Traci Garner

From: Muratore, Kim <Muratore.Kim@epa.gov>
Sent: Friday, February 15, 2019 9:56 AM
To: Traci Garner; Sandra Valle
Subject: Fw: EnPro Holdings, Inc.'s Response to EPA's CERCLA Section 104(e) Information Request

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From: katy.faulkner@huschblackwell.com <katy.faulkner@huschblackwell.com>
Sent: Thursday, February 14, 2019 2:32 PM
To: Muratore, Kim
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Subject: EnPro Holdings, Inc.'s Response to EPA's CERCLA Section 104(e) Information Request

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Ms. Muratore:

Below, please find a link to download EnPro Holdings, Inc.'s Response to EPA's December 10, 2018 CERCLA Section 104(e) Information Request concerning the Orange County North Basin Study Area, Orange County, California. Please let me know if you have any trouble downloading the files.

Regards,
Megan Caldwell
Attorney for EnPro Holdings, Inc.

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RESPONSE TO REQUEST FOR INFORMATION UNDER CERCLA § 104(e)

INTRODUCTION

EnPro Holdings, Inc. (hereinafter "EnPro Holdings") makes the following responses to the United States Environmental Protection Agency (hereinafter "EPA") Request for Information Pursuant to Section 104 of CERCLA in relation to the Orange County North Basin Study Area in Orange County, California (hereinafter "Information Request").

Exhibit List:

Exhibit 1	Facility Maps
Exhibit 2	Figure 2-5, Operation Plan for Hazardous Waste, NGSC-DTSC005435
Exhibit 3	1972 Fullerton Fire Department Information Regarding Trent Tube Division, CRU 00580-00588
Exhibit 4	1983 Purchase Agreement
Exhibit 5	1980 U.S. EPA Forms, CRU 00229-00234
Exhibit 6	[Intentionally Omitted]
Exhibit 7	1983 Operation Plan for Hazardous Waste, CRU 00179-00212
Exhibit 8	1983 Colt Industries Letter to California Department of Health Services regarding Operation Plan for Hazardous Waste, Treatment, and Storage at the Fullerton Operation, CRU 00136-00141
Exhibit 9	1985 Purchase Agreement
Exhibit 10	1985 Calocerinos & Spina Facilities Closure Report, CRU 00435-00579
Exhibit 11	1985 Calocerinos & Spina Letter to California Department of Health Services regarding Site Remediation Plan, NGSC-DTSC004954-004980
Exhibit 12	2000 California Environmental Protection Agency, RCRA Facility Assessment, OCVOCEF 000006-000061
Exhibit 13	2002 Frey Environmental, Inc., Soil and Soil Vapor Assessment, LaBarron Investments, OCVOCEF 000593-000695
Exhibit 14	2002 Frey Environmental, Inc., Revised RCRA Facility Investigation Workplan, OCVOCEF 000703-000756
Exhibit 15	2003 Frey Environmental, Inc., Additional Soil Vapor Assessment, LaBarron Investments, OCVOCEF 000255-000304
Exhibit 16	2003 California Environmental Protection Agency Department of Toxic Substances Control, Memorandum re: Review of RFI Report, OCVOCEF 000167-000171
Exhibit 17	2003 Letter, Frey Environmental, Inc. to California Environmental Protection Agency Department of Toxic Substances Control re: RFI Workplan Addendum, OCVOCEF 000312-000319
Exhibit 18	2003 California Environmental Protection Agency Department of Toxic Substances Control, Memorandum re: Soil and Vapor Assessment, CRU 00238-00240
Exhibit 19	2003 Letter, Frey Environmental, Inc. to California Environmental Protection Agency Department of Toxic Substances Control re: LaBarron Investments, OCVOCEF 000105-000155

General Objections

EnPro Holdings objects to each and every question to the extent it exceeds the authority of EPA under Section 104(e) of CERCLA, insofar as a particular question fails to limit the scope of the inquiry to (a) the identification, nature and quantity of materials which have been or are generated, treated, stored, or disposed of at the Facility (as defined in the Information Request), as provided in CERCLA §104(e)(2)(A), 42 U.S.C. §9604(e)(2)(A); (b) the nature or extent of a release of a hazardous substance or pollutant or contaminant at or from the Facility, as provided in CERCLA §104(e)(2)(B), 42 U.S.C. §9604(e)(2)(B); or (c) information relating to the ability of EnPro Holdings to pay for or perform a cleanup, as provided in CERCLA §104(e)(2)(C), 42 U.S.C. §9604(e)(2)(C). Further, for each and every question, EnPro Holdings objects to the definitions and instructions included in the Information Request as exceeding the scope of EPA's authority for purposes of a CERCLA §104(e) information request. For instance, EnPro Holdings objects to the expansive definition of "Company" and EPA's instruction that any reference to a number of EnPro Holdings entities should be interpreted to include all predecessors, successors, subsidiaries, operating divisions, affiliates, and branches. Requests for such extensive corporate details are beyond EPA's authority under CERCLA §104(e). EnPro Holdings provides a considerable explanation of corporate history and structure below. Otherwise, when asked about the Company, limits its responses to information concerning EnPro Holdings, Inc.

EnPro Holdings objects to each question to the extent the question asks for information or documents protected by the attorney-client privilege and/or work-product doctrine and/or any other privilege or doctrine providing similar protection from disclosure.

EnPro Holdings provides the responses set forth below subject to, and without waiving, the objections set forth herein.

ANSWERS

1. State the full legal name, address, telephone number, email address, and position(s) held by any individual answering any of these questions on behalf of EnPro Holdings, Inc. and its predecessors, including Trent Tube Company, Crucible Steel Company of America, and Colt Industries Operating Corp. (f/k/a, Crucible Steel Corporation), along with their affiliated entities, specifically including Crucible Materials Corporation (collectively, "the Company").

Answer:

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2. Identify the dates the Company, under any of its current or former business structures, owned and/or operated the facility located at 2100 East Orangethorpe Ave., Fullerton, California (the "Facility"). Specifically, provide the dates the following entities owned and/or operated at the Facility: (a) Trent Tube Company; (b) Crucible Steel Company of America; (c) Colt Industries Operating Corp.; and (d) Crucible Materials Corporation. Provide copies of the deeds and purchase agreements evidencing the transfer of real property ownership of the Facility between these entities.

Answer:

The Company and/or its predecessors or affiliates owned and operated the Facility from approximately March 18, 1957 and July 8, 1959 to November 1985. The chronology of the Company's ownership and operation of the Facility is below. Note that entity name abbreviations are defined in EnPro Holdings' response to Request 8 below.

Date	Event
3/18/1957	Trent Tube Company recorded deed for one parcel at the Facility (copy of deed not found)
7/8/1959	Trent Tube Company recorded deed for second parcel at the Facility (copy of deed not found)
3/25/1959	Construction of Facility was completed prior to or on this date based on aerial photography.
10/17/1968	Crucible Parent transferred both parcels of the Facility to Cru Colt (copy of transfer documentation not found)
10/3/1983	CIOC transferred Facility to CMC (see 1983 Purchase Agreement at **Exhibit 4**)
5/11/1984	Manufacturing operations at Facility ceased
4/6/1985	California Department of Health Services approved the Facility closure
11/5/1985	CMC transferred Facility to CIOC (see 1985 Purchase Agreement at **Exhibit 9**)
Nov. 1985	CIOC sold Facility to Howard K. Marlow or Barlow (copy of transfer documentation not found)

EnPro Holdings lacks any further information and/or documents responsive to this Request.

3. Identify the individuals who are or were responsible for environmental matters at the Facility during its operation at this address. For each individual responsible for environmental matters, provide his/her full name, current or last known address, current or last known telephone number, position titles, and the dates the individual held such positions.

Answer:

EnPro Holdings is informed and believes that the following individuals may have worked at the Facility during the period identified in EnPro Holdings' Response to Request 2 above: William Hartfel; Barry Eggers; Adin B. Capron; Harry L. Murphy; S. Stenovich; M. Ely; J. Durlin; R. K. Dickson; John Ammon; Marvin Short; Christopher Sollitto; J.P. Foley; Robert A. Greene; D.R. Gehr; Robert M. Phillips; and Steve Cornell. EnPro Holdings has no knowledge of the current location of the preceding persons or whether they are alive. EnPro Holdings lacks any further information and/or documents responsive to this Request.

4. Identify all current and former employees who have knowledge of the Company's operations at the Facility that relate to the creation, use, storage, or disposal of PCE, TCE, 1,1 ,1 -TCA, 1,1-DCE, 1,4-dioxane, or perchlorate. This includes individuals whose job functions included operations that utilized or generated these hazardous substances, or who were responsible for storing/ filling/disposing of hazardous substances and/or wastes containing the above-identified chemicals. For each individual, provide his/her full name, current or last known address, current or last known telephone number, position title, and the dates the individual held such position.

Answer:

See EnPro Holdings' Response to Request 3 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

5. Identify all current and former employees who have knowledge of the Company's operations at the Facility that relate to the physical layout of each operational area of the Facility, who could explain the day-to-day flow of the operations, or who know the location of physical features such as clarifiers, degreasers, and above- and below-ground storage tanks. For each individual, provide his/her full name, current or last known address, current or last known telephone number, position title, and the dates the individual held such position.

Answer:

See EnPro Holdings' Response to Request 3 above. EnPro Holdings lacks any

further information and/or documents responsive to this Request.

6. Explain the Company's present corporate status (e.g., active, suspended, defunct, merged, dissolved) as well as its operational status (e.g., whether and where business operations are currently occurring).

Answer:

See EnPro Holdings' Response to Request 9 below. EnPro Holdings lacks any further information and/or documents responsive to this Request.

7. Provide the date and in which State the Company was incorporated, formed, or organized.

Answer:

See EnPro Holdings' Response to Request 9 below. EnPro Holdings lacks any further information and/or documents responsive to this Request.

8. Identify the business structure (e.g.. sole proprietorship, general partnership, limited partnership, joint venture, or corporation) under which the Company currently exists or operates, and identify each business structure under which it existed or operated while at the Facility location. For each business structure and name under which the Company has existed or operated at the Facility, provide the corresponding dates that it existed or operated under that business structure and name.

Answer:

See EnPro Holdings' Response to Request 9 below. EnPro Holdings lacks any further information and/or documents responsive to this Request.

9. Describe the historical and current corporate relationship (e.g., parent, subsidiary, division, predecessor, successor) between EnPro Holdings, Inc. and each of the following entities: (a) Trent Tube Company; (b) Crucible Steel Company of America, Trent Tube Division; (c) Colt Industries Operating Corp., Trent Tube Division; and (d) Crucible Materials Corporation, Trent Tube Division. Please also provide the date each company was incorporated, formed, or organized, and the corporate status (e.g., active, suspended, defunct, merged, dissolved) of each of these entities.

Answer:

The following information summarizes the history and relationships between the relevant entities.

In March 1963, the Trent Tube Company, a Wisconsin corporation, was merged into its parent corporation, Crucible Steel Corporation, a Delaware corporation ("Crucible Parent"). On

August 1, 1968, Colt Industries, Inc., a Pennsylvania corporation ("PA Colt") acquired 983,004 shares (approximately 23%) of Crucible Parent from Hunt Foods, Inc., a wholly owned subsidiary of Norton Simon, Inc. On October 17, 1968, Crucible Parent and Cru Colt Corporation, a Delaware corporation ("Cru Colt") entered into an Omnibus Deed, Assignment and Bill of Sale and Assumption Agreement (the "Indenture"). The Indenture was entered into pursuant to the requirements of a Three Party Agreement, dated as of August 15, 1968 (the "Three Party Agreement"), between PA Colt, Crucible Parent and Cru Colt. Pursuant to the terms of the Indenture, and consistent with the Three Party Agreement, Crucible Parent transferred substantially all of its assets to Cru Colt and Cru Colt assumed "any and all indebtedness, obligations and liabilities of [Crucible Parent] of every kind and description whatsoever, accrued, contingent or to accrue or arise", including all environmental liabilities, but excluding Crucible Parent's obligations under the Consolidation Agreement (described below), the Indenture, the Three Party Agreement and certain stock option plans. As a result of the Indenture, all environmental liabilities, if any, related to the Facility were assumed by Cru Colt.

Immediately following the execution of the Indenture on October 17, 1968, PA Colt and Crucible Parent were consolidated to form Colt Industries Inc., a Delaware corporation ("DE Colt"), which became the direct parent entity of Cru Colt. The consolidation was effected through a Plan and Agreement of Consolidation dated as of August 15, 1968 (the "Consolidation Agreement"), between PA Colt and Crucible Parent. Upon effectiveness of the consolidation, Cru Colt was renamed Crucible Steel Corporation. This consolidation between PA Colt and Crucible Parent occurred after the transfer of all liabilities of Crucible Parent, including any liabilities of the Facility, to Cru Colt under the Indenture. Therefore, upon the consolidation, DE Colt became the sole owner of a subsidiary that operated the Facility, among other operations, but DE Colt did not directly own or operate the Facility. On February 14, 1969, Crucible Steel Corporation changed its name to Crucible, Inc. On May 6, 1976, DE Colt merged with its wholly owned subsidiary, Colt Industries Pennsylvania Corporation, a Pennsylvania corporation ("CIPC"). CIPC was the surviving entity of the merger and was renamed Colt Industries Inc.

On December 31, 1982, Crucible, Inc changed its name to Colt Industries Operating Corp ("CIOC"). On October 3, 1983, CIOC and Crucible Materials Corporation, a newly incorporated Delaware corporation ("CMC") entered into a Purchase Agreement (the "1983 Purchase Agreement). Pursuant to the terms of the 1983 Purchase Agreement, CIOC assigned, transferred, delivered and sold all of its tangible and intangible assets related to its Crucible Specialty Metals Division (including the Facility), Trent Tube Division, Crucible Compaction Metals Operation, Crucible Magnetics Division and Crucible Research Center (collectively, the "Crucible Operations"), excluding only the assets of the Crucible Spring Division (unrelated to the Facility), CIOC's interest in an escrow deposit agreement and claims for refunds or credits related to the Crucible Operations. The transferred assets included all manufacturing plants and related facilities appertaining thereto, and all real property, with the transfer of such real property being made on an "as is" and "where is" basis. In exchange for the Crucible Operations, CIOC received all of the capital stock of CMC (1,000 shares of common stock).

On October 28, 1986, CIOC merged with CIPC, and CIPC, as the surviving entity of the merger, became the owner of the equity interests in CMC then held by CIOC. On May 3, 1990, CIPC changed its name to Coltec Industries Inc. On July 12, 1999, Coltec Industries Inc merged

with Runway Acquisition Corporation, a subsidiary of Goodrich Corporation ("Goodrich"), and survived as a wholly owned subsidiary of Goodrich. EnPro Industries, Inc. was incorporated on January 11, 2002 as a wholly owned subsidiary of Goodrich and the sole parent entity of Coltec. On May 31, 2002, the shares of EnPro Industries, Inc. were distributed to the shareholders of Goodrich and EnPro Industries, Inc. became a separate public company, with Coltec Industries Inc continuing as its wholly-owned subsidiary through the date hereof.

Certain of EnPro Industries, Inc.'s subsidiaries, including Coltec Industries Inc, defended asbestos claims for many years. In March 2016, EnPro Industries, Inc. announced a comprehensive settlement to permanently resolve asbestos claims against Coltec Industries Inc and Garlock Sealing Technologies LLC, another EnPro subsidiary. To implement the comprehensive settlement, Coltec Industries Inc underwent an internal corporate restructuring. On September 12, 2016, OldCo, LLC ("OldCo"), a North Carolina limited liability corporation, was formed. On December 31, 2016, Coltec Industries Inc was merged into OldCo. Following that merger, on that same day, OldCo transferred substantially all of its assets to a newly formed entity, EnPro Holdings, Inc., a North Carolina corporation that was formed on September 14, 2016. EnPro Holdings, Inc. was and still is a direct wholly owned subsidiary of EnPro Industries, Inc. Following a bankruptcy court confirmation of a plan of reorganization which included the discharge of certain asbestos-related claims, OldCo merged with EnPro Holdings, Inc. on July 28, 2017 with EnPro Holdings, Inc. being the surviving entity.

EnPro Holdings, Inc.'s corporate status is active, the entity has never used a fictitious name, and the entity has always operated in the form of a corporation. Its business operations are currently headquartered in Charlotte, North Carolina.

10. State whether EnPro Holdings, Inc. is the ultimate successor in interest to the entities listed in Question 9 above in terms of liabilities for the Trent Tube operations that were conducted at the Facility.

Answer:

See EnPro Holdings' Response to Question 33 below. Otherwise, EnPro Holdings, Inc. objects to this request on the basis that it asks for a legal conclusion and exceeds the scope of EPA's authority for purposes of a CERCLA §104(e) information request.

11. If the Company operated at the Facility as a subsidiary, division, or other business unit, provide this information and identify where it fits into the larger company's structural organization.

Answer:

See EnPro Holdings' Responses to Questions 2 and 9 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

12. If the Company is now using or has ever used a fictitious business name while operating at the Facility, identify the fictitious names and the owners of each

fictitious name.

Answer:

See EnPro Holdings' Response to Request 9 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

13. If the Company sold the Facility property, provide the date on which the Facility property was sold and the person or entity to whom it was sold. To the extent known, indicate whether you understand whether the buyer planned to continue the same or similar business operations at the Facility as that conducted by the Company. To the extent you are aware, include any information regarding changes planned by the buyer regarding operations that involve the use, storage, or disposal of PCE, TCE, 1,1-DCE, 1,1,1,-TCA, 1,4-dioxane, or perchlorate (e.g., plans to add or dismantle clarifiers, change the types of solvents being used).

Answer:

See EnPro Holdings' Response to Request 2 above. EnPro Holdings lacks any further information and/or documents responsive to this Request

14. If the Facility was operated by other parties prior to the Company's operations, identify the prior operators and describe those previous operations to the extent known. Describe any changes made to operations by the Company after it began operating at the Facility that changed (either increases or decreases) the use or disposal of PCE, TCE, 1,1-DCE, 1,1,1-TCA, 1,4-dioxane, or perchlorate.

Answer:

EnPro Holdings lacks any information and/or documents responsive to this Request.

15. For any period of time in which the Company owned the Facility under any of its current or former business structures and leased the Facility, provide the name, address, and phone number of any tenants and/or lessees.

Answer:

From approximately March 18, 1957 and July 8, 1959 to November 1985, the time period of ownership/operation identified in EnPro Holdings' Response to Request 2, the entities identified in EnPro Holdings' Response both owned and operated the Facility, and so the Facility was not operated by any tenants or lessees. EnPro Holdings lacks any further information and/or documents responsive to this Request.

16. For any period of time in which the Company under any of its current or former business structures operated at, but did not own, the Facility, provide the name, address, and phone number of the Facility's owner and/or lessor.

Answer:

From approximately March 18, 1957 and July 8, 1959 to November 1985, the time period of ownership/operation identified in EnPro Holdings' Response to Request 2, the entities identified in EnPro Holdings' Response both owned and operated the Facility. EnPro Holdings lacks any further information and/or documents responsive to this Request.

17. Describe the size of the Facility, the approximate number of people employed by the Company at the Facility, and any products manufactured or services performed at the Facility. Describe any significant change in Facility size, the Company's number of employees, and the products manufactured or services performed over time.

Answer:

The Facility property is approximately 5.2 acres in size. One of the two buildings at the Facility had dimensions of approximately 300 feet from north to south and 130 feet from east to west. The majority of the building housed the manufacturing operations. Offices, a laboratory, and a locker room were located in the northernmost section of the building. The second building at the Facility was used for maintenance activities and was located on the eastern portion of the property. The maintenance building had approximate dimensions of 40 feet by 60 feet. The property was covered with concrete with the exception of the southernmost areas of the property which was bordered by Carbon Creek. Based on aerial photography review, all site features outside the main building (i.e., maintenance building, ammonia tanks, etc.) were either demolished or removed from the site between March 1983 and December 1986.

The Facility resized stainless steel or other metal/alloy tubing to customer specifications for aerospace applications. The Facility pulled tubing through resizing dies to produce tubing of various diameters for hydraulic lines for aircraft. Prefabricated tubing was coated with oil to lubricate the tubing during the cold draw process to create smaller diameter tubing. This cold drawn tubing was next immersed in a solvent degreaser to remove the oil from the tubing. The tubing was then raised up out of the dip tank and the solvent was allowed to condense on the tubing as a vapor and then drip back down into the dip tank. This process was typically repeated three to four times per bundle of tubing. The tubing was then placed in a pickle liquor tank for cleaning and descaling of the tubing. The Facility had two pickle liquor tanks with capacities of 2,000 gallons each.

There were four concrete impounds located outside and adjacent to the building on the south side, used for chemical storage. Also located on the property were one liquid ammonia and two hydrogen tanks, a propane tank, a maintenance building, a box construction area, record storage, compressed nitrogen gas cylinders, lubricant storage, and raw tubing storage. The maintenance building was used for welding, grinding, and machine repair. The box construction area was used to assemble wooden boxes for shipping the final product.

EnPro Holdings lacks any further information and/or documents responsive to this Request.

18. Provide a map of the Facility showing the locations of buildings and significant features on the property at the time that the Company operated at the Facility. Indicate the locations of any maintenance shops, machine shops, degreasers, clarifiers, plating areas, painting areas, cooling towers, liquid waste tanks, chemical storage tanks, and fuel tanks. Provide a physical description of the Facility and identify the following:

a. Surface structures (e.g., buildings, tanks, containment areas, storage areas);
b. Subsurface structures (e.g., underground tanks, sumps, pits, clarifiers);
c. Stormwater drainage system and sanitary sewer system, including septic tanks and subsurface disposal fields;
d. 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 the dates on which such changes occurred; and
e. The location of all waste storage or waste accumulation areas as well as waste disposal areas (e.g., dumps, leach fields, bum pits).

Answer:

See EnPro Holdings' Response to Request 17 above. Further, facility maps are attached hereto as **Exhibit 1** (entire document), **Exhibit 7** (at CRU 00186-189 and CRU 00206), **Exhibit 2** (entire document), **Exhibit 10** (at CRU 00502), and **Exhibit 12** (at OCVOCEF 000026, OCVOCEF 000035, OCVOCEF 000057). The chemicals stored in the four concrete impounds located adjacent to the south side of the building included liquid wastes, virgin 1,1,1-TCA, and kerosene. Going from west to east, the first impound near the southwest corner of the building was used to store waste; the type of waste is unknown. The next impound contained 55 gallon drums of waste 1,1,1-TCA, waste kerosene, and waste mineral spirits. The third impound contained waste oil, waste detergent, virgin 1,1,1-TCA and kerosene in above-ground storage tanks , and the 200-gallon waste oil tank. The fourth impound contained concentrated acids. EnPro Holdings lacks any further information and/or documents responsive to this Request.

19. Indicate on a map of the Facility or in narrative form each location where any of the following chemicals were used, stored, generated, spilled, or disposed of: PCE, TCE, 1,1-DCE, 1,1,1-TCA, 1,4-dioxane, or perchlorate. Describe any manufacturing or treatment processes in which any of these chemicals were used.

Answer:

See EnPro Holdings' Response to Request 18 above. Further, the degreasing pit, located in the center of the building on the Facility contained over time PCE, TCE and 1,1,1-TCA and had a maximum capacity of approximately 2,400 gallons. An April 13, 1976 Fullerton Fire Department inspection report identifies a 4,000-gallon trichloroethylene tank adjacent to the south wall outside the building. One of the four concrete impounds located adjacent to the south side of the building included liquid waste 1,1,1-TCA and another contained virgin 1,1,1-TCA. The 1985 Closure Plan for the site stated the

maximum storage capacity of waste 1,1,1-TCA at that time was 15 55-gallon drums or 825 gallons. EnPro Holdings lacks any further information and/or documents responsive to this Request.

20. Provide copies, both originals and updates, of hazardous material business plans and chemical inventory forms submitted to city, county, and/or state agencies for the Facility.

Answer:

EnPro Holdings lacks any information and/or documents responsive to this Request.

21. Provide a list of all chemicals and hazardous substances used at the Facility that contained any of the following: PCE, TCE, 1,1-DCE, 1,1,1-TCA, 1,4-dioxane, or perchlorate.

Answer:

The Facility used PCE, TCE, and 1,1,1-TCA to degrease tubing. EnPro Holdings lacks any further information and/or documents responsive to this Request.

22. For any PCE, TCE, 1,1-DCE, 1,1,1-TCA, 1,4-dioxane, or perchlorate used at or transported to or from the Facility, identify and provide the following information:

a. The trade or brand name, chemical composition, and quantity used for each chemical or hazardous substance;
b. The locations where each chemical or hazardous substance is or was used, stored, and disposed of;
c. The kinds of wastes (e.g., scrap metal, construction debris, motor oil, solvents, waste water), the quantities of wastes, and the methods of disposal for each chemical, waste, or hazardous substance;
d. The quantity purchased (in gallons) and the time period during which it was used; and
e. Copies of Material Safety Data Sheets for all hazardous substances used that contain any of these chemicals.

Answer:

See EnPro Holdings' Responses to Requests 18 and 19 above. Further, the Facility used PCE, TCE, and 1,1,1-TCA from approximately 1959 to 1984. The Facility switched solvents used from TCE to PCE, back to TCE, and then to 1,1,1-TCA. More specifically, from the beginning of operations in approximately 1958, solvent use was undocumented. TCE was documented as being used from 1966 to 1968. PCE was used from 1968 to about 1976. TCE was used again from 1976 to about 1980. Finally, 1,1,1-TCA was used from 1980 until closure in 1984. The chemical 1,1-DCE is a degradation product of 1,1,1-TCA.

With regard to solvent storage locations and methods of disposal, waste 1,1,1-TCA from the still bottom in the degreasing pit was pumped into 55 gallon drums for storage. These drums were stored in cement block and concrete impounds adjacent to the southern wall of the building. The waste 1,1,1-TCA was reclaimed every 2 to 3 months by an outside vendor. On September 5, 1980, Whittier Drum & Vac transported 4 drums of grease (degreaser sludge) and 1,700 gallons of degreaser sludge to the B.K.K. landfill. The type of solvent in the sludge is not provided. On November 12, 1980 Auto-Clean purchased 8 drums (440 gallons) of degreaser sludge for reclamation of 1, 1, 1-trichloroethane (1,1,1-TCA). In the 1983 Operations Plan for the Facility, the annual volume of waste 1,1,1-TCA generated by the site was listed as "800/1300 gallons." The waste consisted of 40-60% 1,1,1-TCA, and the balance was tramp oils. The 1985 Closure Plan for the Facility stated the maximum storage capacity of waste 1,1,1-TCA at that time was 15 55-gallon drums or 825 gallons.

EnPro Holdings lacks any further information and/or documents responsive to this Request.

23. Provide copies of all investigation and sampling reports containing environmental data or technical or analytical information regarding soil, water, and air conditions at the Facility, including, but not limited to, data or information related to soil contamination, soil sampling, soil gas sampling, indoor air sampling, geology, groundwater, surface water, and hydrogeology.

a. State whether the information provided represent a complete list of all soil, soil gas, indoor air, and groundwater sampling conducted at the Facility. If you are aware of any other investigations or sampling reports for which the Company does not have a copy, describe the date and type of sampling conducted, and provide information on where EPA might obtain the report and related documents.

b. State whether the Company is aware of any planned future soil, soil gas, indoor air, or groundwater sampling at the Facility, and if so, please describe.

Answer:

Copies of reports containing sampling results or discussions sampling are attached hereto as **Exhibit 11** (see entire document, a 1985 sampling report), **Exhibit 13** (see entire document, a 2002 sampling report), **Exhibit 15** (see entire document, a 2003 sampling report), **Exhibit 19** (see entire document, a revised 2003 sampling report), **Exhibit 10** (see CRU 00442, CRU 00498-500, CRU 00506-512), **Exhibit 12** (at OCVOCEF 000013), **Exhibit 14** (at OCVOCEF 000708), **Exhibit 16** (entire document), **Exhibit 17** (at OCVOCEF 000313-000314), and **Exhibit 18** (at CRU 000238-000239). The other sampling event for which EnPro Holdings does not have documentation took place in 2011, when the Orange County Water District collected soil samples from two borings that were near, but not at, the dip tank and the waste storage areas at the Facility site. CM-GW02 was drilled approximately 90 feet west of the dip tank. Soil samples were collected every 10 feet. No detectable concentrations of COCs occurred until depths of 60 and 70 feet. The sample at 60 feet contained PCE (9.2 pg/kg), 1,1,1-TCA (2 pg/kg), and cis 1,2-DCE (1.8 pg/kg). The deeper sample (70 feet) contained PCE (33 pg/kg), TCE (6.9

pg/kg), and 1,1-DCE (19 pg/kg). The proportions in the 70-foot sample are similar to those that were found in a water sample collected at 76 feet. CM-GW03 was drilled about 75 feet west of where the high concentrations of 1,1,1-TCA, TCE, and PCE were measured on the south side of the building. These samples had measureable concentrations of PCE in nearly every sample, but non-detectable concentrations of the other COCs, with two exceptions. The sample collected at a depth of 30 feet contained PCE (22 pg/kg), TCE (2.6 pg/kg), and 1,1,1- TCA (4.5 pg/kg). The sample collected at 80 feet contained PCE (7.6 pg/kg) and 1,1-DCE (1.9 pg/kg). The deep samples were probably affected by the contaminants found in the water at these depths. EnPro Holdings lacks any further information and/or documents responsive to this Request.

24. Identify and provide copies of all agency orders, correspondence, and/or workplans regarding any soil, soil gas, indoor air, and/or groundwater sampling at the Facility that was ordered or agreed to be performed, but that was never completed. Explain, to the best of your ability, why the sampling was not conducted.

Answer:

EnPro Holdings lacks any information and/or documents responsive to this Request.

25. Provide copies of any due diligence reports or property transfer assessments related to the Facility.

Answer:

EnPro Holdings lacks any information and/or documents responsive to this Request.

26. Identify, and provide the following information for, all groundwater wells located at the Facility:

a. A map with the specific locations of the groundwater wells;
b. Dates of well construction;
c. Depth to groundwater, depth of well, and depth to and of screened intervals;
d. Uses of each well;
e. Date each well was abandoned, if applicable;
f. Date each well was sampled;
g. All constituents analyzed for during groundwater sampling events; and
h. All groundwater sampling results, reports of findings, and analytical data.

Answer:

See EnPro Holdings' Response to Request 23 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

27. Provide copies of any applications for permits or permits received for the Facility under any local, state, or federal environmental laws and regulations, including any waste discharge permits (e.g., national pollutant discharge elimination system

[NPDES] permits).

Answer:

Attached hereto are a 1967 South Coast Air Quality Management District permit to operate a solvent degreaser (**Exhibit 3**, at CRU 00588); a 1980 U.S. EPA hazardous waste permit application (**Exhibit 5**, entire document); a 1968 Fullerton Fire Department permit for the Facility to store, handle, transport, or use "trichloroethylene" (**Exhibit 3**, at CRU 00587); a 1976 Fullerton Fire Department permit for the Facility to store, handle, transport, or use "trichloroethylene" (**Exhibit 10**, at CRU 00572); a 1983 application for a waste disposal permit (**Exhibit 10**, at CRU 00478-479); an 1985 Air Quality Management District excavation permit and related documentation (**Exhibit 10**, at CRU 00443, CRU 00513-00537); and a permit list referencing a number of other Facility permits, copies of which EnPro Holdings does not have in its possession (**Exhibit 3**, at CRU 00588). EnPro Holdings lacks any further information and/or documents responsive to this Request.

28. For each waste stream generated at the Facility, identify the waste and describe the procedures for (a) collection, (b) storage, (c) treatment, (d) transport, and (e) disposal of the waste stream.

Answer:

See EnPro Holdings' Response to Request 17 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

29. If the Company discharged any of its waste stream at the Facility to the sewer, identify all locations where waste streams were discharged and provide copies of all permits and all analyses performed on discharged water.

Answer:

See EnPro Holdings' Response to Request 17 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

30. Describe the method(s) used by the Company to remove waste streams from sumps at the Facility.

Answer:

See EnPro Holdings' Response to Request 17 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

31. Identify all leaks, spills, or other releases into the environment of any hazardous substances or pollutants or contaminants that have occurred at or from the Facility. Identify and provide supporting documentation of:

a. The date each release occurred;
b. The cause of each release;
c. The amount of each hazardous substance, waste, or pollutant or contaminant released during each release;
d. Where each release occurred and what areas were impacted by the release; and
e. Any and all activities undertaken in response to each release, including the notification of any local, state, or federal government agencies about the release.

Answer:

A 1968 Fullerton Fire Department inspection report notes an oil spill on the floor at the drawing oil and solvent storage area. Otherwise, there are no documented reports of spills at the Facility. In the case of *Orange County Water District v. Northrop Corporation et al.*, Case no. 04CC00715, on May 9, 2014, the Superior Court of the State of California granted summary judgment and a judgment on the pleadings in favor of certain defendants, including CMC, finding that CMC did not contaminate groundwater under the Orange County North Site. EnPro Holdings lacks any further information and/or documents responsive to this Request.

32. Provide copies of any correspondence between the Company and local, state, or federal authorities concerning the use, handling, or disposal of PCE, TCE, 1,1,1-TCA, 1,1-DCE, 1,4-dioxane, or perchlorate at the Facility, including but not limited to any correspondence concerning any of the releases identified in response to the previous question.

Answer:

Attached hereto are 1976-1977 Fullerton Fire Department records of inspection that reference solvent storage (**Exhibit 10**, at CRU 00577); a 1983 letter sent by Colt Industries, Inc. to California State Dept. of Health Services Hazardous Waste Management Branch that briefly mentions solvent storage (**Exhibit 8**, at CRU 00136-CRU00141); a 1985 facilities closure report sent by Colt Industries, Inc. to the California State Dept. of Health Services Hazardous Waste Management Branch that contains a chart regarding solvent disposal (**Exhibit 10**, at CRU 00440); a 1991 RCRA Preliminary Assessment submitted to EPA Region IX that mentions solvent storage and use (**Exhibit 12**, at OCVOCEF 000033, OCVOCEF 000039); a 2000 California Environmental Protection Agency Department of Toxic Substances Control RCRA Facility Assessment that discusses solvent storage and handling (**Exhibit 12**, at OCVOCEF 000011, OCVOCEF 000018, OCVOCEF 000020); and a 2002 letter sent by Frey Environmental, Inc. to California Environmental Protection Agency's Department of Toxic Substances Control that discusses solvent storage (**Exhibit 17**, at OCVOCEF 000313). EnPro Holdings lacks any further information and/or documents responsive to this Request.

33. According to the 2013 10-K Annual Report filed by EnPro Industries, Inc. (p. 33), Colt Industries Operating Corp. (f/k/a, Crucible Steel Corporation) "was a wholly owned subsidiary of Coltec [Industries Inc.] until 1983 when its assets and liabilities were distributed to a new Coltec subsidiary, Crucible Materials Corporation." Describe the

form of the 1983 transaction by which the assets and liabilities of Colt Industries Operating Corp. (f/k/a, Crucible Steel Corporation) were transferred to Crucible Materials Corporation, and the reason for doing so. Explain what liabilities associated with the Trent Tube assets and Facility operations were assumed by Crucible Materials Corporation, and provide complete copies of all documentation evidencing this 1983 transfer and assumption of liabilities by Crucible Materials Corporation.

Answer:

See EnPro Holdings' Response to Question 9, above, concerning the 1983 Purchase Agreement; and see **Exhibit 4** (the 1983 Purchase Agreement), which speak for themselves. EnPro Holdings has no further response to this Request.

34. Records obtained indicate that Crucible Materials Corporation, as a wholly-owned subsidiary of Coltec Industries Inc. (then known as Colt Industries Inc.), operated at the Facility from about 1983 to 1985, when operations at the Facility ceased. State whether EnPro Holdings Inc. succeeded to any environmental liabilities associated with Crucible Materials Corporation's operations at the Facility. Provide copies of all documents evidencing the transfer or assumption of Crucible Materials Corporation's environmental liabilities to or by EnPro Holdings, Inc. or any of its predecessors.

Answer:

See EnPro Holdings' Response to Request 10 above. EnPro Holdings lacks any further information and/or documents responsive to this Request.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

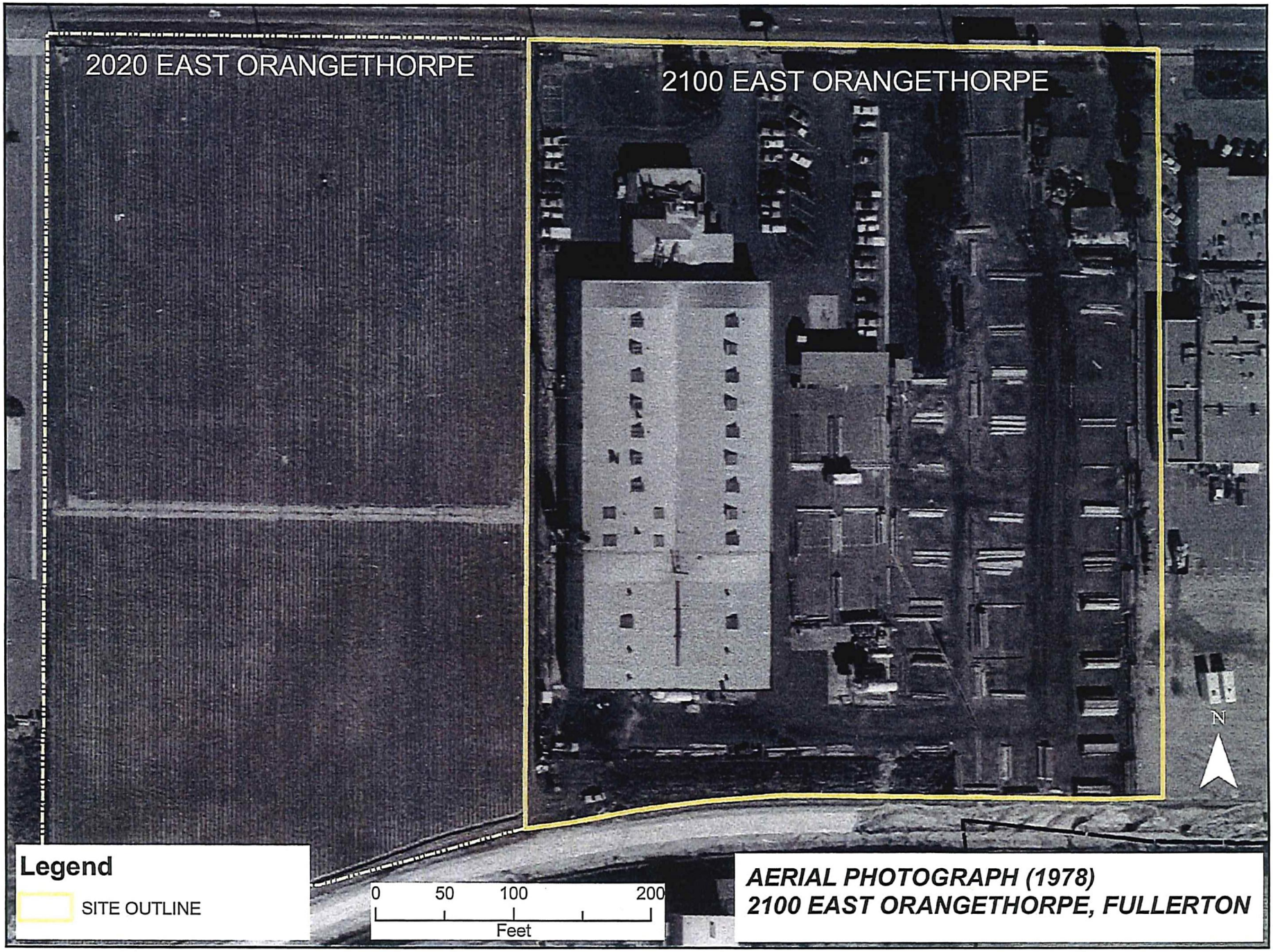
I certify that I have personally examined and am familiar with the information and all documents submitted in response to EPA's Request for Information, and based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the submitted information is true and accurate, and complete unless otherwise indicated, and that all documents submitted herewith are complete and authentic unless otherwise indicated.

BENNE C. HUTSON
NAME (print or type)

VICE PRESIDENT
TITLE (print or type)

Benne C. Hutson
SIGNATURE

Exhibit 1


2020 EAST ORANGETHORPE
2100 EAST ORANGETHORPE
N
Legend
SITE OUTLINE
0 50 100 200
Feet
AERIAL PHOTOGRAPH (1978)
2100 EAST ORANGETHORPE, FULLERTON

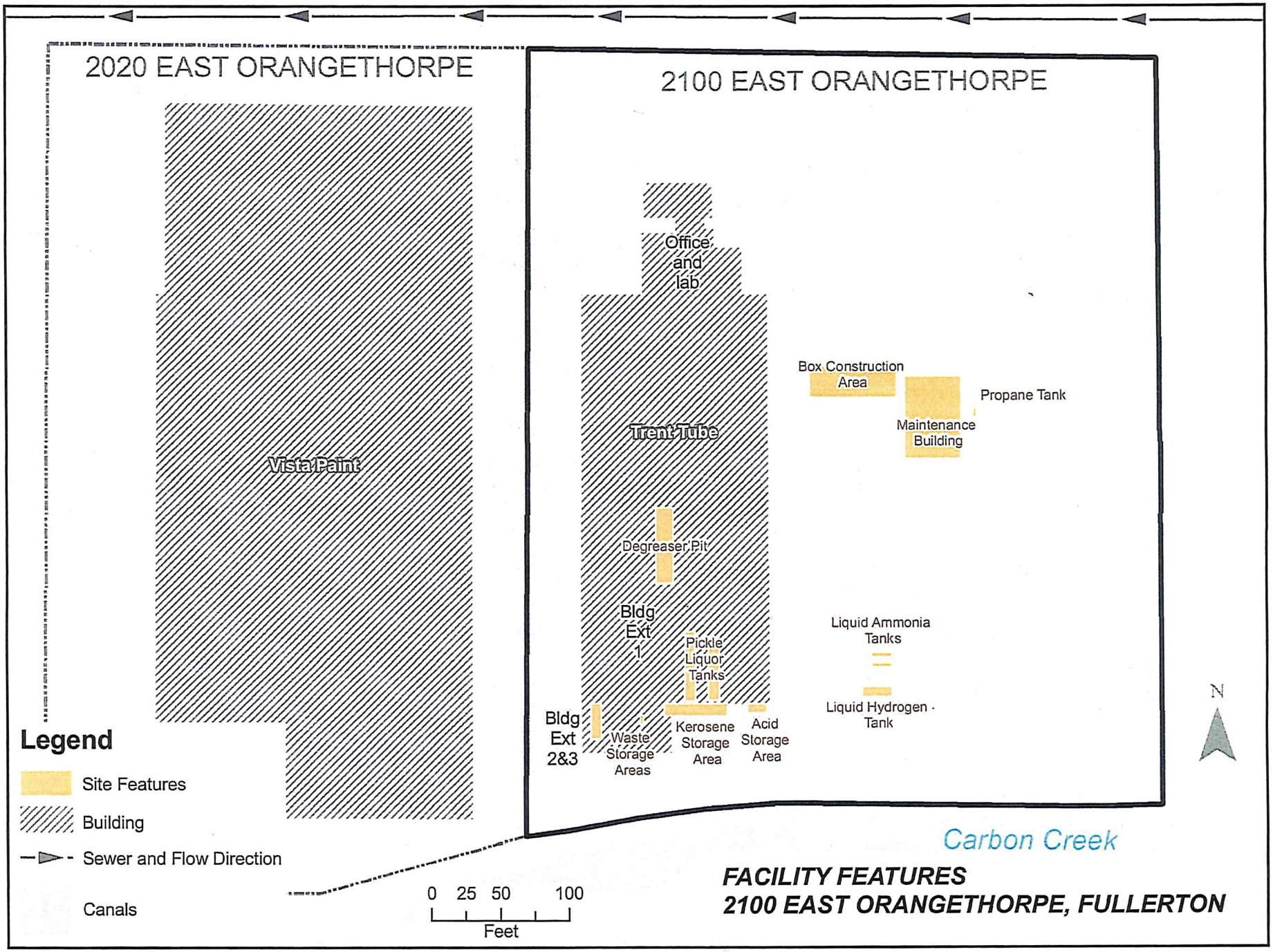
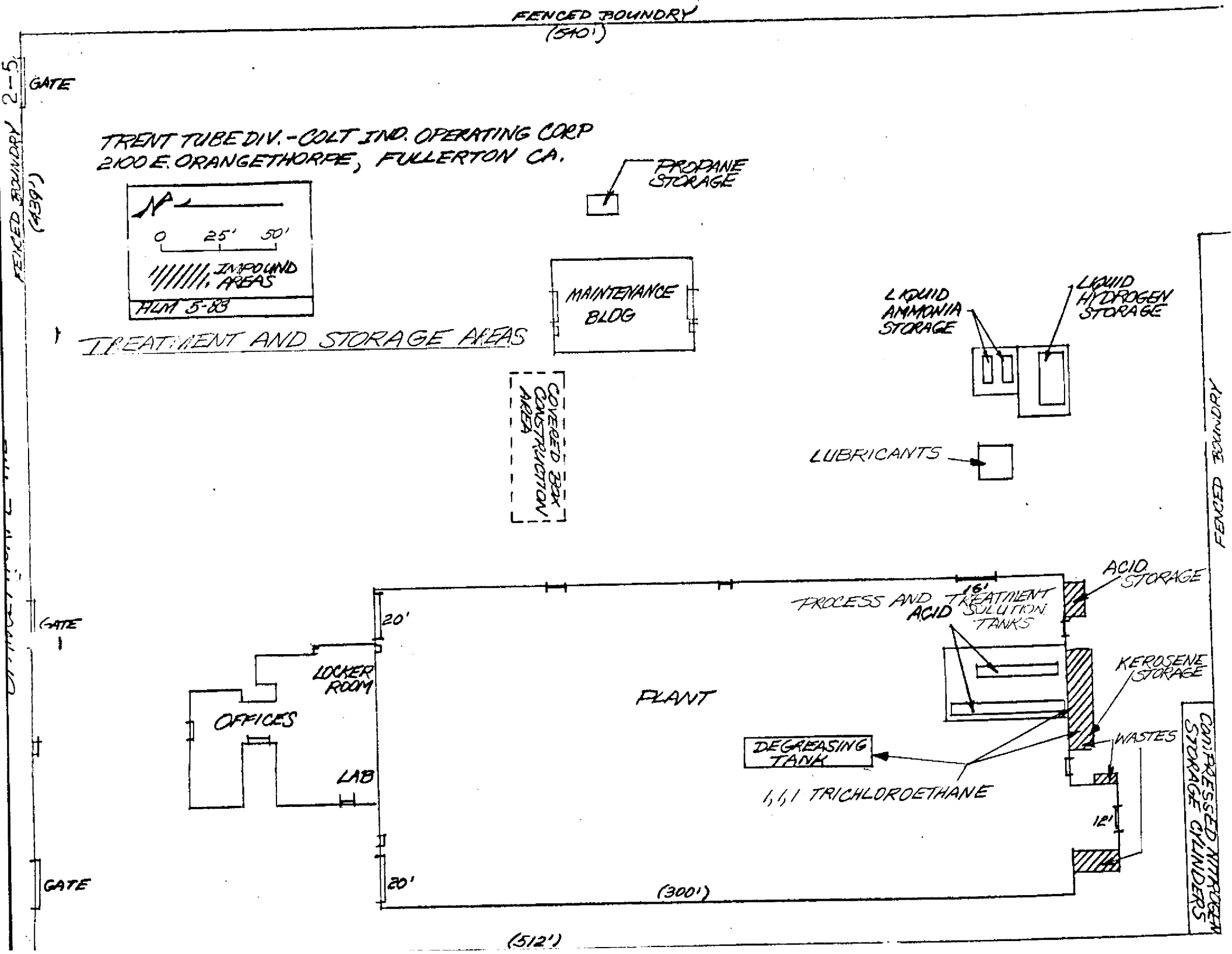

2020 EAST ORANGETHORPE
2100 EAST ORANGETHORPE
Vista Paint
Office and lab
Trent Tube
Box Construction Area
Propane Tank
Maintenance Building
Degreaser Pit
Bldg Ext 1
Pickle Liquor Tanks
Liquid Ammonia Tanks
Liquid Hydrogen Tank
Bldg Ext 2&3
Waste Storage Areas
Kerosene Storage Area
Acid Storage Area
N
Legend
Site Features
Building
Sewer and Flow Direction
Canals
0 25 50 100
Feet
Carbon Creek
FACILITY FEATURES
2100 EAST ORANGETHORPE, FULLERTON

Exhibit 2



NGSC-DTSC005435

Exhibit 3

Trent Tube

Division, Crucible Steel Company, P. O. Box 3068, Fullerton, California 92634

Trent Tube Division
Colt Industries

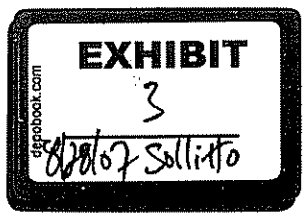
Trent Tube Company - Main Plant
East Troy, Wisconsin

Colt Industries
430 Park Avenue
New York, New York

Main officers:

Fullerton

A. B. Capron	Plant Manager	528-0645
W. C. Hartfel	Maint. Super.	526-1472
S. Stenovitch	Foreman (First Shift)	774-2836
M. Ely	Foreman (2nd Shift)	828-7460
J. Durlin	Foreman (3rd Shift)	Norwalk



CITY OF FULLERTON

BUREAU OF FIRE PREVENTION

- PERMIT -

Date February 25, 1970 NO. FL 70-10

In accordance with Fire Prevention Regulations, permission is hereby granted:

NAME S. R. Ervin for Union Carbide Corporation COMPANY

ADDRESS 2300 E. Pacific Coast Highway-Wilmington, Cal. PHONE (213) 435-2077

to install, ~~store, handle, transport, or use~~ the following:

1 - 5,000 gallon liquid hydrogen tank (839 to 1) liquid to gas for

FIRM NAME TRENT TUBE COMPANY LOCATION 2100 E. Orangethorpe

The continuing effect of this permit is subject to compliance with City and State Regulations and nationally recognized safe practices.

Permission granted for 60 days.
Subject to revocation for proper cause, or when necessary for public safety. Non-compliance with any provision stipulated herein constitutes violation of ordinance.

R. E. EILER - FIRE CHIEF
FULLERTON FIRE DEPARTMENT
312 East Commonwealth Avenue

By _____
FIRE MARSHAL

FULLERTON FIRE DEPARTMENT

INSPECTION REPORT

No. Employees 3-Shifts 85 TOTAL

Report No. Mfg 63

Da. 3-23-67

DISTRICT 6

1. Business Trent ~~Tubing~~ TUBE Co. 2100 E. Orangethrope 526-5522
ADDRESS (Street, City) Emg Phone#

2. Bldg Owner Crucible Steel CO. of Pittsburgh

3. Bus. Owner Same

4. Manager R. K. Dickson PRVY-Controlled/Privacy

5. Asst. Mgr. John Annon PRVY-Controlled/Privacy

6. Descr. Operation Stainless Steel Tubing. Emergency Call Wm. Hartfel - PRVY-Controlled/Privacy

7. CONSTR: Concrete X Masonry ___ Metal ___ Wood Frame ___ Mill ___ Stucco ___ Other ___
8. Bldg. Dimensions 200'X 140' No. Stories 1 Height 18 Ft.

9. FLOORS: Concrete X Wood ___ Other ___ Oil Soaked ___ Weak ___ Overloaded ___

10. ROOF: Concrete ___ Wood Frame ___ Mill X Steel - Unpro. ___ Pro. ___
Covering: Comp. Sheeting No.: Skylights 18 Vents ___ Other ___
Shape: Flat ___ Arch X Slope ___ Sawtooth ___

11. ATTIC: No. Scuttle Holes ___ Loc. ___ Size ___
Division Walls ___ Pierced ___ Unpierced ___
Wiring: Good ___ Fair ___ Bad ___ Storage: No ___ Yes ___

12. VERTICAL OPENINGS: Stairway ___ Loc ___ Open ___ Enclosed ___
Elevator ___ Loc ___ Other ___
Means of Ventilating Overhead

13. BASEMENT: Dimensions None Entrance ___ Contents ___

14. FIRE WALLS: Location N. E. Wall Pierced X Unpierced ___
If Pierced: Fire Doors - No. 1 Class A Self Closing X

15. EXITS: 2 N; 2 S; 2 E; 1 W Type Doors Metal Clad Forcible Entry Two metal clad doors-E. Wall

16. EXPOSURES: Severe ___ Moderate ___ None X Explain ___

17. HEATING UNIT: 8 Gas Heaters Loc. Ceiling
18. AIR CONDITIONER: Loc.
19. WATER HEATER: North Wall-Gas Loc. Lunch Room
20. REFRIGERATION: Type/Size/Capacity
21. CONTROLS: Elec West Wall Gas N.W. Water N.W.

22. HAZARDS: Life (Capacity) Adults ___ Children ___ 24-hour Care ___ Day Care ___
Ambulatory ___ Non-Ambulatory ___

23. HAZARDS: Storage - Kind/Amount/Loc -OVER-

HAZARDS: Electrical None Other ___

24. SPRINKLERS: Throughout X Basement Only ___ Stage ___ Elsewhere ___
25. INTERIOR STANDPIPES: No. Outlets ___ Loc ___

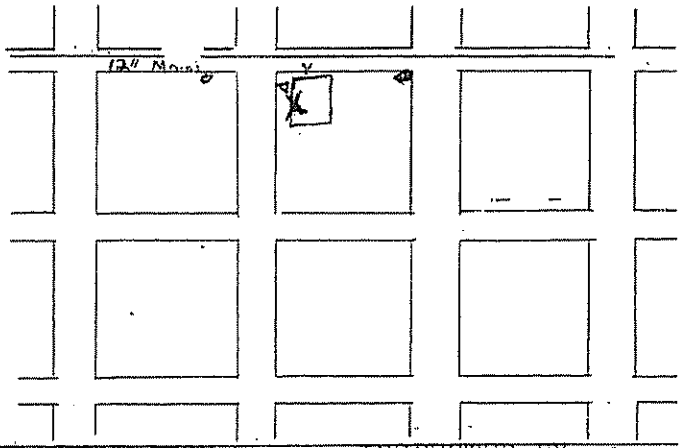
27. Inspected by Engine Co 3. "A" Shift w/ John Annon, Firm Representative

CRU 00582

Indicate: Streets-Hydrants ater Mains ___"
Static Pressure 79 #
Building Location - Railways
Exterior Exposures, etc.

ailable Water 6844 GPM

- Water Main
- Electrical Panel
- Gas Main
- Exposures



RECORD OF INSPECTIONS

-Excellent; B-Good; C-Fair; D-Bad;
)-None; R-Reinspect; *-Co. Inspect.

DATE	WIRING	STOCK & STORAGE	TRASH & DISPOSAL	HEAT & EQPT.	FIRE PTCN. EQPT.	INSPECTED BY Officer in Chg.	Sta	Shi
23-67*	B	B	B	B	B	Wheeler	3	A
19/68*	B-C	C	C	B-C	B	Hulbert	3	A
)-30-69*	C	C	C	C	B	Odenbreit	3	A
17/70	B	B	B	B	B	ELH		
21-70*								

EMARKS

South wall - 500 gallons of Trichlorethylene - TOXIC

South wall center - Nitric Acid and Hydroflouric Acid bath.

South East Corner - Outside, Hydrogen Cylinders on trailers and one Ammonia tank

9/68* Requested that weeds be removed from area of hydrogen tanks.

Letter

-30-68 Letter regarding weeds &
)-30-69 - Electrical discrepancy; temporary wiring on west wall.

eas of concern:

1. 800 gallon dip tank with nitric acid and hydroflouric acid - TOXIC
cated - Center south wall of plant.
2. 3200 gallons of Tri-Chloro-Ethelene, kept at 190 degrees F.
cated - Center of plant
3. Hydrogen shut-off to the (2 Nealing furnaces) is on the inside of
e west wall.

tside storage; located 100 feet southeast corner of plant.

1. Hydrogen storage on trailers, 114,000 cubic feet. Main shut-off on east side of trailer - PINK HANDLE.
2. Ammonia storage, 1000 gallons, is used whenever the hydrogen runs t. Shut-off is on top of ammonia tank.

/17/70 Inspection made w/ John AMMON, Plant Superintendent:
Housekeeping conditions - in GOOD ORDER at this time.
Recommend a "NO SMOKING" sign be posted in this immediate area
Recommend a barrel pump be provided for dispensing of flammable liquids ("red tag" on 55 gal. drums.
Fire extinguishers have been SERVICED, 6/70.

FD-1/1/67 - 500

CRU 00583

2100 E Orangethorpe

RECORD OF INSPECTION

A - Excellent
B - Good
C - Fair
D - Bad
O - None
R - Reinspect
* - Company Inspection

DATE	WIRING	STOCK & STORAGE	TRASH & DISPOSAL	HEAT & EQUIP.	FIRE PTCN EQUIPMENT	INSPECTOR
2/16/66	-	-	-	-	-	KCA
2/16/68	B	B	C	B	B	ELH

REMARKS OR DIAGRAM:

2/16/66 Met w/ Marvin Short & John Ammon, Plant Supt, re use of 55 gal drum for gasoline supply to service fork lift. Advised Mr Short that in order to obtain a permit for this use, the following must be done:

1. Location of drum shall be in a remote area, away from combustible storage & sources of ignition.
2. Dispensing shall be made from top of drum, by use of a pump.
3. Grounding of drum & fork lift required during dispensing.
4. Dispensing shall be made directly from drum into fork lift.
5. Bumper post shall be installed to protect drum from damage.
6. NO SMOKING and STOP MOTOR signs shall be provided for dispensing area.
7. Letter from the company requesting permit for this use & plot plan indicating location of drum shall be submitted to the Bureau of Fire Prevention for approval.

/16/68 Fire inspection made w/ John Ammon, Plant Superintendent:

HOUSEKEEPING (inside - NW)
Oil spill on the floor at the drawing oil & solvent storage area (no Class I & II flammable liquids stored in this area).
Housekeeping in general - in good order.
FIRE EXTINGUISHERS - Being relocated, due to addition & changing of locations of machines.

FLAMMABLE LIQUID STORAGE
One 55 gal. drum of Class I & II flammable liquid stored outside, on the south side of the building.

Recommend a NO SMOKING sign be posted.

NOTE: Prior inspection, 6/16/66, re locating & storage of one 55 gal. drum of gasoline for the fork lifts has not developed. Gasoline is now being purchased in a 5 gallon container, as needed.

'25/70 FL 70-10 issued for installation of 5,000 gal liquid hydrogen tank (to Union Carbide Corp). PEP

FULLERTON BUREAU OF FIRE PREVENTION
CONTINUATION SHEET

Report No. MFG 63

1. Business TRENT ~~TUBING~~ TUBE Co. Address 2100 E. Orangethorpe
2. Bldg Owner " Address Pittsburgh, Pa
3. Business Owner " Address "
4a Manager _____ Address _____
4b ~~Asst Mgr~~ Plant Supt John Ammon Address _____
5. Emergency Nos. Dickson: PRVY-Controlled/Privacy [redacted] Ammon: PRVY-Controlled/Privacy [redacted]
6. Fire Dept Conn: Standpipe _____ Location N of bldg-curb Orangethorpe
7. Fire Dept Conn: Sprinkler _____ Location _____
8. Sprinkler Main Valve Location Main Bldg - N side
9. Type of Building 3 Bldg Height _____
10. Kind of Walls Concrete Kind of Floors Concrete
11. Roof Construct. Composition Roof Openings Skylight
12. Floor Separation _____ Fire Doors/Class _____
13. Attic Ent/Separation _____
14. Basement Ent/Separation _____
15. Vertical Openings/Location _____
16. No. of Exits 4 Locations 2 E; 1 S; 1 N
17. Outside Exposures No problem
18. Hazardous Storage (kind/loc) Approx 3000# Ammonia (storage tank) 3-55 gal drums ~~-~~ Nitric Acid; 30-55 gal drums of Triclane D (metal degreasing-grade tr~~chlorethylene~~)
19. Heating Unit (kind/loc) _____
20. Refrigeration Unit (kind/loc) _____
21. Meter Locations - Light W wall of bldg (inside)
22. Water N of bldg-curb Orangethorpe Gas W side of bldg
23. Common Hazards _____
24. Description of Operation _____

/26/64 1-14,400# tank) Hydrogen mounted on trailers - S of bldg.
1-39,000# tank)

Inspection by K C A (2/16/66) Firm Representative Marvin Short & John Ammon

FFD 2/66 - 500

CRU 00585

Report No. MFG 63

CITY OF FULLERTON

BUREAU OF FIRE PREVENTION

INSPECTION SHEET

Name of Business Trent Tubing 2100 East Orangethorpe

Owner _____ Address [redacted]

Occupant Mgr.: R. K. Dickson Address [redacted]

Emergency Phone: [redacted] (Ammon)(Dickson) (Ammon)

Hydrant Location _____ Size of Main _____

Fire Dept. Connections: Standpipe N. of bldg. curb Location of Orangethorpe

Sprinkler Main Bldg. Main Valve Location N. side of bldg.

Fire Dept. Conn. Location _____ Extra Heads In box E. of main riser.

Best Emergency Entrance North entrance

Type of Building _____ No. of Stairs _____

Kind of Walls Concrete Kind of Floors Concrete

Roof Construction Composition Roof Openings Skylight

Attic Entrance & Location _____ Separation in Attic _____

Floor Separation _____ Fire Doors _____

Basement Entrance _____ Basement Separation _____

Vertical Openings _____ Location _____

Exits (No.) 4 Locations 2 East 1 South 1 North

Outside Exposures No problem

Hazardous Storage 3-55 Gal. Drums Nitric Acid. 30 Drums (55 gal.ea) Triclane D. (Metal degreasing-grade trichlorethylene), Approx. 3000 lbs. Vat & Drums Kind Nitric Acid ammonia storage tank. ~~5000 lbs.~~ hydrogen gas. 6/26/64: 1-14,400 lb. tank & 1-39,000 lb. tank of hydrogen mounted on trailers location S. of bldg.

Location in Building _____

Meter Location: Light West wall of bldg. (inside)

Water N. of bldg. curb of Orangethorpe Gas West side of bldg.

Common Hazards: _____

Inspector _____

(OVER)

CRU 00586

CITY OF FULLERTON

BUREAU OF FIRE PREVENTION

PERMIT

No. 872

Permit No. FL 872

Date November 29, 1968

In accordance with Fire Prevention Regulations, permission is hereby granted:

NAME TRENT TUBE COMPANY

ADDRESS 2100 E. Orangethorpe - Fullerton, California

to ~~install~~ store, handle, transport or use the following: 4,200 gal PERCHLORETHYLENE; 600#-NITRIC ACI 174,000 cu ft HYDROGEN GAS; 1000 gal-AMMONI

The continuing effect of this permit is subject to compliance with City and State Regulations and nationally recognized safe practices.

Permission granted for until revoked period. Subject to revocation for proper cause, or when necessary for public safety. Noncompliance with any provision stipulated herein constitutes a violation of above ordinance.

FULLERTON FIRE DEPARTMENT

~~Lloyd W. Eckels, Chief~~ Roe O. White, Act. Chi

~~123 W. Wilshire Ave.~~ 312 E. Commonwealth

By Karl C. Apfel

~~Fire Marshal~~ Inspector

CRU 00587

South Coast Air Quality Management District

Facility Equipment List Report

Facility: 6513 TRENT TUBE DIV COLT IND
Last Inspection: 07/19/1985
SIC: 3444
Inspector:
Inspection Date:
Location Address: 2100 E ORANGETHORPE, FULLERTON 92634
Mailing Address: P O BOX 3068, FULLERTON 92634-3068
Instruction:

MR: 0604
TS:
Facility Status: Out of Business
Assignment No.
Disposition:

Contact:
Quarter: none - do not inspect
On Hold:
Facility Team:

Suspended:

RECLAIM: N TITLE V: N SIP: AIR:

Application No.	Permit No.	Permit Issue Date	Permit Status	Equipment Category		BCAT/CCAT Description	Application Date	Application Status
02157A	S03878	01/24/1980	INACT_NR	000200	BCAT	FLOWCOATER	01/01/1900	PERMIT TO OPERATE GRANTED
10019X	670019	11/10/1967	INACT_NR	000223	BCAT	DEGREASER OTHER SOLVENT (>1 lb VOC/DAY)	01/01/1900	PERMIT TO OPERATE GRANTED
11486W	001486	08/02/1963	INACT_NR	40	CCAT	SCRUBBER, OTHER VENTING S.S.	01/01/1900	PERMIT TO OPERATE GRANTED
129597				027000	BCAT	LANDFILL, MUNICIPAL WASTE	02/06/1985	APPLICATION CANCELLED, KEEP FILING I
19618X	S00925	11/29/1977	INACT_NR	223900	BCAT	STORAGE TANK CHLORINATED &HALOGENATED HC	01/01/1900	PERMIT TO OPERATE GRANTED
19619X	S00926	11/29/1977	INACT_NR	223900	BCAT	STORAGE TANK CHLORINATED &HALOGENATED HC	01/01/1900	PERMIT TO OPERATE GRANTED

Report:

Inspector: _____ Date: _____ Reviewed By: _____ Date: _____

CRU 00588

Exhibit 4

5

PURCHASE AGREEMENT

BETWEEN

COLT INDUSTRIES OPERATING CORP

AND

CRUCIBLE MATERIALS CORPORATION

DATED AS OF OCTOBER 3, 1983

PURCHASE AGREEMENT

MADE as of the 3rd day of October, 1983

BY AND BETWEEN

COLT INDUSTRIES OPERATING CORP ("CIOC"), a Delaware corporation,

AND

CRUCIBLE MATERIALS CORPORATION ("Crucible"), a Delaware corporation.

W I T N E S S E T H :

CIOC and Crucible, in consideration of the premises and the covenants and agreements hereinafter set forth, each intending to be legally bound, covenant and agree as follows:

ARTICLE I

Transfer of Assets

Section 1.1. Assets to be Acquired. At the Closing, on the Closing Date, but effective as of the Effective Date, (said terms being defined in Section 5.1) CIOC shall assign, transfer and deliver to Crucible, and Crucible shall acquire and receive from CIOC, all of CIOC's right, title and interest in and to all the properties and assets (hereinafter sometimes

collectively referred to as the "Assets to be Acquired"), tangible and intangible, of every kind, nature and description owned or held by CIOC on the Effective Date which are used or are intended for use in the operation of CIOC's Crucible Specialty Metals Division, Trent Tube Division, Crucible Compaction Metals Operation, Crucible Magnetics Division or Crucible Research Center (herein collectively referred to as the "Crucible Operations"), excepting the Excluded Assets defined in Section 1.3, together with all manufacturing plants, buildings, warehouses, district sales offices and related facilities appertaining thereto, including the businesses and good will of the Crucible Operations as a going concern, and all rights to use the name "Crucible Steel" or names similar thereto. There shall be included in the Assets to be Acquired (without limiting the generality of the foregoing), all right, title and interest of CIOC in and to all the assets reflected in the pro forma balance sheet of Crucible as of October 2, 1983 (the "Pro Forma Balance Sheet"), to be attached hereto as Schedule I, and all the following to the extent that they shall be owned or held by CIOC on the Effective Date:

(a) All of CIOC's right, title and interest in and to the real property described or referred to in Schedule II attached hereto (the "Real Property"); which shall be conveyed without warranty, by quitclaim deed, subject inter alia to:

(i) exceptions and reservations contained in prior instruments of record, unrecorded easements, license agreements, rights of way, leases and other charges, restrictions and conditions of title;

(ii) discrepancies or conflicts in boundary lines, shortages in area and encroachments which accurate and complete surveys of the various parcels of the Real Property would disclose;

(iii) laws, ordinances and governmental regulations (including, without limitation, those pertaining to air and water pollution and solid and hazardous wastes) restricting, regulating or prohibiting the occupancy or use of the Real Property, or regulating the character, dimensions or location of Improvements (as that term is defined in subsection (c) below) thereon and the effect of any violations of any such law, ordinance or governmental regulation by CIOC prior to the Closing; and

(iv) all Environmental Claims (as that term is defined in Section 1.6(c)).

(b) All of CIOC's interest in the leases of real property, plants, warehouses, buildings, offices or other interests in real property described in Schedule III attached hereto (the "Leased Realty");

(c) All plants, buildings, improvements and fixtures located on the Real Property and the Leased Realty, together with all rights of way, easements, tenements, hereditaments, licenses, leases, appurtenances and other interests connected with, related to and/or necessary to the ownership or use of the Assets to be Acquired or any of them (the "Improvements");

(d) All apparatus, facilities, computers and other electronic data processing equipment, fixtures, machinery, equipment, furniture, office equipment, motor vehicles, tools and other fixed assets (whether real or personal), including spare equipment, parts and supplies therefor, which are used in connection with or related to the Crucible Operations and which on the Effective Date shall be located on the Real Property or the Leased Realty or at any other location for repair, storage or similar purposes held specifically for the Crucible Operations (the "Equipment");

(e) All inventories, raw materials, supplies, work-in-process, semi-finished and finished products, molds, stools and scrap which are used in connection with or related to the Crucible Operations (the "Inventory");

(f) CIOC's interest in all leases, as lessor or lessee (in addition to those referred to in Subsection (b) above), and in all agreements, which shall be in effect on the Effective Date and which relate to the operation of the Assets to be Acquired, including without limitation royalty and license agreements, union contracts, commitments, open purchase orders for raw materials, supplies, parts and services, and unfilled orders for the manufacture and sale of

products (the leases described in Subsection (b) and the leases, agreements and commitments described herein being hereinafter referred to as the "Leases and Agreements");

(g) All written technical information, data, specifications, research information, engineering drawings, plans and operating or maintenance manuals and instructions relating to the design, construction, use or operation of the Assets to be Acquired;

(h) To the extent freely transferable, all inventions, patents, patent rights, patent applications, licenses, technical formulas, copyrights, proprietary information, trade names, trademarks and trade secrets owned by CIOC (or in which CIOC has rights) relating to the Crucible Operations;

(i) To the extent transferable and utilized at or for the Crucible Operations, all computer applications, programs and other software, including systems documentation and instructions, whether or not associated with leased or owned computers;

(j) Subject to the provisions of Section 6.2 concerning mutual access, all accounting books and records, cost information, metallurgical and quality

records and reports which relate to the Crucible Operations;

(k) Good will, customer lists, lists of business contacts, and sales and pricing data which belong to or have been used in the business of the Crucible Operations;

(l) All accounts receivable arising from the Crucible Operations; and

(m) All cash which on the Effective Date shall be held by or for the account of any of the businesses constituting the Crucible Operations.

The conveyance of the Real Property shall be by quitclaim deed, as hereinabove provided. The sale, assignment, transfer, conveyance and delivery of the other Assets to be Acquired shall be made without representations or warranties by bills of sale, endorsements and assignments and other good and sufficient instruments of transfer as shall be effective to vest in Crucible all of CIOC's right, title and interest in and to the other Assets to be Acquired.

Section 1.2. Inspections, Warranties as to Conditions, Etc. Crucible will accept the transfer and assignment of the Real Property, Leased Realty, Improvements, Equipment and

Inventory based upon Crucible's own inspection, examination and determination with respect thereto as to all matters, including title, description, restrictions on and fitness for use and occupancy, condition and fitness for particular purposes and without reliance upon any express or implied representations or warranties of any nature made by or on behalf of or imputed to CIOC. The Assets to be Acquired and each component thereof are to be sold pursuant to this Agreement in the "as is" and "where is" condition.

Section 1.3. Excluded Assets. The following assets, property and interests (hereinafter referred to as the "Excluded Assets") shall be excluded from the Assets to be Acquired: (i) all assets and properties (including items of the general character described in Subsections (a) through (m) of Section 1.1) which relate exclusively to or are used or are intended for use exclusively in the operations of the Crucible Spring Division of CIOC; (ii) the interest of CIOC in the Escrow Deposit Agreement dated as of October 8, 1982, and Amendment No. 1 thereto dated as of October 14, 1983, between Crucible Inc (name subsequently changed to Colt Industries Operating Corp) and Bankers Trust Company and S. Burg, as Trustees; and (iii) all claims for refund or credit of any type with respect to the Assets to be Acquired or the Crucible Operations which CIOC now has or may hereafter have against the United States or any state or political subdivision, department or agency thereof.

Section 1.4. Leases and Agreements.

(a) CIOC and Crucible will each exercise their best efforts to obtain assignments to Crucible of the Leases and Agreements and to obtain, where necessary or advisable, consents of third parties to such assignments.

(b) From the date hereof until the Closing Date, CIOC will use its best efforts to perform all the obligations of CIOC under the Leases and Agreements to the same extent as CIOC has heretofore.

(c) At the Closing, CIOC will assign or transfer to Crucible, as of the Effective Date, the Leases and Agreements (except as provided in Section 1.5) and Crucible as of the Effective Date will assume all obligations and liabilities of CIOC thereunder whenever arising or asserted, whether or not accrued, inchoate or unknown as of the Effective Date.

Section 1.5. Nonassignable Leases and Agreements.

With respect to the Leases and Agreements (a): (i) in the case of a lease by a third party to CIOC, if an assignment to Crucible is not permitted or consented to, Crucible shall (to the extent permissible under the lease) at the Closing, as of the Effective Date, sublease the leased property from CIOC on the same terms and conditions as appear in such lease; and (ii) in the case of any of the agreements which are not by their terms assignable,

and in the case of leased property which by the terms of the lease cannot be subleased without the consent of another party (and consent to such assignment or sublease has not been obtained), this Agreement shall not be deemed to require an assignment or sublease thereof. If such consent is not obtained, CIOC shall, from and after the Effective Date, continue CIOC's performance under such agreements, through Crucible acting as agent for CIOC as provided in Section 5.5(iii), and Crucible shall, from and after the Effective Date, undertake as CIOC's agent the observance and performance of Leases and Agreements at Crucible's cost and expense, and shall reimburse CIOC quarter annually for the cost to CIOC, if any, of such performance and shall defend, indemnify, protect and hold CIOC harmless from and against any and all liabilities, claims and expenses arising with respect to such Leases and Agreements. To the extent that any Leases and Agreements relate to pollution control financings, Crucible's undertakings as assignee, sublessee or agent of CIOC shall provide for payment schedules and other performance co-extensive with the payments and performance undertakings of CIOC now provided for under Leases and Agreements.

(b) If the assumption of any obligations and liabilities provided in section 1.4(c) or sublease or undertaking contemplated by the preceding Subsection are illegal or invalid or otherwise unenforceable, Crucible will defend, indemnify, protect and hold harmless CIOC from and against any and all liabilities, claims and expenses arising under any Leases

and Agreements as a result of the inability to accomplish such assumption, sublease or undertaking.

Section 1.6. Assumption of Liabilities; Indemnification.

(a) Effective as of the Closing Date, Crucible hereby expressly assumes all liability for all claims, demands and causes of action arising under the Leases and Agreements, whenever arising or asserted, whether or not accrued, inchoate or unknown as of the Effective Date.

(b) Effective as of the Closing Date, Crucible hereby expressly assumes all liability for all claims, demands, liabilities and causes of action, whenever arising or asserted, which relate to the Crucible Operations or to the functioning, use or condition of the Assets to be Acquired (including any property to which any of the Leases and Agreements relate), whether or not accrued, inchoate or unknown as of the Effective Date, including (without limitation) all liabilities reflected in the Pro Forma Balance Sheet, all liabilities under all union contracts and all union and salaried pension and benefit plans which are applicable to the present, former or retired employees of CIOC who are or were employed at facilities on the Real Property or the Leased Realty, and all contingent liabilities (including product liability claims asserted with respect to products sold by CIOC prior to the Closing Date), but excluding any liabilities arising from the matters specifically described

in Schedule IV attached hereto (herein referred to as the "Retained Liabilities").

(c) The liabilities to be assumed by Crucible shall include all Environmental Claims heretofore or hereafter made against CIOC or Crucible, whether or not arising from acts or omissions of CIOC prior to the Effective Date, and whether or not based on facts which existed prior to the Effective Date. As used herein, "Environmental" means relating to pollution of the environment, including air, water and soil, and the effects of hazardous or solid wastes; and "Environmental Claims" means (i) claims, demands or causes of action arising out of the operations, use or condition of the Assets to be Acquired with respect to injury to person, property or otherwise resulting from Environmental matters, excluding claims asserted by employees of CIOC to the extent covered by workers' compensation, and (ii) in relation to all governments or governmental agencies, all suits, investigations, notices, orders, decrees, proceedings and other acts and actions arising under all existing and future Environmental laws, regulations, rules, orders, permits, decrees, notices of violation and other legal Environmental matters. Compliance with all existing and future Environmental laws, regulations, rules, orders, decrees, permits, notices of violation and other legal Environmental matters with respect to the operation, use and condition of the Assets to be Acquired shall be the sole responsibility of Crucible from and after the Effective Date.

(d) Crucible will adopt and continue from and after the Effective Date all union and salaried pension and benefit plans which are applicable to the present, former or retired employees of CIOC who are or were employed at facilities on the Real Property or the Leased Realty, subject to the same limitations, terms, conditions and rights of termination as CIOC now has, and CIOC will deliver to Crucible, or give Crucible access to, such records as Crucible may require to continue such plans. CIOC will execute such consents, agreements and authorizations as may be appropriate to effect the addition or substitution of Crucible as a party to any agreements and policies pertaining to such pension plans, and to effect the substitution of Crucible as the "employer" in respect of employees both prior to and after the Effective Date and benefits payable in respect of such employment.

(e) CIOC will defend, indemnify, protect and hold harmless Crucible from and against any and all claims and expenses with respect to the Retained Liabilities. Crucible will defend, indemnify, protect and hold harmless CIOC from and against any and all claims and expenses with respect to liabilities assumed by Crucible under this Agreement. As used herein, "expenses" shall include reimbursement of reasonable attorney's fees and disbursements.

(f) CIOC shall have no liability to Crucible arising from the functioning, use or condition of the Assets to be Acquired (including any property to which any of the Leases and

Agreements relate) prior to or after the Effective Date or the consequences thereof.

Section 1.7. Use of Name. CIOC shall have no right to use the trade names or trademarks "Crucible" or "Crucible Inc", or any variation thereof, which shall be and are hereby transferred to Crucible on the Effective Date.

ARTICLE II

Purchase Price

Section 2.1. Consideration. At the Closing, Crucible will pay to CIOC the consideration for the Assets to be Acquired by issuing to CIOC 1,000 shares of its Common Stock, par value $1 per share, constituting all its authorized capital stock, and by delivering to CIOC a share certificate evidencing said 1,000 shares, registered in the name of CIOC.

ARTICLE III

Representations and Warranties of CIOC

Section 3.1. Corporate Status. CIOC represents and warrants that CIOC is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, and has full corporate power and authority to enter into this Agreement and to perform its obligations hereunder; the execution and delivery of this Agreement by CIOC and the

consummation of the transactions contemplated by this Agreement have been duly authorized by the Board of Directors of CIOC; this Agreement has been duly executed and delivered by CIOC and is valid and binding upon CIOC in accordance with its terms; and neither the execution and delivery of this Agreement, nor the consummation of the transactions herein contemplated will conflict with or result in a breach of any of the terms, conditions or provisions of any agreement or instrument to which CIOC is a party or by which it is bound or to which it is subject, or constitute a default thereunder.

ARTICLE IV

Representations and Warranties of Crucible

Section 4.1. Corporate Status. Crucible represents and warrants that Crucible is, and will be at the Closing Date, a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware; Crucible is or will be at the Closing Date duly qualified as a foreign corporation in each of the states where any items of real property included in the Real Property or Leased Realty are located (or applications for such qualification shall have been made and diligently prosecuted); Crucible has full corporate power and authority to enter into this Agreement and to perform its obligations hereunder; the execution and delivery of this Agreement by Crucible and the consummation of the transactions contemplated by this Agreement have been duly authorized by the Board of

Directors of Crucible; this Agreement has been duly executed and delivered by Crucible and is valid and binding upon Crucible in accordance with its terms; and neither the execution and delivery of this Agreement, nor the consummation of the transactions herein contemplated, will conflict with or result in a breach of any of the terms, conditions or provisions of any agreement or instrument to which Crucible is a party or by which it is bound or to which it is subject, or constitute a default thereunder.

ARTICLE V

The Closing; The Closing Date; Closing Procedure

Section 5.1. The Closing; the Closing Date and the Effective Date. The consummation of the transactions contemplated herein shall constitute the "Closing"; but all such transactions shall be deemed to have taken place at the opening of business on October 3, 1983 (the "Effective Date"), and for all tax, accounting and other purposes, Crucible shall be deemed to have acquired the Assets to be Acquired, and to have assumed the Leases and Agreements, on the Effective Date. The Closing shall take place at the offices of CIOC at the Crucible Research Center in Robinson Township, Allegheny County, Pennsylvania, as promptly after the execution hereof as practicable, at such time and date or other place as may be mutually agreed upon by CIOC and Crucible (such time and date being herein referred to as the "Closing Date").

Section 5.2. Closing Procedure. At the Closing:

(a) CIOC shall deliver to Crucible the deeds, bills of sale and other instruments of transfer referred to in Section 1.1, in addition to all other documents required to be delivered hereunder by CIOC to Crucible.

(b) Crucible shall deliver to CIOC the stock certificate referred to in Section 2.1.

(c) CIOC will execute and deliver to Crucible all assignments and subleases as contemplated under this Agreement. CIOC will use its best efforts to obtain and deliver to Crucible at the Closing (or as promptly thereafter as is consistent with its best endeavors) (i) duly executed consents to the assignment or sublease of any such lease or contract as cannot be assigned or subleased by its terms, and (ii) transfers of the matters referred to in subsection (h) of Section 1.1. Crucible will execute and deliver to CIOC agreements with respect to the Leases and Agreements, as assignee or sublessee, as provided herein.

Section 5.3. Damage to the Plant. Crucible shall maintain in effect the insurance policies covering the Assets to be Acquired which were in effect on October 2, 1983. If, before the Closing, the Assets to be Acquired, or any of them, are damaged by fire or other casualty, CIOC shall at the Closing

assign to Crucible all of CIOC's right, title and interest in the proceeds of any insurance covering the loss.

Section 5.4. Accounts Receivable. Crucible shall have the right to collect, for the account of Crucible, all receivables, claims and other items to be transferred to Crucible as provided herein, and to endorse in the name of CIOC any checks received on account of any such receivables or other items. CIOC will transfer and deliver to Crucible, as received from time to time, any cash or other property that CIOC may receive in respect of such receivables, claims and other items.

Section 5.5. Agency to Collect Assets. CIOC will on the Closing Date, but effective as of the Effective Date, by appropriate instrument constitute and appoint Crucible, its successors and assigns, the true and lawful attorney of CIOC, with full power of substitution, in the name of CIOC or in the name of Crucible, but for the benefit and at the expense of Crucible, (i) to collect for the account of Crucible all receivables of any character and any other items to be assigned and transferred to Crucible as provided in this Agreement; (ii) to institute and prosecute all proceedings which Crucible may deem proper in order to collect, assert or enforce any claim, right or title of any kind in or to the Assets to be Acquired or the Leases and Agreements, to defend or compromise any and all actions, suits or proceedings in respect of any of the Assets to be Acquired and the Leases and Agreements (but not the obligations of CIOC in respect thereof), and to do all such

See §6.1 - does §5.5 survive the Closing No - a separate instrument at Closing grants power

acts and things in relation thereto as Crucible shall deem advisable; and (iii) to take all action which Crucible may deem proper in order to provide for Crucible the benefits under any of the Leases and Agreements where any required consent of another party to the assignment or sublease thereof to Crucible pursuant to this Agreement shall not have been obtained. CIOC acknowledges that the foregoing powers are coupled with an interest, shall be irrevocable by CIOC and shall not be revoked by its subsequent dissolution or in any manner for any reason. Crucible shall be entitled to retain for its own account any amounts collected pursuant to the foregoing powers, including any amounts payable as interest in respect thereof.

ARTICLE VI

Post-Closing Matters

Section 6.1. Non-Survival of Provisions. None of the provisions of this Agreement, including the representations and warranties contained herein, shall survive the Closing, except Sections 1.1, 1.2, 1.4(c), 1.5, 1.6, 1.7, 3.1, 4.1, the last two sentences of Section 5.2(c), and all the provisions of Articles VI and VII. All covenants, agreements, representations, warranties and other matters which do not survive the Closing are solely conditions to the Closing and after the Closing there shall be no liability or obligation in respect of a breach or claimed breach thereof.

Section 6.2. Records; Access. CIOC and Crucible will cooperate fully with each other so that each party has access to business records existing at the Closing Date relating in any manner to any of the Assets to be Acquired and the Crucible Operations, including the items referred to in clause (j) of Section 1.1 hereof or relating to the Excluded Assets or to the Retained Liabilities, whether in the possession of CIOC or Crucible. No files, books or records existing at the Closing Date relating in any manner to the Assets to be Acquired or the Crucible Operations, or relating to the Excluded Assets or to the Retained Liabilities, shall be destroyed for a period of three years after the Closing nor destroyed thereafter without giving the other party at least 30 days' notice, during which time such other party shall have the right to examine and to remove any of such files, books and records prior to the destruction thereof. Each party shall have full access during normal business hours to all such files, books and records.

ARTICLE VII

Miscellaneous

Section 7.1. Expenses. Whether or not the transactions contemplated by this Agreement are consummated, each party shall pay its own expenses incurred in connection with the negotiation, drafting, execution and performance of this Agreement.

Section 7.2. Brokerage or Finder's Fees. All negotiations relative to the Agreement and the transactions contemplated hereby have been carried on directly between the parties to this Agreement. Each party shall indemnify and hold the other harmless against and in respect of any claim for brokerage fee, finder's fee or any other compensation claimed by any person, firm or corporation not representing the indemnified party and claiming a right to such compensation.

Section 7.3. Waiver of Bulk Transfer Requirements. CIOC need not take any action under any applicable bulk sales law of any state.

Section 7.4. Limitations on Assignment. This Agreement shall not be assignable by CIOC or Crucible, whether by written instrument or by operation of law, without the written consent of the other party. Subject to such limitation, all the terms of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

Section 7.5. Schedules; Interpretation of Agreement.

(a) The Schedules referred to in this Agreement are by this reference incorporated herein and constitute a part of this Agreement.

(b) Any right of CIOC or Crucible to indemnification under the provisions of this Agreement

shall inure to the benefit of CIOC or Crucible, as the case may be, and their respective affiliates and their officers, directors and employees and the officers, directors and employees of such affiliates. As used in this Agreement, an affiliate of a party is a person controlled by, controlling or under common control with such party.

(c) Any reference to the knowledge of either party in this Agreement shall be deemed to mean and refer to the actual knowledge of the officers of such party.

(d) It is the intention of the parties to this Agreement that no third party shall receive a benefit under the Agreement nor be entitled to sue to enforce any part of the Agreement.

Section 7.6. Entire Agreement. This Agreement constitutes and contains the entire and only agreement between the parties hereto and supersedes and cancels any and all pre-existing agreements and understandings between the parties relating to the subject matter hereof. No representation, inducement, promise, understanding, condition or warranty not set forth herein has been made or relied on by either party.

Section 7.7. Further Assurances. Each of the parties hereto agrees to do any and all things, including the execution of any other documents, necessary or appropriate in order to

perform its obligations hereunder and to cause the transactions contemplated hereby to be consummated.

Section 7.8. Waivers and Amendments. This Agreement may not be modified or amended except with the consent of CIOC and Crucible expressed in a written instrument.

Section 7.9. Notices. All notices, demands and other communications which may or are required to be given to or made by either party to the other in connection with this Agreement shall be in writing and shall be deemed to have been duly given or made if sent by United States Registered or Certified Mail, return receipt requested, addressed to the respective parties as follows:

CIOC: 430 Park Avenue
New York, NY 10022

Attention: Secretary

Crucible: Crucible Research Center
Post Office Box 88
Pittsburgh, PA 15230

Attention: James T. Devaney, Esquire

or to such other address and to the attention of such other persons as each of the parties hereto from time to time may specify by notice to the other.

Section 7.10. Governing Law. This Agreement shall be deemed to be an agreement made under the laws of the Commonwealth

of Pennsylvania, and for all purposes shall be construed and enforced in accordance with and governed by the laws of the Commonwealth of Pennsylvania.

WITNESS the due execution hereof.

[CORPORATE SEAL] COLT INDUSTRIES OPERATING CORP

Attest:

Donald E. O'Keefe
Assistant Secretary

By _____
Vice President

[CORPORATE SEAL] CRUCIBLE MATERIALS CORPORATION

Attest:

Alice L. Warland
Assistant Secretary

By _____
Vice President

CRUCIBLE MATERIALS CORPORATION

CONSOLIDATED BALANCE SHEET

OCTOBER 3, 1983

(In Thousands)

ASSETS	
Current assets	
Cash and marketable securities	$ 1,609
Receivables - net	30,727
Inventories	55,280
Prepaid expenses	2,433
Total current assets	90,049
Property, plant, and equipment	169,471
Less accumulated depreciation and amortization	85,694
	83,777
Total assets	$173,826
LIABILITIES AND SHAREHOLDER'S EQUITY	
Current liabilities	
Current maturities of long-term debt	$ 256
Accounts payable	14,241
Accrued expenses	16,269
Total current liabilities	30,766
Due to affiliated companies - net	49,609
Long-term debt	923
Deferred income taxes	9,684
Other liabilities	1,472
Total liabilities	92,454
Shareholder's equity	
Common stock, $1 par value, 1,000 shares authorized, issued, and outstanding	1
Capital in excess of par value	81,371
Retained earnings	-
	81,372
Total liabilities and shareholder's equity	$173,826

Schedule I

References to Locations
of Real Property to be Transferred

1. Carson, CA
2. Fullerton, CA
3. Bremen, GA
4. Carrollton, GA
5. Indianapolis, IN
6. Elizabethtown, KY
7. Auburn, MA
8. Troy, MI
9. Fairfield, NJ
10. Geddes, NY
11. Charlotte, NC
12. Streetsboro, OH
13. North Fayette Township, Allegheny County, PA
14. Robinson Township, Allegheny County, PA
15. East Troy, WI

Schedule III

Leases of Leased Property

(1) Sublease Agreement, dated as of September 15, 1980 between Crucible Center Company and Crucible Inc subleasing certain land and a warehouse and office building erected on the land together with building equipment, said premises being located at 281 Dunlop Boulevard, Madison, Alabama, for a term ending on October 1, 2010.

(2) Commercial Lease Agreement, dated November 24, 1982 between Krazy Glue, Inc., a New York corporation, and Crucible Inc, a Delaware corporation (now by change of name Colt Industries Operating Corp), leasing approximately 25,900 sq. ft. in the building known as 1220 Six Flaggs Road, Austell, Georgia, for a term commencing on January 1, 1982 and ending on December 31, 1985.

(3) Sublease Agreement, dated as of September 15, 1980 between Crucible Center Company and Crucible Inc subleasing a manufacturing building addition and equipment on property at 506 Sangamore Road, Bremen, Georgia for a term ending on October 1, 2010.

(4) Indenture of Lease, dated March 26, 1951, between Woodman of the World Life Insurance Society and/or Omaha Woodman Life Insurance Society, a Nebraska corporation, Farnam at 17th

Street, Omaha, Nebraska and Crucible Steel Company of America, a New Jersey corporation (predecessor of Colt Industries Operating Corp), leasing premises at West Cortland Street and North Kelbourn Avenue, Chicago, Illinois, for a term commencing on April 1, 1981 and ending on March 31, 1986.

(5) Agreement of Lease, dated March 26, 1964, between Crucible Center Company, a Delaware corporation, and Crucible Steel Company of America, a New Jersey corporation (predecessor of Colt Industries Operating Corp), leasing premises at 4551 West Armitage Avenue, Chicago, Illinois, for a term commencing on April 1, 1964.

(6) Contract of Lease and Rent, dated January 19, 1965 between the City of Elizabethtown, Kentucky and Crucible Steel Company of America, a New Jersey corporation (predecessor of Colt Industries Operating Corp) leasing certain premises in Elizabethtown, Kentucky for a term running from July 1, 1966 through June 30, 1986

(7) Sublease Agreement, dated as of September 15, 1980 between Crucible Center Company and Crucible lnc subleasing a kiln building, a powder room and manufacturing equipment at premises at Route #2 - U.S. Highway 62, Elizabethtown, Kentucky for a term ending on October 1, 2010.

(8) Agreement of Lease, dated September 26, 1978 between Joseph Sorkin, Harvey Sorkin, Paul Maislin and Seymour Maislin, c/o Nehring Bros., Inc., 1441 St. Nicholas Ave., N.Y. NY and Crucible Inc, a Delaware corporation (now by change of name Colt Industries Operating Corp), leasing premises at 2911 Como Ave. S.E., Minneapolis, Minnesota for a term commencing on March 4, 1979 and ending on March 3, 1999.

(9) Sublease dated as of November 1, 1976 between Colt Industries Inc and Crucible Inc subleasing certain equipment installed at premises on State Fair Boulevard, Geddes, NY for a term ending on October 31, 1996.

(10) Sublease Agreement, dated as of September 15, 1980 between Crucible Center Company and Crucible Inc subleasing certain machinery and equipment installed at premises on State Fair Boulevard, Geddes, NY for a term ending on October 1, 2010.

(11) Lease Agreement dated October 24, 1980, between Worthington Associates Limited, a Limited Partnership organized under the laws of Ohio and Crucible Inc, a Delaware corporation (now known as Colt Industries Operating Corp), leasing a portion of the building known as 6999 Huntley Road, Columbus, Ohio for a term commencing on December 1, 1980 and ending on November 30, 1985.

(12) Agreement of Lease, dated March 26, 1964, between Crucible Center Company, a Delaware corporation, and Crucible Steel Company of America, a New Jersey corporation (predecessor of Colt Industries Operating Corp, a Delaware corporation), leasing premises at 10555 Taconic Terrace, Woodlawn, Ohio, for a term commencing on April 1, 1964 and ending on March 31, 1984.

(13) Indenture of Lease dated February 14, 1967, between National Storage Company, Inc., a Pennsylvania corporation, Boyers, PA and Crucible Steel Company of America, a New Jersey corporation (predecessor of Colt lndustries Operating Corp), leasing 3,000 sq. ft. of subterranean floor space or area at lessor's premises in Cherry Township, Butler County, PA, being a part of the area known and designated as Room 28 South for a term running from year to year currently expiring on April 14, 1984.

(14) Lease Agreement dated December 6, 1980, between T.C.I. Building and Engineering, assignee of Dorothy Florence, 308 Rosslyn Road, Carnegie, PA and Crucible Inc, a Delaware corporation (now by change of name Colt Industries Operating Corp), leasing 1,900 sq. ft. of space in the Morgan Office Building, 100 Grant Street, Morgan, PA for a term commencing January 15, 1981 and ending January 14, 1984.

(15) Sublease between Colt Industries Inc and Crucible Inc (now Colt Industries Operating Corp), dated as of

November 15, 1976 leasing certain land and buildings erected thereon in the Township of North Fayette, PA for a term commencing on November 15, 1976 and ending on November 14, 1996.

(16) Lease Agreement, dated September 10, 1980, between C.C. Dodd Co., Inc., 145 Noble Avenue, Pittsburgh, PA and Crucible Inc, a Delaware corporation (now by change of name Colt Industries Operating Corp) leasing 3,760 sq. ft. in Unit D in the Oakpark Industrial Park, Oakdale, PA for a term of twelve months commencing September 1, 1983 and ending August 31, 1984.

(17) Agreement of Lease, dated June 3, 1964 between Crucible Center Company, a Delaware corporation, and Crucible Steel Company of America, a New Jersey corporation (predecessor of Colt Industries Operating Corp), leasing premises at 1011 Avenue H East, Arlington, Texas for a term commencing on June 10, 1964 and ending on June 9, 1984.

(18) Lease Agreement, dated July 23, 1981 between Vantage Management Company, As Agent For Vantage Properties, Inc. and Crucible Inc, a Delaware corporation (now known as Colt Industries Operating Corp), leasing Suite 144 in Northpoint Plaza II at 9330 Amberton Parkway, Dallas, Texas for a term ending on September 30, 1984.

(19) Commercial Lease Agreement dated December 23, 1981, between Vantage Management Company of Houston, Inc., 4635

Southwest Freeway, Suite 700-W, Houston, Texas and Crucible Inc, a Delaware corporation (now by change of name Colt Industries Operating Corp), leasing Suite 216 - Building G of Pinemont Distribution Center, 4515 South Pinemont Drive, Houston, Texas for a term commencing on February 22, 1983, and ending on February 21, 1985.

Schedule IV

Retained Liabilities

1. United States of America v. RMI Company, et al. (E.D.N.Y., Civil Action No. 81-4177.

2. All liabilities which relate exclusively to the operations of the Crucible Spring Division of CIOC.

3. All franchise or income tax claims of any type which relate to the Assets to be Acquired or the Crucible operations and which pertain to any period to the Closing Date.

OMNIBUS BILL OF SALE

MADE as of this 3rd day of October, 1983,

BY

CRU COLT CORPORATION ("Seller"), a Delaware corporation, now COLT INDUSTRIES OPERATING CORP (the corporate name of Seller having been changed on October 18, 1968, by amendment of its Certificate of Incorporation to "Crucible Steel Corporation"; thereafter, on February 14, 1967, such name was changed by further amendment to "Crucible Inc"; and thereafter, on December 31, 1982, such name was changed by further amendment to "Colt Industries Operating Corp");

TO

CRUCIBLE MATERIALS CORPORATION ("Buyer"), a Delaware corporation.

WITNESSETH:

WHEREAS, as of October 3, 1983, Seller and Buyer entered into a certain Purchase Agreement (the "Agreement") pursuant to which Seller agreed to sell to Buyer and Buyer agreed to purchase from Seller certain assets of Seller;

WHEREAS, on the date hereof Seller has executed and delivered to Buyer certain instruments of transfer whereby Seller intended to transfer to Buyer all of the personal property and interests thereon intended to be sold and purchased pursuant to the Agreement; and

WHEREAS, Seller is desirous of executing this Omnibus Bill of Sale to effect the transfer of any assets required to be transferred to Buyer pursuant to the Agreement, to the extent that the same have not been effectively transferred by separate instruments of transfer.

NOW, THEREFORE, Seller, intending to be legally bound and to legally bind Seller's successors and assigns, does hereby sell, assign, transfer and set over to Buyer, its successors and assigns, without representations or warranties, all right, title and interest of Seller in, to and under all tangible and intangible personal property of Seller, of every kind, nature and description owned or held by Seller on the date hereof which are used or are intended for use in the operation of Seller's Crucible Specialty Metals Division, Trent Tube Division, Crucible Compaction Metals Operation, Crucible Magnetics Division and Crucible Research Center (herein collectively referred to as the "Crucible Operations"), together with all manufacturing plants, buildings, warehouses, district sales offices and related facilities appertaining thereto, including the businesses and good will of the Crucible Operations as a going concern, and all rights to use the name "Crucible Steel" or names similar thereto, and including, but not limited to, all of

Seller's right, title and interest in and to:

All apparatus, facilities, computers and other electronic data processing equipment, fixtures, machinery, equipment, furniture, office equipment, motor vehicles, tools and other fixed assets (whether real or personal), including spare equipment, parts and supplies therefor, which are used in connection with or related to the Crucible Operations wherever located;

All inventories, raw materials, supplies, work-in-process, semi-finished and finished products, molds, stools and scrap which are used in connection with or related to the Crucible Operations;

Seller's interest in all leases, as lessor or lessee and in all agreements, which shall be in effect on the date hereof and which relate to the Crucible Operations, including without limitation royalty and license agreements, union contracts, commitments, open purchase orders for raw materials, supplies, parts and services, and unfilled orders for the manufacture and sale of products;

All written technical information, data, specifications, research information, engineering drawings, plans and operating or maintenance manuals and instructions relating to the design, construction, use or operation of the Crucible Operations;

All inventions, patents, patent rights, patent applications, licenses, technical formulae, copyrights, proprietary information, trade names, trademarks and trade secrets owned by Seller (or in which Seller has rights) relating to the Crucible Operations;

All computer applications, programs and other software, including systems documentation and instructions, whether or not associated with leased or owned computers;

All accounting books and records, cost information, metallurgical and quality records and reports which relate to the Crucible Operations;

Good will, customer lists, lists of business contacts, and sales and pricing data which belong to or have been used in the business of the Crucible Operations;

All accounts receivable arising from the Crucible Operations; and

All cash which on the date hereof shall be held by or for the account of any of the businesses constituting the Crucible Operations.

If at any time after the date hereof Buyer shall be advised that further transfers, assignments, assurances in law or other acts or things are necessary or desirable to confirm in Buyer the title to any of the personal property hereby intended to be transferred to Buyer, Seller will, as and when requested by Buyer, execute, acknowledge when appropriate and deliver, or cause to be executed, acknowledged and delivered, any and all proper instruments of transfer and will do or cause to be done all such other acts and deeds as Buyer may deem necessary or proper to confirm title to such property in Buyer and to otherwise carry out the intent and purpose hereof.

WITNESS the due execution hereof.

Attest:

CRU COLT CORPORATION, now
COLT INDUSTRIES OPERATING CORP

Assistant Secretary

By: _____
Vice President

[Corporate Seal]

STATE OF New York)
) SS:
COUNTY OF New York)

On this the 7th day of November, 1983, before me, a Notary Public, the undersigned officer, personally appeared Joseph P. Lisa, who acknowledged himself to be the Vice President of Colt Industries Operating Corp, a Delaware corporation, and that he as such Vice President, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Vice President.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Janice W. Magnavita
Notary Public

[Notarial Seal]

JANICE W. MAGNAVITA
Notary Public, State of New York
No. 24-4603219
Qualified in Kings County
Commission Expires March 30, 1984

My Commission Expires:

Exhibit 5

Please print or type in the unshaded areas only (fill—in areas are spaced for elite type, i.e., 1 s/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL — EPA

ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F C A D 0 0 8 3 2 5 1 1 0

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

19 NOV 1980

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill—in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill—in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: TRENT TUBE DIV FULLERTON OPERATION

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 SOLLITTO CHRISTOPHER PLT ENGR	714 526 5522

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 P.O.BOX 3068

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 FULLERTON	CA	92634

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 2100 e ORANGETHORPE AVENUE

B. COUNTY NAME: ORANGE

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 FULLERTON	CA	92634	059

EXHIBIT 5 8/27/87 MURPHY

EPA Form 3510-1 (6-80)

CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
3312 (specify) MFG. STAINLESS STEEL TUBING	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME

TRENT TUBE DIV OF CRUCIBLE INC

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other", specify.)*

F = FEDERAL; S = STATE; P = PRIVATE; M = PUBLIC *(other than federal or state)*; O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*

A 714 526 5522

E. STREET OR P.O. BOX

P O BOX 88

F. CITY OR TOWN

B PITTSBURGH

G. STATE

PA

H. ZIP CODE

15230

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N X	9 P AQBL014 DJ
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U X	9 X (specify)
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R X	9 X (specify)

XI. MAP

Attach [illegible] topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS

MANUFACTURE OF STAINLESS STEEL TUBING
REDRAW PREFABRICATED TUBING TO CUSTOMER SPECIFICATIONS

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the 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.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
C. SOLLITTO PLANT ENGINEER	Christopher Sollitto	11-10-80

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (6-80) REVERSE

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AA 26047

Please print or type in the unshaded areas only (fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F C A D 0 0 8 3 2 5 1 1 0 T/A C 1

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (Yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C 8 | YR. 57 | MO. 06 | DAY

☐ 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES — CODES AND DESIGN CAPACITIES

A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process.

