL CA.

10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE WATER ~~& OIL~~ NOS NA 1270 Combustible Liquid	001	TT	01300 ~~01018710~~	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information: RUBBER GLOVES, SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: FRED SEYMOUR | Signature: Fred Seymour | Month Day Year: 09 21 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: KENNETH T. KING | Signature: Kenneth T. King | Month Day Year: 09 21 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Pete C MADRID | Signature: Pete Madrid | Month Day Year: 09 21 88

GENERATOR

TRANSPORTER

FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-
Please print or type. (Form designed for use o 2-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Instructions on t ack

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD000646257
Manifest Document No.: 11298
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY SUN VALLEY CAL 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 88076220

B. State Generator's ID: HAHQ360220066

5. Transporter 1 Company Name: KING + KING OIL
6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54280

D. Transporter's Phone: 213 [illegible]-8500

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
RRI., 1835 E. 29TH ST
SIGNAL HILL, CALIF

10. US EPA ID Number: CAT080011059

G. State Facility's ID: CAT080011059

H. Facility's Phone: 1-213-595-4597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. COMBUSTABLE LIQUID WASTE OIL NOS. NA 1270	001	TT	00525	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
RUBBER GLOVES, SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera | Signature: J. Concepcion Carrera | Month Day Year: 11 25 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: J. Luis Paz | Signature: J. Luis Paz | Month Day Year: 11 30 88

Do Not Write Below This Line

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

88076220

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite pitch typewriter).

H88-21

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD000646257 | Manifest Document No. 000001 | 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Services
11310 Sherman Way
Sun Valley, CA 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87553871

B. State Generator's ID: HAH016020666

5. Transporter 1 Company Name: Disposal Control Ser
6. US EPA ID Number: CAT080034184

C. State Transporter's ID: 907057/910211

D. Transporter's Phone: 1-800-824-3345

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Pacific Treatment
2190 Main St.
San Diego, CA 92113

10. US EPA ID Number: CAD095894556

G. State Facility's ID: CAD095894556 84

H. Facility's Phone: 1-619-233-0424

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solid RQ Nos. ORM-E-NA 9189	028	DM	000017	Y	State 181; EPA/Other D008/D007
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
A. See Profile 82-0977

K. Handling Codes for Wastes Listed Above
a. 99 stab
b.
c.
d.

15. Special Handling Instructions and Additional Information
Gloves, Goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 11 21 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Jimmy Lizardo | Signature: [signature] | Month Day Year: 11 21 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space
13a) 7y = ≈2800p

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: BOB MILLER | Signature: [signature] | Month Day Year: 11 22 88

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

2304 - 2331

Manifest Document No. CAD006461257 ZOOOKK

Is not required by Federal Law

1. Generator's Name and Mailing Address
Flight Accessory Services
11310 Sherman Way, Sun Valley, CA 91352
4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87553869

B. State Generator's ID: HA H036022068

5. Transporter 1 Company Name: Disposal Control Ser.
6. US EPA ID Number: CAT080034184

C. State Transporter's ID: 910211-90009

D. Transporter's Phone: 1-800-824-3345

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Casmalia Resource Management
Ntu Road
Casmalia, CA 93429
10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

H. Facility's Phone: 1-805-937-8669

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solid Rq. Nos. ORM-E-NA 9189	004	DM	1	Y	State 181 / EPA/Other D006
b. Hazardous Waste Solid Rq. Nos. ORM-E-NA 9189	004	DM	1	Y	State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

GENERATOR COPY
Return to Generator

J. Additional Descriptions for Materials Listed Above
a. See Attached Analysis
b. Production Trash P.U.C. Tapes
cc

K. Handling Codes for Wastes Listed Above
a. 03
b. 03
c.
d.

15. Special Handling Instructions and Additional Information
Gloves, Goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON
Signature: Erik Johnson
Month Day Year: 1 1 4 0 8 8

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: THOMAS C SITEK SR
Signature: Thomas C Sitek Sr
Month Day Year: 1 1 2 0 8 8

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Casmalia Resources #111415
Signature: Dennis Fraley Dennis Fraley
Month Day Year: 1 2 6 1 9 8 8

GENERATOR — TRANSPORTER — FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Health and Welfare Agency
OMB No. 2050—0039 (Expires 9-30-
(Form designed for use on el itch typewriter).

H88-21

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD000646257 | Manifest Document No. 00001 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Services
11310 Sherman Way
Sun Valley, CA 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87553871
B. State Generator's ID: HAHQ 602206 6
C. State Transporter's ID: 907057/910211
D. Transporter's Phone: 1-800-824-3345
E. State Transporter's ID:
F. Transporter's Phone:

5. Transporter 1 Company Name: Disposal Control Ser
6. US EPA ID Number: CAT080034184
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Pacific Treatment
2190 Main St.
San Diego, CA 92113

10. US EPA ID Number: CAD095894556

G. State Facility's ID: CAD095894556 BY
H. Facility's Phone: 1-619-233-0424

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste Solid RQ Nos. ORM-E-NA 9189	028	DN	00007	Y	State 181 / EPA/Other D008/D007
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
A. See Profile ~~[illegible]~~ 88-0977

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
Gloves, Goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 12 19 88

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jimmy Lizardo | Signature: Jimmy Lizardo | Month Day Year: 12 19 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Bob Miller | Signature: Bob Miller | Month Day Year: 12 20 88

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

GREEN: HAULER RETAINS

INSTRUCTIONS ON THE BACK

of California—Health and Welfare Ag...
Approved OMB No. 2050—0039 Exp... 9-30-...
...ase print or type. (Form designed for ... on ell... ...tch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD000646257
Manifest Document No.: 112918
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Services
11310 Sherman ... Sun Valley, Ca 91352

4. Generator's Phone (818) 7... 6201

A. State Manifest Document Number: 87553872
B. State Generator's ID: HAHQ360220 66

5. Transporter 1 Company Name: KING + King oil
6. US EPA ID Number: CAD981473320
C. State Transporter's ID: 54200
D. Transporter's Phone: (213) 439-8500

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
RRI, 1835 E. 29th St.
SIGNAL HILL. CALIF
10. US EPA ID Number: CDT080011059
G. State Facility's ID: CAT080011059
H. Facility's Phone: 1-213-595 6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquid WASTE oil N.O.S. NA 1270	001	TT	00400	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.	93	4			State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL + Water

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Rubber Gloves, Safety Glasses

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 12 20 88

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion CARRERA
Signature: J Concepcion Carrera
Month Day Year: 12 20 88

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: J Luis PAZ
Signature: J Luis P
Month Day Year: 12 21 88

GENERATOR
TRANSPORTER
FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-3
Please print or type. (Form designed for use on pitch typewriter).

1989

Department of Health Servic
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Service
11310 Sherman Way, Sun Valley, Ca. 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87640466
B. State Generator's ID: HA403602206 6

5. Transporter 1 Company Name: King + King Oil
6. US EPA ID Number: CAD981423320
C. State Transporter's ID:
D. Transporter's Phone: (213) 439 6500

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
PRI 1835 E. 29th St
Signal Hill, Ca
10. US EPA ID Number: CAT0100211059
G. State Facility's ID: CAT080011059
H. Facility's Phone: 213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquids WASTE OIL + WATER NOS. NA 1270	001	TT	01290	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Rubber Gloves + Safety Goggles

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 01 13 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera
Signature: J. Concepcion Carrera
Month Day Year: 01 13 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible]
Signature: [illegible]
Month Day Year: 01 13 89

GENERATOR
TRANSPORTER
FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

California—Health and Welfare Agency
Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessory Services, 11310 Sherman Way, Sun Valley, Ca 91352
4. Generator's Phone: (818) 765-6201

A. State Manifest Document Number: 87646407
B. State Generator's ID: HAHQ36022066

5. Transporter 1 Company Name: King + King Oil
6. US EPA ID Number: CAD98842332 0
C. State Transporter's ID: 54200
D. Transporter's Phone: 213-439-8500

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: PRI 1835 E. 27th St, Signal Hill, Ca.
10. US EPA ID Number: CAT090011057
G. State Facility's ID: HAHQ36017252
H. Facility's Phone: 213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquid Waste Water + Oil NOS. NA 1270	001	TT	00950	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: Waste oil + Water.

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d. R01

15. Special Handling Instructions and Additional Information: Rubber Gloves + Safety Glasses

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 02 10 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera
Signature: J. Concepcion Carrera
Month Day Year: 02 10 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: John Tautolo
Signature: John Tautolo
Month Day Year: 02 13 89

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite (12-pitch typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD000646257 | Manifest Document No. | 2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessory Service, 11318 Sherman Way, Sun Valley, CA 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87555352

B. State Generator's ID: HA HQ36022066

5. Transporter 1 Company Name: King + King

6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: (213) 437-6500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: PRI 1835 E. 27th St., Signal Hill, Ca

10. US EPA ID Number: CAT090011057

G. State Facility's ID: [illegible]

H. Facility's Phone: (213) 595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquid (Waste oil + water NOS NA 1270	001	TT	00850	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: Waste oil + water

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information: Rubber Gloves + Safety Glasses.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Jesse Cabrera | Signature: [signature] | Month Day Year: 03 19 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: J. Concepcion Carrera | Signature: [signature] | Month Day Year: 03 19 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Luren Brooks | Signature: [signature] | Month Day Year: 03 31 89

GENERATOR

TRANSPORTER

FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

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INSTRUCTIONS ON THE BACK

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CA0000641637 | Manifest Document No. | Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Services
11310 Sherman Way Sun Valley, CA 91352
4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 88303411
B. State Generator's ID: HA HQ3602206
C. State Transporter's ID: 987090
D. Transporter's Phone: 714-983-0342

5. Transporter 1 Company Name: Disposal Control Service
6. US EPA ID Number: CAT080034184
7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Pacific Treatment
P.O. Box 13626
San Diego, CA 92113
10. US EPA ID Number: CA0095894556

G. State Facility's ID: CA0095894556 DS
H. Facility's Phone: 619-233-0424

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	L. Waste No.
a. California regulated waste only	001	TT	040.00	G	State 135; EPA/Other N/A
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
water 85-90%
mud 10-15%
waste water, sump

K. Handling Codes for Wastes Listed Above
a. 97 [illegible]
b.
c.
d.

15. Special Handling Instructions and Additional Information
Wear appropriate personal protective equipment.

16.
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Printed/Typed Name: Erik Johnson | Signature | Month Day Year: 03 29 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Dave Dade | Signature | Month Day Year: 03 29 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space
Has Hazardous waste land N.O.S. [illegible] / 12 incomplete
1 (app) DCM7

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: DARYEL STAGER | Signature | Month Day Year: 03 29 89

GENERATOR

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

88303411

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 D

...ed OMB No. 2050—0039 (Expires 9-30-88)
...t or type. (Form designed for use on elite-12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Service
11310 Sherman Way. Sun Valley, Ca 91352

4. Generator's Phone (818) 765-7201

A. State Manifest Document Number: 87646468

B. State Generator's ID:

5. Transporter 1 Company Name: King + King oil
6. US EPA ID Number: CAD981423320

C. State Transporter's ID:

D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
PRI 1835 E. 29th ST.
Signal Hill, CA.
10. US EPA ID Number: CAT0100011059

G. State Facility's ID: [illegible]

H. Facility's Phone:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquid Waste oil + Water N.O.S NA1270	001	TT	01475	Gal.	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Waste oil + Water

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Rubber Gloves + Safety Glasses

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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 04 12 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Kenneth T. King
Signature: Kenneth T. King
Month Day Year: 04 12 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pete Madrid
Signature: Pete Madrid
Month Day Year: 04 13 89

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

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INSTRUCTIONS ON THE BACK

Approved OMB No. 2050—0039 (Expires 9-30-88)
Print or type. (Form designed for use on elite (12-pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. D000646257 Manifest Document No. 05111

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUN VALLEY CALIF 91352

State Manifest Document Number 87550951

4. Generator's Phone (818) 765-6201

B. State Generator's ID HAH 036022066

5. Transporter 1 Company Name KING & KING OIL

6. US EPA ID Number CAD981423320

C. State Transporter's ID 54200

D. Transporter's Phone 213-439-8500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I. 1835 E 29TH ST.
SIGNAL HILL CAL.

10. US EPA ID Number CAT090011057

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. COMBUSTABLE LIQUID. WASTE WATER & OIL NOS. NA 1270	001	TT	00600		State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL & WATER.

5

K. Handling Codes for Wastes Listed Above
a. R01. b.
c. d.

15. Special Handling Instructions and Additional Information
Rubber Gloves & Safety Glasses.

16.
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Printed/Typed Name: ERIK JOHNSON
Signature: [signature]
Month Day Year: 05 11 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA
Signature: J Concepcion Carrera
Month Day Year: 05 11 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year: 05 11 89

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [signature] MADRID
Signature: [signature]
Month Day Year: 05 11 89

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

IN EMERGENCY OR SPILL CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

print or type (Form designed for use on elite (12-pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD000646267 — Manifest Document No.

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessory Services, 11310 Sherman Way, Sun Valley, CA. 91352

4. Generator's Phone (818) 765-6201

State Manifest Document Number: 87556355

B. State Generator's ID: HAHQ36022066

5. Transporter 1 Company Name: KING + KING OIL

6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: (213) 439 0500

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: P.R.I 1835 E. 29th ST. SIGNAL Hill, CA.

10. US EPA ID Number: CAT080011059

G. State Facility's ID:

H. Facility's Phone:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquid WASTE water + oil NOS. NA 1270	001		99690		State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: WASTE oil + Water.

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information: Rubber Gloves + Safety Goggles

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON ~~Jesse Cabrera~~ — Signature: [signature] — Month Day Year: 06 07 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: KENNETH T. KING — Signature: [signature] — Month Day Year: 06 07 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [signature] — Signature: [signature] — Month Day Year: 06 06 89

GENERATOR — TRANSPORTER — FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-755

Approved OMB No. 2050—0039 (Expires 9-30-88)
print or type. (Form designed for use on elite (12-pitch typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: D000646257
Manifest Document No.:
Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Service
11310 Sherman Way, Sun Valley, CA. 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 87040409

B. State Generator's ID: HAHQ360220066

5. Transporter 1 Company Name: King + King Oil
6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: (213) 439-8500

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
P.R.I. 1835 Signal Hill, CA.
E. 29th St.

10. US EPA ID Number: CAT090011059

G. State Facility's ID: HAHQ360172524

H. Facility's Phone: (213) 595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustable Liquids WASTE OIL + WATER N.O.S. NA 1270	097	1	006215	C	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c. 22
d.

15. Special Handling Instructions and Additional Information
Rubber Gloves + Safety Glasses.

16.
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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 07 12 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera
Signature: J Concepcion Carrera
Month Day Year: 07 12 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Luke Brooks
Signature: Luke Brooks
Month Day Year: 07 13 89

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

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State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite (12 pitch) typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD000646259 | Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessory Service, 11310 Sherman Way, Sun Valley, CA 91352

4. Generator's Phone: (818) 765-6211

A. State Manifest Document Number: 89475820

B. State Generator's ID: HAH03102206 8

5. Transporter 1 Company Name: Diversified Rental Sales

6. US EPA ID Number: CAT080013411 4

C. State Transporter's ID: 91021

D. Transporter's Phone: 1-800-224-3345

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: Kettleman Hills, 35251 Skyline Rd., Kettleman City, CA

10. US EPA ID Number: CAT080016111 7

G. State Facility's ID: CAT080016111 7

H. Facility's Phone: (209) 386-9711

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hydraulic Oil, Non Dangerous Liquid, E-No. 9129	020	DM	000.15	Y	State 131; EPA/Other F002, D006
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

Returned 20 FMS on 10-12-89 PROFILE PROBLEM CYN

J. Additional Descriptions for Materials Listed Above: Petro-Hydraulic 5260

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information: Glove Box / [illegible]

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Jose [illegible] | Signature | Month Day Year: 09 07 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JOSE L. OCHOA | Signature | Month Day Year: 09 07 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

GENERATOR

TRANSPORTER

Do Not Write Below This Line

designed for use on elite (pitch typewriter).

HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257 | Manifest Document No.: 139 | of 6 | is not required by Federal ...

Generator's Name and Mailing Address: ... ACCESSORY SER. ... SHERMAN WAY, SUN VALLEY

Generator's Phone (818) 765-6201

A. State Manifest Document Number: 89475918

B. State Generator's ID: CAD000646257

C. State Transporter's ID: 910211/907070

D. Transporter's Phone: 1-800-824-3345

E. State Transporter's ID:

F. Transporter's Phone:

G. State Facility's ID: CAD095894556

H. Facility's Phone: 1-619-233-0424

Transporter 1 Company Name: DISPOSAL CONTROL SER | 6. US EPA ID Number: CAT080034184

Transporter 2 Company Name: | 8. US EPA ID Number:

Designated Facility Name and Site Address: PACIFIC TREATMENT, 2190 MAIN ST, SAN DIEGO, CALIF 92113 | 10. US EPA ID Number: CAD095894556

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ HAZARDOUS WASTE SOLID RQ ORME NA 9189 F006, D008/D007	019	DM	004.75	Y	State 181; EPA/Other F006/D008/D007
b. RQ HAZARDOUS WASTE SOLID RQ ORM-E-NA 9189 F006	003	DM	11.175	Y	State 181; EPA/Other F006
c. ~~RQ HAZARDOUS WASTE SOLID RQ ORME NA 9189~~ FJ ~~D001 F005~~	FJ ~~006~~	FJ ~~DM~~	FJ ~~001.15~~	~~Y~~	State ~~181~~ FJ; EPA/Other ~~D001~~ F ~~D001 F005~~
d. RQ WASTE Flammable Solid NOS. Flammable Solid UN1325 D001 F005	006	DM	001.15	Y	State 181; EPA/Other D001 F005

J. Additional Descriptions for Materials Listed Above

a. - CHROME CAKE. # 88-0977
b - NICKEL WASTE # 89-1648
c - CHROME & SOLVENT # 89-1647

K. Handling Codes for Wastes Listed Above

a.	b.
14	14
c.	d.
VOID	14

(28X55 gal)

15. Special Handling Instructions and Additional Information

GLOVES, GOGGLES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 08 15 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Michael B. VanAlstine | Signature: [signature] | Month Day Year: 08 15 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

11c = VOID
11a, 11b - Incomplete ... N.O.S. / 13a; 4.75y = ≈ 8550p
13c; 0.75y = ≈ 1350p / 13d; 1.5y = ≈ 1500p

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: JUAN J. NAVARRETE | Signature: [signature] | Month Day Year: 08 18 89

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

89475918

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-...