1. AMOUNT — Enter the amount.
2. UNIT OF MEASURE — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	T 0 1	1600, 4 TIMES PER YR.	G	
2	S 0 1	660, 4 TIMES PER YEAR	G	
3				
4				

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

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Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

As per my conversation on 19 February 1981 with Mr. William D. Wilson who requested a change in the unit of measure on Line 1, part C, Section III from "G" to "U" for the sole purpose of having the E.P.A. computer accept the information.

The process is 1600 gallons of pickle liquor is neutralized 4 times per year and subsequently disposed in accordance with all state and federal regulations.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY -- For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE -- For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* -- A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

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ntinued from page 2.
OTE: Photocopy this page before completing i. u na. ore than 26 wastes to list.

orm Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)

													T/A	C
V	C	A	D	0	0	8	3	2	5	1	1	0		1

FOR OFFICIAL USE ONLY

			T/A	C	
W	DUP			2	DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	K062	54,500	P	T01	1600 GALS NEUTRALIZED 4 TIMES/YR.
2	F001	29,300	P	S01	660 GALS. SHIPPED TO DUMP SITE
3					FROM DRUM STORAGE 4 TIMES PER
4					YEAR
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

CONTINUE ON REVERSE

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IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

F | C A D 0 0 8 3 2 5 1 1 0 | T/A | 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)
3 3 5 1 3 0	1 1 7 5 3 3 6

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code & no.)
E CRUCIBLE, INC.	4 1 2 - 9 2 3 - 2 9 5 5

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F P.O. BOX 88	G PITTSBURGH	P A	1 5 2 3 0

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe 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.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
J.P. Foley, Division President		Nov. 17, 1980

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe 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.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
C. SOLLITTO PLANT ENGINEER		11-10-80

CRU 00234

11809-6

AA 26051

Exhibit 7

OPERATION PLAN

FOR

HAZARDOUS WASTE

TRENT TUBE DIVISION
COLT INDUSTRIES
FULLERTON OPERATION

EXHIBIT
6
8/7/07 Murphy
depobook.com

DEPOSITION
EXHIBIT
8
Mark
8-7-08
PENGAD 800-631-6989

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CRU 00180

TRENT TUBE DIVISION - COLT INDUSTRIES OPERATION PLAN FOR HAZARDOUS WASTE, STORAGE, AND/OR TREATMENT FACILITY WHICH INVOLVES CONTAINERS AND TANKS.

I FACILITY IDENTIFICATION

1. FACILITY

Trent Tube Division, Fullerton Operation
2100 East Orangethorpe Avenue
Orange County
Fullerton, California 92634

EPA NUMBER

CAD 008325110

MAILING ADDRESS

P.O. Box 3068
Fullerton, California 92634

TELEPHONE NUMBER

(714) 526-5522

OPERATOR AND OWNER OF FACILITY AND LAND

Colt Industries Operating Corporation
430 Park Avenue
New York, New York 10022

Telephone Number (212) 940-0400

CONTACT PERSONNEL AT FACILITY

Harry L. Murphy - Manager of Quality Assurance
Steve Cornell - Maintenance Superintendent

PREPARER OF OPERATION PLAN

Based on DHS instructions of February 3, 1983.

Harry L. Murphy - Manager of Qaulity Assurance

CERTIFICATION

I certify under penalty of law that I have personnally examined and am familiar with the information submitted in this operation plan and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the 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.

D.R. Gehr

Vice President

August 9, 1983
Date

D.R. Gehr
Trent Tube Division
Colt Ind. Operating Corp.

II FACILITY INFORMATION

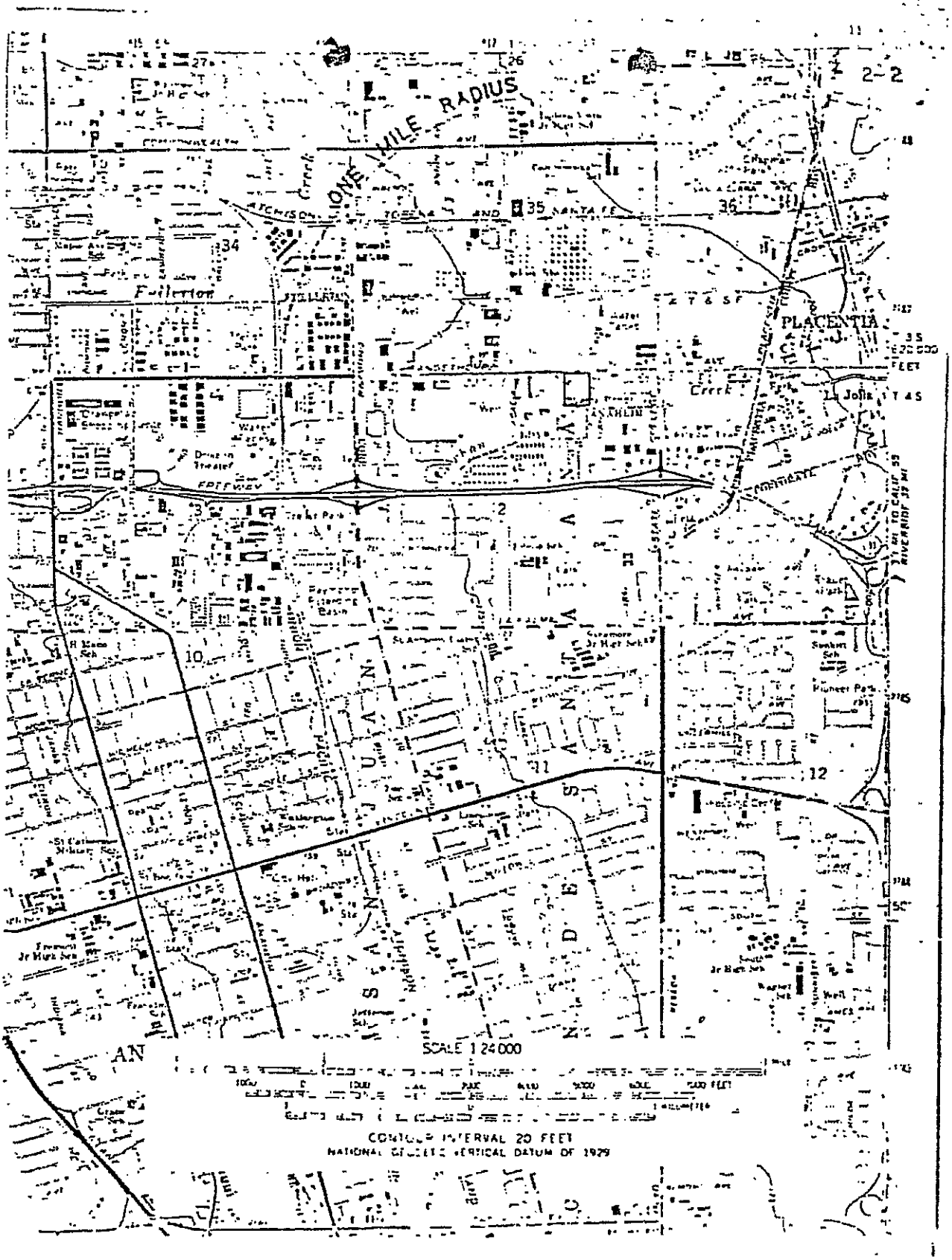
1. Maps of Facility

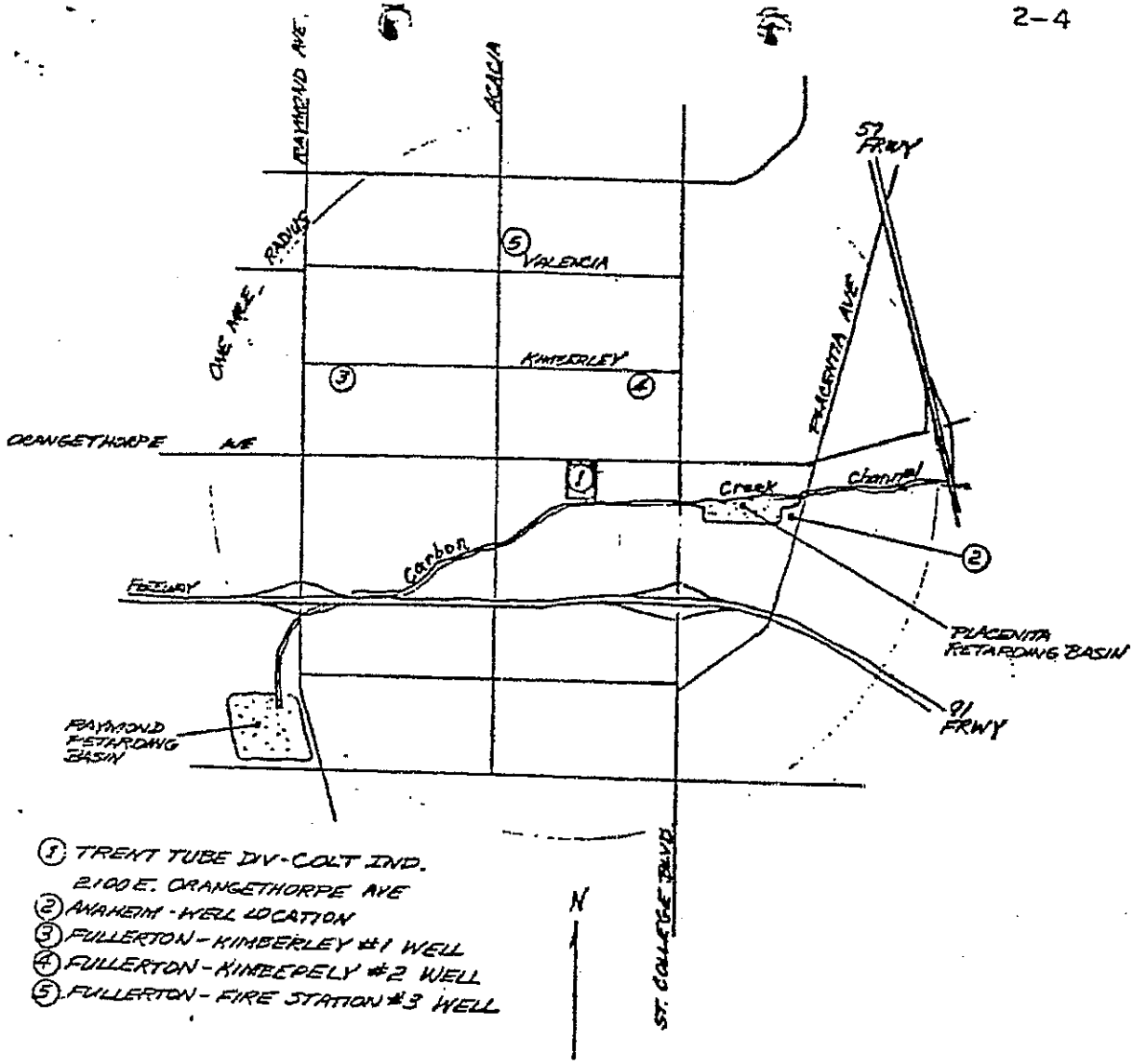
   Topographic (1:2400 Scale)
   Topographic (1:2400 Scale)
   Wells, Surface Water & Aquducts
   Treatment & Storage Areas
   Topographic, Facility Only, Drainage
   Utility Lines

2. Photographs of Facility

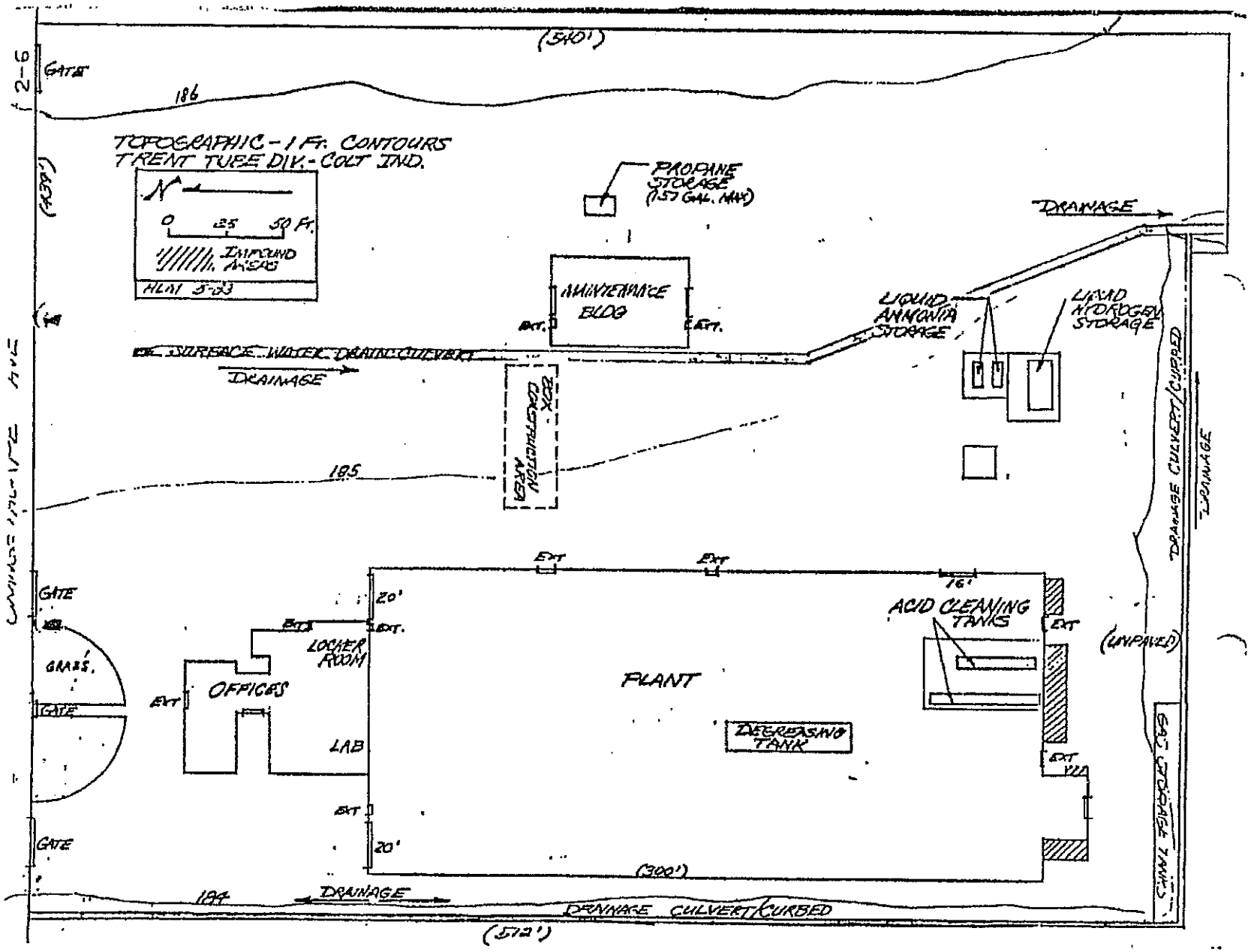
3. Associated Information

CRU 00183

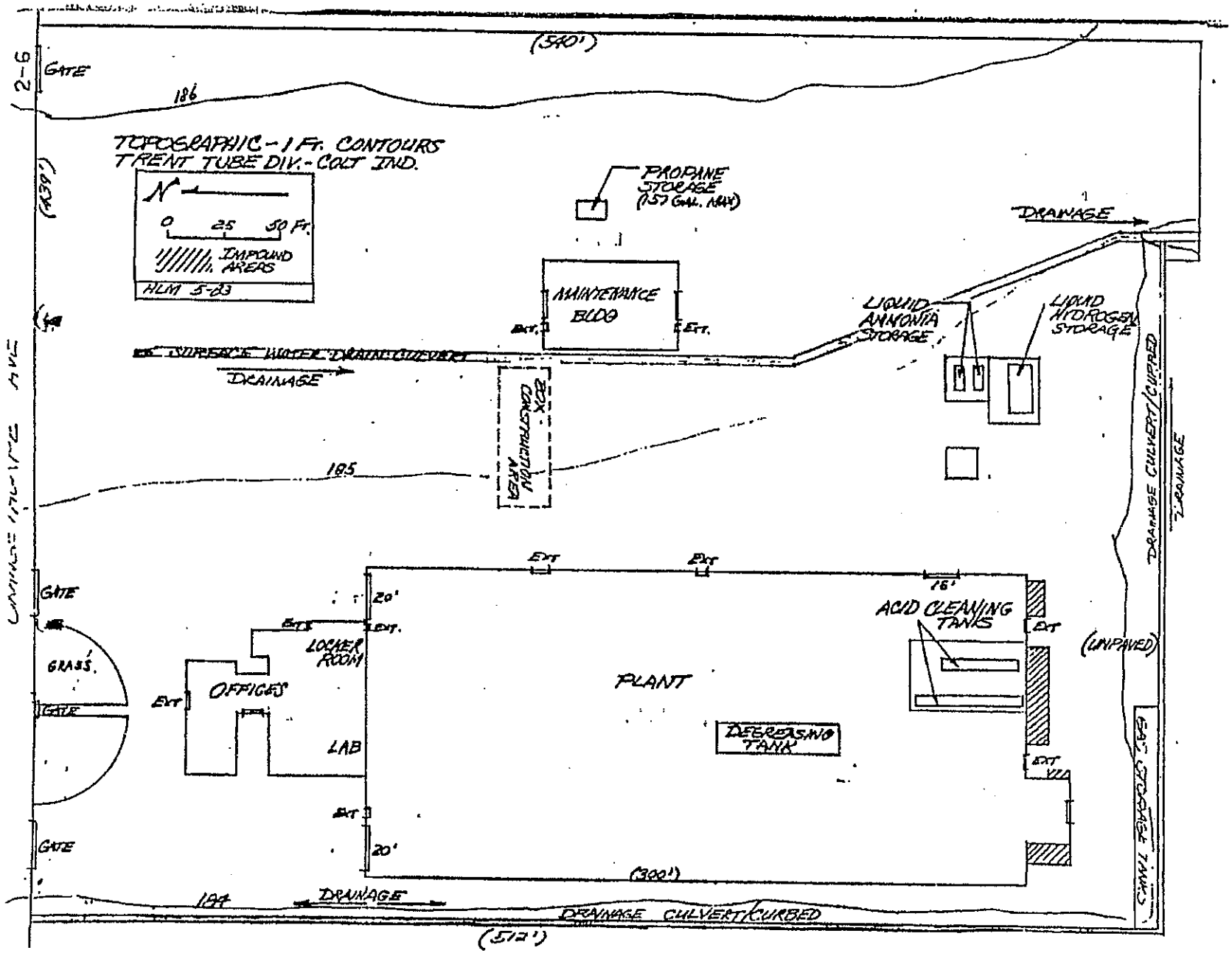

ONE MILE RADIUS
Fullerton
PLACENTIA
SCALE 1:24000
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

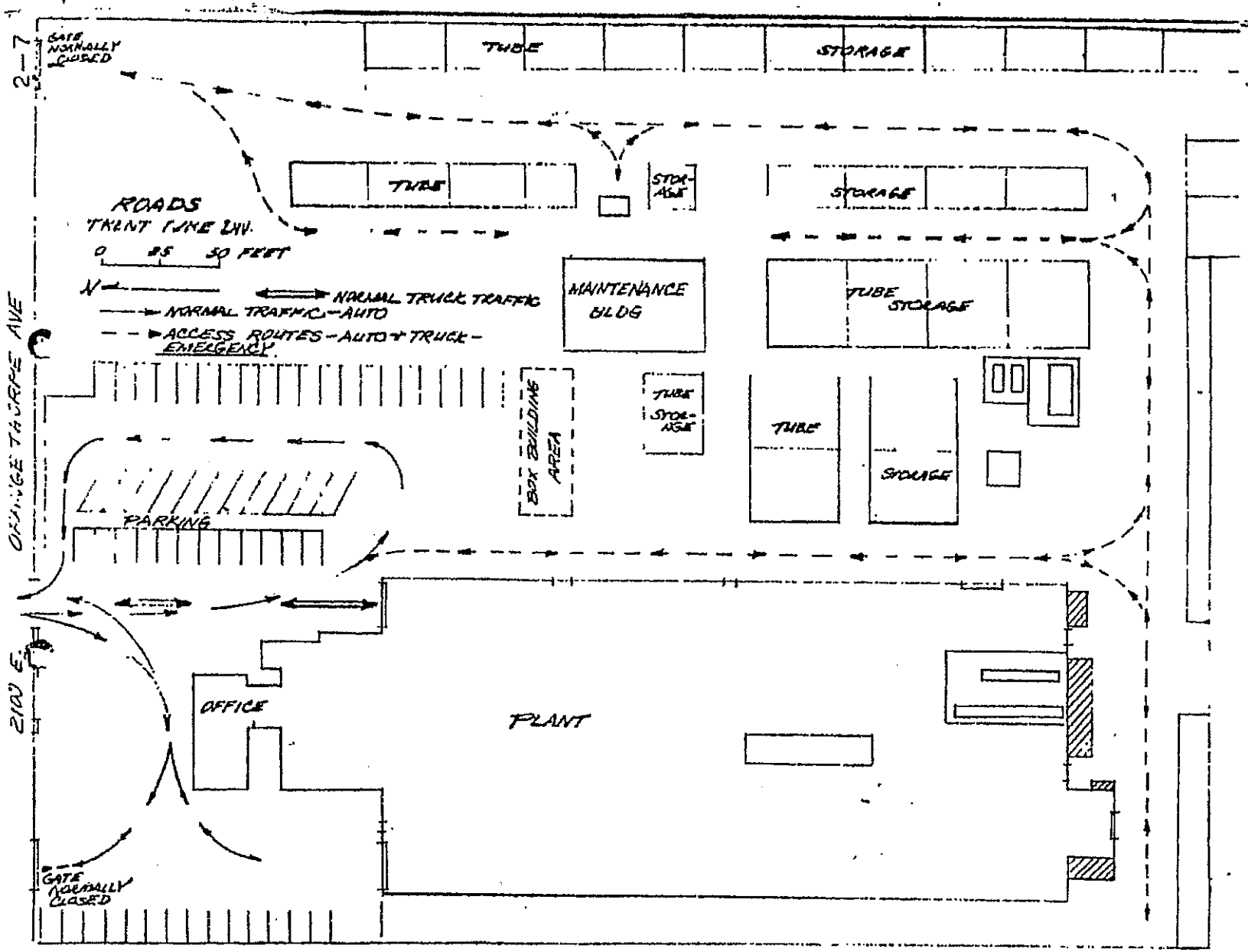


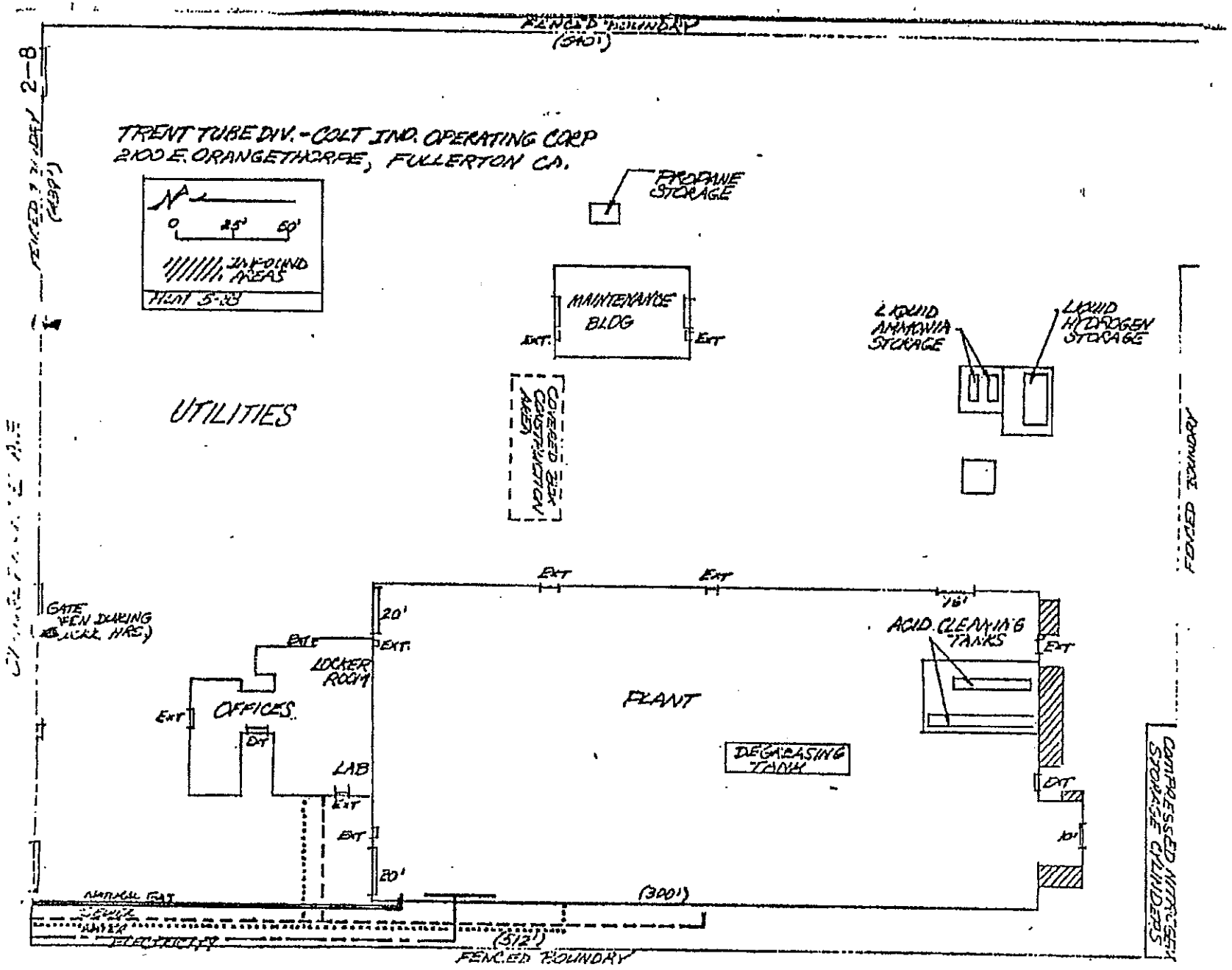
WELL, CREEK AND RETARDING BASIN LOCATIONS WITHIN ONE MILE RADIUS


(340')
GATE
186
TOPOGRAPHIC - 1 Ft. CONTOURS
TRENT TUBE DIV. - COLT IND.
N
0 25 50 Ft.
IMPOUND AREAS
HLAI 5-53
PROPANE STORAGE (1,57 GAL. MAX)
DRAINAGE
MAINTENANCE BLDG
EXT.
LIQUID AMMONIA STORAGE
LIQUID HYDROGEN STORAGE
SURFACE WATER DRAIN CULVERT
DRAINAGE
185
BOX CONSTRUCTION AREA
DRAINAGE CULVERT/CURBED
GATE
GRASS
EXT
20'
LOCKER ROOM
OFFICES
LAB
PLANT
EXT
16'
ACID CLEANING TANKS
(UNPAVED)
DEGREASING TANK
20'
(300')
184
DRAINAGE
DRAINAGE CULVERT/CURBED
(572')

CRU 00186


(540')
GATE
186
TOPOGRAPHIC - 1 Ft. CONTOURS
TRENT TUBE DIV. - COLT IND.
N
0 25 50 Ft.
IMPOUND AREAS
HLM 5-83
PROPANE STORAGE (1500 Gall. Max)
DRAINAGE
MAINTENANCE BLDG
EXT.
EXT.
LIQUID AMMONIA STORAGE
LIQUID HYDROGEN STORAGE
SURFACE WATER DRAINAGE CULVERT
DRAINAGE
EXT. CONSTRUCTION AREA
185
DRAINAGE CULVERT/CURBED
DRAINAGE
EXT
EXT
16'
GATE
20'
EXT
EXT.
LOCKER ROOM
ACID CLEANING TANKS
EXT
(UNPAVED)
GRASS
GATE
EXT
OFFICES
PLANT
LAB
DEGREASING TANK
EXT
EXT
20'
GATE
(300')
184
DRAINAGE
DRAINAGE CULVERT/CURBED
(512')


GATE NORMALLY CLOSED
TUBE
STORAGE
TUBE
STOR-AGE
STORAGE
ROADS
TAINT TUBE DIV.
0 25 50 FEET
N
NORMAL TRUCK TRAFFIC
NORMAL TRAFFIC - AUTO
ACCESS ROUTES - AUTO + TRUCK - EMERGENCY
MAINTENANCE BLDG
TUBE STORAGE
TUBE STOR-AGE
BOX BUILDING AREA
TUBE
STORAGE
PARKING
ORANGE TAURPE AVE
210 E
OFFICE
PLANT
GATE NORMALLY CLOSED



FENCED BOUNDRY
(540')
TRENT TUBE DIV. - COLT IND. OPERATING CORP
2100 E. ORANGETHORPE, FULLERTON CA.
0 25' 50'
IMPOUND AREAS
PROPANE STORAGE
MAINTENANCE BLDG
EXT.
EXT
LIQUID AMMONIA STORAGE
LIQUID HYDROGEN STORAGE
UTILITIES
COVERED BOX CONSTRUCTION AREA
FENCED BOUNDRY
GATE OPEN DURING BUCKL HRS.)
EXT
EXT
20'
EXT.
LOCKER ROOM
OFFICES
EXT
EXT
LAB
EXT
EXT
20'
PLANT
DEGREASING TANK
ACID CLEANING TANKS
EXT
EXT
10'
COMPRESSED NITROGEN STORAGE CYLINDERS
NATURAL GAS
SEWER
WATER
ELECTRICITY
(300')
(512')
FENCED BOUNDRY

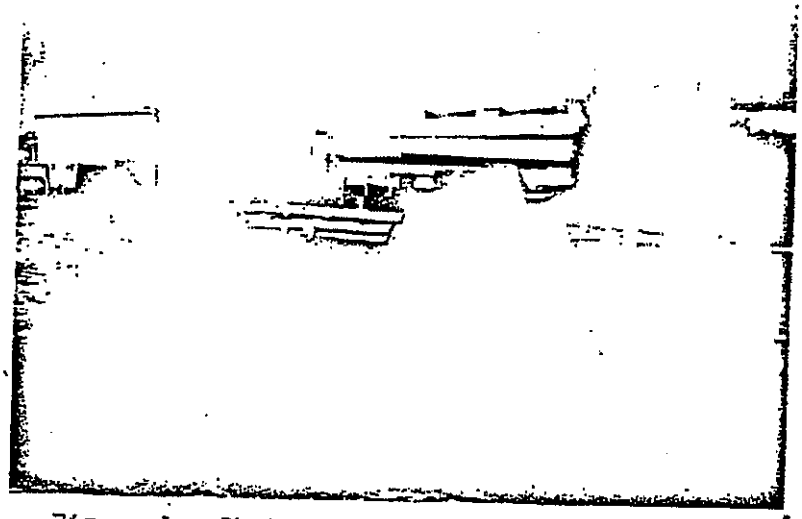


Figure 1 - Photograph from northeast corner of property looking southwest, showing main plant (right) and maintenance building (left).

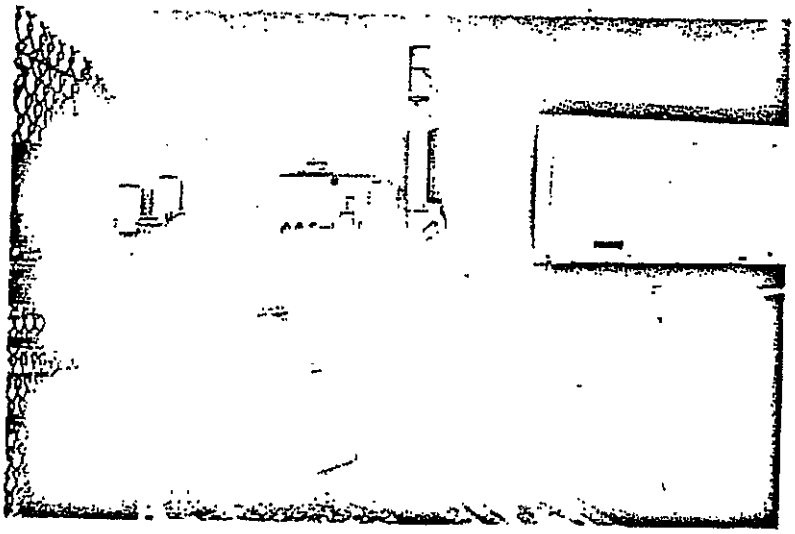


Figure 2 - Photograph taken from south end of property looking west. Shows south end (rear) of plant and locations of three of four impound areas. Building and white tanks (upper left) are on adjacent non-owned property.

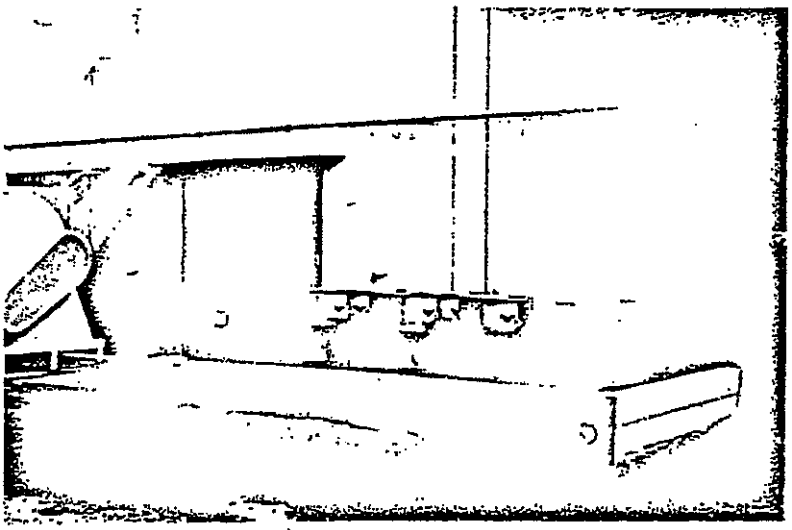


Figure 3 - Impound located at southeast corner of the plant used to store concentrated acids.

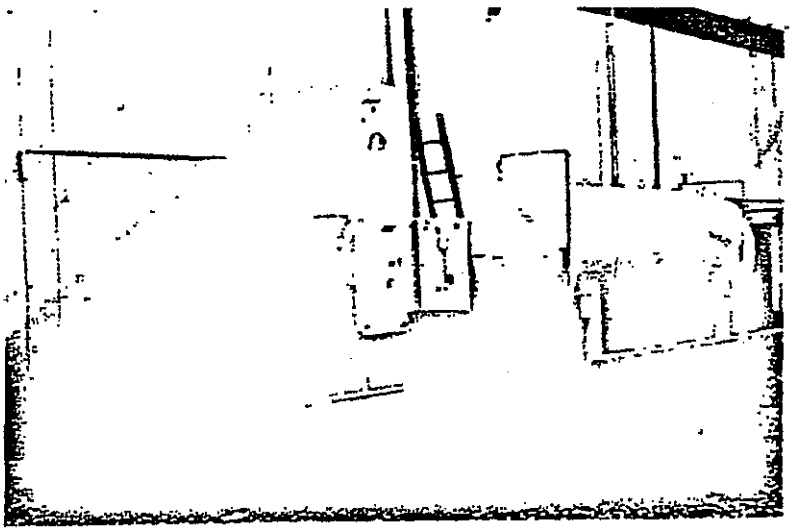


Figure 4 - Impound located at south end, center of plant. Tanks from left to right, store waste oil, waste detergent, unused 1,1,1 trichloroethane, kerosene and 1,1,1 trichloroethane. Drums contain kerosene to be stored in the kerosene tank.

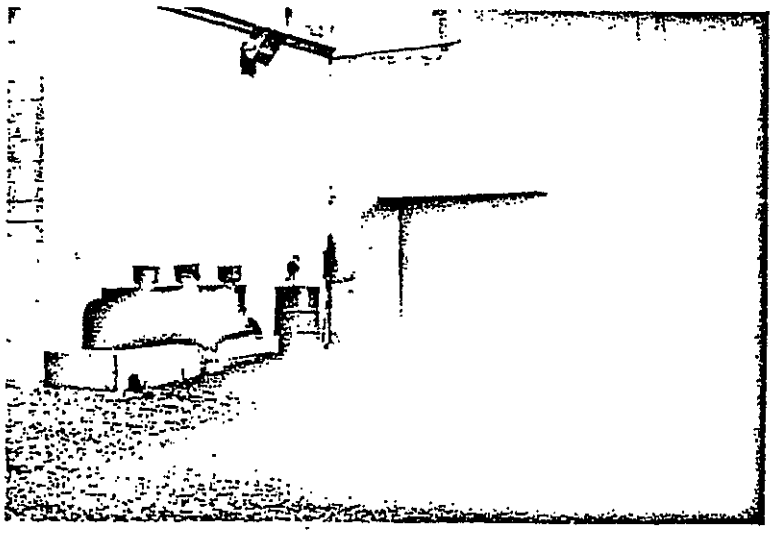


Figure 5 - Waste collection impound at south end of facility. Impounded drums contain waste 1,1,1 trichloroethane, waste kerosene, and waste mineral spirits.

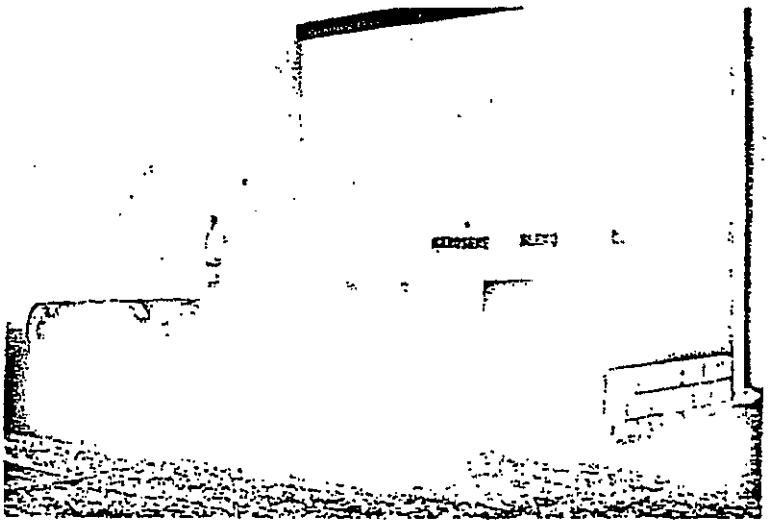


Figure 6 - Waste storage impound at southwest corner of plant. Non-impounded drums are empty.

CRU 00192

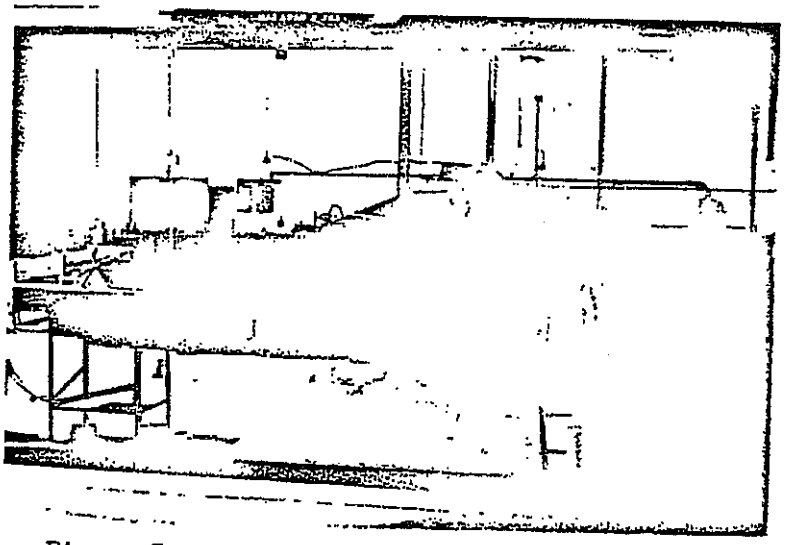


Figure 7 - Acid cleaning area inside the plant at the south end. Covered tank (right) and the center tank contain nitric plus hydrofluoric acid solutions. The two tanks at the left are water rinse tanks.

3. ASSOCIATED INFORMATION

3.1 Legal Description of Property

3.1.1 Parcel Map Number - 073-131-06

3.1.2 SEC 2 T 4 R 10 N 3.90 AC E 4.50 AC N 20 AC FRACT W½ NE ¼-EX-ST

3.2 Estimated Volume of Traffic

3.2.1 Automobile - 70 per working day.

3.2.2 Trucks - 6 common carriers (product shipments or deliveries)

3.2.3 Waste Haulers - 1 every two months to remove wastes.

3.2.4 Other - 6 per working day.

3.3 Access Road Characteristics

3.3.1 Asphault paved (refer to page 2

Northwest and north center entrances, parking lots and road adjacent to plant running north and south.

3.3.2 Gravel - East and west road at south end of plant and routes in storage yard.

3.3.3 Dirt - Northeast gate and zone up to storage areas. Will not support traffic when ground is water saturated.

IV RELATIONSHIP OF FACILITY TO 100 YEAR FLOOD PLAN

1. Data Source

1.1 Federal Emergency Management Agency
Flood Insurance Rate Map
City of Fullerton
Orange County, Panel 2 of 2
Community Panel Number 060219 0002D
Map Revised - April 5, 1983

2. Flood Map

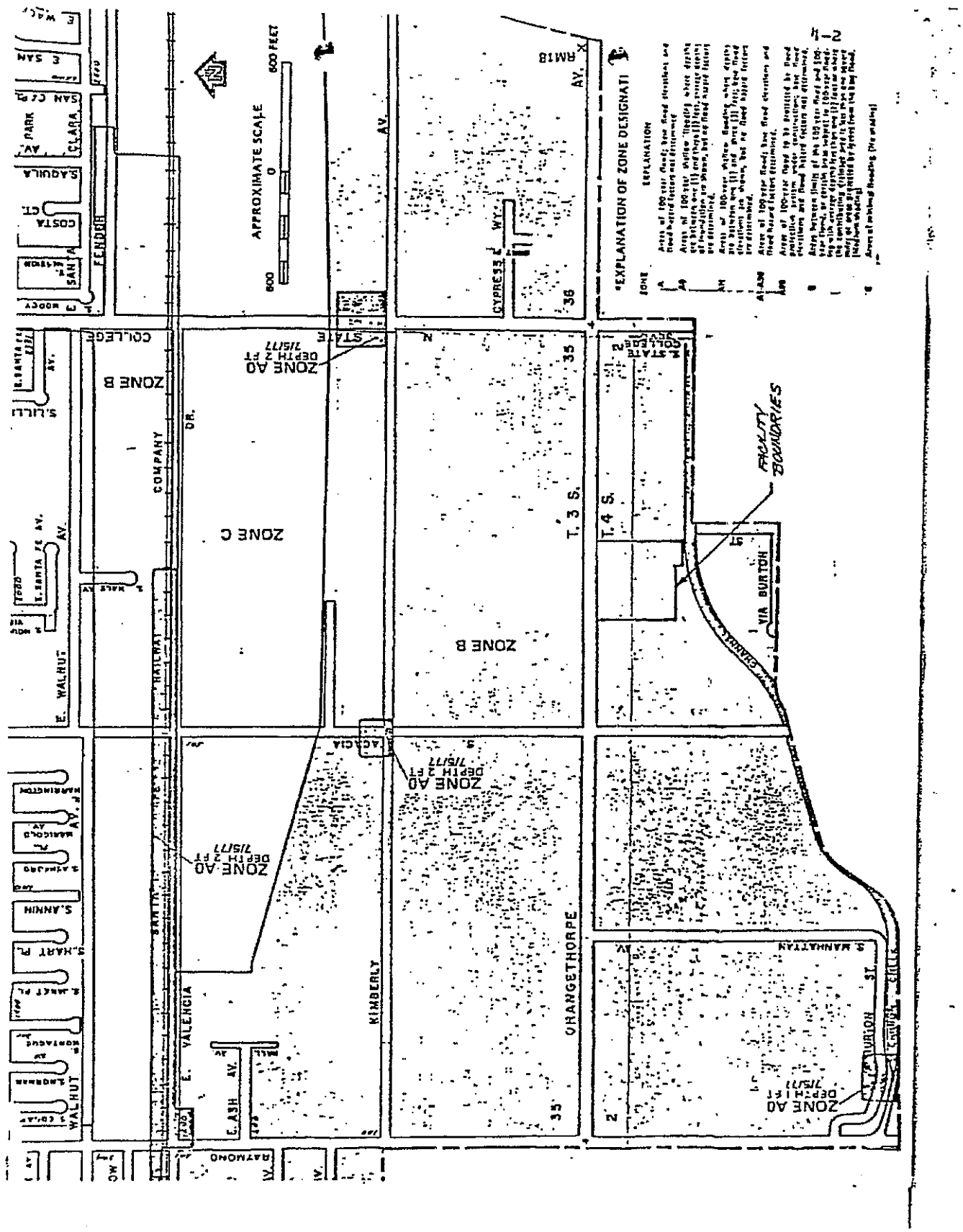
See next page.

3. 100 Year Flood Level

3.1 Less than twelve inches.

4. Analysis

4.1 At less than a 12" level, flood waters do not pose a threat to release of hazardous wastes.


APPROXIMATE SCALE
600 0 600 FEET
EXPLANATION OF ZONE DESIGNATI
EXPLANATION
ZONE A0
DEPTH 2 FT
7/5/77
ZONE B
ZONE C
COLLEGE
COMPANY
DR.
HAILWAY
E. WALNUT
E. VALENCIA
E. ASH AV.
KIMBERLY
ORANGETHORPE
ACACIA
CYPRESS WY.
T. 3 S.
T. 4 S.
FACILITY BOUNDRIES
VIA BURTON
S. MANHATTAN
BURTON ST.
RAYMOND
FENDER
CLARA
S. AQUILA
COSTA CT.
SANTA
S. ANNIN
S. HART PL.
WALNUT
RM18
AV.

V CHARACTERISTICS OF HAZARDOUS WASTES HANDLED

1. Neutralized Pickle Liquor - EPA Number D007
(DOT UN1760; Corrosive Liquid, n.o.s.)

1.1 This is a mixed nitric plus hydrofluoric acid bath used for cleaning and descaling of stainless steel tubing.

1.2 Solution is contained in two process tanks of 2000 gallons each.

1.3 Spent acid is neutralized with ammonia within the process tanks prior to disposal.

1.4 Neutralized solution is vacuumed to a tank truck and disposed of in liquid form in a Class 1 landfill.

1.5 Disposal occurs approximately every 3 to 5 months. Yearly volume is 7,000 to 10,000 gallons.

1.6 Neutralized solution is toxic and has the following properties and analysis: pH 6-8 Sp. Gr. 1.02 to 1.08

Analysis:	Chromium (+6)	2.0/600 ppm
	Chromium (+3)	400/870 ppm
	Nickel	250/1300 ppm
	Ammonium Bifluoride	0/1000 ppm
	Ammonium Fluoride	2/3%
	Ammonium Nitrate	6/12%
	Water	Balance

1.7 The waste is always checked for pH and specific gravity prior to hauling for disposal. pH is checked to determine the point at which the waste is no longer corrosive. Specific gravity is checked to verify the weight of material disposed of. At least once per year the waste is chemically analyzed by an independent laboratory.

1.8 The neutralized waste is sampled at all depths via a straight glass sampling tube.

2. Neutralized Alkaline Cleaner - EPA Number NA
(DOT UN1760; Corrosive Liquid, n.o.s.)

2.1 This alkaline material is used to clean floors.

2.2 Waste containing entrained dirt and oil is stored in a 200 gallon tank. It is neutralized prior to disposal.

CRU 00197

2.3 Neutralized waste is vacuumed to a tank truck for disposal in a Class 1 landfill.

2.4 Disposal occurs every one to three months. Total yearly volume is 800/1400 gallons.

2.5 This waste is toxic and has the following properties and analysis: pH 6-8

Analysis:	Sodium Nitrate	4/10%
	Entrained oil & dirt	2/5%
	Water	Balance

2.6 The waste is neutralized and checked for pH to render it noncorrosive.

3. Waste Oil - EPA Number NA
(DOT UN1268; Combustible Liquid)

3.1 Oil is used as a lubricant in cold drawing of tubing and for general lubrication.

3.2 The waste oil is contained in a steel tank of 200 gallons maximum capacity.

3.3 Disposal occurs at one to three month intervals. Yearly volume is approximately 300 gallons.

3.4 Waste is vacuumed to a tank truck and disposed of in a Class 1 landfill.

3.5 The waste is not analyzed but contains the following constitutents:

Petroleum products	90%
Dirt and sludge	10%

4. Neutralized Conversion Coating - EPA Number NA
(DOT UN1760; Corrosive Solution, n.o.s.)

4.1 A chemical conversion coating is applied to titanium tubing prior to cold drawing. Without this coating the titanium welds to to the tooling.

4.2 The spent solution, an acid plus salt additives, is neutralized with ammonia prior to disposal.

4.3 Neutralization occurs within the process tank.

4.4 The neutralized solution is vacuumed to a tank truck for disposal in a Class 1 landfill.

4.5 Disposal occurs as the need arises to recharge the process tank with fresh solution. Yearly waste volume is 400/800 gallons.

4.6 Neutralized solution is toxic and has the following properties and analysis: pH 6-8

Analysis:	Ammonium Phosphate	1/2%
	Ammonium Fluoride	2/3%
	Sodium Fluoride	10/14%
	Potassuim Fluoride	
	Water	Balance

4.7 The waste is checked for pH during neutralization to render it noncorrosive. The waste is analyzed at least once a year. The waste is sampled at all depths with a straight glass sampling tube.

5. 1,1,1 Trichloroethane - EPA Number F002
(DOT UN2831 ORM-A)

5.1 1,1,1 trichloroethane is used as a solvent to degrease tubing by immersion. The solvent is continuously cleaned by distillation. The waste represents still bottom.

5.2 Waste is contained in 50 gallon drums and is sold for reclaiming at two to three month intervals. Yearly volume is 800/1300 gallons.

5.3 This waste is toxic and is composed of 40-60% 1,1,1 trichloroethane and the balance is tramp oils. No on site analyses are made.

6. Kerosene & Mineral Spirits - EPA Number NA
(DOT UN1223; Combustible Liquid) (DOT UN1256; Combustible Liquid)

6.1 These solvents are used for machinery parts cleaning.

6.2 Waste is contained in 50 gallon drums and is sold for reclaiming every two to three months. Yearly volume is 300/400 gallons.

6.3 This waste is toxic and is composed of 60-80% solvent and the balance tramp oils and sludge.

VI MAJOR WASTE MANAGEMENT DEVICES USED AT THIS FACILITY

1. Steel Drums - 55 Gallon Capacity

1.1 Steel drums are used to store waste 1,1,1 trichloroethane, kerosene, and mineral spirits. These wastes are compatible; however they are stored in separate drums.

1.2 Drums are stenciled with the name of the waste, and labeled when full. "Flamable Liquid" labels are attached to drums containing kerosene and mineral spirits waste. "Hazardous Waste" labels are attached to all wastes in drums.

1.3 Drums containing wastes are stored in cement block and concrete impounds. Outlets to impounds are 4" pipe sealed with a pipe cap. Impounds will store up to a 24 hour, eight inch rainfall plus the contents of the largest waste container within the impound. All ground water drains away from impounds toward curbing which drains off the water.

1.4 Three drums used to collect wastes are stored on pallets in a 170 gallon capacity impound. When full they are transferred to a 1100 gallon impound to await disposal. No more than 20 drums of waste will be stored at one time. Normally, no more than 10 drums are stored. Impound areas are located at the building exterior at the southern end as shown in Figures 1 through 6 in Section II.

2. Storage Tanks - Two each; 200 gallon capacity.

2.1 Two welded, reinforced, 1/4 inch thick, unlined, steel tanks are used for storage of waste oil and alkaline waste solution. These tanks are within a 3700 gallon impound of cement block and concrete construction, separate from drum storage impounds. Wastes within this impound are compatible. Each tank has a painted waste identification label.

2.2 Dimensions of each tank are 31" wide X 36" wide X 45" deep. Tanks are accessible only through a top hinged door. No piping, valves, direct feed system, drain system or interconnecting systems are attached to these tanks. Tanks are emptied by vacuum hose to a tank truck.

2.3 Waste oil (specific gravity 1.1-1.4) and alkaline waste (specific gravity 1.08-1.2) are noncorrosive to carbon steel.

2.4 No vapor control systems are provided except for covers over the access hole.

CRU 00200

2.5 The waste tanks sit on a concrete base near ground level. There are no other tanks in the impound which are not elevated. As such, other tanks would not be affected by leaking waste tank.

2.6 The impound can contain up to a 24 hour, eight inch rainfall plus the contents of a 200 gallon waste container as a minimum. Ground water drains away from the impound toward curbing sloped to provide runoff.

2.7 In the event of leakage, the waste can be removed by vacuuming to a truck or container. Alternately, the waste could be with drawn through a 4" pipe, normally capped to prevent drainage.

2.8 Leaking wastes are easily identifiable. Oil by its appearance and texture and alkaline cleaner by pH.

3. Process/Treatment Tanks

3.1 Three indoor tanks containing acid mixes are used to treat tubing during manufacturing. When the solutions are spent they are neutralized within the process tank with ammonia prior to vacuuming to a tank truck for disposal. Disposal occurs within 72 hours of neutralization.

3.2 No process tank contains a drain nor inlet, outlet or interconnecting piping. All tanks are charged with concentrated chemicals from drums and water from a hose.

3.3 Mixed acid tanks for metal cleaning are welded construction, 1/2 reinforced steel plate. Tanks are lined with 1/2" polypropulence sheeting, seam welded. The shorter of the two tanks has an additional 6" layer of carbon brick on the bottom of the tank. Tank inside dimensions are 33" wide X 33" deep X 34.5 feet long. Tanks sit 7 to 10" off the concrete floor. These tanks contain 1700 and 1500 gallons of solution, respectively. Acid solutions are noncorrosive to liners.

3.4 The third tank contains mixed acid solutions for surface coating titanium tubing. This tank is reinforced wood construction with a 40 mil PVC plastic liner. Dimensions are 22" deep X 22" wide X 27 feet long. This tank contains up to 200 gallons of solution. The chemical solution is noncorrosive to the liner.

CRU 00201

4. Treatment of Wastes

4.1 Spent acid solutions are neutralized with ammonia according to Trent Process Control Standard PCS-016F Supplement III. (Pages 6-4 & 6-5)

CRU 00202

ACID NEUTRALIZATION

1. SCOPE

1.1 This procedure is to be followed for spent acid neutralization with anhydrous ammonia.

2. SPENT ACID

2.1 Spent acid is a mixture of 12-20% nitric acid and 2-5% hydrofluoric acid (by weight) plus metallic ions and salts resulting from passivation and pickling of stainless steels.

2.2 The acid is spent when it no longer removes light oxides on stainless steel tubing or when the iron salt content reaches .04 grams per milliliter of solution.

3. SAFETY PRECAUTIONS

3.1 Acid burns can be severe and painful. If you come in contact with acid, flush the area with large quantities of water. Seek medical help immediately after water flushing if critical areas of the body are exposed or after contact with undiluted hydrofluoric acid.

3.2 Wear protective, rubberized clothing and a face shield when working with unneutralized acid.

3.3 Check that the safety shower and eye wash fountain work properly and that your path to them is not blocked.

4. NEUTRALIZATION PROCEDURE

4.1 Liquid anhydrous ammonia is piped from its storage tank to a stainless steel perforated distribution line placed in the bottom of the acid tank. The distribution line will extend the length of the tank.

4.2 The ammonia flow is controlled by valves at the storage tank and just prior to entry to the acid tank. The flow will be restricted such that excessive heat is not produced, ammonia does not escape to the atmosphere, and the neutral point is not exceeded.

4.3 The neutralization process is to be monitored:

4.3.1 Temperature may not exceed 140°F to avoid deterioration of the tank liner.

4.3.2 The pH must be monitored. The pH increases from about 2, highly acid, to 7, the neutral point. Soda ash can be sprinkled on the acid to check the neutral point. When the soda ash no longer reacts with the solution, the neutral point is close or has been exceeded. Litmus paper obtained from the lab can also be used to determine the pH.

4.3.3 When the neutral point is reached turn off the ammonia control valve and check the stage of neutralization with the pH meter in the Laboratory. The pH must be between 6 and 8, 7 being the exact neutral point. If below 6, continue adding ammonia slowly until the pH is between 6 and 8.

Prepared By: Harry L Murphy Date: 3-12-80
Manager of Quality Assurance

VII FACILITY EQUIPMENT AND DEVICES

1. Waste Loading Equipment

1.1 Fork truck equipped with a boom for drum loading. The fork truck has a cage for driver protection from falling objects.

1.2 Vacuum trucks for loading bulk liquid wastes are provided by outside haulers.

2. Safety & Emergency Equipment

(See map of equipment locations on next page.)

2.1 Safety and emergency equipment available to employees include:

(a) Goggles and face shield located at work stations.

(b) Rubberized suits, gloves and boots available from Maintenance.

(c) Seventeen Class 10BC carbon dioxide or Class 10ABC dry chemical fire extinguishers are located throughout the plant and office, three of which are located within 100 feet of waste storage areas.

(e) One Scott Air-Pak II self contained breathing system stored in the Laboratory.

(f) Two air masks with air supplied from compressed air lines located throughout the plant, are available in the maintenance area.

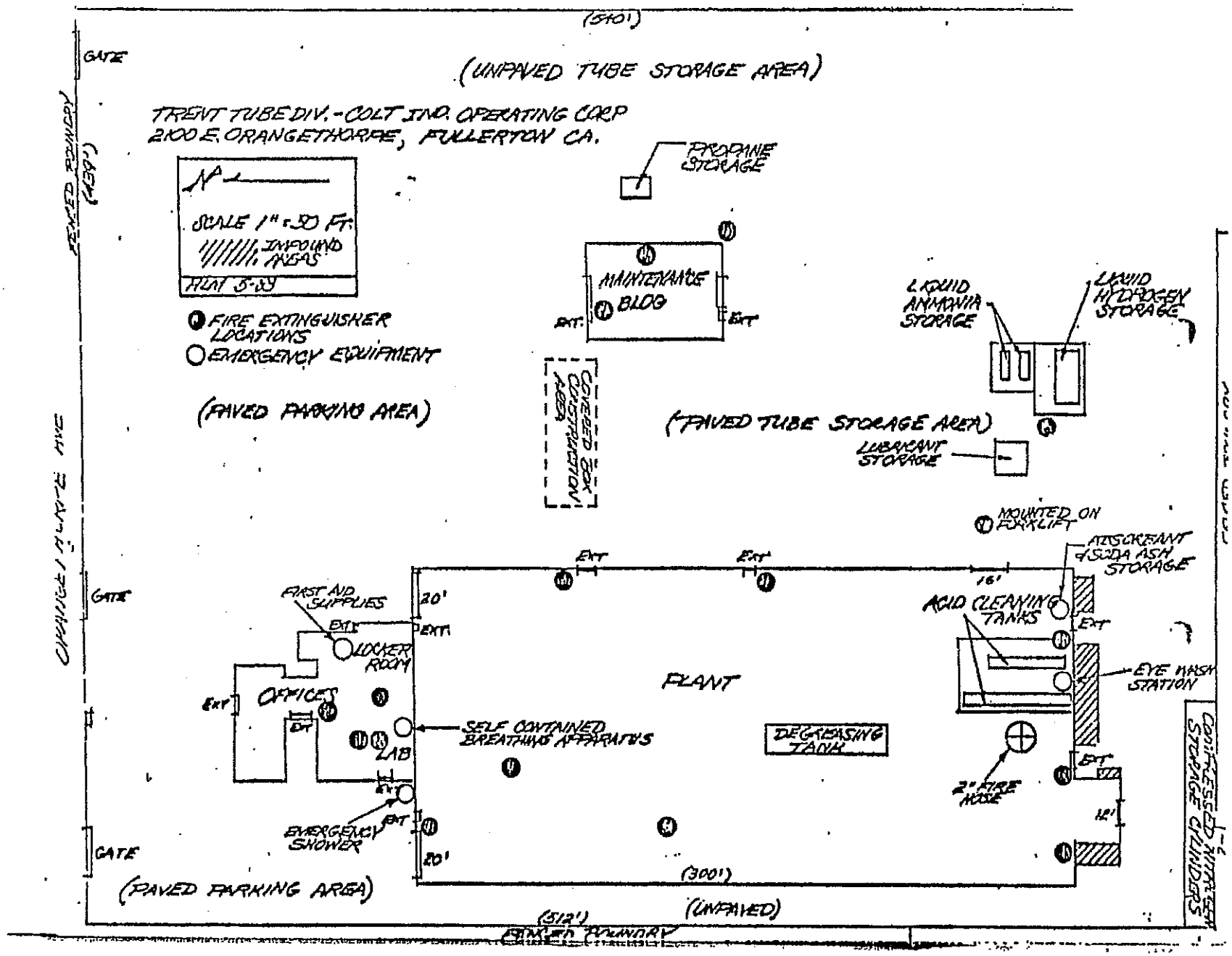
(g) An eyewash station and rinse water tank are located near to process tanks in which spent acids are neutralized.

(h) First aide supplies are located in the washroom.

(i) A telephone is located inside near the process tanks for summoning help if needed.

(j) Emergency shower is located just outside the Laboratory.

(k) Soda ash and absorbent materials are stored inside the plant in the southeast corner.


(510')
GATE
(UNPAVED TUBE STORAGE AREA)
TRENT TUBE DIV. - COLT IND. OPERATING CORP
2100 E. ORANGETHORPE, FULLERTON CA.
SCALE 1" = 50 FT.
INPOUND AREAS
PLOT 5-39
FIRE EXTINGUISHER LOCATIONS
EMERGENCY EQUIPMENT
PROPANE STORAGE
MAINTENANCE BLDG
EXT.
EXT.
LIQUID AMMONIA STORAGE
LIQUID HYDROGEN STORAGE
COVERED CONSTRUCTION AREA
(PAVED PARKING AREA)
(PAVED TUBE STORAGE AREA)
LUBRICANT STORAGE
MOUNTED ON FORKLIFT
ASBESTOS CEMENT & SODA ASH STORAGE
EXT
EXT
16'
GATE
FIRST AID SUPPLIES
EXIT
20'
EXIT
LOCKER ROOM
ACID CLEANING TANKS
EXT
OFFICES
EXT
EXT
PLANT
EYE WASH STATION
SELF CONTAINED BREATHING APPARATUS
LAB
DEGREASING TANK
2" FIRE HOSE
EXT
EMERGENCY SHOWER
EXT
12'
GATE
20'
(300')
(PAVED PARKING AREA)
(UNPAVED)
(512')
COMPRESSED NITROGEN STORAGE CYLINDERS

CRU 00206

3. Security

3.1 Trent Tube property is protected by a six foot chainlink fence around its perimeter. Access is through three gates wide enough to admit trucks and one personnel gate. All but one truck gate are locked at all times except under special circumstances. All gates are locked when the facility is unattended.

3.2 Warning signs are posted in hazardous waste areas. Signs read in English and Spanish. Wording is "Caution - Hazardous Waste area - Unauthorized Persons Keep Out". Size is 14" X 20".

3.3 Silent alarms protect all buildings from entry when the plant is closed.

4. Lighting

4.1 Hazardous waste areas are lighted; however, hazardous waste are not handled during darkness.

4.2 Outdoor lights are sodium vapor type and are located above waste accumulation areas. Indoor lights are fluorescent and sodium vapor located above process tanks.

5. Water Supply

5.1 Water supplies are not required for waste storage or treatment. Water is used only to rinse storage or process tanks when wastes are vacuumed to a tank truck. This usage is minimal.

5.2 No water piping connects directly to waste tanks. There are hose spigots from which garden hoses can be connected for rinsing.

5.3 All water is potable tap water.

CRU 00207

VIII OPERATIONAL PROCEDURES

1. Control of Hazardous Wastes in General

1.1 Wastes are under the control of the Manager of Quality Assurance or Maintenance Superintendent.

1.2 Each waste stream is collected in separate containers. Each container location is marked with the waste to be accumulated and/or stored at that location. Each container is also marked with the waste name.

1.3 None of the wastes generated at this facility are incompatible. They are stored in separate containers because some can be recycled and the others may be eventually be recyclable.

1.4 Waste drums are sealed when full to prevent emissions and prevent a fire hazzard. Waste tanks are also closed with hinged lids.

1.5 Waste storage area isles are kept clear to allow for entry of emergency equipment.

1.6 Empty containiers contaminated with hazardous waste are stored in impound areas and treated as hazardous waste.

1.7 Twice weekly inspections of waste storage and process areas are performed by the Manager of Quality Assurance or his designated representative. These inspections insure proper placement of waste, labeling, container closure, waste levels and a check for leaks. See Environmental Check List on the next page.

1.8 Inspection reports will be retained at this facility for a period of three years.

2. Training

2.1 The Manager of Quality Assurance has overall responsibility for waste control. He attended a seminar, "Hazardous Materials & Waste Management/Compliance". Records of outside training are retained for a minimum of three years.

2.2 No single person is engaged in waste control, treatment or any other related operations. Training is by way of posted notices and on-the-job instruction while being supervised by the Manager of Quality Assurance and/or Maintenance Superintendent during neutralization treatment or loading of wastes for disposal.

2.3 Personnel are instructed in safety procedures, pH measurements, and loading procedures while on-the-job. No records are made of this training.

CRU 00208

ENVIRONMENTAL CHECK LIST

Indicate with a (✓) if inspection was performed and conditions are satisfactory. Place and (x) when conditions are unsatisfactory. An (x) requires an explanation and corrective action, immediately if the condition is serious. Notify the Manager of Quality Assurance and Maintenance Superintendent of action needed.

1. Pickle Area

1.1 Leaks in tank ___
1.2 Overheated ___
1.3 Eyewash station clear ___
1.4 Liquid levels ___
1.5 AQMD permit posted ___

2. Degreasing

2.1 Still operating properly ___
2.2 Leaks in sump ___
2.3 Proper level in tank ___
2.4 AQMD permit posted ___

3. Doping Rack

3.1 Reservior covered ___
3.2 Reservior free of leaks ___
3.3 AQMD permit posted ___

4. Outside Impounds

4.1 Chloroethane VG tanks free of leaks ___
4.2 Chloroethane VG tank valves locked ___
4.3 Condition of Solvo-Clean waste tank and waste level ___
4.4 Condition of waste oil tank and waste level ___
4.5 Kerosene storage tank condition ___
4.6 Drums in impounds elevated ___
4.7 Condition of waste drums (leaks) ___
4.8 Waste levels in collection drums ___
4.9 Drums properly labeled ___
4.10 Drum bungs on tight ___
4.11 Pipe caps are tight on outlets to impounds ___
4.12 AQMD permits posted on chloroethane VG storage tanks ___

5. General Waste Storage Area

5.1 No waste drums are sitting in yard
5.2 Isles are clear for emergency equipment

COMMENTS:

INSPECTOR_____ DATE_____

IX PERSONNEL

1. Training

1.1 Employees will be trained in first aid, fire protection and the Emergency/Contingency Plan every two years.

1.2 Representatives from each plant shift and office personnel will be trained in first aid.

1.3 All personnel will be trained in fire protection.

1.4 Foremen, the designated Emergency Coordinator, and Secondary Emergency Coordinators shall be trained in carrying out the Emergency/Contingency Plan.

1.5 See Section VIII for additional training and personnel information.

CRU 00210

XI ENVIRONMENTAL CONTROL PERMITS

1. South Coast Air Quality Management District
(ID Number - 006513)

1.1

Permit Number	Operating Equipment
670019	Degreaser
001486	Scrubber
S00926	Storage Tank - 4000 Gallons
S00926	Storage Tank - 1400 Gallons
S03878	Flowcoater

2. County Sanitation District of Orange County
(ID Number - 21278)

2.1 Permit Number - 2-278

3. Orange County Health Care Agency - Environmental Health

3.1 Permit Number - 22-83274

4. California Department of Health Services

4.1 California extremely hazardous waste disposal permit number - 3-3966.

CRU 00211

XII RECORDS & REPORTS

1. Maintenance

1.1 Records and reports involving wastes shall be maintained at Trent Tube for a period of three years from the date of inception or last use.

2. Content

2.1 Records and reports shall include:

2.1.1 Inspection Reports
2.1.2 Permits
2.1.3 Waste manifests when disposal occurs.
2.1.4 Incident Reports
2.1.5 Closure Plans
2.1.6 Contingency Plans
2.1.7 Waste Analyses
2.1.8 Reports of accidents involving wastes.
2.1.9 Waste acid neutralization procedure.

3. Control

3.1 Records and reports are under the control of the Manager of Quality Assurance. He is responsible for maintenance and retention.

4. Availability

4.1 Records are available for inspection by the Department of Health Services.

CRU 00212

Exhibit 8

PIC-A 1

Colt Industries

Trent Tube Division
Crucible Inc
P. O. Box 3068
2100 East Orangethorpe
Fullerton, California 92634
714/526-5622

CAD 008325110

August 26, 1983

California State Dept. of Health Services
Hazardous Waste Management Branch
107 South Broadway, Room 7128
Los Angeles, California

Gentlemen:

Enclosed is our operation plan for hazardous waste, treatment and storage at the Fullerton operation.

This letter will also serve as notice that this plant will close on or before December 31, 1983. A closure plan is incorporated as part of the operation.

Sincerely,

Harry L. Murphy

Harry L. Murphy
Manager of Quality Assurance

cc: C. Abend
D. Gehr
F. Hunter

TRENT TUBE DIVISION - [illegible]OLT INDUSTRIES
FULLERTON, CALIFORNIA

CLOSURE PLAN AND COST ESTIMATES
FOR HAZARDOUS WASTE FACILITIES

FACILITY: Trent Tube Division, Fullerton Operation
2100 East Orangethorpe Avenue
Orange County
Fullerton, California 92634

OPERATOR: Trent Tube Division
Crucible Materials Corporation
P.O. Box 3068
Fullerton, California 92634

FACILITY ID NO.: CAD 008325110

FACILITY PHONE NO.: (714) 526-5522

I. GENERAL

A. This plan is prepared in compliance with the California Department of Health Services, Interim Status Document for the Fullerton facility, Section V, dated April 6, 1981.

B. This plan is to be submitted for approval to the California Regional Water Quality Board (CRWQB) prior to closure.

The local board is located at:

6809 Indiana Street
Suite 200
Riverside, California

Attention: Mr. James Anderson
Executive Officer
714/684-9330

II. WASTE INVENTORY

A. Pickle Liquor - EPA Number K062

(1) Contained in two process tanks of 2000 gallons each. Maximum volume at closure, 4000 gallons total.

(2) Waste is neutralized prior to disposal.

B. 1,1,1 Trichloroethane Waste - EPA Number F001

(1) Waste is contained in 55 gallon drums. Maximum storage capacity is 15 drums.

(2) Solvent used during manufacturing is contained in a degreaser unit having a maximum capacity of 2400 gallons.

C. Waste Mineral Spirits & Kerosene

(1) Contained in 55 gallon drums.

(2) Storage capacity at closure is 8 drums.

D. Waste Oil - EPA Number NA

(1) Contained in 10/20 gallon reservoirs at each of six draw benches.

(2) Maximum storage capacity is 200 gallons bulk waste plus the reservoir at each draw bench.

E. Dilute Detergent Cleaning Wastes - EPA Number NA

(1) Contained in a steel storage tank 200 gallons maximum capacity.

III. FACILITY DECONTAMINATION STEPS

A. Pickle Liquor Facilities

(1) Neutralize pickling acids with ammonia as per operating plan.
(2) Pump neutralized solutions to bulk tank truck.
(3) Manifest solutions for treatment and disposal.
(4) Dismantle and cut up nitric-HF pickle tank and exhaust intakes inside building.
(5) Manifest contaminated equipment for disposal.
(6) Arrange with supplier to remove ammonia storage tanks and vent ammonia feed system.

B. 1,1,1 Trichloroethane Facilities

(1) Arrange with reclaimer to pump out degreasing tank, recovery still equipment and 55 gallon drums of still bottoms.

(2) Arrange with reclaimer to haul off remaining quantities of virgin solvent in outside storage tanks.

(3) Rinse degreasing tank and recovery still system with detergent and water pump detergent solution to bulk tank truck for disposal.
(4) Manifest solvent and cleaning solution for disposal.
(5) Arrange with vendor for removal of vertical storage tank.
(6) Clean and ventilate remaining horizontal storage tank.

C. Mineral Spirit and Kerosene Facilities

(1) Arrange with reclaimer to pump out 55 gallon drums.
(2) Clean impound areas with detergent solution.
(3) Transfer cleaning solution to the 200 gallon storage tank.
(4) Manifest mineral spirits and kerosene for disposal by recycling.

D. Waste Oil Facilities

(1) Transfer oil from draw bench reservoirs to 200 gallon storage tank.
(2) Rinse draw bench reservoirs and pump system with detergent solution.
(3) Transfer detergent solution to storage tank.
(4) Arrange for disposal of waste oil from 200 gallon storage tank.
(5) Rinse out 200 gallon storage tank with detergent.
(6) Rinse out oily waste impound area with detergent.

E. Detergent Cleaner Solution Disposal

(1) Pump out 200 gallon storage tanks (2) and impound area into tank truck.
(2) Manifest cleaning solutions for proper disposal.

F. Empty Drum Disposal

(1) Arrange for drum reprocessor to pick up reusable drums.
(2) Crush unusable drums and manifest for disposal.

IV. CLOSURE SCHEDULE

A. After suspension of manufacturing operations, additional wastes due to clean-up operations, etc. will be generated for a maximum of thirty (30) days.

B. Upon suspension of manufacturing operations, all wastes will be treated within forty (40) days and removed from the premises within sixty (60) days.

TRENT TUBE DIVISION - COLT INDUSTRIES
FULLERTON, CALIFORNIA

V. COST ESTIMATES FOR FACILITY CLOSURE

A. Pickle Liquor and Facilities

(1)	Labor costs for neutralization of acids and cleaning and removal of tank and exhaust system. 60 hours @ $18/hr.	$1060
(2)	Transportation, treatment, and disposal of 4000 gallons of neutralized pickle liquor. (4000 gal.) X (8.34 #/gal.) X (125/ton) ÷ (2000 #/gal.)	2085
(3)	Transportation and disposal of pickle tank and exhaust system.	1200
	Subtotal	$4365

B. 1,1,1 Trichloroethane Facilities

(1)	Labor costs for cleaning tanks. 24 hours @ $18/gal.	432
(2)	Credit for recovered solvent. 2000 gal. @ $.60/gal.	(1200)
(3)	Disposal of detergent rinze solution.	400
	Subtotal - Credit	($368)

C. Mineral Spirits and Kerosene Facilities

(1)	Credit for solvent recoveries.	($125)
	Subtotal - Credit	($125)

D. Waste Oil Facilities

(1)	Labor to transfer oil from draw benches to waste oil tank, clean oil reservoirs, storage tank and impound area. 24 hours @ $18/hr.	$432
(2)	Transportation and disposal of waste oil.	400
	Subtotal	$832

E. Detergent Cleaning Solution Disposal

(1)	Transportation and disposal.	$400
	Subtotal	$400

TRENT TUBE DIVISION - COLT INDUSTRIES
FULLERTON, CALIFORNIA

F.	Empty Drum Disposal	
	(1) Cleaning of reusable drums by drum processor. $10 each X 20 drums	$200
	(2) Crushing and disposal of non-reusable drums. $15 X 15 drums	225
	Subtotal	$425
G.	Administration Consultant Services & Contingencies	
	(1) Administration and supervision	$3000
	(2) Professional engineer recommendations, inspection and certification.	5000
	(3) Contingencies	2000
	Subtotal	$10,000
H.	Total Estimated Closure Cost - 4/2/84	$15,529

April 4, 1984
Date

Harry L. Murphy
Harry L. Murphy
Plant Manager

Exhibit 9

Purchase Agreement

Dated as of November 5, 1985

among

CMC Holding Company, Inc.,

The Employee Stock Ownership Plan
of Crucible Materials Corporation,

Colt Industries Inc,

Colt Industries Operating Corp,

and

Garlock Inc

PURCHASE AGREEMENT

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Exhibits

Exhibit A - Form of Exchange Agreement

Exhibit B - Certificate of Resolution with respect to Crucible Preferred Stock

Exhibit C - Form of Plan of Merger

Exhibit D - Form of Assignment

Exhibit E - Form of Tax Procedures Agreement

Exhibit F - Form of Opinion of Kirkpatrick & Lockhart

Exhibit G - Form of Opinion of Powell, Goldstein, Frazer & Murphy

Exhibit H - Certain Transaction Expenses

Schedules--See Section 5(b)

Schedule A - Listing of the Companies, including jurisdiction of incorporation, jurisdictions of qualification, capitalization

Schedule B - Real Estate; Personal Property Title Exceptions

Schedule C - Loans, Credit Agreements and Capitalized Lease Obligations; Guarantees

Schedule D - Litigation, Orders, Stipulations and Decrees

Schedule E - Product Warranty and Product Liability Matters

Schedule F - Terminated Operations

Schedule G - Employee Benefit Plans

Schedule H - Industrial Development Bonds

Schedule I - List of employees of Colt who will become employees of Crucible

Schedule J - List of employees participating in the Crucible Salaried Plans who will be employees of Colt or a subsidiary following the Closing

Schedule K - Certain Environmental Matters

PURCHASE AGREEMENT

Purchase Agreement dated as of November 5, 1985 (the "Agreement"), among CMC HOLDING COMPANY, INC., a Delaware corporation ("Holding"), THE EMPLOYEE STOCK OWNERSHIP PLAN OF CRUCIBLE MATERIALS CORPORATION (the "ESOP"), COLT INDUSTRIES INC, a Pennsylvania corporation ("Colt"), COLT INDUSTRIES OPERATING CORP, a Delaware corporation ("Operating"), and GARLOCK INC, an Ohio corporation ("Garlock").

Preliminary Statement

Operating owns all of the outstanding capital stock of Crucible Materials Corporation, a Delaware corporation ("Crucible"), which outstanding capital stock consists on the date hereof of 1,000 shares of common stock, par value $1 per share ("Common Stock"), and Garlock at the Closing Date hereafter referred to will own all of the outstanding capital stock of Crusteel Limited, an English company ("Crusteel"). Crucible and Crusteel are herein collectively known as the "Companies" and individually as a "Company". Holding and the ESOP are herein collectively known as the "Purchasers".

On the Closing Date (as defined in Section 2 hereof), Operating intends to cause a recapitalization (the

"Recapitalization") of Crucible, as set forth in the form of Agreement of Exchange and Reorganization attached hereto as Exhibit A (the "Exchange Agreement"), pursuant to which Recapitalization Operating will, subject to Section 1(i) hereof, receive in exchange for 1,000 shares of Common Stock (i) 200,000 shares of 13% cumulative convertible preferred stock, Series A, par value $100 per share, of Crucible (the "Crucible Series A Preferred Stock"), less such number of shares of Crucible Series A Preferred Stock as shall have an aggregate par value equal to the amount, if any, by which the Colt Common Stock Amount (as defined in Section 1(b)(i) hereof) exceeds $15,000,000, (ii) such number of shares (the "Employee Preferred Amount") of the 16.5% cumulative convertible preferred stock, Series B, par value $100 per share, of Crucible ("Crucible Series B Preferred Stock") as shall have an aggregate par value equal to the Employee Preferred Value (as defined in Section 1(h) hereof); (iii) 63,000 shares of 16.5% cumulative convertible preferred stock, Series C, par value $100 per share, of Crucible ("Crucible Series C Preferred Stock"), and (iv) 3,000,000 shares of common stock of Crucible, without par value, stated value $10 per share of Crucible ("Crucible Common Stock"), plus such number of shares (the "Employee Common Amount") of Crucible Common Stock as shall have an

aggregate stated value equal to the Employee Common Value (as defined in Section 1(h) hereof).

Operating desires to sell the shares of Crucible to the Purchasers, Garlock desires to sell the shares of Crusteel to Holding, the Purchasers desire to purchase the shares of Crucible and Holding desires to purchase the shares of Crusteel, in accordance with the agreements set forth below. Colt owns all of the outstanding stock of Operating and Garlock and is entering into this Agreement in order to make certain other agreements and to induce the Purchasers to become parties hereto.

1. Sale of Shares. (a) On the basis of the representations and subject to the terms and conditions set forth in this Agreement, Operating agrees to transfer and deliver to Holding on the Closing Date (i) such number of shares of Crucible Common Stock as is equal to the Employee Common Amount, (ii) such number of shares of Crucible Series B Preferred Stock as is equal to the Employee Preferred Amount and (iii) all outstanding shares of Crucible Series C Preferred Stock and to transfer and deliver to the ESOP on the Closing Date 3,000,000 shares of Crucible Common Stock, and Garlock agrees to transfer and deliver to Holding on the Closing Date all of the outstanding shares of capital stock of Crusteel. Operating and

Garlock, respectively, shall deliver certificates for such shares of Crucible Common Stock, Crucible Series B Preferred Stock, Crucible Series C Preferred Stock and capital stock of Crusteel duly endorsed in blank or accompanied by duly executed stock powers, and with transfer taxes and stamp taxes, if any, paid or provided for.

(b) Against delivery of such shares of Crucible Common Stock, Crucible Series B Preferred Stock, all the outstanding shares of Crucible Series C Preferred Stock, and all of the outstanding shares of capital stock of Crusteel, Holding shall deliver on the Closing Date, subject to adjustment as provided in Sections 1(i) and 3(c) hereof, the purchase price (the "Purchase Price") of $99,500,000, which Purchase Price shall be comprised of the following:

(i) all the shares of Common Stock, par value $1.00 per share, of Colt ("Colt Common Stock"), held on the Closing Date (and as to which withdrawal or transfer rights had not been exercised prior to the Closing Date) by the trustee for The Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation (the "Crucible Fund"), such shares to be received by Holding from such trustee on the Closing Date as provided in Section 1(h) hereof, valued at the higher of a price per share of Colt Common Stock of (a) $70.00, or (b) 115% of the average of the closing

market prices on the New York Stock Exchange of Colt Common Stock for the five trading days immediately preceding the Closing Date (the aggregate value of such shares of Colt Common Stock being herein referred to as the "Colt Common Stock Amount");

(ii) its assumption, pursuant to Section 7(d) and the Plan of Merger (as defined in Section 1(i)), of primary indebtedness in respect of the IDBs (as defined in Section 7(d)) in the aggregate amount of principal and accrued interest (net of funds maintained in construction or bond funds relating to such IDBs) of $12,500,000, such assumption being valued at such amount; and

(iii) cash for the remaining balance of such purchase price, of which $2,100,000 shall be payable to Garlock and the balance shall be payable to Operating, in each case by wire transfer of immediately available funds to their respective accounts.

(c) Against delivery of such 3,000,000 shares of Crucible Common Stock, the ESOP shall deliver to Operating on the Closing Date, subject to subsequent adjustment as provided in Section 3(c) hereof, the purchase price of $30,000,000 by wire transfer of immediately available funds to the account of Operating.

(d) The relative rights and preferences of the various series of Preferred Stock of Crucible and New Crucible shall be as set forth in the Certificate of Resolution of Crucible, which Certificate is attached hereto as Exhibit B, and which Resolution shall be adopted by Crucible as part of the Recapitalization.

(e) On the Closing Date, Holding proposes to cause Crucible to enter into a loan agreement satisfactory to Crucible and the parties hereto (the "Loan Agreement") providing for a revolving line of credit of up to $75,000,000 proposed to be extended to New Crucible (as defined in Section 1(j)) on the Closing Date, and related agreements as to collateral satisfactory to Crucible and the parties hereto (the "Revolver Security Agreements") with a group of financial institutions (the "Lenders") represented by Mellon Bank, N.A. It is also proposed that on the Closing Date Holding will cause Crucible to enter into a Loan Agreement with Mellon Bank N.A. ("Mellon") satisfactory to Crucible and the parties hereto (the "Mellon Term Loan Agreement"), providing for a term loan in the principal amount of $16,000,000 (the "Mellon Term Loan") proposed to be made on the Closing Date by Mellon to New Crucible, and related agreements as to collateral satisfactory to Crucible and the parties hereto (the "Term Loan Security Agreements") and that the Mellon Term Loan be guaranteed by Colt pursuant

to a Guarantee Agreement satisfactory to Colt and Mellon (the "Colt/Mellon Guarantee").

(f) On the Closing Date, Holding proposes to cause Crucible to enter into, with The Chase Manhattan Bank, N.A. ("Chase"), a loan agreement satisfactory to Crucible and the parties hereto (the "Chase Loan Agreement"), providing for a term loan in the principal amount of $30,000,000 (the "Chase Term Loan"), proposed to be made on the Closing Date by Chase to New Crucible. The proceeds of the Chase Term Loan shall be loaned by New Crucible to the ESOP, in exchange for a promissory note of the ESOP (the "ESOP Note") in the principal amount of $30,000,000 and satisfactory in form to Crucible and the parties hereto, to fund the acquisition by the ESOP on the Closing Date (after the sale of shares to Holding and the effectiveness of the Plan of Merger referred to in Section 1(j)) of Crucible Common Stock pursuant to Section 1(c) hereof. It is proposed that the ESOP Note will be secured by a pledge of the shares of the Crucible Common Stock so acquired (the "ESOP Pledge"). It is proposed that the Chase Term Loan and the Mellon Term Loan be equally and ratably secured by and under the Term Loan Security Agreements. It is proposed that the Chase Term Loan also be secured by a Pledge and Security Agreement (the "Chase Pledge Agreement"), satisfactory to Crucible and the parties hereto. It is also proposed that

the Chase Term Loan be guaranteed by Colt pursuant to a Guarantee Agreement satisfactory to Colt and Chase (the "Colt/Chase Guarantee") and that Crucible shall assign to Colt all of its right, title and interest in and to the ESOP Pledge (the "Pledge Assignment"). The Lenders, Chase and Colt will enter into on the Closing Date an Inter-Creditor Agreement satisfactory to the parties hereto and consented to by Crucible (the "Inter-Creditor Agreement").

(g) On the Closing Date, it is proposed that Holding and Colt will enter into a revolving credit agreement (the "Standby Credit Agreement") providing for a standby working capital line of credit up to $7,500,000 to be available to New Crucible commencing on January 1, 1987, but only at such times as the full amount then available under the Loan Agreement has been drawn down. The Standby Credit Agreement will extend for a period of three years from the Closing Date, provided that there is no reduction in the $75,000,000 revolving line of credit under the Loan Agreement nor any modification of the determination of the Borrowing Base (as defined therein). Thereafter, the Standby Credit Agreement may be renewed by mutual agreement between New Crucible and Colt. The Standby Credit Agreement will include provisions for (i) repayment of amounts borrowed to the extent of any subsequent borrowing availability under the Loan Agreement; (ii) payment of

interest thereon at a rate per annum equal to the prime rate per annum as announced from time to time by Mellon Bank plus 1-3/4%; and (iii) a third lien on receivables, inventory and general intangibles and other assets, except fixed assets and patents.

(h) Holding proposes that as of the Closing Date, Crucible amend the Crucible Fund and the related trust agreement so as to permit the trustee for the Crucible Fund to exchange on the Closing Date all the Colt Common Stock held on the Closing Date by the trustee for the Crucible Fund for a combination of common stock without par, stated value $10 per share of Holding (the "Holding Common Stock") and 16.5% cumulative convertible preferred stock, par value $100 per share, of Holding ("Holding Series B Preferred Stock"), such that the ratio of the Employee Preferred Value (as hereinafter defined) to the Employee Common Value (as hereinafter defined) shall be two to one, subject to the existing withdrawal and transfer rights of employees (to the extent exercised prior to the Closing Date), which withdrawal and transfer rights Holding also proposes that Crucible amend as of the Closing Date. The exact number of shares to be exchanged will be determined as of the Closing Date on the basis of the Colt Common Stock Amount and the aggregate stated value of the Holding Common Stock and the aggregate par value of Holding Series B Preferred Stock.

The aggregate par value of the Holding Series B Preferred Stock to be exchanged pursuant to this Section 1(h) is herein referred to as the "Employee Preferred Value". The aggregate stated value of the Holding Common Stock to be exchanged pursuant to this Section 1(h) is herein referred to as the "Employee Common Value". Rider 10

(i) If the Colt Common Stock Amount shall be less than $15,000,000, then Operating may elect, in its sole discretion, to increase the number of shares of Crucible Series B Preferred Stock and Crucible Common Stock to be exchanged pursuant to the Recapitalization to such number of shares of each as would have been exchanged if the Employee Preferred Value and Employee Common Stock Value were $10,000,000 and $5,000,000, respectively. If Operating shall make such an election, then the Purchase Price shall be reduced by an amount equal to (i) $15,000,000 minus (ii) the Colt Common Stock Amount. If the Colt Common Stock Amount shall be greater than $15,000,000, then the Purchase Price shall be increased by an amount equal to (i) the Colt Common Stock Amount minus (ii) $15,000,000.

(j) On the Closing Date, Crucible and Holding shall merge pursuant to an Agreement and Plan of Merger (the "Plan of Merger") in the form attached hereto as Exhibit C to be entered into on the Closing Date by Crucible and Holding. Crucible shall be the surviving corporation (as such surviving corporation, Crucible is hereinafter referred

Rider 10

Notwithstanding the foregoing, if the Colt Common Stock Amount shall exceed $15,000,000, then the shares of Colt Common Stock held by the trustee for the Crucible Fund attributable to such excess may be exchanged for such combination of Holding Series B Preferred Stock, Holding Common Stock or other series of stock of Holding (provided that such other series of stock shall have rights, preferences or privileges junior to the Crucible Series A Preferred Stock except to the extent that Crucible Series B Preferred Stock is on parity with Crucible Series A Preferred Stock) as shall be determined by the trustee of the ESOP, the trustee of the Crucible Fund and Crucible. Accordingly, Holding and Operating will authorize such number and series of shares as shall be appropriate.

to as "New Crucible"). Pursuant to such Plan of Merger, (i) holders of Holding Common Stock will receive one share of Crucible Common Stock in exchange for each share of Holding Common Stock, (ii) Operating will retain the shares of Crucible Series A Preferred Stock held by it, (iii) Operating will retain any shares of Crucible Series B Preferred Stock and Crucible Common Stock held by it, (iv) the Crucible Fund will receive one share of the Crucible Series B Preferred Stock purchased by Holding in exchange for each share of Holding Series B Preferred Stock, and (v) the holders of Holding Series C Preferred Stock will receive one share of Crucible Series C Preferred Stock purchased by Holding in exchange for each share of Holding Series C Preferred Stock. As a consequence of the Plan of Merger, New Crucible shall succeed to all Holding's rights and obligations hereunder.

(k) On the Closing Date, following the purchase of 3,000,000 shares of Crucible Common Stock by the ESOP pursuant to Section 1(c) hereof and effective concurrently therewith, the ESOP shall assign all its right, title and interest in and to Section 3 of this Purchase Agreement to New Crucible, New Crucible shall assume all obligations of the ESOP thereunder and the ESOP shall be released and discharged from all such obligations, all pursuant to a Consent and Assignment Agreement in the form attached hereto as Exhibit D (the "Assignment") to be entered into on

the Closing Date by the ESOP, Crucible, Holding, Colt, Operating and Garlock.

2. Closing. The Closing Date shall be December 16, 1985, or such other date as the parties hereto may agree, and the transactions contemplated hereby to be consummated on the Closing Date shall take place, after the satisfaction of the conditions thereto set forth herein, at the offices of Cravath, Swaine & Moore, One Chase Manhattan Plaza, New York, New York. Such events on the Closing Date are referred to herein as the "Closing".

3. Review; Adjustment of Purchase Price.

(a) Promptly following the Closing, Colt will prepare a combined balance sheet for the Crucible Materials Group (as defined in Section 5(d)) as of the Closing Date (the "Closing Balance Sheet"), in accordance with generally accepted accounting principles applied consistently with the audited balance sheet referred to in Section 5(d) hereof (except that in recording actual liabilities, no liability shall be disregarded on the basis of immateriality), which Closing Balance Sheet shall reflect the interim physical inventories taken by Crucible in the ordinary course of business. Colt and New Crucible will further cause Arthur Andersen & Co. ("AA"), independent public accountants for Colt, to review the Closing Balance Sheet in accordance with AICPA guidelines, which review shall not include a new physical

inventory in addition to the interim physical inventories referred to above and shall otherwise not constitute a full audit in accordance with generally accepted auditing standards. Colt will cause AA's report on its review to include New Crucible and the ESOP as addressees. New Crucible shall, and shall cause Crusteel to, cooperate fully with Colt in the preparation and with AA in the review of the Closing Balance Sheet. Such review by AA shall be subject to further review by Peat, Marwick, Mitchell & Co. ("PMM"). In conducting such further review, PMM will have full access (not later than the date of delivery by Colt to New Crucible of the Closing Balance Sheet pursuant to clause (b) below) to all work papers supporting the review by AA and to those personnel who conducted such review. New Crucible will cause PMM's report to include Colt, Operating, Garlock and the ESOP as addressees.

(b) Not later than 60 days following the Closing Date, Colt shall deliver to New Crucible the Closing Balance Sheet, as reviewed and reported on by AA. If PMM, based upon its own review, but not the taking of a new physical inventory, disagrees, within 30 days thereafter, as to the combined net worth of the Crucible Materials Group set forth in the Closing Balance Sheet, it shall furnish to Colt, AA,

New Crucible and the ESOP a written specification of the items and amounts constituting such disagreement. Such differences, if not resolved within 30 days thereafter, shall be referred to the Syracuse, New York, office of Price Waterhouse & Co. ("PW"). The decision of PW shall be final and binding on all parties, with the force and effect of an arbitral award; and PW in such decision shall have all the privileges and immunities of a neutral arbitrator. The fees of AA shall be paid by New Crucible, to the extent provided for in the Closing Balance Sheet, and the balance, if any, shall be paid by Colt; the fees of PMM shall be paid by New Crucible; and the fees of PW shall be paid pursuant to Section 16. Except as provided above and in Section 16, such accounting and auditing fees shall not be taken into account in determining the combined net worth of the Crucible Materials Group as of the Closing Date. The Closing Balance Sheet as reviewed and reported on by AA, after taking into account the final resolution by the parties or by PW of any differences between AA and PMM with respect thereto, shall be conclusive with respect to the aggregate amount, if any, to be paid by the Purchasers or Operating pursuant to Section 3(c).

(c) It is understood and agreed that the respective amounts to be paid by Holding and the ESOP on the Closing Date are based on the assumption of the parties that

the combined net worth on a financial statement basis (plus the LIFO reserve) of the Crucible Materials Group would be at least $147,918,000 as of the Closing Date, reflecting inventories valued on a FIFO basis. The aggregate amount paid by Holding and the ESOP pursuant to Section 1 shall be decreased by the amount by which the combined net worth of the Crucible Materials Group as of the Closing Date, as determined under Paragraph 3(b) above, plus the LIFO reserve is less than, $147,918,000. Any decrease in aggregate amount to be paid by the Purchasers shall be payable by Operating to New Crucible within 10 days of receipt of the Closing Balance Sheet or resolution of dispute, as referred to above, and with interest from the Closing Date to the date of payment at the interest rate per annum announced from time to time by Mellon Bank, N.A., as its prime rate.

4. Access to Records and Facilities of the Companies. Prior to the Closing Date, Colt will cause each of the Companies to afford authorized representatives of the Purchasers and New Crucible's prospective lenders access, during normal business hours and upon notice, to the records, facilities and management of the Companies for the purposes of evaluating the businesses of the Companies and of ascertaining the accuracy of the representations and warranties of Colt, Operating and Garlock contained in this Agreement. All information obtained through such

investigation shall be held in confidence by the Purchasers and such prospective lenders and, if the Closing does not take place hereunder, (i) neither Purchaser nor any such authorized representative or prospective lender shall use or disclose to any person any such information (except to the extent that such information can be shown to be in the public domain, or acquired by a Purchaser or such authorized representative or prospective lender from other sources which are not subject to an obligation of confidentiality to Colt or any of its subsidiaries or the Companies with respect to such information and whose acquisition of such information did not involve the breach of any legal or other obligation) and (ii) the Purchasers and each such authorized representative and prospective lender shall return to the Companies all documents and copies of documents obtained by them in connection with such evaluation. Except as provided in Section 13(C), no such investigation shall prejudice the enforcement of representations and warranties hereunder.

5. Representations and Warranties of Colt, Operating and Garlock. Operating represents and warrants to the Purchasers as to Crucible, Garlock represents and warrants to the Purchasers as to Crusteel, and Colt represents and warrants to the Purchasers as to each and both of the Companies, as follows:

(a) Each of the Companies is a corporation duly organized and legally existing in good standing under the laws of the jurisdiction of its incorporation, with full power and authority to execute, deliver and perform such of the Exchange Agreement as it is intended hereby to be a party thereto, to conduct its business as now being conducted and to own its property, and is legally qualified to transact business as a foreign corporation and is in good standing in all jurisdictions in which it owns or leases material tangible property. Neither Company has any subsidiaries or any equity investment or any contractual obligation to make an equity investment in any other corporation, partnership or other business entity.

(b) The authorized stock, par value per share, number of issued and outstanding shares and treasury shares, jurisdiction of incorporation and the jurisdictions in which each Company is qualified to transact its business are as stated on Schedule A (Schedule A and the other Schedules referred to in this Agreement are included in the disclosure letter delivered by Colt to each Purchaser prior to the date of execution hereof (the "Disclosure Letter"). There are no outstanding rights of any kind to acquire from any of the Companies any shares of their stock of any class or securities of any kind, except pursuant to this Agreement and the

Exchange Agreement. Neither Company has any obligation to acquire from its shareholders any of its shares of capital stock, except as contemplated by the Exchange Agreement. The record books and stock ledgers of each of the Companies contain an accurate and complete record of all issuances, transfers and cancellations of shares of capital stock of such Company.

(c) Operating will on the Closing Date own of record and beneficially all of the outstanding shares of Crucible, free and clear of all liens, encumbrances and equities of any kind. Garlock will on the Closing Date own of record and beneficially all of the outstanding shares of Crusteel, free and clear of all liens, encumbrances and equities of any kind. All of the outstanding shares of the Companies are validly authorized and issued and are fully paid and nonassessable.

(d) The audited combined balance sheet of the Crucible Materials Group dated as of December 31, 1984, together with the related Notes thereto included in the Crucible Materials Group Combined Financial Statements as of December 31, 1984 and 1983 (the "Combined Financial Statements"), copies of which have been delivered to the Purchasers, was prepared, and the final Closing Balance Sheet will be prepared, in each case in accordance with generally accepted accounting principles consistently applied, and

each fairly presents or will present the combined financial position of the Crucible Materials Group as of its date. As used in this Agreement, the "Crucible Materials Group" is the combined group resulting from the application of the Principles of Combination described in Note 1 to the Combined Financial Statements.

(e) Each of the Companies has timely filed all Federal, state, local or other tax returns which are required to be filed (except for those which are open on extension), has paid (or provided reserves for) all taxes which have become due pursuant to such returns (or which will become due on the filing of returns open on extension) or pursuant to any assessment received, and has granted no extension of the statute of limitations for Federal or other income taxes. The Federal income tax liability of Crucible has not been reviewed or determined by the Internal Revenue Service for any year since its formation. The United Kingdom income tax liability of Crusteel has been reviewed or determined by the Inland Revenue Service through the years ended December 31, 1983. Colt has no knowledge of any tax deficiency proposed or threatened against any of the Companies for which it has not provided a reserve.

(f) Each of the Companies has title to all of its personal property reflected in the December 31, 1984, audited combined balance sheet, or acquired since such date, and to the intangible personal property purported to be owned by it, in each case free and clear of liens and encumbrances, except (i) those relating to liabilities shown

on such balance sheet and the notes thereto; (ii) as set forth on Schedule B; (iii) liens for taxes and assessments, governmental charges or levies not yet due and payable but only to the extent the liabilities related to such liens need not have been recorded pursuant to Section 3(a) hereof; (iv) materialmen's, mechanics', carriers', warehousemen's, landlords', workmen's, repairmen's, employees' or other like liens arising in the ordinary course of business, which in each case are not yet delinquent but only to the extent the liabilities related to such liens need not have been recorded pursuant to Section 3(a) hereof; (v) liens incurred or deposits made in the ordinary course of business in connection with workers' compensation, unemployment insurance, social security and other like laws, or to secure the performance of construction contracts, leases, statutory obligations, surety, appeal or performance bonds; (vi) other liens and encumbrances of the character normally excepted in an ALTA Owner's Policy Form B 1970; and (vii) such properties and assets as may have been disposed of since such date in the ordinary course of business. Since December 31, 1984 (and except as set forth in Section 5(h)), the Companies have not transferred any personal property to Colt or any other of its affiliates, except in connection with the Terminated Operations (as defined in Section 5(m)) and except for transactions in accordance with the normal treasury office cash collection system.

(g) Schedule B lists all real property (the "Real Property") purported to be owned by the Companies or held under lease by the Companies pursuant to arrangements relating to the IDBs (the "IDB Leased Property"). Since December 31, 1984, the Companies have not transferred any real property to Colt or any other of its affiliates, except in connection with the Terminated Operations.

(h) Since December 31, 1984, and except as contemplated by this Agreement and the Exchange Agreement, neither Company has (i) authorized, issued or transferred from its treasury any additional stock or securities; (ii) declared or paid any dividend or made any other disposition of assets to any of its shareholders, except (x) that Crucible shall distribute to Operating all of its interest in the Fullerton, California facility (or the sales proceeds thereof), together with or subject to any associated assets or liabilities not reflected on the December 31, 1984, audited combined balance sheet of the Companies and (y) that the Companies have paid or may pay as of the Closing Date dividends of current assets in an aggregate amount not to exceed $10,000,000 if the Closing Date shall occur on or before December 23, 1985 or, the Adjusted Dividend Amount, if the Closing shall occur any date thereafter or (iii) purchased any of its shares of stock or other securities. The "Adjusted Dividend Amount" means the greater of (i) the

amount by which the combined net worth of the Crucible Materials Group plus the LIFO reserve as of the Closing Date exceeds $147,918,000 and (ii) $10,000,000.