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite (12-pitch typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Flight Accessory Service
11310 Sherman Way Sun Valley, Ca 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 89475819

B. State Generator's ID: HAHQ3602206 6

5. Transporter 1 Company Name: King + King Oil
6. US EPA ID Number: CAD981423320

C. State Transporter's ID: 54200

D. Transporter's Phone: (213) 439-8500

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
P.R.I. 1835 E. 29th ST
Signal Hill, Ca
10. US EPA ID Number: CAT080011059

G. State Facility's ID: HAHQ3601725 2

H. Facility's Phone: (213) 595-6577

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustible Liquid Waste water + oil NOS NA 1270	001	TT	600		State 221 EPA/Other D001
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
Waste oil + water

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Rubber Gloves + Safety Goggles

16.
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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 08 25 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J Concepcion Carrera
Signature: J Concepcion Carrera
Month Day Year: 08 25 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year: 8

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pete Madrid
Signature: Pete Madrid
Month Day Year: 08 25 89

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89475819

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

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Form Approved. OMB No. 2050—0039 (Expires 9-30-88)
(Form designed for use on elite (12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST*

Generator's US EPA ID No. CAD006646257 | Manifest Document No. | 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessory Service, 11310 Sherman Way, Sun Valley, Ca 91352

4. Generator's Phone: 818 765 6201

A. State Manifest Document Number: 87646471

B. State Generator's ID: HAH036022066

5. Transporter 1 Company Name: King + King Oil

6. US EPA ID Number: CAD981423220

C. State Transporter's ID: 54200

D. Transporter's Phone: (213) 439-8500

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: E.R.I. 1835 E. 29th St, Signal Hill, Ca

10. US EPA ID Number: CAT090011059

G. State Facility's ID: HAH036011252

H. Facility's Phone: 213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustible Liquid Waste Water + Oil NOS NA 1270	001	TT	850	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: Waste oil + water

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information: Rubber Gloves + Safety Glasses

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: Jesse Cabrera | Signature: Jesse Cabrera | Month Day Year: 08 07 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: J. Concepcion Carrera | Signature: J. Concepcion Carrera | Month Day Year: 08 07 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible] | Signature: [illegible] | Month Day Year: 08 08 89

8022 A (1/87)
8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

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Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FLIGHT ACCESORY SERVICES, 11310 SHERMAN WY. SUN VALLEY, CA 91352
4. Generator's Phone (818) 765 6201
A. State Manifest Document Number: 88589867
B. State Generator's ID: HAHQ36022064
5. Transporter 1 Company Name: RHO CHEM
6. US EPA ID Number: CAD008364432
C. State Transporter's ID: 911266
D. Transporter's Phone: 213 7766233
7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:
9. Designated Facility Name and Site Address: RHO CHEM CORP. 425 ISIS AVE INGLEWOOD, CA 90801
10. US EPA ID Number: CAD008364432
G. State Facility's ID: CAD008364432
H. Facility's Phone: 213 7766233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE ORM-A LIQUID NOS NA1693	001	DM	000556		State 2111 / EPA/Other F001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: 1A TRI 111, 80% WATER 19% METAL FINES 1%

K. Handling Codes for Wastes Listed Above: a. 01 b. c. d.

15. Special Handling Instructions and Additional Information: APRON, GLOVES, GOGGLES

16.

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Printed/Typed Name: Jesse Cabrera
Signature: Jesse Cabrera
Month Day Year: 080989

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: S. EVANS 55277
Signature: [signature]
Month Day Year: 080989

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JERRY L SADLER
Signature: [signature]
Month Day Year: 080989

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

88589867

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

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Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: AD900646757
Manifest Document No.:
Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessories Service, 11310 Sherman Way, So. Vermont, Ca
4. Generator's Phone (213) 765-[illegible]
A. State Manifest Document Number: 89475821
B. State Generator's ID: HA[illegible]
5. Transporter 1 Company Name: King + King Oil
6. US EPA ID Number: [illegible]
C. State Transporter's ID: [illegible]
D. Transporter's Phone: [illegible]
7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:
9. Designated Facility Name and Site Address: PRI [illegible] ST, [illegible]
10. US EPA ID Number: [illegible]
G. State Facility's ID: HA[illegible]
H. Facility's Phone: (213) [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustible Liquid: Waste Water + Oil NOS NA 1270	[illegible]	TT	00675	[illegible]	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: Waste oil + water

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information: Rubber Gloves + Safety Glasses

16.

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Printed/Typed Name: Jesse Cabrera
Signature: [signature]
Month Day Year: [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera
Signature: J. Concepcion Carrera
Month Day Year: 09 28 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name:
Signature:
Month Day Year:

GENERATOR / TRANSPORTER / FACILITY

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DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

Please print or type. (Form designed for use on elite (12 pitch typewriter))

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. 0000646257 | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
HAWKER PACIFIC / FAS
11310 SHERMAN WAY, SUN VALLEY CALIF

State Manifest Document Number 89475921

4. Generator's Phone (818) 765-6201

B. State Generator's ID HAHQ3602206661

5. Transporter 1 Company Name: DISPOSAL CONTROL SERVICES
6. US EPA ID Number: CAT 800341184

C. State Transporter's ID 007333

D. Transporter's Phone 1-714-983-0342

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
APPROPRIATE TECH. II
1700 MAXWELL ROAD
CHULA VISTA CAL 92011
10. US EPA ID Number: CAT080010101

G. State Facility's ID CAT080010101

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE CORROSIVE LIQUID NOS UN # 1760	001	TT	1000	G	State 791 / EPA/Other D002 / D006
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
a. SULFURIC ACID 50% - HYDROFORIC ACID 15%
R01
TREATMENT FACILITY

K. Handling Codes for Wastes Listed Above
a. 89
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES - GOGGLES - ETC.

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON | Signature: Erik Johnson | Month Day Year: 10 30 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: PHILLIP FARLEY | Signature: Phillip Farley | Month Day Year: 10 30 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
Rejected - not acceptable at this time SE 10/30/89
13 Actual gallons 495 gallons SE

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SILVIA L. ESQUIVEL | Signature: Silvia L. Esquivel | Month Day Year: 11 01 89

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89475921

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No: CAD 0 8 1 6 4 6 1 5 7 2

Manifest Document No.

Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elliott Aerospace Services
11315 Sherman Way Sun Valley, Ca 91352

4. Generator's Phone (818) [illegible]

A. State Manifest Document Number: 89475823

B. State Generator's ID: HAW 0 2 6 6 6 6 6 6

5. Transporter 1 Company Name: [illegible]

6. US EPA ID Number: CAD 9 8 1 4 2 3 3 2 0

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
[illegible] E. 25th St.
San [illegible]

10. US EPA ID Number: [illegible]

G. State Facility's ID: HAHG 5 6 0 1 7 3 5 4

H. Facility's Phone: (213) 585-[illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Wastewater, Oil NS NA 9108 7c Combustible Liquid	001	T	996510	G	State 331 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Waste water + oil
178 [illegible]
16

K. Handling Codes for Wastes Listed Above
a. [illegible]
b.
c.
d.

15. Special Handling Instructions and Additional Information
Rubber [illegible] Safety goggles.

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Jesse Cabrera — Signature: [signature] — Month Day Year: 1/1/92 7

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera — Signature: [signature] — Month Day Year: 1/1/92 7

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: 1/8/89

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89475823

Do Not Write Below This Line

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Print or type. (Form designed for use on elite (12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD000164257 | Manifest Document No. | Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY, SUNVALLEY CALIF. ~~91352~~ 91352
4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 89475919
B. State Generator's ID: HAHA136012210661

5. Transporter 1 Company Name: KING & KING OIL
6. US EPA ID Number: CAD981412313210
C. State Transporter's ID: 54200
D. Transporter's Phone: 1-213-439-8500

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I
1635 E 24TH ST
SIGNAL HILL, CALIF
10. US EPA ID Number: CAT090011057
G. State Facility's ID: HAHA136017252
H. Facility's Phone: 1-213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS. COMBUSTIBLE LIQUID NA 1993	001	TT	14010	G	State 223 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
CONTAMINATED WITH HOLOGEATED SOLVENTS
16

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES -

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: FRIK JOHNSON | Signature | Month Day Year: 11 12 21 89

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA | Signature | Month Day Year: 11 12 21 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: PETER MACKS | Signature | Month Day Year: 11 12 21 89

Do Not Write Below This Line

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89475919

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

California Health and Welfare Agency
Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite or pica typewriter).

1990

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD010164127 | Manifest Document No. 105190 | Page 1 of 1 | Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 89475827

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY. SUN VALLEY CALIF

B. State Generator's ID: H AH 316012120161

4. Generator's Phone (818) 765-6201 - 91352

5. Transporter 1 Company Name: KING & KING OIL
6. US EPA ID Number: CAD098142313120

C. State Transporter's ID: 54200
D. Transporter's Phone: 213-439-8500

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
P.R.I.
1635 E 29TH ST
SIGNAL HILL, CALIF
10. US EPA ID Number: CAT090011015

G. State Facility's ID: H AH 316011212 93
H. Facility's Phone: 1-213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS COMBUSTABLE LIQUID N.A. 1270	001	TT	01212	G	State 223 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL.

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES.

16.
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Printed/Typed Name: ERIK JOHNSON | Signature | Month Day Year: 10/10/90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jo CONCEPCION CARRERA | Signature | Month Day Year: 10/10/90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: TOM TAVOLO | Signature | Month Day Year

Do Not Write Below This Line

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89475827

DHS 8022 A (1/88)
EPA 8700-22
(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 D

89485786

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

WASTE MANIFEST

D000646257 Document No. ___ of 1 is not required by Federal Law

3. Generator's Name and Mailing Address Flight Accessory Service 11310 Sherman Way Sun Valley CA 91352	State Manifest Document Number 89485786
4. Generator's Phone (818) 765-6201	B. State Generator's ID HAH030022966
5. Transporter 1 Company Name King + King Oil 6. US EPA ID Number CAD981423320	C. State Transporter's ID 54700 D. Transporter's Phone (213) 43[illegible]
7. Transporter 2 Company Name 8. US EPA ID Number	E. State Transporter's ID F. Transporter's Phone
9. Designated Facility Name and Site Address P.R.I 1835 E. 29th St. Signal Hill CA 90806 10. US EPA ID Number CAT090011057	G. State Facility's ID HAH036017252 H. Facility's Phone 1-213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Waste Oil NOS Contaminated Liquid N.A 1993	0811	TT	00400	G	State 223 EPA/Other D001
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

PETROLEUM RECYCLING CORPORATION

J. Additional Descriptions for Materials Listed Above

Contaminated with Halogenated Solvents

By: _____ 20

K. Handling Codes for Wastes Listed Above

a. R01 b. c. d.

15. Special Handling Instructions and Additional Information

Gloves, Goggles.

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Jesse Cabrera	Jesse Cabrera	01 02 90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
J. Concepcion Carrera	J Concepcion Carrera	01 02 90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Peter Madrid	Peter Madrid	01 03 90

GENERATOR

TRANSPORTER

FACILITY

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

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Department of Health Services
Toxic Substances Control Division
Sacramento, California

HAZARDOUS WASTE MANIFEST

(Please print or type. (Elite type typewriter).)

Generator's US EPA ID No. CAD0016461257

Manifest Document No.

Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 89475920

B. State Generator's ID: A 1 1 3 4 2 4 5 8

3. Generator's Name and Mailing Address: ACCESSORY SERVICES, 11500 SHERMAN WAY, SUNVALLEY

4. Generator's Phone: (818) 765-6201

5. Transporter 1 Company Name: RHO-CHEM CORP

6. US EPA ID Number: CAD008364432

C. State Transporter's ID: 014431

D. Transporter's Phone: (213) 776-6233

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: RHO-CHEM CORP, 425 ISIS AVE, INGLEWOOD, CA 90301

10. US EPA ID Number: CAD008364432

G. State Facility's ID: CAD008364432

H. Facility's Phone: 1-213-776-6233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE FLAMABLE LIQUID NOS (F-003 D-001) CAN 1993 - PAINT WASTE	0103	DM	001612	G	State 213 / EPA/Other F-003/D001
b. ~~WASTE CHEM A NOS NA 1693~~ ERR ~~LIQUID~~ WASTE 1,1,1 TRICHLOROETHANE LIQUID CHEM-A-NOS - ~~NA~~ ~~1693~~ UN2831 (F-001)	0105	DM	002710	G	State 211 / EPA/Other F-001
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
a. PROFILE # 6511 — TOXIC - IGNITABLE
b. PROFILE # 1228 —

K. Handling Codes for Wastes Listed Above
a. 01 b. 01 c. d.

15. Special Handling Instructions and Additional Information
GLOVES GOGGLES APRON

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON — Signature: [signature] — Month Day Year: 10/13/190

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MICHAEL FULLER # 57202 (8) — Signature: M. Fuller — Month Day Year: 10/13/90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Tony Gaeta — Signature: Tony Gaeta — Month Day Year: 10/13/90

Do Not Write Below This Line

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89475920

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Yellow — TSDF SENDS THIS COPY TO DESTINATION

88060460

WASTE MANIFEST

Manifest Document No. 0000646257

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY SUN VALLEY CALIF 91352

4. Generator's Phone (818) 765-6201

5. Transporter 1 Company Name: KING HAZARDOUS WASTE
6. US EPA ID Number: CAL000027490

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
P.R.C. 1835 E. 29TH ST.
SIGNAL HILL CA 90806 CAT080011059

10. US EPA ID Number:

A. State Manifest Document No. 88060460
B. State Generator's ID: HAH03602 2066
C. State Transporter's ID: 2668
D. Transporter's Phone: 213-439-8500
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: 213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS Combustible Liquid NA 1993	001	TT	00275	G	State 223 / EPA/Other D001
b.					State / EPA/Other
c.					State 08 44 / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
CONTAMINATED WITH HALLOGENATED SOLVENTS

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Gloves & Safety Glasses

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON
Signature: [signature]
Month Day Year: 08 27 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA
Signature: J. Concepcion Carrera
Month Day Year: 08 27 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lucen Brooks
Signature: [signature]
Month Day Year: 08 27 90

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 [illegible]

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite (pitch typewriter).

Instructions on the back

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD 006462157 | Manifest Document No. | Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY SUN VALLEY, CA 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 88060470

B. State Generator's ID

5. Transporter 1 Company Name: KING HAZARDOUS WASTE
6. US EPA ID Number: CAL000027490

C. State Transporter's ID: 2668

D. Transporter's Phone: 213-439-8500

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
INDUSTRIAL SERVICE CO
1700 S. SOTO ST.
LOS ANGELES CA 90023 CAD099452708
10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone: 213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS combustible LIQUID NA 1270	001	TT	018417	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
MIXED OIL & WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
Rubber Gloves & Safety Glasses

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON | Signature | Month Day Year: 10 31 14 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA | Signature | Month Day Year: 10 31 14 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: LUIS MESA | Signature | Month Day Year: 10 31 14 90

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAY

Please print or type. (Form designed for use on [illegible] pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257 | Manifest Document No.: 00001 | Page 1 of 1 | Information in the [illegible] is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY [illegible]
11310 SHERMAN WAY SUN VALLEY CALIF 91352

4. Generator's Phone (818) 7[illegible] [illegible]

A. State Manifest Document Number: 89862742

B. State Generator's ID: HAM03602200[illegible]

5. Transporter 1 Company Name: DISPOSAL CONTROL SERVICE
6. US EPA ID Number: CAT080034184

C. State Transporter's ID: 007319

D. Transporter's Phone: 714 983 0342

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
U.S. ECOLOGY
PO BOX 578
BEATTY N.V 89002
10. US EPA ID Number: NVT330010900

G. State Facility's ID:

H. Facility's Phone: 1-702-553-2-03

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. CALIFORNIA REGULATED WASTE ONLY	002	DM	400	D	State 181 / EPA/Other NA
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
25-30% DIESEL
BALANCE SURE PACK

APPROVAL I WS# 07-005-4838

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
WEAR [illegible]

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK L JOHNSON | Signature: [signature] | Month Day Year: 04 04 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jimmy Lizardo | Signature: [signature] | Month Day Year: 04 04 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space
13a) Total quantity received 451 P 4/6/90 [illegible]

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: David P. Lima | Signature: [signature] | Month Day Year: 04 06 90

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89862742

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

State of California, Health and Welfare Agency
Form Approved OMB No 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD009614625 | Manifest Document No. 05790K | Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
1100 CHERLINGTON, SCHURLEY CAL 91352
4. Generator's Phone (818) 765-6201

A. State Manifest Document Number 89862740
B. State Generator's ID HMM03402210161

5. Transporter 1 Company Name: KING HAZARDOUS WASTE
6. US EPA ID Number: CAL000022408
C. State Transporter's ID 266
D. Transporter's Phone 1-213-437-2500

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
INDUSTRIAL SELUKE CO
1700 SOTO ST
LOS ANGELES CA 90023
10. US EPA ID Number: CAD991394812
G. State Facility's ID
H. Facility's Phone 213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS. COMBUSTIBLE LIQUID NA 1270	001	TT	0015615	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
MIXED OIL + WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
WHEN GLOVES - GOGGLES

16.
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Printed/Typed Name: ERIK JOHNSON | Signature | Month Day Year 05/08/90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA | Signature | Month Day Year 05/08/90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: LUIS MESA | Signature | Month Day Year 05/11/90

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

Do Not Write Below This Line

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Designed for use on elite (pitch typewriter)

Generator's US EPA ID No.: CAT000646257 | Manifest Document No: 06209 | Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11310 SHERMAN WAY SUN VALLEY, CA. 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 89969902

B. State Generator's ID: HAH036022066

5. Transporter 1 Company Name: RHO-CHEM CORP.
6. US EPA ID Number: CAD008364432

C. State Transporter's ID: 012727

D. Transporter's Phone: 213-776-6233

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
RHO-CHEM CORP.
425 ISIS AVE.
INGLEWOOD, CA. 90301

10. US EPA ID Number: CAD008364432

G. State Facility's ID: CAD008364432

H. Facility's Phone: 213-776-6233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE 1.1.1. TRICHLOROETHANE ORM-A- UN-2831 F-001	004	DM	00200	G	State 211 EPA/Other F-001
b. ~~WASTE FLAMMABLE LIQUIDS N.O.S. D-001 F.003 UN-1993~~					State 213 EPA/Other ~~F-003/D-001~~
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
A. PROFILE # 1228-
~~B. PROFILE # 6511~~

K. Handling Codes for Wastes Listed Above
a. 01
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES-GOGGLES

16.
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Printed/Typed Name: ERIK JOHNSON | Signature: Erik M Johnson | Month Day Year: 06 26 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Greg Curtis #51825 | Signature: [signature] (4) | Month Day Year: 06 26 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: John Earley | Signature: John Earley | Month Day Year: 06 26 90

Do Not Write Below This Line

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89969902

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

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ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, PA 1969

Please print or type

Form Approved OMB No 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: CAT[illegible] — Manifest Document No: [illegible]
2. Page 1 of 3 — Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address: [illegible]
4. Generator's Phone: (818) [illegible]
5. Transporter 1 Company Name: [illegible]
6. US EPA ID Number: CAT[illegible]
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: [illegible]
10. US EPA ID Number: [illegible]

A. State Manifest Document Number: MI 2047462
B. State Generator's ID: [illegible]
C. State Transporter's ID: [illegible]
D. Transporter's Phone:
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: [illegible]

	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)	12 Containers No.	Type	13 Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a	X RQ [illegible] NA9189 [illegible]	003	DM	[illegible]	P	F002	
b							
c							
d							

J. Additional Descriptions for Materials Listed Above: 11A) [illegible] SEE ATTACHED [illegible] W-[illegible] C-22110

K. Handling Codes for Wastes Listed Above: a/ / b/ / c/ / d/ /

15. Special Handling Instructions and Additional Information: [illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: [illegible] — Signature: [illegible] — Date (Month Day Year): [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date (Month Day Year): [illegible]

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name: — Signature: [illegible] — Date (Month Day Year): [illegible]

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] — Signature: [illegible] — Date (Month Day Year): [illegible]

GENERATOR / TRANSPORTER / FACILITY

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/88)

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Section 299.548 MCL or Section 10 of Act 136, P.A. 1969

Please print or type

Form Approved. OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAT000646257 Manifest Document No. 109598

2. Page 1 of 3

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Flight Accessory Service
11310 Sherman Way, Sun Valley CA. 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number MI 2047462

B. State Generator's ID HAHQ 36-022066

5. Transporter 1 Company Name: Disposal Control Serv.

6. US EPA ID Number: CAT080034184

C. State Transporter's ID 883033

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CyanoKem
12381 Shaffer
Detroit Mi 45227

10. US EPA ID Number: MID098011992

G. State Facility's ID

H. Facility's Phone (313) 353-5280

GENERATOR

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER).	HM	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.	N/H
a. RQ, HAZARDOUS WASTE Solid NOS, ORM-E NA9189 D003, D006, F008	X	003	DM	00660	P	D003 D006 F008	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
11A) AA Cyanide / Cadminium Waste
SEE ATTACHED Profile Sheet
Profile # W-13945
Profile # C-22110

K. Handling Codes for Wastes Listed Above
a/ /
b/ /
c/ /
d/ /

15. Special Handling Instructions and Additional Information
WEAR APPROPRIATE SAFETY PROTECTION (3X55)

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Printed/Typed Name: ERIK JOHNSON
Signature: Erik R. Johnson
Date (Month Day Year): 07 06 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MICHAEL B. VAN ALSTINE
Signature: Michael B. Van Alstine
Date (Month Day Year): 07 06 90

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date (Month Day Year)

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Manifest Document No. CA 1000 0 6 1 4 2 5 7 0 3 1 7 9 6

Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 89970716

B. State Generator's ID: H A H A 3 6 0 2 2 0 6 6

C. State Transporter's ID: 2668

D. Transporter's Phone: 1-213 439-8500

E. State Transporter's ID:

F. Transporter's Phone:

G. State Facility's ID:

H. Facility's Phone: 213-262-9747

1. Generator's Name and Mailing Address: ACCESSORY SERVICES
13310 SHERMAN WAY, SUN VALLEY CAL 91352

4. Generator's Phone: (818) 765-6201

5. Transporter 1 Company Name: KING HAZARDOUS WASTE

6. US EPA ID Number: CAL000012749 0

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address: INDUSTRIAL SERVICE COM.
1700 SOTO ST
LA, CALIF 90023

10. US EPA ID Number: CAD099452708

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS - COMBUSTIBLE LIQUID NA 1270	001	TT	00400	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: MIXED OIL + WATER

K. Handling Codes for Wastes Listed Above: a. R01 b. c. d.

15. Special Handling Instructions and Additional Information: RUBBER GLOVES + GOGGLES

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Printed/Typed Name: ERIK JOHNSON — Signature: [signature] — Month Day Year: 07 09 90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: J. GREGORIO CORREA — Signature: [signature] — Month Day Year: 07 09 90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: LUIS MESA — Signature: [signature] — Month Day Year: 07 10 90

GENERATOR — TRANSPORTER — FACILITY

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DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

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Department of Health Services
Toxic Substances Control Division
Sacramento, California

(pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No: [illegible]
Manifest Document No:
Page 1 of 1
Information in the shaded areas is not required by Federal law.

90130316

3. Generator's Name and Mailing Address: [illegible]
4. Generator's Phone ( ) [illegible]
A. State Manifest Document Number: 90130316
B. State Generator's ID: [illegible]
5. Transporter 1 Company Name: [illegible]
6. US EPA ID Number: [illegible]
C. State Transporter's ID: [illegible]
D. Transporter's Phone: [illegible]
7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:
9. Designated Facility Name and Site Address: [illegible]
10. US EPA ID Number: [illegible]
G. State Facility's ID:
H. Facility's Phone: [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. [illegible]	[illegible]	[illegible]	[illegible]		State N/A; EPA/Other N/A
b. [illegible]	[illegible]	[illegible]	[illegible]		State N/A; EPA/Other [illegible]
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above: [illegible]

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information

16.

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Printed/Typed Name: [illegible] Signature: [illegible] Month Day Year: [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] Signature: [illegible] Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: JAMES LAWRENCE Signature: James Lawrence Month Day Year: 090390

19. Discrepancy Indication Space: Q-K 9/C 17099

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] Signature: [illegible] Month Day Year: [illegible]

GENERATOR / TRANSPORTER / FACILITY

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90130316

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

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Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

89413775

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

WASTE MANIFEST

Generator's US EPA ID No. CAT000646257 | Manifest Document 10190 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Hawker Pacific, 11310 Sermanway, Sun Valley, CA

4. Generator's Phone: 818 765-6201

A. State Manifest Document Number: 89413775

B. State Generator's ID: HAHQ36-022066

5. Transporter 1 Company Name: MARTIN IND Pumping

6. US EPA ID Number: CAD000628636

C. State Transporter's ID: 111506

D. Transporter's Phone: 805-251-3737

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: Norris Environmental, 5215 So. Boyle, Los Angeles, CA 90058

10. US EPA ID Number: CAD097030993

G. State Facility's ID: [illegible]

H. Facility's Phone: 213-588-7111

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Waste Chromic Acid Solution Corrosive Material UN1755	001	TT	01100	GAL	State 792 EPA/Other D002/D007
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above: Chromic Acid From plating bath, Profile # E1455CKO

K. Handling Codes for Wastes Listed Above: a. 15 b. c. d.

15. Special Handling Instructions and Additional Information: Wear Personal Protective Clothing, Emergency Contact #(805) 251-3737 E.R. Guide page 60

16.

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Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 100190

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: LARRY RAMIREZ | Signature: [signature] | Month Day Year: 100190

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: BI TIN VELASCO | Signature: Bi Tin Velasco | Month Day Year: 100190

GENERATOR

TRANSPORTER

FACILITY

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

STATE OF ARKANSAS
Department of Pollution Control and Ecology
P. O. Box 9583 Little Rock, Arkansas 72219
Telephone 501-562-7

1991

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No 2050-0039. Expires 9-30-91

AR 6-90

UNIFORM HAZARDOUS WASTE MANIFEST

1 Generator's US EPA ID No. CAT000646257 Manifest Document No. 83399

2 Page 1 of 1

Information in the shaded areas is not required by Federal law.

3 Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICES
11370 SHERMAN WAY
SUN VALLEY CALIF.

4 Generator's Phone (818) 765-6201

A State Manifest Document Number
AR- 483399

B State Generator's ID
HAHQ-36-022066

5. Transporter 1 Company Name: MARTIN IND. PUMPING, INC.
6 US EPA ID Number: CAD000628656

C State Transporter's ID PC 1153 H 6648

D. Transporter's Phone (805) 251-3737

7. Transporter 2 Company Name
8 US EPA ID Number

E. State Transporter's ID PC ____ H ____

F. Transporter's Phone

9 Designated Facility Name and Site Address
RINECO CHEMICAL
1007 VULCAN RD.
BENTON, ARKANSAS 72015
10 US EPA ID Number: ARD981057870

G. State Facility's ID
ARD 981057870

H Facility's Phone
(501) 778-9089

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12 Containers No	Type	13. Total Quantity	14 Unit Wt/Vol	I. Waste No.
(WASTE PAINT AND RELATED MATERIALS) WASTE FLAMABLE LIQUID, NA 1263	011	DM	00550	G	D001 F005
b. WASTE FLAMABLE LIQUID, N.O.S. (M.E.K. TOLUENE) FLAMABLE LIQUID, UN 1993 ERG#90	002	DM	00024	G	D001
c.					
d.					

J. Additional Descriptions for Materials Listed Above
11a) WASTE PAINT RELATED MATERIALS. 91-01-0048
11b) LAB PACKS - SEE ATTACHED INVENTORY.

if no alternate TSDF, return to generator

K. Handling Codes for Wastes Listed Above
EMERGENCY RESPONSE INFORMATION:
E.R. GUIDE PAGE #26 - A
(818) 765-6201
ERIK JOHNSON.

15. Special Handling Instructions and Additional Information
WEARS GLOVES, GOGGLES, PROTECTIVE CLOTHING AND APPROPRIATE RESPIRATORY GEAR.

16 **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIK JOHNSON
Signature: [signature]
Month Day Year: 01 17 91

TRANSPORTER

17 Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: TROY LEE SCHUMACKER
Signature: [signature]
Month Day Year: 01 17 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19 Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: Kim Cogburn
Signature: [signature]
Month Day Year: 01 12 91

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete.

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91
Please print or type. (Form designed for use on e[illegible]pitch typewriter).

Instructions on the [illegible]ck

Department of Health Services
Toxic Substances Control Division
Sacramento, California

88060514

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAD000646257
Manifest Document No.:
Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Flight Accessory Service, 11310 Sherman Way, Sun Valley Ca 91352
4. Generator's Phone (818) 765-6201

A. State Manifest Document Number: 88060514
B. State Generator's ID: HAH836022066

5. Transporter 1 Company Name: King Hazardous Waste Co. Inc.
6. US EPA ID Number: CAL000027490
C. State Transporter's ID: 2668
D. Transporter's Phone: 213)439-8500

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Industrial Service Co., 1700 So. Soto St., Los Angeles, Ca. 90023
10. US EPA ID Number: CAD099452708
G. State Facility's ID:
H. Facility's Phone: 213) 262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Waste Oil N.O.S. Combustible Liquid N.A. 1270	001	TT	00450	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: Waste Oil + water

K. Handling Codes for Wastes Listed Above: a. R001 b. c. d.

15. Special Handling Instructions and Additional Information: Gloves

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Rod Kenzel
Signature: [signature]
Month Day Year: 01 22 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera
Signature: [signature]
Month Day Year: 01 22 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Luis Mesa
Signature: [signature]
Month Day Year: 01 22 91

Do Not Write Below This Line

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DA

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on el[illegible]pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: CAT000646257
Manifest Document No.: 206191
Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY SUN VALLEY CAL.

4. Generator's Phone (818) 765-6101

A. State Manifest Document Number: 89970718

B. State Generator's ID: HAK036022066

5. Transporter 1 Company Name: KING HAZARDOUS WASTE
6. US EPA ID Number: KAL000027490

C. State Transporter's ID: 2668
D. Transporter's Phone: 213-439-8500

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
INDUSTRIAL SERVICE CO
1700 SO SOTO ST
LOS ANGELES CAL 90023

10. US EPA ID Number: KAD099452708

G. State Facility's ID:
H. Facility's Phone: 213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL N.O.S COMBUSTIBLE LIQUID NA, 1270	001	TT	00650	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above
a. R001
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES & GOGGLES

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON
Signature: [signature]
Month Day Year: 02 06 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Carrera
Signature: [signature]
Month Day Year: 02 06 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: LUIS MEZA
Signature: [signature]
Month Day Year: 2 [illegible]

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89970718

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite pitch typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. AT000646257 | Manifest Document No. | Page 1 of

Information in the shaded areas is not required by Federal law.

90017225

3. Generator's Name and Mailing Address: FLIGHT ACC [illegible] VALLEY [illegible]

4. Generator's Phone ( ) [illegible]

A. State Manifest Document Number: 90017225

B. State Generator's ID: HAHQ36 [illegible]

5. Transporter 1 Company Name: MARTIN [illegible] PUMPING

6. US EPA ID Number: CAD [illegible]

C. State Transporter's ID: [illegible]

D. Transporter's Phone: [illegible]

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: [illegible] LA [illegible]

10. US EPA ID Number: CAD [illegible]

G. State Facility's ID: [illegible]

H. Facility's Phone: [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. [illegible]	001	TT	05000	G	State [illegible] EPA/Other [illegible]
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above:
WATER 60%
CHROME III + VI 3-5%
SODIUM HYDROXIDE 15-17%

K. Handling Codes for Wastes Listed Above: a. 15 b. c. d.

15. Special Handling Instructions and Additional Information: [illegible]
24 HOUR EMERGENCY CH # [illegible] / [illegible]

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIK JOHNSON | Signature: [signature] | Month Day Year: 03 06 91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: CARL POPP | Signature: [signature] | Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space: [illegible]

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: BI [illegible] VELASCO | Signature: [signature] | Month Day Year: [illegible]

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90017225

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAT000614212

Manifest Document No. 14127

Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SER.
1310 SHERMAN WAY, SUN VALLEY CA.

4. Generator's Phone (818) 768-4101

A. State Manifest Document Number 89862739

B. State Generator's ID 4 AAA 3 K-H E T 0 A 5

5. Transporter 1 Company Name: MARTIN TRUCKING INC

6. US EPA ID Number: CAD000626626

C. State Transporter's ID 111-06

D. Transporter's Phone 602-251-7232

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
NICKEL ENVIRONMENTAL SERVICE
[illegible] HOYLE AVE
LA CA 90058

10. US EPA ID Number: CAD097210916

G. State Facility's ID CAD097210916

H. Facility's Phone 213-7111

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE ALKALINE CORROSIVE, LIQUID, N.O.S. CORROSIVE MATERIAL UN 1719	001	TT	014212LB		State 121; EPA/Other D002-D007
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
WATER 80%
CHROME III + VI 3-5%
SODIUM HYDROXIDE 15-17%

K. Handling Codes for Wastes Listed Above
a. 15
b.
c.
d.

15. Special Handling Instructions and Additional Information
WEAR PROPER PROTECTIVE EQUIPMENT ERG GUIDE # 40
24 HR EMERGENCY PH# 213-768-4101

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: ERIK JOHNSON
Signature: [signature]
Month Day Year: 03 07 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: CARL POPP
Signature: [signature]
Month Day Year: 03 07 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: BI TIN VELASCO
Signature: Bi Tin Velasco
Month Day Year: 03 07 91

Do Not Write Below This Line

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89862739

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 20 DAYS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAD006466257

Manifest Document No.

Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
HAWKER PACIFIC / FLIGHT ACCESSORY SER.
11310 SHERMAN WAY SUN VALLEY, CA 91352

4. Generator's Phone 818 765-6201

A. State Manifest Document Number **90017226**

B. State Generator's ID HAHQ26-022266

5. Transporter 1 Company Name MARTIN IND PUMPING

6. US EPA ID Number CAD006466260

C. State Transporter's ID 111506

D. Transporter's Phone 562-261-2737

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
MARKIS ENVIRONMENTAL SERVICE
5215 S BOYLE AVE
LA CA 90058

10. US EPA ID Number CAD009202112

G. State Facility's ID CAL000220095

H. Facility's Phone 213-589-7111

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE ALKALINE (CORROSIVE) LIQUID CORROSIVE MATERIAL NA1719 1G (SODIUM HYDROXIDE)	001	TT	04725	G	State 21 EPA/Other D002/D007
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
WATER 50%
CHROME III - VI 1-2%
SODIUM HYDROXIDE 15-17%

K. Handling Codes for Wastes Listed Above
a. 15
b.
c.
d.

15. Special Handling Instructions and Additional Information
[illegible]

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name ERIK [illegible] Signature [illegible] Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name [illegible] Signature [illegible] Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name [illegible] Signature Month Day Year

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90017226

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 20 DAYS

Welfare Agency
0039 (Expires 9-30-91)
(Form designed for use on elite-pitch typewriter).

Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAT000646257 | Manifest Document No. 04181 | Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY SUN VALLEY CAL
4. Generator's Phone (818) 765-6201 91352

A. State Manifest Document Number 89970717
B. State Generator's ID HAHQ360220616

5. Transporter 1 Company Name: KING HAZARDOUS WASTE
6. US EPA ID Number: CAL000027490
C. State Transporter's ID 2668
D. Transporter's Phone 213-439-8500

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
INDUSTRIAL SERVICE
1700 S. SOTO ST
L.A. CALIF. 90023
10. US EPA ID Number: CAD099452708
G. State Facility's ID
H. Facility's Phone 213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL NOS. COMBUSTIBLE LIQUID N.A. 1270	001	TT	00395	G	State 221 / EPA/Other D001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above
a. R01
b.
c.
d.

15. Special Handling Instructions and Additional Information
GLOVES & GOGGLES

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ERIK JOHNSON | Signature | Month Day Year: 04 18 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. CONCEPCION CARRERA | Signature | Month Day Year: 04 18 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: LUIS MESA | Signature | Month Day Year: 04 18 91

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

State of California—Health and Welfare Agency
Form Approved OMB No 2050—0039 (Expires 9-30-91)
Please print or type. (Form designed for use on elite (pica) pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. CAT000646257 | Manifest Document No. 5218911 | Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
FLIGHT ACCESSORY SERVICE
11310 SHERMAN WAY, SUNVALLEY CALIF
4. Generator's Phone (818) 765-6201 91352

A. State Manifest Document Number 89862738
B. State Generator's ID CAT000646257

5. Transporter 1 Company Name: KING HAZARDOUS WASTE
6. US EPA ID Number: CAL000012714910
C. State Transporter's ID 2668
D. Transporter's Phone 213-439-8500

7. Transporter 2 Company Name —
8. US EPA ID Number
E. State Transporter's ID —
F. Transporter's Phone —

9. Designated Facility Name and Site Address
INDUSTRIAL SERVICE
1700 S SOTO ST
L.A. CALIF 90023
10. US EPA ID Number: CAD099452708
G. State Facility's ID —
H. Facility's Phone 1-213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL, NOS COMBUSTABLE LIQUID N.A. 1270	001	TT	565	G	State 221 / EPA/Other D001
b. —					State / EPA/Other
c. —					State / EPA/Other
d. —					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above
a. R01
b. —
c. —
d. —

15. Special Handling Instructions and Additional Information
GLOVES + GOGGLES

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIK JOHNSON | Signature | Month Day Year: 05 28 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: J. Concepcion Cartera | Signature | Month Day Year: 05 28 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: LUIS MESA | Signature | Month Day Year: 5 28 91

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89862738

Do Not Write Below This Line

DHS 8022 A (1/88)
EPA 8700—22
(Rev. 9-88) Previous editions are obsolete.