(i) Colt has heretofore delivered to both Purchasers a list of all policies of insurance in force (including Colt-wide policies), and all programs or plans for self-insurance, with respect to the material assets and properties of the Companies, none of which insurance or self-insurance will continue in force with respect to the Companies after the Closing.

(j) Schedule C hereto lists each loan or credit agreement or capitalized lease obligation to which any of the Companies is a party or by which it is bound. None of Colt, Operating or Garlock (or, to the best of the knowledge of Colt, Operating and Garlock, the Companies) has received notice of any default in any obligation to be performed by either Company under any agreement or commitment listed on Schedule C. Except as set forth in Schedule C, no Company has expressly guaranteed any obligation of Colt or any of its subsidiaries.

(k) Except as set forth on Schedule D and as provided in Section 5(l), there is no material action, suit or litigation or claim pending or, to the best of the knowledge of Colt, Operating and Garlock, threatened, or to the best of such knowledge any material investigation pending or

threatened, in any case against either Company or any of their property or operations, or their employee benefit plans, or Operating or Garlock with respect to its shares of Crucible or Crusteel, or brought by either Company against a third party or parties (other than in respect of workmen's compensation claims). As to each item set forth thereon, Schedule D describes, to the extent known to Colt, Operating and Garlock, the nature of the item, the amount of damages or other remedy sought, the extent of available insurance, and the firm or individual handling the matter on behalf of the Companies or the insurance carrier. Schedule D also lists each outstanding order, decree or stipulation issued by any local, state or Federal judicial authority in any proceeding in which either Company was or is a party.

(l) Except as set forth in Schedule E, there are no pending or, to the best of the knowledge of Colt, Operating and Garlock, threatened, suits, actions or proceedings for breach of product warranty to customers which have been or may be made against any of the Companies, except routine claims handled in the ordinary course of business. Schedule E sets forth all material product liability claims for injury or damage to persons or property which are pending or, to the best of the knowledge of Colt, Operating and Garlock, threatened, against the Companies with respect to products sold by the Companies.

(m) Set forth in Schedule F is a list of all plants, facilities or operations that either of the Companies has sold, abandoned or otherwise ceased to operate since September 12, 1983, and prior to the date of this Agreement (collectively, the "Terminated Operations"), certain of which Colt, Operating and Garlock are still in the process of disposing. Crucible's predecessors have sold, abandoned or otherwise ceased to operate the following divisions and works, including their manufacturing facilities, warehouses and offices: the Midland Stainless and Alloy Division, the Spring Division, the Park Works, the Spaulding Works, the Harrison Works and the Crucible Mines (collectively, the "Terminated Works"). No liabilities or assets of the Terminated Works have been transferred to or assumed by Crucible.

(n) Each of Colt, Operating and Garlock has full power and corporate authority to execute, deliver and perform this Agreement, the Exchange Agreement, the Assignment and the Tax Procedures Agreement referred to in Section 9(e) (collectively, the "Colt/Purchasers Documents") as it is intended hereby to be a party thereto. Each of the Colt/Purchasers Documents has been duly authorized and approved by all necessary corporate action on the part of Colt, Operating and Garlock (to the extent each is intended hereby to be a party thereto), and is a valid and binding obligation of each of Colt, Operating and Garlock (to such extent) enforceable in accordance with its terms.

(o) The consummation of the transactions contemplated by the Colt/Purchasers Documents will not violate any provision of the certificate of incorporation or by-laws of any of Colt, Operating or Garlock (or, to the best knowledge of Colt, Operating and Garlock, either of the Companies) or result in any breach of or default under, or require a consent under, any decree, mortgage, agreement, indenture or other instrument binding upon any of Colt, Operating or Garlock (or, to the best knowledge of Colt, Operating and Garlock, either of the Companies).

(p) Operating is acquiring shares of Crucible Series A Preferred Stock, pursuant to the Recapitalization for its own account and not with a view to, or for resale in connection with, any distribution or public offering within the meaning of the Securities Act of 1933.

(q) To the best of the knowledge of Colt, Operating and Garlock, except as disclosed in Schedule K, the Companies have not received any written notification from any governmental authority in respect of a currently existing violation of any law, ordinance, rule or regulation relating to matters of environmental protection. Except as set forth in the Disclosure Letter, to the best of the actual knowledge of Colt, Operating and Garlock, (i) the Companies are not in any violation of laws pertaining to environmental protection, and (ii) Crucible has not disposed

or arranged for the disposal of wastes which would result in the imposition of liability under The Comprehensive Environmental Response, Compensation and Liability Act of 1980, in either case which would have a material adverse effect on the business of the Companies.

Except as set forth in this Section 5, in Sections 6 and 16(a) and in the various documents, forms of which are attached as Exhibits hereto, neither Colt, Operating nor Garlock makes any representation, express or implied, with respect to the transactions contemplated hereby.

6. Employee Benefit Plans. Operating represents and warrants to the Purchasers as to Crucible, Garlock represents and warrants to the Purchasers as to Crusteel, and Colt represents and warrants to the Purchasers as to the Companies, as follows: (a) Schedule G is a list of all employee profit sharing, pension, retirement, stock option, stock purchase, deferred compensation, bonus, benefits equalization, insurance and other fringe benefit plans, covering employees of the Companies (including two multi-employer plans as to which Colt makes no representation or warranty), except plans which have been terminated by Crucible in connection with the closing of facilities as set forth in Schedule F (collectively the "Terminated Plans"). With respect to each of the plans (the "plans") excluding

the two multiemployer plans listed thereon, Schedule G further sets forth the names and addresses of the plans, the trustees and insurance carriers (insofar as applicable to each plan), and the basis of the employer contributions. Following the execution and delivery hereof and not later than the Closing Date, plans maintained by Colt for the employees of Crucible (other than insurance plans) will be transferred to Crucible. True copies of each of the plans and related trusts have been furnished to both Purchasers. There have also been furnished to both Purchasers with respect to each of the plans, insofar as applicable to the Companies, true copies of the most recent actuarial report prepared with respect to any of such plans which is funded using actuarial principles, the most recent Internal Revenue Service determination letter (as well as any pending application for a further determination), the most recent summary plan description and the most recent annual report. Except as set forth on Schedule G, the employees of the Companies are not covered by any multiemployer plan as defined in Section 414(f) of the Internal Revenue Code (the "Code") or Section 3(37) of the Employee Retirement Income Security Act of 1974 ("ERISA").

(b) The provisions and operations of each of the plans maintained by Crucible are not in violation in any material respect of any provision of ERISA or any other

statute, rule, regulation, agreement or instrument by which they are governed. All applicable ERISA requirements as to the filing of reports, documents and notices regarding such plans with the Department of Labor, the Internal Revenue Service and the Pension Benefit Guaranty Corporation and the furnishing of such documents to participants and beneficiaries due before the Closing Date have been or will be complied with in all material respects. Crucible is not currently delinquent as to any contribution which it is obligated to make to any multiemployer plan. Crucible has not incurred any "withdrawal liability" (as defined in Section 4201 of ERISA) with respect to any multiemployer plan to which it is obligated to contribute, to which it is contributing or to which it has actually contributed. Crucible has not been advised that it is liable for any funding taxes under Code Sections 413(b)(6) and 4971 on account of an accumulated funding deficiency of any multiemployer plan to which it is obligated to contribute, to which it is contributing or to which it has actually contributed.

(c) There are no pending or, to the best of the knowledge of Colt, Operating and Garlock, threatened, claims or lawsuits (other than claims or lawsuits for benefits under such plans made in the normal course and claims or lawsuits set forth in Schedule D) which have been asserted or instituted against such plans, any fiduciaries thereof respecting their duties to the plans or the assets of any of the trusts under any of the plans.

(d) With respect to each of the pension, savings or profit-sharing plans maintained by Crucible listed in Schedule G:

(i) except as hereinafter set forth, a determination letter has been received or has been requested to the effect that the plan, as most recently amended, is qualified under Section 401 of the Code and the related trust is exempt from Federal income tax under Section 501 of the Code, and, to the best of the knowledge of Colt and Operating, nothing has occurred to cause the loss of such qualification or exemption or to cause such letter not to issue. The Plans are in the process of being amended to comply with the requirements of the Tax Equity and Fiscal Responsibility Act of 1982, the Deficit Reduction Act of 1984 and the Retirement Equity Act of 1984, effective as required thereunder. If such amendments are not completed or determination letters from the Internal Revenue Service are not received with respect thereto prior to the Closing Date, Colt, on behalf of New Crucible, thereafter will complete the preparation of such amendments, the applications for determinations, and the filing and processing of such applications with the Internal Revenue Service. Before and after the Closing Date, Holding, Crucible and New Crucible shall cooperate with Colt and shall take all necessary related actions, including without limitation the adoption of such amendments and such changes as may be necessary to obtain the approval of the Internal

Revenue Service. After the Closing Date, New Crucible will pay any third party fees and expenses in connection therewith;

(ii) all contributions required by the Internal Revenue Code to be made under the plan for plan years ending on or before the Closing Date will have been made;

(iii) the plan has no material liabilities except the present value of the accrued benefits under the plan;

(iv) neither the plan nor any trust created thereunder, nor any trustee or administrator or fiduciary thereof, has prior to the date hereof engaged in a "prohibited transaction", as such term is defined in Section 4975 of the Code or Section 406 of ERISA, which could subject any of the Companies to the tax on prohibited transactions imposed by said Section 4975 or the sanctions imposed under Title I of ERISA;

(v) within the 12 months preceding the date hereof, neither the plan nor any such trust has been terminated, nor have there been any "reportable events" (as that term is defined in Section 4043 of ERISA) which are required to be reported to the Pension Benefit Guaranty Corporation; and

(vi) neither the plan nor any such trust has incurred any "accumulated funding deficiency," as such term is defined in Section 302 of ERISA and Section 412(a) of the Code (whether or not waived), nor

are any of the Companies subject to any tax imposed by Section 4971 of the Code.

(e) With respect to the pension plan maintained by Crusteel listed in Schedule G:

(i) all contributions legally required to be made under the plan for plan years ending on or before the Closing Date will have been made;

(ii) the plan has no material liabilities except the present value of the accrued benefits under the plan; and

(iii) the provisions and operation of the plan are not in violation in any material respect of any statute, rule, regulation, agreement or instrument by which it is governed.

(f) Effective June 1, 1984, the Crucible Materials Corporation Retirement Plan for Salaried Employees and the Crucible Materials Corporation Salaried Retirement Plan (the "Crucible Salaried Plans") and two Colt Industries Operating Corp pension plans were merged into the Retirement Plan for Salaried Employees of Colt Industries Inc. Following the execution and delivery hereof and not later than the Closing Date, the Crucible Salaried Plans will be spun off from the merged plan, and as of the spin-off date, the aggregate market value of the assets in the Crucible Salaried Plans (including book accruals) will equal or exceed the present value as of the spin-off date of the accrued benefits (vested and nonvested) as of such date for

participants (including retirees and deferred vesteds) and beneficiaries. The Colt employees identified on Schedule I who are scheduled to become New Crucible employees in connection with the transaction contemplated hereby will be included as if they were participants as of the spin-off date, and the present participants in the Crucible Salaried Plans identified on Schedule J who are scheduled to be employees of Colt or a subsidiary following the Closing will be excluded as if they were not participants as of the spin-off date.

George B. Buck Consulting Actuaries Inc. will determine the expected future benefit stream, as of the spin-off date, of the benefits accrued as of such date and allocable to the Crucible Salaried Plans from the most recent available data, subject to the approval of The Wyatt Company. The underlying assumptions for determining the expected future benefit stream will be the Pension Benefit Guaranty Corporation's Mortality Tables for Healthy Lives and Disabled Lives (as applicable and in effect as of the spin-off date) and the January 1, 1985, actuarial valuation rates of separation from active service. Assets consisting of a dedicated bond portfolio providing the same stream of payments will then be transferred from the merged plan trust to a trust established by Crucible for the Crucible Salaried Plans. The interest assumption for determining the present

value of accrued benefits will be consistent with the procedure for determining the interest assumptions used in the January 1, 1985, actuarial valuation prepared by George B. Buck Consulting Actuaries Inc. whereby all benefits covered by such dedicated bond portfolio will be valued with an interest rate equivalent to the implicit annual rate of return of the portfolio.

(g) As of the Closing Date, the aggregate value of the net assets available for benefits in all the pension plans maintained by Crucible will equal or exceed the actuarially computed present value of the vested benefits as of the Closing Date for participants (including retirees and deferred vesteds) and beneficiaries in such plans. The above calculation shall be determined on a basis consistent with that set forth in footnote 10 to the Crucible Materials Group Combined Financial Statements as of December 31, 1984, shall be reported on by Arthur Andersen & Co. and shall be based on actuarial assumptions and procedures including interest rates consistent with the January 1, 1984, actuarial valuations prepared by George B. Buck Consulting Actuaries Inc.

(h) Nothing contained in this Section 6 shall be construed as a representation or warranty by Colt, Operating or Garlock as to compliance of the transactions contemplated hereby with ERISA or any other law (whether statutory or common), rule or regulation.

7. Agreements of Colt, Operating and Garlock Prior to the Closing. Colt, Operating and Garlock covenant and agree with the Purchasers, with respect to the period from the date hereof until the Closing Date, as follows:

(a) They will cause each of the Companies to maintain its existing insurance upon all of its material properties and with respect to the conduct of its business in such amounts and of such kinds comparable to that in effect on the date of this Agreement.

(b) They will make net advances to Crucible and Crusteel for the working capital necessary for them to conduct their operations in the manner in which they have been conducted prior to the date hereof, with allowance for normal seasonal variations and growth in the business of the Companies and except as contemplated by Section 5(h).

(c) They will assign or otherwise make available to Crucible all of their rights (including trust deposits) under the capital lease obligations described in Note 8 of the Combined Financial Statements.

(d) They will not permit any of the actions set forth in Section 5(h) of this Agreement to be taken without the prior consent of both Purchasers, except as contemplated by such Section 5(h) and by the Exchange Agreement and except that Colt shall cause Crucible to assume as primary obligor all of the obligations of Colt with respect to the

industrial development bonds listed in Schedule H (the "IDBs") and Colt shall cause the trustees under the IDBs to transfer all remaining funds deposited in the construction funds pertaining to the IDBs to the funds maintained for the payment of the IDBs.

(e) They will use their best efforts to obtain all necessary consents on their part required in connection with the consummation of the transactions contemplated by this Agreement.

(f) Except as otherwise provided in this Agreement, Colt, Operating and Garlock will not interfere with the conduct of business in the ordinary course by the Companies.

8. Representations and Warranties of the Purchasers. (a) Holding represents and warrants to Colt, Operating and Garlock as follows:

(i) it is a corporation duly organized and legally existing in good standing under the laws of the state of Delaware, with full power and corporate authority to execute, deliver and perform such of this Agreement, the Loan Agreement, the Mellon Term Loan Agreement, the Revolver Security Agreements, the Term Loan Security Agreements, the Chase Loan Agreement, the Chase Pledge Agreement, the Plan of Merger, the Assignment and the Tax Procedures Agreement as it is intended hereby to be

a party thereto, to conduct its business as now being conducted and to own its property;

(ii) it is legally qualified to transact business as a foreign corporation and is in good standing in all jurisdictions in which it owns or leases material tangible property;

(iii) this Agreement, the Loan Agreement, the Mellon Term Loan Agreement, the Chase Loan Agreement, the Plan of Merger, the Assignment and the Tax Procedures Agreement have been (or at the Closing Date will be) duly authorized and approved by all necessary corporate action on the part of Crucible and Holding (to the extent each is intended hereby to be a party thereto), and each is (or will be upon execution and delivery in accordance with the terms hereof) a valid and binding obligation of Crucible, Holding and New Crucible (to the extent each is intended hereby to be a party thereto), enforceable in accordance with its terms; this Agreement, the ESOP Note, the ESOP Pledge and the Assignment have been duly authorized and approved by all necessary action on the part of the ESOP and each is (or will be upon execution and delivery in accordance with the terms hereof) a valid and binding obligation of the ESOP, enforceable in accordance with its terms.

(iv) the Revolver Security Agreements, the Term Loan Security Agreements, the Chase Pledge Agreement and the Pledge Assignment have been duly authorized and approved by all necessary corporate action on the part of Crucible and, when executed and delivered in accordance with the terms hereof, will be valid and binding obligations of Crucible and New Crucible, enforceable in accordance with their respective terms, which will grant as set forth therein valid and effective liens on the assets of New Crucible referred to therein, subordinate only to the extent expressly provided therein; the Chase Pledge Agreement and the Pledge Assignment have been duly authorized and approved by all necessary corporate action on the part of Crucible and, when executed and delivered in accordance with the terms hereof, will be a valid and binding obligation of Crucible, New Crucible and the ESOP, enforceable in accordance with their respective terms, which will grant as set forth therein valid, effective, first and prior liens on the assets of New Crucible and the ESOP referred to therein (including, respectively, the ESOP Note and the Crucible Common Stock to be issued to the ESOP pursuant to Section 1 hereof).

(v) the consummation of the transactions contemplated by this Agreement, the Loan Agreement, the

Mellon Term Loan Agreement, the Chase Loan Agreement, the Revolver Security Agreements, the Term Loan Security Agreements, the Chase Pledge Agreement, the Plan of Merger, the Assignment and the Tax Procedures Agreement will not violate any provision of the certificate of incorporation or bylaws of Holding, or result in any breach or default, or require any consent, under any decree, mortgage, agreement, indenture or other instrument binding upon Holding or cause Crucible or New Crucible to be in default under the Loan Agreement, the Mellon Term Loan Agreement or the Chase Loan Agreement; the consummation of the transactions contemplated by this Agreement, the ESOP Note, the ESOP Pledge and the Assignment will not violate any provision of the governing instruments of the ESOP or result in any breach or default, or require any consent, under any decree, mortgage, agreement, indenture or other instrument binding upon the ESOP.

(vi) it is acquiring the shares of capital stock of Crucible and Crusteel to be purchased by it hereunder for its own account and not with a view to, or for resale in connection with, any distribution or public offering within the meaning of the Securities Act of 1933;

(vii) the authorized capitalization of Holding as of the date hereof consists of 500,000 shares of Holding Common Stock, 100,000 shares of Holding Series B Preferred Stock, 63,000 shares of Holding Series C Preferred Stock and 10,000 shares of Holding Series D Preferred Stock; the shares of Crucible Series A Preferred Stock and the shares, if any, of Crucible Series B Preferred Stock and Crucible Common Stock to be acquired by Operating hereunder will, following the effectiveness of the Plan of Merger, be validly authorized and issued, fully paid and nonassessable; the shares of Holding Common Stock and Holding Series B Preferred Stock to be issued to the Crucible Fund (and the shares of Crucible Common Stock and Crucible Series B Preferred Stock to be exchanged therefor pursuant to the Plan of Merger) will, when issued in accordance with the provisions hereof, be validly authorized and issued, fully paid and nonassessable; the shares of Holding Series C Preferred Stock to be acquired by Technology Metals, Inc., a Delaware corporation ("Technology Metals") (and the shares of Crucible Series C Preferred Stock to be exchanged therefor pursuant to the Plan of Merger) will when issued in accordance with the provisions hereof be validly authorized and issued, fully paid and non-assessable;

(viii) the offers, sales and deliveries of shares of the capital stock of Holding to Technology Metals (and the exchange of such shares for shares of Crucible Series C Preferred Stock pursuant to the Plan of Merger), under the circumstances contemplated by this Agreement do not require (x) registration under the Securities Act and the rules and regulations of the Securities and Exchange Commission thereunder or (y) registration or qualification or other authorization under state securities or blue sky laws, except such registration or qualification, or other authorization in respect of the offer, sale and delivery of such shares of stock, as has been or will be obtained and in effect as of the Closing Date;

(ix) the ESOP is duly organized as an "employee stock ownership plan" within the meaning of Section 407(d)(6) of ERISA and Section 4975(e)(7) of the Code and The Citizens and Southern National Bank has been duly appointed as trustee thereunder;

(x) the Holding Common Stock and Holding Series B Preferred Stock to be acquired by the Crucible Fund, the Crucible Common Stock and Crucible Series B Preferred Stock to be exchanged therefor pursuant to the Plan of Merger and the Crucible Common Stock to be acquired by the ESOP hereunder are in each case

"qualifying employer securities" within the meaning of Section 406 of ERISA or "employer securities" within the meaning of Section 409(l) of the Code, as the case may be, with respect to Holding, Crucible and New Crucible, each to the extent applicable;

(xi) the issuance of the ESOP Note as contemplated hereby, and the loan represented by such ESOP Note, constitutes an "exempt loan" according to Treas. Reg. § 54.4975-7(b); and

(xii) it has had the opportunity to make whatever investigation of the business affairs, assets, liabilities and operations of the Companies it has deemed necessary or desirable, it being understood that (except as provided in Section 13(C)) no such investigation shall prejudice the enforcement of representations and warranties hereunder.

(b) The ESOP represents and warrants to Colt and Operating that it is acquiring the 3,000,000 shares of Crucible Common Stock to be purchased by it hereunder for its own account and not with a view to, or for resale in connection with, any distribution or public offering within the meaning of the Securities Act of 1933.

(c) Except as set forth in this Section 8 and in the various documents forms of which are attached as Exhibits hereto, neither Purchaser makes any representation,

express or implied, with respect to the transactions contemplated hereby. Nothing contained in Sections 8(a) (ix) through (xi)) shall be construed as a representation and warranty by either Purchaser as to compliance of the transactions contemplated hereby with ERISA or any other law (whether statutory or common), rule or regulation.

9. Conditions to the Obligations of Operating and Garlock. The respective obligations in accordance with this Agreement of Operating to sell shares of capital stock of Crucible and of Garlock and to sell all of the outstanding shares of capital stock of Crusteel to Holding on the Closing Date, and of Operating to sell 3,000,000 shares of Crucible Common Stock to the ESOP on the Closing Date, shall be, at Operating and Garlock's option, subject to the satisfaction at or prior to the Closing Date of each of the following conditions:

(a) The representations and warranties of Holding and the ESOP contained in this Agreement shall have been true and correct at and as of the date of this Agreement, and shall be true and correct at and as of the Closing Date with the same force and effect as though made at and as of that date, except for changes contemplated or permitted by this Agreement.

(b) Holding and the ESOP shall each have performed and complied with all of its obligations required by

this Agreement to be performed or complied with at or prior to the Closing Date.

(c) Each of Holding and the ESOP shall have delivered to Operating and Garlock a certificate, dated as of the Closing Date, as to its fulfillment of the conditions set forth in subsections (a) and (b) above.

(d) The Loan Agreement, the Mellon Term Loan Agreement, the Revolver Security Agreements and the Term Loan Security Agreements shall have been executed and delivered and the Lenders shall have made a line of credit of $75,000,000 available to New Crucible under the Loan Agreement and Mellon Bank, N.A. shall have loaned $16,000,000 to New Crucible under the Mellon Term Loan Agreement. The respective intended parties shall have entered into the Exchange Agreement, the Chase Loan Agreement, the ESOP Note, the ESOP Pledge, the Chase Pledge Agreement, the Pledge Assignment, the Inter-Creditor Agreement and the Plan of Merger and Chase shall have loaned $30,000,000 to New Crucible under the Chase Loan Agreement.

(e) Holding and the Companies shall have executed and delivered an agreement with respect to income tax procedures, in the form of Exhibit E hereto (the "Tax Procedures Agreement").

(f) Crucible, Holding and the ESOP shall have executed and delivered the Assignment.

(g) Colt, Operating and Garlock shall have received a favorable opinion, dated the Closing Date, from Kirkpatrick & Lockhart, counsel for Holding, substantially in the form attached hereto as Exhibit F.

(h) Colt and Operating shall have received a favorable opinion, dated the Closing Date, from Powell, Goldstein, Frazer & Murphy, counsel for The Citizens and Southern National Bank, trustee for the ESOP, substantially in the form attached hereto as Exhibit G.

(i) Colt, Operating and Garlock shall have received a copy of an opinion of HLHZ dated the Closing Date, as to the fair market value of the Holding Series B Preferred Stock and the Holding Common Stock and the stock of New Crucible to be exchanged therefor.

(j) Technology Metals shall have invested $6,300,000 in Holding Series C Preferred Stock.

(k) The Colt Common Stock Amount shall be no less than $15,000,000.

(l) The ESOP Note shall have been duly executed and delivered by the ESOP and duly pledged by New Crucible to Chase pursuant to the Chase Pledge Agreement.

(m) There shall not be any pending or threatened actions, suits, claims, investigations, litigation or court orders which challenge, or purport to change the terms of, the transactions contemplated hereby.

(n) New Crucible shall have made a contribution of $3.8 million to the ESOP, and a corresponding amount of Crucible Common Stock shall have been allocated to the accounts of the participants in the ESOP.

10. [Reserved.]

11. Conditions to the Obligations of Holding and the ESOP. The respective obligations, in accordance with this Agreement, of Holding to purchase shares of capital stock of Crucible and all of the outstanding shares of capital stock of Crusteel from Operating and Garlock, respectively, on the Closing Date, and of the ESOP to purchase 3,000,000 shares of Crucible Common Stock from Operating on the Closing Date, shall be, at the option of Holding and the ESOP, subject to the satisfaction at or prior to the Closing Date of each of the following conditions:

(a) The representations and warranties of Colt, Operating and Garlock contained in this Agreement shall have been true and correct at and as of the date of this Agreement and shall be true and correct at and as of the Closing Date with the same force and effect as though made at and as of that date, except for changes contemplated or permitted by this Agreement.

(b) Colt, Operating and Garlock shall have performed and complied with all their obligations required by

this Agreement to be performed or complied with at or prior to the Closing Date.

(c) Colt, Operating and Garlock shall have delivered to Holding a certificate, dated as of the Closing Date, as to the fulfillment of the conditions set forth in the two preceding subsections.

(d) Operating shall have entered into the Exchange Agreement, Colt shall have entered into the Colt/Mellon Guarantee and the Colt/Chase Guarantee, and Colt, Operating, and Garlock shall have entered into the Assignment.

(e) Colt and Technology Metals shall have entered into a term loan agreement, providing for a loan by Colt to Technology Metals in the principal amount of $6,000,000 and related agreements as to collateral satisfactory to the parties thereto.

(f) Colt, Operating and Technology Metals shall have entered into an option agreement pursuant to which Technology Metals shall be granted an option to purchase certain shares of Crucible Series A Preferred Stock and Crucible Common Stock held by Colt, Operating and their affiliates from time to time, on terms and conditions satisfactory to the parties thereto.

(g) Colt shall have entered into a deferred compensation agreement with Vincent H. Callahan in a form

satisfactory to the parties thereto and Colt shall have entered into similar agreements with each of the shareholders of Technology Metals as of the Closing Date.

(h) The Standby Credit agreement shall have been executed and delivered by Colt.

(i) Chase shall have entered into the Chase Loan Agreement and the Chase Pledge Agreement and shall have loaned $30,000,000 to New Crucible thereunder; Mellon Bank, N.A., shall have entered into the Mellon Term Loan Agreement and shall have loaned $16,000,000 to New Crucible thereunder.

(j) Holding and the ESOP shall have received a favorable opinion, dated the Closing Date, from Cravath, Swaine & Moore, counsel for Colt, Operating and Garlock, in form and substance satisfactory to Holding, the ESOP and their respective counsel, to the effect that:

(i) each of the Companies is a corporation duly organized and legally existing in good standing under the laws of the jurisdiction of its incorporation, with full power and authority to conduct its business as now being conducted and to own its property;

(ii) the par value and number of shares of authorized stock and outstanding stock of Crucible are as contemplated by the Exchange Agreement and of Crusteel are as set forth on Schedule A. All issued

shares have been duly and validly authorized and issued, are fully paid and nonassessable and are owned of record by Operating (in the case of Crucible and by Garlock (in the case of Crusteel);

(iii) each of the Colt/Purchasers Documents has been duly authorized and approved by all necessary corporate action on the part of each of Colt, Operating and Garlock as is intended hereby to be a party thereto and is a valid and binding obligation of each of them, enforceable against each of them in accordance with its terms, subject, as to the enforceability of remedies, to applicable bankruptcy, insolvency, reorganization, moratorium or, other similar laws affecting creditors' rights generally in effect from time to time and general principles of equity;

(iv) the consummation of the transactions contemplated by the Colt/Purchasers Documents will not violate any provision of the certificate of incorporation or bylaws of the Companies or Colt, Operating or Garlock, or, to the best knowledge of such counsel, result in any breach of or default under, or require a consent under, any decree, mortgage, agreement, indenture or other instrument binding upon Colt, Operating or Garlock;

(v) delivery by Operating to Holding and the ESOP of stock certificates in the names of Holding and the ESOP, respectively, evidencing shares of capital stock of Crucible effectively conveys whatever right, title and interest Operating had in and to such shares as of the delivery of such stock certificates; and

(vi) except as set forth in such opinion, such counsel has no actual knowledge after due inquiry of any actions, suits, claims, investigations or litigation which challenge the transactions contemplated hereby.

Such opinion shall address such other matters as the Purchasers shall reasonably request.

(k) Holding shall have received an opinion, dated the Closing Date, from English counsel for Colt, Operating and Garlock in form and substance satisfactory to Holding and its counsel that delivery by Garlock of stock certificates in the name of Holding, evidencing shares of capital stock of Crusteel effectively conveys whatever right, title and interest Garlock had in and to such shares as of the delivery of such stock certificates.

(l) The Lenders shall have executed and delivered the Loan Agreement and shall have made a line of credit of $75,000,000 available to New Crucible thereunder.

(m) There shall not be any pending or threatened actions, suits, claims, investigations, litigation or court orders which challenge, or purport to change the terms of, the transactions contemplated hereby.

(n) Holding shall have obtained such insurance with respect to New Crucible as it shall reasonably deem appropriate.

(o) The trustee for the ESOP shall have determined on the Closing Date that the purchase by the ESOP of 3,000,000 shares of Crucible Common Stock as contemplated hereby is in the interest of the participants in the ESOP and their beneficiaries.

(p) The trustee for the Crucible Fund shall have determined that the purchases by the Crucible Fund of the Crucible Series B Preferred Stock and Crucible Common Stock as contemplated hereby is in the interest of the participants in the Crucible Fund.

(q) The trustee for the ESOP and the Crucible Fund shall have received an opinion of HLHZ dated the Closing Date, as to the fair market value of the Holding Series B Preferred Stock and the Holding Common Stock and the stock of New Crucible to be exchanged therefor.

(r) New Crucible shall have loaned $30,000,000 to the ESOP in exchange for the ESOP Note.

12. [Reserved.]

13. Indemnification of the Purchasers. Colt, Operating and Garlock jointly and severally agree, without admitting liability to any third party, that they will indemnify and hold the Purchasers and New Crucible harmless in respect of the following (except to the extent the following results in an adjustment pursuant to Section 3 hereof):

(a) any loss, cost, expense, deficiency, liability or damage (including reasonable related counsel fees and disbursements) resulting from:

(i) income or franchise tax matters, which shall be handled as provided in the Tax Procedures Agreement;

(ii) the litigation captioned General Electric Company v. Titanium Metals Corporation of America, et al., U.S. District Court for the Eastern District of New York, Civil Action No. 81-2298 (ERN), and any other litigation arising out of a substantially similar state of facts;

(iii) the Terminated Operations (including without limitation any liabilities or expenses incurred with respect to employee benefit plans relating to employees of the Terminated Operations), except with respect to product warranty matters relating to products or product lines formerly produced at the Fullerton facilities. For the purposes of this subsection (c),

Colt agrees, at its own expense, diligently to handle to completion all claims, litigation and other matters relating to or arising out of the Terminated Operations, except as limited above. New Crucible shall supply suitable personnel of the Companies to assist in such process, as reasonably requested for such purpose, subject to reimbursement by Colt for the salary, payroll expense and out-of-pocket expenses (including overhead) related to any such services;

(iv) the Terminated Works (including without limitation any liabilities or expenses incurred with respect to employee benefit plans relating to employees of the Terminated Works); and

(v) product liability claims or litigations (as opposed to product warranty matters) arising out of products manufactured and shipped by either Company prior to Closing, provided no action or omission to act by either Company or its agents shall have prejudiced any otherwise applicable Colt insurance coverage for such claim or litigation;

(vi) closure costs (and post-closure monitoring costs through the twentieth yearly anniversary of the Closing Date) for the Crucible Specialty Metals Division landfill located in Geddes, New York (excluding

any cost to New Crucible in connection with disposal of waste generated by it); and

(vii) the litigation captioned Friends of the Earth, Atlantic States Legal Foundation and C. G. Spies v. Crucible Materials Corporation, United States District Court for the Northern District of New York (Civil Action No. 84-CV-286), provided that such indemnity shall apply solely to alleged violations of the Federal Water Pollution Control Act by Crucible prior to the entry of a final judgment or the date on which Crucible shall have entered into a final settlement, in each case, with respect to such violations (the "Termination Date"). Notwithstanding anything contained herein to the contrary, neither Colt, Operating nor Garlock shall have any liability for indemnification under this clause (vii) for (x) any penalties, fines or other costs assessed, imposed or incurred in respect of such violations occurring after the Termination Date or (y) any costs incurred in connection with any corrective measures which may be undertaken by Crucible (including, but not limited to capital expenditures), whether or not such penalties,

fines or costs are part of a final judgment or settlement of such litigation.

(b) Ninety percent of the amount, if any, by which the aggregate of all other indemnifiable damages of the Companies and the Purchasers exceeds $500,000 and is less than $6,200,000. For the purposes of this paragraph, "indemnifiable damages" of the Companies shall mean any loss, cost, expense, deficiency, liability or damage (including reasonable related counsel fees and disbursements) resulting from (i) any breach of a representation made by Colt, Operating or Garlock in this Agreement, which representation survives the Closing pursuant to Section 15 hereof, except Section 5(e), as to which claims shall be governed by the Tax Procedures Agreement, the second sentence of Section 5(l), as to which claims shall be governed by Section 13(a)(v), and Section 5(q), as to which claims shall be governed by the following subsection (ii); and (ii) any third party liabilities and/or clean-up costs (but not other corrective measures, including, but not limited to, New Crucible capital expenditures) arising out of (x) the environmental matters identified on Schedule K (except for items (D)(1) and (D)(4), which are otherwise provided for in Sections 13(a)(vi) and (vii) hereof) or

(y) any breach of the representations made by Colt, Operating or Garlock in Section 5(q) hereof.

Each Purchaser agrees to give (and to cause New Crucible to give) Colt written notice within 30 days (or such shorter period, not less than seven days, as shall be appropriate so as not to prejudice the ability of Colt, Operating and Garlock to settle or defend the matter) of (i) any third-party claims, actions or proceedings of which it has knowledge and (ii) the discovery of any other fact upon which, in either case, it or New Crucible intends to base a claim for indemnification hereunder. The failure of either Purchaser or New Crucible to give notice with respect to the foregoing shall relieve Colt, Operating and Garlock of any liability to such Purchaser or New Crucible for indemnification with respect thereto, if their ability to settle or defend the matter has been prejudiced thereby. Colt shall have the right to defend and control, with counsel reasonably satisfactory to the respective Purchaser or New Crucible, as the case may be, and in consultation with counsel for such Purchaser or New Crucible, as the case may be, if requested by such Purchaser or New Crucible, as the case may be, any third-party claim, action or proceeding with respect to which indemnification for damages may be requested hereunder, to the extent that the remedy sought in such claim, action or proceeding is the payment of money

damages. No settlement of any such claim, action or proceeding shall be made without the consent of Colt, Operating and Garlock unless Colt, Operating and Garlock shall have been given prior written notice of such claim, action or proceeding and shall have failed to assume the defense thereof within 30 days after receipt of such notice.

The indemnification provided by this Section shall be subject to the following provisions:

(A) The Purchasers and New Crucible shall not have the right to offset any indemnifiable damages against payments otherwise owing under this Agreement, or against dividends otherwise payable with respect to any stock of Crucible held by Colt or any of its subsidiaries or affiliates.

(B) The payments by Colt, Operating and Garlock pursuant to the indemnification provided by this Section shall be limited so that the amount of any such payment shall be computed net of tax benefit, if any, but giving appropriate effect to the tax consequences of receipt of the indemnification and net of insurance proceeds, or any indemnity, contribution or other similar payment received by the respective Purchaser or the Companies from any third party in respect of any indemnified damages.

(C) It is understood that Vincent H. Callahan, John L. Vensel, John J. DuPlessis and Francis J. Petro are

officers of the Companies or of divisions or operations thereof who are expected to continue in their employment with the Companies and are familiar with their businesses. The indemnification provided by this Section 13 shall not apply to any inaccurate representation (whether by misrepresentation or omission) of which any of them is actually aware or has written notice.

14. Indemnification of Colt, Operating and Garlock. Holding agrees that it will indemnify and hold Colt, Operating and Garlock harmless in respect of any loss, cost, expense, deficiency, liability or damage (including reasonable related counsel fees and disbursements) resulting from (i) any inaccurate representation (whether by misrepresentation or omission) made by either Purchaser in this Agreement, or (ii) any breach of any of the warranties or default in performance of any of the covenants or agreements made by either Purchaser or which either Purchaser was to perform under this Agreement or under any of the various documents forms of which are attached as Exhibits hereto, or (iii) with respect to or resulting from Environmental matters (except as provided in Sections 13(a)(vi), 13(a)(vii) and 13(b)(ii)) or arising (except to the extent covered by the indemnities of Colt, Operating and Garlock hereunder) in any way out of the business and operations (other than the Terminated Operations and the Terminated

Works) conducted or to be conducted by Holding and the Companies, in each case whether or not arising from acts or omissions of the Companies or their predecessors prior to the Closing, whether or not based on facts existing prior to the Closing and whether or not inchoate or unknown as of the Closing, but only to the extent that the liability of Colt, Operating or Garlock is secondary, derivative or vicarious. As used herein, "Environmental" means relating to pollution of the environment, including air, water and soil, and the effects of hazardous or solid wastes.

15. Survival. None of the representations and warranties contained in Sections 5, 6 and 8 of this Agreement shall survive the Closing, except Section 5(e), as to which claims shall be governed by the Tax Procedures Agreement, and Sections 5(a), 5(b), 5(c), 5(d), 5(g), 5(h) (Section 5(h) as to Crusteel only), 5(j), 5(k), 5(l), 5(n), 5(o), 5(p), 5(q), 6 (entire Section) and 8 (entire Section), which representations and warranties shall survive the Closing and any investigation of the parties with respect thereto. Notwithstanding the foregoing, all such representations and warranties that survive the Closing (other than Section 5(e)) shall terminate and be of no further effect, except as to claims as to which written notice has previously been given in good faith, on the second yearly anniversary of the Closing Date, except that the

indemnification provided for by Section 13(b)(ii) shall so terminate (except as to claims as to which written notice has previously been given in good faith) on the third yearly anniversary of the Closing Date. All representations and warranties which do not survive the Closing are solely conditions to the Closing and, after the Closing, there shall be no liabilities or obligations in respect of a breach or claimed breach thereof. Except as provided in the Tax Procedures Agreement, it is understood and agreed that the sole remedy of the Purchasers in respect of any breach by Colt, Operating or Garlock of a representation, warranty, covenant or agreement contained in this Agreement shall be the indemnification provided by Section 13.

16. Absence of Finder; Payment of Expenses.

(a) Each party represents to the other that there is no finder, broker or similar person entitled to a fee for the negotiation, execution or consummation of this Agreement, other than the fees of The First Boston Corporation, whose fees will be paid by Colt.

(b) New Crucible intends to obtain ALTA Owner's Policies Form B 1970 (the "Title Policies"), with standard (a.k.a. general) exceptions and exceptions of record, including the lien of the Mortgage (or such other form as New Crucible may choose providing comparable coverage) issued to New Crucible as the sole named insured, dated as

of the Closing Date, insuring the Real Property (other than the IDB Leased Property) in the amount of the fair market value of such Real Property as set forth in the "Appraisal Report: Crucible Materials Corporation--various sites" prepared by American Appraisal Associates, Inc. Colt has agreed to bear the cost of any premiums payable in connection with obtaining such policies.

(c) Reasonable third-party fees and expenses arising out of the transactions contemplated hereby and listed on Exhibit H hereto will be paid by Crucible or New Crucible up to a maximum of $2,000,000 in the aggregate. Any such fees and expenses paid on or prior to the Closing Date by Colt, Operating or Crucible, shall be reimbursed to Colt by New Crucible at the Closing. Any such amounts in excess of $2,000,000 shall be paid by Colt. If this Agreement is terminated pursuant to Section 31, all such fees and expenses shall be paid by Colt. Colt agrees to pay the expenses incurred by it, Operating and Garlock in connection with this Agreement, including the fees of their counsel and accountants.

17. Notices. Any notice to a party hereto pursuant to this Agreement shall be given in writing personally or by prepaid certified or registered mail addressed, if to Colt, Operating o. Garlock, to the attention of General Counsel, Colt Industries Inc, 430 Park Avenue, New York,

New York 10022; if to Holding or New Crucible, to the attention of Vincent H. Callahan, Crucible Materials Corporation, State Fair Boulevard, Syracuse, New York 13201; and, if to the ESOP, to the attention of Thoben F. Elrod, Jr., The Citizens and Southern National Bank, Employee Benefit Department, P.O. Box 4114, Atlanta, Georgia 30302-4114.

18. Further Assurances; Maintenance of and Access to Records; Lease Agreement. Colt, Operating and Garlock agree that they will execute and deliver to New Crucible, concurrently with or at any time after the Closing, any deed, assignment, conveyance or assurance of title (which shall be prepared at the expense of New Crucible) and necessary or appropriate to confirm the title of New Crucible, or of the particular one of the Companies, of the properties owned by the Companies. Colt further agrees, following the Closing, to either negotiate a mutually acceptable services agreement or transfer to its own computer systems, at its own expense, all pension, personnel and other records relating to the Terminated Operations and other Colt matters that are currently being maintained by Crucible on computer and to remove all other such records within one year during which period New Crucible will permit the storage of such records on its premises. The parties hereto agree that no files, books or records maintained by

Colt or the Companies relating to the Companies and existing at the Closing Date shall be destroyed for a period of three years after Closing and shall not be destroyed by any party hereto or by the Companies thereafter without giving the other parties at least 30 days' notice, during which time such other parties shall have the right to examine and to remove any of such files, books and records prior to their destruction; provided, however, that the destruction, examination and removal of files, books and records relating to tax matters shall be controlled by the Tax Procedures Agreement. The parties hereto and their agents shall have full access during normal business hours to all such files, books and records of the other parties. The parties hereto agree that New Crucible shall enter into a lease agreement, at a rental to be agreed upon therein, which will provide for the lease to Colt or one of its subsidiaries for a term not to exceed one year of the offices currently occupied by personnel performing services for Colt or its subsidiaries other than Crucible.

19. Publicity. Each of the parties hereto agrees that it will not make any public disclosure concerning the execution of this Agreement or the consummation of the transactions contemplated hereby without the consent of the others; provided, however, that each party shall be permitted to make such disclosures to the public or to

governmental agencies as its counsel deems necessary to comply with applicable law or regulations. Colt and the Purchasers will cooperate to prepare a joint press release to be issued in connection with the Closing and, upon the request of Colt or either Purchaser, at the time of the signing of this Agreement.

20. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, applicable to contracts made and to be performed in such state.

21. Execution in Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original.

22. Agreements. Holding agrees to cause New Crucible to comply with the following agreements:

(a) On and after the Closing so long as any indebtedness with respect to the IDBs shall be outstanding New Crucible will comply with all the terms and conditions of the agreements relating thereto unless it shall have paid in full, or effectively provided for the discharge in full of, such IDBs and it will cause its indebtedness with respect to the IDBs to be maintained in rank pari passu with all its senior debt and superior in right of payment to any and all of its subordinated debt.

(b) On and after the Closing the funds held in the bond fund of any IDB shall be used only for the purposes of payment of the principal of and interest on such IDB, as permitted by the trust indenture or other instrument applicable to such IDB, and, in the event there is a Change in Control of New Crucible (otherwise than by reason of action by Colt and its subsidiaries), then promptly thereafter (i) the outstanding principal, accrued interest and all other amounts payable in connection with all outstanding IDBs shall be paid; (ii) provision, reasonably satisfactory to Colt, shall be made to have the principal, interest and all other amounts payable in connection with such IDBs paid as they become due; or (iii) provision shall be made so that Colt shall no longer have any obligation with respect to the payment of principal, interest or any other amount in connection with any of the IDBs. For purposes of this Section 22(b), a "Change in Control" shall mean the acquisition by a single interest or group (other than Technology Metals (as an ownership vehicle for certain management employees of New Crucible), the Crucible Fund, the ESOP, Colt or its subsidiaries) of an aggregate of 20% or more of the outstanding voting stock of New Crucible.

(c) New Crucible shall not (i) terminate any pension plan covering employees of the Companies or (ii) take or omit to take any other action with respect to

any such plan, in either case in such a way as to cause Colt, Operating or Garlock or any subsidiary of them to become liable to the Pension Benefit Guaranty Corporation.

(d) On and after the Closing Date, New Crucible shall be bound by the provisions of the Final Judgment in United States of America v. RMI Company, et al., U.S. District Court for the Western District of Pennsylvania, Civil Action No. 78-1108, dated July 29, 1980; the Final Judgment in United States of America v. Allegheny Ludlum Steel Corporation, et al., U.S. District Court for the District of New Jersey, Civil No. 4583, dated October 25, 1948; and the Order to Cease and Desist In the Matter of American Iron & Steel Institute, et al., United States of America Before Federal Trade Commission, Docket No. 5508, dated August 10, 1951, as such Final Judgments and Order may be amended or modified, during the period they are in effect, and New Crucible shall indemnify and hold Colt harmless in respect of any loss, cost, expense, deficiency, liability or damage resulting from any violation of such Final Judgments or Order by Holding, Crucible, New Crucible or any officer, director, employee or agent thereof. Holding acknowledges that copies of such Final Judgments and Order have been provided to Holding and Holding's counsel.

(e) So long as the Term Loans shall not have been indefeasibly repaid or any indebtedness shall be outstanding

under the IDBs, New Crucible will deliver the following financial statements to Colt: (i) consolidated and consolidating balance sheets, statements of earnings and statements of changes in financial position for New Crucible and Crusteel for each fiscal year ending after the Closing, and for the period then ended, prepared in accordance with generally accepted accounting principles applied consistently with the Combined Financial Statements, together with the report thereon of AA or PMM or other accountants of recognized national standing acceptable to Colt; (ii) consolidated and consolidating balance sheets, statements of earnings and statements of changes in financial position at the end of each of the first three fiscal quarters of New Crucible and Crusteel for each fiscal year ending after the Closing, and for the quarterly and year-to-date periods then ended, prepared in accordance with generally accepted accounting principles applied consistently with the Combined Financial Statements, together with a certificate of the chief financial officer and President of New Crucible with respect thereto; (iii) at the same time they are delivered to the Lenders, copies of any financial statements or other financial information provided to the Lenders or any of them; and (iv) such other financial data as Colt may reasonably request.

(f) So long as the Term Loans shall not have been indefeasibly repaid or any indebtedness shall be outstanding under the IDBs, New Crucible will permit any person designated by Colt to visit and inspect any of the properties of the Companies, including without limitation their original books of entry, and to discuss their affairs, finances and accounts with their officers, all at such reasonable times and as often as Colt may reasonably request.

(g) So long as the Aggregate Colt Exposure shall exceed $10,000,000, one person selected by Colt shall be a member of the Board of Directors of New Crucible (out of a total of no more than six members).

(h) U.S. Patent Application No. 537,135 and related foreign patent applications for Method of Producing Iron-Silicon Alloy Articles shall be retained by Operating.

23. Crucible Stock. The provisions of this Section 23 shall remain in effect so long as the Restricted Securities, as defined in Section 24 hereof, shall be outstanding, and shall inure to the benefit of, and be enforceable by, each successor to Operating as a holder thereof.

(a) Upon surrender at the office of the transfer agent of any certificates representing shares of Crucible Series A Preferred Stock or Crucible Series B Preferred Stock, as the case may be, for conversion into Crucible

Common Stock or upon surrender at such office of any certificates representing shares of Restricted Securities for exchange or transfer, the transfer agent will, at the expense of New Crucible, issue upon such conversion or exchange or transfer new certificates in such denomination or denominations as may be requested for the same aggregate number of shares of Restricted Securities represented by the certificates so surrendered, or for the number of shares of Crucible Common Stock issuable upon conversion of the shares of Crucible Series A Preferred Stock or Crucible Series B Preferred Stock, as the case may be, surrendered, and registered as such holder may request. For purposes hereof, transfer agent shall mean such transfer agent as New Crucible may appoint from time to time.

Upon receipt of evidence satisfactory to New Crucible of the loss, theft, destruction or mutilation of any certificate for shares of Restricted Securities and, in the case of any such loss, theft or destruction, upon delivery of an agreement of indemnity satisfactory to New Crucible (a written agreement of indemnity by Colt shall be satisfactory), or, in the case of any such mutilation, upon surrender and cancelation thereof, New Crucible at its expense will issue a new certificate for the same aggregate

number of shares of such Restricted Securities represented by such lost, stolen, destroyed or mutilated certificate.

(b) Prior to the payment of any dividends on the Restricted Securities, the Board of Directors of New Crucible will declare all such dividends. Nothing in this subsection (b) shall be deemed to limit the discretion of the Board of Directors to declare such dividends under the applicable laws of the jurisdiction of its incorporation and its Certificate of Incorporation.

(c) New Crucible will not issue any additional shares of Crucible Series A Preferred Stock or Crucible Series E Preferred Stock unless and until all the shares of Crucible Series A Preferred Stock or Crucible Series E Preferred Stock shall have been redeemed pursuant to its Certificate of Incorporation or converted into shares of Crucible Common Stock, as the case may be. Notwithstanding the preceding sentence, all shares of Crucible Series A Preferred Stock or Crucible Series E Preferred Stock redeemed, converted, purchased or otherwise acquired by New Crucible shall immediately assume the status of authorized but unissued preferred stock and may thereafter, to the extent permitted by its Certificate of Incorporation, be issued, upon proper corporate action as shares of another

series of the class of preferred stock of which the shares are a series.

(d) New Crucible will take no action which will require or permit New Crucible to treat the dividends on the shares of Restricted Securities or any part thereof as deductible interest payments on its books or its Federal, state or local income tax returns and will take no action which will require or permit, or could reasonably be expected to require or permit, New Crucible to treat the dividends on the shares of Restricted Securities or any part thereof as deductible interest under any provision of the Internal Revenue Code of 1954, as amended (the "Code"), whether now in effect or hereafter enacted or adopted, unless, in either case, such action will not result in denial of the 85% received deduction presently provided by Section 243(a)(1) of the Code (herein called the "Dividends Received Deduction") to any owner of the shares of Restricted Securities who shall otherwise be eligible to claim such deduction. In addition, New Crucible covenants not to take any action voluntarily which could reasonably be expected to cause the Dividends Received Deduction to be eliminated or reduced with respect to dividends on the shares of Restricted Securities.

The covenants contained in this subsection (d) shall be inapplicable if the Code shall be amended after delivery of the shares of Restricted Securities in such a manner as to provide that dividends on the shares of Restricted Securities shall not be treated, in whole or in part as eligible for the Dividends Received Deduction; provided, however, that if, as a result of such Code amendment, only a portion of the dividends are not treated as eligible for the Dividends Received Deduction, New Crucible covenants not to take any action voluntarily which could reasonably be expected to cause the Dividends Receivable Deduction to be eliminated or reduced with respect to the portion of the dividends or shares of Restricted Securities that remain eligible for the Dividends Received Deduction.

(e) New Crucible will not, and will not permit any of its subsidiaries or any affiliates to, become a party to or bound by any contract, indenture, agreement, instrument, charter provision (except as presently provided in its Certificate of Incorporation) or authorizing resolution for any series of preferred stock or preference stock or any note, debenture, bond or other security, under the terms of

or pursuant to which the ability of New Crucible to declare or pay dividends on, to make any other distributions with respect to, or to redeem or purchase any of, the shares of Crucible Series A Preferred Stock, Crucible Series E Preferred Stock or any of its stock ranking on a parity with such shares of stock, will in any way be restricted, except the Loan Agreement, the Mellon Term Loan Agreement and the Chase Loan Agreement.

(f) New Crucible will not take any action not permitted, nor will it omit to take any action required by its Certificate of Incorporation.

(g) At any time after the fifth anniversary of the Closing Date, each holder of outstanding shares of Crucible Series A Preferred Stock or Crucible Series E Preferred Stock, if such holder shall be Colt or any of its affiliates or subsidiaries, shall have the right to require New Crucible to repurchase, upon 30 days' prior written notice, all or any part of such holder's shares at a price (the "Repurchase Price") equal to $100 per share, plus an amount equal to the aggregate par value of undistributed stock dividends accrued to and including the date on which such shares are repurchased, payable in cash out of funds legally available for such repurchase; provided, however, that such holder's right to require New Crucible to repurchase such holder's shares shall be subject to the condition

precedent that New Crucible, after giving effect to such repurchase, shall not be in default under any of the covenants set forth in the Loan Agreement, the Mellon Term Loan Agreement and the Chase Loan Agreement.

Any holder of Crucible Series A Preferred Stock or Crucible Series E Preferred Stock, desiring to exercise its right pursuant to the preceding paragraph shall give notice to New Crucible by first class mail, postage prepaid, specifying the number of shares which are to be repurchased and the date on which such shares are to be repurchased. Such holder shall surrender his certificate or certificates evidencing such shares to New Crucible on or after the date specified and shall thereupon receive payment therefor at the Repurchase Price.

Commencing on the fifth anniversary of the Closing Date, no dividends or other distributions shall be paid on any Subordinate Stock, nor shall any shares of Crucible stock be purchased, redeemed or retired for cash or otherwise unless and until all required repurchases pursuant to this Section 23(g) shall have been made or provided for, except that New Crucible may from time to time repurchase shares of Subordinate Stock held by (i) the ESOP, the Crucible Fund or any employee stock ownership plan for employees of the Company and its affiliates who are covered by a collective bargaining agreement, which plan is qualified under Section 401(a) of the Code, as such shares

become distributable to participants therein (or their beneficiaries) by reason of the death, disability, retirement or separation from employment of such participants and (ii) Technology Metals in accordance with the terms and conditions contained in the agreements contemplated by Section 11(e).

24. Restrictions on Transfer. All shares of the capital stock of Crucible retained by Operating hereunder and all shares of stock issued in exchange therefor or upon conversion or transfer thereof or paid as a dividend thereon (collectively, "Restricted Securities") shall be transferable only upon satisfaction of the conditions specified in this Section 24. Operating and each recipient of such stock of Crucible in transactions permitted by this Section 24 are herein collectively referred to as the "Permitted Holders".

(a) Restrictive Legend. Except as provided in Section 24(e), each certificate representing Restricted Securities shall bear a legend in substantially the following form:

> "The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be transferred in the absence of such registration or an exemption therefrom under such Act. Such shares may be transferred only in compliance with the conditions specified in the Purchase Agreement dated as of November 5, 1985, among CMC Holding Company, Inc., The Employee Stock Ownership Plan of CMC Holding Company, Inc., Colt Industries Inc, Colt Industries Operating Corp and Garlock Inc, a complete and correct copy of which is available for

inspection at the principal office of Crucible Materials Corporation and will be furnished without charge to the holder of such shares upon written request."

(b) Restrictions on Transfer of Crucible Common Stock. The Permitted Holders may, without the consent of New Crucible, sell, transfer, or otherwise dispose of Restricted Securities (i) to New Crucible, (ii) to any Affiliate of Colt, (iii) subject to compliance with Section 24(d), to any Affiliate of a Permitted Holder, which Affiliate is an Institutional Investor, (iv) in an offering which is registered under the Securities Act of 1933, as amended ("1933 Act") or (v) subject to compliance with Sections 24(c) and (d), in an offering (whether or not to an Affiliate of the transferor) which is exempt from the registration requirements of the 1933 Act. The Permitted Holders may sell, transfer or otherwise dispose of Restricted Securities to any other Person with the consent of New Crucible. The provisions of this Section 24 shall not apply to the conversion (without transfer to a third party) of Crucible Series A Preferred Stock into Crucible Common Stock.

(c) Notice of Proposed Transfer; Opinion of Counsel. Prior to any transfer of any Restricted Securities pursuant to Section 24(b)(v), the Permitted Holder shall give written notice to New Crucible of its intention to

effect such transfer and to comply with this Section 24(c). Each such notice shall enclose an opinion of Cravath, Swaine & Moore or another nationally recognized law firm to the effect that the transfer may be effected without registration of such Restricted Securities under the 1933 Act. Such opinion may (but need not) also include such counsel's advice to the effect set forth in Section 24(e)(i). Upon delivery of such notice and opinion to New Crucible (and compliance with Section 24(d)), the Permitted Holder shall thereupon be entitled to transfer such Restricted Securities in accordance with the terms thereof.

(d) Requirements of Certain Transfers. Prior to any transfer of any Restricted Securities pursuant to Section 24(b)(iii) or 24(b)(v), the Permitted Holder shall give written notice to New Crucible of its intention to effect such transfer and to comply with this Section 24(d). Each such notice shall enclose (i) the written representation of the transferee that it is acquiring such Restricted Securities for investment and not with a view to the distribution thereof (subject, however, to any requirement of law that the distribution thereof shall at all times be within the control of such transferee), and (ii) the written agreement of such transferee to be bound by the provisions of this Section 24 applicable to it as a Permitted Holder.

(e) Termination of Restrictions. The restrictions imposed by this Section 24 upon the transferability of Restricted Securities shall cease and terminate as to any particular Restricted Securities at the first to occur of (i) the Permitted Holder (or prior Permitted Holder) of such Restricted Securities shall have delivered to New Crucible an opinion of Cravath, Swaine & Moore or another nationally recognized law firm to the effect that the restrictions imposed by this Section 24 are no longer required in order to assure compliance by New Crucible with the 1933 Act as to such Restricted Securities, (ii) such Restricted Securities shall have been transferred pursuant to Section 24(b)(iv), or (iii) New Crucible is a reporting company under the Securities Exchange Act of 1934, as amended (the "1934 Act"), and trading in the class of capital stock in which such Restricted Securities are included is effected on a national securities exchange or is reported through the automated quotation system of a registered securities association, a consolidated transaction reporting system or a similar generally recognized automated securities trading quotation system. The restrictions imposed by this Section 24 upon the transferability of Restricted Securities shall cease and terminate as to all Restricted Securities on December 31, 1999. Whenever such restrictions shall cease and terminate as to any Restricted Securities, the Permitted

Holders shall be entitled to receive from New Crucible, without expense, new certificates of like tenor for such Restricted Securities not bearing the legend set forth in Section 24(a).

25. Registration Rights. (a) Demand Registration Rights. Upon the written request of a Registration Rights Holder made at any time after the fifth yearly anniversary of the Closing Date or such earlier date as New Crucible shall have registered any of its securities under the 1933 Act or have become subject to the reporting requirements of the 1934 Act, requesting that New Crucible effect the registration under the 1933 Act of all or some of the shares of the Crucible Series A Preferred Stock and/or Crucible Common Stock held by such Registration Rights Holders (the "Registered Stock") and specifying the number of such shares intended to be sold or otherwise distributed and the intended method or methods of disposition, New Crucible will use its best efforts to effect the registration, under the 1933 Act, of such Registered Stock for disposition in accordance with the intended method or methods of disposition stated in such request. Each registration requested pursuant to this Section 25(a) shall be effected by filing of a registration statement on an appropriate form selected by New Crucible which is the most expedient form

then permitted with respect to the proposed offering by the Securities and Exchange Commission ("SEC").

(b) Expenses of Registration Under Demand Rights. The Registration Rights Holder shall pay all reasonable out-of-pocket expenses incurred in connection with any request for registration pursuant to Section 25(a) including, but not limited to, registration and filing fees, underwriting discounts, commissions and expenses, printing expenses, fees and expenses of legal counsel for the Registration Rights Holder and New Crucible, Blue Sky counsel, accounting fees, transfer agent and registrar fees, and any other expenses incidental to such registration statement (and all amendments thereto), including those expenses incurred in connection with the printing, filing and distribution of any preliminary prospectus and the final prospectus.

(c) Limitations, Conditions and Qualifications to Obligations of New Crucible Under Demand Registration Rights. The obligations of New Crucible to use its best efforts to effect registration of Registered Stock pursuant to Section 25(a) are subject to the following limitations:

(i) the right to require registration of shares of Registered Stock pursuant to Section 25(a) may not be

exercised by any Registration Rights Holder more than once in any 12-month period, nor more than 2 times by all Registration Rights Holders in the aggregate;

(ii) New Crucible shall be entitled to postpone for a reasonable period of time the filing of any registration statement requested pursuant to Section 25(a) if at the time it receives the request for registration it determines, in its reasonable judgment, that such registration and offering would materially interfere with any financing, acquisition, corporate reorganization or other material transaction involving New Crucible and promptly gives the Registration Rights Holder written notice of such determination. If New Crucible shall so postpone the filing of a registration statement, the Registration Rights Holder shall have the right to withdraw the request for registration by giving written notice to New Crucible within 30 days after receipt of the notice of postponement and such request shall not be counted for the purposes of Section 25(c)(i);

(iii) any offering under Section 25(a) shall be pursuant to a firm commitment underwriting, the managing underwriter or underwriters of which (together, the "Managing Underwriters") shall be selected by the

Registration Rights Holder and approved by New Crucible (which approval shall not be unreasonably withheld);

(iv) New Crucible shall enter into an underwriting agreement with the underwriters for such offering containing representations and warranties by New Crucible and other terms and provisions applicable to New Crucible as are customarily contained in underwriting agreements with respect to secondary distributions; and

(v) In lieu of effecting any registration requested by a Registration Rights Holder pursuant to Section 25(a) hereof, New Crucible may elect to repurchase from such Registration Rights Holder the number and class of shares specified in such request. If New Crucible wishes to exercise such election, then New Crucible shall deliver to such Registration Rights Holder written notice to such effect (the "Election Notice") not later than 15 days following the receipt by New Crucible of any such request for registration. Such notice shall constitute a binding commitment of New Crucible to purchase all (but not part) of such specified shares on the date set forth in the Election Notice (which date shall not be later than 30 days after delivery of the Election Notice) at the Public Offering Price. The Public Offering Price shall be

the price at which such shares might otherwise be offered to the public as of the date on which such shares are to be repurchased, less the customary underwriting discounts as shall be determined by the Managing Underwriters, which determination shall be based on the criteria such Managing Underwriters customarily consider in establishing the offering price in connection with a public offering.

(d) Piggy-back Registration Rights. If New Crucible shall propose to file before January 1, 1996, a registration statement under the 1933 Act with respect to any of its securities, New Crucible shall give each Registration Rights Holder notice thereof at least 45 days prior to filing and shall use its best efforts to include such number of shares of Registered Stock in such offering as each Registration Rights Holder shall request within 30 days of its receipt of the notice from New Crucible, upon the same terms (including the method of distribution) as such offering is being made.

(e) Expenses of Registration Under Colt's Piggy-back Rights. In connection with any request for

registration pursuant to Section 25(d), New Crucible and each Registration Rights Holder shall each pay its pro rata share (based upon the respective public offering prices of the securities covered by the registration statement) of the reasonable expenses of the offering covered thereby, including their respective pro rata share of registration and filing fees, underwriting discounts, commissions and expenses, printing expenses, expenses incurred in connection with the printing, filing and distribution of any preliminary prospectus and the final prospectus, fees and expenses of Blue Sky counsel, insurance premiums and any other expenses incidental to such registration statement (and all amendments thereto); provided, however, that New Crucible and each Registration Rights Holder shall each pay its own legal fees and expenses (other than Blue Sky counsel) and New Crucible shall pay all transfer agent and registration fees.

(f) Limitations, Conditions and Qualifications to Obligations of New Crucible Under Piggy-back Registration Rights. The obligations of New Crucible under Section 25(d) are subject to the following limitations:

(i) the number of shares of Registered Stock held by all Registration Rights Holders which may be included in New Crucible's initial public offering under the 1933 Act shall consist of not more than

8 percent of the aggregate number of shares to be included in such offering, provided that, if Operating shall make the election pursuant to Section 1(i) hereof, such percentage shall be increased by 80% of the increased percentage of Common Stock retained by Operating as of the Closing Date on a fully converted basis as a result of such election. For purposes of such calculation, shares of Crucible Series A Preferred Stock or Crucible Series B Preferred Stock, as the case may be, shall be weighted by means of the then-applicable conversion price;

(ii) any notice of conversion of Crucible Series A Preferred Stock given by a Registration Rights Holder after its request pursuant to Section 25(d) above shall be revocable until the last business day prior to the effective date of any registration statement covering shares of Crucible Common Stock issuable upon such conversion (and may, at the option of such Registration Rights Holder stated in its notice of conversion, be subject to closing of the sale of such Crucible Common Stock following effectiveness of such registration statement), but for purposes of calculating the limitation in Section 25(f)(i), such conversion shall be

deemed to have occurred on the date of its request pursuant to Section 25(d);

(iii) the Managing Underwriters shall be of recognized standing and selected by New Crucible and approved by Colt (which approval shall not be unreasonably withheld);

(iv) New Crucible shall not be obligated under Section 25(d) to effect registration of any Registered Stock as part of a registration relating solely to a stock option or other employee benefit plan, a merger or consolidation with another corporation or an acquisition of assets; and

(v) New Crucible may, at any time and at its sole discretion, withdraw a registration statement and abandon in the entirety any proposed offering referred to in Section 25(d).

(g) Procedural Obligations in Connection with Registrations. In connection with any registration by New Crucible pursuant to this Section 25, New Crucible shall:

(i) furnish to each Registration Rights Holder and underwriter such number of copies of any prospectus (including any preliminary prospectus) as each may reasonably request in order to facilitate the disposition of the Registered Stock to be sold or otherwise

distributed by the Registration Rights Holders and any underwriters;

(ii) use its best efforts to qualify the offering under applicable state Blue Sky or securities laws as may be necessary to enable the Registration Rights Holders and any underwriters to sell or otherwise distribute the Registered Stock pursuant to this Section 25; provided, however, that New Crucible shall not for any such purpose be required to qualify generally to do business as a foreign corporation in any jurisdiction where it is not so qualified[, or to subject itself to taxation in any such jurisdiction,] or to consent to general service of process in any such jurisdiction;

(iii) use its best efforts to cause such registration statement to remain current for 90 days following its effective date or such lesser period as the managing underwriter (or the Registration Rights Holder) may agree; and

(iv) use its best efforts to obtain insurance against any 1933 Act liabilities of the Registration Rights Holders and any underwriters, or allegations thereof, arising out of the registration, offering and sale of the Registered Stock.

(h) Indemnification. The following shall govern each registration by New Crucible pursuant to this Section 25:

(i) New Crucible will indemnify and hold harmless each Registration Rights Holder, each underwriter of Registered Stock, their respective directors and officers and each Person, if any, who controls any Registration Rights Holder or any such underwriter within the meaning of Section 15 of the 1933 Act, against any and all losses, claims, damages or liabilities (including without limitation settlement costs) to which they or any of them may become subject under the 1933 Act, 1934 Act, or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in such registration statement, prospectus or any amendment or supplement thereto, or any related preliminary prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; and will reimburse them for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss,

claim, damage, liability or action; provided, however, that New Crucible will not be liable to any Registration Rights Holder in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in any of such documents in reliance upon and in conformity with written information furnished to New Crucible by such Registration Rights Holder specifically for use therein, it being understood that none of this Agreement, the Disclosure Letter, the documents forms of which are attached as Exhibits hereto, the balance sheet referred to in Section 5(d) or any other document or information prepared or furnished in connection with the transactions contemplated hereby shall constitute information furnished in writing to New Crucible specifically for use therein. Such indemnity shall be in addition to any liability which New Crucible may otherwise have;

(ii) each Registration Rights Holder will indemnify and hold harmless New Crucible, its directors and officers and each Person, if any, who controls New Crucible within the meaning of Section 15 of the 1933 Act, against any losses, claims, damages or liabilities (including without limitation settlement costs) to

which they or any of them may become subject, under the 1933 Act, the 1934 Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in such registration statement, prospectus or any amendment or supplement thereto, or any related preliminary prospectus, or arise out of or are based upon the omission or the alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent that such untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to New Crucible by such Registration Rights Holder specifically for use therein (subject to the understanding stated in the second to the last sentence of Section 25(h)(i); and will reimburse any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action. This indemnity will be in addition to any liability which any Registration Rights Holder may otherwise have;

(iii) promptly after receipt by an indemnified party of notice of the commencement of any action or proceeding involving a claim referred to in this Section 25(h), such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 25(h), give written notice to the indemnifying party of the commencement of such action or proceeding; provided, however, that the failure of any indemnified party to give notice as provided herein shall not relieve the indemnifying party of its obligations under this Section 25(h), except to the extent that the indemnifying party is actually prejudiced by such failure to give notice. In case any such action or proceeding is brought against an indemnified party, the indemnifying party will be entitled to participate in and to assume the defense thereof, to the extent that it may wish, with counsel reasonably satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party will not be liable to such indemnified party for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof. No indemnifying party will consent to entry of any

judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim, action or proceeding.

26. Right of First Offer. If Colt or any of its subsidiaries or affiliates wishes to sell all or part of the Restricted Securities held by it to a third party at any time on or before the fifth anniversary of the Closing Date (the "First Offer Period"), Colt or any such subsidiary or affiliate shall first be obliged to offer to sell such shares to New Crucible in accordance with the procedures set forth in this Section 26. In order to initiate its right to sell the Restricted Securities to a third party during the First Offer Period, Colt or its subsidiary or affiliate, as the case may be, shall deliver to New Crucible a notification (the "First Offer Notification") describing a proposed offer to sell such shares of Crucible for such price as shall be specified in such First Offer Notification (the "Offered Shares" and the "First Offer Sale Price", respectively). The First Offer Notification shall (i) advise New Crucible that Colt or its subsidiary or affiliate, as the case may be, desires to sell the Offered Shares to a third party (which third party need not be known, but if known will be named), (ii) state the proposed

First Offer Sale Price, (iii) set forth the other material terms of the proposed offer (the "Other First Offer Sale Terms"), and (iv) give New Crucible the option to purchase the Offered Shares at the First Offer Sale Price and upon the Other First Offer Sale Terms.

(b) Within 45 days after the giving of the First Offer Notification, New Crucible shall give notice to Colt, or its subsidiary or affiliate, as the case may be, to the effect that:

(i) New Crucible has elected to purchase the Offered Shares, in which event such notice shall constitute a binding commitment of New Crucible to purchase the Offered Shares at the First Offer Sale Price and upon the Other First Offer Sale Terms on the date specified in such notice (which date shall not be later than 5 days after delivery of such notice),

(ii) New Crucible does not wish to purchase the Offered Shares, in which event Colt, its subsidiary or affiliate, as the case may be, shall have the right at any time for a period of six months after receipt of such notice to offer to sell all or part of the Offered Shares to any third party upon terms and conditions no less favorable than the First Offer Sale Price and the Other First Offer Sale Terms.

If New Crucible fails to give such notice in response to the First Offer Notification within such 45 days, New Crucible shall be deemed to have given notice in the form set forth in clause (ii) above. If New Crucible fails to fulfill the obligation to purchase the Offered Shares pursuant to clause (i) above, then, in addition to all other available remedies, Colt, its subsidiary or affiliate, as the case may be, may at any time for a period of six months after such default, offer to sell all or a part of the Offered Shares to any person at any price and upon any other terms.

27. Entire Agreement. This Agreement, the Exhibits hereto and the Schedules contained in the Disclosure Letter set forth the entire agreement of the parties with respect to the purchase and sale of shares hereunder, and supersede any and all prior agreements or understandings between the parties hereto with respect to such transaction.

28. Binding Nature. This Agreement shall inure to the benefit of and be binding upon and enforceable against the successors and assigns of Holding, the ESOP, Colt, Operating and Garlock, including without limitation New Crucible as the successor to Holding.

29. Amendments; No Assignment. This Agreement may be amended, superseded, cancelled, renewed or extended, and the terms hereof may be waived, only by a written instrument signed by the parties or, in the case of a waiver, by the

party waiving compliance. This Agreement is not assignable, otherwise than pursuant to Section 1(j) or 1(k) or by operation of law.

30. Severability of Provisions. If any provision or any portion of any provision of this Agreement or the application of any such provision or any portion thereof to any person or circumstance, shall be held invalid or unenforceable, the remaining portion of such provision and the remaining provisions of this Agreement, or the application of such provision or portion of such provision as is held invalid or unenforceable to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby.

31. Definitions. For purposes of this Agreement, the following terms shall have the respective meanings set forth or referred to in this Section 30:

(a) The term "AA" shall have the meaning set forth in Section 3(a).

(b) The term "Affiliate" shall mean any Person directly or indirectly controlling, controlled by or under direct or indirect common control with another Person and shall include in the case of the Permitted Holders (i) any Person who is or has been within the past five years from the date hereof, an officer, director or beneficial holder of at least 5% of the outstanding Common Stock of the

Permitted Holders and the spouse, parent or child of any such officer, director or holder, and (ii) any Person of which the Permitted Holders or an Affiliate (as defined in clause (i) above) of the Permitted Holders shall, directly or indirectly, either beneficially own at least 5% of the outstanding equity securities or constitute at least a 5% participant.

(c) The term "Aggregate Colt Exposure" shall mean the sum of (i) the aggregate par value of Crucible Series A Preferred Stock held of record or beneficially by Colt and its subsidiaries, (ii) the aggregate unpaid principal amount of, and accrued interest on, the indebtedness outstanding under the IDB's, and (iii) the aggregate unpaid principal amount of, and accrued interest on, the indebtedness outstanding under the Mellon Term Loan Agreement and the Chase Loan Agreement.

(d) The term "Agreement" shall mean this Purchase Agreement.

(e) The term "Assignment" shall have the meaning set forth in Section 1(i).

(f) The term "Change in Control" shall have the meaning set forth in Section 22(b).

(g) The term "Chase" shall have the meaning set forth in Section 1(f).

(h) The term "Chase Loan Agreement" shall have the meaning set forth in Section 1(f).

(i) The term "Chase Term Loan" shall have the meaning set forth in Section 1(f).

(j) The term "Closing" shall have the meaning set forth in Section 2.

(k) The term "Closing Balance Sheet" shall have the meaning set forth in Section 3(a).

(l) The term "Closing Date" shall have the meaning set forth in Section 2.

(m) The term "Code" shall have the meaning set forth in Section 6(a).

(n) The term "Colt" shall mean Colt Industries Inc, a Pennsylvania Corporation.

(o) The term "Colt/Chase Guarantee" shall have the meaning set forth in Section 1(f).

(p) The term "Colt Common Stock" shall have the meaning set forth in Section 1(b)(i).

(q) The term "Colt Common Stock Amount" shall have the meaning set forth in Section 1(b)(i).

(r) The term "Colt/Mellon Guarantee" shall have the meaning set forth in Section 1(e).

(s) The term "Colt/Purchasers Documents" shall have the meaning set forth in Section 5(n).

(t) The term "Combined Financial Statements" shall have the meaning set forth in Section 5(d).

(u) The term "Companies" shall mean Crucible and Crusteel collectively (and individually as a "Company").

(v) The term "Crucible" shall mean Crucible Materials Corporation, a Delaware corporation.

(w) The term "Crucible Common Stock" shall mean the Common Stock, without par value, stated value $10 per share, of Crucible.

(x) The term "Crucible Fund" shall have the meaning set forth in Section 1(b)(i).

(y) The term "Crucible Materials Group" shall have the meaning set forth in Section 5(d).

(z) The term "Crucible Salaried Plans" shall have the meaning set forth in Section 6(f).

(aa) The term "Crucible Series A Preferred Stock" shall mean the 13% cumulative convertible preferred stock, Series A, par value $100 per share, of Crucible.

(bb) The term "Crucible Series B Preferred Stock" shall mean the 16.5% cumulative convertible preferred stock, Series B, par value $100 per share, of Crucible.

(cc) The term "Crucible Series C Preferred Stock" shall mean the 16.5% cumulative convertible preferred stock, Series C, par value $100 per share, of Crucible.

(dd) The term "Crucible Series E Preferred Stock" shall mean the 13.0% cumulative preferred stock Series E, par value $100 per share, of Crucible.

(ee) The term "Crusteel" shall mean Crusteel Limited, an English company.

(ff) The term "Disclosure Letter" shall have the meaning set forth in Section 5(b).

(gg) The term "Dividends Received Deduction" shall have the meaning set forth in Section 23(e).

(hh) The term "Employee Common Amount" shall have the meaning set forth in the Preliminary Statement.

(hh) The term "Employee Common Value" shall have the meaning set forth in Section 1(h).

(ii) The term "Employee Preferred Amount" shall have the meaning set forth in the Preliminary Statement.

(jj) The term "Employee Preferred Value" shall have the meaning set forth in Section 1(h).

(kk) The term "Environmental" shall have the meaning set forth in Section 14.

(ll) The term "ERISA" shall have the meaning set forth in Section 6(a).

(mm) The term "ESOP" shall mean The Employee Stock Ownership Plan of Crucible Materials Corporation.

(nn) The term "ESOP Note" shall have the meaning set forth in Section 1(f).

(oo) The term "ESOP Pledge" shall have the meaning set forth in Section 1(f).

(pp) The term "Exchange Agreement" shall mean the Agreement of Exchange and Reorganization attached to this Agreement as Exhibit A.

(qq) The term "Garlock" shall mean Garlock Inc, an Ohio corporation.

(rr) The term "HLHZ" shall mean Houlihan, Lokey, Howard & Zuken, Inc.

(ss) The term "Holding" shall mean CMC Holding Company, Inc., a Delaware corporation.

(tt) The term "Holding Common Stock" shall have the meaning set forth in Section 1(h).

(uu) The term "Holding Series B Preferred Stock" shall have the meaning set forth in Section 1(h).

(vv) The term "Holding Series C Preferred Stock" shall mean the $6,300,000 aggregate par value of 16.5% cumulative convertible preferred stock, par value $100 per share, issued by Holding to Technology Metals.

(ww) The term "IDB Leased Property" shall have the meaning set forth in Section 5(g).

(xx) The term "IDBs" shall have the meaning set forth in Section 7(d).

(yy) The term "indemnifiable damages" shall have the meaning set forth in Section 13(b).

(zz) The term "Institutional Investor" shall mean a bank as defined in Section 3(a)(2) of the 1933 Act whether acting in its individual or fiduciary capacity; an insurance company as defined in Section 2(13) of the 1933 Act; an investment company registered under the Investment Company Act of 1940 or a business development company as defined in Section 2(a)(48) of that Act; a Small Business Investment Company licensed by the Small Business Administration; or an employee benefit plan, including an individual retirement account, which is subject to the provisions of ERISA, if the investment decision is made by a plan fiduciary, as defined in Section 3(21) of such Act, which is either a bank, insurance company or registered investment adviser; any person who, on the basis of such factors as financial sophistication, net worth, knowledge, and experience in financial matters, or amount of assets under management qualifies as an accredited investor under rules and regulations which the SEC shall prescribe from time to time.

(aaa) The term "Inter-Creditor Agreement" shall have the meaning set forth in Section 1(f).

(bbb) The term "Lenders" shall have the meaning set forth in Section 1(e).

(ccc) The term "Loan Agreement" shall have the meaning set forth in Section 1(e).

(ddd) The term "Managing Underwriters" shall have the meaning set forth in Section 25(c)(iii).

(eee) The term "Mellon" shall have the meaning set forth in Section 1(e).

(fff) The term "Mellon Term Loan" shall have the meaning set forth in Section 1(e).

(ggg) The term "Mellon Term Loan Agreement" shall have the meaning set forth in Section 1(e).

(hhh) The term "1933 Act" shall mean the Securities Act of 1933, as amended.

(iii) The term "1934 Act" shall mean the Securities Exchange Act of 1934, as amended.

(jjj) The term "NASDAQ" means the National Association of Securities Dealers Automated Quotation System.

(kkk) The term "New Crucible" shall have the meaning set forth in Section 1(j).

(lll) The term "Operating" shall mean Colt Industries Operating Corp, a Delaware corporation.

(mmm) The term "Permitted Holders" shall have the meaning set forth in Section 24.

(nnn) The term "Person" shall mean an individual, partnership, corporation, association, trust joint venture, unincorporated organization, and any government, governmental department or agency or political subdivision thereof.

(ooo) The term "Plan of Merger" shall have the meaning set forth in Section 1(j).

(ppp) The term "plans" shall have the meaning set forth in Section 6(a).

(qqq) The term "Pledge Assignment" shall have the meaning set forth in Section 1(f).

(rrr) The term "PMM" shall have the meaning set forth in Section 3(a).

(sss) The term "PW" shall have the meaning set forth in Section 3(b).

(ttt) The term "Purchasers" shall mean Holding and the ESOP, collectively.

(uuu) The term "Real Property" shall have the meaning set forth in Section 5(g).

(vvv) The term "Recapitalization" shall mean the recapitalization of Crucible caused by Operating, as set forth in the Exchange Agreement.

(www) The term "Registration Rights Holders" shall mean Operating, Colt, each Affiliate of Colt and each Institutional Investor that is a Permitted Holder at the time in question.

(xxx) The term "Registered Stock" shall have the meaning set forth in Section 25(a).

(yyy) The term "Restricted Security" shall have the meaning set forth in Section 24.

(zzz) The term "Revolver Security Agreements" shall have the meaning set forth in Section 1(e).

(aaaa) The term "SEC" shall have the meaning set forth in Section 25(a).

(bbbb) The term "Subordinate Stock" shall mean any stock of New Crucible junior in priority as to dividends to the Crucible Series A Preferred Stock. Commencing on the fifth anniversary of the Closing Date, Crucible Series B Preferred Stock, Crucible Series C Preferred Stock and Crucible Series D Preferred Stock shall not be deemed to be junior in priority as to dividends to the Crucible Series A Preferred Stock.

(cccc) The term "Tax Procedures Agreement" shall have the meaning set forth in Section 9(e).

(dddd) The term "Technology Metals" shall have the meaning set forth in Section 8(a)(vii).

(eeee) The term "Terminated Operations" shall have the meaning set forth in Section 5(m).

(ffff) The term "Terminated Plans" shall have the meaning set forth in Section 6(a).

(gggg) The term "Terminated Works" shall have the meaning set forth in Section 5(m).

(hhhh) The term "Term Loans" shall mean the Chase Term Loan and the Mellon Term Loan collectively.

(iiii) The term "Term Loan Security Agreements" shall have the meaning set forth in Section 1(e).

32. Termination. If the Closing shall not have been completed on or prior to December 23, 1985, this

Agreement may be terminated by either Purchaser or Colt at its sole option by notice to each other party hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

CMC HOLDING COMPANY, INC.,

By _____
Vincent H. Callahan
President

THE EMPLOYEE STOCK OWNERSHIP PLAN OF CRUCIBLE MATERIALS CORPORATION,

By The Citizens and Southern National Bank, not in its individual capacity but as Trustee,

By _____
Thoben F. Elrod, Jr.
Senior Vice President

COLT INDUSTRIES INC,

By _____
Salvatore J. Cozzolino
Executive Vice President and Treasurer

COLT INDUSTRIES OPERATING CORP,

By _____
Joseph P. Lisa
Vice President and Controller

GARLOCK INC,

By _____
Joseph P. Lisa
Vice President and Controller

Agreement may be terminated by either Purchaser or Colt at its sole option by notice to each other party hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

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Senior Vice President

COLT INDUSTRIES INC,

By_____
Salvatore J. Cozzolino
Executive Vice President and Treasurer

COLT INDUSTRIES OPERATING CORP,

By_____
Joseph P. Lisa
Vice President and Controller

GARLOCK INC,

By_____
Joseph P. Lisa
Vice President and Controller

EXHIBIT A

AGREEMENT OF EXCHANGE
AND REORGANIZATION

Agreement of Exchange and Reorganization (the "Exchange Agreement") dated as of [insert Closing Date], 1985, between COLT INDUSTRIES OPERATING CORP, a Delaware corporation ("Operating") and CRUCIBLE MATERIALS CORPORATION, a Delaware corporation and a wholly owned subsidiary of Operating ("Crucible").

Operating owns all the outstanding stock of Crucible, which outstanding capital stock consists on the date hereof of 1,000 shares of common stock, par value $1 per share ("Common Stock").

The parties wish to set forth their agreement with respect to a proposed recapitalization of Crucible, and accordingly hereby agree as follows:

1. Charter Amendments. In accordance with the provisions of the Delaware General Corporation Law, the Board of Directors of Crucible have, by resolutions duly adopted by unanimous written consent, approved a proposed Certificate of Amendment to the Articles of Incorporation of Crucible with terms as set forth in Exhibit I attached hereto. Operating has by written consent as the sole shareholder of Crucible adopted appropriate resolutions approving the proposed Certificate of Amendment. Crucible has caused the due execution, acknowledgment, filing and

recording of such Certificate of Amendment with the Secretary of State of the State of Delaware.

2. Exchange of Stock. Concurrently with the execution and delivery of this Exchange Agreement, Operating is exchanging 1000 shares of Common Stock for (i) [ ] shares of 13.0% cumulative convertible preferred stock, Series A, par value $100 per share, of Crucible; (ii) [ ] shares of 16.5% cumulative convertible preferred stock, Series B, par value $100 per share, of Crucible; (iii) 63,000 shares of 16.5% cumulative convertible preferred stock, Series C, par value $100 per share, of Crucible and (iv) [ ] shares of common stock, without par value, of Crucible.

IN WITNESS WHEREOF, the parties have caused this Exchange Agreement to be duly executed as of the date first above written.

COLT INDUSTRIES OPERATING CORP,

by _____

Title:

CRUCIBLE MATERIALS CORPORATION,

by _____

Title:

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

CRUCIBLE MATERIALS CORPORATION, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of the Corporation by unanimous written consent adopted resolutions proposing and declaring advisable the following amendment to the Certificate of Incorporation of such corporation:

RESOLVED, that the Certificate of Incorporation of the Corporation be amended by changing the Fourth Article thereof so that, as amended, such Article shall be and read as follows:

"4. The total number of shares of stock which the corporation shall have authority to issue is _____ ( ), of which _____ shall be shares of Common Stock, without par value, _____ shall be shares of 13.0% cumulative convertible preferred stock, Series A, par value $100 per share, _____ shall be shares of 16.5% cumulative convertible preferred stock, Series B, par value $100 per share, _____ shall be 16.5% cumulative convertible preferred stock, Series C, par value $100 per share, _____ shall be shares of 16.5% cumulative preferred stock, Series D, par value $100 per share and _____ shall be shares of 13.0% cumulative preferred stock, Series E, par value $100 per share.

The relative rights, privileges and restrictions of the shares of each class are as follows:

[_____
_____.]"

SECOND: That the sole stockholder of the corporation has given its written consent to such amendment in accordance with the provisions of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in acordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by , its President and attested by , its Secretary, this day of December 1985.

CRUCIBLE MATERIALS CORPORATION

by _____
President

Attest:

by _____
Secretary

EXHIBIT B

CRUCIBLE MATERIALS CORPORATION

CERTIFICATE OF RESOLUTION
Pursuant to Section 151 of the General Corporation Law
of the State of Delaware

13.0% CUMULATIVE CONVERTIBLE A PREFERRED STOCK
16.5% CUMULATIVE CONVERTIBLE B PREFERRED STOCK
16.5% CUMULATIVE CONVERTIBLE C PREFERRED STOCK
16.5% CUMULATIVE D PREFERRED STOCK
13.0% CUMULATIVE E PREFERRED STOCK

CRUCIBLE MATERIALS CORPORATION, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), HEREBY CERTIFIES that the following resolution was duly adopted by the Board of Directors of the Corporation, pursuant to authority conferred upon the Board of Directors by the provisions of the Certificate of Incorporation which authorizes the issuance of up to 2,000,000 shares of Preferred Stock, having a par value of $100.00 per share, at a meeting thereof duly held on _____, 1985:

"RESOLVED, that the Board of Directors hereby authorizes the issue of the first five series of Preferred Stock, having a par value of $100.00 per share, of the Corporation and reserves for issuance, and authorizes the issuance of, the number of shares of Common Stock issuable upon conversion of the A Preferred Stock (as herein defined), the B Preferred Stock (as herein defined) and the C Preferred Stock (as herein defined), and the number of shares of D Preferred Stock (as herein defined) and E Preferred Stock (as herein defined) that may be issued as a dividend on shares of such series as herein provided upon the terms and conditions set forth herein, and hereby fixes the designations, preferences and privileges, relative, participating, optional and other special rights, and qualifications, limitations and restrictions thereof, in addition to those set forth in the said Certificate of Incorporation, as follows:

13.0% CUMULATIVE CONVERTIBLE A PREFERRED STOCK

(1) Designation. 200,000 shares of the Preferred Stock, having a par value of $100.00 per share, of the Corporation are hereby constituted as a series of Preferred Stock, having a par value of $100.00 per share, designated as "13% Cumulative Convertible A Preferred Stock" (hereinafter called "A Preferred Stock").

(2) Dividends. The holders of shares of A Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, payable in shares of the Corporation's E Preferred Stock (as hereinafter defined) at the annual rate of 0.13 shares of E Preferred Stock per share, and no more, payable quarterly on the first day of January, April, July and October in each year, commencing January 1, 1986, to holders of record on such respective dates, not exceeding 30 days preceding the payment date thereof, as may be determined by the Board of Directors in advance of the payment of each particular dividend. Dividends shall be payable on A Preferred Stock and E Preferred Stock (as hereinafter defined) in preference to any dividends payable on B Preferred Stock (as hereinafter defined), C Preferred Stock (as hereinafter defined) and D Preferred Stock (as hereinafter defined) with respect to any period ending on or before December 31, 1990 (after which date dividends shall accrue and be payable on B Preferred Stock, C Preferred Stock and D Preferred Stock on a parity with dividends on A Preferred Stock and E Preferred Stock), and in preference to any dividends payable on any stock junior to A Preferred Stock in priority as to dividends. No dividends shall be declared on any other series or class or classes of stock ranking on a parity with the A Preferred Stock as to dividends in respect of any quarter-yearly dividend period unless there shall likewise be or have been declared on all shares of A Preferred Stock at the time outstanding like dividends for all quarter-yearly periods coinciding with or ending before such quarter-yearly period, ratably in proportion to the respective annual dividend rates per annum fixed therefor. Dividends shall be cumulative and will accrue on each share of A Preferred Stock whether or not earned or declared, and whether or not there are from time to time funds legally available therefor, from the date of issue thereof except that dividends on shares of A Preferred Stock issued after the first date of issue of any shares of A Preferred Stock shall accrue from such first date of issue, or from the most recent dividend payment due in the case of shares issued after the initial dividend payment date. No interest, or sum of money in lieu of interest, shall be payable in respect of any dividend payment or payments which may be in arrears. Dividends payable on the A Preferred Stock for any period less than a full quarter shall be computed on the basis of a 360-day year.

If in any quarter-yearly dividend period, dividends at an annual rate of 0.13 shares of E Preferred Stock per share shall not have been declared and paid or set apart for payment on all outstanding shares of A Preferred Stock for such

quarter-yearly dividend period and all preceding quarter-yearly dividend periods from and after the first day from which dividends are cumulative, then, until the aggregate deficiency shall be declared and fully paid or set apart for payment, the Corporation shall not (i) declare or pay or set apart for payment any dividends or make any other distribution on the Common Stock or any other capital stock of the Corporation ranking junior to the A Preferred Stock with respect to the payment of dividends or distribution of assets on liquidation, dissolution or winding up of the Corporation (the Common Stock and such other stock being herein referred to as "Junior Stock") or (ii) make any payment on account of the purchase, redemption or other retirement of any Junior Stock, except for purchases of Junior Stock held by or for The Employee Stock Ownership Plan of Crucible Materials Corporation, The Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation or any other employee stock ownership plan (as defined in Section 4975 of the Internal Revenue Code of 1954, as amended) for employees of the Corporation or a subsidiary of the Corporation subject to a collective bargaining agreement ("Future Union ESOP"), or any participant therein or beneficiary thereof to the extent of any Junior Stock distributed by any of the aforementioned plans or fund, and except for purchases of Junior Stock held by [management in accordance with Colt/Management agreement]. For purposes of the foregoing paragraph, the B Preferred Stock, C Preferred Stock and D Preferred Stock shall be considered to be Junior Stock with reference to the A Preferred Stock and E Preferred Stock until January 1, 1991 and thereafter shall rank on a parity with the A Preferred Stock and E Preferred Stock for all dividend purposes.

(3) Liquidation Preference. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, before any payment or distribution of the assets of the Corporation (whether capital or surplus) shall be made to or set apart for the holders of any series or class or classes of stock of the Corporation ranking junior to the A Preferred Stock upon liquidation, dissolution or winding up, the holders of the shares of the A Preferred Stock shall be entitled to receive, in cash, $100 per share plus an amount equal to all dividends accrued and unpaid thereon to the date of final distribution to such holders, whether or not earned or declared; but such holders shall not be entitled to any further payment. If, upon any liquidation, dissolution or winding up of the Corporation, the assets of the Corporation, or proceeds thereof, distributable among the holders of the shares of the A Preferred Stock shall be

insufficient to pay in full the preferential amount aforesaid and liquidating payment on any other Preferred Stock ranking as to liquidation, dissolution or winding up, on a parity with the A Preferred Stock, then such assets, or the proceeds thereof, shall be distributed among the holders of A Preferred Stock and any such other Preferred Stock ratably in accordance with the respective amounts which would be payable upon liquidation, dissolution or winding up on such shares of A Preferred Stock and any such other Preferred Stock if all amounts payable thereon were paid in full. For the purposes of this Section (3), a consolidation or merger of the Corporation with one or more corporations shall not be deemed to be a liquidation, dissolution or winding up, voluntary or involuntary.

Subject to the rights of the holders of any series or class or classes of stock ranking on a parity with or prior to the A Preferred Stock upon liquidation, dissolution or winding up, upon any liquidation, dissolution or winding up of the Corporation, after payment shall have been made in full to the A Preferred Stock as provided in this Section (3), but not prior thereto, any other series or class or classes of stock ranking junior to the A Preferred Stock upon liquidation shall, subject to the respective terms and provisions (if any) applying thereto, be entitled to receive any and all assets remaining to be paid or distributed, and the A Preferred Stock shall not be entitled to share.

For the purposes of this Section (3), the A Preferred Stock ranks on a parity with the B Preferred Stock, the C Preferred Stock, the D Preferred Stock and the E Preferred Stock upon liquidation.

(4) Redemption.

(a) The A Preferred Stock may not be redeemed prior to January 1, 1991. Commencing January 15, 1991, the Corporation, at its option, may redeem shares of the A Preferred Stock, as a whole or in part, at any time or from time to time at a redemption price of $100 per share payable in cash, plus accrued and unpaid dividends thereon to the date fixed for redemption payable in cash (the sum of $100 together with such accrued and unpaid dividends being referred to herein as the "Redemption Price").

(b) In the event the Corporation shall redeem shares of A Preferred Stock, notice of such redemption shall be given by first class mail, postage prepaid, mailed not less than 30

nor more than 60 days prior to the redemption date, to each holder of record of the shares to be redeemed, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (1) the redemption date; (2) the number of shares of A Preferred Stock to be redeemed and, if less than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder; (3) the Redemption Price; (4) the place or places where certificates for such shares are to be surrendered for payment of the Redemption Price; and (5) that dividends on the shares to be redeemed will cease to accrue on such redemption date. Notice having been mailed as aforesaid, from and after the redemption date (unless default shall be made by the Corporation in providing money for the indefeasible payment of the Redemption Price) dividends on the shares of the A Preferred Stock so called for redemption shall cease to accrue, and said shares shall no longer be deemed to be outstanding, and all rights of the holders thereof as stockholders of the Corporation (except the right to receive from the Corporation the Redemption Price) shall cease. The Corporation's obligation to provide moneys in accordance with the preceding sentence shall be deemed fulfilled if, on or before the redemption date, the Corporation shall deposit with a bank or trust company having an office in the City of Pittsburgh, Pennsylvania, or the Borough of Manhattan, City of New York, having a capital and surplus of at least $50,000,000, funds necessary for such redemption, in trust, with irrevocable instructions that such funds be applied to the redemption of the shares of A Preferred Stock so called for redemption. Any interest accrued on such funds shall be paid to the Corporation from time to time. Any funds so deposited and unclaimed at the end of six years from such redemption date shall be released or repaid to the Corporation, after which the holder or holders of such shares of A Preferred Stock so called for redemption shall look only to the Corporation for payment of the Redemption Price.

Upon surrender in accordance with said notice of the certificates for any shares so redeemed (properly endorsed or assigned for transfer, if the Board of Directors of the Corporation shall so require and the notice shall so state), such shares shall be redeemed by the Corporation at the Redemption Price. If less than all the outstanding shares of A Preferred Stock are to be redeemed, shares to be redeemed shall be selected by the Corporation pro rata (as nearly as may be) from each holder of outstanding shares of A Preferred Stock in the proportion that the shares thereof to be redeemed bear to the total number of shares of the A Preferred Stock then

outstanding. If less than all of the outstanding shares represented by any surrendered certificate are to be redeemed, a new certificate representing the unredeemed shares shall be issued without charge.

In no event shall the Corporation redeem less than all the outstanding shares of A Preferred Stock pursuant to subsection (a) of this Section (4) unless full cumulative dividends shall have been paid or declared and set apart for payment upon all outstanding shares of A Preferred Stock for all past dividend periods.

(5) Shares to be Retired. All shares of A Preferred Stock redeemed or purchased by the Corporation or converted shall be retired and cancelled and shall be restored to the status of authorized but unissued shares of Preferred Stock, without designation as to series, and may thereafter be issued, but not as shares of A Preferred Stock.

(6) Voting. Except as expressly provided hereinafter in this Section (6) or as otherwise from time to time required by law, the A Preferred Stock shall have no voting rights. Whenever, at any time or times, dividends payable on the A Preferred Stock shall be in arrears in an amount equal to at least six full quarterly dividends on the A Preferred Stock at the time outstanding, the holders of the outstanding A Preferred Stock shall have the right, voting together as a class with holders of shares of all other series of Preferred Stock upon which like voting rights have been conferred and are exercisable, to elect a single director of the Corporation at the Corporation's next annual meeting of stockholders and at each subsequent annual meeting of stockholders. At elections for such directors, each holder of Preferred Stock shall be entitled to one vote for each share held (the holders of shares of any other series of Preferred Stock being entitled to such number of votes, if any, for each share of stock held as may be granted to them). Upon the vesting of such right of the holders of the A Preferred Stock, the maximum authorized number of members of the Board of Directors shall automatically be increased by one and the vacancy so created shall be filled by the vote of the holders of the outstanding A Preferred Stock, together with the holders of shares of all other series of Preferred Stock, as hereinabove set forth.

Upon any termination of the right of the holders of the Preferred Stock to vote for directors as herein provided, t e term of office of the director then in office elected by

the holders of the Preferred Stock voting as a class shall terminate immediately. The right of the holders of this series of Preferred Stock to vote for directors shall terminate immediately upon all dividend arrearages being cured with respect to this series of Preferred Stock. If the office of any director elected by the holders of the Preferred Stock voting as a class becomes vacant by reason of death, resignation, retirement, disqualification, removal from office or otherwise, the holders of the series of Preferred Stock which had the right to elect such director may choose a successor who shall hold office for the unexpired term in respect of which such vacancy occurred. Whenever the term of office of the director elected by the holders of the Preferred Stock shall end and the special voting powers vested in the holders of the Preferred Stock as provided in this Section (6) shall have expired, the number of directors shall be such number as may be provided for in the By-Laws irrespective of any increase made pursuant to the provisions of this Section (6).

So long as any shares of A Preferred Stock remain outstanding, the consent of the holders of at least two-thirds of the shares of A Preferred Stock outstanding at the time (voting separately as a class with all other series of Preferred Stock ranking on a parity with A Preferred Stock either as to dividends or the distribution of assets upon liquidation, dissolution or winding up and upon which like voting rights have been conferred and are exercisable) given in person or by proxy, either in writing or at any special or annual meeting called for the purpose, shall be necessary to permit, effect or validate any one or more of the following:

(a) The authorization, creation or issuance, or any increase in the authorized or issued amount, of any class or series of stock (including any class or series of preferred stock) ranking prior to or on a parity with [as those terms are hereinafter defined in this Section (6)] the A Preferred Stock, except for any class or series of stock to be issued to any Future Union ESOP; or

(b) The amendment, alteration or repeal, whether by merger, consolidation or otherwise, of any of the provisions of the Certificate of Incorporation or of these resolutions, or any merger or consolidation, which would adversely affect any right, preference, privilege or voting power of the A Preferred Stock or of the holders thereof; provided,

however, that any increase in the amount of authorized Preferred Stock or the creation and issuance of other series of Preferred Stock, in each case ranking on a parity with or junior to the A Preferred Stock with respect to the payment of dividends and the distribution of assets upon liquidation, dissolution or winding up, shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers; or

(c) The sale, transfer or lease of all or substantially all of the properties and assets of the Corporation outside its ordinary course of business; provided, however, that nothing herein shall require the consent of the holders of the A Preferred Stock for or in respect of the creation of any mortgage, pledge or other lien upon all or any part of the assets of the Corporation.

The foregoing voting provisions shall not apply if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, all outstanding shares of the A Preferred Stock shall have been redeemed or sufficient funds shall have been deposited in trust to effect such redemption.

Any class or classes of stock of the Corporation shall be deemed to rank:

(i) prior to the A Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up if the holders of such class shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in preference or priority to the holders of the A Preferred Stock; and

(ii) on a parity with the A Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up, whether or not the dividend rates, dividend payment dates, or redemption or liquidation prices per share thereof be different from those of the A Preferred Stock, to the extent that the holders of such class and the A Preferred Stock shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case

may be, in proportion to their respective dividend rates or liquidation prices, without preference or priority one over the other.

(7) Conversion. The holders of shares of A Preferred Stock shall have the right, at their option, to convert any or all of such shares into fully paid and nonassessable shares of Common Stock of the Corporation at any time on and subject to the following terms and conditions:

(a) The shares of A Preferred Stock shall be convertible at the office of the Transfer Agent, and at such other office or offices, if any, as the Board of Directors may designate, into shares (calculated as to each conversion to the nearest 1/100 of a share) of Common Stock of the Corporation, at the conversion price, determined as hereinafter provided, in effect at the time of conversion, each share of A Preferred Stock being taken at $100 for the purpose of such conversion. The price at which shares of Common Stock shall be delivered upon conversion (herein called the "conversion price") shall be initially $25.71 per share of Common Stock. The conversion price shall be adjusted in certain instances as provided in paragraphs (c), (i), (j), (k) and (l) below and shall be increased in certain instances as provided in paragraph (k) below.