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HARRY M. SIZEMORE
ROBERT M. ALPERN
MICHAEL M. MILLER
ASSISTANT DIRECTORS

SUITE 1400 CITY HALL EAST
200 NORTH MAIN STREET
LOS ANGELES, CA 90012
(213) 485-5112
FAX NO. (213) 626-5514

INDUSTRIAL WASTEWATER PERMIT

PERMIT NO: W-456607

RE-ISSUED APRIL 4, 1991
EFFECTIVE APRIL 4, 1991
EXPIRES APRIL 30, 1993

COMPANY NAME: Hawker Pacific Inc., Flight Accessory Services

MAILING ADDRESS: 11310 Sherman Way
Sun Valley, CA 91352

LOCATION ADDRESS: 11310 Sherman Way
Sun Valley, CA 91352

EPA PRETREATMENT CATEGORY: Electroplating (Existing Source - 40 CFR 413 Subparts A, E and F - Less than 10,000 GPD)

In accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, the above identified facility is hereby authorized to discharge industrial wastewater through the discharge points identified herein to the City of Los Angeles sewer system in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with all pretreatment regulations, standards or requirements under Local, State and Federal laws, including any such laws, regulations, standards or requirements that may become effective during the term of this permit.

Noncompliance with the terms and conditions of this permit shall constitute a violation of the L.A.M.C. Section 64.30. This permit becomes void upon any change of ownership or location whatsoever. In order to continue to discharge after the expiration date of this permit, an application must be filed for a new permit at least 90 days prior to the expiration date.

DELWIN A. BIAGI, Director
Bureau of Sanitation

BY: [signature] for

DATE: 4-4-91

29022

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

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FACT SHEET: See Appendix

Attachment A - Site Plan
Attachment B - Site Plan (Building #1)
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REPORTING INFORMATION: See Enclosure

Enclosure - Self-Monitoring Report Instruction Packet and Report Form

PART 1 - DISCHARGE LIMITATIONS

A. The permittee is authorized to discharge industrial wastewater to the City of Los Angeles sewer system from the sampling point(s) listed below.

Description of sampling point(s):

Sampling Point(s)	Description
01	The secured sampling facility located directly after 5-stage clarifier (Attachments GA and M)

B. The discharge from Sampling Point 01 shall not exceed the following Federal discharge limitations:

FEDERAL
DISCHARGE LIMITATIONS
(Pretreatment Standards for Existing Sources, 40 CFR 413)

Constituents	Units	Daily Maximum	4-Day Average
Cadmium	mg/l	1.2	0.7
Cyanide(Free)[1]	mg/l	5.0	2.7
Lead	mg/l	0.6	0.4
Total Toxic[2] Organics (TTO)	mg/l	4.57	----

C. The discharge from Sampling Point 01 shall not exceed the following Local discharge limitations:

LOCAL
DISCHARGE LIMITATIONS

Constituents	Units	Instantaneous Maximum
Arsenic	mg/l	3.0
Cadmium	mg/l	15.0
Chromium(Total)	mg/l	10.0
Copper	mg/l	15.0
Cyanide (Free)	mg/l	2.0
Cyanide(Total)	mg/l	10.0
Lead	mg/l	5.0
Nickel	mg/l	12.0
pH	Standard Units (S.U.)	5.5-11.0
Silver	mg/l	5.0
Zinc	mg/l	25.0
Dissolved Sulfides	mg/l	0.1
Dispersed Oil & Grease	mg/l	600.0

Footnotes to Discharge Limitations

[1] Cyanide (Free) shall mean cyanide amenable to chlorination as defined by 40 CFR 136.

[2] Total Toxic Organics (TTO) shall be the summation of all quantifiable values greater than 0.01 milligrams per liter for the following toxic organics:

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
Hexachloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Bis(2-chloroethyl)ether
2-chloroethyl vinyl ether(mixed)
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane
1,3-dichloropropylene
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane
Methylene Chloride
Methyl Chloride
Methyl Bromide
Bromoform
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-Benzanthracene
Benzo(a)pyrene
3,4-Benzofluoranthene
11,12-Benzofluoranthene
Chrysene
Acenaphthylene
Anthracene
1,12-Benzoperylene
Fluorene
Phenanthrene
1,2,5,6-Dibenzanthracene

[2] Continued

Indeno(1,2,3-cd)pyrene
Pyrene
Toluene
Trichloroethylene
Vinyl chloride
Aldrin
Dieldrin
Chlordane (technical mixtures and metabolites)
4,4-DDT
4,4-DDE
Tetrachloroethylene
4,4-DDD
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
(BHC-hexachlorocyclohexane)
- Alpha-BHC
- Beta-BHC
- Gamma-BHC
- Delta-BHC

(PCB-polychlorinated biphenyls)
- PCB-1242 (Arochlor 1242)
- PCB-1254 (Arochlor 1254)
- PCB-1221 (Arochlor 1221)
- PCB-1232 (Arochlor 1232)
- PCB-1248 (Arochlor 1248)
- PCB-1260 (Arochlor 1260)
- PCB-1016 (Arochlor 1016)

Toxaphene
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

PART 2 - MONITORING REQUIREMENTS

A. The permittee shall monitor Sampling Point 01 for the following parameters, at the indicated frequency and by the indicated sample type:

Constituents	Units	Measurement Frequency	Sample Type
Flow	GPD	-------	Report
Arsenic	mg/l	once/6 mo. [1]	Grab or Composite [2]
Cadmium	mg/l	once/6 mo. [1]	Composite
Copper	mg/l	once/6 mo. [1]	Grab or Composite [2]
Chromium(Total)	mg/l	once/6 mo. [1]	Grab or Composite [2]
Cyanide(Free)	mg/l	once/6 mo. [1]	Grab
Cyanide(Total)	mg/l	once/6 mo. [1]	Grab
Nickel	mg/l	once/6 mo. [1]	Grab or Composite [2]
Lead	mg/l	once/6 mo. [1]	Composite
Zinc	mg/l	once/6 mo. [1]	Grab or Composite [2]
Silver	mg/l	once/6 mo. [1]	Grab or Composite [2]
pH [3]	S.U.	once/6 mo. [1]	Grab
Dissolved Sulfides	mg/l	once/6 mo. [1]	Grab
Dispersed Oil & Grease	mg/l	once/6 mo. [1]	Grab
Chlorides [4]	mg/l	once/6 mo. [1]	Grab or Composite
TTO	mg/l	once/6 mo. [1]	Grab

FOOTNOTES TO MONITORING REQUIREMENTS

[1] The sample shall be taken on a day when these substances are likely to be present in their maximum concentration.

[2] The Local limits can be compared to the results from grab sampling as well as composite sampling.

[3] The pH of the wastewater discharge to the sewer system shall be monitored and recorded continuously using a pH meter and recorder.

[4] The City is establishing a data base for chlorides.

B. The permittee shall satisfy the Total Toxic Organics (TTO) requirement in accordance with the following:

MONITORING

1) The IU must prepare an inventory of all toxic organics used and identify the individual toxic organics, listed on pages 4 and 5 of this permit, which can reasonably be expected to be present in the regulated wastewater.

2) The IU is then required to analyze only those toxic organic pollutants which would reasonably be expected to be present.

3) The inventory and TTO analysis shall be submitted to the City of Los Angeles in accordance with the reporting schedule indicated in Part 3 of this permit. The City may require the IU to support the TTO inventory list with appropriate documentation.

TOXIC ORGANIC MANAGEMENT PLAN

1) In lieu of monitoring for TTO and upon written request, the City of Los Angeles may allow the IU to satisfy the TTO requirement by submitting a toxic organic management plan (TOMP) for approval by the City of Los Angeles.

C. Monitoring and sampling shall be carried out during a period of normal operations.

D. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit. The handling, storage and analyses of all samples taken for the determination of the wastewater characteristics discharged shall be performed by laboratories certified by the State of California or approved by the Board of Public Works of the City of Los Angeles.

PART 3 - REPORTING REQUIREMENTS

A. Self-Monitoring

The permittee shall implement a self-monitoring program. Monitoring results obtained shall be summarized and reported on a periodic compliance report form and submitted by the 15th day of the month following the monitoring period. The reporting schedule is summarized as follows according to the industrial discharge in gallons per day (GPD):

Industrial Discharge	Monitoring Period	Report Due Date
9,999 GPD or less	Jan 1 - Jun 30	Jul 15
	Jul 1 - Dec 31	Jan 15

The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed including measured or estimated maximum and average daily flows. The report shall be based upon data obtained through appropriate sampling and analyses performed during the period covered by the report. The data shall be representative of conditions occurring during the reporting period.

B. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR 136 or amendments thereto or otherwise approved by EPA or specified in this permit, the results of such monitoring shall be reported in the compliance report and submitted to the Director.

C. Automatic Resampling

If the results of the permittee's wastewater analysis indicates a violation has occurred, the permittee must do the following:

1. Inform the Director of the violation within 24 hours by contacting the Bureau of Sanitation Enforcement Division S.I.U. Section at (213) 485-5874; and

2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days after becoming aware of the violation.

D. Pre-notification of Monitoring and Sampling

The permittee shall notify the Director by telephone at (213) 485-5874 at least 48 hours in advance of any monitoring or sampling to be done. Notification shall include the date, time and location of proposed monitoring or sampling. Monitoring and sampling shall be carried out during a period of normal operations. Prior to the commencement of any sampling or monitoring, the Director may request that the permittee furnish to the Director a split sample and all supporting data (i.e., methodology, flow measuring data, strip chart recordings and other pertinent information). The Director reserves the right to refuse any data developed from the monitoring or sampling activity if the permittee fails to comply with the pre-notification procedure.

E. Slug/Accidental Discharge Notification

The permittee shall notify the Director immediately upon the occurrence of an accidental discharge of substances prohibited by L.A.M.C. Section 64.30 or any slug loads or spills that may enter the public sewer. The Director shall be notified by telephone at (213) 485-5886. The notification shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective action taken. The permittee's notification of accidental cases in accordance with this section does not relieve it of other reporting requirements that arise under Local, State or Federal laws.

Within five (5) days following an accidental discharge, the permittee shall submit to the Director a detailed written report. The report shall contain the following:

1. A description and cause of the slug or accidental discharge, the cause(s) thereof and the impact on the permittee's compliance status. The description should also include the location of discharge and the type, concentration and volume of waste.

2. The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur.

3. All steps taken or to be taken to reduce, eliminate and prevent recurrence of such a slug discharge, accidental discharge or any other conditions of noncompliance.

F. Operating Upsets

Any permittee that experiences an upset in operations that places the permittee in a temporary state of noncompliance with the provisions of either this permit or with L.A.M.C. Section 64.30 shall inform the Director immediately upon the first awareness of the commencement of the upset at (213) 485-5886.

A written follow-up report of the upset shall be filed by the permittee with the Director within five (5) days. The report shall contain the following information:

a) A description of the upset or slug load, the cause(s) thereof and the upset's or slug load's impact on the permittee's compliance status;

b) The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur; and

c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset, slug load or other conditions of noncompliance.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the permittee for violations attributable to the upset event.

G. Prevention of Spills and Accidental Discharges

1. The permittee shall provide to the City of Los Angeles plans showing facilities and operating procedures in order to provide protection against spills or accidental discharges of prohibited or regulated materials as established by this permit. Such plans shall include, but are not limited to the following:

   a) Diking systems for containment;

   b) Alarm systems including test frequency of alarms;

   c) Employee education programs; and

   d) Manhole sealing and repiping.

2. The permittee shall provide the spill prevention and accidental discharge control plans showing facilities and operating procedures to the City of Los Angeles for review within 30 days of the effective date of the permit.

3. Plans shall be reviewed and approved by the City of Los Angeles prior to construction of any facilities. However, approval of this plan by the City of Los Angeles does not relieve the permittee from its requirements to meet all applicable Local, State and Federal laws and regulations.

H. Notification of Hazardous Waste Discharged into the POTW

1. Permittees not exempt from the requirements under 40 CFR 403.12(p) shall notify the City of Los Angeles, Bureau of Sanitation; the EPA Region 9, Hazardous Waste Management Division; and the California State Department of Health Services, Toxic Substances Control Division in writing of any discharge into the City of Los Angeles sewer system of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. The written notification shall be submitted to the City of Los Angeles Bureau of Sanitation, the EPA Region 9 and the California State Department of Health Services.

I. All reports required by this permit shall be submitted to the Director at the following address:

City of Los Angeles
Bureau of Sanitation
4600 Colorado Blvd. M/S 911
Los Angeles, CA 90039
Attn: EPA Reporting

PART 4 - SPECIAL CONDITIONS

Not Applicable

PART 5 - STANDARD CONDITIONS

SECTION A. DEFINITIONS AND CONDITIONS

1. Definitions

a) Bi-Weekly - Once every other week.

b) Bi-Monthly - Once every other month.

c) Bypass - The intentional diversion of wastes from any portion of a treatment facility.

d) Categorical Pretreatment Standards - Limitations on pollutant discharges to POTWs, promulgated by EPA in accordance with Section 307 of the Clean Water Act, that apply to specified process wastewaters of particular industrial categories.

e) Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a flow proportional composite sample (collected either as a constant sample volume at time intervals proportional to stream flow or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquot) or as a time composite sample (composed of discrete sample aliquot collected in one container at constant time intervals providing representative samples irrespective of stream flow).

f) Cooling Water

(1) Uncontaminated - Water used only for cooling purposes which has no direct contact with any raw material, intermediate or final product and which does not contain a level of contaminants detectably higher than that of the intake water.

(2) Contaminated - Water used only for cooling purposes which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides or by direct contact with process materials and/or wastewater.

g) Daily Maximum - The maximum allowable discharge of a pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

h) Four (4) - Day Average - The maximum allowable value for the average of 4 consecutive sampling days.

i) Director - The Director of the Bureau of Sanitation of the Department of Public Works of the City of Los Angeles or the duly authorized representative thereof.

j) Grab Sample - An individual sample collected in less than 15 minutes, without regard for flow or time.

k) Industrial Wastewater (Industrial Waste) - Any water bearing waste excluding domestic wastewater.

l) Instantaneous Maximum - The allowable maximum concentration determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

m) Interference - A discharge which alone or in conjunction with a discharge or discharges from other sources both:

1) Inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and

2) Causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or prevents the use of disposal of sewage sludge. The following statutory provisions and regulations or permits issued thereunder apply (or more stringent State or Local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act and the Marine Protection, Research and Sanctuaries Act.

n) Monthly Average - The maximum allowable value for the average of all observations obtained during one calendar month.

o) Pass Through - A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, cause a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

p) Publicly Owned Treatment Works (POTW) - A treatment works as defined by Section 212 of the Clean Water Act which is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant.

q) Resource Conservation and Recovery Act (RCRA) - A Federal statute regulating the management of hazardous waste from its generation through ultimate disposal. The Act contains requirements for waste generators, transporters and owners and operators of treatment, storage and disposal facilities.

r) Slug Load - Any pollutant (including Biochemical Oxygen Demand) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b) to 403.12(f).

s) Total Toxic Organics (TTO) - The sum of the masses or concentrations of the specific toxic organic compounds regulated by specific categorical pretreatment regulations which is found in the discharge at specific quantifiable concentrations.

t) Upset - An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities or improper operation and maintenance or lack thereof.

2. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

3. Duty to Comply

The permittee must comply with the provisions of L.A.M.C. 64.30 and all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action or enforcement proceedings, including civil or criminal penalties, injunctive relief and summary abatements.

4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Modification or Revision of the Permit

This permit may be modified, revoked and reissued or terminated for good causes including, but not limited to, the following:

a) The incorporation of any new or revised Federal, State or Local pretreatment standards or requirements;

b) Material or substantial alterations or additions to the discharger's operational processes or discharge volume or character which were not covered in the effective permit;

c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

d) Information indicating that the permitted discharge poses a threat to the City of Los Angeles' collection and treatment systems, POTW personnel or the receiving waters;

e) A violation of any terms or conditions of this permit;

f) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

g) A revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13.

h) A request of the permittee, provided such request does not create a violation of any existing applicable requirements, standards, laws or rules and regulations; or

i) A correction of typographical or other errors in the permit.

6. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any violation of Federal, State or Local laws or regulations.

7. Limitation of Permit Transfer

An Industrial Wastewater Permit shall not be transferable by operation of law or otherwise, either from one location to another or from one person to another. Statutory mergers or name changes shall not constitute a transfer or a change in ownership.

8. Dilution

The permittee shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

9. General Prohibitive Standards

The permittee shall comply with all the general prohibitive discharge standards in the General Pretreatment Regulations, 40 CFR 403, and the L.A.M.C. Section 64.30. Except as expressly allowed in this Industrial Wastewater Permit, the industrial user shall not discharge wastewater to the POTW, the storm drain system or Waters of the State which contains any of the following:

a) Gasoline, mercury, total identifiable chlorinated hydrocarbons, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, solvents, pesticides or jet fuel;

b) Petroleum Oil, nonbiodegradable cutting oil or products of mineral oil origin in amounts that will cause interference or pass through.

c) Liquids, solids or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive or radioactive or by interaction with other materials could result in fire, explosion or injury. This includes, but is not limited to, wastestreams with a closed cup flash point of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21.

d) Solid or viscous materials which could cause obstruction to the flow or operation of the POTW or the storm drain system;

e) Toxic pollutants in sufficient quantity to injure or interfere with any wastewater treatment process, to constitute a hazard or cause injury to human, animal, plant or fish life or to exceed any limitation set forth in this Section;

f) Noxious or malodorous liquids, gases or solids in sufficient quantity, either singly or by interaction with other materials, to create a public nuisance, hazard to life or to prevent entry of any person to the POTW or storm drain system;

g) Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

h) Material of sufficient quantity to interfere with any POTW treatment plant process or to render any product thereof unsuitable for reclamation and reuse;

i) Material of sufficient quantity to cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations in connection with Section 405 of the Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, the Marine Protection, Research, and Sanctuaries Act or State criteria applicable to the sludge management method being used;

j) Material which will cause the POTW to violate its NPDES Permit, applicable Federal and/or State statutes, rules or regulations;

k) Pigment which is not removed in the treatment processes;

l) A heat content in such quantities that the temperature of the wastewater at the introduction into the POTW collection system exceeds 140 degrees Fahrenheit or at the introduction into the POTW treatment plant exceeds 104 degrees Fahrenheit. In no event shall any wastewater having a temperature in excess of 100 degrees Fahrenheit be discharged to the storm system or to the Waters of the State;

m) Pollutants, including oxygen demanding pollutants, released at a flow rate or pollutant concentration which will cause or contribute to interference;

n) Storm water collected and discharged to the POTW;

o) Single pass cooling water in excess of 200 gallons per day discharged to the POTW;

p) Materials which constitute a hazard or causes injury to human, animal, plant or fish life or creates a public nuisance;

q) Recognizable portions of the human or animal anatomy;

r) Floatable material which is readily removable;

s) More than 600 mg/l of total dispersed oil and grease;

t) More than 0.1 mg/l of dissolved sulfides;

u) A pH lower than 5.5 or higher than 11.0 or having any other corrosive property capable of causing damage or hazards to structures, equipment or personnel of the sewer system;

v) Medical or infectious wastes;

w) Radioactive wastes or isotopes;

x) Garbage, food, market wastes or food plant wastes that have not been ground by household type or other suitable garbage grinders;

y) Sharps; or

z) Any trucked or hauled pollutants, except at discharge points designated by the City.