(b) In order to convert shares of A Preferred Stock into Common Stock, the holder thereof shall surrender at any office hereinabove mentioned the certificate or certificates therefor, duly endorsed or assigned to the Corporation or in blank, and give written notice to the Corporation at said office that such holder elects to convert such shares. Holders of shares of the A Preferred Stock surrendered for conversion during the period from the close of business on any record date for the payment of a dividend on the shares of this Series to the opening of business on the date for payment of such dividend shall be entitled to receive the dividend payable on such dividend payment date on the shares of this Series being surrendered for conversion. No payment or adjustment shall be made upon any conversion on account of any dividends accrued on the shares of A Preferred Stock surrendered for conversion or on account of any dividends on the Common Stock issued upon conversion.

Shares of this Series shall be deemed to have been converted immediately prior to the close of business on the day of the surrender of such shares for conversion in accordance with the foregoing provisions, and the person or persons

entitled to receive the Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such Common Stock at such time. As promptly as practicable on or after the conversion date, the Corporation shall issue and shall deliver at said office a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion, together with payment in lieu of any fraction of a share, as hereinafter provided, to the person or persons entitled to receive the same. In case shares of A Preferred Stock are called for redemption, the right to convert such shares shall cease and terminate at the close of business on the date fixed for redemption, unless default shall be made in payment of the redemption price.

(c) In case the conversion price in effect immediately prior to the close of business on any day shall exceed by 25 cents or more the amount determined at the close of business on such day by dividing:

(i) a sum equal to (A) 7,000,000 multiplied by $25.71 (being the initial conversion price), plus (B) the aggregate of the amounts of all consideration received by the Corporation upon the issuance of Additional Shares of Common Stock, as hereinafter defined (including, without duplication in the event of the actual receipt thereof, amounts deemed to have been received by the Corporation pursuant to the last sentence of paragraph (e) below), minus (C) the aggregate of the amounts of all dividends and other distributions which have been paid or made after December __, 1985 on Common Stock of the Corporation, other than in cash out of its earned surplus or in Common Stock of the Corporation, by

(ii) the sum of (A) 7,000,000 and (B) the number of Additional Shares of Common Stock,

the conversion price shall be reduced, effective immediately prior to the opening of business on the next succeeding day, by an amount equal to the amount by which such conversion price shall exceed the amount so determined. The foregoing amount of 25 cents (or such amount as theretofore adjusted) shall be subject to adjustment as provided in paragraphs (i), (j), (k), (l) and (n) below, and such amount (or such amount as theretofore adjusted) is referred to in such paragraphs as the "Differential Amount".

(d) The term "Additional Shares of Common Stock" as used herein shall mean all shares of Common Stock issued by the Corporation after December __, 1985 (including (A) without duplication in the event of the actual issuance thereof, shares deemed to have been issued and to be "Additional Shares of Common Stock" pursuant to paragraph (j) below and (B) shares deemed to be "Additional Shares of Common Stock" pursuant to paragraph (k) below), whether or not subsequently reacquired or retired by the Corporation, other than:

(i) shares issued upon conversion of shares of the A Preferred Stock, the B Preferred Stock, the C Preferred Stock and any other stock issued to a Future Union ESOP;

(ii) shares issued upon exercise of options granted or to be granted to employees or directors for incentive purposes pursuant to any stock option plan approved by the holders of Common Stock of the Corporation; and

(iii) shares issued by way of dividend or other distribution on shares of Common Stock excluded from the definition of Additional Shares of Common Stock by the foregoing clause (i) or (ii) or this clause (iii) or on shares of Common Stock resulting from any subdivision or combination of shares of Common Stock so excluded.

(e) In case of the issuance of Additional Shares of Common Stock for a consideration part or all or which shall be cash, the amount of the cash consideration therefor shall be deemed to be the amount of cash received by the Corporation for such shares (or, if such Additional Shares of Common Stock are offered by the Corporation for subscription, the subscription price, or if such Additional Shares of Common Stock are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price), without deducting therefrom any compensation or discount in the sale, underwriting or purchase thereof by underwriters or dealers or others performing similar services or for any expenses incurred in connection therewith. The subscription price for Additional Shares of Common Stock deemed to have been issued under paragraph (j) below shall be deemed to have been received by the Company at the time such Additional Shares of Common Stock are deemed to have been issued.

(f) In case of the issuance (otherwise than as a dividend or other distribution on any stock of the Corporation or upon conversion or exchange of other securities of the Corporation) of Additional Shares of Common Stock for a consideration part or all of which shall be other than cash, the amount of the consideration therefor other than cash shall be deemed to be the value of such consideration as reasonably determined by the Board of Directors in good faith, irrespective of the accounting treatment thereof. The reclassification of securities other than Common Stock into securities including Common Stock shall be deemed to involve the issuance for a consideration other than cash of such Common Stock immediately prior to the close of business on the date fixed for the determination of security-holders entitled to receive such Common Stock.

(g) A dividend or other distribution on any class of capital stock of the Corporation in cash or in property (including any dividend or other distribution in securities other than Common Stock) shall be deemed to have been paid or made immediately prior to the close of business on the date fixed for the determination of stockholders entitled to receive such dividend or other distribution and the amount of such dividend or other distribution in property shall be deemed to be the value of such property as of the date of the adoption of the resolution declaring such dividend or other distribution, as reasonably determined by the Board of Directors in good faith at or as of that date. In the case of any such dividend or other distribution on Common Stock which consists of securities which are convertible into or exchangeable for shares of Common Stock, such securities shall be deemed to have been issued for a consideration equal to the value thereof as so determined.

If, upon the payment of any dividend or other distribution in cash or in property (excluding Common Stock but including all other securities), outstanding shares of Common Stock are cancelled or required to be surrendered for cancellation, on a pro rata basis, the excess of the number of shares of Common Stock outstanding immediately prior thereto over the number to be outstanding immediately thereafter (less that portion of such excess attributable to the cancellation of shares excluded from the definition of Additional Shares of Common Stock by clause (i), (ii) or (iii) of paragraph (d) above), shall be deducted from the sum computed pursuant to clause (ii) of paragraph (c) above for the purposes of all determinations under such paragraph (c) made immediately prior to the close of business on the date fixed for the

determination of stockholders entitled to receive such dividend or other distribution and at any time thereafter.

The reclassification (including any reclassification upon a consolidation or merger in which the Corporation is the continuing corporation) of Common Stock into securities including other than Common Stock shall be deemed to involve (A) a distribution on Common Stock of such securities other than Common Stock made immediately prior to the close of business on the effective date of the reclassification, and (B) a combination or subdivision, as the case may be, of the number of shares of Common Stock outstanding immediately prior to such reclassification into the number of shares of Common Stock outstanding immediately thereafter.

The issuance by the Corporation of rights or warrants to subscribe for or purchase securities of the Corporation shall not be deemed to be a dividend or distribution of any kind.

(h) In case of the issuance of Additional Shares of Common Stock upon conversion or exchange of other securities of the Corporation, the amount of the consideration received by the Corporation for such Additional Shares of Common Stock shall be deemed to be the total of (A) the amount of the consideration, if any, received by the Corporation upon the issuance of such other securities, plus (B) the amount of the consideration, if any, other than such other securities, received by the Corporation (except in adjustment of interest or dividends) upon such conversion or exchange. In determining the amount of the consideration received by the Corporation upon the issuance of such other securities, (i) except as otherwise provided in the following clauses (ii) and (iii), the amount of the consideration in cash and other than cash shall be determined pursuant to (X) the first sentence of paragraph (e) above and (Y) paragraph (f) above (in each case as if all references therein to "Additional Shares of Common Stock", "shares" or "Common Stock" were referenced to such other securities), (ii) any such other securities issued by way of dividend or other distribution on any class of capital stock of the Corporation other than Common Stock shall be deemed to have been issued without consideration, (iii) the amount of the consideration for any such other securities issued by way of dividend or other distribution on Common Stock shall be determined pursuant to paragraph (g) above, and (iv) if securities of the same class or series of a class as such other securities were issued for different amounts of consideration, or if some were issued for no consideration, then the amount of

the consideration received by the Corporation upon the issuance of each of the securities of such class or series, as the case may be, shall be deemed to be the average amount of the consideration received by the Corporation upon the issuance of all the securities of such class or series, as the case may be.

(i) In case Additional Shares of Common Stock are issued as a dividend or other distribution on any class of capital stock of the Corporation, the conversion price and the Differential Amount in effect at the opening of business on the day following the date fixed for the determination of stockholders entitled to receive such dividend or other distribution shall be reduced by multiplying each of them by a fraction of which the numerator shall be the number of shares of Common Stock outstanding at the close of business on the date fixed for such determination and the denominator shall be the sum of such number of shares and the total number of shares constituting such dividend or other distribution, such reductions to become effective immediately after the opening of business on the day following the date fixed for such determination. In the event of any such dividend or other distribution, the Additional Shares of Common Stock issued in connection therewith shall be deemed to have been issued immediately after the opening of business on the day following the date fixed for such determination and without consideration. For the purposes of this paragraph (i), the number of shares of Common Stock at any time outstanding shall not include shares held in the treasury of the Corporation but shall include shares issuable in respect of scrip certificates issued in lieu of fractions of shares of Common Stock (other than shares of Common Stock which, upon issuance, would not constitute Additional Shares of Common Stock). The Corporation will not pay any dividend or make any distribution on shares of Common Stock held in the treasury of the Corporation.

(j) In case the Corporation shall issue rights or warrants to all holders of its Common Stock entitling them to subscribe for or purchase shares of Common Stock at a price per share less than the conversion price in effect at the opening of business on the day following the date fixed for the determination of stockholders entitled to receive such rights or warrants, such conversion price and the Differential Amount shall be reduced by multiplying each of them by a fraction of which the numerator shall be the number of shares of Common Stock outstanding at the close of business on the date fixed for such determination plus the number of shares of Common Stock which the aggregate of the offering price of the total number of shares of Common Stock so offered for subscription or

purchase would purchase at such conversion price and the denominator shall be the number of shares of Common Stock outstanding at the close of business on the date fixed for such determination plus the number of shares of Common Stock so offered for subscription or purchase, such reductions to become effective immediately after the opening of business on the day following the date fixed for such determination. In the event of any such issuance of rights or warrants, the shares of Common Stock issuable in connection therewith shall be deemed to be "Additional Shares of Common Stock" and to have been issued immediately after the opening of business on the day following the date fixed for such determination. For the purposes of this paragraph (j), the number of shares of Common Stock at any time outstanding shall not include shares held in the treasury of the Corporation but shall include shares issuable in respect of scrip certificates issued in lieu of fractions of shares of Common Stock (other than shares of Common Stock which, upon issuance, would not constitute Additional Shares of Common Stock). The Corporation will not issue any rights or warrants in respect of shares of Common Stock held in the treasury of the Corporation.

(k) In case outstanding shares of Common Stock shall be subdivided into a greater number of shares of Common Stock, the conversion price and the Differential Amount in effect at the opening of business on the day following the day upon which such subdivision becomes effective shall each be proportionately reduced, and conversely, in case outstanding shares of Common Stock shall each be combined into a smaller number of shares of Common Stock, the conversion price and the Differential Amount in effect at the opening of business on the day following the day upon which such combination becomes effective shall each be proportionately increased, such reductions or increases, as the case may be, to become effective immediately after the opening of business on the day following the day upon which such subdivision or combination becomes effective. In the event of any such subdivision, the number of shares of Common Stock outstanding immediately thereafter, to the extent of the excess thereof over the number outstanding immediately prior thereto (less that portion of such excess attributable to the subdivision of shares excluded from the definition of Additional Shares of Common Stock by clause (i), (ii) or (iii) of paragraph (d) above), shall be deemed to be "Additional Shares of Common Stock" and to have been issued immediately after the opening of business on the day following the day upon which such subdivision shall have become effective and without consideration. In the event of any such combination, the excess of the number of shares of

(b) In order to convert shares of A Preferred Stock into Common Stock, the holder thereof shall surrender at any office hereinabove mentioned the certificate or certificates therefor, duly endorsed or assigned to the Corporation or in blank, and give written notice to the Corporation at said office that such holder elects to convert such shares. Holders of shares of the C Preferred Stock surrendered for conversion during the period from the close of business on any record date for the payment of a dividend on the shares of this Series to the opening of business on the date for payment of such dividend shall be entitled to receive the dividend payable on such dividend payment date on the shares of this Series being surrendered for conversion. No payment or adjustment shall be made upon any conversion on account of any dividends accrued on the shares of C Preferred Stock surrendered for conversion or on account of any dividends on the Common Stock issued upon conversion.

Shares of this Series shall be deemed to have been converted immediately prior to the close of business on the day of the surrender of such shares for conversion in accordance with the foregoing provisions, and the person or persons entitled to receive the Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such Common Stock at such time. As promptly as practicable on or after the conversion date, the Corporation shall issue and shall deliver at said office a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion, together with payment in lieu of any fraction of a share, as hereinafter provided, to the person or persons entitled to receive the same. In case shares of C Preferred Stock are called for redemption, the right to convert such shares shall cease and terminate at the close of business on the date fixed for redemption, unless default shall be made in payment of the redemption price.

(c) In case the conversion price in effect immediately prior to the close of business on any day shall exceed by 25 cents or more the amount determined at the close of business on such day by dividing:

(i) a sum equal to (A) 6,845,000 multiplied by $6.75 (being the initial conversion price), plus (B) the aggregate of the amounts of all consideration received by the Corporation upon the issuance of Additional Shares of Common Stock, as hereinafter defined (including, without duplication in the event

Common Stock outstanding immediately prior thereto over the number outstanding immediately thereafter (less that portion of such excess attributable to the combination of shares excluded from the definition of Additional Shares of Common Stock by clause (i), (ii) or (iii) of paragraph (d) above) shall be deducted from the sum computed pursuant to clause (ii) of paragraph (c) above for the purposes of all determinations under such paragraph (c) made on any day after the day upon which such combination becomes effective. Shares of Common Stock held in the treasury of the Corporation and shares issuable in respect of scrip certificates issued in lieu of fractions of shares of Common Stock (other than shares of Common Stock which, upon issuance, would not constitute Additional Shares of Common Stock) shall be considered outstanding for the purposes of this paragraph (k).

(l) In case of any consolidation of the Corporation with, or merger of the Corporation into, any other corporation (other than a consolidation or merger in which the Corporation is the continuing corporation), or in case of any conveyance or transfer of the property and assets of the Corporation substantially as an entirety, each share of this Series of Preferred Stock shall be convertible into the number and kind of shares of stock and other securities and property receivable upon such consolidation, merger, conveyance or transfer by a holder of the number and kind of shares of the Corporation into which such shares of this Series of Preferred Stock might have been converted immediately prior to such consolidation, merger, conveyance or transfer. The above provisions shall similarly apply to successive consolidations, mergers, conveyances or transfers, but shall not apply to any merger of CMC Holding Company, Inc., into the Corporation.

(m) In case at any time or from time to time conditions arise by reason of action taken by the Corporation, which in the reasonable opinion of the Board of Directors are not adequately covered by the provisions contained in paragraphs (c) through (l) and (n), and which might adversely affect the conversion rights of the holders of this Series of Preferred Stock, the Board of Directors shall appoint a firm of independent certified public accountants of recognized national standing, who shall give their opinion upon the adjustment, if any (on a basis consistent with the standards established in the provisions contained herein), necessary with respect to the conversion price so as to preserve without dilution the conversion rights of holders of this Series of Preferred Stock. Upon receipt of such opinion, the Board of Directors shall forthwith make the adjustments described therein.

(n) The Corporation may make such reductions in the conversion price and the Differential Amount, in addition to those required by the foregoing paragraphs, as it considers to be advisable in order that any event treated for Federal income tax purposes as a dividend of stock or stock rights shall not be taxable to the recipients.

(o) Whenever the conversion price is adjusted as herein provided:

(i) the Corporation shall compute the adjusted conversion price in accordance with this Section (7) and shall prepare a certificate signed by the President and Treasurer of the Corporation setting forth the adjusted conversion price and showing in reasonable detail the facts upon which such adjustment is based, including a statement of the consideration received or to be received by the Corporation for, and the amount of, any Additional Shares of Common Stock issued since the last such adjustment, and such certificate shall forthwith be filed with the Transfer Agent or Agents for this Series; and

(ii) a notice stating that the conversion price has been adjusted and setting forth the adjusted conversion price shall forthwith be required, and as soon as practicable after it is required, such notice shall be mailed to the holders of record of the outstanding shares of this Series; provided, however, that if within 10 days after the completion of mailing such a notice, an additional notice is required, such additional notice shall be deemed to be required pursuant to this clause (ii) as of the opening of business on the tenth day after such completion of mailing and shall set forth the conversion price as adjusted at such opening of business, and, upon the completion of mailing of such additional notice, no other notice need be given of any adjustment in the conversion price occurring at or prior to such opening of business and after the time that the next preceding notice given by mail became required.

(p) In case:

(i) the Corporation shall declare a dividend (or any other distribution) on its Common Stock

payable otherwise than in cash out of its earned surplus; or

(ii) the Corporation shall authorize the granting to the holders of its Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any other rights; or

(iii) of any reclassification of the capital stock of the Corporation (other than a subdivision or combination of its outstanding shares of Common Stock), or of any consolidation or merger to which the Corporation is a party and for which approval of any stockholders of the Corporation is required, or of the sale or transfer of all or substantially all of the assets of the Corporation; or

(iv) of the voluntary or involuntary dissolution, liquidation or winding up of the Corporation, then the Corporation shall cause to be mailed to any Transfer Agent or Agents for this Series and to the holders of record of the outstanding shares of this Series, at least 20 days prior to the applicable record date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, rights or warrants, or if a record is not to be taken, the date as of which the holders of Common Stock of record to be entitled to such dividend, distribution, rights or warrants are to be determined, or (y) the date on which such reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up is expected to become effective, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up.

(q) The Corporation shall at all times reserve and keep available, free from pre-emptive rights, out of its authorized but unissued Common Stock, for the purpose of effecting the conversion of the shares of this Series, the full number of shares of Common Stock then deliverable upon the conversion of all shares of this Series then outstanding.

(r) No fractional shares of Common Stock shall be issued upon conversion, but, instead of any fraction of a share which would otherwise be issuable, the Corporation shall pay a cash adjustment in respect of such fraction in an amount equal to the same fraction of the fair market value per share of Common Stock (as reasonably determined by the Board of Directors in good faith) at the close of business on the day of conversion.

(s) The Corporation shall pay all transfer, documentary stamp or other similar transactional taxes attributable to the issuance or delivery of shares of Common Stock upon conversion of any shares of this Series of Preferred Stock.

(t) For the purpose of this Section (7), the term "Common Stock" shall include any stock of any class of the Corporation which has no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation and which is not subject to redemption by the Corporation. However, shares issuable on conversion of shares of this Series shall include only shares of the class designated as Common Stock of the Corporation as of December __, 1985, or shares of any class or classes resulting from any reclassification thereof and which have no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation and which are not subject to redemption by the Corporation; provided that if at any time there shall be more than one such resulting class, the shares of each such class then so issuable shall be substantially in the proportion which the total number of shares of such class resulting from all such reclassifications bears to the total number of shares of all such classes resulting from all such reclassifications.

(8) Stock to be Nonassessable. Upon issuance of any shares of A Preferred Stock, and payment to the Corporation of the stated value thereof, such shares shall be fully paid and nonassessable, and such shares of Common Stock as shall be issuable upon conversion of A Preferred Stock shall be fully paid and nonassessable when the same shall be issued.

16.5% CUMULATIVE CONVERTIBLE B PREFERRED STOCK

(1) Designation. 100,000 shares of the Preferred Stock, having a par value of $100.00 per share, of the Corporation are hereby constituted as a series of Preferred Stock, having a par value of $100.00 per share, designated as "16.5% Cumulative Convertible B Preferred Stock" (herein called "B Preferred Stock").

(2) Dividends. The holders of shares of B Preferred Stock shall be entitled to receive, in preference to any stock junior in priority as to dividends, dividends, when and as declared by the Board of Directors, payable in shares of the Corporation's D Preferred Stock at the annual rate of 0.165 shares of D Preferred Stock per share, and no more, provided that such dividends shall not be paid (but shall continue to accrue) through and including December 31, 1990, if all dividends on the Corporation's A Preferred Stock and E Preferred Stock shall not have been paid in full. The Corporation may issue scrip certificates in lieu of issuing certificates for fractional shares in connection with any dividend paid in D Preferred Stock. The dividends on shares of B Preferred Stock shall be payable quarterly on the first day of January, April, July and October in each year, commencing January 1, 1986, to holders of record on such respective dates, not exceeding 30 days preceding the payment date thereof, as may be determined by the Board of Directors in advance of the payment of each particular dividend. No dividends shall be declared on any other series or class or classes of stock ranking on a parity with the B Preferred Stock as to dividends in respect of any quarter-yearly dividend period unless there shall likewise be or have been declared on all shares of B Preferred Stock at the time outstanding like dividends for all quarter-yearly periods coinciding with or ending before such quarter-yearly period, ratably in proportion to the respective annual dividend rates per annum fixed therefor. Dividends on C Preferred Stock and D Preferred Stock and, after December 31, 1990, dividends on A Preferred Stock and E Preferred Stock shall be payable on a parity with dividends on B Preferred Stock. Dividends shall be cumulative and will accrue on each share of B Preferred Stock whether or not earned or declared, and whether or not there are from time to time funds legally available therefor, from the date of issue thereof except that dividends on shares of B Preferred Stock issued after the first date of issue of any shares of B Preferred Stock shall accrue from such first date of issue, or from the most recent dividend payment due in the case of shares issued after the initial dividend payment date. No interest, or sum of money in lieu of

interest, shall be payable in respect of any dividend payment or payments which may be in arrears. Dividends payable on the B Preferred Stock for any period less than a full quarter shall be computed on the basis of a 360-day year.

If in any quarter-yearly dividend period stock dividends at the full annual rate set forth above in this Section (2) shall not have been declared and paid or set apart for payment on all outstanding shares of B Preferred Stock for such quarter-yearly dividend period and all preceding quarter-yearly dividend periods from and after the first day from which dividends are cumulative, then, until the aggregate deficiency shall be declared and fully paid or set apart for payment, the Corporation shall not (i) declare or pay or set apart for payment any dividends or make any other distribution on the Common Stock or any other capital stock of the Corporation ranking junior to the B Preferred Stock with respect to the payment of dividends or distribution of assets on liquidation, dissolution or winding up of the Corporation (the Common Stock and such other stock being herein referred to as "Junior Stock") or (ii) make any payment on account of the purchase, redemption or other retirement of any Junior Stock, except for purchases of Junior Stock held by or for any retirement plan, The Employee Stock Ownership Plan of Crucible Materials Corporation, The Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation or any employee stock ownership plan (as defined in Section 4975 of the Internal Revenue Code of 1954, as amended) for employees of the Corporation or a subsidiary of the Corporation subject to a collective bargaining agreement, or any participant therein or beneficiary thereof to the extent of any Junior Stock distributed by any of the aforementioned plans or fund, and except for purchases of Junior Stock held by [management in accordance with Colt/Management agreement].

(3) Liquidation Preference. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, before any payment or distribution of the assets of the Corporation (whether capital or surplus) shall be made to or set apart for the holders of any series or class or classes of stock of the Corporation ranking junior to the B Preferred Stock upon liquidation, dissolution or winding up, the holders of the shares of the B Preferred Stock shall be entitled to receive, in cash, $100 per share plus an amount equal to all dividends accrued and unpaid thereon to the date of final distribution to such holders, whether or not earned or declared; but such holders shall not be entitled to any further payment. If, upon any liquidation,

dissolution or winding up of the Corporation, the assets of the Corporation, or proceeds thereof, distributable among the holders of the shares of the B Preferred Stock shall be insufficient to pay in full the preferential amount aforesaid and liquidating payment on any other Preferred Stock ranking as to liquidation, dissolution or winding up, on a parity with the B Preferred Stock, then such assets, or the proceeds thereof, shall be distributed among the holders of B Preferred Stock and any such other Preferred Stock ratably in accordance with the respective amounts which would be payable upon liquidation, dissolution or winding up on such shares of B Preferred Stock and any such other Preferred Stock if all amounts payable thereon were paid in full. For the purposes of this Section (3), a consolidation or merger of the Corporation with one or more corporations shall not be deemed to be a liquidation, dissolution or winding up, voluntary or involuntary.

Subject to the rights of the holders of any series or class or classes of stock ranking on a parity with or prior to the B Preferred Stock upon liquidation, dissolution or winding up, upon any liquidation, dissolution or winding up of the Corporation, after payment shall have been made in full to the B Preferred Stock as provided in this Section (3), but not prior thereto, any other series or class or classes of stock ranking junior to the B Preferred Stock upon liquidation shall, subject to the respective terms and provisions (if any) applying thereto, be entitled to receive any and all assets remaining to be paid or distributed, and the B Preferred Stock shall not be entitled to share therein.

For the purposes of this Section (3), the B Preferred Stock ranks on a parity with the A Preferred Stock, the C Preferred Stock, the D Preferred Stock and the E Preferred Stock upon liquidation.

(4) Redemption.

(a) The B Preferred Stock may not be redeemed prior to January 1, 1994. Thereafter, the Corporation, at its option, may redeem shares of the B Preferred Stock, as a whole or in part, at any time or from time to time at a redemption price of $100 per share payable in cash, plus accrued and unpaid dividends thereon to the date fixed for redemption payable in cash (the sum of $100 together with such accrued and unpaid dividends being referred to herein as the "Redemption Price").

(b) In the event the Corporation shall redeem shares of B Preferred Stock, notice of such redemption shall be given by first class mail, postage prepaid, mailed not less than 30 nor more than 60 days prior to the redemption date, to each holder of record of the shares to be redeemed, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (1) the redemption date; (2) the number of shares of B Preferred Stock to be redeemed and, if less than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder; (3) the Redemption Price; (4) the place or places where certificates for such shares are to be surrendered for payment of the Redemption Price; and (5) that dividends on the shares to be redeemed will cease to accrue on such redemption date. Notice having been mailed as aforesaid, from and after the redemption date (unless default shall be made by the Corporation in providing money for the indefeasible payment of the Redemption Price) dividends on the shares of the B Preferred Stock so called for redemption shall cease to accrue, and said shares shall no longer be deemed to be outstanding, and all rights of the holders thereof as stockholders of the Corporation (except the right to receive from the Corporation the Redemption Price) shall cease. The Corporation's obligation to provide moneys in accordance with the preceding sentence shall be deemed fulfilled if, on or before the redemption date, the Corporation shall deposit with a bank or trust company having an office in the City of Pittsburgh, Pennsylvania, or the Borough of Manhattan, City of New York, having a capital and surplus of at least $50,000,000, funds necessary for such redemption, in trust, with irrevocable instructions that such funds be applied to the redemption of the shares of B Preferred Stock so called for redemption. Any interest accrued on such funds shall be paid to the Corporation from time to time. Any funds so deposited and unclaimed at the end of six years from such redemption date shall be released or repaid to the Corporation, after which the holder or holders of such shares of B Preferred Stock so called for redemption shall look only to the Corporation for payment of the Redemption Price.

Upon surrender in accordance with said notice of the certificates for any shares so redeemed (properly endorsed or assigned for transfer, if the Board of Directors of the Corporation shall so require and the notice shall so state), such shares shall be redeemed by the Corporation at the Redemption Price. If less than all the outstanding shares of B Preferred Stock are to be redeemed, shares to be redeemed shall be selected by the Corporation from outstanding shares of B

Preferred Stock not previously called for redemption by lot or pro rata (as nearly as may be) or by any other method determined by the Corporation in its sole discretion to be equitable. If less than all of the outstanding shares represented by any surrendered certificate are to be redeemed, a new certificate representing the unredeemed shares shall be issued without charge.

In no event shall the Corporation redeem less than all the outstanding shares of B Preferred Stock pursuant to subsection (a) of this Section (4) unless full cumulative dividends shall have been paid or declared and set apart for payment upon all outstanding shares of B Preferred Stock for all past dividend periods.

(5) Shares to be Retired. All shares of B Preferred Stock redeemed or purchased by the Corporation or converted shall be retired and cancelled and shall be restored to the status of authorized but unissued shares of Preferred Stock, without designation as to series, and may thereafter be issued, but not as shares of B Preferred Stock.

(6) Voting. Except as expressly provided hereinafter in this Section (6) or as otherwise from time to time required by law, the B Preferred Stock shall have no voting rights. Whenever, at any time or times, dividends payable on the B Preferred Stock shall be in arrears in an amount equal to at least six full quarterly dividends on the B Preferred Stock at the time outstanding, the holders of the outstanding B Preferred Stock shall have the right, voting together as a class with holders of shares of all other series of Preferred Stock upon which like voting rights have been conferred and are exercisable, to elect a single director of the Corporation at the Corporation's next annual meeting of stockholders and at each subsequent annual meeting of stockholders. At elections for such directors, each holder of B Preferred Stock shall be entitled to one vote for each share held (the holders of shares of any other series of Preferred Stock being entitled to such number of votes, if any, for each share of stock held as may be granted to them). Upon the vesting of such right of the holders of the B Preferred Stock, the maximum authorized number of members of the Board of Directors shall automatically be increased by one and the vacancy so created shall be filled by the vote of the holders of the outstanding B Preferred Stock, together with the holders of shares of all other series of Preferred Stock, as hereinabove set forth.

Upon any termination of the right of the holders of the Preferred Stock to vote for directors as herein provided, the term of office of the director then in office elected by the holders of the Preferred Stock voting as a class shall terminate immediately. The right of the holders of this series of Preferred Stock to vote for directors shall terminate immediately upon all dividend averages being cured with respect to this series of Preferred Stock. If the office of any director elected by the holders of the Preferred Stock voting as a class becomes vacant by reason of death, resignation, retirement, disqualification, removal from office or otherwise, the holders of the series of Preferred Stock which had the right to elect such director may choose a successor who shall hold office for the unexpired term in respect of which such vacancy occurred. Whenever the term of office of the director elected by the holders of the Preferred Stock shall end and the special voting powers vested in the holders of the Preferred Stock as provided in this Section (6) shall have expired, the number of directors shall be such number as may be provided for in the By-Laws irrespective of any increase made pursuant to the provisions of this Section (6).

So long as any shares of B Preferred Stock remain outstanding, the consent of the holders of at least two-thirds of the shares of B Preferred Stock outstanding at the time (voting separately as a class with all other series of Preferred Stock ranking on a parity with B Preferred Stock either as to dividends or the distribution of assets upon liquidation, dissolution or winding up and upon which like voting rights have been conferred and are exercisable) given in person or by proxy, either in writing or at any special or annual meeting called for the purpose, shall be necessary to permit, effect or validate any one or more of the following:

(a) The authorization, creation or issuance, or any increase in the authorized or issued amount, of any class or series of stock (including any class or series of preferred stock) ranking prior to or on a parity with [as those terms are hereinafter defined in this Section (6)] the B Preferred Stock, except for any class or series of stock to be issued to any Future Union ESOP; or

(b) The amendment, alteration or repeal, whether by merger, consolidation or otherwise, of any of the provisions of the Certificate of Incorporation or of these resolutions, or any merger or consolidation, which would adversely affect any

right, preference, privilege or voting power of the B Preferred Stock or of the holders thereof; provided, however, that any increase in the amount of authorized Preferred Stock or the creation and issuance of other series of Preferred Stock, in each case ranking on a parity with or junior to the B Preferred Stock with respect to the payment of dividends and the distribution of assets upon liquidation, dissolution or winding up, shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers; or

(c) The sale, transfer or lease of all or substantially all of the properties and assets of the Corporation outside its ordinary course of business; provided, however, that nothing herein shall require the consent of the holders of the B Preferred Stock for or in respect of the creation of any mortgage, pledge or other lien upon all or any part of the assets of the Corporation.

The foregoing voting provisions shall not apply if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, all outstanding shares of the B Preferred Stock shall have been redeemed or sufficient funds shall have been deposited in trust to effect such redemption.

Any class or classes of stock of the Corporation shall be deemed to rank:

(i) prior to the B Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up to the extent that the holders of such class shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in preference or priority to the holders of the B Preferred Stock; and

(ii) on a parity with the B Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up, whether or not the dividend rates, dividend payment dates, or redemption or liquidation prices per share thereof be different from those of the B Preferred Stock, if the holders of such class and the B Preferred Stock shall be entitled to the receipt of dividends or of amounts

distributable upon liquidation, dissolution or winding up, as the case may be, in proportion to their respective dividend rates or liquidation prices, without preference or priority one over the other.

The B Preferred Stock, C Preferred Stock, D Preferred Stock and E Preferred Stock shall be deemed to rank on a parity with each other for all purposes.

(7) Conversion. The holders of shares of B Preferred Stock shall have the right, at their option, to convert any or all of such shares into fully paid and nonassessable shares of Common Stock of the Corporation at any time on and subject to the following terms and conditions:

(a) The shares of B Preferred Stock shall be convertible at the office of the Transfer Agent, and at such other office or offices, if any, as the Board of Directors may designate, into shares (calculated as to each conversion to the nearest 1/100 of a share) of Common Stock of the Corporation, at the conversion price, determined as hereinafter provided, in effect at the time of conversion, each share of B Preferred Stock being taken at $100 for the purpose of such conversion. The price at which shares of Common Stock shall be delivered upon conversion (herein called the "conversion price") shall be initially $3.89 per share of Common Stock. The conversion price shall be adjusted in certain instances as provided in paragraphs (c), (i), (j), (k) and (l) below and shall be increased in certain instances as provided in paragraph (k) below.

(b) In order to convert shares of A Preferred Stock into Common Stock, the holder thereof shall surrender at any office hereinabove mentioned the certificate or certificates therefor, duly endorsed or assigned to the Corporation or in blank, and give written notice to the Corporation at said office that such holder elects to convert such shares. Holders of shares of the B Preferred Stock surrendered for conversion during the period from the close of business on any record date for the payment of a dividend on the shares of this Series to the opening of business on the date for payment of such dividend shall be entitled to receive the dividend payable on such dividend payment date on the shares of this Series being surrendered for conversion. No payment or adjustment shall be made upon any conversion on account of any dividends accrued on the shares of B Preferred Stock surrendered for conversion or on account of any dividends on the Common Stock issued upon conversion.

Shares of this Series shall be deemed to have been converted immediately prior to the close of business on the day of the surrender of such shares for conversion in accordance with the foregoing provisions, and the person or persons entitled to receive the Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such Common Stock at such time. As promptly as practicable on or after the conversion date, the Corporation shall issue and shall deliver at said office a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion, together with payment in lieu of any fraction of a share, as hereinafter provided, to the person or persons entitled to receive the same. In case shares of B Preferred Stock are called for redemption, the right to convert such shares shall cease and terminate at the close of business on the date fixed for redemption, unless default shall be made in payment of the redemption price.

(c) In case the conversion price in effect immediately prior to the close of business on any day shall exceed by 25 cents or more the amount determined at the close of business on such day by dividing:

(i) a sum equal to (A) 5,211,000 multiplied by $3.89 (being the initial conversion price), plus (B) the aggregate of the amounts of all consideration received by the Corporation upon the issuance of Additional Shares of Common Stock, as hereinafter defined (including, without duplication in the event of the actual receipt thereof, amounts deemed to have been received by the Corporation pursuant to the last sentence of paragraph (e) below), minus (C) the aggregate of the amounts of all dividends and other distributions which have been paid or made after December 31, 1985 on Common Stock of the Corporation, other than in cash out of its earned surplus or in Common Stock of the Corporation, by

(ii) the sum of (A) 5,211,000 and (B) the number of Additional Shares of Common Stock,

the conversion price shall be reduced, effective immediately prior to the opening of business on the next succeeding day, by an amount equal to the amount by which such conversion price shall exceed the amount so determined. The foregoing amount of 25 cents (or such amount as theretofore adjusted) shall be subject to adjustment as provided in paragraphs (i), (j), (k)

and (l) below, and such amount (or such amount as theretofore adjusted) is referred to in such paragraphs as the "Differential Amount".

(d) Paragraphs (d) through (t), inclusive, of Section (7) of the terms and conditions of the A Preferred Stock are hereby incorporated in this Section (7) as if set forth in full herein as paragraphs (d) through (t), inclusive, of this Section (7).

(8) Stock to be Nonassessable. Upon issuance of any shares of B Preferred Stock, and payment to the Corporation of the stated value thereof, such shares shall be fully paid and nonassessable, and such shares of Common Stock as shall be issuable upon conversion of B Preferred Stock shall be fully paid and nonassessable when the same shall be issued.

16.5% CUMULATIVE CONVERTIBLE C PREFERRED STOCK

(1) Designation. 63,000 shares of the Preferred Stock, having a par value of $100.00 per share, of the Corporation are hereby constituted as a series of Preferred Stock, having a par value of $100.00 per share, designated as "16.5% Cumulative Convertible C Preferred Stock" (herein called "C Preferred Stock").

(2) Dividends. The holders of shares of C Preferred Stock shall be entitled to receive, in preference to any stock junior in priority as to dividends, dividends, when and as declared by the Board of Directors, payable in shares of the Corporation's D Preferred Stock at the annual rate of 0.165 shares of D Preferred Stock per share, and no more, provided that such dividends shall not be paid (but shall continue to accrue) through and including December 31, 1990, if all dividends on the Corporation's A Preferred Stock and E Preferred Stock shall not have been paid in full. The Corporation may issue scrip certificates in lieu of issuing certificates for fractional shares in connection with any dividend paid in D Preferred Stock. The dividends on shares of C Preferred Stock shall be payable quarterly on the first day of January, April, July and October in each year, commencing January 1, 1986, to holders of record on such respective dates, not exceeding 30 days preceding the payment date thereof, as may be determined by the Board of Directors in advance of the payment of each particular dividend. No dividends shall be declared on any other series or class or classes of stock ranking on a parity with the C Preferred Stock as to dividends

in respect of any quarter-yearly dividend period unless there shall likewise be or have been declared on all shares of C Preferred Stock at the time outstanding like dividends for all quarter-yearly periods coinciding with or ending before such quarter-yearly period, ratably in proportion to the respective annual dividend rates per annum fixed therefor. Dividends on B Preferred Stock and D Preferred Stock and, after December 31, 1990, dividends on A Preferred Stock and E Preferred Stock shall be payable on a parity with dividends on C Preferred Stock. Dividends shall be cumulative and will accrue on each share of C Preferred Stock whether or not earned or declared, and whether or not there are from time to time funds legally available therefor, from the date of issue thereof except that dividends on shares of C Preferred Stock issued after the first date of issue of any shares of C Preferred Stock shall accrue from such first date of issue, or from the most recent dividend payment due in the case of shares issued after the initial dividend payment date. No interest, or sum of money in lieu of interest, shall be payable in respect of any dividend payment or payments which may be in arrears. Dividends payable on the C Preferred Stock for any period less than a full quarter shall be computed on the basis of a 360-day year.

If in any quarter-yearly dividend period stock dividends at the full annual rate set forth above in this Section (2) shall not have been declared and paid or set apart for payment on all outstanding shares of C Preferred Stock for such quarter-yearly dividend period and all preceding quarter-yearly dividend periods from and after the first day from which dividends are cumulative, then, until the aggregate deficiency shall be declared and fully paid or set apart for payment, the Corporation shall not (i) declare or pay or set apart for payment any dividends or make any other distribution on the Common Stock or any other capital stock of the Corporation ranking junior to the C Preferred Stock with respect to the payment of dividends or distribution of assets on liquidation, dissolution or winding up of the Corporation (the Common Stock and such other stock being herein referred to as "Junior Stock") or (ii) make any payment on account of the purchase, redemption or other retirement of any Junior Stock, except for purchases of Junior Stock held by or for The Employee Stock Ownership Plan of Crucible Materials Corporation, The Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation or any employee stock ownership plan (as defined in Section 4975 of the Internal Revenue Code of 1954, as amended) for employees of the Corporation or a subsidiary of the Corporation subject to a collective bargaining agreement, or any participant therein or

beneficiary thereof to the extent of any Junior Stock distributed by any of the aforementioned plans or fund, and except for purchases of Junior Stock held by [management in accordance with Colt/Management agreement].

(3) Liquidation Preference. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, before any payment or distribution of the assets of the Corporation (whether capital or surplus) shall be made to or set apart for the holders of any series or class or classes of stock of the Corporation ranking junior to the C Preferred Stock upon liquidation, dissolution or winding up, the holders of the shares of the C Preferred Stock shall be entitled to receive, in cash, $100 per share plus an amount equal to all dividends accrued and unpaid thereon to the date of final distribution to such holders, whether or not earned or declared; but such holders shall not be entitled to any further payment. If, upon any liquidation, dissolution or winding up of the Corporation, the assets of the Corporation, or proceeds thereof, distributable among the holders of the shares of the C Preferred Stock shall be insufficient to pay in full the preferential amount aforesaid and liquidating payment on any other Preferred Stock ranking as to liquidation, dissolution or winding up, on a parity with the C Preferred Stock, then such assets, or the proceeds thereof, shall be distributed among the holders of C Preferred Stock and any such other Preferred Stock ratably in accordance with the respective amounts which would be payable upon liquidation, dissolution or winding up on such shares of C Preferred Stock and any such other Preferred Stock if all amounts payable thereon were paid in full. For the purposes of this Section (3), a consolidation or merger of the Corporation with one or more corporations shall not be deemed to be a liquidation, dissolution or winding up, voluntary or involuntary.

Subject to the rights of the holders of any series or class or classes of stock ranking on a parity with or prior to the C Preferred Stock upon liquidation, dissolution or winding up, upon any liquidation, dissolution or winding up of the Corporation, after payment shall have been made in full to the C Preferred Stock as provided in this Section (3), but not prior thereto, any other series or class or classes of stock ranking junior to the C Preferred Stock upon liquidation shall, subject to the respective terms and provisions (if any) applying thereto, be entitled to receive any and all assets remaining to be paid or distributed, and the C Preferred Stock shall not be entitled to share therein.

For the purposes of this Section (3), the C Preferred Stock ranks on a parity with the A Preferred Stock, the B Preferred Stock, the D Preferred Stock and the E Preferred Stock upon liquidation.

(4) Redemption.

(a) The C Preferred Stock may not be redeemed prior to January 1, 1994. Thereafter, the Corporation, at its option, may redeem shares of the C Preferred Stock, as a whole or in part, at any time or from time to time at a redemption price of $100 per share payable in cash, plus accrued and unpaid dividends thereon to the date fixed for redemption payable in cash (the sum of $100 together with such accrued and unpaid dividends being referred to herein as the "Redemption Price").

(b) In the event the Corporation shall redeem shares of C Preferred Stock, notice of such redemption shall be given by first class mail, postage prepaid, mailed not less than 30 nor more than 60 days prior to the redemption date, to each holder of record of the shares to be redeemed, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (1) the redemption date; (2) the number of shares of C Preferred Stock to be redeemed and, if less than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder; (3) the Redemption Price; (4) the place or places where certificates for such shares are to be surrendered for payment of the Redemption Price; and (5) that dividends on the shares to be redeemed will cease to accrue on such redemption date. Notice having been mailed as aforesaid, from and after the redemption date (unless default shall be made by the Corporation in providing money for the indefeasible payment of the Redemption Price) dividends on the shares of the C Preferred Stock so called for redemption shall cease to accrue, and said shares shall no longer be deemed to be outstanding, and all rights of the holders thereof as stockholders of the Corporation (except the right to receive from the Corporation the Redemption Price) shall cease. The Corporation's obligation to provide moneys in accordance with the preceding sentence shall be deemed fulfilled if, on or before the redemption date, the Corporation shall deposit with a bank or trust company having an office in the City of Pittsburgh, Pennsylvania, or the Borough of Manhattan, City of New York, having a capital and surplus of at least $50,000,000, funds necessary for such redemption, in trust, with irrevocable instructions that such funds be applied to the redemption of

the shares of C Preferred Stock so called for redemption. Any interest accrued on such funds shall be paid to the Corporation from time to time. Any funds so deposited and unclaimed at the end of six years from such redemption date shall be released or repaid to the Corporation, after which the holder or holders of such shares of C Preferred Stock so called for redemption shall look only to the Corporation for payment of the Redemption Price.

Upon surrender in accordance with said notice of the certificates for any shares so redeemed (properly endorsed or assigned for transfer, if the Board of Directors of the Corporation shall so require and the notice shall so state), such shares shall be redeemed by the Corporation at the Redemption Price. If less than all the outstanding shares of C Preferred Stock are to be redeemed, shares to be redeemed shall be selected by the Corporation from outstanding shares of C Preferred Stock not previously called for redemption by lot or pro rata (as nearly as may be) or by any other method determined by the Corporation in its sole discretion to be equitable. If less than all of the outstanding shares represented by any surrendered certificate are to be redeemed, a new certificate representing the unredeemed shares shall be issued without charge.

In no event shall the Corporation redeem less than all the outstanding shares of C Preferred Stock pursuant to subsection (a) of this Section (4) unless full cumulative dividends shall have been paid or declared and set apart for payment upon all outstanding shares of C Preferred Stock for all past dividend periods.

(5) Shares to be Retired. All shares of C Preferred Stock redeemed or purchased by the Corporation or converted shall be retired and cancelled and shall be restored to the status of authorized but unissued shares of Preferred Stock, without designation as to series, and may thereafter be issued, but not as shares of C Preferred Stock.

(6) Voting. Except as expressly provided hereinafter in this Section (6) or as otherwise from time to time required by law, the C Preferred Stock shall have no voting rights. Whenever, at any time or times, dividends payable on the C Preferred Stock shall be in arrears in an amount equal to at least six full quarterly dividends on the C Preferred Stock at the time outstanding, the holders of the outstanding C Preferred Stock shall have the right, voting together as a class with holders of shares of all other series

of Preferred Stock upon which like voting rights have been conferred and are exercisable, to elect a single director of the Corporation at the Corporation's next annual meeting of stockholders and at each subsequent annual meeting of stockholders. At elections for such directors, each holder of C Preferred Stock shall be entitled to one vote for each share held (the holders of shares of any other series of Preferred Stock being entitled to such number of votes, if any, for each share of stock held as may be granted to them). Upon the vesting of such right of the holders of the C Preferred Stock, the maximum authorized number of members of the Board of Directors shall automatically be increased by one and the vacancy so created shall be filled by the vote of the holders of the outstanding C Preferred Stock, together with the holders of shares of all other series of Preferred Stock, as hereinabove set forth.

Upon any termination of the right of the holders of the Preferred Stock to vote for directors as herein provided, the term of office of the director then in office elected by the holders of the Preferred Stock voting as a class shall terminate immediately. The right of the holders of this series of Preferred Stock to vote for directors shall terminate immediately upon all dividend arrearages being cured with respect to this series of Preferred Stock. If the office of any director elected by the holders of the Preferred Stock voting as a class becomes vacant by reason of death, resignation, retirement, disqualification, removal from office or otherwise, the holders of the series of Preferred Stock which had the right to elect such director may choose a successor who shall hold office for the unexpired term in respect of which such vacancy occurred. Whenever the term of office of the director elected by the holders of the Preferred Stock shall end and the special voting powers vested in the holders of the Preferred Stock as provided in this Section (6) shall have expired, the number of directors shall be such number as may be provided for in the By-Laws irrespective of any increase made pursuant to the provisions of this Section (6).

So long as any shares of C Preferred Stock remain outstanding, the consent of the holders of at least two-thirds of the shares of C Preferred Stock outstanding at the time (voting separately as a class with all other series of Preferred Stock ranking on a parity with C Preferred Stock either as to dividends or the distribution of assets upon liquidation, dissolution or winding up and upon which like voting rights have been conferred and are exercisable) given in

person or by proxy, either in writing or at any special or annual meeting called for the purpose, shall be necessary to permit, effect or validate any one or more of the following:

(a) The authorization, creation or issuance, or any increase in the authorized or issued amount, of any class or series of stock (including any class or series of preferred stock) ranking prior to or on a parity with [as those terms are hereinafter defined in this Section (6)] the C Preferred Stock, except for any class or series of stock to be issued to any Future Union ESOP; or

(b) The amendment, alteration or repeal, whether by merger, consolidation or otherwise, of any of the provisions of the Certificate of Incorporation or of these resolutions, or any merger or consolidation, which would adversely affect any right, preference, privilege or voting power of the C Preferred Stock or of the holders thereof; provided, however, that any increase in the amount of authorized Preferred Stock or the creation and issuance of other series of Preferred Stock, in each case ranking on a parity with or junior to the C Preferred Stock with respect to the payment of dividends and the distribution of assets upon liquidation, dissolution or winding up, shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers; or

(c) The sale, transfer or lease of all or substantially all of the properties and assets of the Corporation outside its ordinary course of business; provided, however, that nothing herein shall require the consent of the holders of the C Preferred Stock for or in respect of the creation of any mortgage, pledge or other lien upon all or any part of the assets of the Corporation.

The foregoing voting provisions shall not apply if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, all outstanding shares of the C Preferred Stock shall have been redeemed or sufficient funds shall have been deposited in trust to effect such redemption.

Any class or classes of stock of the Corporation shall be deemed to rank:

(i) prior to the C Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up to the extent that the holders of such class shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in preference or priority to the holders of the C Preferred Stock; and

(ii) on a parity with the C Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up, whether or not the dividend rates, dividend payment dates, or redemption or liquidation prices per share thereof be different from those of the C Preferred Stock, if the holders of such class and the C Preferred Stock shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in proportion to their respective dividend rates or liquidation prices, without preference or priority one over the other.

The B Preferred Stock, C Preferred Stock, D Preferred Stock and E Preferred Stock shall be deemed to rank on a parity with each other for all purposes.

(7) Conversion. The holders of shares of C Preferred Stock shall have the right, at their option, to convert any or all of such shares into fully paid and nonassessable shares of Common Stock of the Corporation at any time on and subject to the following terms and conditions:

(a) The shares of C Preferred Stock shall be convertible at the office of the Transfer Agent, and at such other office or offices, if any, as the Board of Directors may designate, into shares (calculated as to each conversion to the nearest 1/100 of a share) of Common Stock of the Corporation, at the conversion price, determined as hereinafter provided, in effect at the time of conversion, each share of C Preferred Stock being taken at $100 for the purpose of such conversion. The price at which shares of Common Stock shall be delivered upon conversion (herein called the "conversion price") shall be initially $6.75 per share of Common Stock. The conversion price shall be adjusted in certain instances as provided in paragraphs (c), (i), (j), (k) and (l) below and shall be increased in certain instances as provided in paragraph (k) below.

(b) In order to convert shares of A Preferred Stock into Common Stock, the holder thereof shall surrender at any office hereinabove mentioned the certificate or certificates therefor, duly endorsed or assigned to the Corporation or in blank, and give written notice to the Corporation at said office that such holder elects to convert such shares. Holders of shares of the C Preferred Stock surrendered for conversion during the period from the close of business on any record date for the payment of a dividend on the shares of this Series to the opening of business on the date for payment of such dividend shall be entitled to receive the dividend payable on such dividend payment date on the shares of this Series being surrendered for conversion. No payment or adjustment shall be made upon any conversion on account of any dividends accrued on the shares of C Preferred Stock surrendered for conversion or on account of any dividends on the Common Stock issued upon conversion.

Shares of this Series shall be deemed to have been converted immediately prior to the close of business on the day of the surrender of such shares for conversion in accordance with the foregoing provisions, and the person or persons entitled to receive the Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such Common Stock at such time. As promptly as practicable on or after the conversion date, the Corporation shall issue and shall deliver at said office a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion, together with payment in lieu of any fraction of a share, as hereinafter provided, to the person or persons entitled to receive the same. In case shares of C Preferred Stock are called for redemption, the right to convert such shares shall cease and terminate at the close of business on the date fixed for redemption, unless default shall be made in payment of the redemption price.

(c) In case the conversion price in effect immediately prior to the close of business on any day shall exceed by 25 cents or more the amount determined at the close of business on such day by dividing:

(i) a sum equal to (A) 6,845,000 multiplied by $6.75 (being the initial conversion price), plus (B) the aggregate of the amounts of all consideration received by the Corporation upon the issuance of Additional Shares of Common Stock, as hereinafter defined (including, without duplication in the event

of the actual receipt thereof, amounts deemed to have been received by the Corporation pursuant to the last sentence of paragraph (e) below), minus (C) the aggregate of the amounts of all dividends and other distributions which have been paid or made after December 31, 1985 on Common Stock of the Corporation, other than in cash out of its earned surplus or in Common Stock of the Corporation, by

(ii) the sum of (A) 6,845,000 and (B) the number of Additional Shares of Common Stock,

the conversion price shall be reduced, effective immediately prior to the opening of business on the next succeeding day, by an amount equal to the amount by which such conversion price shall exceed the amount so determined. The foregoing amount of 25 cents (or such amount as theretofore adjusted) shall be subject to adjustment as provided in paragraphs (i), (j), (k) and (l) below, and such amount (or such amount as theretofore adjusted) is referred to in such paragraphs as the "Differential Amount".

(d) Paragraphs (d) through (t), inclusive, of Section (7) of the terms and conditions of the A Preferred Stock are hereby incorporated in this Section (7) as if set forth in full herein as paragraphs (d) through (t), inclusive, of this Section (7).

(8) Stock to be Nonassessable. Upon issuance of any shares of C Preferred Stock, and payment to the Corporation of the stated value thereof, such shares shall be fully paid and nonassessable, and such shares of Common Stock as shall be issuable upon conversion of C Preferred Stock shall be fully paid and nonassessable when the same shall be issued.

16.5% CUMULATIVE D PREFERRED STOCK

(1) Designation. 700,000 shares of the Preferred Stock, having a par value of $100.00 per share, of the Corporation are hereby constituted as a series of Preferred Stock, having a par value of $100.00 per share, designated as "16.5% Cumulative D Preferred Stock" (herein called "D Preferred Stock").

(2) Dividends. The holders of shares of D Preferred Stock shall be entitled to receive, in preference to any stock junior in priority as to dividends, dividends, when and as

declared by the Board of Directors, payable in additional shares of the Corporation's D Preferred Stock at the annual rate of 0.165 shares of D Preferred Stock per share, and no more, provided that such dividends shall not be paid (but shall continue to accrue) through and including December 31, 1990, if all dividends on the Corporation's A Preferred Stock and E Preferred Stock shall not have been paid in full. The Corporation may issue scrip certificates in lieu of issuing certificates for fractional shares in connection with any dividend paid in D Preferred Stock. The dividends on shares of D Preferred Stock shall be payable quarterly on the first day of January, April, July and October in each year, commencing April 1, 1986, to holders of record on such respective dates, not exceeding 30 days preceding the payment date thereof, as may be determined by the Board of Directors in advance of the payment of each particular dividend. No dividends shall be declared on any other series or class or classes of stock ranking on a parity with the D Preferred Stock as to dividends in respect of any quarter-yearly dividend period unless there shall likewise be or have been declared on all shares of D Preferred Stock at the time outstanding like dividends for all quarter-yearly periods coinciding with or ending before such quarter-yearly period, ratably in proportion to the respective annual dividend rates per annum fixed therefor. Dividends on B Preferred Stock and C Preferred Stock and, after December 31, 1990, dividends on A Preferred Stock and E Preferred Stock shall be payable on a parity with dividends on D Preferred Stock. Dividends shall be cumulative and will accrue on each share of D Preferred Stock whether or not earned or declared, and whether or not there are from time to time funds legally available therefor, from the date of issue thereof except that dividends on shares of D Preferred Stock issued after the first date of issue of any shares of D Preferred Stock shall accrue from such first date of issue, or from the most recent dividend payment due in the case of shares issued after the initial dividend payment date. No interest, or sum of money in lieu of interest, shall be payable in respect of any dividend payment or payments which may be in arrears. Dividends payable on the D Preferred Stock for any period less than a full quarter shall be computed on the basis of a 360-day year.

If in any quarter-yearly dividend period, stock dividends at the full annual rate set forth above in this Section (2) shall not have been declared and paid or set apart for payment on all outstanding shares of D Preferred Stock for such quarter-yearly dividend period and all preceding quarter-yearly dividend periods from and after the first day from which dividends are cumulative, then, until the aggregate

deficiency shall be declared and fully paid or set apart for payment, the Corporation shall not (i) declare or pay or set apart for payment any dividends or make any other distribution on the Common Stock or any other capital stock of the Corporation ranking junior to the D Preferred Stock with respect to the payment of dividends or distribution of assets on liquidation, dissolution or winding up of the Corporation (the Common Stock and such other stock being herein referred to as "Junior Stock") or (ii) make any payment on account of the purchase, redemption or other retirement of any Junior Stock, except for purchases of Junior Stock held by or for The Employee Stock Ownership Plan of Crucible Materials Corporation, The Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation or any employee stock ownership plan (as defined in Section 4975 of the Internal Revenue Code of 1954, as amended) for employees of the Corporation or a subsidiary of the Corporation subject to a collective bargaining agreement, or any participant therein or beneficiary thereof to the extent of any Junior Stock distributed by any of the aforementioned plans or fund, and except for purchases of Junior Stock held by [management in accordance with Colt/Management agreement].

(3) Liquidation Preference. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, before any payment or distribution of the assets of the Corporation (whether capital or surplus) shall be made to or set apart for the holders of any series or class or classes of stock of the Corporation ranking junior to the D Preferred Stock upon liquidation, dissolution or winding up, the holders of the shares of the D Preferred Stock shall be entitled to receive, in cash, $100 per share plus an amount equal to all dividends accrued and unpaid thereon to the date of final distribution to such holders, whether or not earned or declared; but such holders shall not be entitled to any further payment. If, upon any liquidation, dissolution or winding up of the Corporation, the assets of the Corporation, or proceeds thereof, distributable among the holders of the shares of the D Preferred Stock shall be insufficient to pay in full the preferential amount aforesaid and liquidating payment on any other Preferred Stock ranking as to liquidation, dissolution or winding up, on a parity with the D Preferred Stock, then such assets, or the proceeds thereof, shall be distributed among the holders of D Preferred Stock and any such other Preferred Stock ratably in accordance with the respective amounts which would be payable upon liquidation, dissolution or winding up on such shares of D Preferred Stock and any such other Preferred Stock if all amounts payable

thereon were paid in full. For the purposes of this Section (3), a consolidation or merger of the Corporation with one or more corporations shall not be deemed to be a liquidation, dissolution or winding up, voluntary or involuntary.

Subject to the rights of the holders of any series or class or classes of stock ranking on a parity with or prior to the D Preferred Stock upon liquidation, dissolution or winding up, upon any liquidation, dissolution or winding up of the Corporation, after payment shall have been made in full to the D Preferred Stock as provided in this Section (3), but not prior thereto, any other series or class or classes of stock ranking junior to the D Preferred Stock upon liquidation shall, subject to the respective terms and provisions (if any) applying thereto, be entitled to receive any and all assets remaining to be paid or distributed, and the D Preferred Stock shall not be entitled to share therein.

For the purposes of this Section (3), the D Preferred Stock ranks on a parity with the A Preferred Stock, the B Preferred Stock, the C Preferred Stock and the E Preferred Stock upon liquidation.

(4) Redemption.

(a) The D Preferred Stock may not be redeemed prior to January 1, 1994. Thereafter, the Corporation, at its option, may redeem shares of the D Preferred Stock, as a whole or in part, at any time or from time to time at a redemption price of $100 per share payable in cash, plus accrued and unpaid dividends thereon to the date fixed for redemption payable in cash (the sum of $100 together with such accrued and unpaid dividends being referred to herein as the "Redemption Price").

(b) In the event the Corporation shall redeem shares of D Preferred Stock, notice of such redemption shall be given by first class mail, postage prepaid, mailed not less than 30 nor more than 60 days prior to the redemption date, to each holder of record of the shares to be redeemed, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (1) the redemption date; (2) the number of shares of D Preferred Stock to be redeemed and, if less than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder; (3) the Redemption Price; (4) the place or places where certificates for such shares are to be surrendered for payment of the Redemption Price; and (5) that dividends on

the shares to be redeemed will cease to accrue on such redemption date. Notice having been mailed as aforesaid, from and after the redemption date (unless default shall be made by the Corporation in providing money for the indefeasible payment of the Redemption Price) dividends on the shares of the D Preferred Stock so called for redemption shall cease to accrue, and said shares shall no longer be deemed to be outstanding, and all rights of the holders thereof as stockholders of the Corporation (except the right to receive from the Corporation the Redemption Price) shall cease. The Corporation's obligation to provide moneys in accordance with the preceding sentence shall be deemed fulfilled if, on or before the redemption date, the Corporation shall deposit with a bank or trust company having an office in the City of Pittsburgh, Pennsylvania, or the Borough of Manhattan, City of New York, having a capital and surplus of at least $50,000,000, funds necessary for such redemption, in trust, with irrevocable instructions that such funds be applied to the redemption of the shares of D Preferred Stock so called for redemption. Any interest accrued on such funds shall be paid to the Corporation from time to time. Any funds so deposited and unclaimed at the end of six years from such redemption date shall be released or repaid to the Corporation, after which the holder or holders of such shares of D Preferred Stock so called for redemption shall look only to the Corporation for payment of the Redemption Price.

Upon surrender in accordance with said notice of the certificates for any shares so redeemed (properly endorsed or assigned for transfer, if the Board of Directors of the Corporation shall so require and the notice shall so state), such shares shall be redeemed by the Corporation at the Redemption Price. If less than all the outstanding shares of D Preferred Stock are to be redeemed, shares to be redeemed shall be selected by the Corporation from outstanding shares of D Preferred Stock not previously called for redemption by lot or pro rata (as nearly as may be) or by any other method determined by the Corporation in its sole discretion to be equitable. If less than all of the outstanding shares represented by any surrendered certificate are to be redeemed, a new certificate representing the unredeemed shares shall be issued without charge.

In no event shall the Corporation redeem less than all the outstanding shares of D Preferred Stock pursuant to subsection (a) of this Section (4) unless full cumulative dividends shall have been paid or declared and set apart for payment upon all outstanding shares of D Preferred Stock for all past dividend periods.

(5) Shares to be Retired. All shares of D Preferred Stock redeemed or purchased by the Corporation or converted shall be retired and cancelled and shall be restored to the status of authorized but unissued shares of Preferred Stock, without designation as to series, and may thereafter be issued, but not as shares of D Preferred Stock.

(6) Voting. Except as expressly provided hereinafter in this Section (6) or as otherwise from time to time required by law, the D Preferred Stock shall have no voting rights. Whenever, at any time or times, dividends payable on the D Preferred Stock shall be in arrears in an amount equal to at least six full quarterly dividends on the D Preferred Stock at the time outstanding, the holders of the outstanding D Preferred Stock shall have the right, voting together as a class with holders of shares of all other series of Preferred Stock upon which like voting rights have been conferred and are exercisable, to elect a single director of the Corporation at the Corporation's next annual meeting of stockholders and at each subsequent annual meeting of stockholders. At elections for such directors, each holder of D Preferred Stock shall be entitled to one vote for each share held (the holders of shares of any other series of Preferred Stock being entitled to such number of votes, if any, for each share of stock held as may be granted to them). Upon the vesting of such right of the holders of the D Preferred Stock, the maximum authorized number of members of the Board of Directors shall automatically be increased by one and the vacancy so created shall be filled by the vote of the holders of the outstanding D Preferred Stock, together with the holders of shares of all other series of Preferred Stock, as hereinabove set forth.

Upon any termination of the right of the holders of the Preferred Stock to vote for directors as herein provided, the term of office of the director then in office elected by the holders of the Preferred Stock voting as a class shall terminate immediately. The right of the holders of this series of Preferred Stock to vote for directors shall terminate immediately upon all dividend arrearages being cured with respect to this series of Preferred Stock. If the office of any director elected by the holders of the Preferred Stock voting as a class becomes vacant by reason of death, resignation, retirement, disqualification, removal from office or otherwise, the holders of the series of Preferred Stock which had the right to elect such director may choose a successor who shall hold office for the unexpired term in respect of which such vacancy occurred. Whenever the term of

office of the director elected by the holders of the Preferred Stock shall end and the special voting powers vested in the holders of the Preferred Stock as provided in this Section (6) shall have expired, the number of directors shall be such number as may be provided for in the By-Laws irrespective of any increase made pursuant to the provisions of this Section (6).

So long as any shares of D Preferred Stock remain outstanding, the consent of the holders of at least two-thirds of the shares of D Preferred Stock outstanding at the time (voting separately as a class with all other series of Preferred Stock ranking on a parity with D Preferred Stock either as to dividends or the distribution of assets upon liquidation, dissolution or winding up and upon which like voting rights have been conferred and are exercisable) given in person or by proxy, either in writing or at any special or annual meeting called for the purpose, shall be necessary to permit, effect or validate any one or more of the following:

(a) The authorization, creation or issuance, or any increase in the authorized or issued amount, of any class or series of stock (including any class or series of preferred stock) ranking prior to or on a parity with [as those terms are hereinafter defined in this Section (6)] the D Preferred Stock, except for any class or series of stock to be issued to any Future Union ESOP; or

(b) The amendment, alteration or repeal, whether by merger, consolidation or otherwise, of any of the provisions of the Certificate of Incorporation or of these resolutions, or any merger or consolidation, which would adversely affect any right, preference, privilege or voting power of the D Preferred Stock or of the holders thereof; provided, however, that any increase in the amount of authorized Preferred Stock or the creation and issuance of other series of Preferred Stock, in each case ranking on a parity with or junior to the D Preferred Stock with respect to the payment of dividends and the distribution of assets upon liquidation, dissolution or winding up, shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers; or

(c) The sale, transfer or lease of all or substantially all of the properties and assets of the

Corporation outside its ordinary course of business; provided, however, that nothing herein shall require the consent of the holders of the D Preferred Stock for or in respect of the creation of any mortgage, pledge or other lien upon all or any part of the assets of the Corporation.

The foregoing voting provisions shall not apply if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, all outstanding shares of the D Preferred Stock shall have been redeemed or sufficient funds shall have been deposited in trust to effect such redemption.

Any class or classes of stock of the Corporation shall be deemed to rank:

(i) prior to the D Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up to the extent that the holders of such class shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in preference or priority to the holders of the D Preferred Stock; and

(ii) on a parity with the D Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up, whether or not the dividend rates, dividend payment dates, or redemption or liquidation prices per share thereof be different from those of the D Preferred Stock, if the holders of such class and the D Preferred Stock shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in proportion to their respective dividend rates or liquidation prices, without preference or priority one over the other.

The B Preferred Stock, C Preferred Stock, D Preferred Stock and E Preferred Stock shall be deemed to rank on a parity with each other for all purposes.

13.0% CUMULATIVE E PREFERRED STOCK

(1) Designation. 175,000 shares of the Preferred Stock, having a par value, of the Corporation are hereby constituted as a series of Preferred Stock, having a par value of $100.00 per share, designated as "13.0% Cumulative E Preferred Stock" (herein called "E Preferred Stock").

(2) Dividends. The holders of shares of E Preferred Stock shall be entitled to receive, in preference to any stock junior in priority as to dividends, dividends, when and as declared by the Board of Directors, payable in additional shares of the Corporation's E Preferred Stock at the annual rate of 0.13 shares of E Preferred Stock per share, and no more. The Corporation may issue scrip certificates in lieu of issuing certificates for fractional shares in connection with any dividend paid in E Preferred Stock. The dividends shall be payable quarterly on the first day of January, April, July and October in each year, commencing April 1, 1986, to holders of record on such respective dates, not exceeding 30 days preceding the payment date thereof, as may be determined by the Board of Directors in advance of the payment of each particular dividend. No dividends shall be declared on any other series or class or classes of stock ranking on a parity with the E Preferred Stock as to dividends in respect of any quarter-yearly dividend period unless there shall likewise be or have been declared on all shares of E Preferred Stock at the time outstanding like dividends for all quarter-yearly periods coinciding with or ending before such quarter-yearly period, ratably in proportion to the respective annual dividend rates per annum fixed therefor. Dividends shall be payable on A Preferred Stock and E Preferred Stock in preference to any dividends payable on B Preferred Stock, C Preferred Stock and D Preferred Stock with respect to any period ending on or before December 31, 1990 (after which date dividends shall accrue and be payable on B Preferred Stock, C Preferred Stock and D Preferred Stock, on a parity with dividends on A Preferred Stock and E Preferred Stock). Dividends shall be cumulative and will accrue on each share of E Preferred Stock whether or not earned or declared, and whether or not there are from time to time funds legally available therefor, from the date of issue thereof except that dividends on shares of E Preferred Stock issued after the first date of issue of any shares of E Preferred Stock shall accrue from such first date of issue, or from the most recent dividend payment due in the case of shares issued after the initial dividend payment date. No interest, or sum of money in lieu of interest, shall be payable in respect of any dividend payment or payments which may be in

arrears. Dividends payable on the E Preferred Stock for any period less than a full quarter shall be computed on the basis of a 360-day year.

If in any quarter-yearly dividend period, stock dividends at the full annual rate set forth above in this Section (2) shall not have been declared and paid or set apart for payment on all outstanding shares of E Preferred Stock for such quarter-yearly dividend period and all preceding quarter-yearly dividend periods from and after the first day from which dividends are cumulative, then, until the aggregate deficiency shall be declared and fully paid or set apart for payment, the Corporation shall not (i) declare or pay or set apart for payment any dividends or make any other distribution on the Common Stock or any other capital stock of the Corporation ranking junior to the E Preferred Stock with respect to the payment of dividends or distribution of assets on liquidation, dissolution or winding up of the Corporation (the Common Stock and such other stock being herein referred to as "Junior Stock") or (ii) make any payment on account of the purchase, redemption or other retirement of any Junior Stock, except for purchases of Junior Stock held by or for The Employee Stock Ownership Plan of Crucible Materials Corporation, the Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation or any other employee stock ownership plan (as defined in Section 4975 of the Internal Revenue Code of 1954, as amended) for employees of the Corporation or a subsidiary of the Corporation subject to a collective bargaining agreement, or any participant therein or beneficiary thereof to the extent of any Junior Stock distributed by any of the aforementioned plans or fund, and except for purchases of Junior Stock held by [management in accordance with Colt/Management agreement].

(3) Liquidation Preference. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, before any payment or distribution of the assets of the Corporation (whether capital or surplus) shall be made to or set apart for the holders of any series or class or classes of stock of the Corporation ranking junior to the E Preferred Stock upon liquidation, dissolution or winding up, the holders of the shares of the E Preferred Stock shall be entitled to receive, in cash, $100 per share plus an amount equal to all dividends accrued and unpaid thereon to the date of final distribution to such holders, whether or not earned or declared; but such holders shall not be entitled to any further payment. If, upon any liquidation, dissolution or winding up of the Corporation, the assets of the

Corporation, or proceeds thereof, distributable among the holders of the shares of the E Preferred Stock shall be insufficient to pay in full the preferential amount aforesaid and liquidating payment on any other Preferred Stock ranking as to liquidation, dissolution or winding up, on a parity with the E Preferred Stock, then such assets, or the proceeds thereof, shall be distributed among the holders of E Preferred Stock and any such other Preferred Stock ratably in accordance with the respective amounts which would be payable upon liquidation, dissolution or winding up on such shares of E Preferred Stock and any such other Preferred Stock if all amounts payable thereon were paid in full. For the purposes of this Section (3), a consolidation or merger of the Corporation with one or more corporations shall not be deemed to be a liquidation, dissolution or winding up, voluntary or involuntary.

Subject to the rights of the holders of any series or class or classes of stock ranking on a parity with or prior to the E Preferred Stock upon liquidation, dissolution or winding up, upon any liquidation, dissolution or winding up of the Corporation, after payment shall have been made in full to the E Preferred Stock as provided in this Section (3), but not prior thereto, any other series or class or classes of stock ranking junior to the E Preferred Stock upon liquidation shall, subject to the respective terms and provisions (if any) applying thereto, be entitled to receive any and all assets remaining to be paid or distributed, and the E Preferred Stock shall not be entitled to share therein.

For the purposes of this Section (3), the E Preferred Stock ranks on a parity with the A Preferred Stock, the B Preferred Stock, the C Preferred Stock and the D Preferred Stock upon liquidation.

(4) Redemption.

(a) The E Preferred Stock may not be redeemed prior to January 1, 1991. Commencing January 15, 1991, the Corporation, at its option, may redeem shares of the E Preferred Stock, as a whole or in part, at any time or from time to time at a redemption price of $100 per share payable in cash, plus accrued and unpaid dividends thereon to the date fixed for redemption payable in cash (the sum of $100 together with such accrued and unpaid dividends being referred to herein as the "Redemption Price").

(b) In the event the Corporation shall redeem shares of E Preferred Stock, notice of such redemption shall be given

by first class mail, postage prepaid, mailed not less than 30 nor more than 60 days prior to the redemption date, to each holder of record of the shares to be redeemed, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (1) the redemption date; (2) the number of shares of E Preferred Stock to be redeemed and, if less than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder; (3) the Redemption Price; (4) the place or places where certificates for such shares are to be surrendered for payment of the Redemption Price; and (5) that dividends on the shares to be redeemed will cease to accrue on such redemption date. Notice having been mailed as aforesaid, from and after the redemption date (unless default shall be made by the Corporation in providing money for the indefeasible payment of the Redemption Price) dividends on the shares of the E Preferred Stock so called for redemption shall cease to accrue, and said shares shall no longer be deemed to be outstanding, and all rights of the holders thereof as stockholders of the Corporation (except the right to receive from the Corporation the Redemption Price) shall cease. The Corporation's obligation to provide moneys in accordance with the preceding sentence shall be deemed fulfilled if, on or before the redemption date, the Corporation shall deposit with a bank or trust company having an office in the City of Pittsburgh, Pennsylvania, or the Borough of Manhattan, City of New York, having a capital and surplus of at least $50,000,000, funds necessary for such redemption, in trust, with irrevocable instructions that such funds be applied to the redemption of the shares of E Preferred Stock so called for redemption. Any interest accrued on such funds shall be paid to the Corporation from time to time. Any funds so deposited and unclaimed at the end of six years from such redemption date shall be released or repaid to the Corporation, after which the holder or holders of such shares of E Preferred Stock so called for redemption shall look only to the Corporation for payment of the Redemption Price.

Upon surrender in accordance with said notice of the certificates for any shares so redeemed (properly endorsed or assigned for transfer, if the Board of Directors of the Corporation shall so require and the notice shall so state), such shares shall be redeemed by the Corporation at the Redemption Price. If less than all the outstanding shares of E Preferred Stock are to be redeemed, shares to be redeemed shall be selected by the Corporation from outstanding shares of E Preferred Stock not previously called for redemption pro rata (as nearly as may be). If less than all of the outstanding

shares represented by any surrendered certificate are to be redeemed, a new certificate representing the unredeemed shares shall be issued without charge.

In no event shall the Corporation redeem less than all the outstanding shares of E Preferred Stock pursuant to subsection (a) of this Section (4) unless full cumulative dividends shall have been paid or declared and set apart for payment upon all outstanding shares of E Preferred Stock for all past dividend periods.

(5) Shares to be Retired. All shares of E Preferred Stock redeemed or purchased by the Corporation or converted shall be retired and cancelled and shall be restored to the status of authorized but unissued shares of Preferred Stock, without designation as to series, and may thereafter be issued, but not as shares of E Preferred Stock.

(6) Voting. Except as expressly provided hereinafter in this Section (6) or as otherwise from time to time required by law, the E Preferred Stock shall have no voting rights. Whenever, at any time or times, dividends payable on the E Preferred Stock shall be in arrears in an amount equal to at least six full quarterly dividends on the E Preferred Stock at the time outstanding, the holders of the outstanding E Preferred Stock shall have the right, voting together as a class with holders of shares of all other series of Preferred Stock upon which like voting rights have been conferred and are exercisable, to elect a single director of the Corporation at the Corporation's next annual meeting of stockholders and at each subsequent annual meeting of stockholders. At elections for such directors, each holder of E Preferred Stock shall be entitled to one vote for each share held (the holders of shares of any other series of Preferred Stock being entitled to such number of votes, if any, for each share of stock held as may be granted to them). Upon the vesting of such right of the holders of the E Preferred Stock, the maximum authorized number of members of the Board of Directors shall automatically be increased by one and the vacancy so created shall be filled by the vote of the holders of the outstanding E Preferred Stock, together with the holders of shares of all other series of Preferred Stock, as hereinabove set forth.

Upon any termination of the right of the holders of the Preferred Stock to vote for directors as herein provided, the term of office of the director then in office elected by the holders of the Preferred Stock voting as a class shall

terminate immediately. The right of the holders of this series of Preferred Stock to vote for directors shall terminate immediately upon all dividend averages being cured with respect to this series of Preferred Stock. If the office of any director elected by the holders of the Preferred Stock voting as a class becomes vacant by reason of death, resignation, retirement, disqualification, removal from office or otherwise, the holders of the series of Preferred Stock which had the right to elect such director may choose a successor who shall hold office for the unexpired term in respect of which such vacancy occurred. Whenever the term of office of the director elected by the holders of the Preferred Stock shall end and the special voting powers vested in the holders of the Preferred Stock as provided in this Section (6) shall have expired, the number of directors shall be such number as may be provided for in the By-Laws irrespective of any increase made pursuant to the provisions of this Section (6).

So long as any shares of E Preferred Stock remain outstanding, the consent of the holders of at least two-thirds of the shares of E Preferred Stock outstanding at the time (voting separately as a class with all other series of Preferred Stock ranking on a parity with E Preferred Stock either as to dividends or the distribution of assets upon liquidation, dissolution or winding up and upon which like voting rights have been conferred and are exercisable) given in person or by proxy, either in writing or at any special or annual meeting called for the purpose, shall be necessary to permit, effect or validate any one or more of the following:

(a) The authorization, creation or issuance, or any increase in the authorized or issued amount, of any class or series of stock (including any class or series of preferred stock) ranking prior to or on a parity with [as those terms are hereinafter defined in this Section (6)] the E Preferred Stock, except for any class or series of stock to be issued to any Future Union ESOP; or

(b) The amendment, alteration or repeal, whether by merger, consolidation or otherwise, of any of the provisions of the Certificate of Incorporation or of these resolutions, or any merger or consolidation, which would adversely affect any right, preference, privilege or voting power of the E Preferred Stock or of the holders thereof; provided, however, that any increase in the amount of authorized Preferred Stock or the creation and

issuance of other series of Preferred Stock, in each case ranking on a parity with or junior to the E Preferred Stock with respect to the payment of dividends and the distribution of assets upon liquidation, dissolution or winding up, shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers; or

(c) The sale, transfer or lease of all or substantially all of the properties and assets of the Corporation outside its ordinary course of business; provided, however, that nothing herein shall require the consent of the holders of the E Preferred Stock for or in respect of the creation of any mortgage, pledge or other lien upon all or any part of the assets of the Corporation.

The foregoing voting provisions shall not apply if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, all outstanding shares of the E Preferred Stock shall have been redeemed or sufficient funds shall have been deposited in trust to effect such redemption.

Any class or classes of stock of the Corporation shall be deemed to rank:

(i) prior to the E Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up to the extent that the holders of such class shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in preference or priority to the holders of the E Preferred Stock; and

(ii) on a parity with the E Preferred Stock as to dividends or as to distribution of assets upon liquidation, dissolution or winding up, whether or not the dividend rates, dividend payment dates, or redemption or liquidation prices per share thereof be different from those of the E Preferred Stock, if the holders of such class and the E Preferred Stock shall be entitled to the receipt of dividends or of amounts distributable upon liquidation, dissolution or winding up, as the case may be, in proportion to their respective dividend rates or liquidation prices, without preference or priority one over the other.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by _____, its President, and attested by _____, its Secretary, whereby said _____ affirms, under penalties of perjury, that this Certificate is the act and deed of the Corporation and that the facts stated herein are true, this _____ day of December, 1985.

CRUCIBLE MATERIALS CORPORATION

By_____
President

Attest:

_____
Secretary

EXHIBIT C

AGREEMENT AND PLAN OF MERGER

THIS AGREEMENT AND PLAN OF MERGER, made as of the _____ day of December, 1985, by and between CMC HOLDING COMPANY, INC., a Delaware corporation ("Holding"), and CRUCIBLE MATERIALS CORPORATION, a Delaware corporation ("Crucible") (Holding and Crucible being hereinafter sometimes called the "Constituent Corporations"),

WITNESSETH THAT:

WHEREAS, Crucible, as of the date hereof, has authority to issue up to _____ shares of Common Stock without par value, having a stated value of $10.00 per share, and up to _____ shares of Preferred Stock having a par value of $100.00 per share, including _____ shares of 13.0% Convertible Cumulative A Preferred Stock (hereinafter called "A Preferred Stock"), _____ shares of 16.5% Convertible Cumulative B Preferred Stock (hereinafter called "B Preferred Stock"), 63,000 shares of 16.5% Convertible Cumulative C Preferred Stock (hereinafter called "C Preferred Stock"), 700,000 shares of 16.5% Cumulative D Preferred Stock (hereinafter called "D Preferred Stock") and 175,000 shares of 13.0% Convertible E Preferred Stock (hereinafter called "E Preferred Stock"); and

WHEREAS, the issued and outstanding capital stock of Crucible consists of _____ shares of Common Stock, of which _____ shares are owned by Colt Industries Operating Corp, a Delaware corporation ("Operating"), and _____ shares are owned by Holding; _____ shares of A Preferred Stock, which are owned

by Operating; _____ shares of B Preferred Stock, of which [_____ shares are owned by Operating and] _____ shares are owned by Holding; and 63,000 shares of C Preferred Stock, which are owned by Holding; and

WHEREAS, Holding, as of the date hereof, has authority to issue up to _____ shares of Common Stock, without par value, having a stated value of $10.00 per share ("Holding Common Stock"), and up to _____ shares of Preferred Stock having a par value of $100.00 per share, including _____ shares of 16.5% Convertible Cumulative B Preferred Stock (hereinafter called "Holding B Preferred Stock") , and 63,000 shares of 16.5% Convertible Cumulative C Preferred Stock (hereinafter called "Holding C Preferred Stock"); and

WHEREAS, the issued and outstanding capital stock of Holding consists of _____ shares of Holding Common Stock and _____ shares of Holding B Preferred Stock, which are owned by The Crucible Fund for Eligible Salaried Employees of all Divisions of Crucible Materials Corporation (the "Crucible Fund"); and 63,000 shares of Holding C Preferred Stock, which are owned by Technology Metals, Inc., a Delaware corporation ("Technology Metals"); and

WHEREAS, Holding and Crucible desire to merge under and pursuant to Section 251 of the General Corporation Law of Delaware into a single corporation existing under the laws of the State of Delaware;

NOW, THEREFORE, in consideration of the covenants herein contained and intending to be legally bound, the parties hereto hereby agree as follows:

ARTICLE I

THE MERGER

1.1 General. Subject to the terms and conditions set forth herein, on the Effective Date (hereinafter defined), Holding shall merge with and into Crucible (the "Merger") with Crucible as the surviving corporation (hereinafter sometimes called the "Surviving Corporation"), the name of which shall continue to be Crucible Materials Corporation.

1.2 Board of Director Approval. The Board of Directors of each of Holding and Crucible by resolution have approved and adopted this Agreement and Plan of Merger pursuant to and in accordance with Section 251(b) of the General Corporation Law of Delaware.

1.3 Stockholder Approval. The Stockholders of the Constituent Corporations by written consent have approved and adopted this Agreement and Plan of Merger pursuant to and in accordance with Sections 251(c) and 228 of the General Corporation Law of Delaware.

1.4 Effective Date. The Merger shall become effective on the date on which this Agreement and Plan of Merger is filed with the Department of State of the State of Delaware pursuant to and in accordance with Sections 251(c) and 103(d) of the General Corporation Law of Delaware.

1.5 Effect of the Merger. Upon the Merger becoming effective, the separate existence of Holding shall cease. The corporate existence of Crucible shall continue unimpaired and as the Surviving Corporation it shall possess all the rights, privileges, powers and franchises as well of a public as of a private nature, and be subject to all the restrictions, disabilities and duties of each of the Constituent Corporations; and all and singular, the rights, privileges, powers and franchises of each of the Constituent Corporations, and all property, real, personal and mixed, and all debts due to either of said Constituent Corporations on whatever account, as well for stock subscriptions as all other things in action or belonging to each of the Constituent Corporations shall be vested in the Surviving Corporation; and all property, rights, privileges, powers and franchises, and all and every other interest shall be thereafter as effectually the property of the Surviving Corporation as they were of the Constituent Corporations, and the title to any real estate vested by deed or otherwise, under the laws of Delaware, in either of the Constituent Corporations, shall not revert or be in any way impaired; but all rights of creditors and all liens upon any property of either the Constituent Corporations shall be preserved unimpaired, and all debts, liabilities and duties of the Constituent Corporations shall thenceforth attach to the Surviving Corporation, and may be enforced against it to the same extent as if said debts, liabilities and duties had been incurred or contracted by it, all

as provided in Section 259(a) of the General Corporation Law of Delaware. At any time or from time to time, after the Effective Date, as and when requested by the Surviving Corporation or by its successors or assigns, the last acting officers of Holding, or the corresponding officers of the Surviving Corporation, shall, in the name of Holding, execute and deliver or cause to be executed and delivered all such proper deeds, assignments and other instruments and take or cause to be taken all such further or other action as the Surviving Corporation may deem necessary or desirable in order to vest, perfect or confirm in the Surviving Corporation title to and possession of any or all of Holding's property, rights, privileges, powers, franchises, immunities and interests and otherwise to effectuate the terms of this Agreement and Plan of Merger.

1.6 Certificate of Incorporation. The Certificate of Incorporation of Crucible as in effect immediately prior to the Effective Date shall from and after the Effective Date be and remain the Certificate of Incorporation of the Surviving Corporation until thereafter amended or restated in accordance with the General Corporation Law of Delaware.

1.7 By-laws. The By-laws of Holding as in effect immediately prior to the Effective Date shall from and after the Effective Date become and remain the By-laws of the Surviving Corporation until thereafter amended or restated as provided therein.

1.8 Officers and Directors. The officers and directors of Crucible in office on the Effective Date shall remain in the same capacities as officers and directors of the Surviving Corporation until their successors have been duly elected and qualified.

ARTICLE II

CONVERSION OF SHARES

2.1 General. The manner of converting the issued and outstanding shares of the capital stock of each of the Constituent Corporations shall be as provided in this Article.

2.2 Conversion. On the Effective Date the following shall occur:

(a) Each share of Holding Common Stock issued and outstanding shall, by reason of the Merger, be converted into and become one share of the Common Stock of Crucible.

(b) Each share of Holding B Preferred Stock issued and outstanding shall, by reason of the Merger, be converted into and become one share of the B Preferred Stock of Crucible.

(c) Each share of Holding C Preferred Stock issued and outstanding shall, by reason of the Merger, be converted into and become one share of the C Preferred Stock of Crucible.

(d) Operating will retain all of its shares of the A Preferred Stock of Crucible and any shares of [the

B Preferred Stock of Crucible and] the Common Stock of Crucible held by it and such shares shall continue to be outstanding immediately after the Effective Date.

2.3 Surrender and Exchange of Stock Certificates. On the Effective Date, each of Technology Metals and the trustee for the Crucible Fund shall surrender to the Surviving Corporation any and all certificates representing shares of the capital stock of Holding, duly endorsed in blank, and shall receive in exchange therefor appropriate certificates representing the shares of the capital stock of Crucible which they are to receive under this Article.

ARTICLE III

AMENDMENT AND TERMINATION

Notwithstanding anything herein or elsewhere to the contrary, this Agreement and Plan of Merger may be amended, modified or supplemented in writing, or may be terminated in writing and the Merger provided for herein abandoned, at any time prior to the Effective Date, by mutual consent of the Boards of Directors of Holding and Crucible.

IN WITNESS WHEREOF, the duly authorized officers of each of the Constituent Corporations have executed this Agreement and Plan of Merger as of the day and year first above written.

Attest: CMC HOLDING COMPANY, INC.

_____ By_____

Title_____ Title_____

[Corporate Seal]

Attest:

CRUCIBLE MATERIALS CORPORATION

_____

By_____

Title_____

Title_____

[Corporate Seal]

EXHIBIT D

CONSENT AND ASSIGNMENT AGREEMENT dated as of , 1985, among The Employee Stock Ownership Plan of Crucible Materials Holding Corporation (the "Assignor"), Crucible Materials Corporation, a Delaware corporation (the "Assignee"), CMC Holding Company, Inc., a Delaware corporation ("Holding"), Colt Industries Inc, a Pennsylvania corporation ("Colt"), Colt Industries Operating Corp, a Delaware corporation ("Operating"), and Garlock Inc, an Ohio corporation ("Garlock").

In consideration of the covenants set forth herein and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

1. Assignor hereby assigns to Assignee all its right, title and interest in and to Section 3 of the Purchase Agreement (the "Purchase Agreement") dated as of November 5, 1985, among Assignor, Holding, Colt, Operating and Garlock. Effective as of the date hereof, Assignee hereby assumes all the obligations and liabilities of Assignor arising under Section 3 of the Purchase Agreement from and after the date hereof.

2. Each of Holding, Colt, Operating and Garlock hereby consents to the foregoing assignment and assumption and further consents and agrees to release and discharge Assignor from all liabilities and obligations arising under Section 3 of the Purchase Agreement from and after the date hereof.

IN WITNESS WHEREOF, the parties hereto have hereunto executed this Consent and Assignment Agreement as of the day first above written.

THE EMPLOYEE STOCK OWNERSHIP PLAN OF CRUCIBLE MATERIALS CORPORATION,

By _____

CRUCIBLE MATERIALS CORPORATION,

By _____

CMC HOLDING COMPANY, INC.

By _____

COLT INDUSTRIES INC,

By _____

COLT INDUSTRIES OPERATING CORP,

By _____

GARLOCK INC,

By _____

EXHIBIT E

Tax Procedures Agreement

THIS AGREEMENT is dated as of 1985 among CMC Holding Company, Inc., a Delaware corporation ("Holding"), Colt Industries Inc, a Pennsylvania corporation ("Colt"), Colt Industries Operating Corp, a Delaware corporation ("Operating"), Crucible Materials Corporation, a Delaware corporation ("Crucible"), Garlock Inc, an Ohio corporation ("Garlock"), and Crusteel Limited, a United Kingdom company ("Crusteel").

WHEREAS, a majority of the capital stock of Crucible and all the capital stock of Crusteel are being acquired by Holding pursuant to a Purchase Agreement dated as of 1985 (the "Purchase Agreement"), and

WHEREAS, pursuant to Section 13(a)(i) of the Purchase Agreement, the parties are to establish the procedures and basis for the determination and settlement among them of their respective liabilities for and payment of United States Federal income taxes, domestic state and local income and franchise taxes and the United Kingdom Corporation Income Tax as hereinafter set forth, and

WHEREAS, Colt, Operating, Garlock and Crucible and the other qualified domestic subsidiaries of Colt join in the filing of a consolidated United States Federal income tax return and domestic state and local income and/or franchise tax returns on a separate or consolidated, combined or unitary basis depending on the taxing jurisdictions, and

WHEREAS, Crusteel files a United Kingdom Corporation Income Tax Return,

NOW, THEREFORE, the parties hereto agree as follows:

1. Definitions:

1.01 "Colt Affiliates" means Colt and each of its worldwide subsidiaries and affiliates as they were constituted on the Effective Date or during a Prior Period, as hereinafter defined, or, where indicated by the context, one or more of such subsidiaries and affiliates.

1.02 "Colt Group" means the Colt Affiliates except for Crucible and Crusteel or, where indicated by the context, one or more affiliates of the Colt Group other than Crucible and Crusteel.

1.03 "Holding Group" means Holding, Crucible and Crusteel.

1.04 "Companies" means Crucible and/or Crusteel.

1.05 "Effective Date" means the Closing Date as defined in the Purchase Agreement.

1.06 "Prior Period(s)" means any and all tax periods from inception of each of the Colt Affiliates and ending on or before the close of business on the Effective Date.

1.07 "1985 Prior Period" means the tax period commencing on January 1, 1985 and ending on the close of business on the Effective Date.

1.08 "Taxes" means any and all United States Federal or domestic state and local income and/or franchise taxes based on or measured by a corporation's income, or its defined net worth or asset base or such similar basis apportioned or allocated to a taxing jurisdiction, or with respect to Crusteel the United Kingdom Corporation Income Tax, for any one or more Prior Periods, and provided that Taxes shall not include any taxes attributable to the transactions contemplated in the Purchase Agreement.

1.09 "Tax Returns" means any and all tax returns and filings made or required to be made by the Colt Affiliates with respect to Taxes. Tax Returns

include not only separate tax return filings for each of the Colt Affiliates, but also consolidated, combined or unitary filings in certain taxing jurisdictions (sometimes hereinafter referred to as "Combined Tax Returns").

1.10 "Tax Liability" means any and all Taxes and interest and/or penalties accruing thereon or any and all other related cost incurred in connection with the conduct of audits, the processing of claims, protests or other related actions pertaining thereto, but shall not include professional fees paid to third parties or other related expenses with respect to the preparation and filing of Tax Returns, or salaries of employees of the parties.

1.11 "Tax Matters" means any and all actions taken in respect of a Tax Return or Taxes of a Colt Affiliate attributable to a Prior Period or a subsequent period.

1.12 "U.S. Colt Affiliates" means those Colt Affiliates which are members of an affiliated group as such term is defined in Section 1504 of the Internal Revenue Code of 1954, as amended (the "Code").

1.13 "U.S. Companies" means those corporations included in the definition of Companies which are members of an affiliated group as such term is defined in Section 1504 of the Code.

2. Liability

2.01 Pursuant to the terms of the Purchase Agreement, the Colt Group will prepare a closing balance sheet for the Crucible Materials Group as defined in the Purchase Agreement as of the Effective Date (the "Closing Balance Sheet") which reflects, among other things, liability for accrued Taxes, deferred Taxes and reserves for Taxes. To the extent the Closing Balance Sheet understates or overstates the Tax Liability of the Companies for any Prior Period, the Colt Group shall be solely liable for any additional Tax Liability not reflected on the Closing Balance Sheet and the Colt Group shall be the sole beneficiary of any overstatement of Tax Liability on the

Closing Balance Sheet. The parties hereto agree to determine the Companies' Tax Liability for the 1985 Prior Period as follows:

(a) Federal Income Tax. The U.S. Colt Affiliates will file a consolidated U.S. federal income tax return for the 1985 calendar year which will include the U.S. Companies for the 1985 Prior Period and will reflect the Tax Liability of the U.S. Companies for U.S. federal income tax for the 1985 Prior Period. A separate U.S. federal income tax return will be filed by the members of the Holding Group organized in the United States for the short taxable year commencing on the day following the Effective Date. Such separate return will reflect the U.S. federal income tax liability of the Holding Group for such short taxable year.

(b) States and Localities Not Utilizing a Unitary Type System. If any state or locality requires that the Companies file a separate tax return for the 1985 Prior Period, then the Companies' Tax Liability for such state's or locality's Taxes will be determined on the basis of such tax returns filed by the Colt Group.

If any state or locality requires that the Companies file a separate tax return for the 1985 calendar year, then the Companies' 1985 Prior Period Tax Liability will be equal to the amount of tax reflected on said tax return multiplied by a fraction determined as follows: (1) if the Taxes are not solely based on or measured by a corporation's income, the Taxes reflected on said state or local tax return shall be allocated to the 1985 Prior Period by multiplying said Taxes by a fraction, the denominator of which is 365, and the numerator of which is the number of days in the 1985 Prior Period and (2) if the Taxes are based solely on or measured by a corporation's income, the amount of said Taxes multiplied by a fraction, the denominator of which is the total combined U.S. federal taxable income of the Companies for the 1985 calendar year and the numerator of which is the U.S. federal taxable income of the Companies for the 1985 Prior Period.

(c) States and Localities Utilizing a Combined or Unitary Type System. If any state or locality requires that the Colt Affiliates file

Combined Tax Returns for the 1985 calendar year, but include the Companies therein only for the 1985 Prior Period, then the Companies' Tax Liability for such state's or locality's Taxes shall be the amount of such tax reflected for the Companies on such tax return.

If any state or locality requires that the Colt Affiliates file Combined Tax Returns for the 1985 calendar year and include the Companies therein for the 1985 calendar year, then the Companies' Tax Liability for said state's or locality's Taxes with respect to the 1985 Prior Period shall be: (1) if the Combined Tax Return for the given jurisdiction requires that each legal entity in such return be included therein and determine its Tax Liability in the same manner as if it filed a separate return, then the Companies' Tax Liability with respect to the 1985 Prior Period shall be determined in accordance with Section 2.01(b) hereof and (2) if the Combined Tax Return for the given jurisdiction requires that the Tax Liability for the aggregate members included in the Combined Tax Return be determined based on an apportionment of the aggregate net taxable income of the Colt Affiliates, then the Companies' Tax Liability shall be the difference between the liability reflected on such return including the Companies and what said liability would have been if the Companies had been excluded from such return. The Companies' Tax Liability in respect of the 1985 Prior Period shall then be determined as provided in Sections 2.01 (b) and (d) hereof.

(d) United Kingdom Corporation Income Tax. The Taxes as reflected on Crusteel's Tax Return for the 1985 calendar year shall be allocated to the 1985 Prior Period by multiplying said Taxes by a fraction, the denominator of which is 365, and the numerator of which is the number of days in the 1985 Prior Period.

2.02 The Colt Group, Holding and the Companies agree that any and all tax consequences of any and all business activities taken by any one or more of Holding or the Companies after the Effective Date shall be the sole responsibility and/or benefit of Holding and the Companies. The Colt Group shall not be liable for nor benefit from any such tax consequences.

2.03(a) If any Tax Liability is ultimately resolved in favor of the Companies with no liability or a liability for a lesser amount than is reflected on the Closing Balance Sheet, then the difference between the Tax Liability reflected on the Closing Balance Sheet and the actual Tax Liability shall be for the benefit of, and paid in accordance with Section 5.01 hereof by Holding and the Companiesto the Colt Group. If any Tax Liability is ultimately resolved against the Companies with a greater liability than is reflected on the Closing Balance Sheet, then the difference between the actual Tax Liability and the Tax Liability reflected on the Closing Balance Sheet shall be the liability of the Colt Group and shall be paid in accordance with Section 5.01 hereof by the Colt Group either to the Holding Group or to the appropriate taxing jurisdiction, as the Colt Group may in its sole discretion decide.

(b) If any state or local Real Property tax initially assessed by any taxing jurisdiction with respect to any Prior Period is ultimately determined by such jurisdiction to be a greater or lesser amount than such initially assessed tax, then in either event, the additional tax or refund shall be for the account of the Colt Group and shall be paid by the Colt Group or to it in accordance with Section 5.01 hereof.

2.04(a) If in respect of the purchase of the capital stock of the Companies, Holding or the Companies make an election pursuant to Section 338 of the Code, or said Section 338 is held to be applicable, then any Tax Liabilities, reports, payments or other action required or resulting from the applicability of Section 338 shall be the sole responsibility of Holding and the Companies.

(b) From time to time on or after the Effective Date, each of the members of the Colt Group or the Holding Group shall upon request from the other Group properly and timely file a Protective Carryover Election Statement under U.S. Treasury Regulation 1.338-4T(f) in respect of an acquisition made by the other Group. The Group to which such request is made shall not be required to file such a Protective Carryover Election Statement if (i) the requested Group acquired assets from the acquired

company during the consistency period as defined in Code Section 338(h)(4)(A) and (B); (ii) the requested group provides a listing of such acquired assets along with a calculation of the amount required to make the requested Group whole (resulting from the making of such an election) and, (iii) the requesting Group fails to tender the amount required to make the requested Group whole.

2.05 If a member of the Holding Group or a member of the Colt Group changes a current method of accounting or adopts a method of accounting, whether for financial or tax reporting purposes, which adversely affects the Tax Liability of any member of the other Group, then the Group whose member made such change or adoption shall jointly and severally indemnify and hold harmless the other Group from and against any resulting increase in such Tax Liability.

2.06 Any and all finally determined tax credits or tax benefits which on the Effective Date were available to the Companies in a Prior Period but due to statutory limitations upon utilization could not be used and which can be carried forward to a period subsequent to a Prior Period shall be applied for the sole benefit of the Holding Group.

2.07(a) If in any taxable year ending after the Effective Date, the Companies shall have losses, credits or deductions, including net operating or capital losses which may be carried back to a Prior Period ("Companies' Carryback Losses"), the Companies shall promptly notify Colt. Colt or a member of the Colt Group shall apply to the appropriate taxing jurisdiction as agent for the Companies to obtain the benefits of such Companies' Carryback Losses to the extent of the Companies taxable income during the carryback period. Upon receipt of any tax refund due to the Companies' Carryback Losses the Colt Group shall pay said tax refund to the Holding Group in accordance with the provisions of Section 5.01 hereof. In the event such Companies' Carryback Losses are included on a combined or consolidated basis with losses, credits or deductions, including net operating or capital losses, attributable to the Colt Group ("Colt Carryback Losses") arising in any taxable year, then unless otherwise required by statute and related

regulations, the tax refunds from the use of such losses, credits or deductions shall be allocated between the Colt Group and the Holding Group on the basis of the proportion of the Colt Carryback Losses or the Companies' Carryback Losses to the aggregate Carryback Loss.

(b) If as a result of the application of the Companies' Carryback Losses to a Prior Period, whether or not on a combined or consolidated basis with Colt Carryback Losses, there are generated losses, credits or deductions, including net operating or capital losses which may be carried forward from such prior taxable year to a Prior Period ("Companies' Carryforward Losses"), then Colt or a member of the Colt Group shall apply to the appropriate taxing jurisdiction as agent for the Colt Group and the Companies to obtain on behalf of the Companies the tax benefits of such Companies' Carryforward Losses to the extent of the taxable income of the Companies during such carryforward period. A tax refund generated by said tax benefits shall be paid to Holding as agent for the members of the Holding Group in accordance with the provisions of Section 5.01 hereof.

In the event, however, such Companies' Carryforward Losses are included on a combined or consolidated basis with losses, credits or deductions, including net operating or capital losses which may be carried forward to a Prior Period by the Colt Group (Colt Carryforward Losses) and as a result of the application of the combined or consolidated carryforward losses there are refunds obtained, then, unless otherwise required by statute and related regulations, the refunds from the use of the carryforwards shall be allocated between the Colt Group and the Holding Group on the basis of the proportion of the Colt Carryforward Losses or the Companies' Carryforward Losses to the aggregate Carryforward Losses.

(c) If as a result of the filing of claims for refund, due to the Companies Carryback Losses or the Companies Carryforward Losses, refunds are received and paid over to Holding or the Companies and subsequently members of the Colt Group are required to repay all or part of such refund because of an adjustment of such Companies' Carryback (or Carryforward) Losses then, the Companies shall make payment of such amounts either directly

to the taxing jurisdiction or to the Colt Group in accordance with Section 5.01 hereof. The Companies shall hold the Colt Group harmless and indemnify it against any such amounts Colt is required to pay (including both tax and interest).