10. Compliance with Applicable Pretreatment Standards and Requirements

The permittee shall comply at all times with any and all applicable Local, State and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit.

11. Confidentiality

(a) Any information, except for discharge and effluent data, submitted to the City pursuant to this Section may be claimed by the discharger to be confidential. Any such claim must be asserted at the time of submission of the information or data to the City. The claim may be asserted by stamping the words "Confidential Business Information" on each page containing such information or by other means; however, if no claim is asserted at the time of submission, the City may make the information available to the public without further notice. If such a claim is asserted, the information will be treated in accordance with the procedures set forth in 40 CFR Part 2 (Public Information).

(b) Information and data provided to the City which is effluent data shall be available to the public without restriction.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems for treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation or loss or failure of all or part of the pretreatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharge (or both) until operation of the pretreatment facility is restored or an alternative method of pretreatment is provided. This requirement applies, for example, when the primary source of power of the pretreatment facility fails or is reduced. It shall not be a defense for a permittee in an enforcement action to state that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Removed Substances

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

4. Bypass of Treatment Facilities

a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternatives exist.

b) The permittee may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation.

c) Notification of bypass:

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the City of Los Angeles.

(2) Unanticipated bypass. The permittee shall immediately notify the City of Los Angeles and submit a written notice to the POTW within 5 days. This report shall specify the following:

i) A description of the bypass including its cause and duration;

ii) Whether the bypass has been corrected; and

iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit. All equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and approval by the Director.

2. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharge. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit using test procedures identified in Section C.3, the results of this monitoring shall be included in the permittee's self-monitoring reports.

5. Inspection and Entry

The permittee shall allow the Director or an authorized representative upon the presentation of credentials and other documents as may be required by law to do the following:

a) Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit;

d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and

e) Inspect any production, manufacturing, fabricating or storage area where pollutants, regulated under the permit, could originate, be stored or be discharged to the sewer system.

The applicant, by accepting any permit issued, does hereby consent and agree to entry upon the premises as described herein. Any person violating this authority shall be guilty of a misdemeanor.

6. Retention of Records

a) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the City of Los Angeles at any time.

b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Los Angeles shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses shall include the following:

a) The date, exact place, time and methods of sampling or measurement, and sample preservation techniques or procedures;

b) Who performed the sampling or measurements;

c) The date(s) analyses were performed;

d) Who performed the analyses;

e) The analytical techniques or methods used; and

f) The results of such analyses.

8. Falsifying Information

No person shall knowingly make any false statement, representation or certification in any application, record, report, plan or other document filed with the City of Los Angeles. In addition, no person shall tamper with or knowingly render inaccurate any monitoring device required under this permit.

The reports and other documents required to be submitted or maintained under this Industrial Wastewater Permit shall be subject to:

(1) The provisions of 18 U.S.C. Section 1001 relating to fraud and false statements;

(2) The provisions of Section 309 (c) (4) of the Clean Water Act (CWA), as amended, governing false statements, representation or certification; and

(3) The provisions of Section 309 (c) (6) of the Clean Water Act (CWA), as amended, regarding responsible corporate officers.

SECTION D. ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice to the Director 90 days prior to any facility expansion, production increase or process modifications which results in new or substantially increased discharge or a change in the nature of pollutants in the discharge, including the listed or characteristic hazardous wastes for which the Industrial User had submitted initial notification under 40 CFR 403.12(p). The City may require that a new application be filed and a new permit obtained before any planned changes take place.

2. Duty to Provide Information

The permittee shall furnish to the Director any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Signatory Requirements

All applications, reports or information submitted to the Director must contain the following certification statement and be signed as required in Sections (a), (b), (c), or (d) below:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

a) By a responsible corporate officer if the industrial user submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means the following:

   (i) A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation; or

(ii) The manager of one or more manufacturing, production or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b) By a general partner or proprietor if the industrial user submitting the reports is a partnership or sole proprietorship respectively.

c) By a duly authorized representative of the individual designated in paragraph (a) or (b) of this section if:

(i) The authorization is made in writing by the individual described in paragraph (a) or (b);

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or a position having overall responsibility for environmental matters for the company; and

(iii) The written authorization is submitted to the City.

d) If an authorization under paragraph (c) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters of the company, a new authorization satisfying the requirements of paragraph (c) of this section must be submitted to the City prior to or together with any reports to be signed by an authorized representative.

4. <u>Annual Publication</u>

A list of all industries which were subject to enforcement proceedings during the twelve (12) previous months shall be annually published by the Director in the largest daily newspaper within its service area. Accordingly, the permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this L.A.M.C. Section 64.30.

5. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance under L.A.M.C. Section 64.30 or State or Federal laws and regulations.

6. Penalties for Violations of Permit Conditions

The L.A.M.C. Section 64.30 provides that any person who violates a permit condition is subject to a civil penalty in the maximum sum provided by law for each day in which such violation occurs. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of up to $1000.00 per violation per day and/or by imprisonment in the County Jail of a period of not more than six (6) months. The permittee may also be subject to sanctions under State and/or Federal law.

7. Recovery of Costs Incurred

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or the L.A.M.C Section 64.30 or causing damage to or otherwise inhibiting the City of Los Angeles wastewater disposal system shall be liable to the City of Los Angeles for any expense, loss or damage caused by such violation or discharge.

The City of Los Angeles shall bill the permittee for the costs incurred by the City for any cleaning, repair or replacement work caused by the violation or discharge. The permittee shall also be liable for the costs of monitoring and investigation by the City arising from any unlawful discharge. Refusal to pay the assessed costs shall constitute a separate violation of L.A.M.C. Section 64.30.

APPENDIX

FACT SHEET WITH SUPPORTING DOCUMENTATION

FACT SHEET

A. INDUSTRIAL USER INFORMATION

Hawker Pacific, Inc. (W-456607)
Flight Accessory Services Division
11310 Sherman Way
Sun Valley, CA 91352

Hazardous Waste/Process Supervisor: Erik Johnson
(818) 765-6201

B. DESCRIPTION OF THE FACILITY OPERATIONS

Hawker Pacific, Inc., Flight Accessory Services Division is involved in machining, overhaul, assembly and surface treatment of aircraft landing gears and hydraulic system parts such as valves and hydraulic pistons. Surface treatment includes alkaline and acid cleaning, vapor degreasing, electroplating of cadmium, nickel and functional chrome, etching and chromating.

Ancillary operations include grinding, painting, baking of painted parts and testing of finished parts using a water-based dye.

The facility receives over 98% of parts from outside customers (commercial airlines, etc.) and renders the above services for a fee.

There is a very small casting process whereby lead anodes used in the electroplating process are cast into mold. The process is dry and casts on the order of 5 pounds of lead per week.

The site plan of the facility is shown in Attachment A. The facility consists of five buildings. The Site Plan of each building is outlined in Attachments B-F. Building #1 contains the main offices and a fairly large machine shop. Sanitary sewage is the only water discharged into the sewer. Lubricating oils associated with machining are collected and ultimately sold as bunker fuel. Building #2 contains the plating lines along with grinding operations. An assembly area and dye testing facility are located in Building #3. Sanitary sewage is discharged to a septic tank while the water used in dye testing is discharged to the sewer via a secured sampling box. A warehouse and some offices are located in Building #4. Sanitary sewage is discharged to a septic tank. Building #5 contains a small maintenance shop, offices and a small paint shop. The paint operations are dry, with associated dry scrubbers, and sanitary sewage is discharged to the sewer.

The plating line in Building #2 was built in 1968 under the ownership of Inchate Corporation. Hawker-Pacific, an

Australian-based firm specializing in defense contracts, purchased the facility in 1987. The only significant process construction in Building #2 has been the replacement of two (2) small nickel plating tanks with one (1) larger nickel plating tank. A new ion-exchange waste treatment system was added at the end of 1989 and is now becoming fully operational (October 4, 1990).

C. DESCRIPTION OF THE DISCHARGE AND WASTEWATER CONTROL

1. PROCESS WASTESTREAMS

Attachments G and GA show the plating shop layout and Attachment H lists the accompanying tank schedule. Process wastestream are generated from five main areas:

1. Nickel Plating Line
2. Cadmium Cyanide Plating Line
3. Chromating Line
4. Functional Chrome Plating and Alodine
5. Anode Cleaning and Etching

Chromating, Functional Chrome Plating and Alodine rinse waters are discharged to a collection sump where they are then conveyed to the pretreatment system.

Anode cleaning and etching rinsewaters are conveyed directly to the pretreatment system as are rinsewaters from the nickel and cadmium plating lines.

Attachments I-L show process flow diagrams for each production area. A total effluent flow of 1,500-2,000 gpd is listed on these Attachments. However, an October 4, 1990 inspection determined that the flow ranges from 2,000-6,000 gpd depending on production. This is verified by an inspection of water bills which indicates an average discharge of just over 7,000 gpd (accounting for two non-operating days per week) over the May, 1989 to May, 1990 time period.

The flow from each process line was not quantified.

2. DILUTION WASTESTREAMS

There are no dilution wastestreams present at this facility. Ion exchange backwash and boiler blowdown are pumped to an evaporator tank and do not enter the sewer system.

Single-pass cooling water from the vapor degreaser is used as make-up water for a running rinse tank.

3. **WASTEWATER CONTROL**

The pretreatment is automated and consists of cyanide destruction and ion exchange. A schematic of the system is outlined in Attachment M.

Cyanide bearing wastestreams are conveyed to holding drums (T01-T04) where cyanide is oxidized by alkaline chlorination through the addition of caustic and sodium hypochlorite.

T05-T18 consists of chemical treatment and associated storage for segregated wastestreams before they enter the ion exchange unit.

After cyanide destruction cadmium bearing wastestreams are chemically treated to an optimum pH before entering a specific anionic resin designed to selectively remove the cadmium ion. Trivalent chromium/lead, hexavalent chromium and nickel wastestreams are all segregated, chemically treated to an optimum pH and conveyed to respective resins to selectively remove the heavy metal ions. Photo-sensitive detectors are installed on the discharge end of the resin to detect breakthrough of the heavy metal. Backwash rates are still being quantified but, during the initial start-up phase, have ranged from twice a day to once every three weeks depending on factors such as type of heavy metal and rate of production. As stated earlier, this backwash water is pumped to an evaporator unit where the metals are concentrated before off-site disposal. The chemical storage units contain float alarms to signal lowering quantities of treatment chemicals. The contractor is training two employees in the operations of the system. After passing through the resins the wastestreams are combined, neutralized and discharged through a 5-stage clarifier/secured sampling box to the City sewer.

The facility has no established toxic organic management plan (TOMP).

D. **DISCHARGE LIMITATIONS AND POINT OF COMPLIANCE**

1. **Hawker Pacific, Inc.** Flight Accessory Services Division, must comply with the following federal pretreatment standards at Sampling Point 01 (secured sampling box located directly after 5-stage clarifier noted on Attachments GA and M).

FEDERAL CATEGORICAL PRETREATMENT STANDARDS FOR HAWKER PACIFIC INC. FLIGHT ACCESSORY SERVICES DIVISION (40 CFR 413 Existing Job Shop Electroplater < 10,000 gpd)

Parameter	Units	Daily Maximum	4-Day Average
Cadmium	mg/l	1.2	0.7
Cyanide (Free)	mg/l	5.0	2.7
Lead	mg/l	0.6	0.4
TTO	mg/l	4.57	---

2. **Hawker Pacific, Inc.** Flight Accessory Services Division, must comply with the following local limits at Sampling Point 01 (secured sampling box located directly after 5-stage clarifier - noted on Attachments GA and M).

LOCAL DISCHARGE LIMITATION STANDARDS FOR HAWKER PACIFIC INC. FLIGHT ACCESSORY SERVICES DIVISION

Parameter	Units	Instantaneous Maximum
Arsenic	mg/l	3.0
Cadmium	mg/l	15.0
Copper	mg/l	15.0
Cyanide (Total)	mg/l	10.0
Cyanide (Free)	mg/l	2.0
Dissolved Sulfides	mg/l	0.1
Lead	mg/l	5.0
Nickel	mg/l	12.0
pH	S.U.	5.5 - 11.0
Silver	mg/l	5.0
Total Chromium	mg/l	10.0
Zinc	mg/l	25.0
Oil & Grease (Dispersed)	mg/l	600.0

E. RATIONALE FOR EFFLUENT LIMITATIONS

Hawker Pacific, Inc., Flight Accessory Services Division is involved in machining, overhaul, assembly and surface treatment of aircraft landing gears and hydraulic system parts such as valves and hydraulic pistons. Surface treatment includes alkaline and acid cleaning, vapor degreasing, electroplating of cadmium, nickel, and functional chrome, etching and chromating.

The plating line was constructed in 1968. The replacement of two (2) small nickel plating tanks with one (1) larger tank has been the only significant process construction in the proceeding time period and does not satisfy new source criteria as listed in 40 CFR 403.3 K(1)(2)(3).

The facility receives over 98% of the parts undergoing electroplating from outside customers, primarily commercial airlines. Wastewater discharge varies from 2,000-6,000 gpd, depending on production. This is verified by an inspection of water bills for the May 1989 - May 1990 time period indicating an average discharge of 7,000 gpd (accounting for two non-operating days per week). There are no dilution wastestreams present at this facility.

Therefore, Hawker Pacific, Inc. Flight Accessory Services Division qualifies as an existing, non-integrated, job-shop electroplater subject to federal categorical pretreatment standards set in 40 CFR 413 Subparts A, E and F (Electroplating of Common Metals, Coating and Etching, respectively) for dischargers less than 10,000 gpd. Lead casting is not covered under 40 CFR 464 (Metal Casting and Molding) pretreatment standards. Although the process is covered under 40 CFR 461 (Battery Manufacturing), the facility is not subject to this category because it does not manufacture batteries. The lead casting process is, therefore, considered as unregulated.

Sampling Point 01 qualifies as an end of process location. Therefore, Sampling Point 01 will provide a representative sample to determine compliance with applicable federal pretreatment standards.

In addition to federal limitations, local limits must also be met by this facility. Sampling Point 01 qualifies as an end of pipe location. Therefore, local limits apply at this point.

F. MONITORING REQUIREMENTS

1. **Hawker Pacific, Inc.** Flight Accessory Services Division shall monitor Sampling Point 01 for the following parameters, at the indicated frequency and by the sample type:

Constituent	Units	Measurement Frequency	Sample Type
Flow	GPD	—	Report
Arsenic	mg/1	1/6 mo. [1]	Grab or Composite [2]
Cadmium	mg/1	1/6 mo. [1]	Composite
Chromium (Total)	mg/1	1/6 mo. [1]	Grab or Composite [2]
Copper	mg/1	1/6 mo. [1]	Grab or Composite [2]
Cyanide (Total)	mg/1	1/6 mo. [1]	Grab
Cyanide (Free)	mg/1	1/6 mo. [1]	Grab
Lead	mg/1	1/6 mo. [1]	Composite
pH [3]	S.U.	1/6 mo. [1]	Grab
Silver	mg/1	1/6 mo. [1]	Grab or Composite [2]
Zinc	mg/1	1/6 mo. [1]	Grab or Composite [2]
Dissolved Sulfides	mg/1	1/6 mo. [1]	Grab
Oil & Grease (Dispersed)	mg/1	1/6 mo. [1]	Grab
Total Toxic Organics (TTO)	mg/1	1/6 mo. [1]	Grab
Chlorides [4]	mg/1	1/6 mo. [1]	Composite

FOOTNOTES TO MONITORING REQUIREMENTS

[1] A sampling frequency of 1/6 mo. corresponds to once every six months or biannually. Sampling should be conducted on a day that is representative of normal discharge.

[2] Unlike federal categorical pretreatment standards, Local limits can be compared to the results from grab sampling as well as composite sampling.

[3] The pH of the wastewater discharge to the sewer shall be monitored and recorded continuously using a pH meter and recorder.

[4] Due to the concerns of meeting its NPDES permit conditions, the city of L.A. is in the process of establishing a data base for chlorides.

G. REPORTING REQUIREMENTS

Reporting requirements are in accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30.

H. SPECIAL CONDITIONS

None Applicable

I. STANDARD CONDITIONS

Standard conditions are in accordance with the Los Angeles Municipal Code Section 64.30.

J. ATTACHMENTS

Attachment A - Site Plan
Attachment B - Site Plan (Building #1)
Attachment C - Site Plan (Building #2)
Attachment D - Site Plan (Building #3)
Attachment E - Site Plan (Building #4)
Attachment F - Site Plan (Building #5)
Attachment G - Plating Shop Lay-out
Attachment GA- Plating Shop Lay-out
Attachment H - Tank Schedule
Attachment I - Process Flow Diagram - Chrome Plating
Attachment J - Process Flow Diagram - Alodine
Attachment K - Process Flow Diagram - Nickel Plating
Attachment L - Process Flow Diagram - Cadmium Plating & Chromating
Attachment M - Pretreatment System Schematic

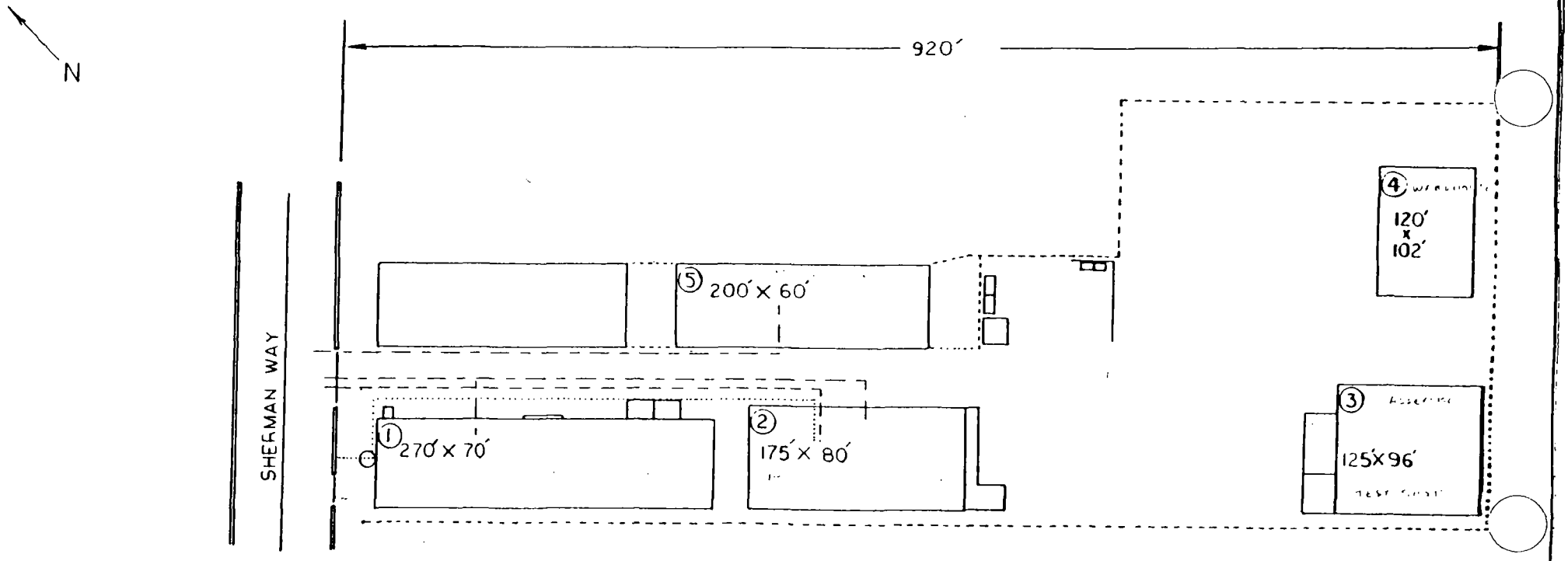
Inspected By: Steven Pha Date: 7-30-90

Prepared By: Doug Jones Date: 10/25/90

Reviewed By: Vladimir Lorenzo Date: 11/19/90

HAWFS/DJ/adm

ATTACHMENT A



SEWER W/WATER

SEWER

WATER IN

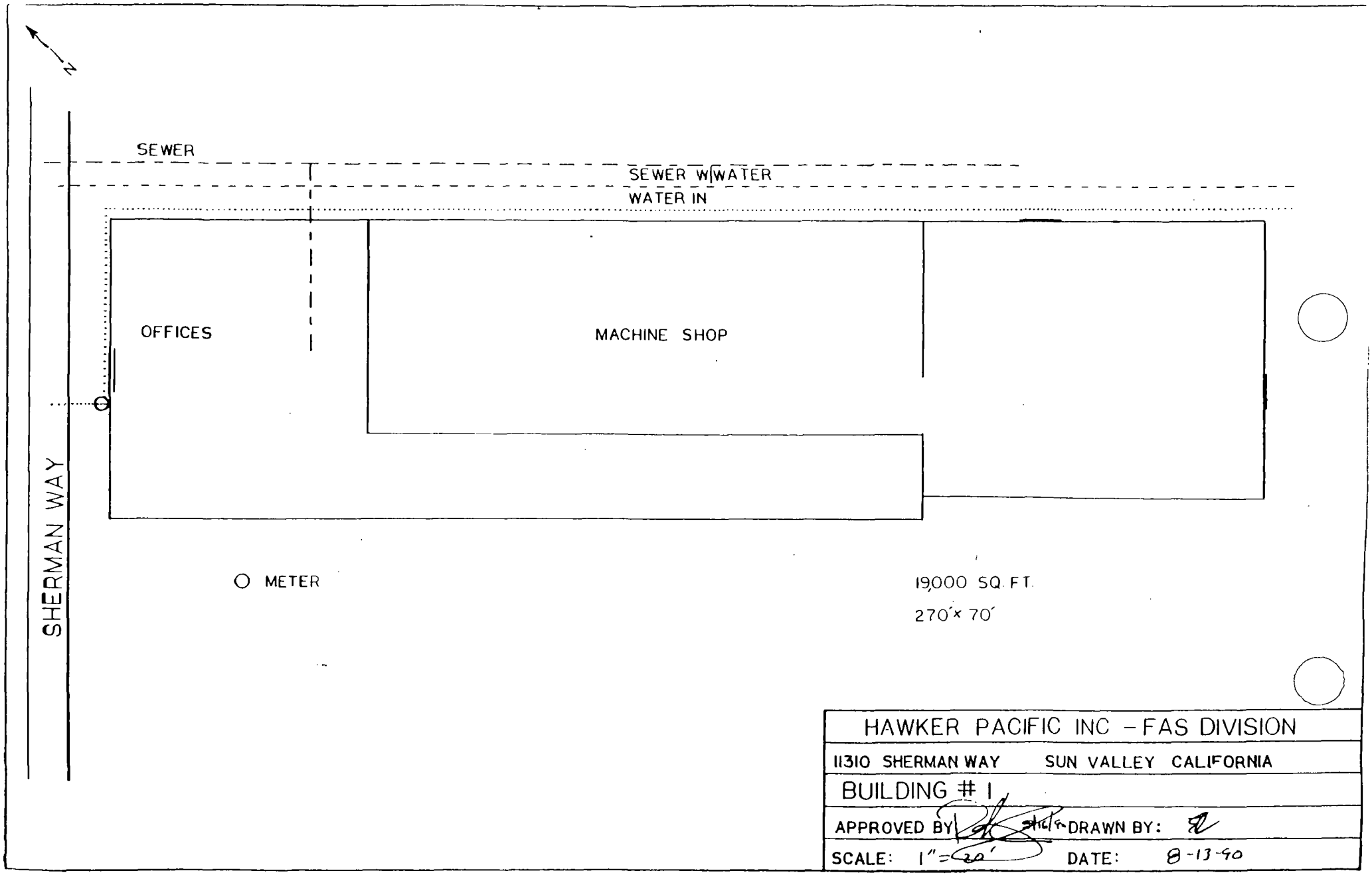
METER

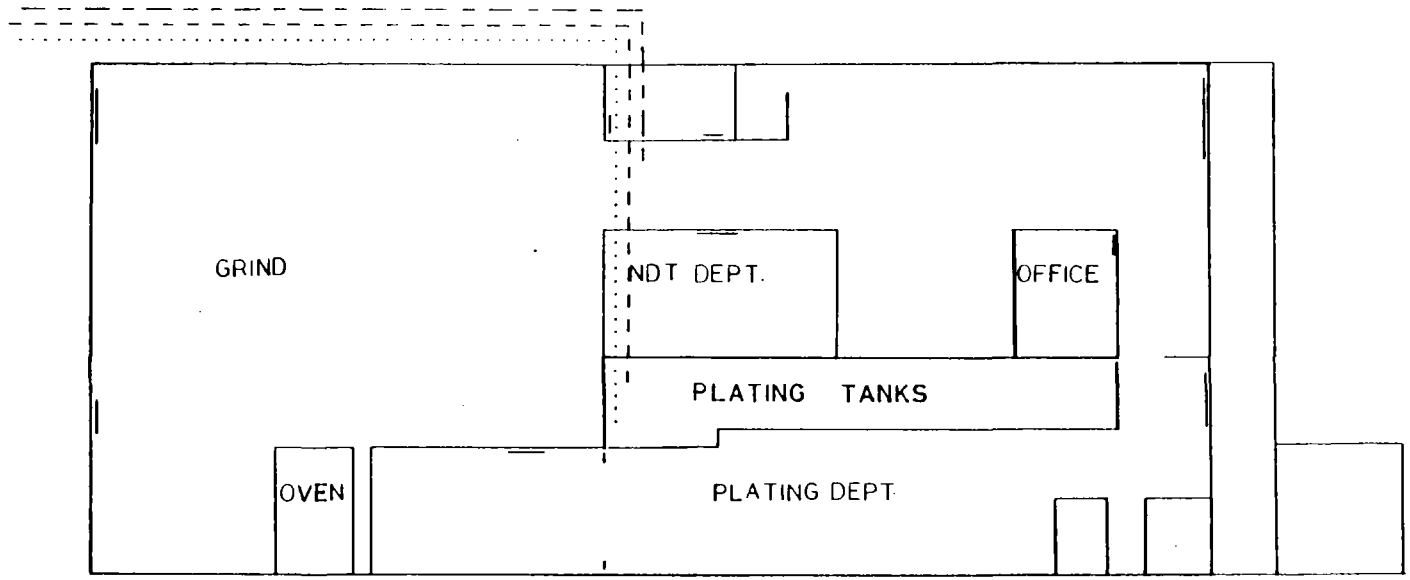
HAWKER PACIFIC-FAS DIV.

SITE PLAN: 7-1-90

DRAWN BY E.J. APPROVED BY 8/15/90

SCALE: 1" = 80'


N
SEWER
SEWER W/WATER
WATER IN
OFFICES
MACHINE SHOP
SHERMAN WAY
METER
19,000 SQ. FT.
270' x 70'
HAWKER PACIFIC INC - FAS DIVISION
11310 SHERMAN WAY SUN VALLEY CALIFORNIA
BUILDING # 1
APPROVED BY:
DRAWN BY:
SCALE: 1" = 20'
DATE: 8-13-90



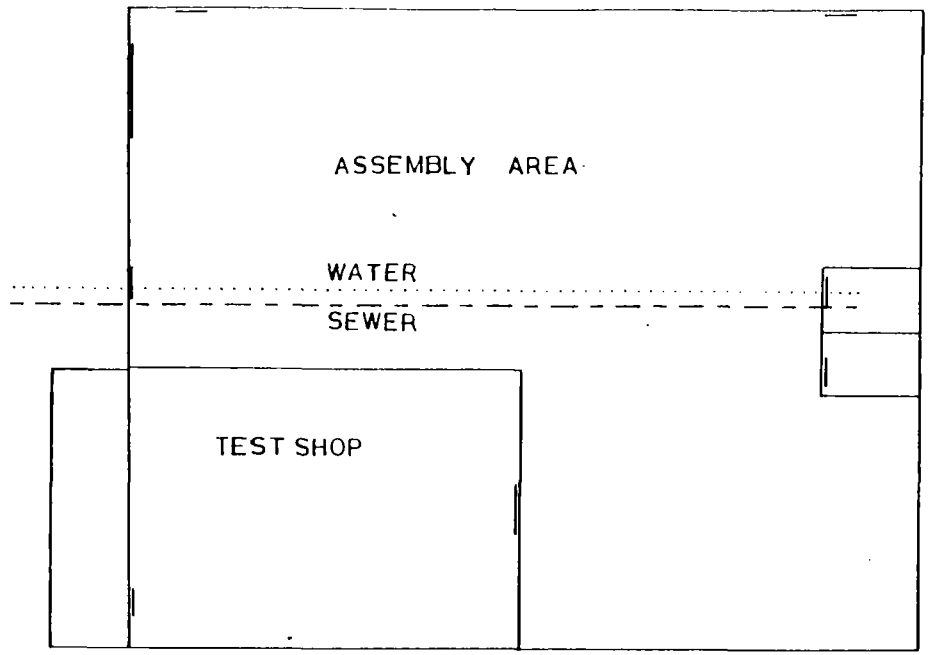
14,000 SQ. FT. 175' x 80'

SEWER - - - - - -

SEWER W/WATER - - - - - -

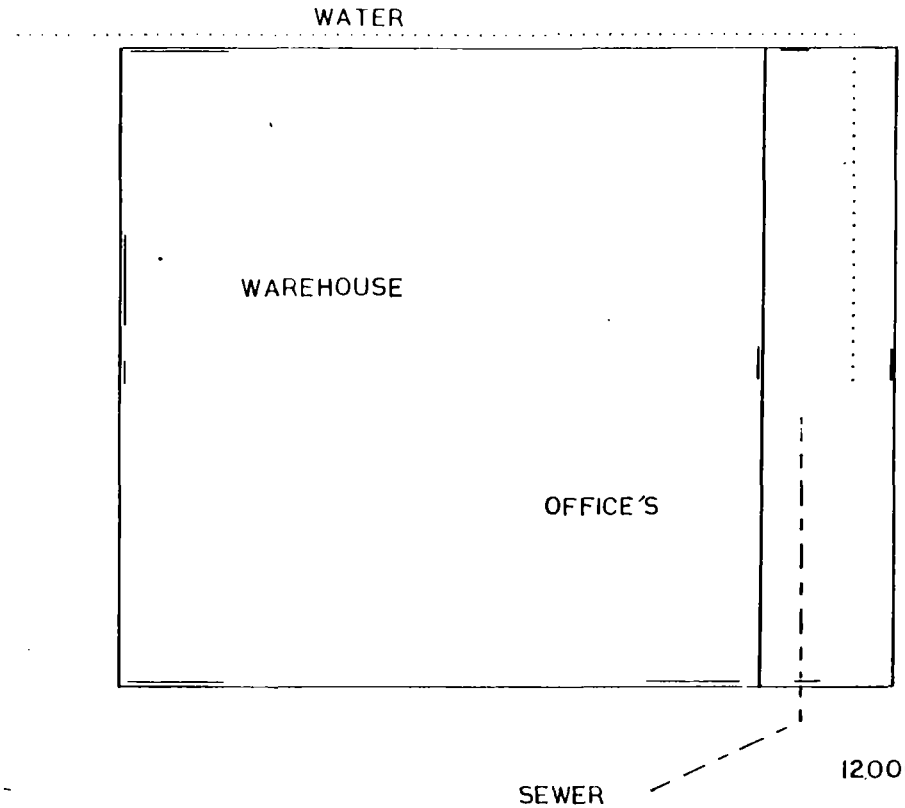
WATER . . . . . .

HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
BUILDING # 2	
APPROVED BY:	DRAWN BY:
SCALE: 1" = 20'	DATE: 8-13-90



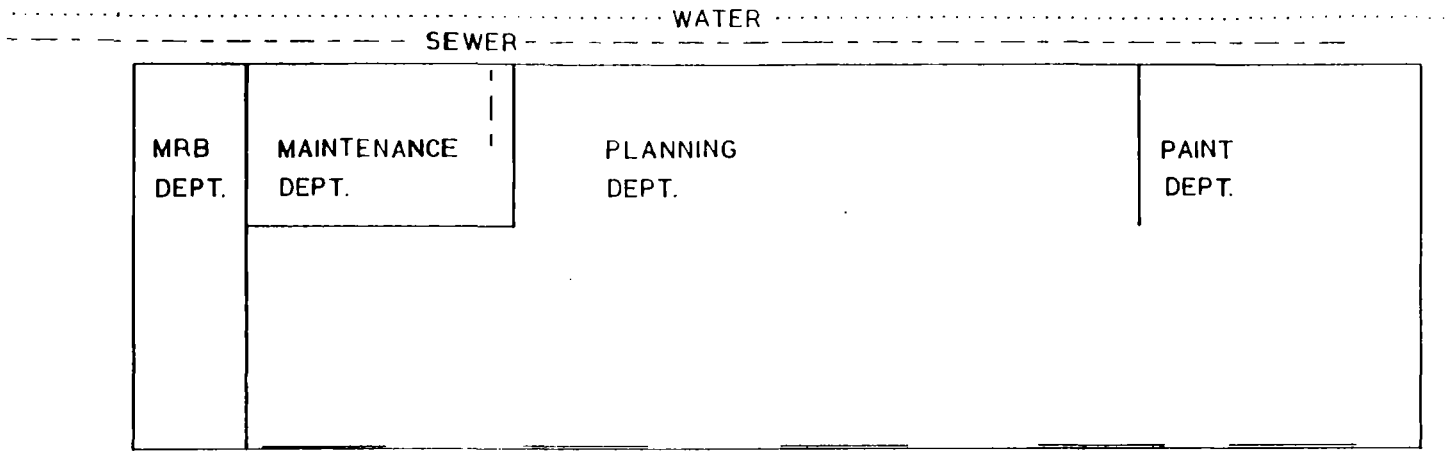
12,000 SQ FT. 125' × 96'

HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
BUILDING # 3	
APPROVED BY:	DRAWN BY:
SCALE: 1" = 20'	DATE: 8-13-90



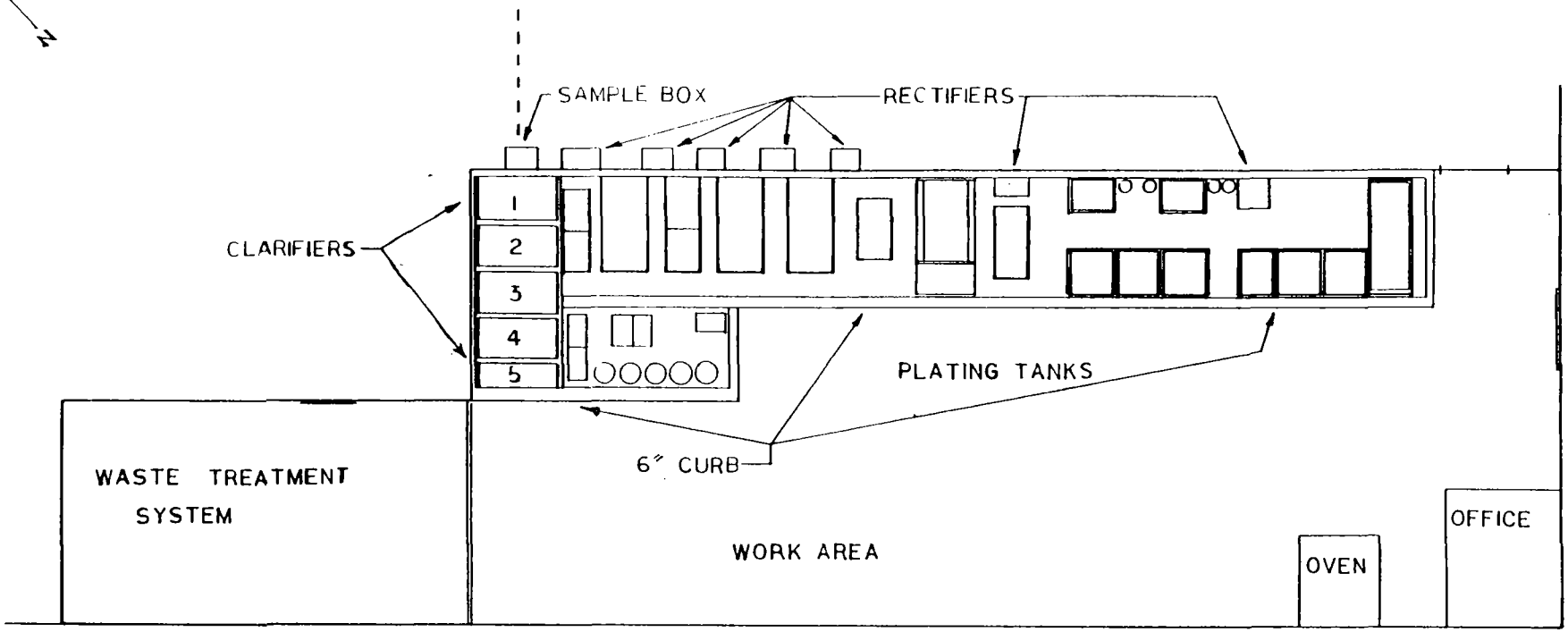
12,000 SQ FT 120 x 100

HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
BUILDING 4	
APPROVED BY:	DRAWN BY:
SCALE: 1" = 20'	DATE: 8-13-90