(d) If any refund claim involves a carryback or carryforward into a Prior Period and is to be filed by the Colt Group as agent for the Companies, such claim of the Companies shall be reviewed and signed by the Companies' Independent Public Accountants and submitted for review by the Vice President of Taxes of Colt prior to the filing of such claim for refund. In the event the parties disagree as to the refund claim, and such disagreement is not resolved within 15 days of receipt of the refund claim, then such disagreement shall be referred to Arthur Andersen & Co., the Colt Group's Independent Public Accountants, or another nationally recognized firm of public accountants selected by Colt and the Companies. The decision of such public accounting firm shall be final and binding on all parties, with the force and effect of an arbitral award; and the firm rendering such decision shall have all the privileges and immunities of a neutral arbitrator. The fees of the arbitrator shall be paid one-half by Colt and one-half by the Companies.

2.08 If the resolution of a Tax Matter for a Prior Period:

(a) directly or indirectly makes any tax benefit available to the Companies for use in a period commencing after the Effective Date, the Colt Group shall be entitled to compensation at the time(s) such tax benefit is actually used by the Holding Group. The amount of compensation shall equal the difference, if any, between the taxes which would have been paid by the Holding Group determined without regard to such tax benefit and the actual tax paid by the Holding Group.

(b) directly or indirectly results in the reduction of or loss of any tax benefit available to the Companies for use in a period subsequent to Prior Periods, then the Holding Group shall be entitled to compensation at the time(s) such tax benefit would have been utilized by the Holding

Group. The amount of compensation shall equal the difference, if any, between the taxes which would have been paid by the Holding Group determined without regard to the reduction or loss of such tax benefit and the actual tax paid by the Holding Group.

(c) The Colt Group shall duly notify the Holding Group of any tax benefit available to the Companies or the reduction or loss of any tax benefit otherwise available to the Companies with respect to a tax year commencing after the Effective Date with applicable details thereof which results from the resolution of a Tax Matter. Subsequent thereto for each tax year of the Holding Group, the Holding Group shall, no later than October 31 of the following year, have its chief financial officer certify to the Colt Group with applicable details the amount of compensation as provided for in Section 2.08(a) or 2.08(b) above that one party owes to the other party and if there be none for the given year, such certification shall so state. In the event a payment pursuant to the aforesaid is payable to either party, then the provisions of Section 5.01 hereof shall apply.

3. **Agency**

Colt shall be the sole agent for the Companies in all Tax Matters relating to Tax Returns for all Prior Periods or to Tax Returns which cover both a Prior Period and a period thereafter and Colt or a member of the Colt Group will file all Tax Returns for such periods. Colt, as agent for the Companies, shall owe a fiduciary duty to act in the Companies' best interests with respect to all such Tax Matters. Holding and the Companies may participate in any Tax Matter relating to a Prior Period, at the expense of Holding or the Companies, but Holding and the Companies shall provide Colt with a non-revocable power of attorney to act for the Companies as provided herein.

4. **Consents, Records and Information**

4.01 At any time and from time to time after the Effective Date, each of the parties hereto upon request shall duly do, execute, acknowledge

and deliver, or cause to be done, executed, acknowledged and delivered, all such further acts, assignments, documents, and assurances as may be necessary or desirable to carry out the intent and purposes of this Tax Procedures Agreement which shall include, but not be limited to, providing data and documentation necessary to prepare and file complete and accurate Tax Returns, extending the time in which to file a Tax Return, the contesting by the Colt Group of any proposed or asserted change by any jurisdiction in the previously reported Tax Liability relating to any tax period which includes a Prior Period, whether at an administrative level or in a court action. Further, each party hereto upon request shall provide data and documentation then in its possession relating to taxes to permit the requesting party to prepare its Tax Returns, complete tax audits and determine Tax Liabilities for subsequent tax periods which do not include a Prior Period.

4.02 Holding and the Companies will use all reasonable efforts to notify Colt promptly of any information or event relating to the Companies which is received or has occurred after the Effective Date which might have an effect on the Tax Liability of the Companies for any Prior Period. Colt will use all reasonable efforts to notify the Companies of any event relating to the Colt Group which is received or has occurred after the Effective Date which might have an effect on the Tax Liability of the Companies for any subsequent tax periods.

4.03(a) Nothing contained in this Tax Procedures Agreement shall be interpreted to give Holding or the Companies any access to any Tax Returns, books and records, or other information relating to Colt or any member of the Colt Group, except to the extent that the need for such data and information is related to Taxes of the Companies or to the administration or interpretation of this Agreement.

(b) Nothing contained in this Tax Procedures Agreement shall be interpreted to give Colt or any member of the Colt Group access to any Tax Returns, books and records, or other information relating to the Companies, Holding or Holding affiliated companies relating to subsequent tax periods,

except to the extent that the need for such data and information is related to the Taxes of Colt or a member of the Colt Group or to the Taxes of the Companies for a taxable period which includes a Prior Period, or is necessary to properly determine the Tax Liability of such Prior Period or to the administration or interpretation of this Agreement.

5. Payments

5.01 All payments which are required to be made by one party to the other pursuant to this Agreement will be made no later than thirty days after notice of such payment is mailed to the party required to make payment. In the event of a refund, such payment and any data accompanying same will not be due until 15 days after the receipt of such refund from the taxing jurisdiction. Each notice shall set forth the basis and computation of the amount of such payment. In the event there is a disagreement between the parties in respect of a payment, notice shall be given by the party required to make the payment to the party requesting the payment within the aforesaid thirty-day period, detailing the reasons for the disagreement. Such differences if not resolved within thirty days thereafter, shall be referred to Price Waterhouse or another nationally recognized firm of public accountants selected by Colt and Holding. The decision of such public accounting firm shall be final and binding on all parties, with the force and effect of an arbitral award; and the firm rendering such decision shall have all the privileges and immunities of a neutral arbitrator. The fees of any such public accounting firm shall be paid one-half by Colt and one-half by the Companies.

In the event of a refund, if there is a disagreement between the parties as to the amount, the procedure for resolving the disagreement shall be the same as in the case of a payment.

5.02 In the event that in accordance with this Agreement the Colt Group pays a Tax Liability attributable to any period commencing after the Effective Date or the Holding Group pays a Tax Liability attributable to a Prior Period,

the party making such payment shall be entitled to reimbursement for such amount.

5.03 In the event either party hereto is required to make a payment hereunder to the other party with respect to Crusteel, such amount shall be in U.S. dollars converted from pounds sterling at the closing buying rate as reported by the Federal Reserve Bank of New York in effect on the date of payment.

6. General

6.01 All covenants and agreements of Holding, Crucible and Crusteel or any of them hereunder are made by Holding, Crucible and Crusteel jointly and severally, and all covenants and agreements of Colt, Operating and Garlock or any of them hereunder are made by Colt, Operating and Garlock jointly and severally.

6.02 All notices, requests, demands and other communications required or permitted to be given hereunder or necessary or convenient in connection herewith shall be in writing and shall be deemed to have been duly given if delivered personally or mailed first-class, postage prepaid, registered or certified mail, addressed as follows:

If to any member of the Colt Group

Colt Industries Inc
430 Park Avenue
New York, New York 10022
Attention: Vice President, Taxes

If to Holding or the Companies

Crucible Materials Corporation
State Fair Boulevard
Syracuse, New York 13201
Attention: Chairman

Any party may change the address to which such communications are to be directed to it by giving notice to the other in the manner provided for

in this Section.

6.03 This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, excluding the conflict of laws provisions thereof.

6.04 This Agreement shall be binding upon, and inure to the benefit of, and be enforceable by the parties hereto and their respective permitted successors and assigns.

6.05 This Agreement may be amended, modified, superseded or cancelled, only by a written instrument specifically referring to this Tax Procedures Agreement and executed by all of the parties hereto or their respective permitted successors and assigns.

6.06 Failure of any party to insist upon strict observance of or compliance with any of the terms hereof in one or more instances shall not be deemed to be a waiver of its rights to insist upon such observance or compliance with such terms in the future or with the other terms hereof.

6.07 This Agreement may not be assigned without the written consent of the other parties hereto, except by Holding to Crucible or by operation of law.

WITNESS the due execution hereof as of the day and year first above written.

CMC HOLDING COMPANY, INC.

By:_____

COLT INDUSTRIES INC

By:_____

COLT INDUSTRIES OPERATING CORP

By:_____

CRUCIBLE MATERIALS CORPORATION

By:_____

GARLOCK INC

By:_____

CRUSTEEL LIMITED

By:_____

EXHIBIT F

Form of Opinion of Kirkpatrick & Lockhart

December , 1985

Colt Industries Inc
Colt Industries Operating Corp
Garlock Inc
430 Park Avenue
New York, N. Y. 10022

Gentlemen:

We have acted as special counsel to CMC Holding Company, Inc., in connection with the transactions contemplated by the Purchase Agreement dated as of November 5, 1985 (the "Agreement") among CMC Holding Company, Inc. (the "Company"), The Employee Stock Ownership Plan of Crucible Materials Corporation, Colt Industries Inc, Colt Industries Operating Corp and Garlock Inc. This opinion is rendered to you pursuant to Section 9(g) of the Agreement. Terms used herein which are not otherwise defined are used as defined in the Agreement.

In connection with this opinion, we have examined an executed copy of the Agreement, the closing documents delivered between the Purchasers and Colt, Operating and Garlock in consummation of the transactions contemplated by the Agreement, certificates of public and Company officials and such other documents and copies of documents and such questions of law as we have deemed necessary or appropriate for the purposes of this opinion. We have assumed the

authenticity of all certificates and other documents examined by us and the conformity to the originals of all copies examined by us. We have undertaken no investigation to determine the accuracy of such certificates and documents or any facts represented therein. You are, of course, aware that while we have acted as special counsel to the Company in connection with the transactions contemplated by the Agreement, we have not heretofore acted as counsel to Crucible.

Based upon and subject to the foregoing, we are of the opinion that:

1. The Company is a corporation duly organized and legally existing in good standing under the laws of the jurisdiction of its incorporation, with full power and authority to conduct its business as now being conducted and to own its property.

2. Each of the Colt/Purchasers Documents, the Loan Agreement, the Mellon Term Loan Agreement, the Chase Loan Agreement, the Revolver Security Agreements, the Term Loan Security Agreements, the Chase Pledge Agreement, the Pledge Assignment and the Plan of Merger has been duly authorized and approved by all necessary corporate action on the part of the Company and/or Crucible, as appropriate, and is a valid and binding obligation of the Company and/or Crucible, as the case

may be, enforceable in accordance with its terms, subject, however, to (a) the effect on enforceability of applicable bankruptcy, insolvency, moratorium, receivership, reorganization or similar laws affecting the rights of creditors generally, and (b) the effect upon enforceability of general principles of equity and the exercise of judicial discretion by a court in respect of its equitable jurisdiction.

3. The consummation of the transactions contemplated by the Colt/Purchasers Documents and the Plan of Merger will not violate any provision of the certificate of incorporation or by-laws of the Company, or, to the best of our knowledge, result in any breach of or default under, or require a consent under, any decree, mortgage, agreement, indenture or other instrument binding upon the Company.

4. After due inquiry, we have no actual knowledge of any actions, suits, claims, investigations or litigation which challenge the transactions contemplated by the Agreement.

5. The status of the shares of Crucible Series A Preferred Stock [and Crucible Series B Preferred Stock and Crucible Common Stock, if any] to be acquired by Operating under the Agreement as validly authorized and issued, fully paid and nonassessable will not be

adversely affected by consummation of the Plan of Merger.

6. The offers, sales and deliveries of shares of the capital stock of Holding to Technology Metals (and the exchange of such shares for shares of Crucible Series C Preferred Stock pursuant to the Plan of Merger) under the circumstances contemplated by the Agreement do not require (a) registration under the Securities Act and the rules and regulations of the Securities and Exchange Commission thereunder or (b) registration or qualification, or other authorization, pursuant to the laws of [states to be identified], except such as has been obtained and is in effect.

7. The ESOP is an "employee stock ownership plan" within the meaning of Section 407(d)(b) of ERISA and Section 4975(e)(7) of the Code and The Citizens and Southern National Bank has been appointed as trustee of the related trust. The Holding Common Stock and Holding Series B Preferred Stock to be acquired by the Crucible Fund, the Crucible Common Stock and Crucible Series B Preferred Stock to be exchanged therefor pursuant to the Plan of Merger and the Crucible Common Stock to be acquired by the ESOP under the Agreement are in each case "qualifying employer securities"

within the meaning of Section 406 of ERISA or "employer securities" within the meaning of Section 409(1) of the Code, as the case may be, with respect to Holding, Crucible and New Crucible, each to the extent applicable. The loan represented by the ESOP Note constitutes an "exempt loan" according to Treas. Reg. §54, 4875-7(b), except that we express no opinion as to whether the loan is primarily for the benefit of the ESOP participants and their beneficiaries.

The foregoing is subject to the possible effect of laws restricting dividends or restricting redemptions or repurchases of a corporation's capital stock and laws relating to fraudulent conveyances. We express no opinion as to the following matters: (a) except as specifically set forth in paragraph 7 above, whether the transactions contemplated by the Agreement violate any provision of the Employee Retirement Income Security Act of 1974, as amended, or any other law (whether statutory or common), rule or regulation, (b) the Exchange Agreement, and (c) the perfection or priority of any lien or security interest or the state of title to any property.

Very truly yours,

EXHIBIT G

Form of Opinion of Powell, Goldstein, Frazer & Murphy

December , 1985

Colt Industries Inc
Colt Industries Operating Corp
Garlock Inc
430 Park Avenue
New York, N. Y. 10022

Sale of Crucible Materials Corporation
and Crusteal Limited

Gentlemen:

We have served as counsel for The Citizens and Southern National Bank ("C&S"), not in its individual capacity but as trustee under the Crucible Materials Corporation Employee Stock Ownership Plan and of the trust relating thereto (collectively, the "Trust"), in connection with the Trust's proposed purchase of three million shares of the common stock of Crucible Materials Corporation pursuant to the terms of the Purchase Agreement dated November 5, 1985, among CMC Holding Company, Inc., the Trust, Colt Industries Inc, Colt Industries Operating Corp, and Garlock Inc. C&S serves as trustee of the Trust pursuant to the terms of the Crucible Materials Corporation Employees Stock Ownership Trust.

In connection with the purchase, the Trust will sign a Purchase Agreement, a promissory note (the "ESOP Note") in the amount of thirty million dollars

($30,000,000.00) made payable to Crucible Materials Corporation, a pledge agreement under which the Trust will pledge to Crucible Materials Corporation the shares of common stock of Crucible Materials Corporation which the Trust will purchase (the "Pledge Agreement") and a Consent and Assignment Agreement (the "Assignment") pursuant to which the Trust will assign all of its rights, title and interest in and to Section 3 of the Purchase Agreement to Crucible Materials Corporation.

You have requested our opinion pursuant to Paragraph 9(h) of the Purchase Agreement with regard to certain matters pertaining to the Trust. In connection with our preparation of the opinion, we have examined and are familiar with either the originals or copies identified to our satisfaction to be copies of the documents described in the paragraph above and we have made such other investigation as we have deemed appropriate in order to furnish the opinion set forth below.

In our examination, we have assumed the genuiness of all signatures, the authenticity of all documents submitted to us as original documents and the conformity to the original documents of all documents submitted as photostatic copies. As to questions of fact relevant to our opinion, where those facts were not immediately verified by us, we

have relied, to the extent we deem proper, upon the representation of officers of C&S.

Based upon the foregoing, we are of the opinion that:

1. The Purchase Agreement, the ESOP Note, the Pledge Agreement and the Assignment have been duly authorized and approved by all necessary action on the part of the Trust and each is or will be upon execution and delivery in accordance with the terms thereof a valid and binding obligation of the Trust, enforceable in accordance with its terms, except (i) that enforceability is subject to the effect of bankruptcy, insolvency, reorganization, moratorium, receivership, or other similar laws now or hereafter in effect relating to creditors' rights generally, and (ii) that the remedies of specific performance and injunctive and other forms of equitable relief are subject to certain equitable defenses and to the discretion of the court before which any proceeding therefore may be brought.

2. The consummation of the transactions contemplated by the Purchase Agreement, the ESOP Note, the Pledge Agreement and the Assignment will not violate any provision of the governing instruments of the Trust or result in any breach or default or require any

consent under any decree, mortgage, agreement, indenture or other instrument binding upon the Trust.

3. After due inquiry, we have no actual knowledge of any actions, suits, claims, investigations or litigation which challenge the transactions contemplated by the Purchase Agreement.

This opinion is directed only to Colt Industries Inc, Colt Industries Operating Corp and Garlock Inc in response to their request and has not been prepared for use or reliance by any other party.

Very truly yours,

POWELL, GOLDSTEIN, FRAZER & MURPHY

EXHIBIT H

Certain Transaction Expenses

100% of the reasonable fees and expenses of:

- American Appraisal Associates, Inc.
- Kirkpatrick & Lockhart
- Reed Smith Shaw & McClay
- Schiff Hardin & Waite
- Powell, Goldstein, Frazer & Murphy
- Hoolihan, Lokey, Howard & Zukin Inc.
- William M. Mercer-Meidinger, Inc.
- Peat, Marwick, Mitchell & Co.
- The Wyatt Company
- Mellon Bank, N.A., and Mellon Financial Services Corporation
- The Citizens and Southern National Bank
- The Chase Manhattan Bank, N.A.
- Milbank, Tweed, Hadley & McCloy
- [Local counsel for mortgages.]
- Key Trust Company
- A.G. Edwards & Sons, Inc.
- Peper, Martin, Jensen, Maichel and Hetlage

50% of the reasonable fees and expenses of:

- Price Waterhouse & Co.

November 5, 1985

List of Schedules

Schedule	Title	Agreement, Section
A	Listing of the Companies, Including Jurisdiction of Incorporation, Jurisdictions of Qualification, Capitalization	5(b)
B	Real Property; Personal Property Title Exceptions	5(g); 5(f)
C	Loans, Credit Agreements & Capitalized Lease Obligations; Guarantees	5(j)
D	Litigation, Orders, Stipulations & Decrees	5(k)
E	Product Warranty & Product Liability Matters	5(l)
F	Terminated Operations	5(m)
G	Employee Benefit Plans	6(a)
H	Industrial Development Bonds	7(d)
I	List of Employees of Colt Who Will Become Employees of New Crucible	6(f)
J	List of Employees Participating in the Crucible Salaried Plans Who Will Be Employees of Colt or a Subsidiary Following the Closing	6(f)
K	Certain Environmental Matters	5(q)

Because of overlaps in information called for by these schedules, each item disclosed in any single schedule is hereby deemed referred to by reference and incorporated in every other schedule. The disclosure on any schedule of additional information not required to be disclosed on the schedule shall not mean that all additional information of such type is listed thereon.

November 5, 1985

Schedule A

Listing of the Companies, Including
Jurisdiction of Incorporation,
Jurisdictions of Qualification, Capitalization
[Agreement, Section 5(b)]

Crucible

Jurisdiction of Incorporation: Delaware

Jurisdictions in which Qualified:

Alabama	Minnesota
California	New Jersey
Georgia	New York
Illinois	North Carolina
Indiana	Ohio
Kentucky	Pennsylvania
Massachusetts	Texas
Michigan	West Virginia
	Wisconsin

Authorized Shares: 1,000 Shares Common Stock par value $1 per share

Issued & Outstanding Shares: 1,000 Shares Common Stock par value $1 per share

Treasury Shares: None

Crusteel

Jurisdiction of Incorporation: United Kingdom

Jurisdictions in which Qualified:

None

Authorized Shares: 10,000 Shares Common Stock par value 1£ per share

Issued & Outstanding Shares: 10,000 Shares Common Stock par value 1£ per share

Treasury Shares: None

November 5, 1985

Schedule B

Real Property; Personal Property Title Exceptions
[Agreement, Section 5(g); 5(f)]

Real Property

Crucible

1. Specialty Metals Division (warehouse)
   1101 Avenue H East
   Post Office Box 5248
   Arlington, Texas 76011

2. Specialty Metals Division (warehouse)
   Post Office Box 149
   St. Mark Street
   Auburn, Massachusetts 01501

3. Trent Tube Division (plant)
   Carrollton Operation
   141 Hammonds Street
   Carrollton, Georgia 30117

4. Specialty Metals Division (warehouse)
   22400 So. Lucerne Street
   Carson, California 90749

5. Specialty Metals Division (warehouse)
   321 West 32nd Street
   Post Office Box 21128
   Charlotte, North Carolina 28206

6. Trent Tube Division (warehouse)
   4551 West Armitage Avenue
   Chicago, Illinois 60639

7. Trent Tube Division (plant)
   2188 S. Church Street
   East Troy, Wisconsin 53120

8. Magnetics Division (plant)
   Post Office Box 100
   Route 2 - U.S. 62
   Elizabethtown, Kentucky 42701
   (A portion of the property is leased pursuant to the capital lease identified at Schedule C(b)(6))

9. Specialty Metals Division (warehouse)
Post Office Box 554
25 Greenbrook Road
Fairfield, New Jersey 07007-0554

10. Specialty Metals Division (plant)
State Fair Boulevard
Syracuse, New York 13201

11. Specialty Metals Division (warehouse)
105 S. Keystone
Indianapolis, Indiana 46201

12. Crucible Compaction Metals Operation (plant)
R.D. No. 1
McKee & Robb Hill Road
Oakdale, Pennsylvania 15071
(A portion of the property is leased pursuant to the capital lease identified at Schedule C(b)(2))

13. Research Center
Post Office Box 88
Parkway West & Route 60
Pittsburgh, Pennsylvania 15230

14. Specialty Metals Division (warehouse)
3500 Crane Center Drive
Streetsboro, Ohio 44240

15. Specialty Metals Division (warehouse)
1201 Piedmont
Troy, Michigan 48084

16. Specialty Metals Division (warehouse)
10555 Taconic Terrace
Cincinnati, Ohio 45215

17. Specialty Metals Division (warehouse)
281 Dunlop Boulevard
Madison, Alabama 35758
(All of the property is leased pursuant to the capital lease identified at Schedule C(b)(4))

18. Thornberry Condominium
755 Windvue Drive
Unit 236-B
Pittsburgh, Pennsylvania 15205

Crusteel

None

Personal Property Liens & Encumbrances

Crucible

1. Financing Statement filed on December 6, 1982 with the Secretary of State of Wisconsin under File No. 636524 by VDM Technologies Corp. in connection with a Consigned Stock and Warehouse Agreement, dated September 30, 1982, entered into by the Trent Tube Division. The consignment arrangement has been terminated but VDM Technologies Corp. is apparently no longer in business.

2. Financing Statement filed with the Secretary of State of Georgia by ACRS Leasing of Irvine, CA, Secured Party, with Walter Heller Western as Assignee, covering office equipment leased to the Trent Tube Division in Carrollton, Georgia, for a term of 39 months commencing on September 6, 1983.

3. Financing Statement filed by General Systems Corporation, Secured Party, with the Central Trust Company as Assignee, covering a lease of electronic data processing equipment with Magnetics Division in Elizabethtown, Kentucky, for a term of 36 months commencing December 5, 1983.

Crusteel

None.

November 5, 1985

Schedule C

Loan or Credit Agreements & Capitalized Leases; Guarantees
[Agreement, Section 5(j)]

Crucible

(a) Loan or Credit Agreements:

None.

(b) Capitalized Lease Obligations:

(1) Amendatory and Restated Lease Agreement, dated as of June 1, 1978 between the Onondaga County Development Agency and Colt Industries Inc ("Colt"), with respect to Series 1978 pollution control bonds, subleased to Crucible Materials Corporation ("Crucible"), on October 3, 1983.

(2) Amendatory and Restated Lease Agreement, dated as of June 1, 1978, between Allegheny County Industrial Development Authority and Colt, with respect to Series 1978 revenue bonds, subleased to Crucible, on October 3, 1983.

(3) Lease Agreement, dated as of September 15, 1980 between the City of Elizabethtown, Kentucky and Colt with respect to Series 1980 revenue bonds, subleased to Crucible on October 3, 1983.

(4) Lease Agreement, dated as of September 15, 1980, between the Industrial Development Board of Huntsville, Alabama and Colt, with respect to Series 1980 revenue bonds, subleased to Crucible on October 3, 1983.

(5) Lease Agreement, dated as of September 15, 1980, between the Onondaga County Industrial Development Authority and Colt, with respect to Series 1980 pollution control bonds, subleased to Crucible on October 3, 1983; and

(6) Contract of Lease and Rent, dated January 19, 1965, and Contract of Lease, dated January 19, 1965, both between the City of Elizabethtown, Kentucky and Crucible Steel Company of America, assigned to Crucible on October 3, 1983.

(c) Guarantees of Obligations of Colt or Its Subsidiaries:

None.

Crusteel

(a) Loan or Credit Agreements:

(1) Mellon Bank, N.A. and Barclays Bank PLC £600,000 credit facility from each bank - letter from Mellon Bank to Crusteel, dated June 29, 1984; letter from Barclays Bank to Crusteel, dated June 25, 1984, Debenture and Charge, dated October 19, 1978. [Crusteel proposes to increase to £1,500,000]

(b) Capitalized Lease Obligations:

The leases referred to below are capitalized for U.S. financial accounting purposes.

(1) Lease between Sun Life Assurance Company (assigned by FPA Finnegan Limited) and Crusteel Limited relating to Unit No. 8 Rutland Road Industrial Estate in the City of Sheffield, for a term of 35 years (less 10 days) from January 1, 1973.

(2) Lease between Sun Life Assurance Company (assigned by Artagen Properties Limited) and Crusteel Limited relating to land adjoining Unit No. 8 Rutland Road Industrial Estate in the City of Sheffield, for a term of 35 years (less 10 days) from January 1, 1973.

(c) Guarantees of Obligations of Colt or Its Subsidiaries:

None.

November 5, 1985

Schedule D

Litigations & Claims
of $10,000 or More
[Agreement, Section 5(k)]

Crucible

A. Crucible Magnetics Division

1. Claims for damage to approximately 900 automobiles sprayed with paint by an outside contractor performing repair work in July, 1984 painting three storage silos at the Crucible Magnetics Division plant in Elizabethtown, Kentucky, might be asserted against Crucible. One claim for compensatory damages of $1000 has been filed (Connie P. Moore v. Colt Industries FMC, Crucible Magnetics Division, District Court of Hardin County, Small Claims Division, Case No. 855-130).

B. Crucible Compaction Metals Operation ("CCMO")

1. I. R. Toulouse, Admin. of Estate of J. D. Toulouse v. Autoclave Engineers and Battelle Memorial Institute v.Crucible, Allegheny County Court of Common Pleas, GD81-34411

(a) Wrongful death action arising from death of CCMO employee which occurred inside autoclave vessel. CCMO is third-party defendant to Battelle on basis of indemnification provision in contract between Battelle and CCMO for purchase of the autoclave vessel. Battelle has settled the main complaint for $113,000 and the complaint and third party complaint have been dismissed. Battelle may commence an action for indemnification against Crucible within two years of the date of its payment.

(b) Relief Sought - Compensatory damages in excess of $10,000 and punitive damages in an unspecified amount

(c) Insurance - $6,000,000 primary and first layer of excess, per occurrence and in the aggregate, $500,000 deductible; insurer has reserved its rights as to punitive damages

(d) Counsel - Avrum Levicoff, Esq.
Egler, Anstandig, Garrett & Riley
The Lawyers Building
428 Forbes Avenue
Pittsburgh, PA
(412) 281-9810

2. Burnes v. Duff-Norton Company, Inc., et al., Allegheny County Court of Common Pleas, G.D. 84-23018

(a) Claim for damages for personal injuries sustained by plaintiff while operating a hoist during installation of a crane at Crucible Compaction Metals Operation.

(b) Relief Sought - Compensatory damages in excess of $20,000.

(c) Insurance - $6,000,000 primary and first layer of excess, per occurrence and in the aggregate, $500,000 deductible.

(d) Counsel - Avrum Levicoff, Esq.
Egler, Anstandig, Garrett and Riley
2100 Lawyers Building
Pittsburgh, PA 15219
(412) 281-9810

3. Citation and Notification of $9,000 penalty issued by Occupational Safety and Health Administration ("OSHA") on August 12, 1985 concerning Atomizer Department.

C. Crucible Research Center

1. J. Connors, T. Leslie, R. Orekowski & R. Windsheimer v. Crucible Inc, U.S. District Court for the Western District of Pennsylvania, Case No. 84-1109

(a) Suit alleging age discrimination in termination of plaintiffs' employment

(b) Relief Sought - Reinstatement of employment with back pay; lost pension benefits; liquidated damages equal to monies lost (subject to doubling if discrimination is held willful) plus attorneys' fees and costs: and injunction prohibiting further alleged discrimination

(c) Insurance - None

(d) Counsel - Patrick W. Ritchey, Esq.
Reed Smith Shaw & McClay
Union Trust Building
Pittsburgh, PA
(412) 288-3131

Subject to the indemnity provided in Section 13(a)(iv) of the Purchase Agreement, dated November 5, 1985.

2. J. Connors, T. Leslie, R. Orekowski & R. Windsheimer v. Crucible Steel, Equal Employment Opportunity Commission Charge Nos. 034-850992, 034-850999, 034-850998, 034-850997.

(a) Charges alleging reverse sex discrimination and retaliation for having filed an age discrimination suit by failing to rehire or recall the charging parties.

(b) Relief Sought - Unspecified

(c) Insurance - None

(d) Counsel - Patrick W. Ritchey, Esq.
Reed Smith Shaw & McClay
Union Trust Building
Pittsburgh, PA
(412) 288-3131

Subject to the indemnity provided in Section 13(a)(iv) of the Purchase Agreement, dated November 5, 1985.

D. Trent Tube Division

1. Specter Red Ball, Inc. et al. v. A & M Trading Co., Inc, et al., United States Bankruptcy Court, Western District of Texas, Case Nos. 5-82-00329-T and 5-84-0504-T.

(a) Claims against Trent Tube Division for freight bills allegedly unpaid or freight misdescribed

(b) Relief Sought - Approx. $95,000 and $1,953

(c) Insurance - None

(d) Counsel - Nancy Reyes, Esq.
McCannish, Ingram, Martin & Brown
900 Milam Building
East Travis at Soledad
San Antonio, TX 78205
(512) 225-5500

Michael Golightly, Esq.
Kline & Kline
106 S. St. Mary's Street
One Alamo Center
San Antonio, TX 78205

2. Maislin Industries, U.S., Inc. et al. v. Colt Ind., Inc., Crucible Inc. and Trent Tube Div. Bankruptcy Case No. 83-03161-W; Adversary Case No. 85-0771, U.S. Bankruptcy Ct. E.D. Mich. S.D.

(a) Suit to collect charges for transportation service furnished by plaintiff.

(b) Relief Sought - $1,425.55

(c) Insurance - None

(d) Counsel - Sidney Berman, Esq.
Fischer, Franklin, Ford, Simon & Hogg
1700 Guardian Bldg.
Detroit, MI 48266

E. Crucible Specialty Metals Division

1. Frazier Industrial Co., Inc. v. Crucible, Inc., NY Supreme Court, Onondaga County

(a) Suit for breach of contract for failure to pay for goods sold and counterclaim for defective goods.

(b) Relief Sought - $64,877.17, plus interest from August 4, 1976 by plaintiff and $135,000 by Crucible on counterclaim

(c) Insurance - None

(d) Counsel - Paul M. Hanrahan, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

2. L. McCabe v. Crucible Inc, New York State Division of Human Rights (Case No. E-S-60396-78E)

(a) Sex and disability discrimination complaint, including class allegations, for failure to hire for mill job because of plaintiff's size, weight and sex

(b) Relief Sought - To require Crucible to hire complainant and pay back wages to date of employment application and for class relief

(c) Insurance - None

(d) Counsel - David Larrison, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

3. Reaves v. Crucible, United States District Court for the Northern District of New York (Civil Action No. 81-CV-544)

(a) Claim for allegedly wrongful discharge based on racial discrimination

(b) Relief Sought - Back pay, reinstatement and attorneys fees

(c) Insurance - None

(d) Counsel - David E. Peebles, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

4. R. Reynolds and G. Reynolds v. A. C. Towne Corp. and Pullman Inc. v. Crucible, New York Supreme Court, Onondaga County

(a) Action for damages for personal injury. Plaintiff, an employee of Crucible, was injured when railing gave way. Plaintiff sued Towne Corp., the manufacturer of the railing, and Pullman, Inc., the contractor which installed the railing. Towne Corp. filed third-party complaint against Crucible alleging sole custody of the premises and negligence in failing to inspect and post warnings and safety devices.

(b) Relief Sought - $1,000,000 compensatory damages and $10,000,000 punitive damages

(c) Insurance - $2,000,000 excess per occurrence and in the aggregate; $500,000 deductible; insurer reserves its rights regarding punitive damages

(d) Counsel - Paul M. Hanrahan, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

5. Silver v. Randall Electric Inc.; Perkins v. Randall Electric Inc.; Randall Electric Inc. v. Crucible, New York Supreme Court, Onondaga County

(a) Suit for damages by Crucible employees injured in the course of construction work being performed at Syracuse plant by Randall Electric. Crucible took over defense of the suit from Randall Electric and third-party complaint by Randall was dismissed.

(b) Relief Sought - $250,000 compensatory damages and $600,000 punitive damages in each case

(c) Insurance - $2,000,000 excess per occurrence and in the aggregate; $500,000 deductible; insurer reserves its rights regarding punitive damages

(d) Counsel - Paul M. Hanrahan, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

6. Thomas v. Crucible, New York Supreme Court, Onondaga County

(a) Suit for personal injury by employee of Higgins Erectors injured while performing work at Syracuse plant. Defense of this suit was tendered to and accepted by Utica Mutual Insurance Co. on the basis of the indemnity provision in Crucible's contract with Higgins Erectors.

(b) Relief Sought - $500,000 compensatory damages

(c) Insurance - See (a) above

(d) Counsel - David S. Howe, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

7. Stora Kopparberg Corporation & Uddeholm Steel Corporation v. Crucible Inc., (Civil Action No. 74-1062) and Crucible Inc. v. Stora Kopperbergs AB and Uddeholms AB (Civil Action No. 74-917) United States District Court for the Western District of Pennsylvania

   (a) Stora's claim is to invalidate two Crucible patents relating to powder-metallurgy produced high speed steel and for alleged antitrust violations as a result of patent misuse and Crucible's claim is for infringement of the two patents. On October 11, 1984, the Court entered a judgment holding the Crucible patents valid and infringed and issued an injunction against continued infringement. The injunction was stayed until March 12, 1985, when the stay was lifted. Stora has appealed to the Court of Appeals for the Federal Circuit. In addition, on April 19, 1985, Crucible filed a motion for summary judgment dismissing the antitrust counts in the Stora complaint.

   (b) Relief Sought - Crucible seeks an injunction and damages and Stora seeks a declaration of invalidity and antitrust damages.

   (c) Insurance - None

   (d) Counsel - Ford F. Farabow, Jr., Esq.
   Finnegan, Henderson, Farabow, Garrett & Dunner
   1775 K Street, N.W.
   Washington, DC
   (202) 293-6850

8. W. E. Smith v. Enerpac, Crucible, et al., Philadelphia County, Court of Common Pleas, Case No. 6907

   (a) Claim for damages for personal injury sustained when plaintiff was operating a hydraulic press.

   (b) Relief Sought - Compensatory damages in excess of $20,000.

   (c) Insurance - $6,000,000 primary and first layer of excess per occurrence and in the aggregate, $500,000 deductible.

(d) Counsel - Austin Hogan, Esq.
White & Williams
17th Floor
1234 Market Street
Philadelphia, PA 19107
(215) 854-7000

9. The Pension Agreement between Crucible Materials Corporation, Specialty Metals Division - Syracuse and United Steelworkers of America v. V. M. Black and V. Black, U.S. District Court for the Northern District of New York (Case No. 81-CV-1570)

(a) Interpleader Action to resolve conflicting claims of two wives for surviving spouse pension benefits.

(b) Relief Sought - Determination of proper party entitled to pension plan benefits.

(c) Insurance - None.

(d) Counsel - David E. Peebles, Esq.
Hancock & Estabrook
One Mony Plaza
Syracuse, New York 13202
(315) 471-3151

10. Barbara A. Seigle v. Crucible, N.Y. State Division of Human Rights, Complaint No. 5-E-S-85-102222E.

(a) Complaint alleging sex discrimination in failure to recall. On May 30, 1985, the Division of Human Rights determined that there was no probable cause to believe defendant had engaged in unlawful discrimination. Plaintiff has filed a notice of appeal.

(b) Relief Sought - Reinstatement of employment with back pay.

(c) Insurance - None

(d) Counsel - Frank A. Hunter, Esq.
Crucible Research Center
Parkway West & Route 60
Pittsburgh, PA 15230

11. Letter, dated February 6, 1985, has been received from Gene Zamler, Esq., Bockoff & Zamler, Southfield, Michigan representing Diane Chapman, a visitor at the Troy, Michigan warehouse of the Specialty Metals

Division, with respect to injuries allegedly sustained by Ms. Chapman while on the premises.

12. Claim letter, dated May 22, 1985, from Thaddeus B. Oot and Associates, a law firm representing Kenneth O'Neil claiming on behalf of Mr. O'Neil compensation for lost time due to injuries allegedly sustained while unloading a truck owned and operated by the Specialty Metals Division. Mr. O'Neil was a leased driver provided to the Division by Pen Truck Aids, Inc.

13. On May 28, 1985, Mr. Lloyd Sing, Jr., an employee of Anderson Truck Service was killed while unloading steel bars from a truck at the Minneapolis Warehouse of the Specialty Metals Division. A report of the accident has been forwarded to the insurance carrier, Aetna Casualty Co.

14. Crucible Materials Corporation v. Urban-Snow Gas Co., Inc. and Roy L. Urban, Sr., U.S. District Court for the Northern District of Texas, Dallas Div., CA-85-0033-G.

    (a) Action for damages for breach of contract and fraud.

    (b) Relief sought - Compensatory damages of $475,089.86; punitive damages of $750,000; an order that defendants be required to perform their contract obligations; an order removing Urban-Snow Gas Co. as operator of the gas properties in question.

    (c) Insurance - Not applicable

    (d) Counsel - Drew Heard, Esq.
    Shank, Irwin & Conant
    4100 Thanksgiving Tower
    1601 Elm Street
    Dallas, TX 75201
    (214) 720-9600

15. Crucible Inc, Specialty Metals Division v. Tri-Cities Tool & Die Co., Inc., Fairfield County, Alabama Circuit Court

    (a) Action to recover an open account.

    (b) Relief sought - Damages of $11,315.09.

    (c) Insurance - Not applicable.

(d) Counsel - Judy K. Carter, Esq.
Legal Clinic of Thomas M. Semmes, P.C.
1412 Leighton Avenue
Anniston, Alabama 36201
(205) 236-7355

Crucible Fund

1. Francis Werchinski v. Crucible Fund, Small Claims Court, Syracuse, New York, Index No. 1317/85.

(a) Claim for loss of bank interest on distribution to the Plaintiff from Crucible savings plan for the period from July 1, 1985 through August 12, 1985.

(b) Relief sought - Monetary damages of $1,500 together with costs and disbursements.

(c) Insurance - None

(d) Counsel - Paul M. Hanrahan, Esq.
Hancock & Estabrook
One Mony Plaza
100 Madison Street
Syracuse, NY
(315) 471-3151

Associate Counsel - William H. Powderly, Esq.
Reed Smith Shaw & McClay
Two Mellon Bank Center
Pittsburgh, PA 15219-4407
(412) 288-3131

Crusteel

1. Crusteel Ltd. v. Inland Revenue

(a) This is a pending tax proceeding of Crusteel Ltd. within the Inland Revenue Service respecting the characterization of foreign exchange loss deductions claimed in 1976 and 1978. The issue is whether the foreign exchange loss is an ordinary loss which would be deductible as an ordinary business item, or a capital loss which would not be deductible at all.

(b) Amounts in Dispute:

1976 loss	£ 204,000	
1978 loss	38,000	
1980 gain	(4,000)	
	£ 238,000 x 52% =	£ 124,000
Certificate of Tax Deposit		106,500
Exposure plus Interest		£ 18,000

(c) Insurance - None

(d) Counsel - Instructing Solicitors
Frere Cholmeley
28 Lincoln's Inn
Fields,
London WC2A 3HH

Barrister
Francis J. Brennan
Gray's Inn Chambers
Gray's Inn
London WC 1

Auditors
Arthur Andersen & Co. (Arthur Hunking)
1 Surrey Street
London WC2R 2PS

Outstanding Orders, Decrees or Stipulations

Crucible

1. Final Judgment in United States of America v. RMI Company, et al., U.S. District Court for the Eastern District of New York, Civil Action No. 81-4177, dated October 9, 1984.

2. Final Judgment in United States of America v. RMI Company, et al., U.S. District Court for the Western District of Pennsylvania, Civil Action No. 78-1108, dated July 29, 1980.

3. Final Judgment in United States of America v. Allegheny Ludlum Steel Corporation, et al., U.S. District Court for the District of New Jersey, Civil No. 4583, dated October 25, 1948.

4. Order to Cease and Desist In the Matter of American Iron & Steel Institute, et al., United States of America Before Federal Trade Commission, Docket No. 5508, dated August 10, 1951.

Crusteel

None.

November 5, 1985

Schedule E

Product Warranty Litigations &
Product Liability Claims
[Agreement, Section 5(1)]

Crucible

A. Crucible Specialty Metals Division

1. Duff v. Summa Corp., Hughes Helicopters Inc., Thoroughbred Helicopter Services Inc., Mayville Gear Mfg. Co. and Crucible Inc., Perry County, Kentucky Circuit Court, Civil Action No. 81-C1-398

   (a) Suit for wrongful death arising out of a helicopter accident, alleging Crucible sold defective Hy-Tuf steel to Mayville, who manufactured a shaft therefrom which was then sold to Hughes, who manufactured and sold the helicopter to Thoroughbred

   (b) Relief sought - compensatory damages of $10,000,000 and punitive damages of $10,000,000

   (c) Insurance - $500,000,000 primary per occurrence and annual aggregate, no deductible; insurer reserves its rights regarding punitive damages

   (d) Counsel - Fred J. Meier, Esq.
   Kern, Wooley & Maloney
   10920 Wilshire Boulevard
   Los Angeles, California
   (213) 824-1777

2. Materials Research Laboratory, Inc. v. Colt Industries - Crucible Specialty Metals Division and Calumet Heat Treating Corporation, Cook County, Illinois Court of Common Pleas, 85M1-077311.

   (a) Action for breach of warranty with respect to a steel product sold to plaintiff.

   (b) Relief sought - Compensatory damages of $3,006.99 plus costs of suit.

   (c) Insurance - None.

(d) Counsel - M. Jayne Rizzo, Esq.
Wildman, Harrold, Allen & Dixon
One IBM Plaza
Chicago, IL

B. Trent Tube Division

1. Claim, asserted by Union Carbide Corporation, by letter, dated May 30, 1984, against the Trent Tube Division for alleged defective tubing. Union Carbide seeks reimbursement of expenses incurred in the amount of $71,250.00, plus replacement at Trent Tube's expense of 198 allegedly defective tubes.

2. Claim, asserted by E. I. duPont de Nemours & Company in a letter, dated March 27, 1985, to McJunkin Corporation, a Trent Tube Division distributor, for labor and overhead costs totalling $60,000 for removing and refabricating allegedly defective pipe manfactured by the Trent Tube Division. A letter rejecting this claim, dated May 22, 1985, has been forwarded to McJunkin.

3. Claim asserted by Wellman Thermal Systems Corporation in a letter dated June 7, 1985, to Tube Sales, a Trent Tube Division customer, rejecting as defective and reserving all rights with respect to Hastelloy X tubing used by Wellman to manufacture thermocouples for General Electric for use in military aircraft engines. Trent Tube has offered to settle with Tube Sales by providing 56,000 feet of replacement tubing at Trent Tube's cost in exchange for a release.

Crusteel

1. Dannisforge Engineering Ltd. has asserted a claim that steel sold to it by Crusteel was defective. Dannisforge is seeking damages of approximately £20,000 and Crusteel is seeking payment for a second shipment of steel by it to Dannisforge while waiting for an independent report on whether the first shipment was defective. The parties disagree over the conclusions of the report. The claim is not insured. Crusteel would seek to recover any loss from its supplier, under its warranty. Crusteel's solicitor is the firm of Irwin Mitchell, Belgrave House, Bank Street, Sheffield, S1 1WE, England (Mr. Peter Wild).

2. Senior & Dickson (Toolmakers) Ltd. has asserted a claim that steel sold to it by Crusteel and manufactured by it into a tool was defective and seeking consequential damages of approximately £100,000 based on its customer's alleged loss of production. The claim is covered by insurance of £250,000 per claim and in the aggregate for the policy

period of December 31, 1982 - December 30, 1983, subject to a deductible of £5,000 per loss, but limited to £20,000 in the aggregate. Crusteel would seek to recover any loss within the deductible amount from its supplier. Crusteel's solicitor - Irwin Mitchell (Mr. R. Steer).

November 5, 1985

Schedule F

Terminated Operations
[Agreement, Section 5(m)]

Crucible Terminated Operations

1. Trent Tube Division - Austell plant, 1220 Six Flags Road, Austell, Georgia

2. Trent Tube Division - Bremen plant, 506 Sangamore Road, Bremen, Georgia

3. Trent Tube Division - Fullerton plant, 2100 E. Orangethorpe Avenue, Fullerton, California

Crusteel Terminated Operations

None.

November 5, 1985

Schedule G

Employee Benefit Plans
[Agreement, Section 6(a)]

Crucible

Pension and Employee Profit Sharing Plans

1. The Crucible Fund for Eligible Salaried Employees of All Divisions of Crucible Materials Corporation (Plan No. 040)
   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022
   Trustee: [Bankers Trust Company]
   Insurance Carrier: N/A
   Employer Contributions: Contributions by Crucible are based upon a percentage of active participants' contributions and conditional upon the amount of Colt's net earnings and preferred stock dividends

2. Crucible Materials Corporation Retirement Plan for Salaried Employees (applies to Eligible Employees of Crucible Magnetics Division, Trent Tube Divisions [all U.S. locations]) (Plan No. 041)
   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022
   Trustee: Mellon Bank, N.A.
   Insurance Carrier: N/A
   Employer Contributions: The cost of basic plan benefits is paid for entirely by Crucible; employee makes a contribution of 2% of earnings in excess of the Social Security wage base for optional supplemental plan benefits and Crucible pays the balance of the cost

3. Magnetics Division of Crucible Materials Corporation Restated Pension Plan for Certain Employees at its Elizabethtown Plant (Plan No. 043)

Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: Mellon Bank, N.A.
Insurance Carrier: N/A
Employer Contributions: Crucible pays the entire cost of the plan

4. Pension Agreement between Colt Industries, Crucible Materials Corporation and United Steelworkers of America Pension Plan "A" Covering Employees of Bargaining Units Located at Specialty Metals Division, Local 1277, 2716, 2924 of Colt Industries, Crucible Materials Corporation (Plan No. 044)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: Mellon Bank, N.A.
Insurance Carrier: N/A
Employer Contributions: Crucible pays the entire cost of the plan

5. Specialty Metals Division Retirement Plan for Cleveland Warehouse Employees between Crucible Materials Corporation and United Steelworkers of America AFL-CIO and Local Union No. 7822 (Plan No. 046)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: Mellon Bank, N.A.
Insurance Carrier: N/A
Employer Contributions: Crucible pays the entire cost of the plan

6. Trent Tube Pension Plan between Crucible Materials Corporation and United Steelworkers of America and Local No. 7076 (East Troy, Wisconsin Plant) (Plan No. 047)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: Mellon Bank, N.A.
Insurance Carrier: N/A
Employer Contributions: Crucible pays the entire cost of the plan

7. Trent Tube Division Pension Plan between Crucible Materials Corporation and United Steelworkers of America and Local No. 7261 (Plan No. 048) (Carrollton, Georgia Plant)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: Mellon Bank, N.A.

Insurance Carrier: N/A
Employer Contributions: Crucible pays the entire cost of the plan

8. The Crucible Materials Corporation 1975 Salaried Retirement Plan for Eligible Employees of Crucible Compaction Metals Operation, North Fayette Township, PA; Crucible Specialty Metals Division, Geddes, NY; Crucible Materials Research Center, Robinson Township, PA. (Plan No. 051)
   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022
   Trustee: Mellon Bank, N.A.
   Insurance Carrier: N/A
   Employer Contributions: The cost of basic plan benefits is paid for entirely by Crucible; employee makes a contribution of 2% of earnings in excess of the Social Security wage base for optional supplemental plan benefits and Crucible pays the balance of the cost

9. Crucible Compaction Metals Operation USW Pension Plan (Plan No. 052)
   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022
   Trustee: Mellon Bank, N.A.
   Insurance Carrier: N/A
   Employer Contributions: Crucible pays the entire cost of the plan

10. Central States, Southeast and Southwest Areas Pension Fund (Crucible Specialty Metals Division, Detroit, Michigan warehouse)

Insurance Plans

1. Colt Industries Inc Travel Accident Insurance (Plan No. 520)
   Name: Travel Accident Insurance
   Sponsor & Address: Colt Industries Inc
   430 Park Avenue
   New York, NY 10022
   Trustee: N/A
   Insurance Carrier: Continental Casualty Co.
   Chicago, IL
   Employer Contributions: Colt pays the entire cost of the benefits under the Plan

2. Crucible Inc Long Term Disability Insurance Plan for Eligible Salaried Employees Specialty Metals Division, Syracuse, NY 13201; Material Research Division, Box 88, Pittsburgh, PA 15230; CCMO Division, Oakdale, PA 15031; Trent Tube Division, E. Troy, WI 53120; Trent Tube Division, Carrollton, GA 30117; Magnetics Division, Elizabethtown, KY 42701 (Plan No. 522)

   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022

   Trustee: N/A

   Insurance Carrier: Continental Casualty Company

   Employer Contributions: This is an optional plan for which the employee pays the cost of coverage based on salary. See chart on Page 8 of Summary Plan Description.

3. Crucible Inc Group Insurance Plan for Eligible Salaried Employees (Specialty Metals Division, Syracuse, NY 13201; Material Research Division, Box 88, Pittsburgh, PA 15230; CCMO Division, Oakdale, PA 15031) (Plan No. 522)

   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022

   Trustee: N/A

   Insurance Carrier: The Aetna Life Insurance Company
   151 Farmington Avenue
   Hartford, CT 06115

   Employer Contributions: Crucible pays the entire cost of the medical, dental and vision care expense plan for active eligible employees. Employees contribute toward the cost of coverage for their eligible dependents. Employees also contribute toward the cost of life insurance based on salary.

4. Insurance Benefits for Employees Represented By the United Steelworkers of America of the CCMO Division, Colt Industries, Crucible Inc. (Plan No. 522)

   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022

   Trustee: N/A

   Insurance Carrier: The Aetna Life Insurance Company
   151 Farmington Avenue
   Hartford, CT 06115

Employer Contributions: Crucible pays the full cost for active eligible employees. As of January 1, 1986, employees will contribute for the cost of coverage for their eligible dependents.

5. Group Insurance Plan for Salaried Employees of Crucible Inc at the Trent Tube Division and Magnetics Division (Plan No. 523)

   Sponsor & Address: Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022

   Trustee: N/A

   Insurance Carrier: The Aetna Life Insurance Company
   151 Farmington Avenue
   Hartford, CT 06115

   Employer Contributions: Crucible pays the full cost of the medical and dental expense plan for active eligible employees. Employees contribute towards the cost of coverage for their eligible dependents. Employees also contribute to the cost of life insurance based on salary.

6. Program of Insurance Benefits for Union Non-Exempt Salaried Employees, Colt Industries, Crucible Inc, Pursuant to Agreement with United Steelworkers of America (Plan No. 524)

   Sponsor & Address: Colt Industries, Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022

   Trustee: N/A

   Insurance Carrier: Blue Cross and Blue Shield
   Aetna Life Insurance Company

   Employer Contributions: The entire cost of the benefits under the Plan is paid for by Crucible

7. Program of Insurance Benefits for Hourly Paid Employees Colt Industries, Crucible Inc, Pursuant to Agreement with United Steelworkers of America (Plan No. 524)

   Sponsor & Address: Colt Industries, Crucible Materials Corporation
   430 Park Avenue
   New York, NY 10022

   Trustee: N/A

Insurance Carrier: Blue Cross and Blue Shield
Aetna Life Insurance Company
Employer Contributions: The entire cost of the benefits under the Plan is paid for by Crucible

8. Program of Insurance Benefits for Hourly Paid Employees of the East Troy Plant, Trent Tube Division, Colt Industries, Crucible Inc Pursuant to Agreement with United Steelworkers of America (Plan No. 525)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: N/A
Insurance Carrier: Blue Cross/Blue Shield of Western Pennsylvania
Aetna Life and Casualty Company
Employer Contributions: Crucible pays the entire premium, except for additional life insurance which is paid by the employee. Effective June 1, 1985, employees will contribute towards the cost of dependent coverage.

9. Program of Insurance Benefits for Hourly Paid Employees of the Carrollton Plant, Trent Tube Division, Colt Industries, Crucible Inc Pursuant to Agreement with United Steelworkers of America (Plan No. 525)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: N/A
Insurance Carrier: The Aetna Life Insurance Company
151 Farmington Avenue
Hartford, CT 06115
Employer Contributions: Crucible pays the entire premium, except for additional life insurance which is paid by the employee.

10. Group Insurance Plans for Eligible Salaried Pensioners Colt Industries, Crucible Inc (Plan No. 526)
Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022
Trustee: N/A
Insurance Carrier: The Aetna Life Insurance Company
Employer Contributions: The cost of the medical plan is shared by the retiree and Crucible with the retiree

paying a percentage of the total cost. Crucible pays the entire cost of the life insurance.

11. Group Insurance Plan for Eligible Salaried Pensioners Colt Industries, Crucible Inc, Trent Tube Division and Magnetics Division (Plan No. 526)

Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022

Trustee: N/A

Insurance Carrier: The Aetna Life Insurance Company
151 Farmington Avenue
Hartford, CT 06115

Employer Contributions: The cost of the medical plan is shared by the retiree and Crucible with the retiree paying a percentage of the total cost. Crucible pays the entire cost of the life insurance.

12. Program of Hospital - Medical Benefits for Eligible Pensioners & Surviving Spouses of Colt Industries, Crucible Inc, Pursuant to Agreement with United Steelworkers of America (Plan No. 527)

Sponsor & Address: Colt Industries, Crucible Materials Corporation
430 Park Avenue
New York, NY 10022

Trustee: N/A

Insurance Carrier: Blue Cross and Blue Shield

Employer Contributions: Crucible pays the entire cost of the hospital and physicians' services benefits of this Program. The cost of the optional major medical benefits of the Program are paid for entirely by pensioners and surviving spouses electing such coverage.

13. Group Insurance Plan for Hourly Paid Employees of Colt Industries, Crucible Inc, Magnetics Division, Elizabethtown, KY 42701, Pursuant to Agreement with the International Union of Electrical, Radio and Machine Workers, AFL-CIO - Local No. 762 (Plan No. 528)

Sponsor & Address: Crucible Materials Corporation
430 Park Avenue
New York, NY 10022

Trustee: N/A
Insurance Carrier: Phoenix Mutual Life Insurance Company; Blue Cross/Blue Shield of Kentucky and Aetna Life Insurance Company
Employer Contributions: The employee contributes for eligible dependent coverage. The cost of all other benefits is paid entirely by Crucible at no cost to the employee.

14. Supplemental Unemployment Benefit Plan for Employees of Crucible Materials Corporation, Specialty Metals Division Established Pursuant to Agreement with United Steelworkers of America (Plan No. 531) (old plan and draft new plan)
    Sponsor & Address: Crucible Materials Corporation
    430 Park Avenue
    New York, NY 10022
    Trustee: Manufacturers Hanover Trust Company
    600 Fifth Avenue
    New York, NY 10020
    Insurance Carrier: N/A
    Employer Contributions: Crucible contributions are based on hours worked to a specified maximum.

15. Group Insurance Plan for Eligible, Non-Exempt Union Employees of Crucible Inc, Specialty Metals Division, Syracuse, NY 13201, (Cleveland District) (Plan No. 537)
    Sponsor & Address: Crucible Materials Corporation
    430 Park Avenue
    New York, NY 10022
    Trustee: N/A
    Insurance Carrier: The Aetna Life Insurance Company
    151 Farmington Avenue
    Hartford, CT 06115
    Employer Contributions: Contributions for life insurance are based on salary. Medical benefits are paid in full by Crucible.

16. Michigan Conference of Teamsters Welfare Fund (Crucible Specialty Metals Division, Detroit, Michigan warehouse)

Special Employee Benefit Plans

Except as otherwise indicated, each of the following plans is sponsored by Colt Industries Inc, 430 Park Avenue, New York, New York for certain executive employees and none of the plans have either trustees or insurance carriers.

1. Incentive Plan for Certain Employees of Colt Industries Inc and its Subsidiaries

   Employer Contributions: Colt Industries Inc - provided minimum profits are achieved, as specified in the plan, awards under the plan are determined by a committee of the Board of Directors of Colt Industries Inc and made annually in January based upon performance during the prior calendar year to officers of Colt and certain headquarters personnel

2. Divisional Incentive Compensation Program

   Sponsor & Address: Divisions of Colt Industries Inc

   Employer Contributions: Divisions of Colt Industries Inc - contingent upon achievement of specific divisional objectives, cash awards are made to divisional presidents, vice presidents and other divisional executives

3. 1977 Long-Term Performance Plan

   Employer Contributions: Colt Industries Inc - performance shares awarded under the plan accrue value annually over a ten year period based on net profits of Colt Industries Inc

4. Capital Accumulation Plan

   Employer Contributions: Colt Industries Inc - recipients of awards have amounts credited to deferred accounts to which additional compensatory amounts are credited annually based on after-tax return on total capital with accumulated amounts payable generally at the end of ten years

5. Deferred Compensation Agreements

Employer Contributions: Colt Industries Inc - recipients of awards have amounts credited to deferred accounts to which additional compensatory amounts are credited annually based on a specified bank's prime rate with accumulated amounts payable generally at the end of ten years

6. Family Protection Program

Insurance Carrier: N/A [life insurance policies finance certain obligations]

Employer Contributions: Colt Industries Inc - in the event of the participant's death within 7 years from the date of issuance of an insurance policy on the participant's life obtained by Colt Industries Inc from Connecticut Mutual Life Insurance Company, amounts based on participant's annual compensation and limited by the net proceeds of such policy are payable to the participant's beneficiary annually over a 15 year period

7. Employee Stock Option Plans

Employer Contributions: Colt Industries Inc - incentive stock options and non-qualified stock options to purchase common stock of Colt Industries Inc at 100% of market price on the date of grant are granted to participants, exercisable in cumulative installments over a ten year period. In connection with the exercise of such options by officers of Colt Industries Inc, upon approval by the Stock Option and Compensation Committee, loans for the option exercise price secured by the shares issued as a result of the exercise and unsecured loans

for the resulting taxes thereon have been made by Colt Industries Inc at interest rates of either 6-1/2% or 9% depending upon the type of option exercised

8. Financial Counseling Program
   Selected executives of Colt Industries Inc receive assistance from approved counselors in the following areas: financial and investment planning; estate counseling; and income tax counseling and return preparation. Costs of such counseling are paid by Colt Industries Inc within maximum ranges.

9. Arrangements to provide benefits approximately equal to benefits provided to participants in the Retirement Plan for Salaried Employees of Colt Industries Inc and the Retirement Savings Plan for Salaried Employees of Colt Industries Inc whose benefits under such plans are limited by certain provisions of the Internal Revenue Code have been made by Crucible Materials Corporation with one officer of Colt Industries Inc who is an officer of Crucible Materials Corporation and is not covered by the aforesaid Retirement or Retirement Savings Plan.

10. Crucible Materials Corporation has committed to loan $40,000 to an executive of Crucible to be evidenced by a Promissory Note (Unsecured) payable on fixed dates or earlier under certain specified circumstances.

11. Annual physical examinations by approved organizations or physicians are provided by Colt Industries Inc to certain executives.

12. Automobiles constituting part of a fleet of company automobiles are assigned to certain executives with arrangements for reimbursement for any personal use of such automobiles by the executives.

13. Relocation Expenses Reimbursed for Certain New Hired and Relocated Employees.
    The items of expense covered include:
    1. cost of moving household goods;
    2. brokerage fees on sale of house;
    3. closing costs on new home;
    4. legal fees associated with the sale and purchase of the homes involved;
    5. up to one month's salary for miscellaneous expenses;
    6. mortgage interest differential payment.

14. Excess Personal Liability Insurance for Certain Executive Employees.
    Insurance Carrier: Kemper Group
    Employer Contributions: Colt pays the entire premium, the amount of which is then included in employee's income

15. Excess Long-Term Disability Insurance for Certain Executive Employees.
    Insurance Carrier: National Benefit Life Insurance Company and Guardian Life Insurance Company
    Employer Contributions: Colt pays the entire premium, the amount of which is then included in employee's income

Other Employee Benefits for Non-Union Employees

1. Severance and Termination Allowance Policy for Non-Union, Salaried Employees of Crucible Materials Corporation:
   Severance allowance, subject to conditions stated in policy, may be payable to eligible employees who are terminated solely by reason of the shutdown or significant and distant relocation of Crucible facilities and who are not terminated at their own election; and, termination allowance may be payable, subject to conditions stated in policy, to eligible employees whose employment is terminated by Crucible without prejudice.

2. Crucible Research Center:
   Provision for payment for time spent on jury duty.
   Payment for certain specified holidays.
   Payment of salary continuance for absence from work due to personal accident or illness.
   Military encampment allowance paid to employees attending military reserve camp.
   Payment of salary during authorized leaves of absence.
   Payment for vacation based upon years of service including a provision for deferred vacation.
   Tuition aid program provides for payment of tuition fees for courses of study under certain conditions.
   Provision for payment of meal allowance under certain conditions.
   Payment for part of the cost of safety shoes.
   Payment for safety glasses for employees.
   Reimbursement for certain specified expenses when an employee is transferred and has to relocate.
   Lump sum pay increase program.

3. Crucible Compaction Metals Operation:
   Vacation policy for exempt and non-exempt salaried employees provides for varying amounts of paid vacation based upon years of service.
   Payments by the Operation for safety shoes and for safety glasses.
   Tuition aid program provides for payment of tuition fees for courses of study under certain conditions.
   Payment for certain specified holidays.
   Payment of salary differential for time spent on jury duty.
   Payment for time spent at military reserve encampment.
   Time off without pay for authorized leaves of absence.
   Extended work week Compensation Plan.
   Transfer and relocation expense reimbursement.
   Payment of salary continuance for absence from work due to personal accident or illness.

4. Crucible Magnetics Division:
   Payment of salary continuance for absence from work due to personal accident or illness.
   Vacation policy provides for varying amounts of paid vacation based upon years of service and includes a provision for deferred vacation.
   Tuition aid program provides for payment of tuition fees for courses of study under certain conditions.
   Payment for certain specified holidays.
   Field salesmen incentive plan based upon volume of sales and new accounts or business.
   Sales manager incentive plan based upon percentage of field salesmen's incentive payments.
   Payment for safety glasses.
   Payment of salary or salary differential for time spent on jury duty.
   Military encampment allowance paid to employees attending military reserve camp.
   Payment of salary during authorized leaves of absence.
   Payment for part of the cost of safety shoes.
   Lump sum pay increase program.

5. Crucible Specialty Metals Division:
   Tuition aid program provides for payment of tuition fees for courses of study under certain conditions.
   Vacation policy for exempt and non-exempt salaried employees provides for varying amounts of paid vacation based upon years of service.
   Payment for certain counselling services for employees.
   District sales managers' and field salesmen incentive program with payments being based upon the profit performance of each district or field salesman.

Payment for part of the cost of safety shoes and safety glasses.
Provision for payment for time spent on jury duty and for absence from work for bona fide personal accidents or illness.
Military encampment allowance paid to employees attending military reserve camp.
Seminar or training program attendance.
Extended work week compensation plan.
Transfer and relocation expense reimbursement.
Lump sum pay increase program.

6. Trent Tube Division:
Payment for certain specified holidays.
Payment for counselling services for employees having family or marital problems, alcohol or other drug abuse, financial complications or other problems.
Tuition aid program provides for payment of tuition fees for courses of study under certain conditions.
Vacation policy for exempt and non-exempt salaried employees provides for varying amounts of paid vacation based upon years of service.
Payment of part of the cost of safety shoes and safety glasses.
Payment for time spent on jury duty.
Payment of salary differential for time spent on military reserve encampment.
Authorized leaves of absence with no pay or with partial pay.
Sales incentive plan with outside salesman based upon sales quotas.
Sales incentive plan with inside salesman based upon sales quota and profit target.
Sales incentive plan with product managers based upon profit target.
Severance allowances may be authorized in certain circumstances.

Other Employee Benefits for Union Employees

Other employee benefits for union employees are described in the collective bargaining agreements listed below.

1. 1984/1987 Agreement between Crucible Materials Corporation Magnetics Division and the International Union of Electronic, Electrical, Technical, Salaried, and Machine Workers, AFL-CIO, Local 762

2. Agreement between East Troy Plant, Crucible Materials Corporation Trent Tube Division and the United Steelworkers of America, dated June 1, 1984

3. Agreement between Carrollton Plant, Colt Industries Trent Tube Division and the United Steelworkers of America, Local Union 7261, dated September 13, 1984

4. Agreement between Crucible Materials Corporation Specialty Metals Division and the United Steelworkers of America, dated June 1, 1983

5. Agreement between Crucible Specialty Metals, a Division of Crucible Materials Corporation and the United Steelworkers of America, Office & Technical & Plant Protection Employees - Syracuse, dated June 1, 1983

6. Agreement between Crucible Compaction Metals Operation and the International Union of the United Steel Workers of America, Local Union No 14034, dated December 7, 1984.

7. March 1, 1983 Agreement between Crucible Specialty Metals Division and United Steelworkers of America, Local Union 7822, District No. 28 (Cleveland, Ohio Warehouse)

8. July 1, 1985 Agreement by and between Crucible Specialty Metals Division, a Division of Crucible Materials Corporation and Local Union No. 299, affiliated with the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America (Detroit, Michigan Warehouse)

Crusteel

1. Crusteel Limited Pension and Life Assurance Scheme
   Sponsor & Address: Crusteel Limited
   Rutland Way
   Sheffield
   Yorkshire, England
   Trustee: A committee of employees
   Insurance Carrier: The Scottish Amicable Insurance Company
   Employer Contributions: This plan is supplemental to the state-run pension scheme. Only permanent staff members are eligible. Employer and employee contribute based on a percentage of the employee's salary.

2. National Pension Scheme
   Crusteel and its employees contribute to the state-run pension scheme at the rate established by the government.

3. B.U.P.A. (British United Provident Association) private medical health insurance program

   Sponsor & Address: Crusteel Limited
   Rutland Way
   Sheffield
   Yorkshire, England

   Trustee: N/A

   Insurance Carrier: British United Provident Association

   Employer Contributions: Crusteel pays the entire cost of the program

4. The Crusteel Ltd. Permanent Health Insurance Scheme (disability insurance)

   Sponsor & Address: Crusteel Limited
   Rutland Way
   Sheffield
   Yorkshire, England

   Trustee: N/A

   Insurance Carrier: N.E.L. (National Employers Liability) Permanent Health Insurance Scheme

   Employer Contributions: Crusteel pays the entire cost of the Scheme

5. Bonus & Incentive Scheme 1984

   Discretionary bonuses are paid to participants by Crusteel based upon target accumulated profits.

6. Vacation Practice

   25 annual days and 8 statutory days.

November 5, 1985

Schedule H

Industrial Development Bonds
[Agreement, Section 7(d)]

1. Allegheny County Industrial Development Authority $1,000,000 Industrial Development Refunding Revenue Bonds (Colt Industries Project) Series 1978 - 7-1/4% due 1998 - 2008.

2. Onondaga County Industrial Development Agency $5,215,000 Pollution Control Refunding Revenue Bond Series 1978 - 7-1/4% due 1998 - 2008.

3. Onondaga County Industrial Development Agency $2,575,000 Pollution Control Revenue Bonds (Colt Industries Inc Project) Series 1980 - 9-7/8% due 2010.

4. City of Elizabethtown (Kentucky) $560,000 Industrial Building Revenue Bonds - 4-1/8% due 1985 - 1986.

5. City of Elizabethtown, Kentucky $5,800,000 Industrial Development Revenue Bonds (Colt Industries Project) Series 1980 - 9-7/8% due 2006 - 2010.

6. The Industrial Development Board of the City of Huntsville (Alabama) $575,000 Industrial Development Revenue Bonds (Colt Industries Inc Project) Series 1980 - 9-7/8% due 2006 - 2010.

November 5, 1985

Schedule I

Crucible Employees Who Will Become
Participants in the Crucible Salaried Plans
[Agreement, Section 6(f)]

Employee	Job Title	Division
Lewis, G.	Vice President Marketing	Crucible Magnetics Division
Bryant, J.	VP & General Manager Ceramics	
Smith, C.	Chief Engineer Systems	
Wohlers, C.	Product Manager Ceramics	
Haswell, W.	Vice President Technology	Crucible Specialty Metals Division
Nolan, D.	Vice President Purchasing	
Parkes, N.	Assistant Controller	
Stevenson, J.	Vice President Marketing	
White, R.	Marketing Manager	
Wright, J.	Director Mill Metallurgy	
Brossman, W.	Plant Manager	Trent Tube Division
Greeley, I.	Plant Manager	
Petro, F.	Division President	
Stam, J.	Plant Manager	
Bishop, M.	Manager of Sales	Crucible Compaction Metals Operation
McTiernan, B.	Supervisor Process Engineering	
Woodhul, E.	Process Engineer	
Vensel, J.	Deputy Group Executive	

November 5, 1985

Schedule J

Non-Crucible Employees Who
Will Be Transferred Out of the
Crucible Salaried Plans
[Agreement, Section 6(f)]

R. Bird
K. Lynn
A. Gumz

Garlock
Colt N.Y.
Farnam

November 5, 1985

Schedule K

Certain Environmental Matters
[Agreement, Section 5(q)]

A. Crucible Magnetics Division

1. On March 26, 1982, Crucible was notified by the Environmental Protection Agency ("EPA") and the Attorney General of the State of Ohio that it had sent hazardous wastes to a hazardous waste facility operated by Chem-Dyne in Hamilton County, Ohio. The EPA Notice stated that Crucible was one of the parties responsible for cleaning up such site pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"). The State of Ohio has informed Crucible that removal and remedial actions performed at such site from July 1979 through March 1982 have totalled $421,000 and has estimated that the total cost of cleaning up the site and of damage to the natural resources of the State of Ohio could be as much as $20,000,000.

2. U.S.A. v. Chem-Dyne Corp, et al., U.S. District Court for Southern District of Ohio, Case Nos. C-1-82-840 and C-1-82-962

   (a) Third-party complaint filed by major generators of hazardous wastes shipped to Chem-Dyne site in Hamilton County, Ohio, against minor generators seeking indemnification and contribution under CERCLA. Crucible has filed a motion for summary judgment dismissing the complaint on the ground that it did not ship any waste material to the site.

   (b) Relief Sought - All costs of clean-up of hazardous waste site, estimated at $20,421,000. The major generators have proposed a settlement with Crucible as to the surface water claims only for slightly less than $20,000 and as to all claims for slightly less than $50,000, which Crucible has rejected.

   (c) Insurance - None

(d) Counsel - Blair S. McMillin, Esq.
Reed Smith Shaw & McClay
Union Trust Building
Pittsburgh, PA
(412) 288-3131

3. On July 26, 1982, Crucible was notified by the United States Department of Justice that the EPA had determined that it was one of many potentially responsible parties, pursuant to CERCLA, for cleaning up a hazardous waste site located in Seymour, Indiana. The records available indicated that the Crucible Magnetics Division had delivered a small number of drums of waste material to the Seymour site. In November 1982, Colt accepted a settlement offer pursuant to which the United States, the EPA and local governmental authorities covenanted not to sue Colt or any of its subsidiaries with respect to the Seymour site in consideration of payments by Colt of approximately $12,500 (of which $4,684 was attributable to and paid by the Magnetics Division and the remainder related to another Colt division), which amount represents the Government's determination of Colt's pro rata share of estimated total clean-up costs of $30,000,000, based on Colt's apportioned shares of the total estimated waste shipped to the Seymour site. The settlement became final after execution of the agreement by the United States and other governmental authorities in August 1983.

4. On May 10, 1984, the Crucible Magnetics Division was notified by the EPA that it was a potentially responsible party for cleaning up a hazardous wastes site in Zionsville, Indiana operated by the Environmental Conservation and Chemical Corporation, also known as Enviro-Chem.

B. Crucible Compaction Metals Operation ("CCMO")

1. Application No. 0285441 for a water quality management permit to construct a sanitary water treatment system was filed with the Pennsylvania Department of Environmental Resources. By a letter, dated October 17, 1985, the Department requested additional information and changes with respect to the construction plan in connection with its review of the permit.

C. Trent Tube Division

1. By letter, dated December 12, 1983, the Wisconsin

Department of Natural Resources issued a notice of violation to the Trent Tube Division with respect to discharges exceeding daily maximum effluent limitations at Plants Nos. 1, 2 and 3 in East Troy, Wisconsin with notification that regulations provide for forfeitures of up to $10,000 per day of violation. On January 18, 1985, the Division forwarded to the Department plans to modify the existing water pollution treatment plant. Capital costs are currently estimated to be $500,000. On March 25, 1985, the Department approved the plans for modification of the existing pretreatment plant. Such modifications have been completed and it is anticipated that the Department will conduct an inspection shortly.

2. By letter, dated July 12, 1984, the Wisconsin Department of Natural Resources notified the Trent Tube Division that violations of Wisconsin air pollution control regulations may exist as a result of the operation at the Trent Tube Division facilities in East Troy, Wisconsin of two acid pickling baths, an annealing furnace and a boiler without any permits for such sources having been obtained. Since then, the Department notified the Division that it was waiving the requirement of permits for the annealing furnace and the boiler. On March 11, 1985, the Department issued air pollution permit No. 84DAA84DAA229 for one acid pickle stack (north pickle - Trentweld), but will require permits for three additional acid pickle stacks at the facilities.

D. Crucible Specialty Metals Division

1. Friends of the Earth, Atlantic States Legal Foundation and C. G. Spies v. Crucible Materials Corporation, United States District Court for the Northern District of New York (Civil Action No. 84-CV-286)

   (a) Citizen's suit under Section 505(a) of the Federal Water Pollution Control Act alleging violations by Crucible of the Act from 1977 to date, by exceeding the effluent limitations of Crucible's NPDES/SPDES water pollution permit. The plaintiffs have filed a motion for partial summary judgment on the issue of Crucible's liability.

   (b) Relief Sought - The complaint seeks a declaratory judgment that Crucible has violated and continues to be in violation of the Water Pollution Control Act, an injunction enjoining Crucible from operating its Syracuse, New York steel manufacturing plant in such manner as will result

in further violations, authorization for plaintiffs to sample or to arrange for sampling of pollutant discharges from Crucible's Syracuse plant for a period of one year after Crucible achieves compliance with all of the permit limitations, ordering Crucible to provide the plaintiffs for one year following entry of an order by the Court with copies of all reports and other documents that Crucible submits to Federal or state governmental authorities regarding its permit, requiring Crucible to pay civil penalties of $10,000 per day of violation for each violation of the Pollution Control Act and for an award to the plaintiffs of their costs, including reasonable attorneys' and expert witnesses' fees.

(c) Insurance - None

(d) Counsel - Theodore Garrett, Esq.
Covington & Burling
121 Pennsylvania Avenue, N.W.
Washington, DC
(202) 662-6000

2. On February 26, 1982, Crucible was notified by the EPA that hazardous wastes had been hauled from the Crucible Specialty Metals Division near Syracuse, New York, to a hazardous waste treatment facility in Oswego, New York, operated by Pollution Abatement Services of Oswego, Inc. The EPA notice stated that Crucible was one of the parties responsible for cleaning up the Oswego site pursuant to CERCLA. On December 7, 1983, Crucible was notified that eight additional sites, to which wastes originally stored at the Oswego site were ultimately deposited, are also involved in the clean-up program. A report issued by the EPA on March 12, 1982, stated that $2,400,000 had been committed to the treatment and removal of toxic waste from the Oswego site and that an additional $3,400,000 had been allocated to the final closure of the site.

3. On October 11, 1983, the Department of Sanitation of the City of New York notified the Crucible Specialty Metals Division that it was one of many potentially responsible parties, pursuant to CERCLA, for cleaning up a hazardous waste site in Long Island City, New York operated by Hudson Oil Refining Corp. The Division has been informed that the main waste contaminant at this site is polychlorinated biphenols.

4. On December 6, 1983, the Crucible Specialty Metals Division was notified by the New York Department of Environmental Conservation that it was a potentially responsible party for cleaning up a hazardous waste site operated by the Division in Geddes, New York. On October 16, 1985, Crucible filed with the EPA a proposed revised closure plan for this site with estimated closure costs of $3,222,877 and estimated post-closure costs of $1,374,000.

5. On March 25, 1985, the New York Department of Environmental Conservation released a list of hazardous waste sites in the State of New York, which includes three sites at which waste from the Specialty Metals Division has been deposited in the past, in addition to the State Fair landfill operated by the Division. On August 18, 1984, the Division filed with the Department a Hazardous Waste Disposal questionnaire listing five sites at which waste has been deposited in the past by the Division in addition to the State Fair landfill.

6. Application for renewal of SPDES Permit No. NY0000825 was filed with the New York Department of Environmental Conservation on May 4, 1984, covering discharge of pollutants from the Specialty Metals facility in Geddes, New York. Objections to limitations contained in the draft renewal permit issued by the Department on February 4, 1985 and a request for a variance with respect to certain of such limitations were filed with the Department on April 10, 1985.

7. On June 24, 1985, the New York Department of Environmental Conservation issued a notice that boiler No. 9 at the Specialty Metals Division, Syracuse plant, was not in compliance with applicable air pollution regulations. The Division is installing corrective pollution control equipment.

Exhibit 10

FACILITIES CLOSURE REPORT

QA

TRENT TUBE DIVISION
FULLERTON PLANT
COLT INDUSTRIES, INC.

2100 E. Orangethorpe Avenue
Fullerton, California

FOR SUBMITTAL TO:

CALIFORNIA DEPARTMENT OF HEALTH SERVICES
HAZARDOUS WASTE MANAGEMENT BRANCH
107 South Broadway, Room 7128
Los Angeles, California

March 1985

depobook.com
EXHIBIT
9
8/27/87 MM/PH

Calocerinos & Spina
CONSULTING ENGINEERS
Liverpool, New York 13088

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I. Background Information

On April 6, 1981, the Fullerton operation of Trent Tube Division of Colt Industries was issued Interim Status Document CAD 008325110 by the State of California, Department of Health Services (DOHS), which authorized the treatment and storage of hazardous wastes on the Plant premises subject to a number of conditions as described in an attachment. A copy of that document and the attachment pages referring to closure are enclosed as Appendix A.

One of the conditions in the Interim Status Document called for the preparation and submittal of an Operations Plan for hazardous waste treatment and storage at the Facility. The Operations Plan also required the inclusion of a Contingency Plan for the Facility and a formal written Closure Plan which is subject to approval of the Regional Water Quality Control Board.

On August 26, 1983, Trent Tube submitted the required formal Operations Plan for Hazardous Waste to the DOHS. The Operations Plan includes a written Closure Plan dated February 22, 1983, as an Appendix to that Report. A copy of that original Closure Plan is included as Appendix B of this Report.

The cover letter of that submittal, which is also included in Appendix B, specifically notified that Agency that the Fullerton Facility would close on or before December 31, 1983.

II. Revision of Closure Plan Prior to Actual Closure

From March 28-30, 1984, Mr. Richard W. Klippel, P.E., of Calocerinos & Spina, Consulting Engineers (C&S), and Robert Phillips of Trent Tube inspected the Plant and assisted Mr. Harry Murphy, Plant Manager, in updating and revising the Closure Plan and cost estimate. On March 29, 1984, Mr. Klippel and Mr. Phillips met with Mr. Kurt Burchtold of the Santa Ana Regional Water Quality Control Board to discuss the pending Plant closure and submittal of the notice and revised Closure Plan. Mr. Burchtold advised Trent Tube to submit the Plan to both the Water Quality Control Board and the DOHS.

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On April 1, 1984, in accordance with provisions of Attachment A, Section V, of the Interim Status Document, the Revised Closure Plan and cost estimate were submitted by certified letter to the Santa Ana Regional Water Quality Control Board. As per Mr. Burchtold's recommendation, a copy of the Plan was sent to the DOHS. That Closure Plan identified the actual closure date of May 11, 1984.

On May 4, 1984, Trent Tube received a copy of a memo from the Regional Water Quality Control Board to the DOHS referring closure approval for the Facilty to the DOHS. In that memo, the Regional Water Quality Board stated that no problems were noted during their inspection of the Facility or in their review of the Closure Plan, with one exception. That exception involved small areas of soil contaminated with waste oil which were noted on the south side of the Plant during their inspection. Their memo notes that the Plant Manager, Mr. Harry Murphy, stated that, during closure, the soil in those areas would be removed to a depth of 3 feet.

A copy of the Revised Closure Plan and the Regional Water Quality Control Board's letter are contained in Appendix C.

III. Actual Closure Activities

During April 1984 Trent Tube began to deactivate portions of their manufacturing operation and on May 11, 1984, the Firm ceased all manufacturing at the Facility. During this period, and throughout the remainder of May, the Company fully implemented all of the items referenced in the Closure Plan including:

1. Removal of all drums of waste solvents plus detergent cleaning wastes.
2. Removal of all remaining virgin solvents.
3. Removal of waste oils for recycling.

CRU 00438

4. Washing and rinsing of the degreaser tank in the Building and disposal of the wash waters.
5. Neutralization and disposal of the pickling acids contained in tanks in the Building.
6. Dismantling and removal of the pickling tanks and exhaust ducts used to vent the tank.
7. Removal of ammonia and associated storage tanks by suppliers.
8. Removal and disposal of contaminated soil behind the Building as requested by the Regional Water Quality Control Board.

Table 1, attached, shows the various items removed for disposal and the transporter, disposal site and manifest number for each. Copies of all manifests are included in Appendix D, along with photos of the areas excavated.

IV. Closure Certification

On August 16, 1984, Mr. Richard Klippel under the direction of Mr. Frank Spina, California P.E. #39026, Partner, Calocerinos & Spina, Consulting Engineers, inspected the vacant and closed Facility and reviewed photographs, manifests and billing records pertaining to the closure activities. On August 29, 1984, Mr. Frank Spina, on the basis of Mr. Klippel's inspection, certified by letter that the Facility was closed in accordance with the Closure Plan dated April 1, 1984. A copy of that Closure Certification is enclosed as Appendix E. Since the August 16th letter was inadvertently sealed with Mr. Spina's New York seal, an additional certification with the California seal was provided on December 13, 1984.

V. Additional Cleanup Requirements

On December 12, 1984, Mr. Robert Phillips received a letter dated December 3, 1984, from the Facility Permitting Unit of the DOHS advising Trent Tube that the Closure Plan was inadequate and the subsequent Closure Certification

CRU 00439

TABLE 1

DISPOSAL DESTINATION FOR HAZARDOUS ITEMS

FROM

TRENT TUBE CLOSURE, FULLERTON, CALIFORNIA

Date of Disposal	Item	Quantity	Transporter	Disposal Site	Manifest No.
3/13/84	Oily wash water	400 gals.	Kens Oil Co.	BKK Corp. West Covina	83170052
5/2/84	Oily wash water	300 gals.	Lakewood Oil Serv.	BKK Corp. West Covina	83318904
5/23/84	Contaminated soil	20 c.y.	J-Cal Trans.	BKK Corp. West Covina	83170053
5/23/84	Contaminated soil	20 c.y.	J-Cal Trans.	BKK Corp. West Covina	83170054
5/23/84	Contaminated soil	15 c.y.	Magee Bros. Trkg.	BKK Corp. West Covina	83432430
5/23/84	1,1,1-Trichlor and oil	3,000 gals.	Oil Process	Baron Blakeslee Corp.	83432428
5/25/84	Waste oil to recycling	160 gals.	Rutherfield Pacific	Facet Energy	83326982
5/26/84	Neutralized pickling acid	2,100 gals.	Liquid Waste Management	Chemical Waste Management Kettleman City	83170055
5/29/84	Pickling tank and liner	10,000 lbs.	Industrial Waste Utilization	BKK Corp. West Covina	83432433
5/29/84	Tank and residue	2,400 lbs.	Industrial Waste Utilization	BKK Corp. West Covina	83432434
5/29/84	Tank, liner and residue	10,000 lbs.	Industrial Waste Utilization	BKK Corp. West Covina	83432435
5/29/84	Oily wash water	500 gals.	United Pumping Service	BKK Corp. West Covina	83170056
5/30/84	Waste acids and adsorbant	800 lbs.	Industrial Waste Utilization	BKK Corp. West Covina	83432440
5/30/84	1,1,1-Trichloroethane, oil	145 gals.	Industrial Waste Utilization	Baron Blakeslee Corp.	83432441
5/31/84	Misc. paints, solvents and adsorbants	3,600 lbs.	Industrial Waste Utilization	BKK Corp. West Covina	83432442
5/31/84	Empty drums and residues	600 lbs.	Industrial Waste Utilization	BKK Corp. West Covina	83432439

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inappropriate. The letter directed that a written Site Assessment Plan, prepared by an independent engineer registered in the State of California, be submitted to their office by December 15, 1984. The letter further stated that the Plan must provide for sampling and chemical assessment of all areas which were excavated at the Direction of the Regional Water Quality Control Board and all other areas that could be contaminated with hazardous wastes. The Plan must identify all principals, including the analytical laboratory, and all other contractors used. The Plan should also include drawings, sketches and/or photographs necessary to fully describe areas of concern and should propose remedial actions that would be taken if found to be necessary.

On December 14, 1984, officials of Trent Tube, Calocerinos & Spina, and Wayne Smith, Esq., of Gibson, Dunn and Crutcher, Attorneys, met with Mr. Roy Thielking of the Facility Permitting Unit staff and discussed the matter in some detail. At that meeting, it was agreed that Trent Tube would proceed with the submittal of the Site Assessment Plan and the subsequent execution of the activities upon Plan approval. Since Trent Tube had a purchase offer for the property and considered time to be of the essence, they requested that Mr. Thielking publish the required public notice at the earliest opportunity. Furthermore, it was agreed that Trent Tube would attempt to complete the site evaluation procedure to the Department's satisfaction prior to the expiration of the required 45-day public comment period. Thus, by approximately February 1, 1985, closure certification could be accomplished thereby allowing closing on the sale of the property.

VI. Site Assessment

A Site Assessment Plan was prepared and transmitted to Mr. Thielking on December 18, 1984, under the signature and seal of Frank J. Spina, California P.E. #39026. The Assessment Plan, which is included as Appendix F, outlined a

CRU 00441

plan for obtaining borings and analyses of soil samples during the period from December 26-28, 1984, and submittal of an Assessment Report by January 15, 1985, outlining any remediation deemed necessary.

The site assessment work began on December 26, 1984, under the overall direction of Mr. Andrew Diefendorf, CPG, of Calocerinos & Spina.

Mr. David Bramwell, CEG, of IT Corporation, Irvine, California, supervised the drilling activities of the subcontractor, Pioneer Drilling Company, and obtained the required boring samples for analysis. The samples were packed in ice and shipped by air express to California Analytical Services in Sacramento, California, where they were analyzed for suspected organics utilizing USEPA Methods 601 and 602. On-site readings of the soils at various locations were taken by Mr. Bramwell utilizing an organic vapor meter. The analytical results from the boring samples along with the organic vapor meter readings confirmed the presence of additional organic contamination at low levels near the rear of the Trent Tube Building and organic contamination at a much higher level near the back fence of the Trent Tube property adjacent to the paved Solvent Storage Area belonging to Vista Paint Company. Thus, further remediation of the site was judged to be necessary.

VII. Site Remediation Activities

On January 18, 1985, a Site Remediation Plan was submitted to Mr. Thiekling of DOHS under the signature and seal of Mr. Frank J. Spina. The Plan, which is contained in Appendix G, contains all of the boring logs and analytical results along with drawings detailing the limits of excavation of contaminated soil in several areas of the site.

In subsequent telephone conversations, Mr. Thielking verbally agreed with the recommended remediation steps but advised that he would have to have a letter of approval from the South Coast Air Quality Management District (SCAQMD) before he could give his formal approval.

CRU 00442

On January 28, 1985, C&S provided the SCAQMD with a copy of the Site Remediation Plan and inquired as to the need for an Air Permit. A letter was also sent to Mr. Thielking advising him of our contact with SCAQMD and requesting written approval of the Remediation Plan from the DOHS.

On February 3, 1985, Trent Tube submitted an Application for an Excavation Permit along with an Excavation Plan narrative to SCAQMD and DOHS.

On February 7, 1985, Mr. Diefendorf of Calocerinos & Spina, Mr. Phillips of Trent Tube and Mr. Charles Templar of Industrial Waste Utilization met with Mr. Lettice of the SCAQMD in El Monte and were given an Excavation Permit letter with a list of permit conditions. Copies of the referenced correspondence and the Permit are enclosed as Appendix H.

On February 8, 1985, Mr. Diefendorf and Mr. Phillips met with Mr. Thielking to advise him of the issuance of the Air Permit and to request written approval to proceed with the remedial excavation work. While a letter was not given them, they left with a feeling that they had verbal approval of the Remediation Plan and could proceed with the excavation described in that Plan.

Excavation activities at the site therefore commenced on February 11, 1985, under the supervision of Mr. Diefendorf, C&S. A total of four truckloads (57 cubic yards) of contaminated soil were excavated and transported to the Casmalia Resources Landfill, Casmalia, California. Photos showing the excavation area and manifests for the four loads are contained in Appendix I.

Late Monday morning Mr. Diefendorf talked by phone with Mr. Thielking who informed him that a letter was being prepared requiring excavation of a much larger area of soil for shipment to disposal and also requiring submittal of a plan for investigating contamination between the Trent Tube fence and the large drainage channel behind the site.

CRU 00443

With the uncertainty regarding the extent of work required, Trent Tube decided to halt any further excavation and seek clarification from the DOHS. The letter referenced by Mr. Thielking was received by Trent Tube on February 20, 1985. A copy of that letter is enclosed in Appendix J.

On February 21, 1985, representatives of Trent Tube, Colt Industries, Calocerinos & Spina, and Gibson, Dunn & Crutcher met with Mr. Thielking and Mr. Sneh of the DOHS to clarify the extent of the required excavation. Mr. Sneh stated that a closure certification would be granted to Trent Tube if they completed the work described in the Remediation Plan plus the additional on-site excavation as outlined in the February 20, 1985, letter. It was determined that the Closure Notification had been published in the newspaper and that no comments had been received during the 45-day notice period. Thus, the notification requirement had been fulfilled.

With that clarification Trent Tube resumed excavation at the site on February 25, 1985. Sixteen additional loads of contaminated soil were transported to the Casmalia Resources Landfill on February 25, 26 and 27, 1985. Manifests for the 16 loads are contained in Appendix K. The boundaries of the expanded excavation area are shown in Figure 9 in Appendix K.

Soils from Area B at the site, outside of the extended Area A, were removed to the designated area east of the building and spread in a thin layer for aeration. During the period of aeration, the warm (75°F) dry weather resulted in excellent drying of the material. Furthermore, the material was turned over during aeration to further enhance volatilization of the contaminants.

On February 28, 1985, 16 truckloads of clean fill material were backfilled into the excavated hole and compacted. On March 1, 1985, the aerated soil was removed from the aeration area and placed back in the excavation. The aerated soil comprises the top 2 feet of the entire area as shown in Figure 10 in

CRU 00444

Appendix K. The Appendix also contains photographs showing the area after excavation, and after backfill and final grading.

Mr. Richard J. Kulibert, Hydrogeologist with Calocerinos & Spina, inspected the final excavation and backfilling operations from January 25 through March 1, 1985. Excavation work was performed by Industrial Waste Utilization and transportation of the waste was provided by J-Cal Transportation.

At this point in time, the site has been completely remediated in accordance with the Amended Plan approved by the California Department of Health Services, and a Certification to that effect is included in the transmittal letter for this Report.

Respectfully submitted,

CALOCERINOS & SPINA

Frank J. Spina, P.E.
Partner

FJS:RWK:mts

Enclosures

CRU 00445

APPENDIX A

INTERIM STATUS DOCUMENT

AND

CLOSURE PROVISIONS

CALIFORNIA—HEALTH AND WELFARE AGENCY
DEPARTMENT OF HEALTH SERVICES
714 744 P STREET
SACRAMENTO, CA 95814

EDMUND G. BROWN JR., Governor

Facility: Trent Tube Division
Fullerton Operation
2100 East Orangethorpe Avenue
Orange County
Fullerton, CA 92634

Operator: Trent Tube Division of Crucible, Inc.
P.O. Box 3068
Fullerton, CA 92634

INTERIM STATUS DOCUMENT

Number: CAD 008325110

Effective Date: April 6, 1981

Pursuant to Section 25200.5 of the California Health and Safety Code, this Interim Status Document is hereby granted to Trent Tube Division of Crucible, Inc., subject to the conditions set forth in Attachment A which by this reference is incorporated herein.

Harvey F. Collins

Harvey F. Collins, Ph.D., Chief
Environmental Health Branch

V. CLOSURE

1. Closure.

The owner or operator shall close his facility in a manner that: (a) minimizes the need for further maintenance, and (b) controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground water, or surface waters, or to the atmosphere.

2. Closure plan and amendment of plan.

(a) The owner or operator shall have a written closure plan. This plan shall be subject to approval by the California Regional Water Quality Control Board and shall be kept at the facility. This plan shall identify the steps necessary to close the facility completely at any point during its intended life and at the end of its intended life. The closure plan shall include, at least:

(1) A description of how and when the facility will be partially closed, if applicable, and ultimately closed. The description shall identify the maximum extent of the operation which will be unclosed during the life of the facility, and how Item 1 and other applicable conditions of this document will be met;

(2) An estimate of the maximum inventory of wastes in storage or in treatment at any given time during the life of the facility;

(3) A description of the steps needed to decontaminate facility equipment during closure; and

(4) A schedule for final closure which shall include, as a minimum, the anticipated date when wastes will no longer be received, the date when completion of final closure is anticipated, and intervening milestone dates which will allow tracking of the progress of closure. (For example, the expected date for completing treatment or disposal of waste inventory shall be included, as must the planned date for removing any residual wastes from storage facilities and treatment processes.)

(b) The owner or operator may amend his closure plan at any time during the active life of the facility. (The active life of the facility is that period during which wastes are periodically received.) The owner or operator shall amend his plan any time changes in operating plans or facility design affect the closure plan.

(c) The owner or operator shall submit his closure plan to the California Regional Water Quality Control Board at least 180 days before the date he expects to begin closure. The California Regional Water Quality Control Board will modify, approve, or disapprove the plan within 90 days of receipt and after providing the owner or operator and the affected public (through a newspaper notice) the opportunity to submit written comments.

3. Time allowed for closure.

(a) Within 90 days after receiving the final volume of hazardous wastes, the owner or operator shall treat all hazardous wastes in storage or in treatment, or remove them from the site, or dispose of them on-site, in accordance with the approved closure plan.

(b) The owner or operator shall complete closure activities in accordance with the approved closure plan and within six months after receiving the final volume of wastes. The California Regional Water Quality Control Board may approve a longer closure period under Item 2 (c) if the owner or operator can demonstrate that: (1) the required or planned closure activities will, of necessity, take him longer than six months to complete, and (2) that he has taken all steps to eliminate any significant threat to human health and the environment from the unclosed but inactive facility.

4. Disposal or decontamination of equipment.

When closure is completed, all facility equipment and structures shall have been properly disposed of, or decontaminated by removing all hazardous waste and residues.

5. Certification of closure.

When closure is completed, the owner or operator shall submit to the California Regional Water Quality Control Board certification both by the owner or operator and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

CRU 00449

VI. FINANCIAL RESPONSIBILITY

1. Cost estimate for facility closure.

   (a) The owner or operator shall have a written estimate of the cost of closing the facility in accordance with the applicable closure requirements of this document. The owner or operator shall keep this estimate, and all subsequent estimates, at the facility. The estimate shall equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.

   (b) The owner or operator shall prepare a new closure cost estimate whenever a change in the closure plan affects the cost of closure.

   (c) On each anniversary of the effective date of this document, the owner or operator shall adjust the latest closure cost estimate using an inflation factor derived from the annual Implicit Price Deflator for Gross National Product as published by the U.S. Department of Commerce in its *Survey of Current Business*. The inflation factor shall be calculated by dividing the latest published annual Deflator by the Deflator for the previous year. The result is the inflation factor. The adjusted closure cost estimate shall equal the latest closure cost estimate (see Item 1(b)) times the inflation factor.

APPENDIX B

CLOSURE PLAN AND NOTIFICATION

SUBMITTED ON AUGUST 26, 1983

Colt Industries

Trent Tube Division
Crucible Inc
P. O. Box 3068
2100 East Orangethorpe
Fullerton, California 92634
714/526-5522

WRM Copy

CAD 008325110

August 26, 1983

California State Dept. of Health Services
Hazardous Waste Management Branch
107 South Broadway, Room 7128
Los Angeles, California

Gentlemen:

Enclosed is our operation plan for hazardous waste, treatment and storage at the Fullerton operation.

This letter will also serve as notice that this plant will close on or before December 31, 1983. A closure plan is incorporated as part of the operation.

Sincerely,

Harry L Murphy

Harry L. Murphy
Manager of Quality Assurance

cc: C. Abend
D. Gehr
F. Hunter

OPERATION PLAN

FOR

HAZARDOUS WASTE

TRENT TUBE DIVISION
COLT INDUSTRIES
FULLERTON OPERATION

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CLOSURE PLAN AND COST ESTIMATES FOR HAZARDOUS WASTE FACILITIES

FACILITY: Trent Tube Division, Fullerton Operation
2100 East Orangethorpe Avenue
Orange County
Fullerton, California 92634

OPERATOR: Trent Tube Division of Crucible, Inc.
P.O. Box 3068
Fullerton, California

FACILITY ID NO.: CAD 008325110

FACILITY PHONE NO.: (714) 526-5522

I. GENERAL

A. This plan is prepared in compliance with the California Department of Health Services, Interim Status Document for the Fullerton facility, Section V, dated April 6, 1981.

B. This plan is to be submitted for approval to the California Regional Water Quality Board at least 180 days prior to the facility closure for a period exceeding 90 days.

II. WASTE INVENTORY

A. Pickle Liquor - EPA Number K062

(1) Contained in two process tanks of 2000 gallons each. Maximum volume at closure, 4000 gallons total.
(2) Waste is neutralized prior to disposal in a class 1 landfill.

B. 1,1,1 Trichloroethane Waste - EPA Number F001

(1) Waste is contained in 55 gallon drums. Maximum capacity is 15 drums.
(2) Process fluid is contained in a process tank of 2400 gallons maximum capacity.

C. Waste Mineral Spirits & Kerosene

(1) Contained in 55 gallon drums.
(2) Maximum capacity of 3 drums at closure.

D. Waste Oil - EPA Number NA

(1) Contained in 10-20 gallon resevoirs at each of six draw benches.
(2) Maximum storage capacity is 200 gallons bulk waste plus the resevoir at each draw bench.

E. Caustic Cleaning Wastes - EPA Number NA

(1) Contained in a steel storage tank of 200 gallons maximum capacity.
(2) Neutralization is required before disposal in a class 1 landfill.

III. FACILITY DECONTAMINATION STEPS

A. Acids & Caustics

(1) Neutralize these solutions (ph 6/8).
(2) Have solutions pumped to a bulk tank truck.
(3) Water rinse all tanks.
(4) Transfer rinse solution to the bulk tank truck.
(5) Arrange for disposal in class 1 landfill.

B. Waste Oil

(1) Transfer from bench resevoirs to storage tank then to bulk truck with a vacuum system.
(2) Water rinse and pump solution to bulk tank truck.
(3) Arrange for disposal in class 1 landfill.

C. 1,1,1 Trichloroethane, Mineral Spirits & Kerosene

(1) Arrange for a reclaimer to pick up and remove material from premises.

IV. CLOSURE SCHEDULE

A. Wastes will no longer be generated after 15 days of closure.

B. Wastes will be treated and/or removed from the facility within 30 days of closure.

V. COST ESTIMATES FOR FACILITY CLOSURE

A. Pickle Liquor

(1) Neutralize and clean tanks, labor 8 hours @ $18/hr.	$144.00
(2) Vacuum truck service	850.00
(3) Dump fee - 18 tons @ $4/ton	72.00

B. Caustic & Oil Wastes

(1)	Transfer oil from draw benches, labor 8 hours @ $18/hr.	$144.00
(2)	Neutralize caustic tank, labor 1 hour @ $18/hr.	18.00
(3)	Vacuum truck service	85.00
(4)	Dump fee 1.6 tons @ $4/ton	7.00

C. 1,1,1 Trichloroethane, Mineral Spirits & Kerosene

(1)	Labor eight hours @ $18/hr.	144.00
	Subtotal	$1464.00

D. Administration & Contingencies

(1)	Administration (including supervision and paperwork).	316.00
(2)	Contingencies (15% of $1464).	220.00
	Total cost of closure	$2000.00

VI. CERTIFICATION OF CLOSURE

A. Trent Tube and an independent registered professional engineer shall submit to the California Regional Water Quality Board certification that the facility has been closed and wastes removed in accordance with specifications of the CRWQB approved plan.

Prepared by: Harry L Murphy — Feb 22, 1983 (Date)

cc: H. Murphy
C. Abend
R. Holmes
J. Pawlowski
M. Short
S. Cornell
D. Gehr
R. Haak

APPENDIX C

REVISED CLOSURE PLAN AND COMMENT LETTER

FROM REGIONAL BOARD

Colt Industries

Trent Tube Division
Crucible Inc
P. O. Box 3068
2100 East Orangethorpe
Fullerton, California 92634
714/526-5522

April 1, 1984

Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, California 92506

Attention: James Anderson, Executive Officer

Reference: Facility Closure - CAD 008325110

Gentlemen:

In accordance with provisions of our interim status document number CAD 008325110 effective April 6, 1981, the Trent Tube Division hereby formally submits notification of its intent to close its manufacturing facility at 2100 East Orangethorpe Avenue, Fullerton, California, 92634, and hereby transmits for the record, a copy of our latest revised closure plan for the subject facility as required by Section V paragraph 2 (c) of that document.