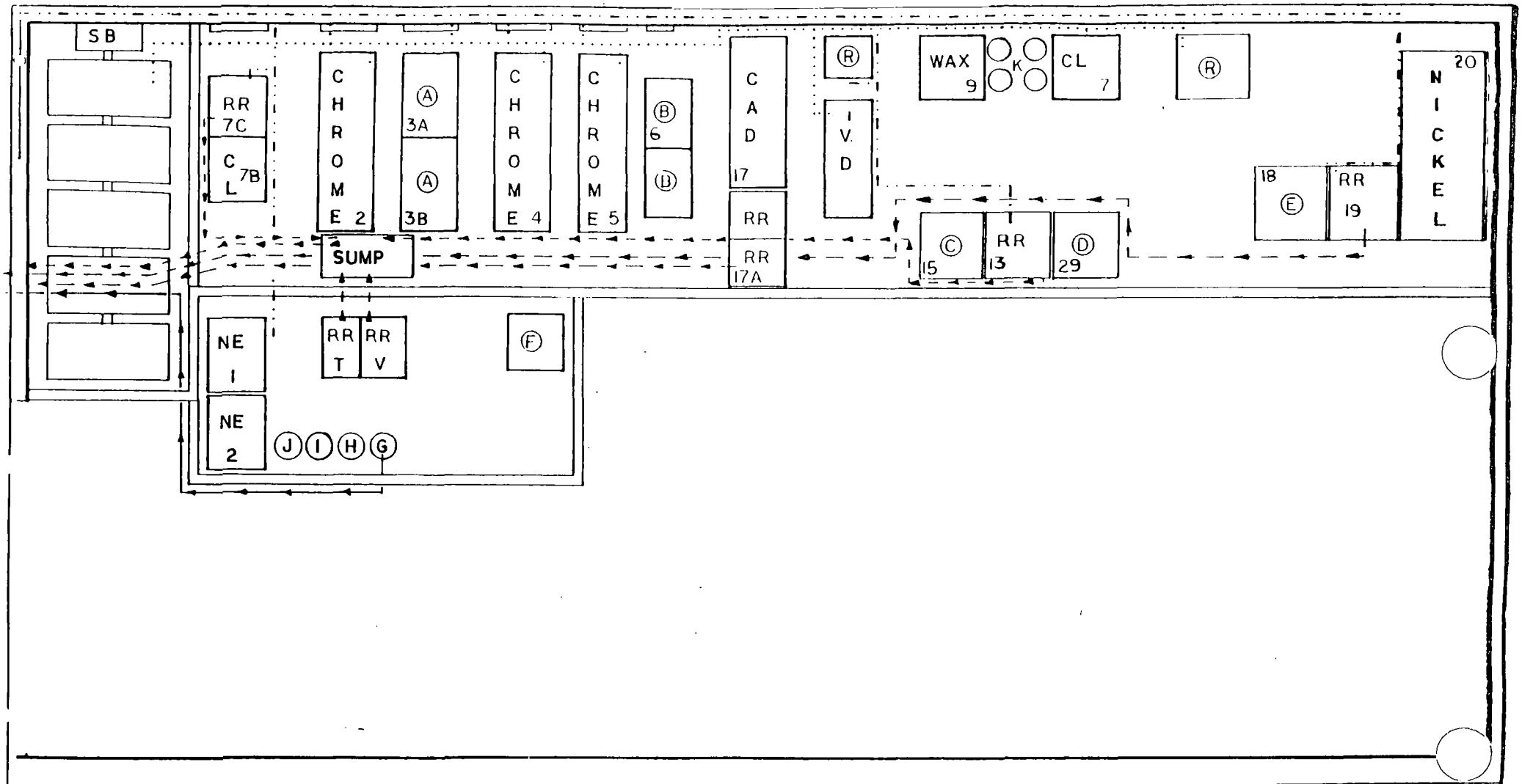


12,000 SQ. FT. 200′ × 60′

HAWKER PACIFIC INC – FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
BUILDING # 5	
APPROVED BY:	DRAWN BY:
SCALE: 1″ = 20′	DATE: 8-13-90



HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
PLATING SHOP BUILDING # 2	
APPROVED BY:	DRAWN BY:
SCALE: 1" = 40'	DATE: 8-13-90



CHROME W WATER	A CHR. STRIP	G ANODE RINSE
CAD CYN W WATER	B HOT WATER	H ANODE CLEANER
NICKEL W WATER	C CYN NEUT.	I ALUM CLEANER
ANODE CLEANER W WATER	D IRIDITE	J DE SMUT
COOLING WATER	E ACID ETCH	K ALUM PREP.
WATER IN DI	F ALODINE	R RECTIFIERS

HAWKER PACIFIC INC - FAS DIVISION

11310 SHERMAN WAY SUN VALLEY CALIFORNIA

PLATING SHOP

APPROVED BY: DRAWN BY:

SCALE: 1"=2' DATE: 8-13-90

FORM A: TANK SCHEDULE

TANK I.D. NUMBER	TANK NAME	TANK VOLUME & DIMENSIONS	TANK CONTENTS	pH	IS THE TANK SPILL CONTAINED?	TANK CONSTRUCTION MATERIAL
4	CHROME PLATING TANKS	3' x 6' x 8' 1000 GAL.	CHROMIC ACID + WATER	1.0	Yes	STEEL + LEAD
3-A	CHROME STRIP TANK.	2' x 2½' x 7' 250 GAL.	SODIUM HYDROXIDE + WATER	13.0	Yes	STEEL
3-B	CHROME STRIP TANK	3' x 3½' x 4' 300 GAL.	SODIUM HYDROXIDE + WATER	13.0	Yes	STEEL
2	CHROME PLATING TANK	3' x 6' x 8' 1000 GAL.	CHROMIC ACID + WATER	1.0	Yes	STEEL + LEAD.
17-A	CAD RINSE TANK	4' x 6' x 4' 600 GAL.	WATER D.I.	7.0	Yes	POLY PRO + STEEL
7-B	OAKITE CLEANER	2½ x 3' x 8 400 GAL.	SODIUM HYDROXIDE + WATER	13.0	Yes	STEEL
7-C	CLEANER RINSE	2½ x 3' x 8' 400 GAL	D.I. WATER	7.0	Yes	STEEL.
NE-1	NITAL ETCH TANK	2' x 4' x 4 200 GAL	HCL 3% + WATER	4.0	Yes	POLY PRO.
NE-2	NITAL ETCH TANK	2 x 4 x 4 200 GAL	NITRIC ACID + WATER 2.%	4.0	Yes	POLY PRO.
F	ALODINE	3 x 3 x 3 150 GAL	CHROMIC ACID + WATER	4.0	Yes	FIBERGLASS
G	ANODE RINSE TANK	30" DIA x ~~36 H~~ 80 GAL.	D.I. WATER	7.0	Yes	POLYPRO.

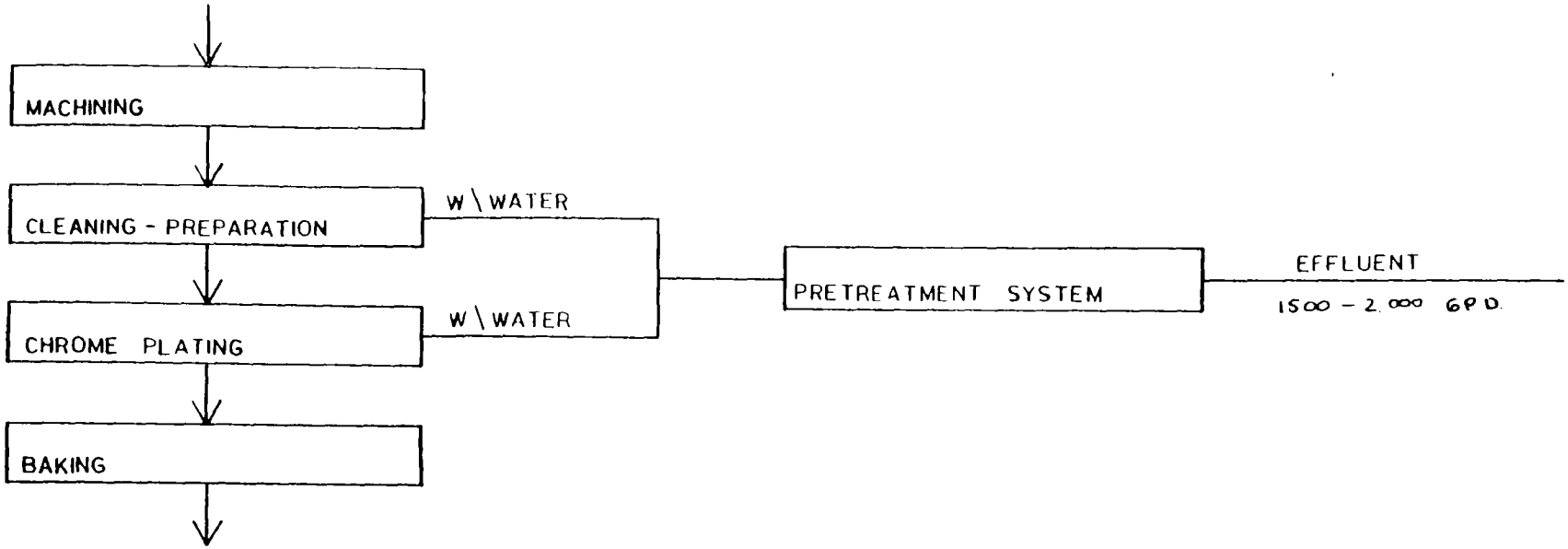
FORM A: TANK SCHEDULE

TANK I.D. NUMBER	TANK NAME	TANK VOLUME & DIMENSIONS	TANK CONTENTS	pH	IS THE TANK SPILL CONTAINED?	TANK CONSTRUCTION MATERIAL
20	NICKEL PLATING TANK	3'W x 8½ L x 8' DEEP 1500 GALLON	NICKEL PLATING SOLUTION	4.0	yes	POLY PRO + STEEL
19	NICKEL RINSE	3'W x 3'L x 8' DEEP 500 GALLON	D.I. WATER	7.0	yes	FIBERGLASS
18	ETCH TANK	3'W x 3'L x 8' DEEP 500 GAL.	HF ACID SULFURIC ACID	1.0	yes	POLY PRO + STEEL
29	IRIDITE TANK	3' x 3' x 8' 500 GALLON	CHROMIC ACID + WATER	4.0	yes	FIBERGLASS + LINER
13	RINSE TANK	3' x 3' x 8' 500 GAL.	D.I. WATER	7.0	yes	FIBERGLASS
15	CHROMIC DIP TANK	3' x 3' x 8' 500 GALLON	CHROMIC ACID + WATER	4.0	yes	FIBERGLASS + LINER
7	OAKITE CLEANER	2½' x 3' x 8' 400 GAL	NAOH + WATER	13+	yes	STEEL.
9	WAX TANK	400 GALL 2½ x 3' x 8'	BROWN WAX HEATED	7.0	yes	STEEL
17	CADMIUM CYANIDE TANK	2½' W x 6' x 8' 900 GAL.	CYANIDE CADMIUM SOLUTION	13.0	yes	STEEL.
6	HOT WATER	6' x 5' x 8' 1400 GALLON	HOTWATER	7.0	yes	STEEL.
5	CHROME PLATING TANK	2½ x 6 x 8 / 800 GAL.	CHROMIC ACID + WATER.	1.0	yes	STEEL + LEAD.

FORM A: TANK SCHEDULE

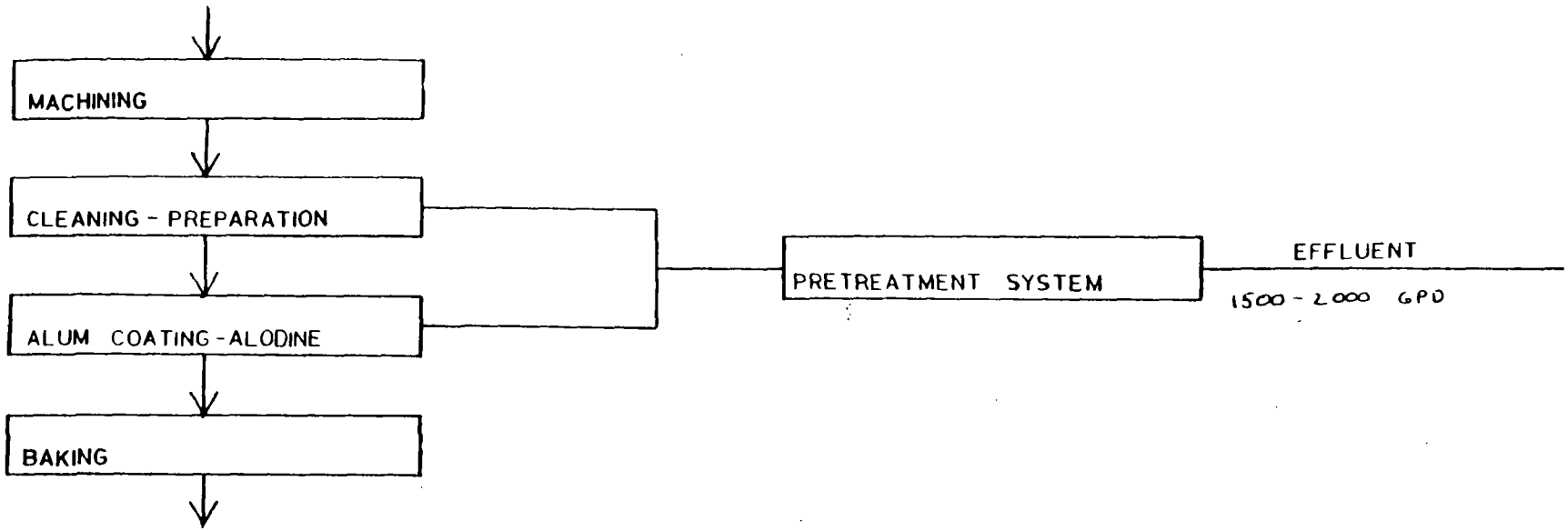
TANK I.D. NUMBER	TANK NAME	TANK VOLUME & DIMENSIONS	TANK CONTENTS	pH	IS THE TANK SPILL CONTAINED?	TANK CONSTRUCTION MATERIAL
H	ANODE CLEANER	30" DIA X 36" 80 GAL.	SODIUM HYDROXIDE + WATER	13.0	yes	POLY PRO
I	DE SMUT	30" X 36" 80 GAL	CHROMIC ACID + NITRIC ACID	2.0	yes	POLY PRO
J	ALUMINUM CLEANER	30" X 36" 80 GAL	SODIUM HYDROXIDE	13.0	yes	POLY PRO
K	ALUMINUM CLEANER 4 TANKS	30" X 36" 80 GAL	NITRIC ACID + WATER	1.0	yes	POLY PRO
		"	NITRIC ACID + WATER	1.0	yes	POLY PRO
		"	AMONIUM NITRATE + WATER	13.0	yes	POLY PRO
		"	ZINCATE	13.0	yes	POLY PRO
T	CHROME RINSE	2' X 4' X 4' 200 GAL	WATER		yes	POLY PRO
V	CHROME RINSE	2' X 4' X 4' 200 GAL	WATER		yes	POLY PRO

ATTACHMENT I



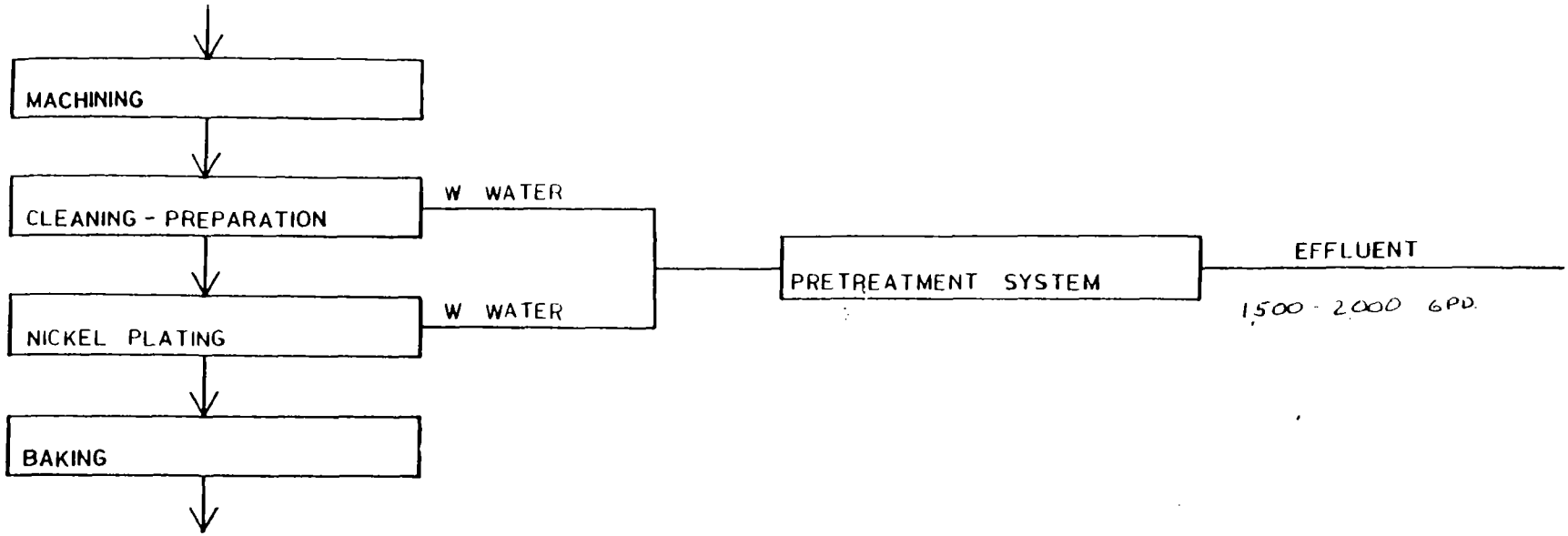
HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
PROCESS FLOW DIAGRAM	
APPROVED BY:	DRAWN BY:
SCALE:	DATE:

ATTACHMENT J



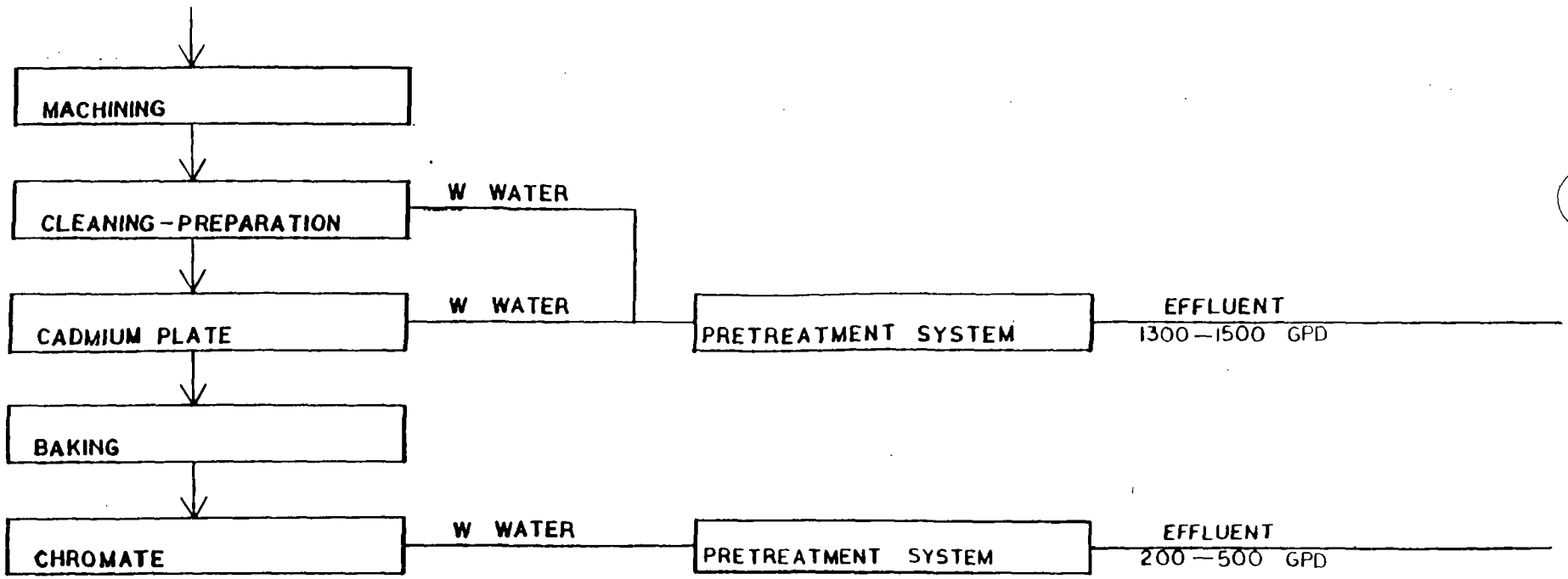
HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
PROCESS FLOW DIAGRAM	
APPROVED BY:	DRAWN BY:
SCALE:	DATE:

ATTACHMENT K



HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY SUN VALLEY CALIFORNIA	
PROCESS FLOW DIAGRAM	
APPROVED BY:	DRAWN BY:
SCALE:	DATE:

ATTACHMENT L



HAWKER PACIFIC INC - FAS DIVISION

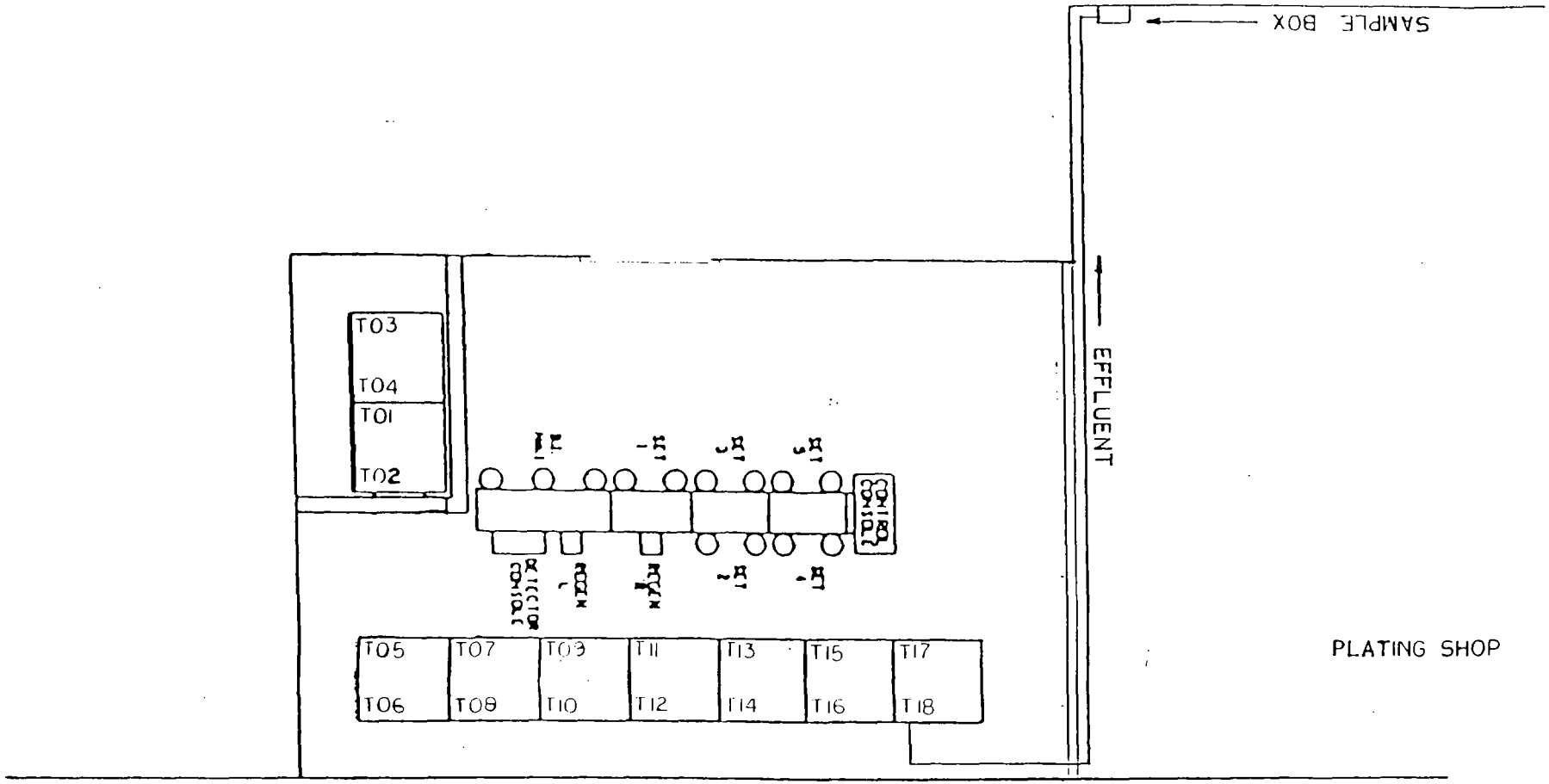
11310 SHERMAN WAY SUN VALLEY CALIFORNIA

PROCESS FLOW DIAGRAM

APPROVED BY: DRAWN BY: EKJ

SCALE: ——— DATE: 8-13-90

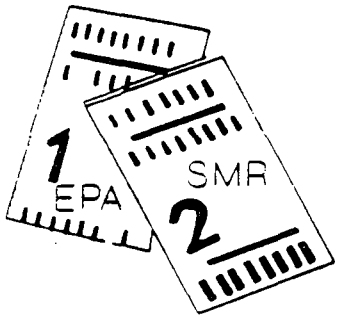
ATTACHMENT M



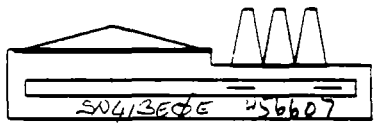
HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PRETREATMENT SYSTEM	
APPROVED BY:	DRAWN BY: EQ
SCALE: 1" = 2'	DATE: 8-13-90

CITY of LOS ANGELES

EPA Categorical Industrial User



SELF-MONITORING INSTRUCTIONS & REQUIREMENTS



For Facilities Designated

40 CFR 413
ELECTROPLATER
‹ 10,000 gpd
NON-INTEGRATED w/
CONTINUOUS DISCHARGE

10/01/90

MONITORING AND REPORTING FREQUENCY [40 CFR 403.12(e)]

The Industrial User must implement a Self-Monitoring program. Monitoring results obtained must be summarized and reported on a periodic compliance report form and submitted by the 15th day of the month following the monitoring period. The reporting schedule summarized below is applicable only to categorical Industrial Users which are subject to 40 CFR 413 and which have a daily discharge flow less than 10,000 gpd.

SEMI-ANNUAL MONITORING AND REPORTING FREQUENCY

Monitoring Period	Report Due Date
January	
February	
March	
April	
May	
June	July 15
July	
August	
September	
October	
November	
December	January 15

CONTROL AUTHORITY CONTACTS

Industrial Users within the City of Los Angeles may contact the Control Authority to obtain further information regarding the following subjects at the following address and phone numbers.

Self-Monitoring Reporting

All periodic Compliance self-monitoring reports required by the Control Authority must be submitted to the Control Authority at the following address:

City of Los Angeles
Bureau of Sanitation
Enforcement Division, Mail Stop 911
4600 Colorado Blvd.
Los Angeles, CA 90039
Attn: EPA Reporting

EPA Pretreatment Program and Self-Monitoring Requirements

Prenotification of Self-Monitoring sampling.

City-Wide Inspection Section	(213) 485-5874

Self-Monitoring procedures.

Self-Monitoring Review Section	(213) 237-0806

Self-Monitoring violations.

Significant Industrial User Inspection Section	(213) 485-5874
Self-Monitoring Review Section	(213) 237-0806

Discharge Standards.

Permitting Section	(213) 237-0806
Enforcement Section	(213) 485-7580
EPA Reporting Section	(213) 237-0806

Industrial User Category.

Permitting Section	(213) 237-0806
EPA Reporting Section	(213) 237-0806

Control Authority Sampling and Inspection Operations (procedures and processes)

Inspection Administration	(213) 485-5886
Significant Industrial User Inspection Section	(213) 485-5874

Waste Minimization and Source Control

Toxic Organic Management Plan (TOMP)	(213) 237-0806

For additional guidance regarding Local, State and Federal regulations and procedures contact one or more of the following:

Self-Monitoring Review	(213) 237-0802
EPA Reporting Section	(213) 237-0806
Permitting Section	(213) 237-0806
Toxic Organic Management	(213) 237-0806
Enforcement Section	(213) 485-7580
Inspection Administration	(213) 485-5886
SIU Inspection Section	(213) 485-5874
City Wide Inspection	(213) 485-5874

PERIODIC COMPLIANCE REPORT

THIS IS A DESCRIPTION OF YOUR FACILITY

SEND REPORT TO:

BUREAU OF SANITATION
ENFORCEMENT DIVISION
4600 COLORADO BLVD
LOS ANGELES CA 90039
ATTN REPORTING SECTION

I.W. PERMIT # W- PERMIT NUMBER HERE PHONE # (DAYTIME OFFICE

COMPANY NAME: NAME OF BUSINESS FACILITY

COMPANY ADDRESS: STREET ADDRESS OF FACILITY

MAXIMUM DAILY FLOW:
AVERAGE DAILY FLOW: during the reporting period

CYANIDE WASTE FLOW: AVERAGE during the reporting period

Production Data as required

REPORTING PERIOD
(CHECK ONE)

Check the proper reporting period

REGULATED TOXIC ORGANICS INVENTORY LIST

INVENTORY DATE:

REGULATED TOXIC ORGANICS USED (IF NONE MUST STATE NONE)	AMOUNT USED PER MONTH	REGULATED TOXIC ORGANICS USED (IF NONE MUST STATE NONE)	AMOUNT USED PER MONTH

List TTOs and quantity used monthly. TTOs are listed on page 11, 11a or 11b.

SAMPLE #	LOCATION SAMPLE TAKEN	LABORATORY NAME	SAMPLE TAKEN BY (PERSON NAME)	PRENOTIFICATION DATE ** MM/DD/YY	REPORTED FLOW (GPD)	FLOW WAS * (CHECK) M	E	C
1 2 3 4 *	Describe the Sample Point. (cyanide destruct, sample box manhole, batch tank)	Lab performing analysis	Who took the sample?	DATE YOU Called	FLOW on DAY Sampled	MEASURED	ESTIMATED	CALCULATED

* M = MEASURED E = ESTIMATED C = CALCULATED

** TO PRENOTIFY CALL (213) 485-5874

(SAMPLE)

FORM - MN413A0E (CONTINUE) I.W. PERMIT #: W- 123456

POLLUTANTS (in mg/l)	FEDERAL LIMITS (POINT SOURCE) MAXIMUM DAILY (A)	FEDERAL LIMITS (POINT SOURCE) MAXIMUM 4 - DAY (B)	ALTERNATIVE LIMITS FOR DAILY MAX. AND 4 - DAY AVERAGE USING CWF	LOCAL LIMITS INSTANTANEOUS MAXIMUM (C)	LAB SAMPLE # 1 SAMPLE DATE 9/12/90	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 2 SAMPLE DATE 9/29/90	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 3 SAMPLE DATE 10/15/90	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 4 SAMPLE DATE 11/1/90	VIOL (A) AND/OR (B) (C)	4 - DAY AVERAGE RESULT FROM 9/12/90 TO 11/1/90	VIOL (B) YES /NO
ARSENIC				3.00	0.01		0.12							
CADMIUM	1.20	0.70		15.00	0.80	B	0.60		0.74		0.58		0.68	NO
COPPER	4.50	2.70		15.00	0.30		1.20		1.32		1.02		0.96	NO
NICKEL	4.10	2.60		12.00	1.20		1.07		0.97		0.84		1.02	NO
SILVER				5.00	0.01		0.05							
CHROMIUM	7.00	4.00		12.00	1.02		3.20		1.50		1.32		1.76	NO
ZINC	4.20	2.60		25.00	1.50		1.40		2.10		2.67	B	1.92	NO
LEAD	0.60	0.40		5.00	0.13		0.69	A,B						
t. METALS	10.50	6.80			4.02		6.87	B	5.89		5.85		5.66	NO
CYANIDE(f)				2.00	0.02		0.13							
CYANIDE(t)	1.90	1.00		10.00	0.30		0.34							
D. SULFIDES				0.10	0.01		0.02							
TTO	2.13				0.32		0.14							
pH (pH unit)				5.5 - 11.0	8.30		7.53							
OIL & GREASE				600.0	10.2		15.4							
CHLORIDES				-----	120.0		90.3							

t = TOTAL, f=FREE, D=DISSOLVED, VIOL=VIOLATION, TTO=TOTAL TOXIC ORGANICS, CALC.=CALCULATED, CWF=COMBINED WASTESTREAMS FORMULA, MAX.=MAXIMUM
(ALL CALCULATIONS FOR COMBINED WASTESTREAMS FORMULA MUST BE SHOWN IN ATTACHMENTS OF THIS REPORT)

IF IN VIOLATION, ATTACH A STATEMENT OF REASON FOR VIOLATION AND CORRECTIVE ACTION TAKEN

I CERTIFY THAT OUR COMPANY ( ) IS (✓) IS NOT CONSTANTLY IN COMPLIANCE WITH THE EPA PRETREATMENT STANDARDS AND THE CITY OF LOS ANGELES EFFLUENT LIMITS. I HAVE PROPERLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS RESPONSIBLE FOR OBTAINING THE INFORMATION SUBMITTED HEREIN, I CERTIFY THAT THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT AS DIRECTED BY THE 40 CFR 403.12 (K) AND L.A.M.C.64.30 (C) 8.

John Doe	JOHN DOE	PRESIDENT	11/14/90
AUTHORIZED REPRESENTATIVE SIGNATURE	PRINT NAME	TITLE	DATE

BTV/MN413A0E/REV/9/90

BUREAU OF SANITATION

PERIODIC COMPLIANCE REPORT

FORM - SN413E0E

EPA SEMI-ANNUALLY PERIODIC COMPLIANCE REPORT FOR EXISTING SOURCE NON-INTEGRATED JOB-SHOP ELECTROPLATING WITH AN AVERAGE DISCHARGE FLOW LESS THAN 10,000 GPD (40 CFR 413)

SEND REPORT TO:
BUREAU OF SANITATION
ENFORCEMENT DIVISION
4600 COLORADO BLVD
LOS ANGELES CA 90039
ATTN. REPORTING SECTION

I.W. PERMIT # W- PHONE # ( )

COMPANY NAME:

COMPANY ADDRESS:

MAXIMUM DAILY FLOW: (GPD) ☐ MEASURED ☐ ESTIMATED ☐ CALCULATED

AVERAGE DAILY FLOW: (GPD) ☐ MEASURED ☐ ESTIMATED ☐ CALCULATED

REPORTING PERIOD
(CHECK ONE)

☐ JAN - JUN 19__

☐ JUL - DEC 19__

REGULATED TOXIC ORGANICS INVENTORY LIST INVENTORY DATE:

REGULATED TOXIC ORGANICS USED (IF NONE MUST STATE NONE)	AMOUNT USED PER MONTH	REGULATED TOXIC ORGANICS USED (IF NONE MUST STATE NONE)	AMOUNT USED PER MONTH

SAMPLE #	LOCATION SAMPLE TAKEN	LABORATORY NAME	SAMPLE TAKEN BY (PERSON NAME)	PRENOTIFICATION DATE ** MM/DD/YY	REPORTED FLOW (GPD)	FLOW WAS * (CHECK) M	E	C
1								
2								
3								
4								

* M - MEASURED E - ESTIMATED C - CALCULATED ** TO PRENOTIFY CALL (213) 485-5874

FORM - SN413E0E(CONTINUE) I.W. PERMIT #: W-

POLLUTANTS (in mg/l)	FEDERAL LIMITS (POINT SOURCE) MAXIMUM DAILY (A)	FEDERAL LIMITS (POINT SOURCE) MAXIMUM 4 - DAY (B)	ALTERNATIVE LIMITS FOR DAILY MAX. AND 4 - DAY AVERAGE USING CWF	LOCAL LIMITS INSTANTANEOUS MAXIMUM (C)	LAB SAMPLE # 1 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 2 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 3 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 4 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	4 - DAY AVERAGE RESULT FROM TO	VIOL (B) YES /NO
ARSENIC				3.00										
CADMIUM	1.20	0.70		15.00										
COPPER				15.00										
NICKEL				12.00										
SILVER				5.00										
CHROMIUM				12.00										
ZINC				25.00										
LEAD	0.60	0.40		5.00										
t. METALS														
CYANIDE(f)	5.00	2.70		2.00										
CYANIDE(t)				10.00										
D. SULFIDES				0.10										
TTO	4.57													
pH (pH unit)				5.5 - 11.0										
OIL & GREASE				600.0										
CHLORIDES				-----										

t = TOTAL, f=FREE, D=DISSOLVED, VIOL=VIOLATION, TTO=TOTAL TOXIC ORGANICS, CALC.=CALCULATED, CWF=COMBINED WASTESTREAMS FORMULA, MAX.=MAXIMUM
(ALL CALCULATIONS FOR COMBINED WASTESTREAMS FORMULA MUST BE SHOWN IN ATTACHMENTS OF THIS REPORT)

IF IN VIOLATION, ATTACH A STATEMENT OF REASON FOR VIOLATION AND CORRECTIVE ACTION TAKEN

I CERTIFY THAT OUR COMPANY [ ] IS [ ] IS NOT CONSTANTLY IN COMPLIANCE WITH THE EPA PRETREATMENT STANDARDS AND THE CITY OF LOS ANGELES EFFLUENT LIMITS. I HAVE PROPERLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS RESPONSIBLE FOR OBTAINING THE INFORMATION SUBMITTED HEREIN, I CERTIFY THAT THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT AS DIRECTED BY THE 40 CFR 403.12 (K) AND L.A.M.C.64.30 (C) 8.

/ /

AUTHORIZED REPRESENTATIVE SIGNATURE PRINT NAME TITLE DATE