In accordance with Section 1 (d) of the referenced interim status document, the owner notified the California State Department of Health Services of the proposed closure of the facility by certified letter on August 26, 1983, a copy of which is attached for reference.

The company plans to discontinue manufacturing operations at the subject facility on Friday, May 11, 1984, and to proceed at that time with the schedule of activities contained in the attached closure plan.

In accordance with discussions on March 29, 1984, between myself and consultant Mr. Klippel of Calocerinos & Spina, and Mr. Berchtold of your staff, we look forward to the expeditious review offered by your agency and trust that you will promptly advise us of any deficiencies noted in the closure document. Enclosed per Mr. Berchtolds' request is a copy of the Facilities Operating Plan as submitted to the Department of Health Services on August 26, 1984.

Thank you for your assistance in this matter and please do not hesitate to call if you have any questions or need additional information.

Very truly yours,

Trent Tube Division
Crucible Materials Corp.

cc: Dept. of Health Services
Hazardous Waste Management Board

/

TRENT TUBE DIVISION - COLT INDUSTRIES
FULLERTON, CALIFORNIA

CLOSURE PLAN AND COST ESTIMATES FOR HAZARDOUS WASTE FACILITIES

FACILITY: Trent Tube Division, Fullerton Operation
2100 East Orangethorpe Avenue
Orange County
Fullerton, California 92634

OPERATOR: Trent Tube Division
Crucible Materials Corporation
P.O. Box 3068
Fullerton, California 92634

FACILITY ID NO.: CAD 008325110

FACILITY PHONE NO.: (714) 526-5522

I. GENERAL

A. This plan is prepared in compliance with the California Department of Health Services, Interim Status Document for the Fullerton facility, Section V, dated April 6, 1981.

B. This plan is to be submitted for approval to the California Regional Water Quality Board (CRWQB) prior to closure.

The local board is located at:

6809 Indiana Street
Suite 200
Riverside, California

Attention: Mr. James Anderson
Executive Officer
714/684-9330

II. WASTE INVENTORY

A. Pickle Liquor - EPA Number K062

(1) Contained in two process tanks of 2000 gallons each. Maximum volume at closure, 4000 gallons total.

(2) Waste is neutralized prior to disposal.

B. 1,1,1 Trichloroethane Waste - EPA Number F001

(1) Waste is contained in 55 gallon drums. Maximum storage capacity is 15 drums.

(2) Solvent used during manufacturing is contained in a degreaser unit having a maximum capacity of 2400 gallons.

C. Waste Mineral Spirits & Kerosene

(1) Contained in 55 gallon drums.

(2) Storage capacity at closure is 8 drums.

D. Waste Oil - EPA Number NA

(1) Contained in 10/20 gallon reservoirs at each of six draw benches.

(2) Maximum storage capacity is 200 gallons bulk waste plus the reservoir at each draw bench.

E. Dilute Detergent Cleaning Wastes - EPA Number NA

(1) Contained in a steel storage tank 200 gallons maximum capacity.

III. FACILITY DECONTAMINATION STEPS

A. Pickle Liquor Facilities

(1) Neutralize pickling acids with ammonia as per operating plan.
(2) Pump neutralized solutions to bulk tank truck.
(3) Manifest solutions for treatment and disposal.
(4) Dismantle and cut up nitric-HF pickle tank and exhaust intakes inside building.
(5) Manifest contaminated equipment for disposal.
(6) Arrange with supplier to remove ammonia storage tanks and vent ammonia feed system.

B. 1,1,1 Trichloroethane Facilities

(1) Arrange with reclaimer to pump out degreasing tank, recovery still equipment and 55 gallon drums of still bottoms.

(2) Arrange with reclaimer to haul off remaining quantities of virgin solvent in outside storage tanks.

(3) Rinse degreasing tank and recovery still system with detergent and water pump detergent solution to bulk tank truck for disposal.
(4) Manifest solvent and cleaning solution for disposal.
(5) Arrange with vendor for removal of vertical storage tank.
(6) Clean and ventilate remaining horizontal storage tank.

C. Mineral Spirit and Kerosene Facilities

(1) Arrange with reclaimer to pump out 55 gallon drums.
(2) Clean impound areas with detergent solution.
(3) Transfer cleaning solution to the 200 gallon storage tank.
(4) Manifest mineral spirits and kerosene for disposal by recycling.

D. Waste Oil Facilities

(1) Transfer oil from draw bench reservoirs to 200 gallon storage tank.
(2) Rinse draw bench reservoirs and pump system with detergent solution.
(3) Transfer detergent solution to storage tank.
(4) Arrange for disposal of waste oil from 200 gallon storage tank.
(5) Rinse out 200 gallon storage tank with detergent.
(6) Rinse out oily waste impound area with detergent.

E. Detergent Cleaner Solution Disposal

(1) Pump out 200 gallon storage tanks (2) and impound area into tank truck.
(2) Manifest cleaning solutions for proper disposal.

F. Empty Drum Disposal

(1) Arrange for drum reprocessor to pick up reusable drums.
(2) Crush unusable drums and manifest for disposal.

IV. CLOSURE SCHEDULE

A. After suspension of manufacturing operations, additional wastes due to clean-up operations, etc. will be generated for a maximum of thirty (30) days.

B. Upon suspension of manufacturing operations, all wastes will be treated within forty (40) days and removed from the premises within sixty (60) days.

TRENT TUBE DIVISION - COLT INDUSTRIES
FULLERTON, CALIFORNIA

V. COST ESTIMATES FOR FACILITY CLOSURE

A. Pickle Liquor and Facilities

(1)	Labor costs for neutralization of acids and cleaning and removal of tank and exhaust system. 60 hours @ $18/hr.	$1060
(2)	Transportation, treatment, and disposal of 4000 gallons of neutralized pickle liquor. (4000 gal.) X (8.34 #/gal.) X (125/ton) ÷ (2000 #/gal.)	2085
(3)	Transportation and disposal of pickle tank and exhaust system.	1200
	Subtotal	$4365

B. 1,1,1 Trichloroethane Facilities

(1)	Labor costs for cleaning tanks. 24 hours @ $18/gal.	432
(2)	Credit for recovered solvent. 2000 gal. @ $.60/gal.	(1200)
(3)	Disposal of detergent rinse solution.	400
	Subtotal - Credit	($368)

C. Mineral Spirits and Kerosene Facilities

(1)	Credit for solvent recoveries.	($125)
	Subtotal - Credit	($125)

D. Waste Oil Facilities

(1)	Labor to transfer oil from draw benches to waste oil tank, clean oil reservoirs, storage tank and impound area. 24 hours @ $18/hr.	$432
(2)	Transportation and disposal of waste oil.	400
	Subtotal	$832

E. Detergent Cleaning Solution Disposal

(1)	Transportation and disposal.	$400
	Subtotal	$400

TRENT TUBE DIVISION - COLT INDUSTRIES
FULLERTON, CALIFORNIA

F. Empty Drum Disposal

(1)	Cleaning of reusable drums by drum processor. $10 each X 20 drums	$200
(2)	Crushing and disposal of non-reusable drums. $15 X 15 drums	225
	Subtotal	$425

G. Administration Consultant Services & Contingencies

(1)	Administration and supervision	$3000
(2)	Professional engineer recommendations, inspection and certification.	5000
(3)	Contingencies	2000
	Subtotal	$10,000

H. Total Estimated Closure Cost - 4/2/84 $15,529

April 4, 1984
Date

Harry L. Murphy
Harry L. Murphy
Plant Manager

State of California

Memorandum

To : Angelo Bellomo, Regional Administrator
Toxic Substances Control Division
Department of Health Services
107 South Broadway, Room 7128
Los Angeles, CA 90012

Date: May 4, 1984

From : California Regional Water Quality Control Board—Santa Ana Region
6809 INDIANA AVENUE, SUITE 200, RIVERSIDE, CA 92506 (ATSS) 632-4130

Subject: TRENT TUBE DIVISION (CAD 008325110) CLOSURE PLAN

We have received a closure plan for the Trent Tube Division Facility in Fullerton (a copy was sent to your office). It is our understanding that for storage facilities your office has approval authority for closure plans. We therefore are referring this matter to you for review.

We have, however, reviewed the plan and inspected the facility with respect to its impact on water quality. During the inspection, small areas of soil contaminated with waste oil were noted on the south side of the plant. Mr. Harry Murphy, Plant Manager, stated that soil in these areas will be removed to a depth of three feet during closure. This is not included in the closure plan.

With the above exception, no problems were noted during the inspection or in our review of the closure plan as submitted. If you have any questions on this matter, please contact Kurt Berchtold of my staff.

Original Signed by

JAMES W. ANDERSON
Executive Officer

cc: Robert M. Phillips, Trent Tube Division
Harry Murphy, Trent Tube Division
Fred Lercari, SWRCB - DTS

KVB:kyb

APPENDIX D

PHOTOS OF EXCAVATED AREAS AND

MANIFEST FORMS SHOWING DISPOSAL OF MATERIALS SHIPPED

DURING INITIAL CLOSURE - MARCH-MAY 1984

...NT BRANCH

UNIFORM HAZARDOUS WASTE MANIFEST

...type (12 characters per inch). 77250 STATE ID NUMBER 83170052

...NAME AND MAILING ADDRESS
TRENT TUBE DIV. - COLT IND.
2100 E. ORANGETHORPE AVE
FULLERTON, CA 92634
AREA CODE/PHONE NUMBER 714-526-5522

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER
CAD008325110000

TRANSPORTER NO. 1
KEN'S OIL Co. P.O. Box 1239
GARDENGROVE, CA.
714-534-8841

VEH./CONTAINER NO. 0 0 0 1 3 1 6 7
EPA ID NUMBER CAD0 4659 139

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

V.EH./CONTAINER NO.
EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
BKK
2210 S. AZUSA
WEST COVINA, CA 91791
AREA CODE/PHONE NUMBER 213-965-0911

EPA ID NUMBER
CAD067786749

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISP METH
WATER + OIL	NA 1270	400	G	001	CT	2220	

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
95% WATER	95	90	X	
5% OIL	10	5	X	

SPECIAL HANDLING INSTRUCTIONS
WEAR RUBBER GLOVES + GOGGLES

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature HARRY L. MURPHY Harry L Murphy — MO. 03 DAY 13 YR. 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature Ron Kaufman — DATE REC'D & ACCEPTED MO. 3 DAY 13 YR. 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature — DATE REC'D & ACCEPTED MO. DAY YR.

DISCREPANCY INDICATION SPACE
00264 1.25

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number.
See instructions.
Ron Sager Ron Sager
Printed or typed full name and signature

EPA ID NUMBER CAD067786749 — DATE RECEIVED & ACCEPTED MO. 03 DAY 27 YR. 84

DHS-8022A 11/82

TSDF RETAINS

CRU 00467

State of California—Health and Welfare Agency
HAZARDOUS WASTE MANAGEMENT BRANCH
2-264 P Street
Sacramento, CA 95814

Department of Health Services

UNIFORM HAZARDOUS WASTE MANIFEST

7250

STATE ID NUMBER 83318904

Please print or type with ELITE type (12 characters per inch).

TO BE FILLED IN BY GENERATOR

GENERATOR NAME AND MAILING ADDRESS
KENT NICE DIV - COLT IND
3100 ORANGETHORPE AVE
FULLERTON, CA 92634
AREA CODE/PHONE NUMBER 714-521-7302

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER
CAD 0 2 3 5 1 0 7 0 0 2

TRANSPORTER NO. 1
Lakewood Oil Service
13577 Woodruff Ave
Santa Fe Calif.

VEH./CONTAINER NO. | EPA ID NUMBER
CAD 9 8 1 7 6 8 | CAD 0 0 5 6 7 2 5 0 1

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO. | EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
KEK Corp
220 Avenue A
W. Newton Calif
AREA CODE/PHONE NUMBER 312-872-6590

EPA ID NUMBER
CAD 0 9 8 1 7 7 8 6 1 4

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISPOSAL METHOD
Alkaline Waste Oil	NA 1719	1300	GAL	013	CT	122	01
(Waste Alkaline Liquid, NOS)							

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Soap	85		X	
Water	15		X	
Petroleum Hydrocarbons	10		X	

SPECIAL HANDLING INSTRUCTIONS
Fuel, Diesel + Gasoline

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature HARRY L MURPHY

MO 05 DAY 02 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TO BE FILLED IN BY TRANSPORTER

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR.

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR.

TO BE FILLED IN BY TSDF

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions

Printed or typed full name and signature

EPA ID NUMBER

DATE RECEIVED & ACCEPTED MO. 05 DAY 02 YR 84

TSDF RETAINS

HWD DHS-8022A 11/82

CRU 00468

...and Welfare Agency
...MANAGEMENT BRANCH

UNIFORM HAZARDOUS WASTE MANIFEST

Department of Health Services

...type with ELITE type (12 characters per inch).

STATE ID NUMBER 83170053

GENERATOR NAME AND MAILING ADDRESS

Trent Tube Company
2100 E. Orangethorpe Avenue
Fullerton, CA 92634
AREA CODE/PHONE NUMBER 714-526-5522

77250

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER CAD008325110

TRANSPORTER NO. 1

U. Cal TRANS
P.O. Box
912 Lynwood CA

VEH./CONTAINER NO. 00052585

EPA ID NUMBER CAD008081488

TRANSPORTER NO 2/ALTERNATE TSD FACILITY

V.EH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

BKK
2210 S. AZUSA AVENUE
WEST COVINA, CA 91791
AREA CODE/PHONE NUMBER 213-965-0916

EPA ID NUMBER CAD067786749

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DIS MET
1.0 Hazardous Waste Solid Nos. ORM - E	NA9189	20	Y	001	DT	611	0

COMPONENTS	CONC RANGE UPPER	CONC RANGE LOWER	UNITS %	UNITS PPM
CONTAMINATED SOIL	99%	97%	X	
OIL	2%	1%	X	
KEROSENE	1%	1%	X	
SODIUM HYDROXIDE	2%	1%	X	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature HARRY L MURPHY Harry L Murphy

MO 05 DAY 23 YR. 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature John L Wallberg John L Wallberg

DATE REC'D & ACCEPTED MO 05 DAY 23 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR.

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

LEYFENBERG

Printed or typed full name and signature

EPA ID NUMBER CAD067786749

DATE RECEIVED & ACCEPTED MO 05 DAY 23 YR. 84

TO BE FILLED IN BY GENERATOR

TO BE FILLED IN BY TRANSPORTER

TO BE FILLED IN BY TSDF

DHS-8022A 11/82

TSDF RETAINS

CRU 00469

State of California—Health and Welfare Agency
HAZARDOUS WASTE MANAGEMENT BRANCH
Sacramento, CA 95814

UNIFORM HAZARDOUS WASTE MANIFEST

Department of Health Services

STATE ID NUMBER 83170054

Please print or type with ELITE type (12 characters per inch).

GENERATOR NAME AND MAILING ADDRESS
Trent Tube Company
2100 E. Orangethorpe Avenue
Fullerton, Ca 92634
714-526-5522
AREA CODE/PHONE NUMBER

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER
CAD008325181

TRANSPORTER NO. 1
J. CAL TRANS
P.O. BOX 912
LYNWOOD, CA

VEH./CONTAINER NO.
00052585

EPA ID NUMBER
CAD980814885

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

V.EH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
BKK
2210 S. AZUSA AVENUE
WEST COVINA, CA 91791
213-965-0916
AREA CODE/PHONE NUMBER

EPA ID NUMBER
CAD067786749

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISP METH
1.0 HAZARDOUS WASTE SOLID NOS. DRM - E	NA9189	20	Y	001	DT	611	0

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
CONTAMINATED SOIL	99%	97%		
OIL	2%	1%		
KEROSENE	1%	.1%		
SODIUM HYDROXIDE	2%	1%		

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

HARRY L. MURPHY
Harry L Murphy
Printed or typed full name and signature

MO. 05 DAY 23 YR. 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
John I Wallberg John L Wallberg
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. 05 DAY 23 YR. 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
VOID HARRY L MURPHY
Harry L Murphy
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR.

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

LAFENBERG
Printed or typed full name and signature

EPA ID NUMBER
CAD067786749

DATE RECEIVED & ACCEPTED MO. 05 DAY 23 YR. 84

TO BE FILLED IN BY GENERATOR

TO BE FILLED IN BY TRANSPORTER

TO BE FILLED IN BY TSDF

TSDF RETAINS

NO DHS-8022A 11/82

CRU 00470

UNIFORM HAZARDOUS WASTE MANIFEST

STATE ID NUMBER: B3432439

GENERATOR NAME AND MAILING ADDRESS
Trent Tube
2100 E. Orangethorpe
Fullerton, Ga 92636

AREA CODE/PHONE NUMBER: 714-526-3522

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER: CAD0[illegible]

TRANSPORTER NO. 1: Magee Bros Trk

VEH/CONTAINER NO.: 433198

EPA ID NUMBER: CAX000[illegible]

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH/CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
[illegible]
2210 S. Azusa Avenue
West Covina, Ga 91791

AREA CODE/PHONE NUMBER: 213-965-0916

EPA ID NUMBER: CAD0677[illegible]

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.
1.9 Hazardous Waste Solid nos [illegible]	NA9189	75	PY	DOI	DT	611

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS
CONTAMINATED SOIL	99%	97%	
OIL	2%	1%	
KEROSENE	1%	1%	
SODIUM HYDROXIDE	2%	1%	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature: Harry L. Murphy — Harry L. Murphy — MO 05 DAY 23 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TO BE FILLED IN BY TRANSPORTER

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Hollis Magee — Hollis Magee
Printed or typed full name and signature
DATE REC'D & ACCEPTED: MO DAY YR

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature
DATE REC'D & ACCEPTED: MO DAY YR

TO BE FILLED IN BY TSDF

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Printed or typed full name and signature: Dane Ain, [signature]

EPA ID NUMBER: CAD067780749

DATE RECEIVED & ACCEPTED: MO 05 DAY 23 YR 84

TSDF RETAINS

CRU 00471

Wellare Agency
MANAGEMENT BRANCH

UNIFORM HAZARDOUS WASTE MANIFEST

Department of Health Services

Type with ELITE type (12 characters per inch)

STATE ID NUMBER 83432428

GENERATOR NAME AND MAILING ADDRESS
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
AREA CODE/PHONE NUMBER 714-526-5522

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER
CAD008325110

TRANSPORTER NO 1
Oil Process
5756 Alba
Los Angeles, Ca 90058
213-585-5063

VEH./CONTAINER NO. 2484
EPA ID NUMBER CAD050606850

TRANSPORTER NO 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO.
EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
Baron Blakeslee
525 E. Alondra
Gardena, Ca 90248
AREA CODE/PHONE NUMBER 213-532-0730

EPA ID NUMBER
CAD097465132

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISP METH
1.0 1,1,1 Trichloroethane GRM - A	UN2831	3000	G	001	CT	211	G

COMPONENTS	CONC RANGE UPPER	CONC RANGE LOWER	UNITS %	UNITS PPM
1.0 1,1,1 Trichloroethane	95	85	X	
1.1 Oil	5	3	X	
Go # 26203				

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA

Printed or typed full name and signature HARRY L. MURPHY Harry L Murphy

MO 05 DAY 23 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature Pat Owens Pat Owens

DATE REC'D & ACCEPTED MO 5 DAY 23 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number.

Printed or typed full name and signature Michael Childs Michael Childs

EPA ID NUMBER CAD097465132

DATE RECEIVED & ACCEPTED MO 05 DAY 25 YR 84

05 23 84

TSDF SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS

CRU 00472

Department of Health Services

...nd Welfare Agency
...MANAGEMENT BRANCH

UNIFORM HAZARDOUS WASTE MANIFEST

...814

STATE ID NUMBER 83326982

...ype with ELITE type (12 characters per inch).

GENERATOR NAME AND MAILING ADDRESS
TRENT TUBE DIV - CRUCIBLE OPER. CORP.
P.O. BOX 3068
FULLERTON, CA. 92634 (714) 526-5522

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER CAD008325110

AREA CODE/PHONE NUMBER

TRANSPORTER NO. 1
Rutherford/Pacific
3020 Orange Ave
Long Beach Ca 90807 213-595-9461

VEH./CONTAINER NO. 00043622

EPA ID NUMBER CAD980737031

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

V.EH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
Facet Energy
3020 Orange Ave
Long Beach Ca 90807 213-595-7333

EPA ID NUMBER CAD990669400

AREA CODE/PHONE NUMBER

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DIS MET
WASTE OIL - COMBUSTABLE NOS.	NA1270	1160	Gal	001	CT	22V	01

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Recyclable oil	100			

SPECIAL HANDLING INSTRUCTIONS

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HARRY L. MURPHY
Harry L Murphy

Printed or typed full name and signature

MO. 05 DAY 25 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Kevin McCusker
Kevin McCusker

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. 05 DAY 25 YR. 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR.

TO BE FILLED IN BY TRANSPORTER

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Michael Mosier
Michael Mosier

Printed or typed full name and signature

EPA ID NUMBER CAD990669400

DATE RECEIVED & ACCEPTED MO. 05 DAY 25 YR. 84

TO BE FILLED IN BY TSDF

TSDF SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS

State of California—Health and Welfare Agency
HAZARDOUS WASTE MANAGEMENT BRANCH
714-744 P Street
Sacramento, CA 95814

UNIFORM HAZARDOUS WASTE MANIFEST

Department of Health Ser

Please print or type with ELITE type (12 characters per inch).

STATE ID NUMBER **83170055**

GENERATOR NAME AND MAILING ADDRESS
TRW TIRE DIV - CENTRALIA PLT CAP
P O BOX 3068
FULLERTON CA 92634
AREA CODE/PHONE NUMBER 714-526-5532

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER CAD009729190

TRANSPORTER NO. 1
LIQUID WASTE MANAGEMENT
1261 N GROVE ST
ANAHEIM CA 92806
800-624-3845

VEH./CONTAINER NO. | EPA ID NUMBER
WA185 | CAT080034141

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

V.EH./CONTAINER NO. | EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
METTLEMAN HILLS INC.
PO BOX 1104
SANTA FE SPRINGS CA 90670
AREA CODE/PHONE NUMBER

EPA ID NUMBER CAT000646117

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.
~~Corrosive Liquid, NOS~~	~~UN1760~~	2200	E	001	CT	~~X~~
HAZARDOUS WASTE LIQUID, NOS	NA9189					611

COMPONENTS	CONC RANGE UPPER	CONC RANGE LOWER	UNITS %	UNITS PI
CHROMIUM	.142	.100	X	
NICKEL	.335	190	X	
IRON	4.30	.400	X	
FLUORIDE	1.75	1.40	X	
AMMONIA	2.14	1.70	X	
AMMONIUM FLUORIDE	3.51	2.80	X	
WATER	BAL			

SPECIAL HANDLING INSTRUCTIONS
WASTE TIRE CLEAT + EAGLES PH 6/8
PROFILE NO FD 7619

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature HARRY L MURPHY — MO 05 DAY 26 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature JULIO OCHOA Julio Ochoa
DATE REC'D & ACCEPTED MO 05 DAY 26 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature
DATE REC'D & ACCEPTED MO DAY YR

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number See instructions
EPA ID NUMBER
Printed or typed full name and signature
DATE RECEIVED & ACCEPTED MO DAY YR

DHS-8022A 11/82

TSDF SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS

TO BE FILLED IN BY GENERATOR
TO BE FILLED IN BY TRANSPORTER

CRU 00474

GENERATOR'S WASTE MATERIAL PROFILE SHEET

SFO D 78619
TSDR

A GENERAL INFORMATION

GENERATOR NAME: TRENT TUBE DIV. - CRUCIBLE OF. CORP
FACILITY ADDRESS: 2100 E. ORANGETHORPE AVE
FULLERTON CA 92634
TRANSPORTER: LIQUID WASTE MANAGEMT.
TRANSPORTER PHONE: 800-824-3345
GENERATOR USEPA I.D. CAD008325110
GENERATOR STATE I.D. SAME
TECHNICAL CONTACT: H.L. MURPHY
TITLE: QA MGR
PHONE: 714-526-5522
NAME OF WASTE: NEUTRALIZED NITRIC ACID
PROCESS GENERATING WASTE: PICKLING OF STAINLESS STEELS

B PHYSICAL CHARACTERISTICS OF WASTE

COLOR: GREEN

ODOR: ☒ NONE TO ☒ MILD ☐ STRONG
DESCRIBE: AMMONIA

PHYSICAL STATE @ 70°F: ☐ SOLID ☐ SEMI SOLID ☒ LIQUID ☐ POWDER

LAYERS: ☐ MULTILAYERED ☒ BI-LAYERED ☐ SINGLE PHASED

FREE LIQUIDS: ☒ YES ☐ NO
VOLUME: 100 %

pH: ☐ < 2 ☐ 7.1-10 ☐ N/A ☐ 2-4 ☐ 10.1-12.5 ☒ 4.1-6.9 ☐ > 12.5 ☐ 7 ☐ EXACT

SPECIFIC GRAVITY: ☐ < .8 ☐ 1.3-1.4 ☐ .8-1.0 ☐ 1.5-1.7 ☒ 1.1-1.2 ☐ > 1.7 ☐ EXACT

FLASH POINT: ☐ < 70°F ☐ > 200°F ☐ CLOSED CUP ☐ 70°F-100°F ☒ NO FLASH ☐ OPEN CUP ☐ 101°F-139°F ☐ EXACT ☐ 140°F-200°F

C CHEMICAL COMPOSITION (TOTALS MUST ADD TO 100%)

TOTAL CHROMIUM	0.245 %
NICKEL	0.225 %
IRON	0.458 %
FLUORIDE	1.58 %
AMMONIA	2.14 %
AMMONIUM FLUORIDE	3.09 %
BALANCE H2O	%

D METALS ☐ TOTAL (PPM) ☒ EPA EXTRACTION PROCEDURE (mg/L)

ARSENIC (As)		SELENIUM (Se)	
BARIUM (Ba)		SILVER (Ag)	
CADMIUM (Cd)		COPPER (Cu)	
CHROMIUM (Cr)	2940	NICKEL (Ni)	2700
MERCURY (Hg)		ZINC (Zn)	
LEAD (Pb)		THALLIUM (Tl)	
CHROMIUM-HEX (Cr + 6)	360 EST.	IRON	5496

E OTHER COMPONENTS - TOTAL (PPM)

CYANIDES	-0-	PCB'S	-0-
SULFIDES	-0-	PHENOLICS	-0-

F SHIPPING INFORMATION

DOT HAZARDOUS MATERIAL? ☒ YES ☐ NO
PROPER SHIPPING NAME: HAZARDOUS WASTE LIQUID NOS
HAZARD CLASS: ORM-E ID NO: NA9189 RQ
METHOD OF SHIPMENT: ☒ BULK LIQUID ☐ BULK SOLID ☐ DRUM (TYPE/SIZE)
ANTICIPATED VOLUME: 3500 GALS ☐ CUBIC YARDS ☐ OTHER
PER: ☒ ONE TIME ☐ WEEK ☐ MONTH ☐ QUARTER ☐ YEAR ☐

G HAZARDOUS CHARACTERISTICS

REACTIVITY: ☒ NONE ☐ PYROPHORIC ☐ SHOCK SENSITIVE ☐ EXPLOSIVE ☐ WATER REACTIVE ☐ OTHER

OTHER HAZARDOUS CHARACTERISTICS: ☒ NONE ☐ RADIOACTIVE ☐ ETIOLOGICAL ☐ PESTICIDE MANUFACTURING WASTE ☐ OTHER

USEPA HAZARDOUS WASTE? ☒ YES ☐ NO
USEPA HAZARDOUS CODE(S): D007
STATE HAZARDOUS WASTE? ☒ YES ☐ NO
STATE CODE(S): SAME

SPECIAL HANDLING INFORMATION: WEAR EYE PROTECTION & RUBBER GLOVES

☐ ADDITIONAL PAGE(S) ATTACHED

I HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS COMPLETE AND ACCURATE AND THAT ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED

AUTHORIZED SIGNATURE	TITLE	DATE
Harry L Murphy	Quality Assurance Mgr	5/17/84

FORM 6000 8/83 © 1983 WASTE MANAGEMENT, INC.

D 78619

WASTE PROFILE SHEET CODE

CERTIFICATION OF REPRESENTATIVE SAMPLE

GENERAL DIRECTIONS: IN ORDER TO DETERMINE WHETHER WE CAN ACCEPT THE SPECIAL WASTE DESCRIBED IN THE ABOVE NUMBERED PROFILE SHEET, WE MUST OBTAIN A REPRESENTATIVE SAMPLE OF THE WASTE. WE WILL ANALYZE THE SAMPLE TO VERIFY THE INFORMATION YOU HAVE PROVIDED US, SO IT IS PARTICULARLY IMPORTANT THAT THE SAMPLE BE TRULY REPRESENTATIVE. IN MOST CIRCUMSTANCES YOU WILL BE OBTAINING THE SAMPLE. HOWEVER, IN THOSE CASES IN WHICH WE OBTAIN THE SAMPLE, WE MUST ASK THAT ONE OF YOUR EMPLOYEES BE PRESENT TO DIRECT THE PARTICULAR SOURCE TO BE SAMPLED AND TO WITNESS THE SAMPLING. IN SUCH CASE, YOUR EMPLOYEE MUST SIGN THIS CERTIFICATION AS A WITNESS.

THIS CERTIFICATION MUST BE RETURNED, WITH THE REPRESENTATIVE WASTE SAMPLE, TO:

EXCLUSIVE PROPERTY OF
CHEMICAL WASTE MANAGEMENT INC. OAK BROOK, ILL.
Not to be reproduced without specific written permission
from an authorized representative.

CHEMICAL WASTE MANAGEMENT, INC.
KETTLEMAN HILLS DISPOSAL FACILITY
P. O. BOX 471, 35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

THE UNDERSIGNED CERTIFIES THAT HE/SHE OBTAINED A REPRESENTATIVE SAMPLE OF THE WASTE MATERIAL DESCRIBED IN THE "GENERATOR'S WASTE MATERIAL PROFILE SHEET" ABOVE REFERENCED, AND THAT THE FOLLOWING REPRESENTATIONS ARE TRUE AND CORRECT:

1. HOUR AND DATE OF SAMPLING: 4/30/84 10:00 AM
2. SOURCE FROM WHICH SAMPLE TAKEN: 2 tanks for processing (Stainless tanks are 1 equal 1 evaporator) (Samples combined into one sample)
3. EQUIPMENT AND SAMPLING METHOD USED: Sampling pipe at various depths.
4. AMOUNT OF SAMPLE OBTAINED: 2 gal
5. TYPE OF CONTAINER INTO WHICH SAMPLE WAS PLACED: (plastic containers)
6. THE SAMPLING EQUIPMENT USED, AND THE CONTAINER INTO WHICH THE SAMPLE WAS PLACED, WERE THEMSELVES UNCONTAMINATED BEFORE USE.
7. AT THE TIME OF SAMPLING I AFFIXED A LABEL TO THE CONTAINER IN THE FOLLOWING FORM WITH THE FOLLOWING INFORMATION (FILL IN THIS PORTION, INCLUDING YOUR SIGNATURE, JUST AS IT APPEARS ON THE LABEL YOU PREPARED):

GENERATOR: Trent Tube
WASTE NAME: Neutralized Nitric acid
SAMPLE HOUR/DATE: 4/30/84 10:00 AM
PROFILE SHEET CODE:
SAMPLER SIGNATURE: Harry L Murphy

WITNESS VERIFICATION: I WAS PERSONALLY PRESENT DURING THE SAMPLING DESCRIBED; I DIRECTED THE WASTE SOURCE TO BE SAMPLED; AND I VERIFY THE INFORMATION ABOVE NOTED.

WITNESS: MELVIN W SHORT
SIGNATURE: Melvin W Short
TITLE: BUYER
EMPLOYER: Trent Tube
DATE: 5/17/84

SAMPLER NAME: Harry L Murphy
SIGNATURE: Harry L Murphy
TITLE: Mgr. Quality Assurance
EMPLOYER: Trent Tube Div.
DATE: 5/17/84

LABORATORY REVIEW OF SAMPLING PROTOCOL

BASED UPON MY REVIEW OF THE ABOVE PROFILE SHEET, I CONCLUDE THAT THE ABOVE METHODOLOGY IS:

☐ ADEQUATE FOR YIELDING A REPRESENTATIVE SAMPLE.
☐ INADEQUATE FOR THE REASONS NOTED HEREON.

DATE:
LAB MGR:

FORM WMI 51 (Rev 8/83)
© 1980 WASTE MANAGEMENT, INC

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900

CLIENT

Industrial Waste Utilization
P. O. Box 1163
Brea, Ca. 92621
Attn: Chuck Templer

LAB NO. E04364

REPORTED 5/10/84

RECEIVED 4/30/84

SAMPLE IDENTIFICATION: Neutralized Nitric Acid w/Hydrofluoric Trent Tube, 2100 E. Orangethorpe, Fullerton, Ca.

BASED ON SAMPLE: As Submitted

pH	6.1
Specific Gravity	1.80 (Hydrometer)
Total Chromium	0.245 % .00245 = 2450ppm
Nickel	0.225 %
Iron	0.458 %
Fluoride	1.58 %
Ammonia	7.14 %
Ammonium Fluoride	3.08 %

ASSOCIATED LABORATORIES

Edward S. Behare, Ph.D.

ESB/jg

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TESTING & CONSULTING
Chemical •
Microbiological •
Environmental •

*AMENDED

WASTE PRODUCER, PLEASE CHECK APPLICABLE PERMIT REQUEST:

____ New Permit

____ Renewal Permit (Current Permit No. _____ Date _____)

_X_ Amendment and (Current Permit No. 3-3966 Date 25-26-83) Issue

____ Verbal Permit (No. _____ Date _____)
(If given verbal emergency permit by telephone)

For Office Use Only:
Permit # 3-4962
Date Handled 5/11/84
Date Sent 5/11/84

Department of Health Services
HAZARDOUS WASTE MANAGEMENT BRANCH
107 South Broadway, Room 7128
Los Angeles, CA 90012

CALIFORNIA DEPARTMENT OF HEALTH SERVICES
Hazardous Materials Management Section

Section Offices:

714/744 P Street
Sacramento, CA 95814
(916) 322-2337

2151 Berkeley Way
Berkeley, CA 94704
(415) 540-2043

5545 East Shields Avenue
Fresno, CA 93727
(209) 291-6676

107 South Broadway
Rm. 7012
Los Angeles, CA 90012
(213) 620-2380

APPLICATION FOR CALIFORNIA EXTREMELY HAZARDOUS WASTE DISPOSAL PERMIT*

Please type or print clearly. Provide all information requested, since omissions will result in delay or denial of permit. Allow 15 days process time from day of receipt.

WASTE PRODUCER:

Name of Firm COLT INDUSTRIES - CRUCIBLE OPERATING DIV. INC.
TRENT TUBE DIVISION

Street and No. (Or P.O. Box) P.O. BOX 3068 - 2100 E. ORANGETHORPE AVENUE

City FULLERTON *State* CA *Zip Code* 92634

Telephone No. 714) 526-5522 *County* ORANGE

Pick Up Address (If Different)

Applicant HARRY L. MURPHY *Title* MANAGER OF QUALITY ASSURANCE

PROPOSED HAULER:

LIQUID WASTE MANAGEMENT
1369 W. 9th STREET
UPLAND, CA 91786
800-824-3345
CAT 080034184

Hauler Reg. No.

PROPOSED DISPOSAL (OR OTHER) FACILITY:

*Amended

CASMALIA RESOURCES (ALT) KETTLEMAN HILLS
CASMALIA, CA
P.O. BOX 1104
COALINGA, CA 93210
CAT000646117

PROPOSED METHOD OF DISPOSAL:

Burial___ Ponding _X_ Storage ___ Other *(Specify)* _____

Treatment *(Specify type)* EVAPORATION OF WATER AND ENCAPSULATION

Recycle *(Specify method of reuse)* _____

*Required for handling or disposal of extremely hazardous wastes (Section 66570, Title 22, CAC).

Collett

CRU 00478

CALIFORNIA DEPARTMENT OF HEALTH SERVICES
Hazardous Materials Management Section

APPLICATION FOR CALIFORNIA EXTREMELY HAZARDOUS WASTE DISPOSAL PERMIT

DESCRIPTION OF WASTE (including Composition with Upper and Lower Concentration of Hazardous Components)	CONCENTRATION Lower	Upper	Units, % or ppm	QUANTITY (For year's permit give estimated quantity per disposal and per year)
AMMONIUM BIFLUORIDE	0	400	ppm	5 to 15 POUNDS

(Attach page(s) for additional wastes)

DESCRIPTION OF PACKAGING: (Packaging, Containerization)

Drums ____ Cartons ____ Bottles ____ Tank Truck X

Other ____
Specify method of packaging small containers

Packaging, containerization, and transport of the material shall be in accordance with Title 49, Code of Federal Regulations for hazardous materials, and with regulations of the California Highway Patrol, Title 13, California Administrative Code, for intrastate transport of hazardous materials and, for PCB-containing wastes, in accordance with U.S.E.P.A. regulations set forth in Title 40 CFR Part 761.

PERMIT TO BE USED FOR: (Length of Time)

Single Disposal X

One Year Maximum for Multiple Disposals ___

PERMIT RENEWALS: (Application for renewal of a one-year blanket permit, using this form, must be received at least 15 days prior to expiration date to keep permit in effect).

Signature of Applicant Harry L Murphy

Company and City TRENT TUBE DIVISION - FULLERTON, CA

Date MAY 7, 1984

1/22/81

CRU 00479

UNIFORM HAZARDOUS WASTE MANIFEST

77250

STATE ID NUMBER 83432433

GENERATOR NAME AND MAILING ADDRESS

Trent Tube
2100 E. Orangethorpe Ave.
Fullerton, CA 92634 714-526-5582

AREA CODE/PHONE NUMBER

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

TRANSPORTER NO. 1

Industrial Waste Utilization

VEH/CONTAINER NO. CAD008325410

EPA ID NUMBER

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

V.EH/CONTAINER NO. CAD9A05529

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

EPA ID NUMBER

EKK Landfill
2210 S. Azusa Rd.
West Covina, CA 91791 213-965-0916

AREA CODE/PHONE NUMBER

CAD057756[illegible]

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	TYPE	WASTE CAT. NO.	DISPOSAL METHOD
Hazardous Waste Solid nos E	NA9189	100000	P	001	F	151	[illegible]

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Steel Tank	10	80	X	
Carbon Steel Liner	8	5	X	
Plastic Liner	4		X	
Residue		1	X	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

HARRY L. MURPHY

Printed or typed full name and signature

Harry L. Murphy

MO 05 DAY 29 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR

DISCREPANCY INDICATION SPACE

SAMPLE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number and fee instructions.

Printed or typed full name and signature

EPA ID NUMBER

DATE RECEIVED & ACCEPTED MO DAY YR

05 29 84

TSDF RETAINS

CRU 00480

WASTE MANAGEMENT BRANCH — UNIFORM HAZARDOUS WASTE MANIFEST

STATE ID NUMBER 83432458

Please print or type with ELITE type (12 characters per inch).

GENERATOR NAME AND MAILING ADDRESS
Trail Tube
2150 W. Dragoncrest Ave.
Fullerton, Ca. 9263[illegible] 714-56-5[illegible]

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER CAD 981 325 118

AREA CODE/PHONE NUMBER

TRANSPORTER NO. 1 — Industrial Waste Utilization

VEH./CONTAINER NO. | EPA ID NUMBER
CAD 981 [illegible]

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO. | EPA ID NUMBER

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY
BKK Landfill
2210 S. Azusa Rd.
West Covina, Ca. 91791 213-965-0916

EPA ID NUMBER CAD 067 [illegible]

AREA CODE/PHONE NUMBER

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	WASTE M
Waste Acids, Inorganic, N.O.S.	NA1760	3500	P	005	TT		

COMPONENTS	CONC RANGE - UPPER	CONC RANGE - LOWER	UNITS %	UNITS PP
Steel Tank	30	25	X	
Acids	25	20	X	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature: Mary L. Murphy — MO 05 DAY 31 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES — DATE REC'D & ACCEPTED MO DAY YR

Printed or typed full name and signature

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES — DATE REC'D & ACCEPTED MO DAY YR

Printed or typed full name and signature

DISCREPANCY INDICATION SPACE — NONE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Printed or typed full name and signature: KAY SIMPSON

EPA ID NUMBER CAD067[illegible]

DATE RECEIVED & ACCEPTED MO 05 DAY 30 YR [illegible]

TSDF RETAINS

TO BE FILLED IN BY GENERATOR

DHS 8022A 11/82

CRU 00481

WASTE MANAGEMENT BRANCH — UNIFORM HAZARDOUS WASTE MANIFEST

STATE ID NUMBER

GENERATOR NAME AND MAILING ADDRESS

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

TRANSPORTER NO. 1

VEH./CONTAINER NO. — EPA ID NUMBER

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO. — EPA ID NUMBER

TREATMENT, STORAGE OR DISPOSAL (TSDI) FACILITY

EPA ID NUMBER

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISP METH

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature — MO DAY YR

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES — DATE REC'D / ACCEPTED — MO DAY YR

Printed or typed full name and signature

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES — DATE REC'D / ACCEPTED — MO DAY YR

Printed or typed full name and signature

DISCREPANCY INDICATION SPACE

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions — EPA ID NUMBER — DATE RECEIVED & ACCEPTED — MO DAY YR

Printed or typed full name and signature

TSDF RETAINS

CRU 00482

...EMENT BRANCH

UNIFORM HAZARDOUS WASTE MANIFEST

(4)

...type with ELITE type (12 characters per inch).

17250

STATE ID NUMBER **83170056**

GENERATOR NAME AND MAILING ADDRESS

TRENT TUBE COMPANY
2100 E. ORANGETHORPE AVENUE
FULLERTON, CA 92634 714-526-5522

AREA CODE/PHONE NUMBER

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

CAD008325110

TRANSPORTER NO. 1

VEH./CONTAINER NO. 53851

EPA ID NUMBER CAD980585291

TRANSPORTER NO. 2 ~~[illegible] FACILITY~~

United Pumpkinseed
14016 E. Valley Blvd
City of Industry, CA

VEH./CONTAINER NO. 00052619

EPA ID NUMBER CAD072953771

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

BKK LANDFILL
2210 S. AZUSA ROAD
WEST COVINA, CA 91791 213-965-0916

AREA CODE/PHONE NUMBER

EPA ID NUMBER CAD057786749

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISP. MET.
10 Hazardous Waste liquid nos	NA9189	500	G	001	CT	134	03
ORM-E							03

COMPONENTS	CONC RANGE UPPER	CONC RANGE LOWER	UNITS %	UNITS PPM
1.1 Water	99	98	X	
1.2 Detergent	1	.5	X	
1.3 Oil	1	.5	X	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

HARRY L MURPHY

Printed or typed full name and signature Harry L Murphy

MO. 05 DAY 29 YR. 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR.

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

X John Telles John Telles

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. 05 DAY 29 YR. 84

DISCREPANCY INDICATION SPACE

1.67

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

[signature]

Printed or typed full name and signature

EPA ID NUMBER CAD067786749

DATE RECEIVED & ACCEPTED MO. 05 DAY 30 YR. 84

TSDF RETAINS

...8022A 11/82

CRU 00483

HAZARDOUS WASTE MANIFEST

Type or PRINT with ELITE type (12 characters per inch)

STATE ID NUMBER

GENERATOR NAME AND MAILING ADDRESS

Frank Edge
2100 E. Orangethorpe Ave.
Fullerton, CA 92631

AREA CODE/PHONE NUMBER 714-525-3322

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

TRANSPORTER NO. 1

Industrial Waste Utilization

VEH./CONTAINER NO.

EPA ID NUMBER

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

BKK Landfill
2210 S. Azusa Rd.
West Covina, CA 91791

AREA CODE/PHONE NUMBER 213-965-0226

EPA ID NUMBER

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO	CONTAINER TYPE	WASTE CAT. NO.	DISPOSAL METHOD
Corrosive Solid, N.O.S. Corrosive Material	9179	200	P	001	DM	121	2

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Soluble Oils	10	5	X	
Glass Balls	20	55	X	
Abrasive	10	5	X	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature: Carey L. Allen

ISO 25 30 84

Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature: David L. Alley

DATE REC'D & ACCEPTED: MO 03 DAY 30 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED: MO DAY YR

DISCREPANCY INDICATION SPACE

094

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Printed or typed full name and signature: Frank Kishi Jr.

EPA ID NUMBER: CAD982372474

DATE RECEIVED & ACCEPTED: MO 05 DAY 31 YR 84

TSDF RETAINS A COPY

EPA Form 8700-22A 11/82

CRU 00484

Department of Health Services

UNIFORM HAZARDOUS WASTE MANIFEST

STATE ID NUMBER 83432441

GENERATOR NAME AND MAILING ADDRESS
Trent Tube
2100 E. Orangethorpe Ave.
Fullerton, CA 92634 714-526-5522
AREA CODE/PHONE NUMBER

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER
CAD008325110

TRANSPORTER NO. 1
Industrial Waste Utilization

VEH./CONTAINER NO. 53851
EPA ID NUMBER CAD980585291

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

V.EH./CONTAINER NO.
EPA ID NUMBER

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY
Baron Blakeslee
525 E. Alondra Blvd.
Gardena, CA 90248 213-532-0730
AREA CODE/PHONE NUMBER

EPA ID NUMBER CAD097465131

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO	CONTAINER TYPE	WASTE CAT NO.	DIS MET
1,1,1, Trichloroethane CEM-A	UN2831	00145	G	004	DM	2110	

COMPONENTS	CONC RANGE UPPER	CONC RANGE LOWER	UNITS %	UNITS PPM
TRICHLOROETHANE	70	60	✓	
OIL	40	30	✓	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

HARRY L MURPHY
Printed or typed full name and signature Harry L Murphy

MO 05 DAY 30 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
David E. Alley
Printed or typed full name and signature D E Alley

DATE REC'D & ACCEPTED MO 05 DAY 30 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR

DISCREPANCY INDICATION SPACE
129 gallons

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number.
See instructions.
Michael Childs Michael Childs
Printed or typed full name and signature

EPA ID NUMBER CAD097465132

DATE RECEIVED & ACCEPTED MO 06 DAY 21 YR 84
05 30 84

DHS-8022A 11/82

TSDF SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS

CRU 00485

UNIFORM HAZARDOUS WASTE MANIFEST

7712 57 STATE ID NUMBER 3432412

GENERATOR NAME AND MAILING ADDRESS
Evan Tube
2150 E. Orangethorpe Ave.
Fullerton, CA 92631
AREA CODE/PHONE NUMBER 714-526-5581

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER CA 2 3

TRANSPORTER NO. 1
Industrial Waste Utilization
VEH./CONTAINER NO.
EPA ID NUMBER CAD 981 9 8 0 9 2 9 1 3

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY
VEH./CONTAINER NO.
EPA ID NUMBER

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY
BKK Landfill
2210 S. Azusa Rd.
West Covina, CA 91791
213-965-0516
AREA CODE/PHONE NUMBER
EPA ID NUMBER CAD 0 6 7 7 8 6 7 6 9

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO	CONTAINER TYPE	WASTE CAT.	WASTE NO.	DISP METH
1. Flammable Solid, n.o.s. Flammable Solid	NA1325	0245	P	01	DM	141	00	100
2. HAZARDOUS WASTE SOLID, NOS	NA9189	0200	P	01	DM	141	00	100

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
1. Paint Sludge	50	40	✓	
1.2 Absorbent	60	40	✓	
2.1 Trichloroethane	50	40	✓	
2.2 Absorbent	60	50	✓	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature: Harry L. Murphy — Harry L Murphy — MO 03 DAY 31 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
David E. Alley
Printed or typed full name and signature
DATE RECD & ACCEPTED MO 03 DAY 31 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Printed or typed full name and signature
DATE RECD & ACCEPTED MO DAY YR

DISCREPANCY INDICATION SPACE
2.12
SEPA

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number & handling instructions.
Printed or typed full name and signature
EPA ID NUMBER CAD 0 6 7 7 8 6 7 6 9
DATE RECEIVED & ACCEPTED MO 04 DAY 3 1 YR 84

EPA Form 8700-22A 11-82 GENERATOR RETAINS COPY

CRU 00486

MANAGEMENT BRANCH — UNIFORM HAZARDOUS WASTE MANIFEST

STATE ID NUMBER 83432439

GENERATOR NAME AND MAILING ADDRESS

Trent Tube
2100 E. Orangethorpe Ave.
Fullerton, CA 92634

AREA CODE/PHONE NUMBER 714-526-5581

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

TRANSPORTER NO. 1

Industrial Waste Utilization

VEH/CONTAINER NO. 4 4 0 0 0 3 2 5 1 1 6

EPA ID NUMBER

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

Rush Salvage, Inc.
7621 Pearl Drive
Whittier, CA 90604
(213) 944-6417

VEH/CONTAINER NO. 4 0 0 7 3

EPA ID NUMBER

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY

BKK Landfill
2210 S. Azusa Rd.
West Covina, CA 91792

AREA CODE/PHONE NUMBER 213-965-0916

EPA ID NUMBER

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DISP METH
1.0 Hazardous Waste Solid, N.O.S.							

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
1.1 Soft Gas			X	
1.2 Oil			X	

SPECIAL HANDLING INSTRUCTIONS

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature

MO DAY YR

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

David E. Allen

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

JOHN P. NASH

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO DAY YR 5 31 84

DISCREPANCY INDICATION SPACE

0.16

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Printed or typed full name and signature

EPA ID NUMBER

DATE RECEIVED & ACCEPTED MO DAY YR 06 04 84

TSDF RETAINS

TO BE FILLED IN BY GENERATOR

TO BE FILLED IN BY TRANSPORTER

TO BE FILLED IN BY TSDF

CRU 00487

APPENDIX E

CERTIFICATION OF CLOSURE

AUGUST 29, 1984

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

August 29, 1984

Mr. Angelo Bellomo
Regional Administrator
Toxic Substances Control Division
Department of Health Services
107 South Broadway, Room 7128
Los Angeles, California 90012

Re: Closure Certification
Trent Tube Facility
Fullerton, California
CAD 008325110

Dear Sir:

On August 16, 1984, Mr. Richard Klippel, P.E., of Calocerinos & Spina, Consulting Engineers, inspected the vacant Trent Tube Division Plant at 2100 East Orangethorpe Avenue, Fullerton, California.

Based on his inspection of the physical facilities, as well as photographs, manifests and billing records, we hereby certify that the Facility has been closed in accordance with the "Closure Plan" submitted by Trent Tube Division to your office on April 1, 1984.

The closure activities also included removal of the top three (3) feet of oil-contaminated soil on the two (2) areas on the south side of the Plant which were referenced in Mr. James Anderson's memo to you of May 4, 1984.

We therefore request that you delete the Interim Status Permit for this Facility from your records.

For:

TRENT TUBE DIVISION
CRUCIBLE MATERIALS CORP.

D. R. Gehr
Vice President
Technical Services

For:

CALOCERINOS & SPINA
CONSULTING ENGINEERS

Frank J. Spina, P.E.
Partner

CC: Mr. James Anderson
Executive Officer
Regional Water Quality Board
Suite 200, 6809 Indiana Street
Riverside, California 92506

Mr. Harry Murphy, Trent Tube Div.

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

December 13, 1984

Mr. Angelo Bellomo
Regional Administrator
Toxic Substances Control Division
Department of Health Services
107 South Broadway, Room 7128
Los Angeles, California 90012

Re: Closure Certification
Trent Tube Facility
Fullerton, California
CAD 008325110

Dear Sir:

On August 16, 1984, Mr. Richard Klippel, P.E., of Calocerinos & Spina, Consulting Engineers, inspected the vacant Trent Tube Division Plant at 2100 East Orangethorpe Avenue, Fullerton, California.

Based on his inspection of the physical facilities, as well as photographs, manifests and billing records, we hereby certify that the Facility has been closed in accordance with the "Closure Plan" submitted by Trent Tube Division to your office on April 1, 1984.

The closure activities also included removal of the top three (3) feet of oil-contaminated soil on the two (2) areas on the south side of the Plant which were referenced in Mr. James Anderson's memo to you of May 4, 1984.

We therefore request that you delete the Interim Status Permit for this Facility from your records.

For:

TRENT TUBE DIVISION
CRUCIBLE MATERIALS CORP.

D. R. Gehr
Vice President
Technical Services

For:

CALOCERINOS & SPINA
CONSULTING ENGINEERS

Frank J. Spina, P.E.
Partner

REGISTERED PROFESSIONAL ENGINEER
FRANK JOSEPH SPINA
No. 39026
CIVIL
STATE OF CALIFORNIA

CC: Mr. James Anderson
Executive Officer
Regional Water Quality Board
Suite 200, 6809 Indiana Street
Riverside, California 92506

Mr. Harry Murphy, Trent Tube Div.

CRU 00490

APPENDIX F

LETTER COMMENT BY DEPARTMENT OF HEALTH SERVICES

AND

PROPOSED SITE ASSESSMENT PLAN

ATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY
GEORGE DEUKMEJIAN, Governor

EPARTMENT OF HEALTH SERVICES
17 SOUTH BROADWAY, ROOM 3128
S ANGELES, CA 90012

December 3, 1984

Mr. Robert M. Phillips
Trent Tube Division
Crucible Materials Corp
P.O. Box 88
Pittsburgh, PA 15230

Dear Mr. Phillips:

CLOSURE PLAN DEFICIENCIES RE: CLOSURE OF TRENT TUBE FACILITY, FULLERTON, CA (CAD 008325110)

The closure plan you submitted on August 24, 1983 regarding the subject facility is inadequate. Therefore, the subsequent closure certification is inappropriate.

You are directed to submit to this office by December 15, 1984 a revised written site assessment plan prepared by an independent engineer registered in the State of California.

The plan must provide for sampling and chemical assessment of all areas which were excavated at the direction of the California Regional Water Quality Control Board and all other areas that could be contaminated with hazardous wastes. Areas where chlorinated solvents were used, stored, or may have been spilled are of particular concern. The plan must identify all principals, including the analytical laboratory and all other contractors used. Drawings, sketches and/or photographs necessary to fully describe areas of concern and proposed remedial actions should also be included.

The assessment plan must be approved by this office prior to any further construction, excavation or other work in the affected areas.

If you have any questions or wish to further discuss this matter please call Roy Thielking of my staff.

Sincerely,

John Hinton, P.E., Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division

JH:RT:kp

cc: See attached list
CERTIFIED

James Anderson, Executive Officer
California Regional Water
Quality Control Board
Santa Ana REgion
6809 Indiana Ave., Suite 200
Riverside, CA 92506

Harry Murphy
Trent Tube Division
Colt Industries Operating Corporation
430 Park Avenue
New York, NY 10022

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

December 18, 1984

Mr. Roy Thielkin
Project Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division
Department of Health Services
107 South Broadway, Room 7128
Los Angeles, California 90012

Re: Site Assessment Plan
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Thielkin:

In accordance with Mr. Hinton's letter of December 3, 1984, and our discussion during the meeting in your office on December 14, 1984, we are hereby submitting a Site Assessment Plan for the Trent Tube Division Plant at 2100 East Orangethorpe Avenue, Fullerton, California.

As you will note, we anticipate performing the site borings during the period of December 26-28, 1984. We would therefore appreciate receiving your comments at the earliest possible time.

Please feel free to call us if you have any questions or need additional information.

Very truly yours,

CALOCERINOS & SPINA

RWK:mts

Richard W. Klippel, P.E.
Industrial Waste Manager

Enclosure

CC: W. Smith, Esq. (w/ enc.)
Mr. D. Bramwell, IT Corp. (w/enc.)
Mr. R. Phillips, Trent Tube (w/enc.)
Mr. J. Devaney, Colt Industries

CRU 00494

SITE ASSESSMENT PLAN

TRENT TUBE DIVISION PLANT

2100 EAST ORANGETHORPE AVENUE

FULLERTON, CALIFORNIA

CAD 008325110

I. Background Information

Trent Tube Division of Crucible Material Corporation ceased operation of their manufacturing facility at 2100 East Orangethorpe Avenue, Fullerton, California, on March 11, 1984. In accordance with Article 4, para. 66402, of the California Waste Management Regulations, notice of the anticipated closure along with a Closure Plan and cost estimate plus a copy of the Operation Plan were submitted to the California Department of Health Services by certified letter on August 24, 1983. No comments on that submittal were received.

From March 28-30, 1984, Mr. Richard W. Klippel, P.E., of Calocerinos & Spina, Consulting Engineers, and Robert Phillips of Trent Tube inspected the Plant and assisted Mr. Harry Murphy, Plant Manager, in updating and revising the Closure Plan and cost estimate. On March 29, 1984, Mr. Klippel and Mr. Phillips met with Mr. Kurt Burchtold of the Santa Ana Regional Water Quality Control Board to discuss the pending Plant closure and submittal of the notice and revised Closure Plan. Mr. Burchtold advised Trent Tube to submit the Plan to both the Water Quality Control Board and the California Department of Health Services for review.

On April 1, 1984, in accordance with provisions of Attachment A, Section V, of the Interim Status Document, CAD 008325110, the Revised Closure Plan and cost estimate were submitted by certified letter to the Santa Ana Regional Water Quality Control Board. As per Mr. Burchtold's

recommendation, a copy of the Plan was sent to the Department of Health Services. That Closure Plan identified the actual closure date of May 11, 1984.

On May 4, 1984, Trent Tube received a copy of a memo from the Regional Water Quality Control Board to the Department of Health Services referring closure approval for the facility to the Department of Health Services.

In that memo, the Regional Water Quality Board stated that no problems were noted during their inspection of the facility or in their review of the Closure Plan, with one exception. That exception involved small areas of soil contaminated with waste oil which were noted on the south side of the Plant during their inspection. Their memo notes that the Plant Manager, Mr. Harry Murphy, stated that, during closure, the soil in these areas would be removed to a depth of three (3) feet.

On May 11, 1984, Trent Tube ceased manufacturing at the facility and during the remainder of the month, closure activities as described in the Closure Plan were carried out under the supervision of Mr. Harry Murphy. As agreed in his meeting with the Regional Water Quality Control Board staff, the two small areas of soil stained by waste oil were excavated to a depth of three (3) feet and the excavations were filled with clean crushed stone.

On August 16, 1984, Mr. Richard Klippel under the direction of Mr. Frank Spina, California P.E. #39026, Partner, Calocerinos & Spina, Consulting Engineers, inspected the vacant and closed facility and reviewed photographs, manifests and billing records pertaining to the closure activities. On August 29, 1984, Mr. Frank Spina on the basis of Mr. Klippel's inspection, certified by letter that the facility was closed in accordance with the Closure Plan dated April 1, 1984.

II. Purpose of Plan Submitted

On December 12, 1984, the appropriate Trent Tube personnel received a letter dated December 3, 1984, from the California Department of Health Services, Facility Permitting Unit, advising the company that the Closure Plan was inadequate and the subsequent closure certification inappropriate. The letter directed that a written Site Assessment Plan, prepared by an independent engineer registered in the State of California, be submitted to their office by December 15, 1984. The letter further stated that the Plan must provide for sampling and chemical assessment of all areas which were excavated at the direction of the Regional Water Quality Control Board and all other areas that could be contaminated with hazardous wastes. The Plan must identify all principals, including the analytical laboratory, and all other contractors used. The Plan should also include drawings, sketches and/or photographs necessary to fully describe areas of concern and should propose remedial actions that would be taken if found to be necessary.

On December 14, 1984, officials of Trent Tube, Calocerinos & Spina, Consulting Engineers, and Wayne Smith, Esq., of Gibson, Dunn and Crutcher, Attorneys, met with Mr. Roy Thielkin of the Facility Permitting Unit staff and discussed the matter in some detail. At that meeting, it was agreed that Trent Tube would proceed with the submittal of the Site Assessment Plan and the subsequent execution of the activities upon Plan approval. Since Trent Tube has a purchase offer for the property and considers time to be of the essence, they requested that Mr. Thielkin publish the required public notice at the earliest opportunity. Furthermore, it was agreed that Trent Tube would attempt to complete the site evaluation procedure to the Department's satisfaction prior to the expira-

tion of the required 45-day public comment period. Thus, by approximately February 1, 1985, closure certification could be accomplished thereby allowing closing on the sale of the property.

This Site Assessment Plan is submitted in response to the December 3, 1984, letter request by the Department of Health Services and is specifically tailored to provide the information requested in that letter.

III. Goals of the Site Assessment Plan

The goal of the proposed Site Assessment Plan is to ascertain the presence of hazardous waste constituents in the soil at the Trent Tube facility and to recommend and implement necessary remediation if such materials are found to be present.

IV. Specific Location To Be Assessed

The initial site locations to be assessed are shown as locations A-1, A-2 and A-3 in Figure 1, attached, and are shown pictorially in Figures 2 and 3. The locations shown are those which were excavated at the direction of the Regional Water Quality Control Board. These areas are in close proximity to each of the diked areas where hazardous substances and/or hazardous wastes were stored and represent areas where previous excavation was carried out to remove soil which was visibly stained with oily substances. Specific sample sites in each area were selected to characterize those areas which were visibly contaminated and are generally located near the diked areas and opposite the locations of the dike drains which were periodically opened to remove trapped rainwater from the diked areas.

V. Assessment Procedure

At each of those locations shown in Figure 1 (A-1, A-2 and A-3), it is proposed that soil samples be obtained utilizing a 2-inch diameter

Modified California Sampler. Samples would be collected at three depths at each location. The upper depth would be at the top layer of soil directly beneath the recent excavation which would be approximately 3 feet deep. Additional samples at each location would be obtained at depths of 5 feet and 10 feet. Recent structural borings in the Plant yard confirm a thick layer of sand beneath the site with a water depth of greater than 25 feet.

Samples at each location would consist of a 6-inch long undisturbed soil sample contained within a capped section of 2-inch pipe. The sampling rig would be thoroughly decontaminated between samples and boring holes will be filled with a bentonite clay slurry upon completion.

Samples would be shipped in the sample collection cylinder and refrigerated until analysis. Samples would be delivered to the analytical laboratory on the same day and analyzed within 72 hours of collection. Each sample would be analyzed for the following constituents which were present in the hazardous wastes stored in the adjacent storage areas.

Waste	Target Parameter	Method
Chlorothene VG	1,1,1,Trichlorothane	GC - USEPA Method 601
Blended Solvents	Methylene Chloride	GC - USEPA Method 601
Mineral Spirits and Kerosene	Benzene, Toluene, Xylene	GC - USEPA Method 602

Results will be reported in terms of mg/kg (wet weight) as received.

To establish background concentrations in the area, additional samples at the same approximate depths will be taken in three (3) other

locations on the Plant site remote from the waste storage areas. These additional locations are labelled B-1, B-2 and B-3 on Figure 1. These nine samples would be analyzed for the same parameters.

In the interest of time, it is proposed that additional soil samples be collected at downgradient locations at increasing distances from the waste storage areas in order to determine the areal extent of any contamination that might be found. Such samples would be taken at the 3, 5 and 10-feet depths but would only be analyzed if significant contamination were found to exist in the initial set of samples (A-1, A-2 and A-3) adjacent to the waste storage areas. Analyses of these samples would be carried out within 14 days of collection and these samples would be kept refrigerated during the intervening period.

Analytical results of the A-1, A-2 and A-3 samples will be evaluated and compared against the analyses of the background samples (B-1, B-2 and B-3) at comparable depths. If the contaminants are found to exist in the A series samples in concentrations statistically higher than in the background (B series) samples, the same analyses would be performed on the samples taken at a greater distance from the storage areas (C series). If contamination is found in the C series samples, the D series of samples taken near the property line will be analyzed. The composite set of analytical results will then be utilized to determine the areal extent of any remediation that may be required. Such remediation, depending upon the nature and extent of any contamination found, may include either removal of contaminated soil to a secure disposal site or surface spreading and natural volatization of the contaminants.

The results of the assessment including all analytical data, chain-of-custody sheets, maps and sketches as well as recommendations arising

from the assessment will be documented in a Site Assessment Report which will be promptly submitted to the Department of Health Services.

VI. Principals Involved In the Assessment Process

Certified Independent Engineer	- Frank J. Spina, Calif. P.E. #39026
Principal Site Coordinator	- Andrew F. Diefendorf, CPG (C&S)
Drilling Company	- Pioneer Drilling Company Redlands, Calif.
Analytical Laboratory	- California Analytical Services Sacramento, California
Soil Sampling	- Mr. David Bramwell, CEG IT Corporation, Irvine, California
Data Evaluation	- Richard W. Klippel, P.E. (C&S)

VII. Projected Date of Assessment Effort

1.	Submit Assessment Plan	-	December 19, 1984
2.	Obtain Boring Samples	-	December 26, 27 and 28, 1984
3.	Analysis of Samples	-	December 27-28, 1984
4.	Evaluation of Results	-	January 2-15, 1985
5.	Submittal of Assessment Plan	-	January 15, 1985
6.	Remediation of Site, if necessary	-	January 15-30, 1985

Respectfully submitted,

CALOCERINOS & SPINA

Frank J. Spina, P.E.
Partner

FJS:RWK:mts

Attachments

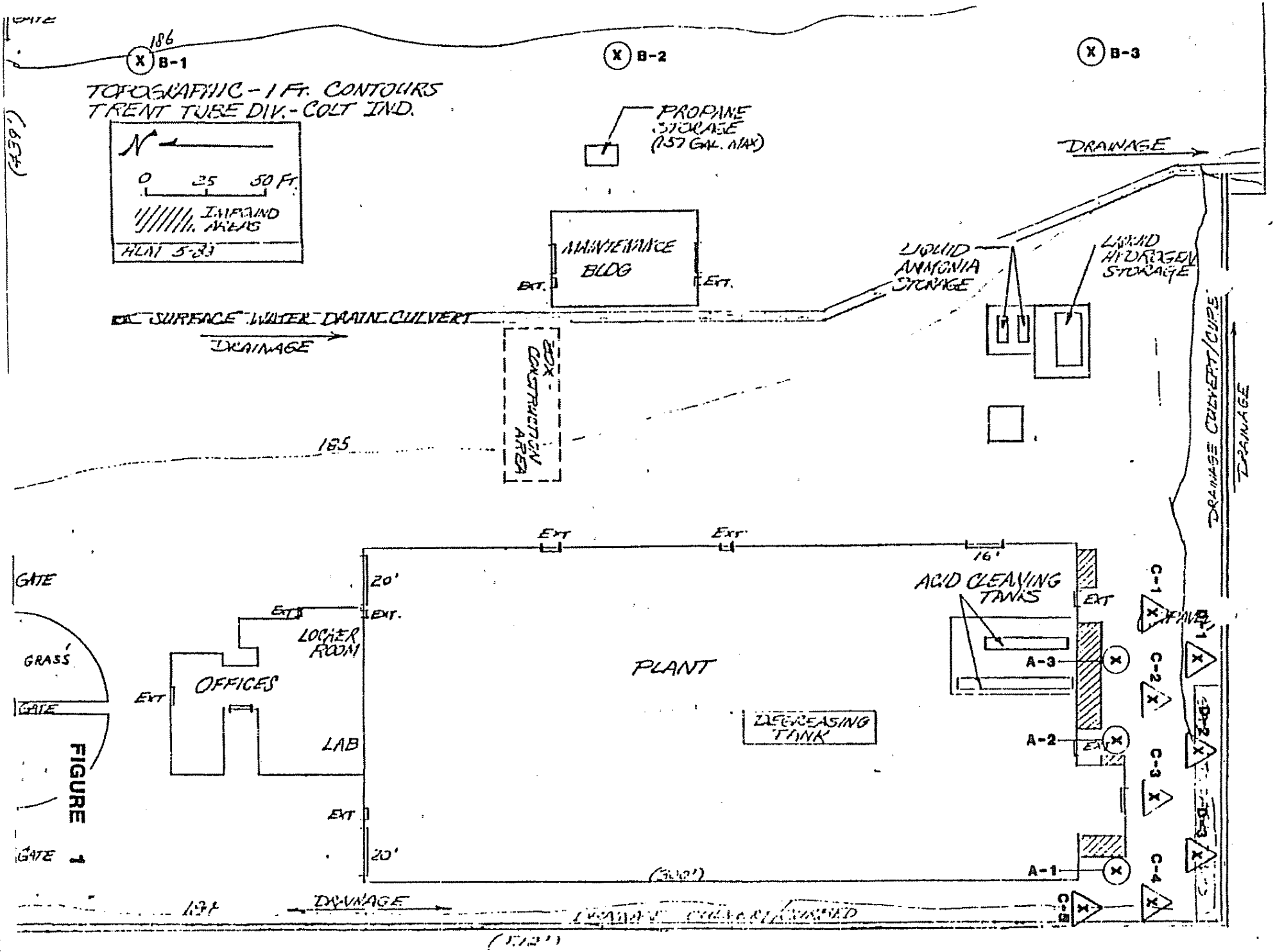

FIGURE 1

CRU 00502

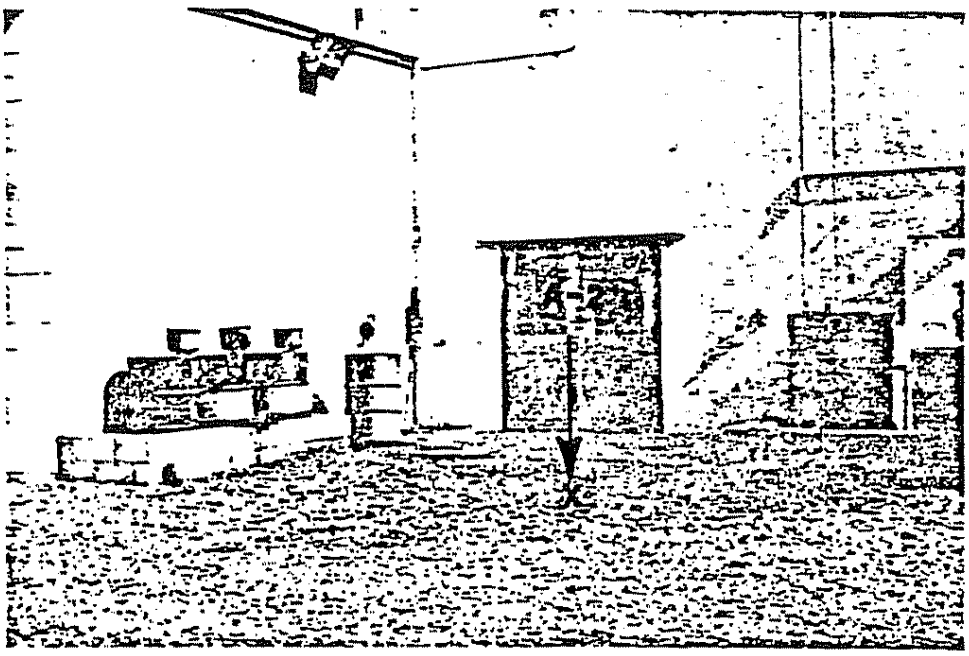

Figure 5 - Waste collection impound at south end of facility. Impounded drums contain waste 1,1,1 trichloroethane, waste kerosene, and waste mineral spirits.

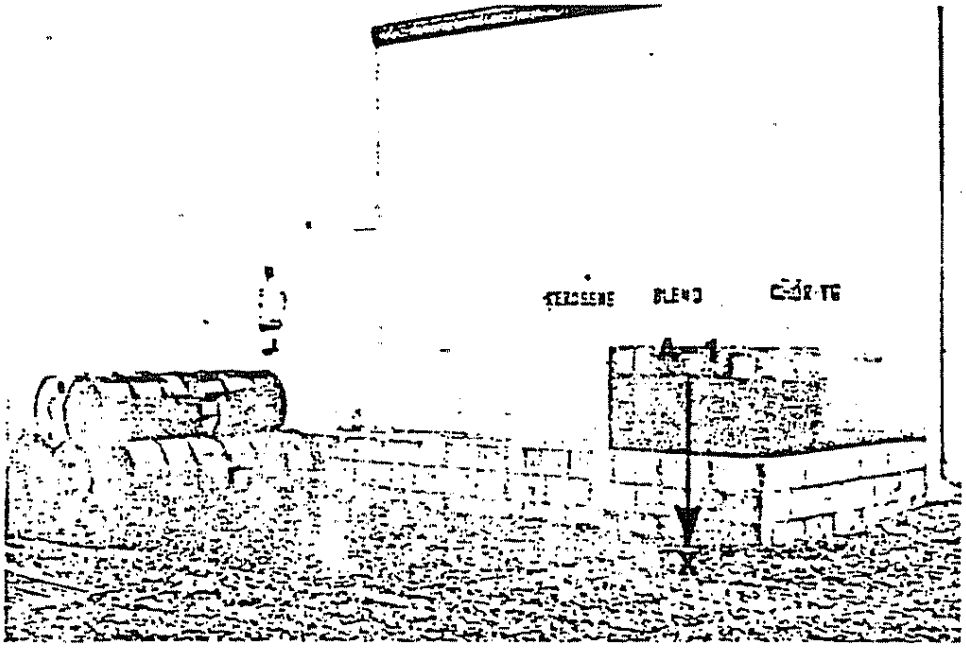

Figure 6 - Waste storage impound at southwest corner of plant. Non-impounded drums are empty.

FIGURE 2

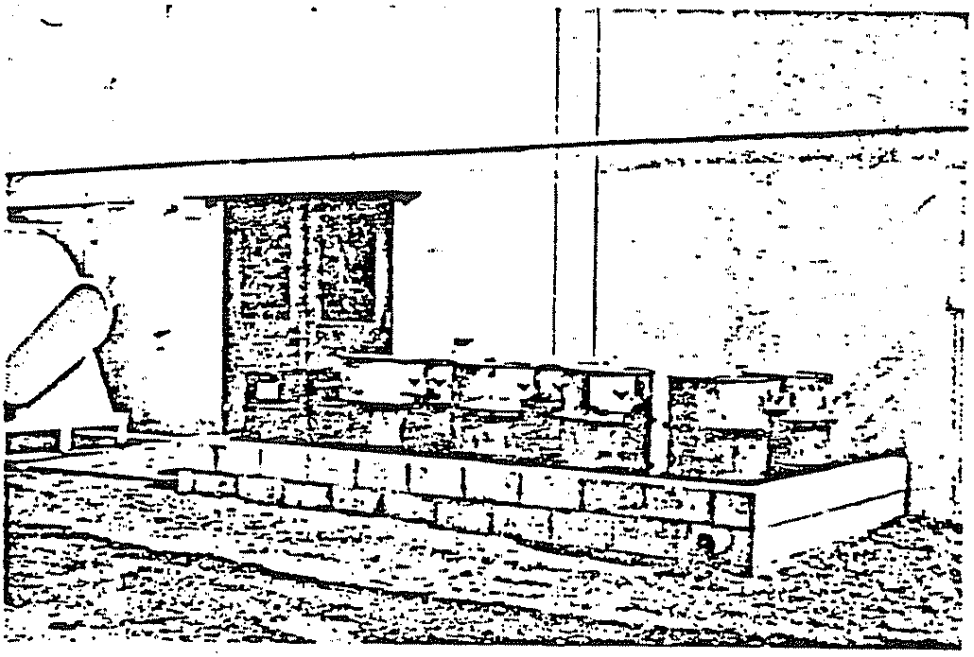

Figure 3 - Impound located at southeast corner of the plant used to store concentrated acids.

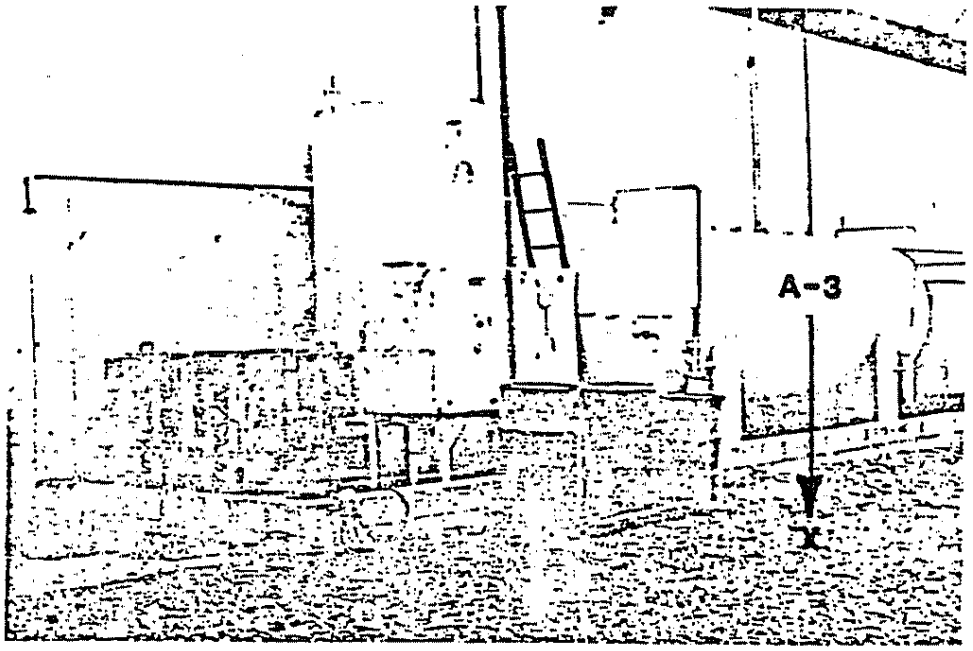

Figure 4 - Impound located at south end, center of plant. Tanks from left to right, store waste oil, waste detergent, unused 1,1,1 trichloroethane, kerosene and 1,1,1 trichloroethane. Drums contain kerosene to be stored in the kerosene tank.

FIGURE 3

APPENDIX G

PROPOSED SITE REMEDIATION PLAN

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

January 18, 1985

Mr. Roy Thielking
Project Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division
Department of Health Services
197 Broadway, Room 7128
Los Angeles, California 90052

Re: Site Remediation Plan
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Thielking:

We have completed our site assessment for the above-referenced Project and present herein the results of that assessment and our proposed plan for remediation of the site.

Site Sampling

A total of 14 borings were completed as originally proposed at the rear of the facility and at background locations. An additional set of three borings (E Series) were completed at selected locations requested by you during the on-site program. Locations of all borings are indicated on the attached Site Plan (Figure 1). Drilling was conducted on December 26, 27, and 28, 1984, by Pioneer Drilling Company with inspection, sample preservation and logging conducted by Mr. David Bramwell, PG, of IT Corporation. Field supervision was performed by Mr. Andrew Diefendorf, CPG, of Calocerinos & Spina.

Soil samples were taken at approximately 3-, 5- and 10-foot depth intervals in all borings with the exception of the E Series at which location samples were obtained at approximately 2-, 4- and 6-foot depth intervals. Samples were either maintained within capped 6-inch or 4-inch California Sampler sleeves, which were then placed in polyethelene bags and stored in teflon-capped glass jars; or the samples were removed from the sampler and placed directly in laboratory-prepared, teflon-capped sample jars. All samples were refrigerated and air freighted to the analytical laboratory at the end of each day of drilling.

Results of Investigations

Attachment A presents the analytical results of all samples processed by California Analytical Laboratory. Of the 26 organic parameters included within the complete USEPA 601 and 602 scans performed, only 6 were identified on the site. Summary results of analyses for these six parameters are presented

as Table 1. Note that of the samples analyzed at 17 locations only 3 (A-1, D-2 and C-3) indicate soil contamination above the allowable limit of 1 mg/kg at a depth of 3 feet. Only two locations (A-1 and C-4) indicated detectable contamination at a sampling depth in excess of three feet. With the exception of locations D-2 and C-3, contaminant concentrations detected were only slightly over the allowable limit.

Based on our review of previous soil removal (see Figure 2) and soil samples taken during this investigation (see Drill Logs, Attachment B), it is our opinion that the majority of contamination was removed during the original remedial efforts. Remnant contamination appears to be concentrated within a shallow (3.5- to 4.5-foot depth) zone of silty organic soil found in a limited area at the rear of the site (see Figures 3 and 4). Our past experience has shown that these fine-grained materials tend to adsorb and retain more of the solvents than the coarser and more porous underlying sand materials.

Portable organic vapor meter (OVM) readings taken during the sampling support the findings that the organic silty sand layer is retaining most of the spilled solvents. While the OVM readings indicate organic vapors dispersed throughout the relatively porous sandy deposts on the site, based on plots of OVM readings (Figures 5 through 7) at the three sample depths, two distinctive sources of contaminant are apparent. Both zones of contamination appear to result from surface runoff away from solvent storage areas in the vicinity of A-1 and A-2, respectively.

Previous excavation of soil from the area of A-2 resulted in removal of any detectable soil contamination in that area, although trace organic vapors are still present. On the other hand, the high concentration of solvents "downsurface" from A-2 at D-2 probably represents entrapment of the solvents within the organic soils immediately beneath the surficially lowest point of surface drainage between A-2 and the concrete drainage swale. The organic layer in this area is of low enough permeability to create a small pocket of trapped or perched water.

Inasmuch as fluid flow in the vadose (unsaturated) zone of the sand deposits beneath the organic layer should be vertical for approximately 80 feet (depth of water table), the spread of contamination at the rear of the site is probably directly related to surface water wash during periods of rain. Infiltrating solvent would be adsorbed by the finer-grained soil layer allowing that layer to act as a potential contaminant source during rainy periods. Note from Figures 3 and 5 that there is a strong correlation between the limits of detectable (greater than 1 ppm) OVM readings and the apparent limits of the organic silty sand layer. The significant quantity of rain prior to and during the period of this investigation may account for leaching of solvents from that layer such that detectable solvents were present at depth in a few of the borings.

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Previous excavation of soil from the area of A-2 resulted in removal of any detectable soil contamination in that area, although trace organic vapors are still present. On the other hand, the high concentration of solvents "downsurface" from A-2 at D-2 probably represents entrapment of the solvents within the organic soils immediately beneath the surficially lowest point of surface drainage between A-2 and the concrete drainage swale. The organic layer in this area is of low enough permeability to create a small pocket of trapped or perched water.

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It should also be noted that no solvents were detectable at depth in areas where the stratigraphic section of sand is void of any silty organic containing layers. In these areas of relatively clean coarse sand there is very little particle surface upon which the solvent can be retained. Any solvent reaching depth in these areas has already escaped and, if it were not for the limited presence of an organic layer, no solvents would probably be currently detectable on the site.

The key to remediation of this site, therefore, becomes (1) removal of the primary source of contamination, the organic soil layer, and (2) prevention of further migration of any small quantities of solvent contained in deeper sands by elimination of surface water infiltration.

Controlling factors in the practicality of applied methods of remediating this site include (1) the proximity of various structures and (2) the potential low angle of repose of any sands which are excavated. Removal of soils in close proximity to structures may threaten the stability of those structures.

Proposed Additional Remediation

Because some remnant soil contamination is still present at the rear of the site, we recommend the following remedial actions:

1. Removal of all heavily contaminated soils outlined in Area "A" of Figure 8 to a depth of 4.5 feet (vertically, if possible) and transport to an approved disposal facility. This represents all contaminated soils within an approximately eight-foot radius of D-2.

2. Removal of all soils in Areas "B" and "C" (side slopes of 1:1.5, if possible) to the base of the organic layer (3.5 to 4.5 feet in depth). Note that these areas were delineated by overlay analysis of Figure 3 and 5.

3. All soils excavated from Areas "B" and "C" to be loosely spread in a selected area on the east side of the site in a layer not to exceed four inches in thickness and allowed to aerate for a minimum of one week.

4. Replacement of aerated soils back in excavation in compacted lifts not to exceed one-foot in thickness and redressing to ground surface with a minimum of four inches of approved gravel base.

In addition, we recommend removal of solvent-stained soils along the embankments of the drainage swale at E-2 to a depth of six inches with disposal at an approved disposal site, and replacement of soils with granular (gravel) materials.

It is assumed that the volumes of soil to be removed as proposed may be the minimum necessary. In order to assess actual soil conditions encountered during remediation, we would utilize a portable OVM to determine if all pockets of significant contamination have been removed and if additional removal is required at time of excavation.

In order to facilitate successful closure of this facility, we request your immediate review and comment on this Proposal. Thank you in advance for your assistance in this matter.

Respectfully submitted,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

CC: Mr. R. Phillips (w/enc)

TABLE 1

TRENT TUBE

FULLERTON, CALIFORNIA

RESULTS OF ANALYSES

		Contaminant Concentration in mg/kg (parts per million)					
		Method 601			Method 602		
Sample Point	Depth (feet)	1,1,1-Tri-chloroethane	Tetrachloro-ethylene	Trichloro-ethylene	Ethyl-Benzene	Xylene	Toluene
A-1	3.5	1.2	1.1	LTD	1.7	2.7	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	1.5	1.7	LTD	LTD	LTD	LTD
A-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
A-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
A-4	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
C-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
C-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
C-3	3.5	2.2	5.3	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD

Table 1 (Continued)
Page 2

Sample Point	Depth (feet)	Contaminant Concentration in mg/kg (parts per million) Method 601 1,1,1-Tri-Chloroethane	Tetrachloro-ethylene	Trichloro-ethylene	Method 602 Ethyl-Benzene	Xylene	Toluene
C-4	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	1.1
D-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	—	--	--	--	--	--
	10.5	—	--	--	--	--	--
D-2	3.5	780	21	70	LTD	95	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
D-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
E-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	—	--	--	--	--	--
	6.0	--	--	--	--	--	--
E-2	2.0	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	—	--	--	--	--	--
E-3	2.0	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	—	--	--	--	--	--
	6.0	--	--	--	--	--	--

NOTES:

1. LTD = Less Than Detectable limit of 0.5 mg/kg.
2. -- = Sample Not Analyzed

APPENDIX H

CORRESPONDENCE REGARDING

AIR QUALITY BOARD EXCAVATION PERMIT

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

January 28, 1985

Mr. Fred Lettice
Supervising Engineer
South Coast Air Quality
Management District
9150 Flair Drive
Elmonte, California 91731

Re: Site Remediation Plan
Trent Tube Plant
2100 East Orangethorpe Ave.
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Lettice:

In response to our telephone conversation with Mr. Robert Pease of your office on January 28, 1985, we are submitting herewith for your immediate review a copy of the Site Remediation Plan which we have filed with the California Department of Health Services. We understand that an excavation permit from the Air Quality Management District may be necessary to accomplish this remediation.

The inactive Trent Tube Facility (stainless steel manufacturing) is located within a heavily industrialized area along East Orangethorpe Avenue in Fullerton. The small (30X100 foot) area adjacent to the rear of the building to be remediated is surrounded by Vista's paint manufacturing facility and Vista's chemical storage area.

The remedial plan calls for removal of approximately three (3) truckloads of soil to a hazardous waste landfill. Discussions with the Department of Health Services indicate that the remaining soils may be removed to a Class II-1 Landfill or spread in a thin layer and allowed to aerate for a week prior to placement back in the excavation. A portable OVM would be utilized during excavation to determine if any additional materials should be also sent to a hazardous facility, as well as to monitor air quality during excavation.

Please note from Figures 5 through 7 of the Report that the OVM readings of soil samples were generally within the same order of magnitude (1-10 ppm) as the background (neighborhood) OVM readings of the air taken during our investigations. Based on the small area involved and the generally low level of organic contamination of soils, we do not believe that an air quality problem will present itself during our proposed remedial efforts.

CRU 00514

Trent Tube desires to complete closure of their facility prior to February 15, 1985, and requests your assistance in reaching that goal. We will be contacting you during the middle of this week to determine if the District will require a permit. Meanwhile, should you have any questions regarding this submittal, please feel free to contact the undersigned.

Very truly yours,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

Enclosure

CC: Mr. R. Phillips

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

January 18, 1985

Mr. Roy Thielking
Project Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division
Department of Health Services
197 Broadway, Room 7128
Los Angeles, California 90052

Re: Site Remediation Plan
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Thielking:

We have completed our site assessment for the above-referenced Project and present herein the results of that assessment and our proposed plan for remediation of the site.

Site Sampling

A total of 14 borings were completed as originally proposed at the rear of the facility and at background locations. An additional set of three borings (E Series) were completed at selected locations requested by you during the on-site program. Locations of all borings are indicated on the attached Site Plan (Figure 1). Drilling was conducted on December 26, 27, and 28, 1984, by Pioneer Drilling Company with inspection, sample preservation and logging conducted by Mr. David Bramwell, PG, of IT Corporation. Field supervision was performed by Mr. Andrew Diefendorf, CPG, of Calocerinos & Spina.

Soil samples were taken at approximately 3-, 5- and 10-foot depth intervals in all borings with the exception of the E Series at which location samples were obtained at approximately 2-, 4- and 6-foot depth intervals. Samples were either maintained within capped 6-inch or 4-inch California Sampler sleeves, which were then placed in polyethelene bags and stored in teflon-capped glass jars; or the samples were removed from the sampler and placed directly in laboratory-prepared, teflon-capped sample jars. All samples were refrigerated and air freighted to the analytical laboratory at the end of each day of drilling.

Results of Investigations

Attachment A presents the analytical results of all samples processed by California Analytical Laboratory. Of the 26 organic parameters included within the complete USEPA 501 and 602 scans performed, only 6 were identified on the site. Summary results of analyses for these six parameters are presented

CRU 00516

as Table 1. Note that of the samples analyzed at 17 locations only 3 (A-1, D-2 and C-3) indicate soil contamination above the allowable limit of 1 mg/kg at a depth of 3 feet. Only two locations (A-1 and C-4) indicated detectable contamination at a sampling depth in excess of three feet. With the exception of locations D-2 and C-3, contaminant concentrations detected were only slightly over the allowable limit.

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Portable organic vapor meter (OVM) readings taken during the sampling support the findings that the organic silty sand layer is retaining most of the spilled solvents. While the OVM readings indicate organic vapors dispersed throughout the relatively porous sandy deposts on the site, based on plots of OVM readings (Figures 5 through 7) at the three sample depths, two distinctive sources of contaminant are apparent. Both zones of contamination appear to result from surface runoff away from solvent storage areas in the vicinity of A-1 and A-2, respectively.

Previous excavation of soil from the area of A-2 resulted in removal of any detectable soil contamination in that area, although trace organic vapors are still present. On the other hand, the high concentration of solvents "downsurface" from A-2 at D-2 probably represents entrapment of the solvents within the organic soils immediately beneath the surficially lowest point of surface drainage between A-2 and the concrete drainage swale. The organic layer in this area is of low enough permeability to create a small pocket of trapped or perched water.

Inasmuch as fluid flow in the vadose (unsaturated) zone of the sand deposits beneath the organic layer should be vertical for approximately 80 feet (depth of water table), the spread of contamination at the rear of the site is probably directly related to surface water wash during periods of rain. Infiltrating solvent would be adsorbed by the finer-grained soil layer allowing that layer to act as a potential contaminant source during rainy periods. Note from Figures 3 and 5 that there is a strong correlation between the limits of detectable (greater than 1 ppm) OVM readings and the apparent limits of the organic silty sand layer. The significant quantity of rain prior to and during the period of this investigation may account for leaching of solvents from that layer such that detectable solvents were present at depth in a few of the borings.

as Table 1. Note that of the samples analyzed at 17 locations only 3 (A-1, D-2 and C-3) indicate soil contamination above the allowable limit of 1 mg/kg at a depth of 3 feet. Only two locations (A-1 and C-4) indicated detectable contamination at a sampling depth in excess of three feet. With the exception of locations D-2 and C-3, contaminant concentrations detected were only slightly over the allowable limit.

Based on our review of previous soil removal (see Figure 2) and soil samples taken during this investigation (see Drill Logs, Attachment B), it is our opinion that the majority of contamination was removed during the original remedial efforts. Remnant contamination appears to be concentrated within a shallow (3.5- to 4.5-foot depth) zone of silty organic soil found in a limited area at the rear of the site (see Figures 3 and 4). Our past experience has shown that these fine-grained materials tend to adsorb and retain more of the solvents than the coarser and more porous underlying sand materials.

Portable organic vapor meter (OVM) readings taken during the sampling support the findings that the organic silty sand layer is retaining most of the spilled solvents. While the OVM readings indicate organic vapors dispersed throughout the relatively porous sandy deposts on the site, based on plots of OVM readings (Figures 5 through 7) at the three sample depths, two distinctive sources of contaminant are apparent. Both zones of contamination appear to result from surface runoff away from solvent storage areas in the vicinity of A-1 and A-2, respectively.

Previous excavation of soil from the area of A-2 resulted in removal of any detectable soil contamination in that area, although trace organic vapors are still present. On the other hand, the high concentration of solvents "downsurface" from A-2 at D-2 probably represents entrapment of the solvents within the organic soils immediately beneath the surficially lowest point of surface drainage between A-2 and the concrete drainage swale. The organic layer in this area is of low enough permeability to create a small pocket of trapped or perched water.

Inasmuch as fluid flow in the vadose (unsaturated) zone of the sand deposits beneath the organic layer should be vertical for approximately 80 feet (depth of water table), the spread of contamination at the rear of the site is probably directly related to surface water wash during periods of rain. Infiltrating solvent would be adsorbed by the finer-grained soil layer allowing that layer to act as a potential contaminant source during rainy periods. Note from Figures 3 and 5 that there is a strong correlation between the limits of detectable (greater than 1 ppm) OVM readings and the apparent limits of the organic silty sand layer. The significant quantity of rain prior to and during the period of this investigation may account for leaching of solvents from that layer such that detectable solvents were present at depth in a few of the borings.

It should also be noted that no solvents were detectable at depth in areas where the stratigraphic section of sand is void of any silty organic containing layers. In these areas of relatively clean coarse sand there is very little particle surface upon which the solvent can be retained. Any solvent reaching depth in these areas has already escaped and, if it were not for the limited presence of an organic layer, no solvents would probably be currently detectable on the site.

The key to remediation of this site, therefore, becomes (1) removal of the primary source of contamination, the organic soil layer, and (2) prevention of further migration of any small quantities of solvent contained in deeper sands by elimination of surface water infiltration.

Controlling factors in the practicality of applied methods of remediating this site include (1) the proximity of various structures and (2) the potential low angle of repose of any sands which are excavated. Removal of soils in close proximity to structures may threaten the stability of those structures.

Proposed Additional Remediation

Because some remnant soil contamination is still present at the rear of the site, we recommend the following remedial actions:

1. Removal of all heavily contaminated soils outlined in Area "A" of Figure 8 to a depth of 4.5 feet (vertically, if possible) and transport to an approved disposal facility. This represents all contaminated soils within an approximately eight-foot radius of D-2.

2. Removal of all soils in Areas "B" and "C" (side slopes of 1:1.5, if possible) to the base of the organic layer (3.5 to 4.5 feet in depth). Note that these areas were delineated by overlay analysis of Figure 3 and 5.

3. All soils excavated from Areas "B" and "C" to be loosely spread in a selected area on the east side of the site in a layer not to exceed four inches in thickness and allowed to aerate for a minimum of one week.

4. Replacement of aerated soils back in excavation in compacted lifts not to exceed one-foot in thickness and redressing to ground surface with a minimum of four inches of approved gravel base.

In addition, we recommend removal of solvent-stained soils along the embankments of the drainage swale at E-2 to a depth of six inches with disposal at an approved disposal site, and replacement of soils with granular (gravel) materials.

It is assumed that the volumes of soil to be removed as proposed may be the minimum necessary. In order to assess actual soil conditions encountered during remediation, we would utilize a portable OVM to determine if all pockets of significant contamination have been removed and if additional removal is required at time of excavation.

In order to facilitate successful closure of this facility, we request your immediate review and comment on this Proposal. Thank you in advance for your assistance in this matter.

Respectfully submitted,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

CC: Mr. R. Phillips (w/enc)

TABLE 1

TRENT TUBE

FULLERTON, CALIFORNIA

RESULTS OF ANALYSES

		Contaminant Concentration in mg/kg (parts per million)					
		Method 601			Method 602		
Sample Point	Depth (feet)	1,1,1-Tri-chloroethane	Tetrachloro-ethylene	Trichloro-ethylene	Ethyl-Benzene	Xylene	Toluene
A-1	3.5	1.2	1.1	LTD	1.7	2.7	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	1.5	1.7	LTD	LTD	LTD	LTD
A-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
A-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
A-4	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
C-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
C-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
C-3	3.5	2.2	5.3	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD

Table 1 (Continued)
Page 2

Sample Point	Depth (feet)	Contaminant Concentration in mg/kg (parts per million) Method 601 1,1,1-Tri-Chloroethane	Tetrachloro-ethylene	Trichloro-ethylene	Method 602 Ethyl-Benzene	Xylene	Toluene
C-4	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	1.1
D-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
D-2	3.5	780	21	70	LTD	95	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
D-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
E-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	--	--	--	--	--	--
E-2	2.0	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	--	--	--	--	--	--
E-3	2.0	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	--	--	--	--	--	--

NOTES:

1. LTD = Less Than Detectable limit of 0.5 mg/kg.
2. -- = Sample Not Analyzed

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

January 28, 1985

Mr. Roy Thielking
Project Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division
Department of Health Services
197 Broadway, Room 7128
Los Angeles, California 90052

Re: Site Remediation Plan
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Thielking:

In response to our phone conversation of Friday, January 25, 1985, we have discussed the above-referenced Remediation Plan with the South Coast Air Quality Management District. We are providing that office with a copy of the Remediation Plan for review to determine if an excavation permit will be necessary.

Dependent upon the needs of the District, we will either (1) spread for aeration those soils not requiring disposal at a hazardous waste facility or (2) transport those low level contaminated soils to a Class II-1 facility.

Inasmuch as your Department seems to be in general agreement with our Remedial Plan, we are in need of written approval or contingent approval of that Plan. Please let us know if you are in need of any further submittals by us at this time.

Very truly yours,

CALOCERINOS & SPINA

Andrew F. Diefendorff, CPG
Manager, Applied Geoscience

AFD:mts

CC: Mr. R. Phillips

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

February 1, 1985

Mr. Roy Thielking
Project Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division
Department of Health Services
197 Broadway, Room 7128
Los Angeles, California 90052

Re: Site Remediation Plan
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Thielking:

Please find enclosed for your review one (1) copy of our Excavation Plan for the SCAQMD Permit Application for closure of the above-referenced facility.

As descussed, we have scheduled a meeting with you and a representative of your office, the Owner, the Contractor and C&S at the offices of the SCAQMD (9150 Flair Drive, Elmonte, California) on Thursday, February 7, 1985, at 2:30 p.m.

It is our desire to finalize, at that meeting, any necessary changes to the Excavation Permit in order that we may obtain that Permit and receive Department of Health Services approval of the Closure Plan by the end of the week and be able to initiate excavation on Monday, February 11, 1985.

We look forward to meeting with you at that time.

Very truly yours,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

Enclosure

CC: Mr. R. Phillips

CRU 00524

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 - (315) 457-6711

February 1, 1985

Mr. Fred Lettice
Supervising Engineer
South Coast Air Quality
Management District
9150 Flair Drive
Elmonte, California 91731

Re: Site Remediation Plan
Trent Tube Plant
2100 East Orangethorpe Ave.
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Lettice:

Please find attached for your review one (1) copy of the Excavation Permit Narrative for the above-referenced Project. Copies of the signed Application are being forwarded by the Owner and should be delivered to your offices by Tuesday, February 5, 1985.

As discussed wit Mr. Pease of SCAQMD, we have scheduled a meeting at your offices for Thursday, February 7, 1985, at 2:30 p.m. to discuss the Permit Application and the Site Closure Plan with representative of your agency, Mr. Thielking of the Department of Health Services, the Owner, and the Excavation Contractor. It is our desire to have all approvals and Permits in hand by the end of the week in order to initiate excavation on Monday, February 11, 1985.

Should you have any quesitons or require further information for the Permit narrative, please contact the undersigned. Your assistance in this matter is greatly appreciated.

Very truly yours,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

Enclosure

CC: Mr. R. Phillips

SCAQMD EXCAVATION PERMIT APPLICATION PLAN NARRATIVE

AND

CDHS SITE CLOSURE PLAN AMENDMENT

Submitted to:

South Coast Air Quality Monitoring District

and

California Department of Health Services

For:

Trent Tube Plant

2100 East Orangethorpe Avenue

Fullerton, California

CAD 008325110

By:

CALOCERINOS & SPINA
CONSULTING ENGINEERS
1020 Seventh North Street
Liverpool, New York 13088

February 1985

AQMD EXCAVATION PLAN NARRATIVE

General

This narrative is submitted to satisfy the combined requirements of the California Department of Health Services (CDHS) for facility closure and the excavation permit requirements of the South Coast Air Quality Monitoring District (SCAQMD). The original Closure Plan (PLAN) was submitted to the CDHS and SCAQMD on Janaury 18 and 28, 1985, respectively. That PLAN should be referenced as the primary Closure and Excavation Plan. For purposes of brevity, this narrative should be reviewed as an Amendment to the PLAN.

Based on discussions with Mr. Thielking of CDHS and Mr. Pease of SCAQMD, we propose the methods of soil excavation, removal, treatment, monitoring and management as described below.

Soil Remediation and Quantities

Approximately 20 to 40 cubic yards (cy) of moderately 1,1,1,Trichloro-ethane (TCE) contaminated (2 to 780 ppm) soil in the vicinity of Boring D-2 (Figure 1A) will be removed from the site as presented in the original PLAN (Area 1 of Figure 8). This soil will be transported under manifest along with oil-stained surface soils in the vicinity of Boring E-2 to a Class-1 facility for disposal. Note that no vinyl chloride was used at the facility and none was detected in the organic scans of samples obtained.

Approximately 450 cy of lightly TCE contaminated (less than 2 ppm) soil as outlined in the original PLAN as Areas 2 and 3 will be excavated and spread in a four-inch layer in an area on the east side of the property as outlined in Figure 1A. This soil will be allowed to aerate for a period upto one week prior to placement back in the excavated areas.

Monitoring During Excavation

During excavation a portable organic vapor meter (OVM) will be utilized to determine if additional soils will require transport to a Class 1 facility. In addition, background air and soil readings will be obtained with the OVM to determine if the work is affecting the air quality in the vicinity of the excavation. Should levels of volatiles increase above ambient air quality, then excavation will cease until levels have dropped.

Organic Vapor Sampling

Approximately 30 soil samples in the vicinity of the 3,000 s.f. area to be excavated has been tested both analytically (USEPA 601 and 602 scans) as well as by OVM (see Original Plan). Based on these results it is estimated that the volume of soils to be excavated and trucked from the site contain approximately a maximum 0.5 gallons of TCE.

It should be noted that no vapor problems were reported during previous efforts which removed the majority of contaminated soils from the facility during the summer of 1984. Recent OVM readings at the location to be excavated indicated no detectable elevation in the ambient air levels derived from the soils on the site.

Excavation and Transportation

Excavation and loading into trucks for off-site disposal will be accomplished utilizing a front-end and skip loader. Excavation will not be conducted on days when the SCAQMD forecasts 1st, 2nd or 3rd stage episodes for the area where the excavation will occur. Excavation will not be conducted on days when the wind velocity is greater than 15 mph average or 25 mph gusts. Trucks will be provided with plastic box liners to encapsulate the soil. An impermeable tie-down tarpaulin will also be required for each truck leaving the site. It is estimated that only three truckloads will be required to transport materials from the site.

Monitoring and Control of Soil Spreading

During spreading of soils to be aerated, the OVM will be utilized to monitor any changes in ambient air quality. Based on previous soils analyses the estimated maximum possible volume of TCE contained within the 450 cy of soils to be aerated is approximately 0.2 gallons. No changes in vapor readings should, therefore, be detectable at the aeration area. Should elevated levels be determined, the rate of transport and spreading can be slowed. Inasmuch as the materials to be excavated and spread generally consist of moist medium to coarse sands, dust problems also are not anticipated. However, should dust or windblown particulates present a problem during spreading, a light application of water utilizing spray hoses will be accomplished. This method of dust control will be minimized to a misting operation in order to prevent leaching of TCE from the sand.

Agreement to Cease Operation

The owner agrees that excavation and spreading operations will be immediately ceased, if he has been informed by the Executive Officer of SCAQMD that a public nuisance has occurred.

Contingent Plans

Should the aeration of the soils prove to be the sole source of public nuisance, it is proposed that those soils to be aerated will be removed from the site to a Class II-1 facility in the same manner as the soils removed to the Class I facility.

Respectfully submitted,

TRENT TUBE DIVISION

Robert Phillips
Assistant Vice President
Finance and Administration

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive El Monte, CA 91731

APPLICATION FOR PERMIT TO CONSTRUCT AND PERMIT TO OPERATE AND EXCAVATE
FOR FEE INFORMATION AND SMALL BUSINESS EXEMPTION
SEE REVERSE SIDE

PLEASE TYPE OR PRINT

SCAQMD USE: SEC | TS | ID NUMBER

1 PERMIT TO BE ISSUED TO:
Trent Tube Division, Crucible Material Corporation

2 BUSINESS LICENSE NAME OF ORGANIZATION THAT IS TO RECEIVE PERMIT
Colt Industries, Inc.

3 NAME (OR NAMES) OF OWNER OR PRINCIPAL PARTNERS DOING BUSINESS AS (DBA) ABOVE ORGANIZATION

4 MAILING ADDRESS
2188 So. Church Street, East Troy, Wisconsin 53120
NUMBER STREET CITY OR COMMUNITY STATE ZIP CODE

5 EQUIPMENT LOCATION (IF SAME ENTER "SAME") Excavation at
2100 East Orangethorpe Avenue, Fullerton, Calif. 92631
NUMBER STREET CITY OR COMMUNITY ZIP

5B NEAREST INTERSECTING STREET: State College Blvd.

6 CONTACT PERSON (INITIALS & NAME): Robert Phillips

6B CONTACT PHONE NO (AREA & NO.): (414) 642-7321

7 EQUIPMENT APPLICATION IS HEREBY MADE FOR PERMIT TO OPERATE THE FOLLOWING EQUIPMENT
Excavation Permit per Rule 1150

8 IF THIS EQUIPMENT HAD A PREVIOUS WRITTEN PERMIT STATE NAME OF CORPORATION COMPANY OR INDIVIDUAL OWNER THAT OPERATED THIS EQUIPMENT AND STATE PREVIOUS AIR POLLUTION CONTROL DISTRICT PERMIT NUMBER

NAME PREVIOUS PERMIT NUMBER

9 PERMIT APPLICATION FOR EQUIPMENT
- NEW CONSTRUCTION ☐
- ALTERATION ☐
- CHANGE OF LOCATION ☐ Excavation

REINSTATE NON-PAYMENT P/O FEES DUE ☐
CHANGE OF OWNERSHIP ☐
EXISTING EQUIPMENT IN OPERATION WITHOUT PRIOR PERMIT ☐
CHANGE OF CONDITIONS ☐

10 TYPE OF ORGANIZATION
- CORPORATION ☒
- PARTNERSHIP ☐
- INDIVIDUAL OWNER ☐
- LOCAL GOV'T AGENCY ☐
- STATE AGENCY ☐
- FEDERAL AGENCY ☐
- UTILITY ☐

11 ESTIMATED COST OF EQUIPMENT OR ALTERATION
BASIC EQUIPMENT $ Excavation $20,000
AIR POLLUTION CONTROL EQUIPMENT $

12 FOR THE NEW CONSTRUCTION, ALTERATION, TRANSFER OF OWNERSHIP OR LOCATION WHAT IS
Excavation
ESTIMATED STARTING DATE? 2/11/85 ESTIMATED COMPLETION DATE? 2/15/85

13 GENERAL NATURE OF BUSINESS
Seamless and welded tubing Manufacturing

14 PRINCIPAL PRODUCT
Stainless Steel Tubing

15 DO YOU CLAIM CONFIDENTIALITY OF DATA?
YES ☐ NO ☒
IF YES STATE NATURE OF DATA ON SEPARATE SHEET

16 NORMAL OPERATING HOURS OF SUBJECT EQUIPMENT
HOURS/DAY 8
DAYS/WEEK 5
WEEKS/YEAR 1

16 HAS A CEQA DOCUMENT BEEN PREPARED FOR THIS PROJECT? YES ☐ NO ☒

15a. ARE ALL COMPANIES' FACILITIES IN CALIFORNIA IN COMPLIANCE WITH AIR POLLUTION RULES?
YES ☒ NO ☐

16 SIGNATURE OF RESPONSIBLE MEMBER OF ORGANIZATION

17 OFFICIAL TITLE OF SIGNER
Assistant Vice President of Finance and Administration

18 TYPED OR PRINTED NAME OF SIGNER
Robert Phillips

19 PHONE NO
414 642-7321

20 DATE
2/2/85

FOR SCAQMD USE ONLY

SIC NO | EQUIP CAT NO ___ ___ ___ ___ ___ ___ / ___ ___ | SCH STEP

APPLICATION NO | PERMIT NO | TYPE B OR C | WORK UNITS A C P O | ASSIGNMENT UNIT ENGR | CLASS I III

VALIDATION

FILING FEE $ | CHECK OR MONEY ORDER NO

DA - REVISED 8-84 PRIOR VERSIONS NOT VALID

(Continued on reverse)

SEE REVERSE FOR FEES REQUIRED UPON FILING

C-1

South Coast
AIR QUALITY MANAGEMENT DISTRICT
9150 FLAIR DRIVE, EL MONTE, CA 91731 (818) 572-6200

February 5, 1985

Trent Tube Company
2100 East Orangethorpe Avenue
Fullerton, California

Att: Robert Phillips
Assistant Vice President

Gentlemen:

RULE 1150 EXCAVATION PERMIT

Reference is made to your application for a Rule 1150 excavation permit for the excavation of 40 yd^3 and the aeration of 500 yd^3 from the southwest area of the Trent Tube Plant property located in Fullerton, California.

Please be advised that this excavation permit is granted under Rule 1150 of the Rules and Regulations of the South Coast Air Quality Management District and is subject to the following conditions:

1. This excavation permit is valid until March 1, 1985. An extension may be granted upon request.

2. This District shall be notified in writing when the excavation begins and when it is terminated.

3. Areas A, B, and C are the locations as identified in your Rule 1150 application.

4. Only material excavated from Areas B and C may be aerated.

5. All excavated material that is aerated shall be watered until the surface is moist and then maintained in a moist condition to prevent dusting.

6. Any spreading of material to neutralize the soil from areas B and C shall be done in a manner to minimize emissions.

7. All material that is excavated from area A must be immediately placed in trucks or trailers which will be used to transport the material.

8. During excavation, if a considerable number of complaints are received, all work shall cease and approved mitigation measures shall be implemented immediately.

9. During excavation, monitoring for organics as methane shall be conducted at the property line at a location downwind from the excavation site. If the monitoring results indicate that the ambient concentration reaches 150ppm, all excavation shall cease and the approved mitigation measures implemented.

10. During excavation, all dirt working areas, excavated material, and dirt roadways shall be watered until the surface is moist and then maintained in a moist condition to reduce dust.

11. Excavation shall not be conducted on days when the SCAQMD forecasts second or third stage episodes for the area where the excavation will occur.

12. Excavation shall not be conducted on days when the wind velocity is greater than 15 m.p.h. average or 25 m.p.h. gusts.

13. During loading and transport, no material shall extend above the sides or rear of the truck or trailer which will haul the excavated material.

14. The exterior of trucks hauling excavated material must be cleaned off prior to leaving the excavation site.

15. All excavated solid materials shall be tranported in trucks which are covered with an impermeable cover, with such covers tied down.

16. The asphalt pad used to aerate the material excavated from areas B and C shall be completely cleaned free of all excavated material after aeration is complete to prevent fugitive dust emissions.

17. If hazardous material or organic liquids are encountered during the excavation in concentrations greater than those reported in the core samples, excavation must cease and the District notified. Additional mitigation measures as deemed necessary by the District must be implemented prior to resuming excavation.

18. All excavation material must be transported in such a manner as to prevent any emissions of hazardous materials.

19. All hazardous materials shall be transported in containers clearly marked as to the type(s) of material contained and what procedures should be followed in case of accidental spills.

20. During the transport of hazardous material(s), if a spill occurs, the immediate area may be evacuated and monitors set up downwind. The evacuated area shall then be extended to the point at which ambient levels are considered safe.

21. Mitigation measures, other than those indicated in these conditions, which are deemed appropriate by the Executive Officer as necessary to protect the confort, repose, health or safety of the public, shall be implemented upon request.

22. All materials that are listed as hazardous by a Federal or State agency shall be considered "hazardous materials" for the purpose of this permit.

23. Other governmental agencies may require approval before any excavation begins. It shall be the responsibility of the applicant to obtain that approval.

The South Coast Air Quality Management District shall not be responsible or liable for any losses because of measures required or taken pursuant to the requirements of this approved excavation management plan.

If you have any questions concerning this permit, please call Robert Pease at (818) 572-6174.

Very truly yours,

Sanford M. Weiss
Director of Engineering

Fred E. Lettice
Supervising Engineer

RP:tdb

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

February 11, 1985

South Coast Air Quality
Management District
9150 Flair Drive
Elmonte, California 91731

Attn: Mr. Fred Lettice
Supervising Engineer

Re: Air Quality Permit
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Gentlemen:

In accordance with your Letter Permit of February 5, 1985, please be advised that we intend to initiate excavation at the Trent Tube Plant site on Monday, February 11, 1985.

Should you have any questions regarding this matter, please contact Mr. Robert Phillips of Trent Tube, East Troy, Wisconsin.

Very truly yours,

CALOCERINOS & SPINA

Richard W. Klippel, P.E.
Industrial Waste Manager

RWK:mts

CC: Mr. R. Phillips

CRU 00534

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

February 20, 1985

South Coast Air Quality
Management District
9150 Flair Drive
Elmonte, California 91731

Attn: Mr. Fred Lettice
Supervising Engineer

Re: Air Quality Permit
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Gentlemen:

In accordance with your Letter Permit of February 5, 1985, please be advised that we initiated excavation at the Trent Tube Plant site on Monday, February 11, 1985.

Because formal agreement could not be reached with the California Department of Health Services regarding the Remedial Program, the Project was placed on "Hold" late in the morning of February 11, 1985. Once agreement has been made we plan to complete remediation and will notify you of our intended date of re-initiation.

This work may extend past March 1, 1985, thus requiring an extension of our Permit. Please let us know what we will need to provide you in order to obtain an extension.

Very truly yours,

CALOCERINOS & SPINA

Andrew F. Diefendorf
Applied Geoscience Manager

AFD:mts

CC: Mr. R. Phillips

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

February 27, 1985

South Coast Air Quality
Management District
9150 Flair Drive
Elmonte, California 91731

Attn: Mr. Fred Lettice
Supervising Engineer

Re: Air Quality Permit
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Gentlemen:

In accordance with your Letter Permit of February 5, 1985, please be advised that we re-initiated excavation at the Trent Tube Plant site on Monday, February 25, 1985.

All soil excavation and replacement work is planned to be completed on Friday, March 1, 1985. We therefore do not anticipate a request for an SCAQMD Permit Extension.

At this time we would like to thank you and your staff for your courtesy and cooperation in assisting us to reach a timely conclusion to this Facility closure.

Very truly yours,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

CC: Mr. R. Phillips

CRU 00536

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

March 4, 1985

Mr. Fred Lettice
Supervising Engineer
South Coast Air Quality
Management District
9150 Flair Drive
Elmonte, California 91731

Attn: Mr. R. Pease

Re: Site Remediation Plan
Trent Tube Plant
2100 East Orangethorpe Ave.
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Lettice:

This letter is to notify you that all remedial excavation, aeration and soil replacement work was completed at the above-referenced Facility on Friday, March 1, 1985.

Our Supervising Geologist has informed us that weather conditions were ideal and that no fugitive dust conditions or air-quality monitoring problems arose.

Again, we wish to thank you for your timely cooperation in assisting us with this closure.

Very truly yours,

CALOCERINOS & SPINA

AFD:mts

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

CC: Mr. R. Phillips

CRU 00537

APPENDIX I

PHOTOS OF EXCAVATION AND

MANIFEST FORMS SHOWING DISPOSAL

OF EXCAVATED SOILS SHIPPED TO DISPOSAL

DURING REMEDIATION WORK - FEBRUARY 11, 1985

State of California—Health and Welfare Agency

GENERATOR COPY

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Return To Generator

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD009832110 Manifest Document No. 00007
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
4. Generator's Phone ( ) 714-632-0181

A. State Manifest Document Number 84582038
B. State Generator's ID

5. Transporter 1 Company Name: J.C.H. TRANSPORTATION
6. US EPA ID Number: KAD982014883
C. State Transporter's ID 53584
D. Transporter's Phone 209-722-7709

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 93429
10. US EPA ID Number: CAD020748325
G. State Facility's ID: CAD020748325
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	I. Waste No.
a. Hazardous Waste Solid nos CFR-E NA 9189	001	DM	15	T	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601 & 602 SCANS. - SANDS Contains
0-780 ppm 1,1,1 Trichloroethane
0-75 Tetrachloroethylene
0-72 Trichloroethylene
0-1.1 Ethylbenzene
0-97 Xylenes
0-1.1 Toluene

K. Handling Codes for Wastes Listed Above: 03

15. Special Handling Instructions and Additional Information

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)
HARRY L MURPHY	Harry L Murphy	2 11 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
TOMMY M RAIN	Tommy M Rain	02 11 85

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. 29899-28480 lbs

Printed/Typed Name	Signature	Date (Month Day Year)
Casmalia Resources	Alice Priest Office Limit	2 11 85

GENERATOR — TRANSPORTER — FACILITY

DHS 8022 A (7/84)
EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 69541

CRU 00539

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. KAD008325110 Manifest Document No. 00004

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
TRENT Tube
2200 E Orangethorpe
Fullerton, Ca 92634

4. Generator's Phone ( ) 714-632-0181

A. State Manifest Document Number 84582041

B. State Generator's ID

5. Transporter 1 Company Name: J Cal Truus.

6. US EPA ID Number: CAD980814883

C. State Transporter's ID 52527

D. Transporter's Phone 213-920-7157

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
NTU Road
Casmalia, Ca 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID CAD020748125

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	I. Waste No.
a. ORM-E Hazardous Waste Solid nos NA9189	001	DT	13	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
SAND CONTAINING PER EPA SCANS 601 & 602 IN Mg/Kg
0-780 1,1,1 Trichloroethane
0-21 Tetrachloroethylene
0-70 Trichloroethylene
0-1.1 Toluene
0-95 Xylene
0-1.7 ethylbenzene

K. Handling Codes for Wastes Listed Above
03

15. Special Handling Instructions and Additional Information

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: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month 2 Day 11 Year 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Glen Small
Signature: Glen Small
Date: Month 2 Day 11 Year 85

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. 39929-32100 lbs
Printed/Typed Name: CASMALIA RESOURCES
Signature: V. M. Kinkade
Date: Month 2 Day 11 Year 85

GENERATOR

TRANSPORTER

FACILITY

DHS 8022 A (7/84)
(EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 80541

CRU 00540

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: CA 0008325120 00003

2. Page 1 of 2 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634

4. Generator's Phone (714-632-0181)

A. State Manifest Document Number: 84582042

B. State Generator's ID:

5. Transporter 1 Company Name: J Cal Trans

6. US EPA ID Number: CAD982014893

C. State Transporter's ID: 54046

D. Transporter's Phone: 714 970-7704

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 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

H. Facility's Phone: 805-937-8459

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. Hazardous Waste Solid nos ORM-E NA 9189	001	DT	14	T	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601 + 602 Scan - Sample contains no Mylar
O-63 1,1,1 Trichloroethane
O-17 Ethylbenzene
O-21 Trichloroethylene
O-95 Styrene
O-70 Tetrachloroethylene
O-11 Toluene

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

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: HARRY L MURPHY
Signature: Harry L Murphy
Date: Month 11 Day 17 Year 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: John L Wallberg
Signature: John L Wallberg
Date: Month 11 Day 17 Year 85

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 18. 3991 - 30 yd Bales

Printed/Typed Name: Casmalia Resources
Signature: D. M. Gaines
Date: Month 11 Day 19 Year 85

GENERATOR | TRANSPORTER | FACILITY

DHS 8022 A (7/84)
EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

CRU 00541

State of California—Health and Welfare Agency

GENERATOR COPY

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Return to Generator

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: CAD008325110 | Manifest Document No.: 00002 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
4. Generator's Phone ( ) 714-632-0181

A. State Manifest Document Number: 84582043
B. State Generator's ID:

5. Transporter 1 Company Name: J. Cal transportation
6. US EPA ID Number: CAD980814883
C. State Transporter's ID: 52583
D. Transporter's Phone: (213) 920-7709

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 93429
10. US EPA ID Number: CAD020748125
G. State Facility's ID: CAD020748125
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	t Waste No.
a. Hazardous waste Solid nos CRMES NA 9189	001	DT	15	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA Sample 601-602 - Sands contained in mg/kg
0-730 n-Propyl-Ethyl-Trichloroethane
0-21 Tetrachloroethylene
0-70 Trichloroethylene
0-1.1 Ethylbenzene
0-95 Xylene
0-1.1 Toluene

K. Handling Codes for Wastes Listed Above: 03

15. Special Handling Instructions and Additional Information

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: HARRY L. MURPHY | Signature: Harry L Murphy | Date: Month Day Year 2 11 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: James Aronson | Signature: James Aronson | Date: Month Day Year 02 11 85

18. Transporter 2 Acknowledgement or 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. # 39775-31,460 lbs.
Printed/Typed Name: Casmalia Resources | Signature: Alice Ceiest Alice L'Heureux | Date: Month Day Year 02 11 85

DHS 8022 A (7/84)
(EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 69541

CRU 00542

APPENDIX J

DEPARTMENT OF HEALTH SERVICES COMMENT LETTER

ON REMEDIATION AND EXCAVATION PLAN

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM 7128
LOS ANGELES, CA 90012
(213) 620-2380

February 20, 1985

Robert Phillips
Trent Tube Division
Colt Industries
P. O. Box 88
Pitsburgh, PA 15230

EXCAVATION AND/OR CHARACTERIZATION OF CONTAMINATION OF CONTAMINATED SOILS AT TRENT TUBE FACILITY FULLERTON, CALIFORNIA CAD 008325110

Dear Mr. Phillips:

This to confirm the February 11, 1985 discussion between you and Roy Thielking of my staff concerning the February 1, 1985 excavation plan you submitted to this office as part of the Facility Closure Plan.

The volume of soil within a semicircle defined by boring locations D-1, C-3 and D-3 on Figure 8 of the plan and within five feet of the surface must either be excavated and removed as hazardous waste to a legal point of disposal or be further characterized to show that portions thereof are not contaminated with more than five parts per million of hazardous wastes.

Your proposal to excavate and aerate the outlying portions of Area B which were found to have less than five parts per million of contamination is acceptable.

You are directed to submit to this office by March 15, 1985, a written plan for characterization, and, if appropriate, excavation of contaminated soils south of boring D-2 and between the Trent Tube property line and the flood control channel.

Should you have any questions or wish to meet with my staff, please call Roy Thielking.

Sincerely,

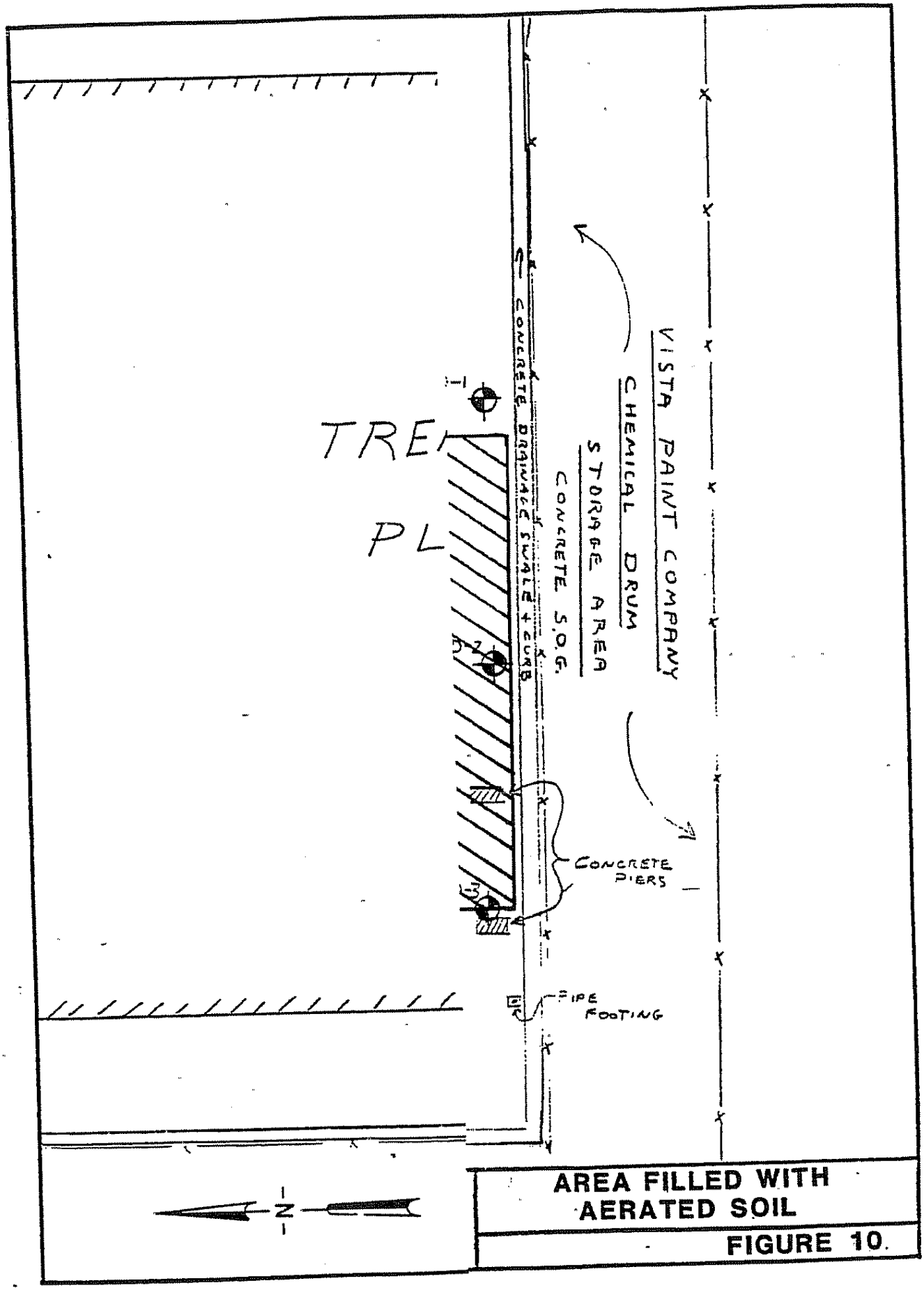
for John A. Hinton, P.E., Manager
Facility Permitting Unit
Toxic Substances Control Division

JAH:RT/mw

cc: California Regional Water Quality Control Board
South Coast Air Quality Management District
Gibson Dunn & Crutcher
Attn: Wayne Smith

APPENDIX K

PHOTOGRAPHS SHOWING REMEDIATION, DRAWINGS OF REVISED EXCAVATION LIMITS AND MANIFESTS SHOWING PROPER DISPOSAL OF CONTAMINATED SOIL SHIPPED TO DISPOSAL AT CASMALIA RESOURCES - FEBRUARY 25-28, 1985



AREA FILLED WITH AERATED SOIL

FIGURE 10.

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD008325110 — Manifest Document No: 00005

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634

4. Generator's Phone: 714-632-0181

A. State Manifest Document Number: 84582032

B. State Generator's ID:

5. Transporter 1 Company Name: J-CAL TRANSPORTATION

6. US EPA ID Number: CAD98081-9883

C. State Transporter's ID: 52587

D. Transporter's Phone: 714-821-4274

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 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

H. Facility's Phone: 805-937-8440

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 WasteSolid nos ERM-E NA 9189	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601 & 602 Scan - Sand Containing in Mg/Kg
0-700 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachloroethylene 0-95 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY — Signature: Harry L Murphy — Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: BOB TARVIS — Signature: Bob Tarvis — Date: Month Day Year: 02 25 85

18. Transporter 2 Acknowledgement or 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. # 41344 - 25,700 lbs.

Printed/Typed Name: Casmalia Resources — Signature: [signature] — Date: Month Day Year: 02 25 85

GENERATOR / TRANSPORTER / FACILITY

DS 8022 A (7/84)
DA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89541

CRU 00547

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

GENERATOR COPY

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008325130 2. Manifest Document No. 00002 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 84582033

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
4. Generator's Phone (714-632-0181)

B. State Generator's ID

5. Transporter 1 Company Name: J. CAL. TRANSPORTATION
6. US EPA ID Number: CAD980814883
C. State Transporter's ID: 53584
D. Transporter's Phone 213 910-7706

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
MTU Road
Casmalia, Ca 93429
10. US EPA ID Number: CAD020748125
G. State Facility's ID: CAD020748125
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	I. Waste No.
a. Hazardous Waste Solid nos NA 9189 ORM-E	001	DT	14	T	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA ID # 2 Sets of Seal Containers in 55 gl Kg
0-180 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachloroethylene 0-95 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: TOMMY M. BAIN
Signature: Tommy M Bain
Date: Month Day Year 10 21 25 85

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. F 41334-35, 00163
Printed/Typed Name: Casmalia Resources
Signature
Date: Month Day Year 10 25 85

DHS 8022 A (7/84)
EPA 8700-22A

Will-call TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 032541

CRU 00548

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

GENERATOR COPY

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] 2. 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
Trent Tube
2100 E. Grangethorpe
Fullerton, Ca 92631

4. Generator's Phone ( ) 714-632-0181

A. State Manifest Document Number 84582034

B. State Generator's ID

5. Transporter 1 Company Name: T-CAL Trans

6. US EPA ID Number: CAD980814883

C. State Transporter's ID: 52527

D. Transporter's Phone: 213 920-7709

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 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

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	1. Waste No.
a. Hazardous Waste Solid nos CHM-E NA 9182	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601+602 Scans—Sands Entrance in Mg/Kg
0-780 1,1,1 Trichlorethane 0-1,1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-70 Trichloroethylene 0-1,7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name	Signature	Date Month Day Year
Harry L. Murphy	Harry L Murphy	2 26 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Glen Small	Glen Small	2 26 85

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. # 41476-27, 46065

Printed/Typed Name	Signature	Date Month Day Year
Casmalia Resources	Carol Johnston	02 26 85

DHS 8022 A (7/84)
EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89641

CRU 00549

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD008325310
Manifest Document No.:
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR COPY
Return to Generator

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92631
4. Generator's Phone (714) 932-0181

A. State Manifest Document Number: 84582035
B. State Generator's ID:
C. State Transporter's ID: 53585
D. Transporter's Phone: (217) 920-7789
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAD020748125
H. Facility's Phone: 805-937-8449

5. Transporter 1 Company Name: J-Cal Transportation
6. US EPA ID Number: CAD980814883
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, Ca 93429
10. US EPA ID Number: CAD020748125

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 CRM-E NA 9189	003	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601 + 602 Scans - Sand Containing in Mg/Kg
0-780 1,1,1 Trichlorethane 0-1.1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-30 Trichloroethylene 0-1.3 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month Day Year: 2 26 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Don Baine III
Signature: [signature]
Date: Month Day Year: 2 26 85

18. Transporter 2 Acknowledgement or 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. # 41475-35,300lbs
Printed/Typed Name: Casmalia Resources
Signature: [signature]
Date: Month Day Year: 02 26 85

HS 8022 A (7/84)

CRU 00550

f California—Health and Welfare Agency

GENERATOR COPY

Return to Generator

Department of Health Services
Toxic Substances Control Division
Sacramento, California

print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: C A D 0 0 8 3 2 5 1 1 d 0 0 0 0 4

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
Generator's Phone: 714-632-0181

4. A. State Manifest Document Number: 84582039
B. State Generator's ID:

5. Transporter 1 Company Name: J. CAL TRANS
6. US EPA ID Number: C.A.D.9.8.0.8.1.4.8.8.3
C. State Transporter's ID: 56D462
D. Transporter's Phone: 213 920-7709

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 93429
10. US EPA ID Number: C A D 0 2 0 7 4 8 1 2 5
G. State Facility's ID: CAD020748125
H. Facility's Phone: 805-937-8440

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.
Hazardous Waste Solid nos ORM-E NA 9189	001	DM	14	T	611

Additional Descriptions for Materials Listed Above
E-1 Soils & Sands containing in mg/kg
-750 tetrachloroethene 0-1.1 ethylbenzene
-21 trichloroethylene 0-35 xylene
2-70 1,1-dichloroethylene 0-1.7 toluene

K. Handling Codes for Wastes Listed Above: 03

15. Special Handling Instructions and Additional Information

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)
HARRY L. MURPHY	Harry L Murphy	10 25 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
John L Wallbrit	John L Wallbrit	10 25 85

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. # 4133-2938015

Printed/Typed Name	Signature	Date (Month Day Year)
Casmalia Resources	Carol Johnston	10 25 85

22 A (7/84)
(00-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 80541

CRU 00551

California—Health and Welfare Agency

GENERATOR COPY

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Print or type. (Form designed for use on elite (12-pitch) typewriter.) Return to Generator

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008325110 — Manifest Document No. 00005
2. Page 1 of 2 — Information in the shaded areas is not required by Federal law.
4. State Manifest Document Number 84582040

5. Generator's Name and Mailing Address
Trent Tube
5100 E. Orangethorpe
Fullerton, Ca 92634
Generator's Phone (714-632-0181)

6. Transporter 1 Company Name — US EPA ID Number
A. State Transporter's ID
B. Transporter's Phone
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name — US EPA ID Number
E. State Transporter's ID 53585
F. Transporter's Phone (213)920-7709

8. Transporter 1 Company Name — US EPA ID Number
Cal Transportation — CAD098081883

9. Designated Facility Name and Site Address — 10. US EPA ID Number
Casmalia Resources
NTU Road
Casmalia, Ca 93429 — CAD020748125
G. State Facility's ID CAD020748125
H. Facility's Phone 805-937-8400

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.
Hazardous Waste Solid nos CRE NA 9189	001	DM	1	T	611

J. Additional Descriptions for Materials Listed Above
a. EPA 8010 Tetrachloroethylene in mg/kg
b. 8020 Benzene 0-1.1 Ethylbenzene
c. 8-21 Tetrachloroethylene 0-95 Xylene
d. 8-10 Trichloroethylene 0-1.3 Toluene

K. Handling Codes for Wastes Listed Above
03

15. Special Handling Instructions and Additional Information
Shipment never presented to Transporter # 1.
- 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 governmental regulations.

Printed/Typed Name: Harry L. Murphy — Signature: Harry L Murphy — Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Dan Bailie — Signature — Date: 2 15 85

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. #41348-26,820 lbs.
Printed/Typed Name: Casmalia Resources — Signature — Date: 02 25 85

8022 A (7/84) Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS 84 60541

CRU 00552

California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008325220 — Manifest Document No.

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 84582064

Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634 714-632-0181

B. State Generator's ID

Generator's Phone

Transporter 1 Company Name: J-Cal Transportation — 6. US EPA ID Number: CAD980914883

C. State Transporter's ID: 57587

D. Transporter's Phone: 213 920-7709

Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

Designated Facility Name and Site Address
Casmalia Resources
HWY Road
Casmalia, Ca 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

H. Facility's Phone: 805-937-8436

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.
Hazardous waste Solid nos CRM-E NA 9189	001	DT	1	T	622

J. Additional Descriptions for Materials Listed Above
For EPA 601+602 Sens-Solids Containing 11 mg/kg
1-720 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
1-21 Tetrachloroethylene 0-95 Xylene
1-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above

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 governmental regulations.

Printed/Typed Name: HARRY L MURPHY — Signature: Harry L Murphy — Date: Month 07 Day 27 Year 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: BOB JARVIS — Signature: Bob Jarvis — Date: Month 07 Day 27 Year 85

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.

Printed/Typed Name — Signature — Date: Month . . Day . . Year . .

8022 A (7/84)
8700-22)

Yellow: GENERATOR RETAINS

84 89541

CRU 00553

California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

GENERATOR COPY
Return to Generator

1. Generator's US EPA ID No. CAD 0 0 0 5 7 0	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.

Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634 714-632-0181
Generator's Phone

A. State Manifest Document Number: 84582065
B. State Generator's ID: [illegible]

Transporter 1 Company Name: J-Cal Transportation
6. US EPA ID Number: CAD 9 8 0 8 1 4 8 8 3
C. State Transporter's ID: 53584
D. Transporter's Phone: 213 920 7709

Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, Ca 93429
10. US EPA ID Number: C.A.D.0.2.0.7.4.8.1.2.5
G. State Facility's ID: CAD020748125
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	I. Waste No.
Hazardous Waste Solid nos CRM-E NA 9189	0 0 1	D T	1 4	Y	611

Additional Descriptions for Materials Listed Above
Per EPA 601 + 602 Scans - Sands Containing in Mg/Kg
0-780 1,1,1 Trichlorethane 0-1.1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-70 Trichlorethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month Day Year: 2 27 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: TOMMY M. BAIN
Signature: Tommy M. Bain
Date: Month Day Year: 02 27 85

18. Transporter 2 Acknowledgement or 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. # 41636-34,240 lbs
Printed/Typed Name: Casmalia Resources
Signature: Carol Johnston
Date: Month Day Year: 02 27 85

8022 A (7/84)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 69541

CRU 00554

f California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. C A D [illegible]

GENERATOR COPY
Return to Generator

Information in the shaded areas is not required by Federal law.

Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
714-632-0181

A. State Manifest Document Number 84582066
B. State Generator's ID

Generator's Phone

Transporter 1 Company Name: J-Cal Transportation
6. US EPA ID Number: CAD980814883
C. State Transporter's ID: 56046
D. Transporter's Phone: 213 920-7709

Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, Ca 93429
10. US EPA ID Number: CAD020748125
G. State Facility's ID: CAD020748125
H. Facility's Phone: 805-937-8440

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.
Hazardous Waste Solid nos CRM-E NA 9189	001	DT	14	Y	611

Additional Descriptions for Materials Listed Above
Per EPA 601+602 Scans—Sends Containing in Mg/Kg
0-780 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

5. Special Handling Instructions and Additional Information

Gloves & Goggles

6. 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: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month Day Year: 02 27 85

7. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: John L Wallberg
Signature: John L Wallberg
Date: Month Day Year: 02 27 85

8. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

9. Discrepancy Indication Space

10. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. # 41637-34980165
Printed/Typed Name: Casmalia Resources
Signature: [signature]
Date: Month Day Year: 02 27 85

022 A (7/84)
1700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89541

CRU 00555

of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

GENERATOR COPY

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008 Manifest Document No. 84582067 Return to Generator

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92631 714-632-0181

4. Generator's Phone

A. State Manifest Document Number: 84582067

B. State Generator's ID

5. Transporter 1 Company Name: J.Cal transportion

6. US EPA ID Number: CAD980814883

C. State Transporter's ID: 58971

D. Transporter's Phone: (213)920-7709

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 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

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	I. Waste No.
a. Hazardous Waste Solid nos ORM-E NA 9189	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
For EPA 601+602 Scans - Sands Containing in Mg/Kg
0-780 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month Day Year 02 27 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: James Aronson
Signature: James Aronson
Date: Month Day Year 02 27 85

18. Transporter 2 Acknowledgement or 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. 7141645-42,140 lbs.
Printed/Typed Name: Casmalia Resources
Signature: Jalen Bautista
Date: Month Day Year 02 27 85

8022 A (7/84)
(8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

04 89541

CRU 00556

f California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD008325110
Manifest Document No.:
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92634
Generator's Phone: 714-632-0181

A. State Manifest Document Number: 84582068
B. State Generator's ID:

Transporter 1 Company Name: J-Cal Transportation
6. US EPA ID Number: CAD980814883
C. State Transporter's ID: 53585
D. Transporter's Phone: 213 920-7709

Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, Ca 93429
10. US EPA ID Number: CAD020748125
G. State Facility's ID: CAD020748125
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	I. Waste No.
Hazardous Waste Solid nos ORM-E NA 9189	01	DT	14	Y	611

Additional Descriptions for Materials Listed Above
Per EPA 601 & 602 Scans Sands Containing in Mg/Kg
-780 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
-21 Tetrachlorethylene 0-95 Xylene
-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L MURPHY
Signature: Harry L Murphy
Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Dan Bain
Signature: Dan Bain
Date: Month Day Year: 2 27 85

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space

MAR 11 1985

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. #41674 - 36,780 lbs
Printed/Typed Name: Cas. Res. Marc Crosby
Signature: Marc Crosby
Date: Month Day Year: 4 [illegible]

1022 A (7/84)
8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89541

CRU 00557

California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

GENERATOR COPY

Print or type. (Form designed for use on elite (12-pitch) typewriter)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008314583 Registered to Generator

2. Page 1 of

Information in the shaded areas is not required by Federal law.

Manifest Document Number 843 2069

Generator's Name and Mailing Address
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92631

Generator's Phone 714-692-0181

B. State Generator's ID

Transporter 1 Company Name
J-Cal Transportation

6. US EPA ID Number CAD980814583

C. State Transporter's ID 52585

D. Transporter's Phone 213 920-7707

Transporter 2 Company Name
Hoyt Trans.

8. US EPA ID Number CAX000097110

E. State Transporter's ID 714-737-9635

F. Transporter's Phone

Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, Ca 93429

10. US EPA ID Number CAD020748125

G. State Facility's ID CAD020748125

H. Facility's Phone 805-937-8180

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.
Hazardous Waste Solid nos CRT-E RA 9189	001	DT	1A	T	721

J. Additional Descriptions for Materials Listed Above
Per EPA 60+62 Scans - Sands Containing in Mg/Kg
0-180 Trichloroethylene 0-1.1 Ethylbenzene
0-21 Tetrachloroethylene 8-95 Xylene
0-70 Trichloroethylene 8-1.7 Toluene

K. Handling Codes for Wastes Listed Above
03

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 governmental regulations.

Printed/Typed Name HARRY L. MURPHY
Signature Harry L Murphy
Date Month Day Year 12 12 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Mike Hoyt
Signature Mike Hoyt
Date Month Day Year 12 12 85

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

19. Discrepancy Indication Space
Waste never presented to J-Cal. C. Temple for Trent.
Line 7 is transporter #1

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. # 41657-28,280 lbs
Printed/Typed Name Casmalia Resources
Signature
Date Month Day Year 12 17 85

IS 8022 A (7/84)
PA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 88541

CRU 00558

of California—Health and Welfare Agency

GENERATOR COPY

Department of Health Services
Toxic Substances Control Division
Sacramento, California

e print or type. (Form designed for use on elite (12-pitch) typewriter.)

Return Generator

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. CAD008325110	2. Page 1 of 1 Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Trent Tube 2100 E. Orangethorpe Fullerton, Ca 92631		A. State Manifest Document Number 84582070 B. State Generator's ID
4. Generator's Phone: 714-632-0181		
5. Transporter 1 Company Name J-Cal Trans	6. US EPA ID Number CAD990814883	C. State Transporter's ID 52528 D. Transporter's Phone 639-8495
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 93429	10. US EPA ID Number CAD020748125	G. State Facility's ID CAD020748125 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	I. Waste No.
a. Hazardous Waste Solid nos ORM-E NA9189	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601+602 Scans + Sands Containing in Mg/Kg
0-780 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-70 Trichlorethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above
03

15. Special Handling Instructions and Additional Information

Glasses + 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 governmental regulations.

Printed/Typed Name	Signature	Date Month Day Year
HARRY L MURPHY	Harry L Murphy	12 26 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Steve Hoyt	[signature]	12 26 85

18. Transporter 2 Acknowledgement or 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. #41488-321 920 lbs.

Printed/Typed Name	Signature	Date Month Day Year
Casmalia Resources -	Idea Bauxista	02 26 85

S 8022 A (7/84)
A 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

CRU 00559

te of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

ease print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008325110 — Manifest Document No.

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number 82071

B. State Generator's ID

3. Generator's Name and Mailing Address
[redacted] Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92631 714-[illegible]

4. Generator's Phone

GENERATOR COPY

5. Transporter 1 Company Name: J-CAL TRANSPORTATION — US EPA ID Number: CAD980814883

C. State Transporter's ID: 52587

D. Transporter's Phone: 714-8214274

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 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

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	I. Waste No.
a. Hazardous Waste Solid nos ORM-E NA 9189	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601 + 602 Scans - Sands Containing in Mg/Kg
0-780 1,1,1 Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachlorethylene 0-95 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY — Signature: Harry L Murphy — Date: Month Day Year 02 26 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: BOB JARVIS — Signature: Bob Jarvis — Date: Month Day Year 02 26 85

18. Transporter 2 Acknowledgement or 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 #4477-29,080165.

Printed/Typed Name: Casmalia Resources — Signature: Eden Bautista — Date: Month Day Year 02 26 85

GENERATOR — TRANSPORTER — FACILITY

DHS 8022 A (7/84) — Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS — 84 89541

CRU 00560

te of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

ess print or type. (Form designed for us... ...writer.)

GENERATOR COPY

UNIFORM HAZARDOUS WASTE MANIFEST

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Return To Generator

Trent Tube
2100 E. Orangethorpe
Fullerton, CA 92631

4. Generator's Phone: 714-632-0181

A. State Manifest Document Number: 84582072

B. State Generator's ID:

5. Transporter 1 Company Name: J Cal Trans

6. US EPA ID Number: K0078021 4883

C. State Transporter's ID: 56046

D. Transporter's Phone: 213 920-7709

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 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

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	I. Waste No.
a. Hazardous Waste Solid nos ORM-E NA 9189	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

Per EPA 601 + 602 Scans - Sands Containing as Pg/Kg
0-780 1,1,1 Trichlorethane 0-1.1 ethylbenzene
0-21 Tetrachlorethylene 0-75 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above: 03

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month 02 Day 26 Year 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: John L Wallberg
Signature: John L Wallberg
Date: Month 02 Day 26 Year 85

18. Transporter 2 Acknowledgement or 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. #41452-34,040165

Printed/Typed Name: Casmalia Resources
Signature: [signature]
Date: Month 02 Day 26 Year 85

DHS 8022 A (7/84)
(EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89541

CRU 00561

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

GENERATOR COPY

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | 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
Trent Tube
2100 E. Orangethorpe
Fullerton, Ca 92631

Return To Generator

4. Generator's Phone 714-632-0181

A. State Manifest Document Number: 84582073

B. State Generator's ID:

5. Transporter 1 Company Name: J. CAL. TRANSPORTATION

6. US EPA ID Number: CAD98081488 3

C. State Transporter's ID: 53584

D. Transporter's Phone: 213 920-7709

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
RTU Road
Casmalia, Ca 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID: CAD020748125

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	I. Waste No.
a. Hazardous Waste Solid nes ORM-E NA 9189	001	DT	14	Y	611
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Per EPA 601 + 602 Scans - Sands Containing in Mg/Kg
0-7801,1,1-Trichloroethane 0-1.1 Ethylbenzene
0-21 Tetrachloroethylene 0-95 Xylene
0-70 Trichloroethylene 0-1.7 Toluene

K. Handling Codes for Wastes Listed Above
63

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 governmental regulations.

Printed/Typed Name: HARRY L. MURPHY
Signature: Harry L Murphy
Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: TOMMY M. BAIN
Signature: Tommy M Bain
Date: Month Day Year: 02 26 85

18. Transporter 2 Acknowledgement or 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. # 41451-29200 lbs
Printed/Typed Name: Casmalia Resources
Signature: Carol Johnston
Date: Month Day Year: 02 26 85

DHS 8022 A (7/84)
(EPA 8700-22)

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89541

CRU 00562

FULLERTON FIRE DEPARTMENT

312 E. Commonwealth Avenue
Fullerton, California 92632

ADD ☐ DEL ☐ REV ☐

Page ___ of ___

California Hazardous Materials Inventory Form

☐ Trade Secret

SITE NAME & ADDRESS: Executive RV Center, 2100 E. Orangethorpe ave. Fullerton

Date: 28 (Day) 8 (Mo) 97 (Yr)

Common Name: Propane

Chemical Name: Liquified Petroleum Gas AHM ☐

CAS #: 68476857

UN/DOT #: 1075

HAZARD CATEGORIES

PHYSICAL HAZARDS: Fire ☑ Reactive ☐ Pressure Release ☐

HEALTH HAZARDS: Immediate (Acute) ☐ Delayed (Chronic) ☐

HAZARD CLASS

UN/DOT NUMBER: 1075

DOT HAZARD CLASS: 2G

NFPA 704 HAZARD DIAMOND: Fire 4, Reactive, Health 1, Specific 0

UFC HAZARD CLASS: ___

PHYSICAL STATE:

Solid ☐ Liquid ☑ Gas ☐

Other:

Pure ☑ Mixture ☐ Waste ☐

Radioactive: ☐

Waste Number:

Annual Waste Qty:

MIXTURE INFO

% Wt.	Component	CAS #	Local Use

Amount & Time

Max. Daily:

Avg. Daily: 425

Largest container on-site:

Days per year on-site:

UNITS OF MEASURE: gals ☑ lbs ☐ cu ft ☐ curies ☐

Storage Codes & Locations

C	P	T	Map#	Locator	Location Description	Max Amt
A	2	6			In front of office	425

FOR ADMINISTERING AGENCY USE ONLY

Facility ID: ___ C Y ___ INV. ___

BR #: ___ H N ___ ___

Reviewed: ___ G T ___ ___

COMPUTER

(Duplicate Form as Necessary)

ONE chemical per page

CRU 00563

OCT 1997 Received

FULLERTON FIRE DEPARTMENT

312 E. Commonwealth Avenue
Fullerton, California 92632

ADD ☐ DEL ☐ REV ☐

Page ___ of ___

California Hazardous Materials Inventory Form

☐ Trade Secret

SITE NAME & ADDRESS: Executive RV Center, 2100 E. Orangethorpe Ave.

Date: 28 (Day) 10 (Mo) 97 (Yr)

Common Name: Gasoline & Diesel fuel

Chemical Name: _____ AHM ☐

CAS #: 8006619

UN/DOT #: 1203

HAZARD CATEGORIES

PHYSICAL HAZARDS: Fire ☐ Reactive ☐ Pressure Release ☐

HEALTH HAZARDS: Immediate (Acute) ☐ Delayed (Chronic) ☐

HAZARD CLASS

UN/DOT NUMBER: _____

DOT HAZARD CLASS: FL

NFPA 704 HAZARD DIAMOND: Fire / Reactive / Health / Specific

UFC HAZARD CLASS: _____

PHYSICAL STATE:

Solid ☐ Liquid ☑ Gas ☐

Other:

Pure ☐ Mixture ☐ Waste ☐

Radioactive: ☐

Waste Number:

Annual Waste Qty:

MIXTURE INFO

% Wt.	Component	CAS #	Local Use

Amount & Time

Max. Daily: ≤ 3000

Avg. Daily: ≈ 3000

Largest container on-site: N/A

Days per year on-site: 365

UNITS OF MEASURE: gals ☑ lbs ☐ cu ft ☐ curies ☐

Storage Codes & Locations

C	P	T	Map#	Locator	Location Description	Max Amt
	1	4			Recreational vehicles stored in building!	

FOR ADMINISTERING AGENCY USE ONLY

Facility ID: _____ C Y _____ INV _____ COMPUTER

BR #: _____ H N _____

Reviewed: _____ G T _____

(Duplicate Form as Necessary)

ONE chemical per page

FULLERTON FIRE DEPARTMENT

312 E. Commonwealth Avenue
Fullerton, California 92632

ADD ☐ DEL ☐ REV ☐

Page ___ of ___

California Hazardous Materials Inventory Form

☐ Trade Secret

SITE NAME & ADDRESS: Executive Air Center, 2100 E. Orangethorpe ave. Fullerton

Date: 28 (Day) 8 (Mo) 97 (Yr)

Common Name: waste oil, fresh oil
Chemical Name: " " " AHM ☐

CAS #: ___
UN/DOT #: 1270

HAZARD CATEGORIES

PHYSICAL HAZARDS: Fire ☐ Reactive ☐ Pressure Release ☐

HEALTH HAZARDS: Immediate (Acute) ☐ Delayed (Chronic) ☐

HAZARD CLASS

UN/DOT NUMBER: ___

DOT HAZARD CLASS: ___

NFPA 704 HAZARD DIAMOND: Fire / Reactive / Health / Specific

UFC HAZARD CLASS: ___

PHYSICAL STATE:

Solid ☐ Liquid ☑ Gas ☐
Other:

Pure ☐ Mixture ☐ Waste ☑
Radioactive: ☐

Waste Number:
Annual Waste Qty: 150 gal.

MIXTURE INFO

% Wt.	Component	CAS #	Local Use

Amount & Time

Max. Daily:
Avg. Daily: 150
Largest container on-site: 55
Days per year on-site: 365

UNITS OF MEASURE: gals ☑ lbs ☐ cu ft ☐ curies ☐

Storage Codes & Locations

C	P	T	Map#	Locator	Location Description	Max Amt
D	1	4			at rear of Building	150 gal.

FOR ADMINISTERING AGENCY USE ONLY

Facility ID: ___
BR #: ___
Reviewed: ___

C Y ___
H N ___
G T ___

COMPUTER
INV. ___
___

(Duplicate Form as Necessary)

ONE chemical per page

CRU 00565

FULLERTON FIRE DEPARTMENT

312 E. Commonwealth Avenue
Fullerton, California 92632

ADD ☐ DEL ☐ REV ☐

Page ___ of ___

California Hazardous Materials Inventory Form

☐ Trade Secret

SITE NAME & ADDRESS: _____ Date: Day | Mo | Yr

Common Name: Gasoline CAS #: 8006-61-9

Chemical Name: _____ AHM ☐ UN/DOT #: _____

HAZARD CATEGORIES

PHYSICAL HAZARDS: Fire ☐ Reactive ☐ Pressure Release ☐

HEALTH HAZARDS: Immediate (Acute) ☐ Delayed (Chronic) ☐

HAZARD CLASS

UN/DOT NUMBER	DOT HAZARD CLASS	NFPA 704 HAZARD DIAMOND	UFC HAZARD CLASS
		Fire / Reactive / Health / Specific	

PHYSICAL STATE:

Solid ☐ Liquid ☐ Gas ☐ Other:

Pure ☐ Mixture ☐ Waste ☐ Radioactive: ☐

Waste Number:

Annual Waste Qty:

MIXTURE INFO

% Wt.	Component	CAS #	Local Use

Amount & Time

Max. Daily: Largest container on-site:

Avg. Daily: 300 # Days per year on-site:

UNITS OF MEASURE: gals ☒ lbs ☐ cu ft ☐ curies ☐

Storage Codes & Locations

C	P	T	Map#	Locator	Location Description	Max Amt
					stored in RV Vehicles + Boats	300

FOR ADMINISTERING AGENCY USE ONLY

Facility ID: _____ C Y _____

BR #: _____ H N _____

Reviewed: _____ G T _____

COMPUTER INV. _____ _____

(Duplicate Form as Necessary)

ONE chemical per page

CRU 00566

Ass Cd	Contact	Phone	ASSOCIATED PARTIES
	BRAD FISCHER	PRVY-Controlled/Privacy	
	EDWARD FISCHER		

ACTIVITY SUMMARY

Code	Act-Date	Comp	Empl	Time	Comment
INFO	08/26/86	3F	8418	0000	USING FRONT 1/2 OF OFFICES-REST ARE VAC
INSP	08/26/86	3F	8418	0030	NO VIOLATIONS NOTED
5146	08/04/89	FP3	5071	0060	ONE A/G 499 GAL.PROPANE TANK INSTALLED
INSP	05/28/91	3A	5648	0045	VIOLATIONS NOTED SEE FILE
REIN	07/30/91	3A	5648	0020	FORWARDED PAPERWORK TO INSP. KUNZE
ICOM	09/17/91	FP3	5071	0030	VIOLATIONS CORRECTED SEE FILE
ICOM	11/20/92	3A	7129	0060	NO VIOLATIONS NOTED
ICOM	06/04/93	3A	5681	0010	NO VIOLATIONS
ICOM	10/08/93	3A	4717	0035	VIOLATIONS CORRECTED
ICOM	07/14/95	3B	8194	0045	NO VIOLATIONS
ICOM	06/25/97	3C	4812	0015	NO VIOLATIONS NOTED
5500	10/15/97	FP2	322	0000	HAZARDOUS MATERIALS INSPECTION
INSP	10/15/97	FP2	322	0120	HAZ MAT DISC. INSP., SEE FILE
5500	11/01/97	FP2	322	0000	HAZ MAT PERMIT ISSUED
ICOM	05/07/98	3B	5648	0030	VERBAL HOUSEKEEPING IN REAR ROOM
REIN	05/07/98	FP2	322	0030	VIOLATIONS PENDING, SEE FILE
INSP	05/07/98	FP2	322	0180	INSPECTION PENDING/SEE FILE

FI110 / LOCATION MAINTENANCE INQUIRE

Address 2100 E ORANGETHORPE AVE

1) Business Name EXECUTIVE R.V. CENTER
2) Mail Address 1
3) Mail Address 2
4) Location Zip Code 92634
5) Bus Phone 714/680-3815
6) Permits? Y
7) Expiration
8) Comment
9) Occ Cd 15
10) Grid 1327
11) Fist 0
12) Knox Box
13) Ext System Y
14) Detectors N
15) Insp Station 3
16) Insp Group 5
17) Freq Code 1

ICOM	01/25/99 FP2	322	0030 ALL VIOLATIONS CORRECTED
ICOM	10/11/00 FP4	5181	0060 COMPLAINT ON SPKLR SYSTEM OS&Y-CORRECTED
ICOM	01/26/01 3B	8175	0030 NO VIOLATIONS NOTED

No Incidents Exist

Hit any key to continue:

Guardian Storage Inc. DBA: E ɔutive RV Center
2100 E Orangethorpe Ave 92831

3 chemicals found this address

File Number :

Cas # :

Max Daily Amt : 150Gallons Gals/Lbs/CuFt

Chemical Name: **Waste oil, Fresh Oil**

C	P	T	Location	Building
D	1	4	at rear of building 150 gal max amount	

Cas # : 68476857

Max Daily Amt : 0Gallons Gals/Lbs/CuFt

Chemical Name: **Liquified Petroleum Gas**

C	P	T	Location	Building
A	2	6	in front of office 425 max amount	

Cas # : 8006619

Max Daily Amt : 300Gallons Gals/Lbs/CuFt

Chemical Name: **Gasoline**

C	P	T	Location	Building
			Stored in RV vehicles and boats 300 max amount	

Date Printed: 11/19/97

PERMIT NOT IN EFFECT UNTIL VALIDATED BY CITY TREASURER

Inspected and approved 6-4-81 C.T. Thompson

FILE

FULLERTON FIRE DEPARTMENT
312 EAST COMMONWEALTH AVENUE
FULLERTON, CALIFORNIA 92632

F 18.00 18.00 20.00 2.00 180 5078 98 5/29/8 10

ATE May 29, 1981 PERMIT NO. LPG 81-117

In accordance with Uniform Fire Code, Fire Prevention Regulations, permission is hereby granted:

OMPANY PARGAS - ✓ BY Bob Schneider

DDRESS PO Box 150, 535 S. Melrose Placentia, CA 92670 PHONE (714) 993-9400

install and use the following:

ONE 172 GAL ABOVE GROUND LPG TANK for

RM NAME TRENT TUBE DIVISION LOCATION 2100 E. Orangethorpe

nstallation/use shall be in compliance with Uniform Fire Code, Article 82, 1979 Ed., & attached sheet

nal approval and continuing effect of this permit subject to compliance with field inspection before use

; applicable City and State

gulations, and nationally recognized safe practices. SUBJECT TO REVOCATION FOR PROPER CAUSE.

RMIT RECEIVED R. J. Schneider DATE 5/29/81

rmit Fee $ 18.00 Permit Expires 5/29/82

FIRE PREVENTION BUREAU

yable to City Treasurer
C 13.05.031, amended 6/78

Treasurer's Receipt No. 17654 5/29

33 - -

FMC, Section 13.10
(UFC Amendment Ordinance)

By C. Thomas Thompson
Inspector C. Thomas Thompson
Phone (714) 738-6500

PARGAS PLOT PLAN

P.O.Box 150 * 500 S.Melrose, Placentia, Calif. 92670 * Phone (714)993-9400

Trent Tube Division

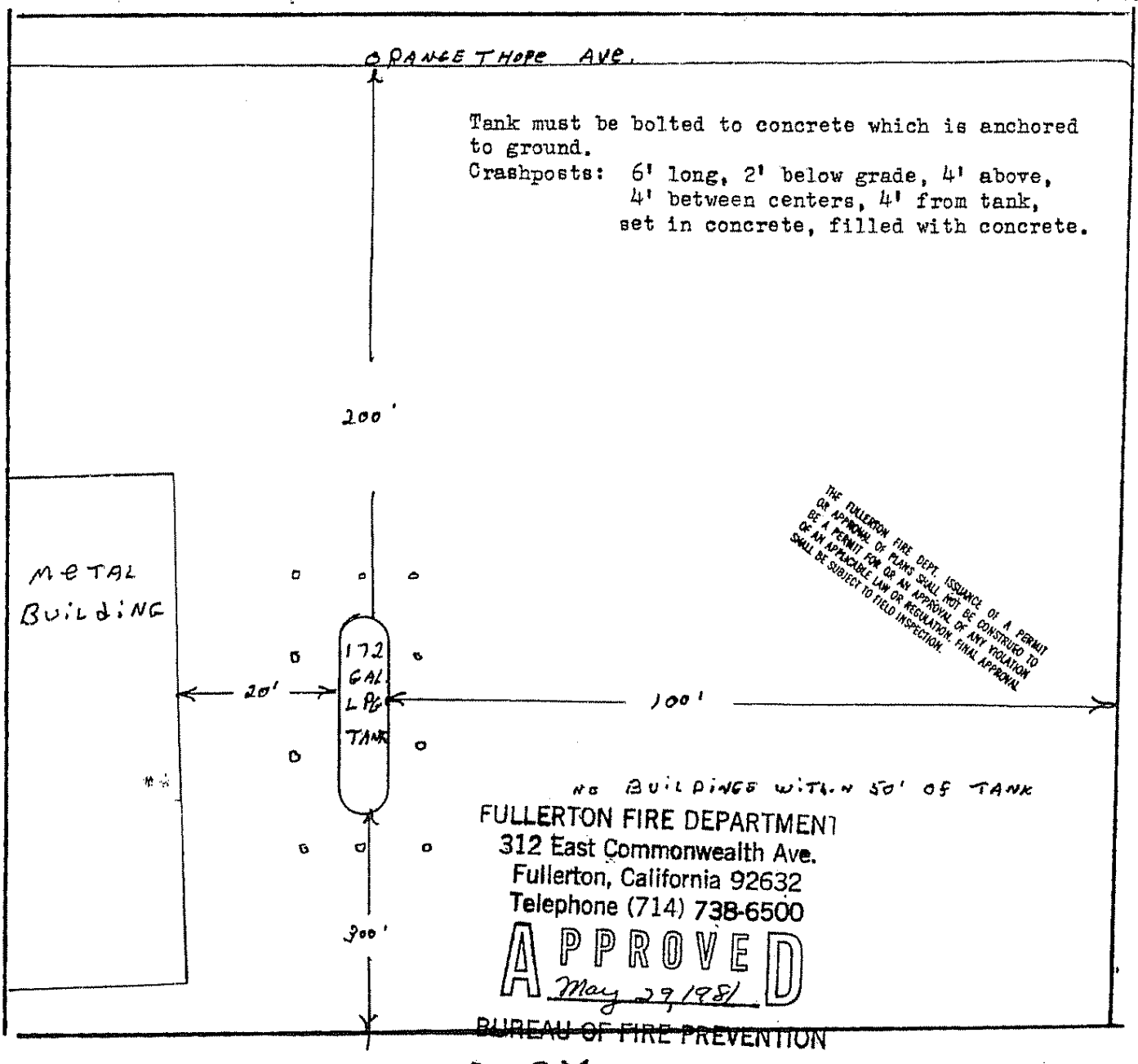
ADDRESS OF L.P.G. INSTALLATION 2100 E. Orangethorpe, Fullerton

TANK CAPACITY 172 gal. water capacity

DATE INSTALLED Will Notify

ALL NECESSARY CRASHPOSTS INSTALLED AND FLAMMABLE & NO SMOKING SIGNS ARE ON TANK AS REQUIRED BY CODE.

N



FULLERTON FIRE DEPARTMENT
312 East Commonwealth Ave.
Fullerton, California 92632
Telephone (714) 738-6500

APPROVED
May 29, 1981
BUREAU OF FIRE PREVENTION
By C. Thomas Thompson

CRU 00570

FIRE DEPARTMENT

312 EAST COMMONWEALTH AVENUE • FULLERTON, CALIFORNIA 92632

WILLIAM A HOUSER FIRE CHIEF

Phones — Administration 738-6502
Prevention 738-6500
EMERGENCY only 738-6122

ADDITIONAL REQUIREMENTS FOR L P G TANK INSTALLATION

1. 4" x 6' steel crash posts installed 3' from tank; 48" centers; 3' above ground, filled with concrete - 3' in ground, with concrete caps.

2. Tank to be secured on concrete pad poured through asphalt.

3. Approved signs - "NO SMOKING" and "FLAMMABLE", visible from all sides on tank.

   1200 or less gallon capacity - NO SMOKING within 25 feet

   1200 or more gallon capacity - NO SMOKING within 50 feet

4. Approved "2A-40BC" extinguisher, mounted at tank site in approved manner.

5. Approved fittings, pipes, and hoses, as per Codes.

6. Approved electrical wiring, as per Codes. Necessary electrical permit shall be obtained from the Dept. of Development Services. Electrical must be inspected and approved prior to Fire Dept. inspection.

7. No combustibles within 10' of tank installation. This includes parking of automobiles. Striping or barriers may be necessary to maintain distance.

8. Department of Industrial Safety requires that pressure vessels be a minimum of 50' from a railroad mainline, and a minimum of 10' from a railroad spurline.

THESE INSTALLATION REQUIREMENTS ARE AN INTEGRAL PART OF THE APPROVED PLANS, AND ARE TO BE AFFIXED TO THE PLANS AT ALL TIMES.

CRU 00571

CITY OF FULLERT

BUREAU OF FIRE PREV

- PERMIT

Date May 5, 1976

In accordance with Fire Prevention Regulations,

NAME Bill Hartfel for TF

ADDRESS 2100 E. Orangethorpe Fullerton,

to ~~install~~, store, handle, ~~transport~~, or use the

5M gal tank LIQUID HYDROGEN; 4M gal tank TRICHLORETHYLEN
Five 55 gal drums NITRIC ACID

FIRM NAME TRENT TUBE COMPANY LOCATIO

STORAGE AND USE SHALL BE IN COMPLIANCE WITH ARTI

The continuing effect of this permit is subject
Regulations and nationally recognized safe pract

Permission granted (until revoked) (-----days)

Subject to revocation for proper cause, or when necessary for public safety. Non-compliance with any provision stipulated herein constitutes violation of ordinance.

FP 33- 7/74 - 500

5/4/76 Margie Regan
Permit Received

CITY OF FULLERTON FIRE DEPARTMENT

312 East Commonwealth Ave., Fullerton, Calif. 92632 — Phone (714) 738-6500

EMERGENCY DIAL 911

FILE

NUMBER	FRAC	DIR.	STREET	UNIT NO
2100		E	Orangethorpe	

BUSINESS NAME: Executive RV Center

BUSINESS TELEPHONE: 680-0295

MAILING ADDRESS - NAME	NUMBER. STREET	CITY. STATE. ZIP

CONTACT 1: Brad Fischer — PHONE: PRVY-Controlled/Privacy

CONTACT 2: Bryan Wilson — PHONE: PRVY-Controlled/Privacy

ENTERED

OCC CODE	KNOX-BOX	EXT. SYSTEM	DETECTORS	PERMITS	EXPIRATION DATE	GRID	INSP GROUP	INSP FREQ	FIRST-IN COMPANY
						1327			

ACTIVITY DATE	ACTIVITY CODE	INSP COMPANY	EMPLOYEE NO.	INSPECTION TIME	TOTAL TIME
5/31/02	DS	FP3	322		

COMMENTS

Update by Completing new Hazardous Material Disclosure i/o for propane + Gasoline + Diesel (no longer Has Waste + new oil)

AN INSPECTION OF YOUR FACILITY REVEALED THE FOLLOWING VIOLATIONS: _____

CRU 00573

FIRE DEPARTMENT
312 EAST COMMONWEALTH AVENUE • FULLERTON, CALIFORNIA 92632
WILLIAM A. HOUSER
FIRE CHIEF
Phones—Administration 738-6502
Prevention 738-6500
EMERGENCY only 911

REPORT OF INSPECTION ☒
REPORT OF APPENDIX G TEST ☐

BUSINESS NAME Mom's BUILDING OR LOCATION MR Buckley
STREET 2100 E. Orangethorpe INSPECTOR Don Villa - for ALERT
CITY & STATE Fullerton ZIP 90621 DATE 12-11-84

	Yes	N.A.‡	No*
1. GENERAL			
a. Is the building occupied according to information furnished by owner or owner's representative?			X
b Is occupancy same as previous inspection according to information furnished by owner or owner's representative?	X		X
c. Are all systems in service?			
d. Are all fire protection systems same as last inspection according to information furnished by owner or owner's representative?	X		X
e. Is building completely sprinklered?	X		
f. Are all new additions and building changes properly protected according to information furnished by owner or owner's representative?	X		
g. Is all stock or storage properly below sprinkler piping?	X		
h. Was property free of fires since last inspection according to information furnished by owner or owner's representative? (Explain any fire on separate sheet)	X		
i. In areas protected by wet system, does the building appear to be properly heated in all areas, including blind attics, perimeter areas and are all exterior openings protected against entrance of cold air?	X		
2. CONTROL VALVES (See Section 16)			
a. Are all sprinkler system main control valves open?	X		
b. Are all other valves in proper position?	X		
c. Are all control valves in good condition and sealed or supervised?	X		
3. WATER SUPPLIES (See Section 17)			
a. Was a water flow test made and results satisfacotry?	X		
4. TANKS, PUMPS, FIRE DEPT. CONNECTIONS			
a. Are fire pumps, gravity tanks, reservoirs and pressure tanks in good condition and properly maintained?		X	
b. Are fire dept. connections in satisfactory condition, couplings free, caps in place and check valves tight?	X		
5. WET SYSTEMS (See Section 13)			
a. Are cold-weather valves open or closed as necessary?	X		
b. Have anti-freeze systems been tested and left in satisfactory condition?		X	
c. Are alarm valves, water-flow indicators and retards in satisfactory condition?	X		
6. DRY SYSTEMS (See Section 14)			
a. Is dry valve in service and in good condition?		X	
b. Is air pressure and priming water level normal?		X	
c. Is air compressor in good condition?		X	
d Were low points drained during fall and winter inspections?		X	
e. Are quick-opening devices in service?		X	
f. Have dry valves been trip tested satisfactorily as required?		X	
g. Are dry valves adequately protected from freezing?		X	
h. Are valve house and heater condition satisfactory?		X	
7. SPECIAL SYSTEMS (See Section 18)			
a. Were valves tested as required?		X	
b. Were all heat responsive systems tested and results satisfactory?		X	
c. Were supervisory features tested and results satisfactory?		X	
8. ALARMS			
a. Are water motor and gong test satisfactory?	X		
b. Is electric alarm test satisfactory?			
c. Is supervisory alarm service test satisfactory?	X		

*Explain "No" answers in Item #19 ‡Not Applicable

FIRE DEPARTMENT COPY

CRU 00574

9. SPRINKLERS – PIPING	Yes	N.A.‡	No*
a. Are all sprinklers in good condition, not obstructed, and free of corrosion or loading?	X		
b. Are all sprinklers less than 50 years old?	X		
c. Are extra sprinklers readily available?	X		
d. Is condition of piping, drain valves, check valves, hangers, pressure gages, open sprinklers, strainers satisfactory?	X		
e. Have sprinklers been checked for proper temperature rating?		X	
f. Are portable fire extinguishers in good condition?		X	
g. Is hand hose on sprinkler systems satisfactory?		X	
10. Date Dry-system Piping last checked for stoppage.		X	
11. Date Dry-system Piping last checked for proper pitch.		X	
12. Date Dry-pipe Valve last trip tested.			
13. Wet Systems: No? 6" 8" Make and Model? GRINNELL - A			
14. Dry Systems: No? Make and Model?			
15. Special System: No.? Type Condition? Make and Model?			

16. CONTROL VALVES	No?	Type?	Open Yes	Open No	Secured Yes	Secured No	Closed Yes	Closed No	Signs Yes	Signs No	Condition
City Connection Control Valve											
Tank Control Valves											
Pump Control Valves											
Sectional Control Valves (PIV)	1	8" OS+Y	X			X			X		OK
System Control Valves	2	PIV	X			X			X		OK

17. WATER-FLOW TEST

Water Pressure? 85 CITY YES PSI TANK PSI FIRE PUMP PSI

Water-flow Test? 76 (If none made, why?)

Test Pipe Located	Size Test Pipe	Pressure Before	Flow Pressure	Pressure After	Test Pipe Located	Size Test Pipe	Pressure Before	Flow Pressure	Pressure After
BACK WALL	1"	85	78	85					

18. Heat Responsive Devices: Type? Type of test?

Valve No ___ A B C D E F ___ Valve No ___ A B C D E F ___

Valve No ___ A B C D E F ___ Valve No ___ A B C D E F ___

Valve No ___ A B C D E F ___ Valve No ___ A B C D E F ___

Valve No ___ A B C D E F ___ Valve No ___ A B C D E F ___

Auxiliary equipment: No? Type? Location? Test Results?

19. Explanation of any "No" answers.

A. BUILDING JUST CHANGED HANDS

B. SPRINKLERED NEW AREAS

A. 4 new sprinklers (upright)
B. rebuilt alarm valve
C. rebuilt 8" OS+Y
D. FIX WATER MOTOR
E. BACK FLUSH SYSTEM

20. Recent changes in building occupancy or fire protection equipment. YES

21. Adjustments or corrections made. – – – – – – – – – – – –

22. Desirable improvements. NONE

OWNER'S REPRESENTATIVE: Sheila Looney for Alert Fire Protection

STREET 4740 Bryson St., Anaheim CITY & STATE Calif 92807

*Explain "No" answers in Item #19

PERMIT NOT IN EFFECT UNTIL VALIDATED BY CITY TREASURER

7-12-82 Pressure Test on piping approved. (E77)
7-16-82 24 hour Test at 1:45
7-17-82 Test complete at 1340
11-22-82 approved as inspected

FILE

FULLERTON FIRE DEPARTMENT
312 East Commonwealth Avenue
Fullerton, California 92632

PERMIT NO. CG 82-108 E 14 (E77) 30.00 F 30.00 TI

DATE June 17, 1982

In accordance with Uniform Fire Code, Fire Prevention Regulations, permission is hereby granted:

COMPANY TRENT TUBE DIVISION BY Victor Melnikow (Steve)

ADDRESS 2100 E. Orangethorpe, Fullerton, CA 92634 PHONE (714) 526-5522

to install/use the following:

SIX (6) HIGH PRESSURE NITROGEN GAS RECEIVERS for

FIRM NAME TRENT TUBE DIVISION LOCATION 2100 E. Orangethorpe

installation/use shall be in compliance with UFC, 1979 Ed., Art. 75 & NFPA Standard 56F

Final approval and continuing effect of this permit subject to compliance with Fullerton Fire Dept. field inspection and test of piping as per code; applicable City and State regulations, and nationally recognized safe practices. SUBJECT TO REVOCATION FOR PROPER CAUSE.

PERMIT RECEIVED [signature] DATE 6/17/82

Permit Fee $ 30.00

Permit Expires 6/17/83

Treasurer's Receipt No. 24041

Payable to City Treasurer per FMC 13.10.040, amended 12/79

FMC, Section 13.10
(UFC Amendment Ord.)

FULLERTON FIRE PREVENTION BUREAU

By C. Thomas Thompson
C. Thomas Thompson, Inspector
(714) 738-6500
FP 33 - 11/81

CRU 00576

TRENT TUBE CO.
2100 E. Orangethorpe

RECORD OF INSPECTIONS

CONTINUATION SHEET

A - Excellent
B - Good
C - Fair
D - Bad

O - None
R - Reinspect
* - Eng. Co.

DATE	WIRING	STOCK & STORAGE	TRASH & DISPOSAL	HEAT & EQPT.	FIRE PTCN. EQUIPMENT	INSPECTOR
4/13/76	B	B	B	C	B	ELH
6-4-76*						3C

4/13/76 Fire inspection was conducted with Bill Hartfel:

INSIDE BUILDING:

HOUSEKEEPING - In GOOD order at this time.
ELECTRICAL WIRING- Maintenance department SW corner - Flexible cord runs along wall through a vent near the floor, extended to an electric pump motor, which is located outside the building, SW corner.
HEATING UNIT - Natural gas fired, located near the south wall, east side of the plant. The vent terminates at the unit approximately 4' above the floor.

The vent shall be extended to the outside of the building in compliance with the Uniform Mechanical Code.

NITRIC ACID - Center, south wall of plant. Five (5)- 55 gallon drums stored adjacent to the watered nitric acid tank. Nitric acid drums shall be stored outside the building; recommended a shaded area be provided.

OUTSIDE BUILDING:

4,000 gallons trichlorethylene stored in tank, adjacent to south wall. This product has fixed plumbing from the storage tank to the inside dip tank.

Recommend that the outside storage tank be secured from movement to prevent possible plumbing breakage in the event that an earthquake occurs. ELH

/5/76 Permit No. HC 76-52 issued for storage and use of hydrogen, ammonia, nitric acid, and trichlorethylene (perchlorethylene is no longer used). ELH

1/29/77 Conferred w/ plant engineer, Barry Eggers, re installing an aboveground 600 gallon tank near property line, approx 40' south of plant. This proposed tank will contain waste machine oil w/ traces of tri-chlorethylene. There will be no plumbing attached to tank; tank is to be set on concrete footing.

The existing 1200 gallon tank, located adjacent to and on exterior of the south side of the plant, will be remodeled to contain only 600 gallons of trichlorethylene. There appears to be no added hazard to this proposal. ELH

FP 11/72- 200

- OVER -

CRU 00577

FULLERTON FIRE DEPARTMENT

INSPECTION REPORT

No. Employees 80 — Report No. Mfg 63

Date 7/8/71 — DISTRICT 6

1. Business Trent Tubing — 2100 E. Orangethorpe Ave. — 526-5522
6-72 Colt Industries — ADDRESS (Street, City) — Emg Phone
2. Bldg Owner ~~Same~~ (Trent Tube Div) — 430 Park Ave. NY-NY 10022
3. Bus. Owner Same
4. Manager ~~Adin R. Capron~~ PRVY-Controlled/Privacy
Maintenance Foreman
5. Asst. Mgr ~~Bill Hartfel~~ PRVY-Controlled/Privacy
6-72 act: Larry Murphy PRVY-Controlled/Privacy
6. Descr. Operation Manufacture Stainless Steel Tubing

7. CONSTR: Concrete x Masonry ___ Metal ___ Wood Frame x Mill ___ Stucco x Other ___
8. Bldg. Dimensions 300'X140' No. Stories 1 Height 20'

9. FLOORS: Concrete x Wood ___ Other ___ Oil Soaked ___ Weak ___ Overloaded ___

10. ROOF: Concrete ___ Wood Frame x Mill ___ Steel - Unpro. ___ Pro. ___
Covering: Tar paper No.: Skylights x Vents x Other ___
Shape: Flat ___ Arch x Slope ___ Sawtooth ___

11. ATTIC: No. Scuttle Holes 1 Loc. Hallway in office Size 3'X4'
Division Walls 0 Pierced ___ Unpierced ___
Wiring: Good x Fair ___ Bad ___ Storage: No x Yes ___

12. VERTICAL OPENINGS: Stairway 0 Loc ___ Open ___ Enclosed ___
Elevator 0 Loc ___ Other ___
Means of Ventilating Sky lights

13. BASEMENT: Dimensions 0 Entrance ___ Contents ___

14. FIRE WALLS: Location Between office & plant Pierced x Unpierced ___
If Pierced: Fire Doors - No. 1 Class A Self Closing yes
Rolling steel &

15. EXITS: 4 N; 2 S; 3 E; 0 W Type Doors metal glass Forcible Entry glass

16. EXPOSURES: Severe ___ Moderate ___ None x Explain nothing near

17. HEATING UNIT: Infra Ray Heating Loc. Throughout plant
18. AIR CONDITIONER: offices Loc. ~~3 units on roof~~
19. WATER HEATER: 1 Vernon Glass Loc. ~~Men's wash room~~
20. REFRIGERATION: 0 Type/Size/Capacity ___
21. CONTROLS: Elec West side Gas west side Water West

22. HAZARDS: Life (Capacity) Adults ___ Children ___ 24-hour Care ___ Day Care ___
Ambulatory ___ Non-Ambulatory ___

23. HAZARDS: Storage - Kind/Amount/Loc See remarks

24. HAZARDS: Electrical 0 Other ___

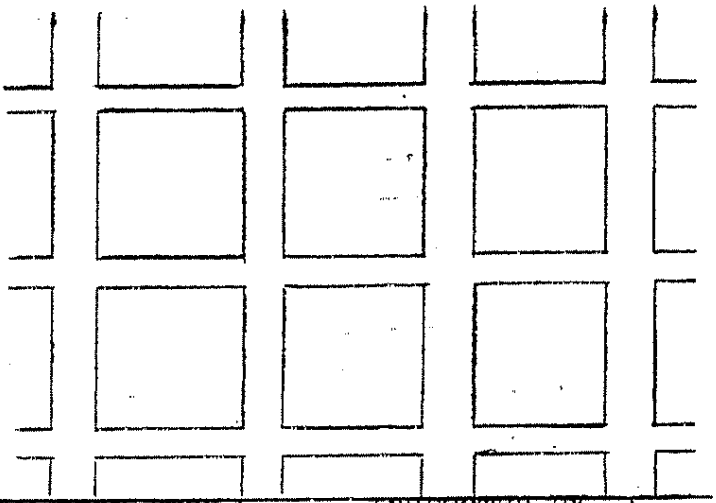
25. SPRINKLERS: Throughout x Basement Only ___ Stage ___ Elsewhere ___
26. INTERIOR STANDPIPES: No. Outlets 0 Loc ___

27. Inspected by Sta. #3 A shift w/ Bill Hartfel, Firm Representative

CRU 00578

ndicate: Streets-Hydrants-Water Mains 12 "
Static Pressure 78 #
Building Location - Railways
Exterior Exposures, etc.
vailable Water 4250 GPM

- Water Main
- Electrical Panel
- Gas Main
- Exposures



ECORD OF INSPECTIONS
-Excellent; B-Good; C-Fair; D-Bad;
-None; R-Reinspect; *-Co. Inspect.

ATE	WIRING	STOCK & STORAGE	TRASH & DISPOSAL	HEAT & EQPT.	FIRE PTCN. EQPT.	INSPECTED BY Officer in Chg.	Sta	Shift
-8-71	B	B	B	B	A	Mapes	3	A
/24/72	B	B	B	C	B	ELH		
-1-72*	B	B	C	C	B		3	B
-8-72*							3	B
-1-74	B	B	B	R	R	ELH	1	—
1-14*							3	B

MARKS

7/8/71 5,000 gals. of Liquid Hydrogen in tank 75' east of building.
1,000 gals. of Ammonia tank 75' east of building
2000 gals. open tank of Water Nitric Acid Hydroflouric Acid located in south end of building

'24/72 AMMONIA STORAGE TANK (1000 gals)-SE of bldg - Vertical portion of 3/4" pipe supply line that enters the ground adj to east end of storage tank is exposed to edge of driveway.
Recommend that pipe bumper posts be installed at this location, to provide protection against vehicle damage.
FLAMMABLE LIQUID STORAGE-outside, S of bldg - No problem at this time.
FIRE EXTINGUISHERS - Service dated 1972.
HOUSEKEEPING - In GOOD order at this time.
WEEDS -OK this date; weeds have been removed from yard area.
Reinspecting pending. ELH

1-29-73 "Extinguish that fire" for Fire Brigade Training Program. KCA
2-1-74 Fire inspection was made with firemen Max Green and Bill Hartfel Maint. foreman.
fl liquid storage - outside bldg - S/wall.
"Tybol" red label fl liquid being dispensed without benefit of grounding device. UFC 14.207(h)

POSTED
Fire extinguishers - service dated jan. 31-1973
Housekeeping in general - in good order at this time.
Ammonia storage tank - protective pipe bumper post installed adj to 3/4" supply line; to provide protection against vehicle damage.
Bill Hartfel was advised of existing conditions of this fire inspection.

Exhibit 11

Calocerinos & Spina
CONSULTING ENGINEERS
1020 Seventh North Street, Liverpool, NY 13088 · (315) 457-6711

January 18, 1985

Mr. Roy Thielking
Project Manager
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division
Department of Health Services
197 Broadway, Room 7128
Los Angeles, California 90052

Re: Site Remediation Plan
Trent Tube Plant
Fullerton, California
CAD 008325110

File: 469.003

Dear Mr. Thielking:

We have completed our site assessment for the above-referenced Project and present herein the results of that assessment and our proposed plan for remediation of the site.

Site Sampling

A total of 14 borings were completed as originally proposed at the rear of the facility and at background locations. An additional set of three borings (E Series) were completed at selected locations requested by you during the on-site program. Locations of all borings are indicated on the attached Site Plan (Figure 1). Drilling was conducted on December 26, 27, and 28, 1984, by Pioneer Drilling Company with inspection, sample preservation and logging conducted by Mr. David Bramwell, PG, of IT Corporation. Field supervision was performed by Mr. Andrew Diefendorf, CPG, of Calocerinos & Spina.

Soil samples were taken at approximately 3-, 5- and 10-foot depth intervals in all borings with the exception of the E Series at which location samples were obtained at approximately 2-, 4- and 6-foot depth intervals. Samples were either maintained within capped 6-inch or 4-inch California Sampler sleeves, which were then placed in polyethelene bags and stored in teflon-capped glass jars; or the samples were removed from the sampler and placed directly in laboratory-prepared, teflon-capped sample jars. All samples were refrigerated and air freighted to the analytical laboratory at the end of each day of drilling.

Results of Investigations

Attachment A presents the analytical results of all samples processed by California Analytical Laboratory. Of the 26 organic parameters included within the complete USEPA 601 and 602 scans performed, only 6 were identified on the site. Summary results of analyses for these six parameters are presented

NGSC-DTSC004954

as Table 1. Note that of the samples analyzed at 17 locations only 3 (A-1, D-2 and C-3) indicate soil contamination above the allowable limit of 1 mg/kg at a depth of 3 feet. Only two locations (A-1 and C-4) indicated detectable contamination at a sampling depth in excess of three feet. With the exception of locations D-2 and C-3, contaminant concentrations detected were only slightly over the allowable limit.

Based on our review of previous soil removal (see Figure 2) and soil samples taken during this investigation (see Drill Logs, Attachment B), it is our opinion that the majority of contamination was removed during the original remedial efforts. Remnant contamination appears to be concentrated within a shallow (3.5- to 4.5-foot depth) zone of silty organic soil found in a limited area at the rear of the site (see Figures 3 and 4). Our past experience has shown that these fine-grained materials tend to adsorb and retain more of the solvents than the coarser and more porous underlying sand materials.

Portable organic vapor meter (OVM) readings taken during the sampling support the findings that the organic silty sand layer is retaining most of the spilled solvents. While the OVM readings indicate organic vapors dispersed throughout the relatively porous sandy deposts on the site, based on plots of OVM readings (Figures 5 through 7) at the three sample depths, two distinctive sources of contaminant are apparent. Both zones of contamination appear to result from surface runoff away from solvent storage areas in the vicinity of A-1 and A-2, respectively.

Previous excavation of soil from the area of A-2 resulted in removal of any detectable soil contamination in that area, although trace organic vapors are still present. On the other hand, the high concentration of solvents "downsurface" from A-2 at D-2 probably represents entrapment of the solvents within the organic soils immediately beneath the surficially lowest point of surface drainage between A-2 and the concrete drainage swale. The organic layer in this area is of low enough permeability to create a small pocket of trapped or perched water.

Inasmuch as fluid flow in the vadose (unsaturated) zone of the sand deposits beneath the organic layer should be vertical for approximately 80 feet (depth of water table), the spread of contamination at the rear of the site is probably directly related to surface water wash during periods of rain. Infiltrating solvent would be adsorbed by the finer-grained soil layer allowing that layer to act as a potential contaminant source during rainy periods. Note from Figures 3 and 5 that there is a strong correlation between the limits of detectable (greater than 1 ppm) OVM readings and the apparent limits of the organic silty sand layer. The significant quantity of rain prior to and during the period of this investigation may account for leaching of solvents from that layer such that detectable solvents were present at depth in a few of the borings.

It should also be noted that no solvents were detectable at depth in areas where the stratigraphic section of sand is void of any silty organic containing layers. In these areas of relatively clean coarse sand there is very little particle surface upon which the solvent can be retained. Any solvent reaching depth in these areas has already escaped and, if it were not for the limited presence of an organic layer, no solvents would probably be currently detectable on the site.

The key to remediation of this site, therefore, becomes (1) removal of the primary source of contamination, the organic soil layer, and (2) prevention of further migration of any small quantities of solvent contained in deeper sands by elimination of surface water infiltration.

Controlling factors in the practicality of applied methods of remediating this site include (1) the proximity of various structures and (2) the potential low angle of repose of any sands which are excavated. Removal of soils in close proximity to structures may threaten the stability of those structures.

Proposed Additional Remediation

Because some remnant soil contamination is still present at the rear of the site, we recommend the following remedial actions:

1. Removal of all heavily contaminated soils outlined in Area "A" of Figure 8 to a depth of 4.5 feet (vertically, if possible) and transport to an approved disposal facility. This represents all contaminated soils within an approximately eight-foot radius of D-2.

2. Removal of all soils in Areas "B" and "C" (side slopes of 1:1.5, if possible) to the base of the organic layer (3.5 to 4.5 feet in depth). Note that these areas were delineated by overlay analysis of Figure 3 and 5.

3. All soils excavated from Areas "B" and "C" to be loosely spread in a selected area on the east side of the site in a layer not to exceed four inches in thickness and allowed to aerate for a minimum of one week.

4. Replacement of aerated soils back in excavation in compacted lifts not to exceed one-foot in thickness and redressing to ground surface with a minimum of four inches of approved gravel base.

In addition, we recommend removal of solvent-stained soils along the embankments of the drainage swale at E-2 to a depth of six inches with disposal at an approved disposal site, and replacement of soils with granular (gravel) materials.

It is assumed that the volumes of soil to be removed as proposed may be the minimum necessary. In order to assess actual soil conditions encountered during remediation, we would utilize a portable OVM to determine if all pockets of significant contamination have been removed and if additional removal is required at time of excavation.

In order to facilitate successful closure of this facility, we request your immediate review and comment on this Proposal. Thank you in advance for your assistance in this matter.

Respectfully submitted,

CALOCERINOS & SPINA

Andrew F. Diefendorf, CPG
Manager, Applied Geoscience

AFD:mts

CC: Mr. R. Phillips (w/enc)

TABLE 1

TRENT TUBE

FULLERTON, CALIFORNIA

RESULTS OF ANALYSES

Sample Point	Depth (feet)	Contaminant Concentration in mg/kg (parts per million) Method 601 1,1,1-Trichloroethane	Tetrachloroethylene	Trichloroethylene	Method 602 Ethyl-Benzene	Xylene	Toluene
A-1	3.5	1.2	1.1	LTD	1.7	2.7	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	1.5	1.7	LTD	LTD	LTD	LTD
A-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
A-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
A-4	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
B-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
C-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
C-2	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
C-3	3.5	2.2	5.3	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD

Table 1 (Continued)
Page 2

Sample Point	Depth (feet)	Contaminant Concentration in mg/kg (parts per million) Method 601 1,1,1-Tri-Chloroethane	Tetrachloro-ethylene	Trichloro-ethylene	Method 602 Ethyl-Benzene	Xylene	Toluene
C-4	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	1.1
D-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	--	--	--	--	--	--
	10.5	--	--	--	--	--	--
D-2	3.5	780	21	70	LTD	95	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
D-3	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	5.0	LTD	LTD	LTD	LTD	LTD	LTD
	10.5	LTD	LTD	LTD	LTD	LTD	LTD
E-1	3.5	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	--	--	--	--	--	--
E-2	2.0	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	--	--	--	--	--	--
E-3	2.0	LTD	LTD	LTD	LTD	LTD	LTD
	4.0	--	--	--	--	--	--
	6.0	--	--	--	--	--	--

NOTES:

1. LTD = Less Than Detectable limit of 0.5 mg/kg.
2. -- = Sample Not Analyzed

ATTACHMENT "A" D.B.

California Analytical Laboratories, Inc.
2544 Industrial Boulevard • West Sacramento, CA 95691 • (916) 372-1393

December 28, 1984
Lab No. 19999
Received: 12/27/84
Project No. 847025

RECEIVED
JAN 02 1985

Ed Serota
IT Corporation
17500 Redhill Avenue
Suite 202
Irvine, CA 92714

Seventeen soil samples were received in aluminum core tubes to be analyzed for halogenated and aromatic volatile organics. RUSH.

CAL I.D.	Sample I.D.	
19999-1	A-1 3 1/2'	12/26/84
-2	A-1 5 1/2'	12/26/84
-3	A-1 10 1/2'	12/26/84
-4	A-2 3 1/2'	12/26/84
-5	A-2 5 1/2'	12/26/84
-6	A-2 10 1/2'	12/26/84
-7	A-3 3 1/2'	12/26/84
-8	A-3 5 1/2-6'	12/26/84
-9	A-3 10 1/2-11'	12/26/84
-10	B-1 3 1/2-4'	12/26/84
-11	B-1 7 1/2-8'	12/26/84
-12	B-1 10 1/2-11'	12/26/84
-13	B-2 3-3 1/2'	12/26/84
-14	B-2 5-5 1/2'	12/26/84
-15	B-3 3 1/2-4'	12/26/84
-16	B-3 5 1/2-6'	12/26/84
-17	B-3 10 1/2-11'	12/26/84

Results of analysis by EPA Methods 601 and 602 are on the attached data sheets.

Charles J. Soderquist, PhD
Vice President

Ben N. Buechler
GC Lab Manager

jb

This report is for the sole and exclusive use of the client to whom it is addressed.
Samples not destroyed in testing are retained a maximum of thirty (30) days unless otherwise requested.

ATTACHMENT "B"

IT CORPORATION

TRANSMITTAL SHEET

TO Dick Klippel
Calocerinos & Spina
1020 Seventh North Street
Liverpool, New York 13088

DATE January 4, 1985

OUR JOB NO. 847025

YOUR ORDER NO.

SUBJECT Trent Tube Division Facility
2100 E. Orangethrope Ave.
Fullerton, California

WE ARE SENDING YOU VIA: Mail

FOLLOWING ITEMS: Copies of boring logs of subject property

A-1,2,&3
B-1,2,&3
C-1,2,3,4,&5
D-1,2,&3
E-1,2,&3'

NO. OF COPIES SUBMITTED: One each

COPIES TO:

SUBMITTED BY: David D. Bramwell

David D. Bramwell

IT CORPORATION • 17500 RED HILL AVENUE • IRVINE, CALIFORNIA 92714 • (714) 261-6441

NGSC-DTSC004961

LOCATION OF BORING

Background OVM = 0.4 - 0.5

JOB NO.	CLIENT	LOCATION
847025	Trant Rube	Fullerton

DRILLING METHOD: Mobil 50 @ 8" diameter hollow stem auger

BORING NO.: A-1

SHEET: 1 OF 1

SAMPLING METHOD: GMB = 18" drive Sampler with 2"-OD and 6" to 4" long sleeves

	DRILLING START	DRILLING FINISH
TIME	2:20P	3:00P
DATE	12/26/84	12/26/84

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR Pacific Drilling

DRILLING FOREMAN Ernie

FIELD ENGINEER DDB DATE 12/29/84

EDITED BY DATE

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM	brown to black	Silty Sand	loose, moist, trace to some gravel
						2				
						3		lt. brown	Silty Sand	moist, moderate loose to dense, trace fine pebble gravel
		5.2				4				
GMB	18/16		3½/3½	6/7/8		5	SM			
		2.3				6				
GMB	19/17		5½/5½	7/10/10		7				
						8				
						9				
						10				
		3.6				11				
GMB	19/16		11½/11½	10/21/30		12				TD = 11.5'
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

IT CORPORATION

NGSC-DTSC004962

LOCATION OF BORING

Background OVM = 0.4-0.5

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD Mob. 150 (W) 8" diameter hollow stem auger

BORING NO. A-2

SHEET 1 OF 1

SAMPLING METHOD GMB = 18" drive Sampler with 2"-OD and 6" to 4" long sleeves

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING START: TIME 1:40P, DATE 12/26/84

DRILLING FINISH: TIME 2:10P, DATE 12/26/84

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

DATE 12/26/84

FIELD ENGINEER DDB

EDITED BY

DATE

SURFACE CONDITIONS: Flat + grouelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SM/ML	brown	Sandy Silt	fill wet to moist, Some Cobble gravel
						1				
						2				
		9.2				3		lt. brown	Sand	dry to moist moderately dense to dense Sand is medium to coarse grained, trace pebble gravel, trace silt
GMB	18/15		3½	5/8/4		4	SP			
		3.5				5				
GMB	18/14		5½	7/11/18		6				
						7				
						8				
						9				
		2.2				10				
GMB	19/16		10½	9/9/26		11				TD = 11.5'
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				

IT CORPORATION

NGSC-DTSC004963

LOCATION OF BORING	JOB NO. 847025	CLIENT Trent Tube	LOCATION Fullerton
	DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger		BORING NO. A-3
			SHEET 1 OF 1
	SAMPLING METHOD GMB = 18" drive sampler with 2"-OD and 4" to 6" long sleeves.		DRILLING START TIME 1:00 P DATE 12/26/84; FINISH TIME 1:35P DATE 12/26/84

Background OVM = 0.4 - 0.5

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/ SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM	brown	Silty Sand	moist, moderate dense, Sand is fine grained
						2				
		0.8				3		lt brown	Sand	moist to dry, moderate dense to dense, sand is medium to coarse grained, clean to trace silt, trace pebble gravel
GMB	18/15		3½	8/9/9		4	SP			
		1.1				5				
GMB	18/16		5½	7/10/11		6				
						7				
						8				
						9				
		1.3				10				
GMB	18/17		10½	16/25/32		11				
						12				TD = 11.5'
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

FIELD ENGINEER VDB DATE 12/26/84

EDITED BY DATE

IT CORPORATION

LOCATION OF BORING

Background OVM = 0.2

JOB NO.	CLIENT	LOCATION
84725	Trent Tube	Fullerton

DRILLING METHOD: Mobil 50 with 8" diameter hollow stem auger

SAMPLING METHOD: Shelby tubes/GMB = 18" drive sampler with 2"-OD and 4" to 6" long sleeves

BORING NO.: B-1

SHEET: 1 OF 1

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING START: TIME 9:35A, DATE 12/20/94

DRILLING FINISH: TIME 12:15P, DATE 12/20/94

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

DATE 12/20/94

DATE

FIELD ENGINEER DDB

EDITED BY

SURFACE CONDITIONS: Flat (W) Surficial fill

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS; CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SM	brown	Silty Sand	dry to moist, moderate loose, sand is fine grained
						1				
						2				
						3				
						4				
Shelby		0.2	3½			5	SP	lt. brown	Sand	dry, moderate loose, sand is fine to medium grained
						6				
Shelby			no recovery			7				
						8		grey	Sand	dry dense, Sand is medium to coarse grained.
GMB	18/14		7½	4/4/5		9	SP			
						10				
						11				TD = 11.5'
GMB	18/16		10½	15/18/27		12				
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

IT CORPORATION

NGSC-DTSC004965

LOCATION OF BORING

Background ORM = 0.1

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD: Mobil 50 with 8" diameter hollow stem auger

BORING NO.: B-2

SHEET: 1 OF 1

SAMPLING METHOD: 24" long Shelby tubes

DRILLING: START TIME 9:00A, FINISH TIME 9:30A

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATE (START): 12/20/94 DATE (FINISH): 12/20/94

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN [illegible]

FIELD ENGINEER DDB DATE 12/26/94

EDITED BY DATE

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	ORM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SM	brown	Silty Sand	moist, moderate loose, sand is fine grained
						1				
						2	SP	lt. brown	Sand	moist moderate loose, sand is fine grained, trace silt
						3				
		0.1								grades to dry at 4' depth.
SHELBY						4				
		0.1				5				
SHELBY						6				
						7				
						8				
						9		lt. brown	Sand	dry moderate dense sand is fine to coarse grained trace pebble gravel.
						10	SP			
SHELBY	no recovery					11				
						12				
SHELBY	no recovery					13				
						14				TD = 14.0'
						15				
						16				
						17				
						18				
						19				
						20				

IT CORPORATION

NGSC-DTSC004966

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Trenc Tube	Fullerton

DRILLING METHOD: Mobil 50 with 9" diameter hollow stem auger

BORING NO.: B-3

SHEET: 1 OF 1

SAMPLING METHOD: GMB - 18" drive Sampler with 2"-OD and 6" to 4" long sleeves

DRILLING: START TIME 12:20P; FINISH TIME 12:50P

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATE: START 12/20/84; FINISH 12/20/84

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ervin

FIELD ENGINEER DJB DATE 12/20/84

EDITED BY DATE

SURFACE CONDITIONS: Flat and gravelled.

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	DEPTH OF CASING	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SM/ML	brown	Sand Silt	moist, loose
						1				
						2				
						3	SM	brown	Silty Sand	moist moderate dense, Sand is fine grained.
GMB	18/16		3½	7/10/11		4		lt. brown	Sand	dry to moist moderate dense to dense sand is medium to coarse grained, trace pebble gravel, clean.
						5	SP			
GMB	18/16		5½	9/12/16		6				
						7				
						8				
						9				grades with increase of pebble gravel and fines.
						10				
GMB	18/14		10½	13/19/30		11				TD = 11.5'
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				

IT CORPORATION

NGSC-DTSC004967

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
947025	Trent Tube	Fullerton

DRILLING METHOD Mobil 50 with 8" diameter hallow stem auger

BORING NO. C-1

SHEET 1 OF 1

SAMPLING METHOD GMB = 18" drive Sampler with 2"-OD and 6" to 4" long sleeves.

DRILLING

					START	FINISH
WATER LEVEL					TIME 1:45P	TIME 2:35P
TIME					DATE 12/27/94	DATE 12/27/94
DATE						
CASING DEPTH						

Background OVM = 0.4 - 0.5

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM/SP	brown	Sand	dry to moist moderate dense to dense Sand is medium to coarse grained, trace to some silt.
						2				
		0.9				3				
GMB	13/15		3½	4/8/17		4				
		1.2				5				
GMB	13/16		5½	15/15/20		6				
						7				
						8				
						9				
		1.0				10				
GMB	18/16		10½	19/19/23		11				TD = 11.5'
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

DATE 12/27/94

FIELD ENGINEER DDE

EDITED BY

DATE

IT CORPORATION

NGSC-DTSC004968

LOCATION OF BORING	JOB NO. 847025	CLIENT Trent Tube	LOCATION Fullerton
	DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger		BORING NO. C-2
	SAMPLING METHOD GMB = 18" drive Sampler with 2"-OD and 6" to 4" long sleeves		SHEET 1 OF 1

WATER LEVEL					DRILLING START	DRILLING FINISH
TIME					TIME 1:30P	TIME 2:00P
DATE					DATE 12/27/84	DATE 12/27/84
CASING DEPTH						

Background OVM = 0.4-0.5

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SP	brown	Sand	moist, moderate dense Sand is medium grained.
						1				
						2	SP	lt brown	Sand	moist dense sand is medium to coarse grained trace fine pebble gravel, Clean to trace silt.
		0.6				3				
GMB	18/14		3½	8/9/13		4				
		12.6				5	ML	black	Silt	moist to wet, soft, organics
GMB	18/14		5½	8/9/14		6	SP	brown to lt brown	Sand	moist dense sand is medium to coarse grained trace fine pebble gravel, Clean to trace silt.
						7				
						8				
						9				
		0.9				10				
GMB	18/17		10½	16/27/38		11				
						12				TD=11.5'
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

FIELD ENGINEER DDB DATE 12/27/84

EDITED BY DATE

IT CORPORATION

LOCATION OF BORING	JOB NO. 847025	CLIENT Trent Tube	LOCATION Fullerton
	DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger		BORING NO. C-3
	SAMPLING METHOD GMB = 18" drive Sampler with 2"-OD and 6" to 4" long sleeves.		SHEET 1 OF 1

WATER LEVEL					DRILLING START	DRILLING FINISH
TIME					TIME 10:55A	TIME 11:30A
DATE					DATE 12/27/84	DATE 12/27/84
CASING DEPTH						

Background OVM = 0.4 - 0.5

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SP/SM	brown	Sand	dry to moist, moderate loose, Sand is fine grained, some silt.
						1				
						2	SP/SM	lt. brown	Sand	dry to moist, moderate dense, trace to some silt.
		1.5				3				
GMB	18/15		3½	4/5/6		4	ML	brown to black	silt	moist, soft, organics
		11.5				5				
GMB	18/16		5½	6/10/10		6	SP	brown to lt. brown	Sand	dry to moist, dense, Sand is medium to coarse grained, trace fine pebble gravel clean to trace silt.
						7				
						8				
						9				
		1.8				10				
GMB	18/16		10½	11/22/33		11				
						12				TD = 11.5'
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

DRILLING CONTRACTOR Tronear

DRILLING FOREMAN Ernie

FIELD ENGINEER DDB DATE 12/27/84

EDITED BY DATE

IT CORPORATION

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger

BORING NO. C-4

SHEET 1 OF 1

SAMPLING METHOD GMB = 18" drive sampler with 2"-OD and 6" to 4" long sleeves

DRILLING START TIME 9:10A DATE 12/21/94

DRILLING FINISH TIME 9:40A DATE 12/21/94

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

Background OVM = 0.4 - 0.5

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM	brown to black	Silty Sand	moist to wet, moderate loose
						2				
		5.2				3	ML	black	Silt	soft, organics
GMB	18/16		3½	5/6/7		4	SP	H. brown	Sand	moist moderate dense to dense clean to trace silt
		0.9				5				
GMB	18/16		5½	6/8/9		6				
						7				
						8				
						9				
		0.5				10				
GMB	18/17		10½	11/20/28		11				
						12				TD = 11.5'
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

DATE 12/27/94

FIELD ENGINEER DDB

EDITED BY

DATE

IT CORPORATION

NGSC-DTSC004971

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD: Mobil 50 with 8" diameter hollow stem auger

BORING NO.: C-5

SHEET: 1 OF 1

SAMPLING METHOD: GMB = 18" drive sampler with 2"-OD and 6" to 4" long sleeves.

DRILLING: START TIME 8:25A; FINISH TIME 9:00A

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING START DATE: 12/27/84; DRILLING FINISH DATE: 12/27/84

Background OVM = 0.5

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR: Pioneer

DRILLING FOREMAN: Ernie

FIELD ENGINEER: DDB

EDITED BY

DATE: 12/27/84

DATE

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM	brown	Silty Sand	moist moderate loose Sand is fine grained, trace gravel.
						2				
		0.6				3	SP	lt. brown	Sand	moist, moderate dense to dense, clean to trace silt
GMB	18/17		3½'	4/6/7		4				
		0.7				5				
GMB	18/15		5½'	6/8/8		6				
						7				
						8				
						9				
		0.6				10				
GMB	18/15		10½'	11/17/22		11				TD = 11.5'
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				

IT CORPORATION

NGSC-DTSC004972

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Treni Tube	Fullerton

DRILLING METHOD: Mobil 50 with 8" diameter hallow stem auger

BORING NO.: D-1

SHEET: 1 OF 1

SAMPLING METHOD: GM3: 18" drive Sampler with 2"-OD and 6" to 4" long sleeves.

					DRILLING START	DRILLING FINISH
WATER LEVEL						
TIME					TIME 3:00P	TIME 5:30P
DATE					DATE 12/27/94	DATE 12/27/94
CASING DEPTH						

Background OVM = 1.2

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SP/SM	brown	Silty Sand	moist moderate dense sand is medium grained
						2				
		2.4				3				
GMB	18/15		3½'	4/6/9		4				
			← water mal function timing			5	SP	lt. brown	Sand	moist, dense, sand is medium to coarse grained, trace fine pebble gravel, clean to trace silt
GMB	18/16		5½'	13/17/23		6				
						7				
						8				
						9				grades dry
						10				
GMB	18/15		10½'	12/23/32		11				TD = 11.5'
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				

DRILLING CONTRACTOR: Pioneer

DRILLING FOREMAN: Ernie

FIELD ENGINEER: DDB DATE: 12/27/94

EDITED BY: DATE:

IT CORPORATION

NGSC-DTSC004973

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger

BORING NO. D-2

SHEET 1 OF 1

SAMPLING METHOD GMB = 18" drive sampler with 2"-OD and 6" to 4" long sleeves.

DRILLING START TIME 11:45A FINISH TIME 12:40P

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING START DATE 12/27/84 FINISH DATE 12/27/84

Background OVM = 0.4 - 0.5

DATUM SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

DATE 12/27/84

DATE

FIELD ENGINEER DLE

ENTED BY

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SM	brown	Silty Sand	moist moderate loose, Sand is fine grained
						1				
						2	ML/SM	brown	Sandy Silt	moist to wet, soft, organics.
		89.4				3				
GMB	18/13	49.6	3½'	4/5/7		4	SP/SM	brown	Sand	Wet moderate loose to dense, some silt.
		26.8				5				at 4½'-5' boring making liquid.
GMB	18/15		5½'	13/15/17		6				
						7				
						8				
						9	SP	lt. brown	Sand	dry to moist, dense, Sand is medium to coarse grained
		2.9				10				
GMB	13/16		10½'	13/11/23		11				TD = 11.5'
						12				
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

IT CORPORATION

NGSC-DTSC004974

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD: Mobil 50 with 8" diameter hollow stem auger

BORING NO.: D-3

SHEET: 1 OF 1

SAMPLING METHOD: GMB = 18" drive sampler with 2"-OD and 6" to 4" long sleeves.

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING: START TIME 9:50A, FINISH TIME 10:45A

DATE: 12/27/94 / 12/27/94

Background OVM = 0.4-0.5

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM	brown	Silty Sand	moist, moderate loose
						2				
						3				
		0.7								
GMB	18/17		3½	6/8/11		4	ML	black	Silt	moist, organics, limonite staining.
						5	SM	brown	Silty Sand	moist to wet, moderate dense, sand is fine to medium grained.
		2.2								
GMB	18/18		5½	5/9/13		6				
						7	SP	lt. brown	Sand	moist, moderate dense to dense, sand is medium to coarse grained, trace fine pebble gravel, clean to trace silt.
						8				
						9				
						10				
		0.8								
GMB	18/17		10½	14/19/27		11				
										TD = 11.5'
						12				
						13				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

DRILLING CONTRACTOR Hoover

DRILLING FOREMAN Ernie

DATE 12/27/94

DATE

FIELD ENGINEER DDB

EDITED BY

DATE

IT CORPORATION

NGSC-DTSC004975

LOCATION OF BORING	JOB NO. 847025	CLIENT Trent Tube	LOCATION Fullerton
	DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger		BORING NO. E-1
			SHEET 1 OF 1
	SAMPLING METHOD GMB= 18" drive sampler with 2"-OD and 4" to 6" long sleeves.		DRILLING START TIME 3:40P DATE 12/27/84 / FINISH TIME 4:05P DATE 12/27/84

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and asphalt covered

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0	SM	brown	Silty Sand	moist, moderate dense
						1				
GMB	18/16		2'	4/7/10		2	ML	brown	Silt	moist, moderate firm, trace fine sand
						3	SP	lt. brown	Sand	dry to moist, dense, sand is medium to coarse grained
GMB	18/16		4'	6/7/11		4				
						5				
						6				
						7				
						8				
GMB	18/17		9'	10/13/23		9				
						10				TD=10.0'
						11				
						12				
						3				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

FIELD ENGINEER DDB DATE 12/27/84

EDITED BY DATE

IT CORPORATION

LOCATION OF BORING

JOB NO.	CLIENT	LOCATION
847025	Trent Tube	Fullerton

DRILLING METHOD Mobil 50 with 8" diameter hollow stem auger

BORING NO. E-2

SHEET 1 OF 1

SAMPLING METHOD GMB = 18" drive sampler with 2"-OD and 4" to 6" long sleeves

DRILLING START TIME 8:25A DATE 12/29/94

DRILLING FINISH TIME 8:50A DATE 12/29/94

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

Background OVM = 0.3

DATUM

SURFACE ELEVATION

DRILLING CONTRACTOR Environmental Drilling

DRILLING FOREMAN Ernie

FIELD ENGINEER TDE

EDITED BY

DATE 12/29/94

DATE

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
GMB	18/16	0.4	2'	3/6/6		0 1 2	SP	brown to H brown	Sand	moist moderate dense to dense sand is medium to coarse grained clean to trace silt
GMB	18/16	0.4	4'	4/7/7		3 4 5				
GMB	18/15	0.7	6½'	7/11/12		6 7				TD = 7.5'
						8 9 0 1 2 3 4 5 6 7 8 9 0				

IT CORPORATION

NGSC-DTSC004977

LOCATION OF BORING	JOB NO. 847025	CLIENT Trent Tube	LOCATION Fullerton
	DRILLING METHOD Mobil so with 8" diameter hollow stem auger		BORING NO. E-3
			SHEET 1 OF 1
	SAMPLING METHOD GMB = 18" drive Sampler with 2"-OD and 6" to 4" long sleeves.		DRILLING START TIME 9:00 A DATE 12/28/84 / FINISH TIME 9:30 A DATE 12/29/84

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

Background OVM = 0.3

DATUM

SURFACE ELEVATION

SURFACE CONDITIONS: Flat and gravelled

SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	OVM	SAMPLE NO. / SAMPLE DEPTH	BLOWS/6" SAMPLER	NUMBER OF RINGS	DEPTH IN FEET	USCS DESIGNATION	COLOR	SOIL TYPE	SECONDARY CHARACTERISTICS, CONSISTANCY AND REMARKS ON SOIL AND DRILLING
						0				
						1	SM	brown	Silty Sand	dry to moist moderate dense, sand is fine grained
GMB	18/16	0.7	2'	4/6/6		2				
						3	SP	H. brown	Sand	dry dense sand is fine to medium grained.
						4				
		0.5				5				
GMB	18/17		5½'	7/11/13		6				
						7				
						8				
GMB	18/17		9'	12/17/22		9				
						10				TD=10.0'
						11				
						12				
						3				
						4				
						5				
						6				
						7				
						8				
						9				
						0				

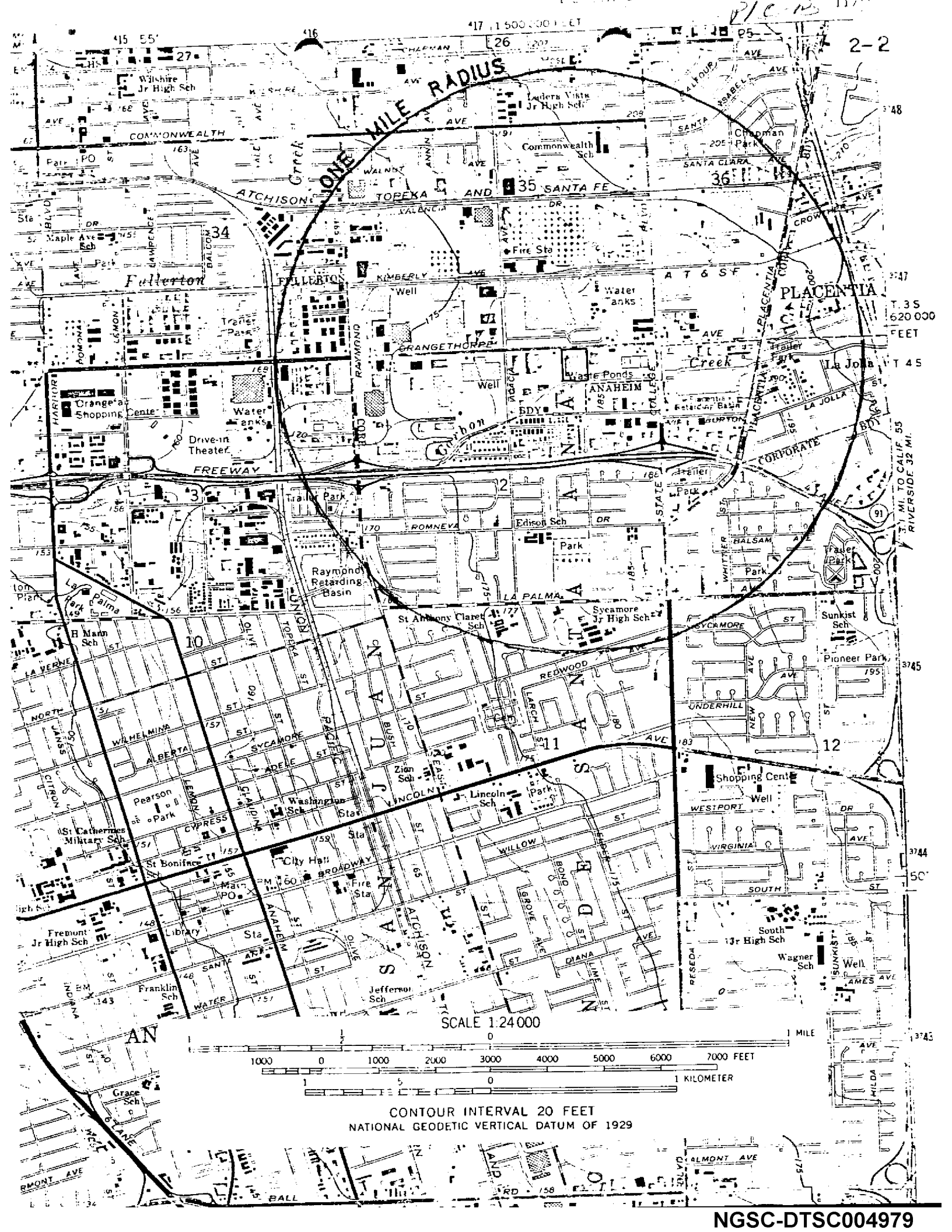
DRILLING CONTRACTOR Pioneer

DRILLING FOREMAN Ernie

FIELD ENGINEER DDB DATE 12/28/84

EDITED BY DATE

IT CORPORATION



NGSC-DTSC004979

I FACILITY INFORMATION

1. Maps of Facility

Topographic (1:2400 Scale)
Topographic (1:2400 Scale)
Wells, Surface Water & Aquducts
Treatment & Storage Areas
Topographic, Facility Only, Drainage
Utility Lines

2. Photographs of Facility

3. Associated Information

Exhibit 12

RCRA FACILITY ASSESSMENT

for

Trent Tube Division
Crucible Materials Corporation
2100 East Orangethorpe Avenue
Fullerton, California 92634
EPA I.D. #CAD008325110

Prepared by:

California Environmental Protection Agency
Department of Toxic Substances Control
Standardized Permits and Corrective Action Branch
700 Heinz Avenue, Suite 300
Berkeley, California 94710

May 2000

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FIGURES

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Figure 2 - Site Map with SWMUs
Figure 3 - Sampling Well Locations

ATTACHMENTS

Attachment 1 - Visual Site Inspection
Attachment 2 - Photos
Attachment 3 - Environmental Priorities Initiative Preliminary Assessment, Trent Tube Division, Ecology and Environment, September 15, 1991
Attachment 4 - Notification of Hazardous Waste Activity (Part A)

OCVOCEF 000007

EXECUTIVE SUMMARY

In 1984, the United States Congress amended the Resource Conservation and Recovery Act (RCRA) by passing the Hazardous and Solid Waste Amendments (HSWA). HSWA provide authority to the United States Environmental Protection Agency (EPA) to require comprehensive corrective action for Solid Waste Management Units (SWMUs) and other areas of concern at facilities applying for a RCRA permit and those which have, or had, RCRA Interim Status. In July 1991, the California Department of Toxic Substances Control received authorization from USEPA to implement the RCRA program in the State of California.

The intent of HSWA and the California State law is to address previously unregulated releases of hazardous constituents to air, soil, surface water, groundwater, and the generation of subsurface gas. To achieve this objective, a RCRA Facility Assessment (RFA), which identified and assessed the SWMUs and other areas of concern, was performed at the former site of the Trent Tube facility, 2100 East Orangethorpe Avenue, Fullerton, Orange County, California.

The purpose of this RFA is to determine whether a release of hazardous waste or hazardous constituents has occurred from SWMUs or Areas of Concern (AOCs) and to determine the need for further action to be performed at the site.

This assessment is based only on information found in the files of the following agencies: U.S. EPA Region IX, Department of Toxic Substances Control-Cypress Regional Office and the Glendale Regional Office, Orange County Assessors Office, Orange County Water District. A Visual Site Inspection conducted on February 11, 1999, was also a source of information for this RFA.

The facility was constructed in the late 1950s by the Trent Tube Company, a Division of Crucible Materials Corporation. Trent Tube manufactured stainless steel tubing and customized prefabricated tubing made to customer specifications. On May 11, 1984, all manufacturing was terminated. The building is currently being used to store recreational vehicles. The building and property are now owned by LaBarron Investments.

A total of four SWMUs and one AOC were identified. They are:

SWMU #1:	Drum Storage Areas
SWMU #2:	Waste Oil Tank
SWMU #3:	Spent Pickle Liquor Tanks
SWMU #4:	Degreasing Pit
AOC #1:	Area from the rear (south side) of the plant building to the property boundary.

OCVOCEF 000008

Constituents of concern used at the facility include tetrachloroethane (PCE), trichloroethane (TCA), trichloroethylene (TCE), nitric acid, hydrofluoric acid, hexavalent chromium, nickel, lead, and waste oil.

Closure of the facility was overseen by the Department of Health Services (DHS), now known as the Department of Toxic Substances Control (DTSC). Closure of the facility included removal of heavily impacted soils and aeration of lightly impacted soils contaminated with organic solvents including TCE, TCA, and xylene. Aerated soils were placed back into the excavated area. No confirmation sampling was conducted. No groundwater sampling was conducted as part of the closure. Closure was certified by an independent registered engineer and approved by DHS on April 16, 1985.

Orange County Water District sampling wells in the area of the former Trent Tube facility show significant PCE and TCE contamination. PCE and TCE were used and released at the former Trent Tube facility. (reference #7)

This RFA recommends:

1) concrete and soil sampling at the location of the Degreasing Pit (SWMU #4);

2) additional soil samples to be taken behind (south) the plant building (AOC#1);

3) concrete and soil samples to be taken in and around the Drum Storage Area (SWMU#1);

4) concrete and soil samples to be taken in and around the Spent Pickle Liquor Tanks (SWMU #3), and

5) a comprehensive groundwater sampling program to determine the extent and degree of groundwater contamination.

OCVOCEF 000009

1.0 INTRODUCTION

In 1984, the United States Congress amended the Resource and Conservation and Recovery Act (RCRA) by passing the Hazardous Waste and Solid Waste Amendments (HSWA). As a result, Section 3008(h) of RCRA, as amended by HSWA, and the California Health and Safety Code, Section 25187 provided the United States Environmental Protection Agency (U.S. EPA) and the California Department of Toxic Substances Control (DTSC) the authority to require comprehensive corrective action on Solid Waste Management Units (SWMUs) and other Areas of Concern (AOCs) at facilities which have been issued an Interim Status Document (ISD) for the treatment, storage, or disposal of hazardous waste. These laws apply regardless of whether the ISD is in effect or has been terminated, or whether the facility is currently operating or has closed. The primary objective of the corrective action program is to clean up releases of hazardous waste or hazardous constituents that threaten or could potentially threaten human health or the environment.

To achieve this objective, a RCRA Facility Assessment (RFA) is conducted to identify and evaluate the SWMUs and AOCs. The purpose of a RFA is to determine whether a release of hazardous waste or hazardous constituents has occurred from SWMUs or AOCs and to determine the need for further investigation to be performed if necessary.

This assessment is based only on information found in the files of the U.S. EPA Region IX, Cal/EPA Department of Toxic Substances Control-Cypress and Glendale Regional Offices, Orange County Assessors Office, and a Visual Site Inspection conducted on February 11, 1999. A search of the Sanborn Insurance Maps at the University of California Berkeley Map Library did not produce any maps for the location occupied by this facility.

2.0 FACILITY DESCRIPTION

2.1 Site Location, Property Ownership, and Responsible Parties

The 5.2 acre site is located at 2100 East Orangethorpe Avenue in Fullerton, Orange County, California, Latitude 33°51'30" N, Longitude 117°53'03" W. The property is currently owned by LaBarron Investments, 2020 East Orangethorpe, Fullerton 92831, President Eddie Fisher (714) 680-3812.

Trent Tube headquarters is located at 2015 Energy Drive, P.O. Box 77, East Troy, Wisconsin, 53120-0077, phone (800) 558-2260, web site: http://www.trent-tube.com. Trent Tube, at the time of operation, was owned by Colt Industries, Inc. It was sold to Crucible Materials Corporation in 1985 (reference #11).

2.2 Operations and Hazardous Waste Management

The manufacturing portion of the building measures approximately 300 feet by 130 feet giving a total square footage of 39, 000. Operations at the facility involved the manufacture of stainless steel tubing. Details of the manufacturing process are not available. Operations at the facility generated hazardous waste consisting of waste oil, spent organic solvents, degreaser agent 1,1,1 trichloroethane (TCA), and waste pickle liquor. The waste oil was stored in ten 20-gallon steel containers. Spent solvents and degreasers were stored in 55-gallon drums in two hazardous waste storage areas with a total capacity of 20 drums. The waste pickle liquor was stored in two 2,000-gallon indoor tanks.

The manufacturing area of the plant included a degreasing tank containing 1,1,1 trichloroethane, process and acid treatment solution tanks containing pickle liquor, acid and solvent storage, kerosene storage, liquid hydrogen and liquid ammonia storage, lubricant storage, compressed nitrogen cylinder storage, and a laboratory.

To the rear, or south side of the plant, was a storage area for waste solvents (SWMU #1). Waste oil was stored in a 200 gallon waste oil tank outside the building in the southwest portion of the yard (SWMU #2). The degreasing tank (SWMU #4) and two waste pickle liquor tanks (SWMU #3) were inside the building. See Figure 2 for exact locations of these units.

2.3 Operational History

late 1950s The facility was constructed in the late 1950s by the Trent Tube Company.

August 1980	Notification of Hazardous Waste Activity form was filed with the US EPA. (see attachment #4)
November 1980	RCRA Part A was submitted to EPA for treatment and storage of hazardous waste.
April 6, 1981	The facility was issued an Interim Status Document (ISD) by the Department of Health Services (DHS, now known as DTSC) authorizing the treatment and storage of hazardous wastes.
July 22, 1983	In a letter from Trent Tube to DHS dated July 22, 1983, Trent Tube stated that the spent pickle liquor contains "chromium (6+) generally less than 500 mg/l; and nickel, generally 1300-1800 mg/l." (reference #5)
August 26, 1983	Trent Tube submits Part B Permit Application to DHS. A Closure Plan was included as part of the application.
April 1, 1984	Revised Closure Plan submitted by Trent Tube.
May 4, 1984	Memo from RWQCB, Santa Ana Region, to DHS, concerning an inspection by the RWQCB which found small areas of soil contaminated with waste oil on the south side of the plant. (reference #2)
May 11, 1984	Trent Tube ceased all manufacturing at the site. Immediately thereafter, the facility began implementation of the Closure Plan. Closure included removing all drums of wastes and virgin chemicals; washing and rinsing of the degreaser tank; neutralization and disposal of pickle liquor to a Class I landfill; dismantling and removal of the pickling tanks and exhaust ducts; removal of ammonia and associated storage tanks by suppliers; removal and disposal of contaminated soil behind the building as requested by the Regional Water Quality Control Board (reference #3). Two small areas of soil stained by waste oil were excavated to a depth of three feet and the excavations were filled with clean crushed stone (reference #4). There are no references in the record to soil sampling during these activities. Reports on this initial excavation work were not found during the file review process.
December 3, 1984	Letter sent to Trent Tube from DHS advised that the Closure Plan was inadequate and that a written Site Assessment Plan should be submitted.

December 18, 1984	Site Assessment Plan was prepared by Calocerinos & Spina and submitted to DHS (reference #4). This plan described details for collecting soil samples in the area behind (south) of the plant, and the analysis of these samples for organic solvent contamination.
December 26, 1984	Site assessment work began. Soil samples were taken at three depths at three different locations. The analysis was targeted for 1,1,1 trichloroethane and methylene chloride (SW-846 Method 601) and benzene, toluene, and xylene (SW-846 Method 602).
January 18, 1985	The results of the Site Assessment were submitted. Fourteen borings were completed to the rear (south side) of the facility and three additional borings were completed at "clean" background locations. Sampling was completed to a maximum depth of 10 feet. A portable OVM (organic vapor meter) was also employed to pinpoint areas of contamination. Sample analysis showed soil contaminated with organics (TCA, TCE, and Xylene) to a depth of five feet. This document also proposed a Site Remediation Plan which included remediation measures consisting of excavation and disposal of heavily impacted soils (5 ppm to 780 ppm organic solvent), and excavation, aeration, and replacement of lightly impacted soils (up to 5 ppm organic solvent). The Site Remediation Plan indicate that the proposed remediation measures were the "minimum necessary" and that the proximity of structures would limit the extent of soil excavation. The Site Remediation Plan was approved by DHS and the South Coast Air Quality Management District (SCAQMD).
February 1, 1985	Trent Tube submits an amendment to an application to the SCAQMD to excavate and aerate solvent contaminated soils.
February 11, 1985	Excavation activities commenced as detailed in the Site Remediation Plan. Four truckloads (57 cubic yards) of contaminated soil from the rear of the building (south side) were excavated and transported to the Casmalia Resource Landfill.
February 25, 1985	Sixteen additional truckloads of soil were excavated from the rear of the building (south side) between the Trent Tube fence and large drainage channel behind the site. The soil, containing up to 5 ppm organic solvent, was spread in a thin layer for aeration in the area to the east of the building.

March 1, 1985	The aerated soil was placed back into the excavated area. The aerated soil comprises the top 2 feet of the area excavated. Approximately 40 cubic yards of soil from a hot-spot (tested at 780 ppm TCA) was removed and hauled to a Class I disposal site. No record of post-excavation confirmation sampling was found.
April 16, 1985	DHS sends a letter to Trent Tube (reference #10) stating that facility closure is approved based on the Professional Engineer's Certification of Closure submitted by Calocerinos & Spina, March 11,1985 (reference #2). This letter states that "this acknowledgment of facility closure is not certification that your facility does not pose any environmental or public health threat nor does it remove any liability associated with past hazardous waste management practices at the site."

3.0 ENVIRONMENTAL SETTING

3.1 Site Location and Features

Trent tube is located in a light industrial/commercial area. There are no residences bordering the property. The manufacturing building measures approximately 300 feet long and 130 feet wide. The building is concrete block with a concrete floor. Areas outside the building are paved with asphalt.

To the north of the site is East Orangethorpe Avenue, to the east is a rental storage space facility, to the south is a drainage culvert, and to the west is Lewellyn Avenue.

Based on information received from the California Department of Fish and Game's Natural Diversity Data Base, no endangered or threatened plants or animals are known to exist within one half mile of the facility. (reference #9)

3.2 Surface Water

A drainage culvert, known as Carbon Creek, runs east-west to the south of the property. Carbon Creek flows into the San Gabriel River. Neither Carbon Creek nor San Gabriel River is used as a drinking water source for Orange County Water District. (reference #1)

3.3 Site Hydrology

The site is located in the coastal plain and is underlain by three major aquifer systems: the lower, middle and upper aquifers. The upper aquifer system consists of sediments and upper Pleistocene and younger alluvium to a thickness of 800 feet and is formed by sediments of the La Habra Formation, stream terrace deposits, older alluvium, and recent alluvium. The middle aquifer system is comprised of lower Pleistocene sediments from the San Pedro and Coyote Hills formations. The middle aquifer system is the major groundwater supply for the Orange County basin and contains multiple layers of gravelly sediments. The lower aquifer is comprised of Pleistocene and older sediments, bearing fresh water to a depth of almost 4,000 feet. Interconnection of the upper and middle water-bearing strata is through recent alluvium, limited by the Norwald fault zone. (reference #1)

Soils in the region consist of alluvial sand and silty sand. Groundwater beneath the site is found at approximately 80 feet below ground surface. Groundwater flow is to the southwest. Annual net precipitation is the Fullerton area is 5.19 inches (reference #1).

The City of Fullerton and the surrounding cities of Anaheim and Orange use groundwater in the area as a source for a portion of their drinking water. The aquifer beneath the site is part of the groundwater system used for this drinking water. The Orange County Water District manages wells in the area.

3.4 Human Health and Environmental Risk

3.4.1 Human Health Risk

Residential population estimates for the Trent Tube area, based on 1990 Census Data, are the following:

1 mile radius: 18,090
2 mile radius: 87,350

Potential for significant air releases from the existing site are low based on: (1) levels of VOCs found in soils around the plant during closure operations; (2) the facility has been closed since 1985 and therefore most volatiles in surface soils have evaporated; (3) the site is now paved; and (4) no hazardous materials are currently stored at the site.

Surface water drainage around the site empties to the storm sewer which drains to Carbon Creek, a concrete paved culvert which drains to the San Gabriel River. The San Gabriel River is not a regulated drinking water source. Swimming, bathing, fish ingestion, or nonregulated drinking by humans may have posed a risk to human health if a spill occurred when the facility was operating. There is currently no potential of risk to human health from the facility since the facility has been closed for years.

Groundwater in the area is used for drinking. Groundwater wells are monitored by the Orange County Water District. Groundwater analyses performed by the Orange County Water District (reference #7) have shown contaminated groundwater in wells downgradient (southwest), upgradient (north and northeast), and northwest of the site (See figure 3).

- Downgradient well identified as FM-3 tests positive for PCE. However the PCE contamination has been decreasing in recent years (8.7 ppb in 1995 to 2.5 ppb in 1999). Trace amounts of TCE were detected in this well in 1995 and 1996. No TCE has been detected in this well since 1997.

- Upgradient well FFS-1 tests positive for PCE (12.4 ppb in 1998).

- Upgradient well F-KIM2 tests positive for PCE (3.2 ppb in 1999).

- To the northwest, well FM-5 tests positive for TCE (170 ppb in 1995 and 104 ppb in 1999). This well also shows increasing levels of PCE (3.1 ppb in 1995 and 16.2 ppb in 1999) as well as DCE (10.2 ppb in 1997) and traces of DCA (DCA and DCE are breakdown products of PCA and TCE, respectively).

The Maximum Contaminant Levels (MCLs) for both PCE and TCE in drinking water is currently 5 ppb. The water districts cleanup goal is zero, or non-detect, for these constituents.

These groundwater results suggest that Trent Tube may have, and may still be, contributing to groundwater contamination in the area due to the fact that two contaminants found in the groundwater, PCE and TCE, were used at Trent Tube and were found in contaminated soils at the site. The detection of PCE and TCE in wells upgradient of Trent Tube suggests the possibility of other sources for the contamination in the groundwater, however, until a more complete groundwater evaluation of the area is completed, including seasonal variations in groundwater flow direction, it is difficult to determine the source or sources of groundwater contamination in the area.

Groundwater extracted from wells in the vicinity of the former Trent Tube facility poses a potential health risk to those consuming or in contact with it (reference #8).

3.4.2 Environmental Risk

The principle environmental risk is due to contaminants left at the site from past spills and leaks.

Groundwater is an environmental resource which needs to be protected. In this case, groundwater is a primary source of drinking water for the area. Soils contaminated with volatile organic compounds (VOCs) at the site, if present, have a high potential for impacting groundwater.

Surface water from the facility drains to Carbon Creek which runs along the south boundary of the facility. This culvert empties into the San Gabriel River. There is currently no potential for contamination to surface water from the Trent Tube site since (1) the facility has been closed since 1985; (2) the site is paved; and (3) no hazardous materials are currently stored at the site.

No federal or State protected species of animals or plants are known to exist in the vicinity of the Trent Tube site. (reference #9)

OCVOCEF 000017

4.0 DESCRIPTION OF SWMUs and AOCs.

The following areas have been designated Solid Waste Management Units (SWMUs) at the facility:

SWMU #1: DRUM STORAGE AREAS - Two drum storage areas were located outside, to the south of the Trent Tube building. (see figure #2)

Total Capacity: 20 55-gallon drums (1100 gallons)

Dates of Operation: late 1950s to May 11, 1984.

Waste Managed: Solvents, degreasers including TCA, and kerosene. Analyses of contaminated soils in the area indicate the presence of tetrachloroethylene (PCE) and trichloroethylene (TCE) (reference #6). Therefore, it is very likely that these chemicals were stored in the storage areas.

Containment: The storage areas originally were concrete bermed impoundments. The impoundments were removed. The areas are currently paved with asphalt.

History of Releases: Soil sampling within 5 feet of this SWMU revealed soils contaminated with TCA (1.5 ppm), PCE (1.7 ppm), ethylbenzene (1.7 ppm), and xylene (2.7 ppm). No sampling was performed directly under these areas (reference #6).

Potential for Impacts to the Environment: Due to the high mobility of solvents in soil, residual soil contamination may have, and may still be, impacting groundwater. The Site Assessment Report of January 18, 1985 found organic solvents at levels stated in the previous paragraph. Groundwater in the area has been found to contain TCE and PCE solvent contamination. Surface water is not expected to be impacted because the site is currently paved and no hazardous materials are currently stored at the site. This SWMU is associated with, and bordering on AOC #1.

SWMU #2: WASTE OIL TANKS - Waste oil was stored in two 200 gallon steel unlined waste oil tanks outside the building next to the south facing wall (reference #1). The oblong tanks measured 31" wide by 36" wide by 45" deep. No piping or valves were associated with these tanks. The tanks were surrounded by a cement

brick and concrete wall with a capacity of 3700 gallons.

Capacity: 200 gallons

Dates of Operation: late 1950s to May 11, 1984.

Waste Managed: The waste oil tanks held waste lubricant oil. Additional contaminants contained in the oil are unknown, however, it is assumed that the oil would contain metals from the machining processes. Contaminants would therefore include chrome and nickel. If waste oil from vehicles was added to this tank, lead may also have been present.

History of Release: Two loci of contamination were located within the area of the waste oil tanks. Soil from these areas was removed on May 11, 1984 (see Section 2.4 Operation History).

Containment: The steel tanks were originally located in a concrete impoundment. The impoundment was removed. The area is currently paved with asphalt.

Potential for Impacts to the Environment: Residual waste oil may remain in the area around this SWMU. However, oil and associated metal contaminants, do not tend to migrate quickly. Impacts are expected only in soils in the immediate area of this SWMU and are not expected to have impacted groundwater or surface water.

SWMU #3: SPENT PICKLE LIQUOR TANKS - Two 2,000-gallon aboveground tanks were located inside the southeast portion of the Trent tube building. Spent pickle liquor was neutralized inside these tanks.

Capacity: Two 2,000-gallon tanks (4000 gallons total)

Dates of Operation: 1950s to May 11, 1984.

Wastes Managed: Nitric and hydrofluoric acid were used for descaling and cleaning stainless steel tubing. The spent mixture was neutralized with ammonia inside these tanks prior to off-site disposal. The mixture contained chromium (+6), nickel, and possibly lead. Approximately 7,000 to 10,000 gallons of this waste were generated per year.

Release Controls: The tanks were located inside the building which had a concrete floor.

History of Releases: There is no known history of release. No record of soil sampling and analysis for metals was found.

Potential for Releases to the Environment: Potential exists for impacts to the surrounding soils from hydrofluoric acid, hexavalent chromium, nickel, and lead. Since this area is indoors and covered with concrete, and these contaminants are known not to migrate through soils rapidly, impacts to groundwater are not expected. Impacts to soils, if present, are expected to be in the immediate area.

SWMU #4: DEGREASING PIT - A degreasing pit measuring 13 feet by 16 feet by 7 feet deep was located inside the Trent Tube building. This pit was observed by consultants from Ecology and Environment in 1983. No other information is available. (reference #1)

Capacity: approximately 10,000 gallons

Wastes managed: Based on information on other units at the facility, wastes managed at the pit may have included TCE, TCA, and PCE.

History of Releases: There are no records of releases or any records of sampling in or near this SWMU. Groundwater in the area is known to contain TCE and PCE.

Potential for Impacts to the Environment: Solvents used in this SWMU are highly mobile and have the potential for impacting groundwater under the site. This area is indoors and covered in concrete which retards evaporation of solvents.

AOC #1: Rear (south side) of Plant Building - Soil in this area (measuring approximately 50 ft by 200 ft) was contaminated with VOCs and remediation work associated with closure may have been inadequate. Remediation included both excavation of soils for disposal at a landfill, and excavation of soils for aeration and placement back into the excavated area. Soils excavated for disposal had concentrations of up to 780 ppm TCA, 70 ppm PCE, and 70 ppm TCE. Soils with levels of up to 5 ppm organic solvents were aerated and then were placed back into the excavated areas as the top two feet of topsoil. No confirmation sampling was completed

after remediation of this area. This AOC is associated with, and borders on, SWMU #1.

Potential for Impacts to the Environment: Solvents found in soils at this AOC are highly mobile and have the potential for impacting groundwater under the site. Due to the lack of confirmation sampling, soils at the site may be currently contributing to the ground contamination. Impacts to surface water are not expected because the area is paved.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This report concludes that, as a result of past operations at the former Trent tube facility, a high potential for significant impacts to human health and the environment currently exists at this site . Factors which led to this conclusion include the following:

1) Remediation activities at the site did not include confirmation sampling of soils to ensure that aerated soils placed back into the excavated area at the rear of the building had been thoroughly remediated. These soils contained up to 5 ppm TCE and PCE.

   Groundwater in the area is used as a drinking water source and is impacted with PCE and TCE. These VOCs were employed at the site.

   Preliminary Remediation Goals from the USEPA for contaminated soils with the potential for contaminant migration to groundwater are the following :
   TCE - 3 ppb
   PCE - 3 ppb

   Therefore, the potential levels in soils are 1666 times the screening levels for soils with the potential for releases to groundwater.

2) No sampling was completed for SWMUs in the interior of the building;

3) No sampling was completed for the Waste Oil Tanks (SWMU #2); and

4) No toxic metal sampling was completed at any location at the site.

Constituents of concern identified at the facility include tetrachloroethane (PCE), trichloroethane (TCA), trichloroethylene (TCE), nitric acid, hydrofluoric acid, hexavalent chromium, nickel, lead, and waste oil. Specific recommendations to characterize soils and groundwater at the site are the following:

Drum Storage Areas (SWMU #1) and Area to the Rear of Facility (AOC #1): Since no confirmation sampling was performed after remediation of contaminated areas to the rear of the facility, it is recommended that a comprehensive soil-vapor sampling plan be developed and implemented in these areas. In addition, it is recommended that soils be sampled and analyzed for nickel, chrome, and lead. Soil must be characterized to a sufficient depth (from the surface to

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at least 10 feet below ground surface) to locate contaminated soils which may now be covered by clean fill or soils.

Waste Oil Tanks (SWMU #2): Shallow soil samples are recommended around this unit to detect possible impacts to soils. Analysis should include TPH, nickel, chrome, and lead.

Spent Pickle Liquor Tanks (SWMU #3): Concrete and shallow soil samples are recommended in and around the area of this SWMU with analysis for fluoride ion, pH, hexavalent chromium, nickel, and lead.

Degreasing Pit (SWMU #4): Concrete samples and both shallow (one foot) and deep soil samples are recommended in and around the area of this SWMU, with analysis for PCE, TCE, TCA, fluoride ion, pH, hexavalent chromium, nickel, and lead.

Groundwater: As stated in Section 3.4.1., the Orange County Water District has determined that groundwater in the area is impacted with PCE and TCE. In addition, the site is listed with the Regional Water Quality Control Board, Santa Ana Region on their "Spills, Leaks, Investigation and Cleanup (SLIC)" list (reference #12). The solvents in the groundwater were use at the Trent Tube facility and found in soils to the rear of the facility. Whether Trent Tube contributed to the groundwater contamination, and whether contaminated soil residues are still contributing to the groundwater problem, can not be ascertained at this time due to the small number of sampling wells in the vicinity. If soil-vapor tests and/or soil analysis as recommended above indicate the presence of VOCs in facility soils, it is strongly recommended that a comprehensive groundwater investigation be completed to determine the extent and sources of groundwater solvent contamination in the area.

Agency Coordination:
All activities must be coordinated with all government agencies involved including:
(1) Department of Toxic Substances Control;
(2) Regional Water Quality Control Board, Santa Ana Region; and
(3) Orange County Water District.

6.0 REFERENCES

1. Environmental Priorities Initiative Preliminary Assessment, Trent Tube Division, Fullerton Operation, 2100 East Orangethorpe Avenue, Sullerton, CA, Ecology and Environment, Inc., September 15, 1991. Files: USEPA Region 9

2. Facilities Closure Report, Trent Tube Division, Fullerton Plant, Colt Industries, Inc., 2100 E. Orangethorpe Avenue, Fullerton, CA, Calocerinos & Spina Consulting Engineers, March 11, 1985. Files: DTSC Cypress

3. Memorandum to Angelo Bellomo, Regional Administrator, Toxic Substances Control Division, Department of Health Services, Los Angeles, CA., from Regional Water Quality Control Board, Santa Ana Region, "Trent Tube Division (CAD 008325110) Closure Plan", May 4, 1984. Files: DTSC Cypress (copy contained within reference #2)

4. Site Assessment Plan, Trent Tube Plant, Fullerton, CA., Calocerinos & Spina Consulting Engineers, December 18, 1984. Files: DTSC Cypress

5. Letter from Trent Tube to DHS, Subject: Treatment Facilities, July 22, 1983. Files: DTSC Cypress.

6. Site Remediation Plan, Trent Tube Plant, Fullerton, CA., Calocerinos & Spina Consulting Engineers, January 18, 1985. Files: DTSC Cypress

7. Information Request Transmittal, Former Trent Tube. Prepared by Orange County Water District, 10500 Ellis Avenue, Fountain Valley, California, June 28, 1999, Request Number 3518, Search Years 1995-present.

8. Telephone conversation between Nira Yamachika, Orange County Water District, Santa Ana, California and Andrew Berna-Hicks, DTSC, July 1999.

9. State of California Department of Fish and Game, "Natural Diversity Database (Rarefind)," Anaheim Quadrangle, 9/7/99

10. Certification of Closure, Trent Tube Fullerton Facility, Department of Health Services, Los Angeles Office, April 16, 1985. Files: DTSC Cypress

11. Telephone conversation between Harvey Simmons, General Council, Crucible Materials Corporation, Syracuse, New York and Andrew Berna-Hicks, DTSC, October 6, 1999.

12. Maneck Chichgor, Regional Water Quality Control Board, Santa Ana Region

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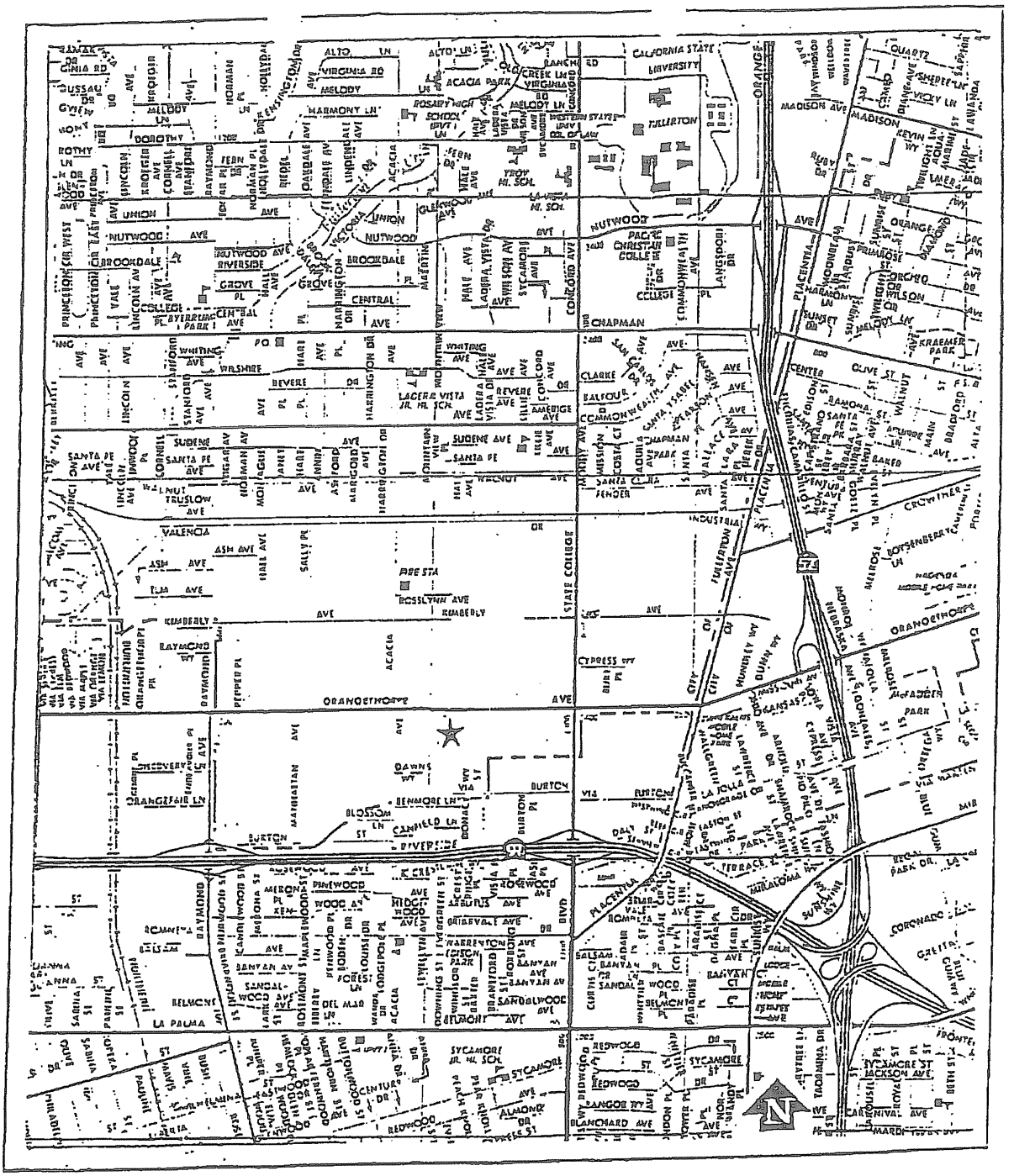


Figure 1

--SITE LOCATION--

TRENT TUBE DIVISION

2100 East Orangethorpe Avenue

Fullerton, CA 92634

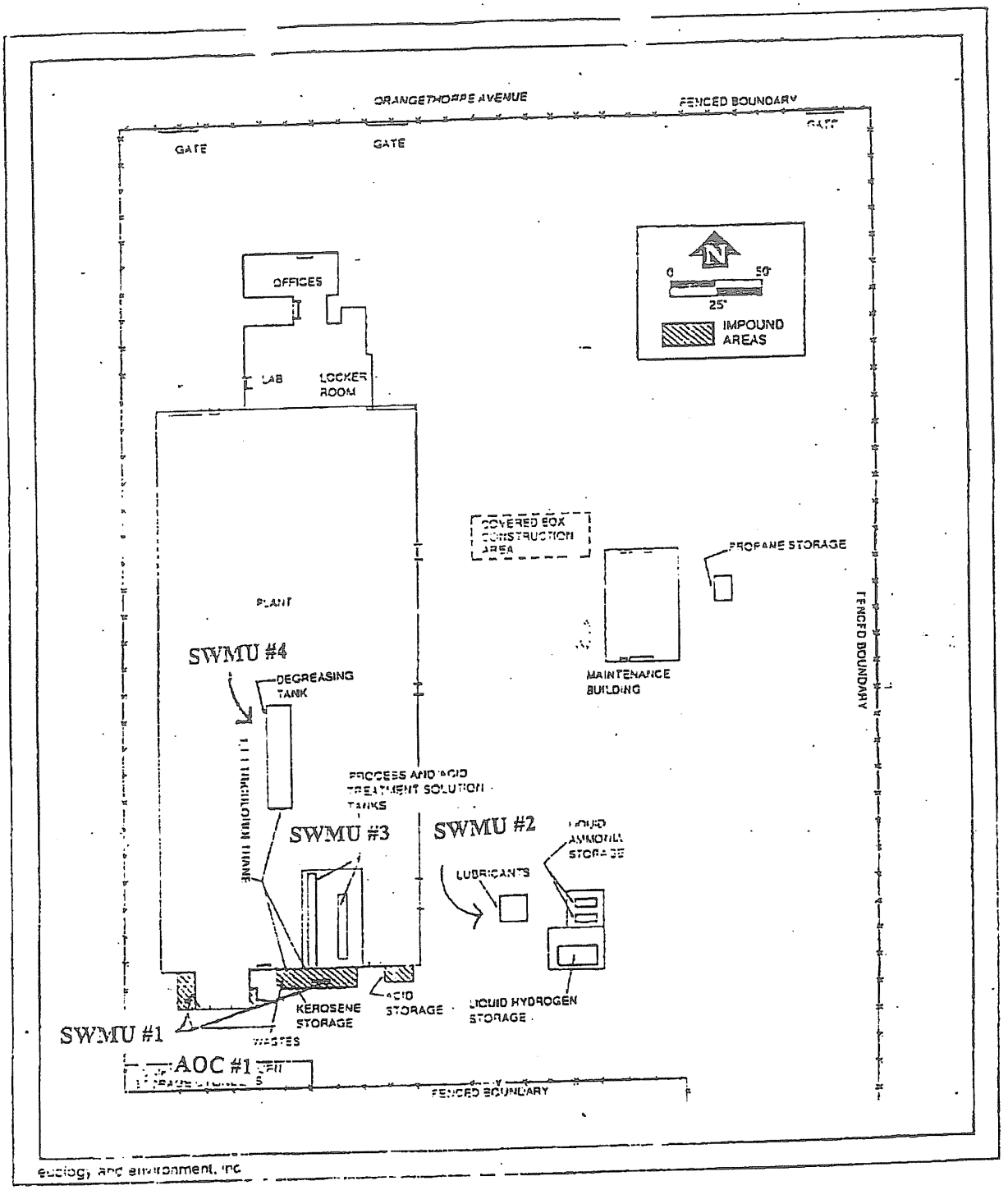
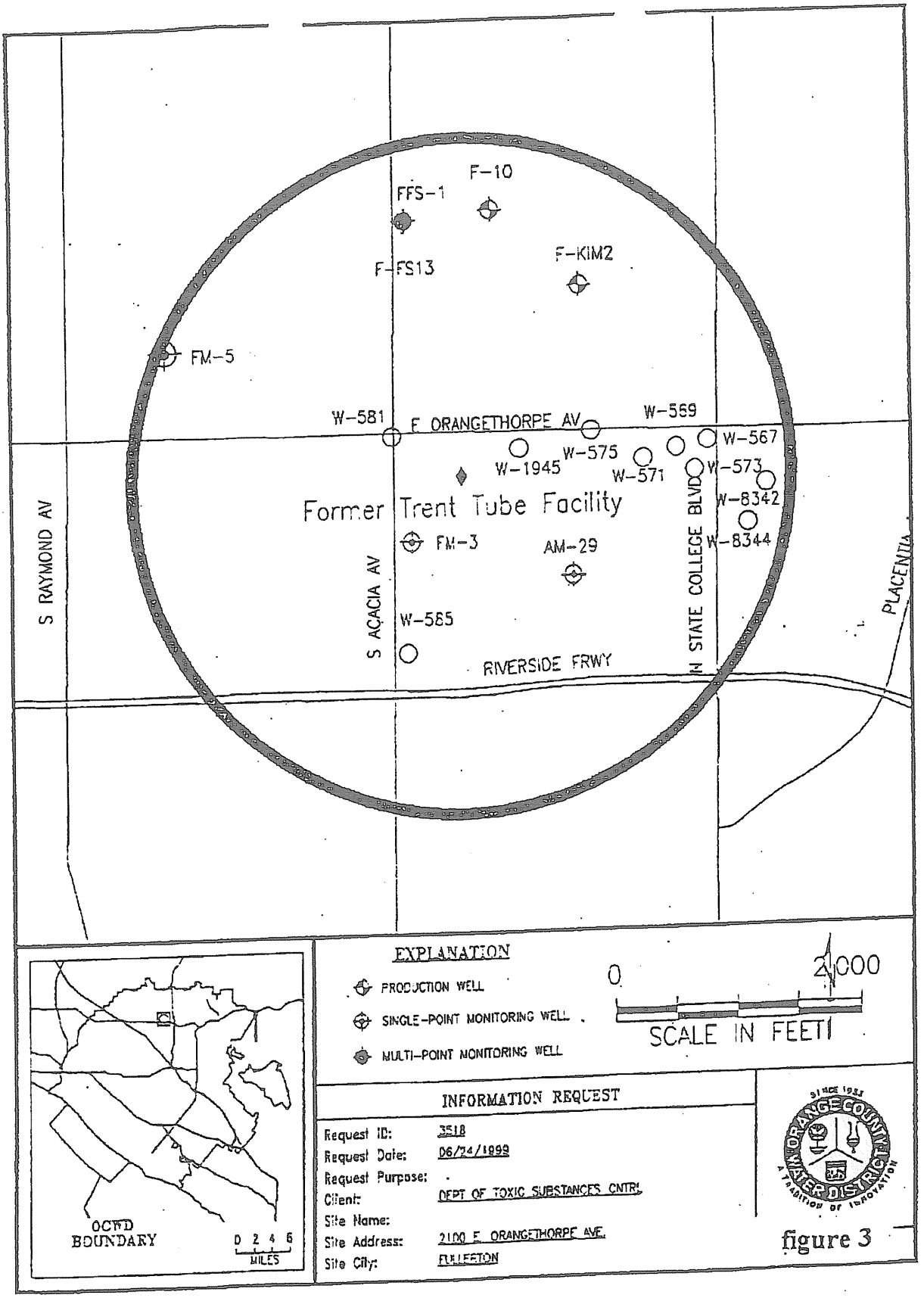


Figure 2

FACILITY MAP
TRENT TUBE FULLERTON
2100 East Orangethorpe Avenue
Fullerton, California


F-10
FFS-1
F-KIM2
F-FS13
FM-5
W-581
E ORANGETHORPE AV
W-569
W-567
W-575
W-1945
W-571
W-573
W-8342
W-8344
Former Trent Tube Facility
FM-3
AM-29
S RAYMOND AV
S ACACIA AV
N STATE COLLEGE BLVD
PLACENTIA
W-585
RIVERSIDE FRWY
OCWD BOUNDARY
0 2 4 6 MILES
EXPLANATION
PRODUCTION WELL
SINGLE-POINT MONITORING WELL
MULTI-POINT MONITORING WELL
0
2,000
SCALE IN FEET
INFORMATION REQUEST
Request ID: 3518
Request Date: 06/24/1999
Request Purpose:
Client: DEPT OF TOXIC SUBSTANCES CNTRL
Site Name:
Site Address: 2100 E. ORANGETHORPE AVE.
Site City: FULLERTON
ORANGE COUNTY WATER DISTRICT
figure 3

Trent Tube Division, Fullerton, CA
RCRA Facility Assessment

ATTACHMENT #1

to: file
from: Andrew Berna-Hicks
subject: Site Visit, Trent Tube Division, Fullerton, California

On February 11, 1999 I visited the former site of the Trent Tube Division facility. The building is currently used to store motor homes and boats and is known as the Executive RV Center. The building is the same one occupied by Trent Tube. The building has a concrete floor which appears to be in good condition with no obvious cracking. Whether this is the original floor was undetermined. Also, the presence of many motor homes made inspection of the floor problematic. The rear area was paved with asphalt and also used to store motor homes and boats. The front rooms of the building are occupied by an auto sales and leasing firm known as Autocar. These rooms were originally office space for Trent Tube and there is no record of hazardous material activity in these areas.

ATTACHMENT 2
PHOTOGRAPHS

Photo #1 - front of building, former office for Trent Tube

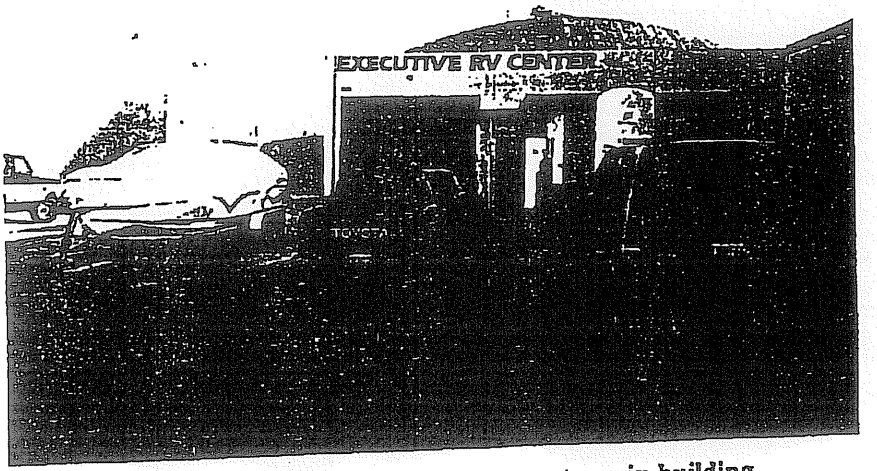


Photo #2 - east side of office, entrance to main building

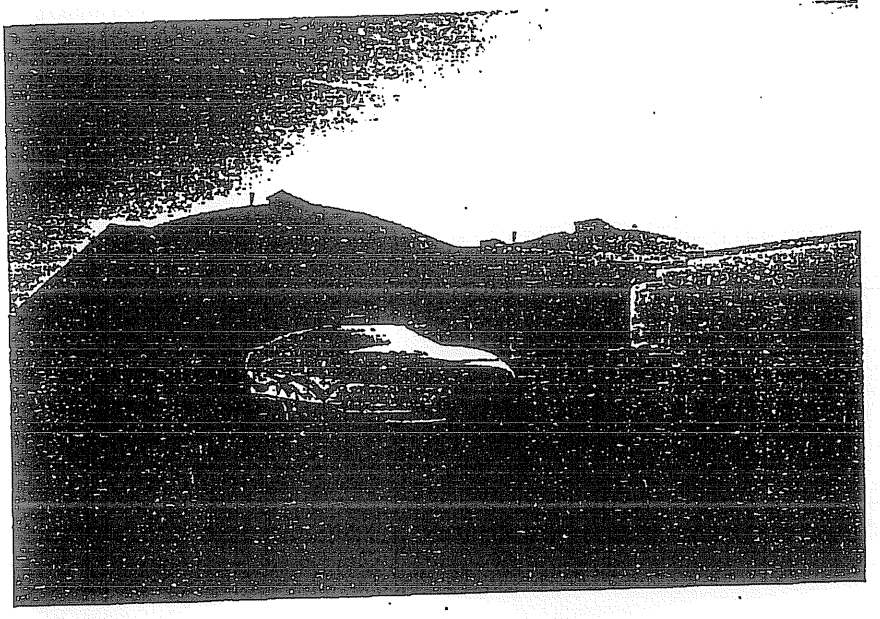


Photo #3 - east side of building

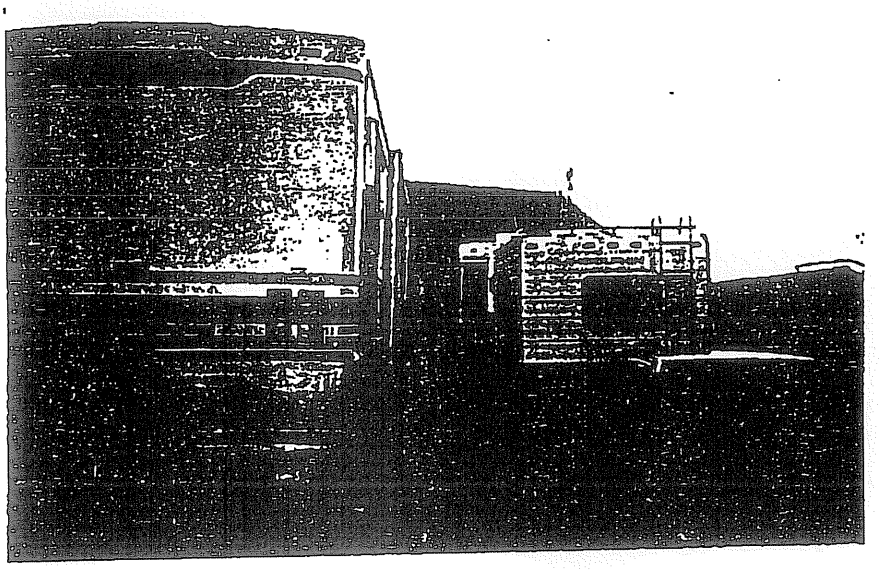


Photo #4 - rear of building

ATTACHMENT 3

ENVIRONMENTAL PRIORITIES INITIATIVE
PRELIMINARY ASSESSMENT
TRENT TUBE DIVISION

prepared by

ECOLOGY AND ENVIRONMENT

September 15, 1991

ENVIRONMENTAL PRIORITIES INITIATIVE
PRELIMINARY ASSESSMENT

Purpose: RCRA Preliminary Assessment

Site: Trent Tube Division, Fullerton Operation
2100 East Orangethorpe Avenue
Fullerton, California 92634
Orange County

Site EPA ID Number: CAD008325110

TDD Number: F9-9105-067

Program Account Number: FCA1806RAA

FIT Investigators: Abby Goldenberg

Date of Drive-By: July 9, 1991

Report Prepared By: Abby Goldenberg

Report Date: September 15, 1991

Through: Lorene Flaming

FIT Review/Concurrence: James A. James 9/11/91

Submitted To: Rachel Loftin
Site Assessment Manager
EPA Region IX

ecology and environment, inc.
160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811
International Specialists in the Environment

recycled paper

1. INTRODUCTION

As part of its Environmental Priorities Initiative (EPI) program, the U.S. Environmental Protection Agency (EPA) has requested Ecology and Environment, Inc.'s Field Investigation Team (E & E FIT) to conduct a Preliminary Assessment (PA) of Trent Tube Division Fullerton, located at 2100 East Orangethorpe Avenue, Fullerton, California.

The EPI program integrates the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the 1984 Hazardous and Solid Waste Amendments (HSWA), with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), in order to set priorities for cleanup of the most environmentally significant sites first. The Preliminary Assessment is conducted using CERCLA Hazard Ranking System (HRS) criteria to determine the site's eligibility for inclusion on the National Priorities List and, thus, assists in prioritizing facilities for the RCRA program.

2. SITE DESCRIPTION

2.1 SITE LOCATION AND OWNER/OPERATOR HISTORY

The Trent Tube Division Fullerton Operation (Trent Tube) site is located at 2100 East Orangethorpe Avenue, Fullerton, California (T. 4 S., R. 10 W., sec. 2, San Bernardino Baseline and Meridian; lat. 33°51'30" N., long. 117°53'03" W.) (see Figure 1, Site Location Map) (1,25). The 5.2-acre Trent Tube site is located in a mixed light industrial and commercial area in Orange County (35). The site is adjacent to Vista Paint Company (EPA ID# CAT080033277) (3,16).

The facility was constructed in the late 1950s by the Trent Tube Company (36). Trent Tube manufactured stainless steel tubing and customized prefabricated tubing to customer specifications (2). On May 11, 1984 all manufacturing on the site ceased (3). In 1985, Colt Industries sold the site to Howard K. Barlow (36). The site is currently leased to several companies including Auto Car Leasing and Executive RV Center (see Figure 2, Facility Map) (4,25,37).

2.2 FACILITY PROCESSES/WASTE MANAGEMENT

The following hazardous wastes were generated from operations at the facility until 1984: waste oil, spent solvents, and waste pickle liquor. The waste oil was stored in a 200-gallon steel tank. The spent solvents were stored in 55-gallon drums in two hazardous waste storage areas. The waste pickle liquor was stored in two 2,000-gallon indoor tanks. All waste was reportedly sent to a Class I landfill (7). Additional historical information about facility processes at the Trent Tube site was not available to FIT.

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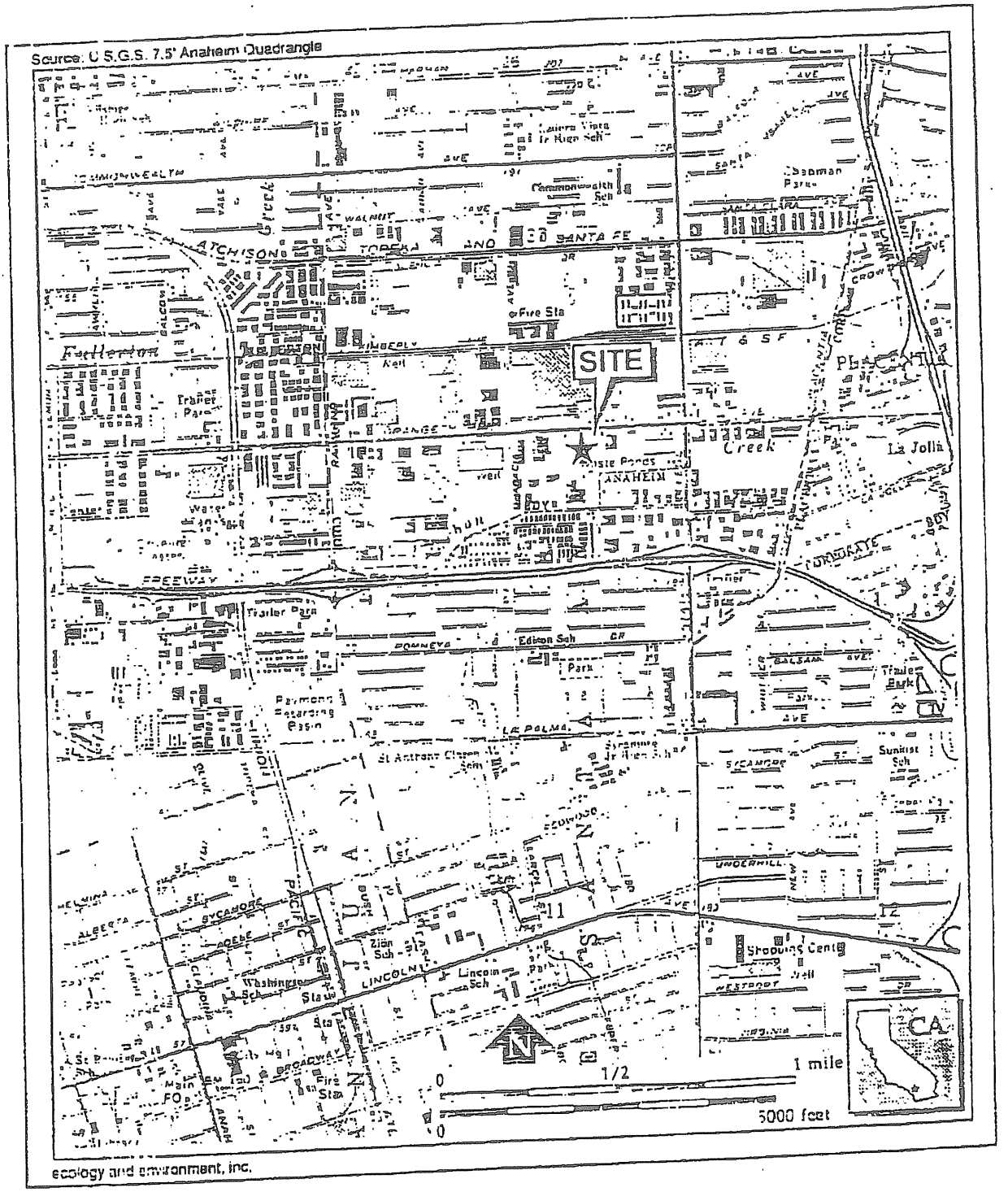

Figure 1

SITE LOCATION MAP
TRENT TUBE FULLERTON
2100 East Orangethorpe Avenue
Fullerton, California

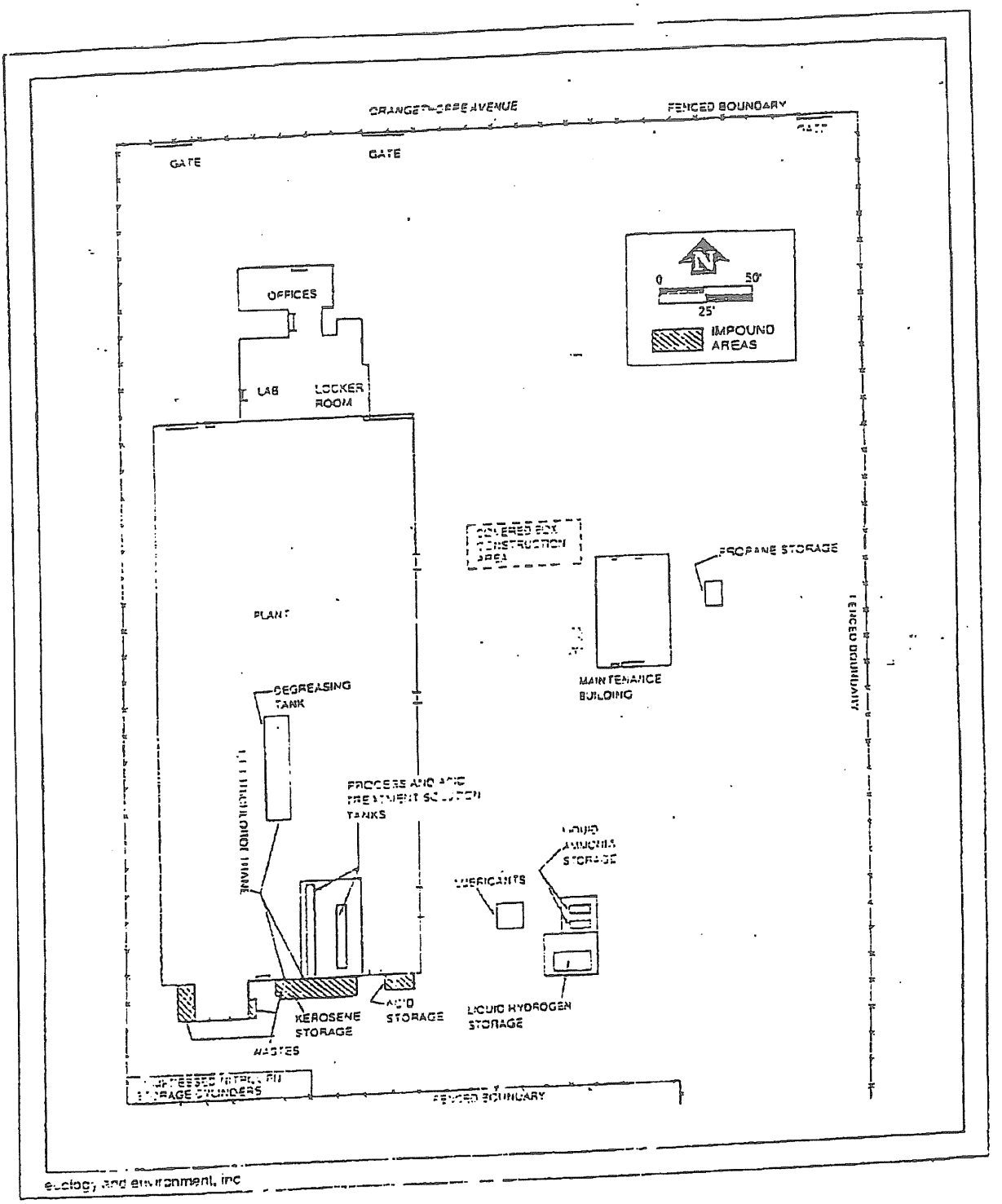

Figure 2

FACILITY MAP
TRENT TUBE FULLERTON
2100 East Orangethorpe Avenue
Fullerton, California

The Trent Tube site is currently leased to several companies including Auto Car Leasing and Executive RV Center by LaBarron Investments (4). Currently, the only wastes known to be generated on the site are approximately 200 gallons of waste oil each year from Executive RV Center (37). Auto Car Leasing and Executive RV Center are not listed in the Resource Conservation and Recovery Act (RCRA) Data Base dated April 22, 1991 (16).

3. REGULATORY INVOLVEMENT

3.1 U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

A Notification of Hazardous Waste Activity was filed for the Trent Tube site in August 1980 (16). An RCRA Part A hazardous waste facility permit application was submitted to EPA in November 1980 for treatment and storage of hazardous waste (2). EPA rescinded the Part A for Trent Tube in August 1987 because the site had been clean-closed (6).

3.2 CALIFORNIA DEPARTMENT OF HEALTH SERVICES (DHS)

On April 6, 1981, an Interium Status Document (ISD) was issued by DHS for the Trent Tube site. The ISD authorized the treatment and storage of hazardous wastes on plant premises and required the preparation of an Operations Plan, a Contingency Plan, and a Closure Plan (3,8). On August 26, 1983 an Operations Plan for hazardous waste at the Trent Tube site was submitted to DHS which included a Closure Plan dated February 22, 1983 (3,7).

In December 1984, DHS required Trent Tube to prepare a Site Assessment Plan (SAP) to address inadequate closure of the facility (9). The SAP, submitted on December 18, 1984, outlined plans for obtaining borings and analysis of soil samples (10). The sampling results indicated the presence of organic contamination near the Trent Tube building and at higher levels near the back fence. A Site Remediation Plan was submitted to DHS on January 18, 1985 (3,35). In February 1985, 20 truckloads of contaminated soil were excavated and sent to the Casmalia Resource Management landfill in Casmalia, California. Sixteen truckloads of clean fill were backfilled into the hole and compacted (3). Closure certification was submitted to DHS on March 11, 1985 and approved by DHS on April 16, 1985 (5). DHS conducted a post-closure inspection of Trent Tube in September 1986 (11).

The Trent Tube site is not listed in the California Expenditure Plan for the Hazardous Substance Cleanup Bond Act of 1984 (revised 1989).

3.3 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

RWQCB reviewed the Closure Plan for Trent Tube and recommended that soil contaminated with oil at the south side of the plant be removed to a depth of 3 feet during closure (3). These areas were removed and filled with clean crushed stone (10). There is no other known RWQCB involvement at the Trent Tube site (13).

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3.4 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)

Trent Tube submitted an application for an Excavation Permit to SCAQMD to conduct remedial work, which was issued on February 8, 1985 (3). Trent Tube possessed operating permits from SCAQMD for a degreaser, a scrubber, two storage tanks, and a flowcoater (7,14).

3.5 OTHER AGENCY INVOLVEMENT

The Orange County Health Care Agency inspected the Trent Tube site on April 15, 1985. The inspection report indicated that the site was not in operation (15). There are no other known agencies involved at the Trent Tube site.

4. DESCRIPTIONS OF INDIVIDUAL SOLID WASTE MANAGEMENT UNITS

Distinct Solid Waste Management Units (SWMUs) have been identified to evaluate potential on-site sources of releases to air, surface water, groundwater, and soil. A SWMU is defined as any discernible waste management unit at a facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of solid and/or hazardous waste. As a result of this Preliminary Assessment, FIT has identified three significant SWMUs at the site. It appears that one of these units is RCRA-regulated. Additional SWMUs may exist.

4.1 DRUM STORAGE AREAS

Unit Description: Two outdoor drum storage areas were formerly located at the southern portion of the Trent Tube facility. A maximum of 20 drums were stored in the storage areas at one time (7).

Date of Start-up: The date of start-up is unknown. The facility began operation in the late 1950s (36).

Date of Closure: The facility ceased operation on May 11, 1984 (3). The site was certified clean-closed in April 1985 (5).

Waste Managed: Waste solvents including 1,1,1-trichloroethane (TCA), kerosene, and mineral spirits were stored in 55-gallon drums in the storage areas. Approximately 800 to 1,300 gallons of spent TCA and 300 to 400 gallons of other spent solvents were generated each year (7).

Release Controls: Drums were stored in cement and concrete bermed impoundments (7).

History of Releases: The Site Assessment sampling results indicated the presence of organic contamination including TCA, tetrachloroethylene (PCE), and trichloroethylene (TCE) in two areas at the Trent Tube site (3). The sample locations appear to be near the location of the drum storage areas.

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4.2 WASTE OIL STORAGE TANK

Unit Description: A 200-gallon steel tank was used to store waste oil at the Trent Tube site (7). The waste oil storage tank is located outside the building in the southwest portion of the site (2).

Date of Start-up: The date of start-up is unknown. The facility began operation in the late 1950s (36).

Date of Closure: The facility ceased operation on May 11, 1984 (3). The site was certified clean-closed in April 1985 (5).

Waste Managed: Waste lubricant oil was stored in the waste oil storage tank. Approximately 300 gallons of waste oil were generated each year. The oil was picked up every one to three months by a vacuum truck and taken to a Class I landfill (7).

Release Controls: The unlined steel tank was located in a concrete impoundment (7).

History of Releases: There were two areas of soil contaminated with oil at the Trent Tube site (12). These areas of contamination appear to be located near the waste oil tank.

4.3 SPENT PICKLE LIQUOR TANKS

Unit Description: Two 2,000-gallon tanks were located inside the southeast portion of the Trent Tube building. Spent pickle liquor was neutralized inside the tanks. Every three to five months the neutralized liquid was picked up and disposed of in liquid form in a Class I landfill (2,7).

Date of Start-up: The date of start-up is unknown.

Date of Closure: The facility ceased operation on May 11, 1984 (3). The facility was certified clean-closed in April 1985 (5).

Waste Managed: Mixed nitric and hydrofluoric acid was used for descaling and cleaning stainless steel tubing (2). The spent acid mixture was neutralized with ammonia inside the tanks prior to disposal. The mixture is a RCRA listed waste (K062) and contains lead and chromium (VI). Approximately 7,000 to 10,000 gallons per year were generated (7). -CR6

Release Controls: The tanks were located inside the Trent Tube building (7).

History of Releases: There is no known history of releases. No information was available to FIT on sampling for metals.

4.4 AREA OF CONCERN

A degreasing pit which measured 13 feet wide by 16 feet long by 7 feet deep was located inside the Trent Tube building. It was present in 1983; however, no other information about the pit was available to FIT. No sampling information was available to FIT.

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5. HRS FACTORS

The Hazard Ranking System (HRS) is a scoring system used to assess the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). FIT has evaluated the following HRS factors relative to this site.

5.1 WASTE TYPE AND QUANTITY

The known waste streams generated annually at the Trent Tube include: approximately 1,200 gallons of spent solvents, 300 gallons of waste oil, and 7,000 to 10,000 gallons of spent pickle liquor containing lead and chromium VI (see Section 4 for details) (7). Soil sampling to a depth of 10.5 feet below ground surface detected TCA, PCE, TCE. TCA was detected at 780 ppm. Twenty truckloads of contaminated soil were excavated in 1985 and transported to a treatment, storage or disposal facility (TSDF) (3).

5.2 GROUNDWATER

The Trent Tube site is located in the coastal plain and is underlain by three major aquifer systems, the lower, middle and upper aquifers. The upper aquifer system consists of sediments of upper Pleistocene and younger alluvium to a thickness of 800 feet and is formed by sediments of the La Habra Formation, stream terrace deposits, older alluvium, and recent alluvium. The middle aquifer system is comprised of lower Pleistocene sediments from the San Pedro and Coyote Hills formations. The middle aquifer system is the major groundwater supply for the Orange County basin and contains multiple layers of gravelly sediments. The lower aquifer is comprised of Pleistocene and older sediments, bearing fresh water to a depth of almost 4,000 feet. Interconnection of the upper and middle water-bearing strata is through recent alluvium, limited by the Norwalk fault zone (17).

Soils in the region consist of alluvial sand and silty sand (18). Groundwater beneath the site is found at approximately 80 feet below ground surface (bgs) (3). Groundwater flow is to the southwest (17,20). Annual net precipitation in the Fullerton area is 5.19 inches (19).

Water for the region is supplied by five water purveyors. These include the Yorba Linda Water District, City of Anaheim, City of Fullerton, City of Orange, and Southern California Water Company (20,21,24,27,28).

The Yorba Linda Water District serves approximately 60,000 people. They have seven active wells in a blended system. The wells provide 45 percent of the drinking water supply. The remaining 55 percent of their water supply is imported from the Metropolitan Water District (MWD) (20).

The City of Anaheim uses approximately 70 percent groundwater in its drinking water system. There are 35 wells in the system. The well system supplies approximately 207,000 people with water (21,22,23).

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The City of Fullerton gets 65 percent of its drinking water from municipal wells and 35 percent from MWD. Water from these two sources is not blended. Water purchased from the district serves the northern part of the city and the wells serve the southern part. The population of Fullerton is 112,000. The 11-well system is interconnected and serves approximately 72,800 people (24,26).

The City of Orange has a system of 15 wells which are blended with imported water to serve a population of 107,000. No single source provides more than 40 percent of the system's supply. Seventy percent of the water comes from wells and thirty percent is imported (27)

Three of Southern California Water Company's six wells are located in the Placentia area. Approximately 20,000 people in the southern part of Placentia are served by groundwater. The northern part is served mainly by MWD water (28).

A release of contaminants to the groundwater has been not documented at the Trent Tube site. A potential exists for a release to groundwater due to the depth to groundwater and the presence of soil contamination. Twenty truckloads of soil were removed, however it is not known in post-removal confirmation samples were taken (17).

5.3 SURFACE WATER

The only surface water body located within 2 miles of the Trent Tube site is Carbon Creek. There are no beneficial uses of Carbon Creek except flood control (29,30). Carbon Creek flows into the San Gabriel River which is also not used for drinking or fishing (1,29,30).

The Trent Tube site is located in a Zone B floodplain. Zone B is defined as areas between the 100-year and 500-year floodplain (7). The 2-year, 24-hour rainfall for the Fullerton area is 2.5 inches (32).

5.4 AIR

A release of contaminants to the air has not been documented from the Trent Tube site. The potential to release is low because the site is paved and the facility is no longer in operation (3,25). Wastes and contaminated soil were removed after the facility ceased operation in 1984 (3). The only known waste generated by current operators is waste oil (37).

The estimated population distribution within 4 miles of the Trent Tube site is shown in Table 1 (34). No known federal or state protected species are known to exist within 4 miles of the Trent Tube site (33).

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Table 1

Distance (miles)	Population
On-site	0
Greater then 0 to 0.25	0
Greater then 0.25 to 0.5	3,428
Greater then 0.5 to 1	11,763
Greater then 1 to 2	58,413
Greater then 2 to 3	76,003
Greater then 3 to 4	96,236

5.5 SOIL EXPOSURE

There is a low potential for exposure via the soil exposure pathway because the site is paved and the Trent Tube facility is no longer in operation (3,25). Wastes and contaminated soil were removed after the facility ceased operation in 1984 (3). The population located within 1 mile of the Trent Tube site is approximately 15,191 (34). While the site was operated by Trent Tube, the site was surrounded by a 6 foot chain-link fence, locked gates and an alarm system (7).

6. SUMMARY OF FIT INVESTIGATIVE ACTIVITIES

6.1 AGENCIES CONTACTED

As part of the investigation of the Trent Tube site, FIT contacted the following agencies: California Department of Health Services, California Regional Water Quality Control Board, South Coast Air Quality Management District, Orange County Environmental Management Agency, and Orange County Health Care Agency (11,14,30). Information from these sources is presented throughout this report.

6.2 RECONNAISSANCE OBSERVATIONS

In concurrence with EPA, a drive-by was conducted of the Trent Tube site on July 9, 1991. FIT observed that two companies, Auto Car Leasing and Executive RV Center, were located at the site. (See Drive-By report for details) (25).

7. EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415(b)(2)] authorizes the Environmental Protection Agency to consider emergency response actions at those sites which pose an imminent threat to human health or the environment.

The site was certified clean-closed by DHS on April 16, 1985. There is no apparent need for a referral of this site to EPA's Emergency Response Section at this time because all known wastes have been removed from the site (5).

OCVOCEF 000041

8. SUMMARY OF HRS CONSIDERATIONS

The Trent Tube Division Fullerton Operation site is located at 2100 East Orangethorpe Avenue in Fullerton, California. Trent Tube manufactured stainless steel tubing and customized prefabricated tubing. Operations ceased at the site on May 11, 1984. Closure certification was approved by the California Department of Health Services on April 16, 1985. The site is listed in the Resource Conservation and Recovery Act database as closure certified. The site is currently owned by LaBarron Investments and leased to several companies including Auto Car Leasing and Executive RV Center. The only waste known to be on site currently is waste oil.

The following are significant Hazard Ranking System factors associated with the Trent Tube site:

- Moderate waste quantity;
- The site has been clean closed and wastes were removed to a TSDF;
- A low potential exists for a release to surface water and air;
- A potential exists for a release to groundwater;
- Groundwater within 4 miles of the site is supplemented by surface water to serve approximately 300,000 people; and
- Distance to the nearest well is 0.25 miles from the site.

OCVOCEF 000042

9. EPA RECOMMENDATION

	Initial	Date
No Further Remedial Action Planned under CERCLA		
Higher-Priority for Further Site Assessment		
Lower-Priority for Further Site Assessment		
Defer to Other Authority (e.g., RCRA, TSCA, NRC)	[signature]	9.16.91

Notes:

OCVOCEF 000043

10. REFERENCES

1. U.S. Geological Survey, map of Anaheim, California, 7.5-minute quadrangle 1965 (photorevised 1981).

2. Trent Tube Division, Fullerton Operation (Trent Tube), Hazardous Waste Part A Permit Application, November 10, 1980.

3. Calocerinos & Spina, "Facilities Closure Report for Trent Tube Division, Fullerton Plant", March 1985.

4. Lindsey, Nancy, U.S. Environmental Protection Agency (EPA), and Abby Goldenberg, Ecology and Environment Inc.'s Field Investigation Team (E & E FIT), telephone conversation, August 22, 1991.

5. Hinton, John, California Department of Health Services (DHS), to Robert M. Phillips, Trent Tube Division, letter, April 16, 1985.

6. Feeley, Michael, U.S. EPA, to Angelo Bellomo, DHS, letter, August 24, 1987.

7. Trent Tube Division, Fullerton Operation, Operation Plan for Hazardous Waste, March 12, 1980.

8. DHS, Interim Status Document, Trent Tube Division, Fullerton Operation, April 6, 1981.

9. Hinton, John, DHS, to Robery M. Phillips, Trent Tube, letter, December 3, 1984.

10. "Site Assessment Plan", Trent Tube Division, January 18, 1984. Dec

11. U.S. EPA, Resource Conservation and Recovery Act (RCRA), Quality Assurance Check List, Trent Tube Fullerton Division, June 9, 1987.

12. Anderson, James W., Regional Water Quality Control Board (RWQCB), to Angelo Bellomo, DHS, memorandum, May 4, 1984.

13. Rokiri, Cherry, RWQCB, and Abby Goldenberg, E & E FIT, telephone conversation, June 6, 1991.

14. Fees, Lea Yvonne, South Coast Air Quality Management District, and Abby Goldenberg, E & E FIT, letter, July 1, 1991.

15. Bish, Katherine, Orange County Health Care Agency, hazardous waste inspection of Trent Tube Division, April 15, 1985.

16. U.S. EPA, RCRA, April 10, 1991.

17. Brown and Caldwell, "Fullerton Water System Master Plan and Related Studies", March 1983.

OCVOCEF 000044

REFERENCES (CONT.)

18. Moore & Taber, Foundation Investigation, 2100 East Orangethorpe Avenue, August 16, 1984.

19. U.S. Department of Commerce, National Oceanic and Atmospheric Adminsitration (NOAA), National Environmental Satellite Data and Information Service, National Climatic Data Center, Comparative Climatic Data for the United States Through 1985, Nashville, TN.

20. Robinson, Mike, Yorba Linda Water District, to Janice Brickell, E & E FIT, facimile, December 28, 1990.

21. Bustos, Carlos, City of Anaheim, and Chris Nelson, E & E FIT, telephone conversation, May 7, 1990.

22. City of Anaheim, Water Production Data Sheet, Fiscal Year 1989-1990.

23. reference deleted

24. Sears, Larry, City of Fullerton, and Chris Nelson E & E FIT, telephone conversation, November 26, 1990.

25. Goldenberg, Abby, "Drive-By Report", Trent Tube Fullerton Division, July 9, 1991.

26. City of Fullerton, map of water system, no date.

27. Lass, Richard, City of Orange, and Janice Brickell, E & E FIT, telephone conversation, December 28, 1990.

28. Costeson, Frank, Southern California Water Company, and Helena Brykarz, E & E FIT, telephone conversation, March 5, 1990.

29. Moore, Jim, Los Angeles County Department of Public Works, and Peter Towle, E & E FIT, telephone conversation, July 8, 1990.

30. Bonn, Richard, Orange County Environmental Management Agency, and Abby Goldenberg, E & E FIT, telphone conversation, June 12, 1991.

31. Diefendorf, Andrew, Calocerinos & Spina, to Roy Thieking, DHS, letter, January 18, 1985.

32. U.S. Department of Commerce, National Oceanic and Atmospheric Adminstration (NOAA), National Weather Service, NOAA Atlas II, Precipitation-Frequency Atlas of the Western United States, Volume XI-California, p. 61, Silver Spring, MD, 1973.

33. State of California Department of Fish and Game, "Natural Diversity Database (RareFind)," Anaheim, California quadrangle, April 1991.

34. U.S. EPA, Office of Toxic Substances, "Graphical Exposure Modeling System," March 1989.

REFERENCES (CONT.)

35. Malone, Walter, and Kurt Shelger, Lander Associates, "Appraisal of Trent Stainless Tube Company", September 14, 1983.

36. Manewitz, Mark, Coltec Industries, to Abby Goldenberg, E & E FIT, letter, August 26, 1991.

37. McCall, Mike, Orange County Health Care Agency, "Hazardous Waste and Underground Storage Tank Inspection Report", Executive RV Center, February 15, 1991.

OCVOCEF 000046

PA CONTACT LOG

Facility Name: Trent Tube Division Fullerton
Facility ID: CAD008325110

Name	Affiliation	Phone #	Date	Information
Frank Costeson	So. California Water Company	213-251-3600	3/5/90	See Contact Report.
Carlos Bustos	City of Anaheim	714-999-5100	5/7/90	See Contact Report.
Jim Moore	L.A. County Public Works	818-445-7630	7/8/90	See Contact Report.
Larry Sears	City of Fullerton	714-738-6886	11/26/90	See Contact Report.
Richard Lass	City of Orange	714-532-0356	12/28/90	See Contact Report.
Mike Robinson	Yorba Linda Water District	714-777-3018	12/28/90	See Contact Report.
Cherry Rwakiri	RWQCB	714 782 4130	6/6/91	There are no active or inactive files at RWQCB for the Trent Tube site.
Richard Bonk	Orange County Environmental Management Agency	714-567 6371	6/12/91	See Contact Report.
Abby Goldenberg	E & E FIT	415-777-2811	7/9/91	Site Drive-by.
Nancy Lindsay	EPA	415-744-2038	8/22/91	See Contact Report.

agg/tr/clcr

OCVOCEF 000047

CONTACT REPORT

AGENCY/AFFILIATION: EPA		
DEPARTMENT: RCRA Enforcement		
ADDRESS/CITY: San Francisco		
COUNTY/STATE/ZIP: San Francisco, CA		
CONTACT(S)	TITLE	PHONE
1. Nancy Lindsey		415-744-2038
2.		
E & E PERSON MAKING CONTACT: Abby Goldenberg		DATE: 8/22/91
SUBJECT: Site Description		
SITE NAME: Trent Tube		EPA ID#: CAD008325110

She spoke with Mr. Fischer of La Barron Investments and obtained the following information.

- LaBarron Investments purchased the site in 1985.
- LaBarron Investments owns and leases the site.
- The site is leased to several companies including Auto Car Leasing and Executive RV Center.

agg/tt/clcr

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/3/91

TIME: 10 __ AM

DIRECTION:

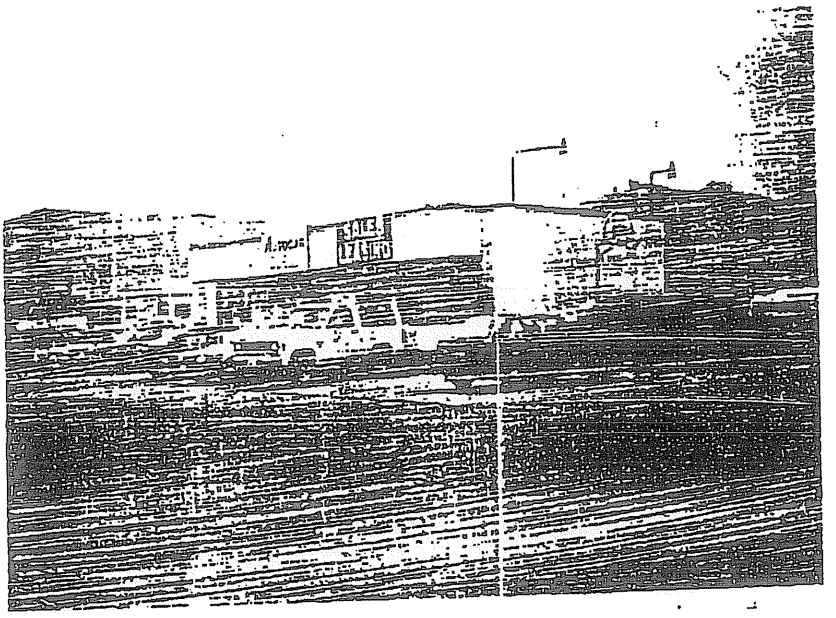
southwest

WEATHER:

overcast

PHOTOGRAPHED BY:

Abby Goldenberg



DESCRIPTION:

Autocar facility at Trent Tube site.

agp/:::fd:fpls

ATTACHMENT 4

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY (PART A)

prepared by

TRENT TUBE DIVISION

for the

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

November 10, 1980

Please print or type in the unshaded areas only (fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F C A D 0 0 8 3 2 5 1 1 0 3 5

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate area below. Also complete and/or correct the preprinted data if it was not label was provided. If the label is missing, you should provide the information that should appear, in the appropriate areas below. If you are an existing facility and a preprinted label has been provided, affix it here. Complete all items unless the instructions for those items specifically state that you need not do so. Refer to the instructions for definitions of terms used in this form. You may attach additional sheets of paper and additional maps and drawings if more space is needed to answer a question adequately. Number all attachments consecutively. Type or print in the unshaded areas only. Failure to provide information required by this form may subject you to fines, imprisonment, or both under applicable statutes. See the instructions for details. Many questions require you to mark a box. Mark in the manner shown: X. Answer every question by marking the appropriate box or by providing the requested information. If "NO" is marked, you may leave the remainder of that question blank. If you need additional space to answer a question, you may attach separate sheets of paper. Number all answers to correspond with the item numbers and mark "Attachment" next to the answer. If you do not have the data required by a question, specify why the data are not available and indicate when they will be available. Sign and date the application on page 3. Applications not signed or dated will be returned. Keep a copy of your completed application for your records. Submit the original application to the EPA address listed in the instructions for the appropriate EPA program.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of those forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of terms used in this section.

SPECIFIC QUESTIONS	MARK "X" YES	NO	ATTACHED (FORM 2 ATTACHED)
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	
D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X	X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of coal, or recovery of geothermal energy? (FORM 4)		X	
H. Do you or will you inject at this facility any produced fluids of the same type as those listed in the instructions and which will be brought to the surface in connection with conventional oil or natural gas production and inject fluids for enhanced recovery of oil or natural gas? (FORM 4)		X	
I. Is this facility a proposed stationary source which is ONE OF THE 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: TRENT TUBE DIV FULLERTON OPERATION

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title) | B. PHONE (area code & no.)

2 SOLLITTO CHRISTOPHER PLT ENGR | 714 | 526 | 5522

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 P.O.B.O.X 3068

B. CITY OR TOWN | C. STATE | D. ZIP CODE

4 FULLERTON | CA | 92634

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 2100 e ORANGETHORPE AVENUE

B. COUNTY NAME

ORANGE

B. CITY OR TOWN | C. STATE | D. ZIP CODE | E. COUNTY CODE

6 FULLERTON | CA | 92634 | 059

CONTINUE ON REVERSE

EPA Form 3510-1 (6-80)

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST: 3312 (specify) MFG. STAINLESS STEEL TUBING

B. SECOND: (specify)

C. THIRD: (specify)

D. FOURTH: (specify)

VIII. OPERATOR INFORMATION

A. NAME: TRENT TUBE DIV OF CRUCIBLE INC

B. Is the name listed in Item 8A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.) F = FEDERAL, M = PUBLIC (other than federal or state), S = STATE, O = OTHER (specify), P = PRIVATE: P (specify)

D. PHONE (area code): A 714 526 5522

E. STREET OR P.O. BOX: PO BOX 88

F. CITY OR TOWN: PITTSBURGH (PA)

G. STATE: PA

H. ZIP CODE: 15230

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): 9 N [X]

B. PSD (Air Emissions from Proposed Sources): 9 P [X] AQBL0174DJ

C. UIC (Underground Injection of Fluids): 9 U [X]

D. OCEAN DUMPING (Ocean Waters): 9 O [X]

E. OTHER (specify): 9 X [X] (specify)

F. OTHER (specify): 9 Y [X] (specify)

XI. MAP F9: A50

Attach a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS F9: A51

MANUFACTURE OF STAINLESS STEEL TUBING
REDRAW PREFABRICATED TUBING TO CUSTOMER SPECIFICATIONS

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the 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.

A. NAME & OFFICIAL TITLE (type or print): C. SOLLITTO PLANT ENGINEER

B. SIGNATURE: C. Sollitto

C. DATE SIGNED: 11-10-80

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (6-80) REVERSE

OCVOCEF 000052

Form Approved OMB No. 158-S80004

Type in the unshaded areas only
are spaced for elite type, i.e., 12 characters/inch).

ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

EPA

I. EPA I.D. NUMBER

F C A D 0 0 8 3 2 5 1 1 0 — T/A C: 1

II. OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

III. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☐ 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

C	YR.	MO.	DAY
8	5 7	0 6	

☐ 2. NEW FACILITY (Complete item below.)

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION (place an "X" below and complete Item I above)

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.
1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to depth of one foot) OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP — T/A C: 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	2/19/81
1	T 0 1	1600,4 TIMES PER YR.		
2	S 0 1	660,4 TIMES PER YEAR	G	
3				
4				

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

CONTINUE ON REVERSE

OCVOCEF 000053

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED INCLUDE DESIGN CAPACITY.

As per my conversation on 19 February 1981 with Mr. William D. Wilson who requested a change in the unit of measure on Line 1, part C, Section III from "G" to "U" for the sole purpose of having the E.P.A. computer accept the information.

The process is 1600 gallons of pickle liquor is neutralized 4 times per year and subsequently disposed in accordance with all state and federal regulations.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.
Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				*included with above*

CONTINUE ON PAGE 3

OCVOCEF 000054

...m page 2.
...otocopy this page before completing ... have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY	
C A D 0 0 8 3 2 5 1 1 0	T/A C 1	S W DUP	T/A C 2 DUP

DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	K 0 6 2	54,500	P	T 0 1	1600 GALS NEUTRALIZED 4 TIMES/YR.
2	F 0 0 1	29,300	P	S 0 1	660 GALS. SHIPPED TO DUMP SITE
3					FROM DRUM STORAGE 4 TIMES PER
4					YEAR
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

F	C	A	D	0	0	8	3	2	5	1	1	0	6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)
40 33 51.30	79 57 36

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code & no.)
E CRUCIBLE, INC.	412-923-2955

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F P.O. BOX 88	G PITTSBURGH	PA	15230

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe 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.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
J.P. Foley, Division President		Nov. 17, 1980

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe 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.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
C. SOLLITTO PLANT ENGINEER		11-10-80

OCVOCEF 000056

Form Approved OMB No. 158-S20004

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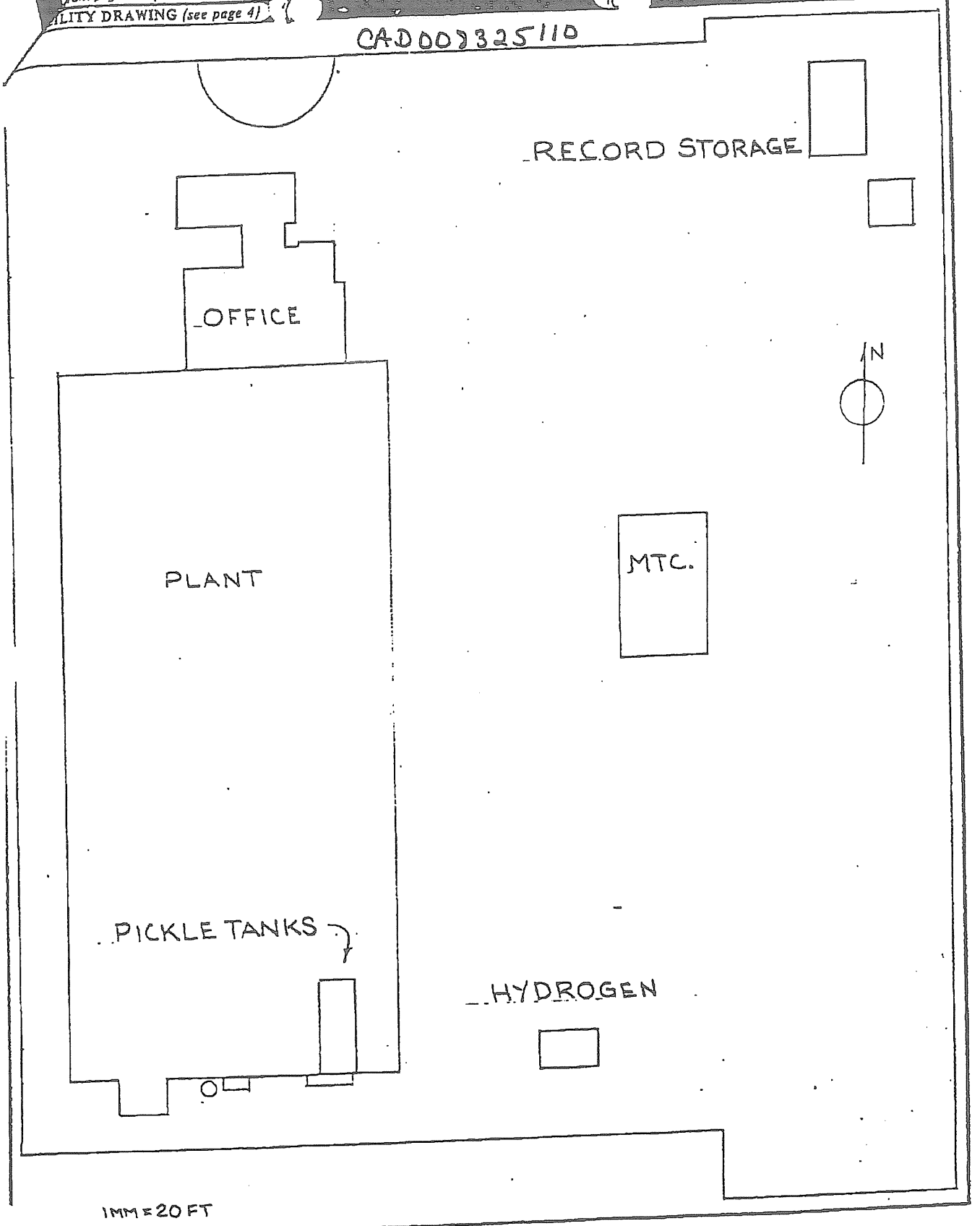

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CA D00 8325110

ANAHEIM QUADRANGLE
CALIFORNIA—ORANGE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

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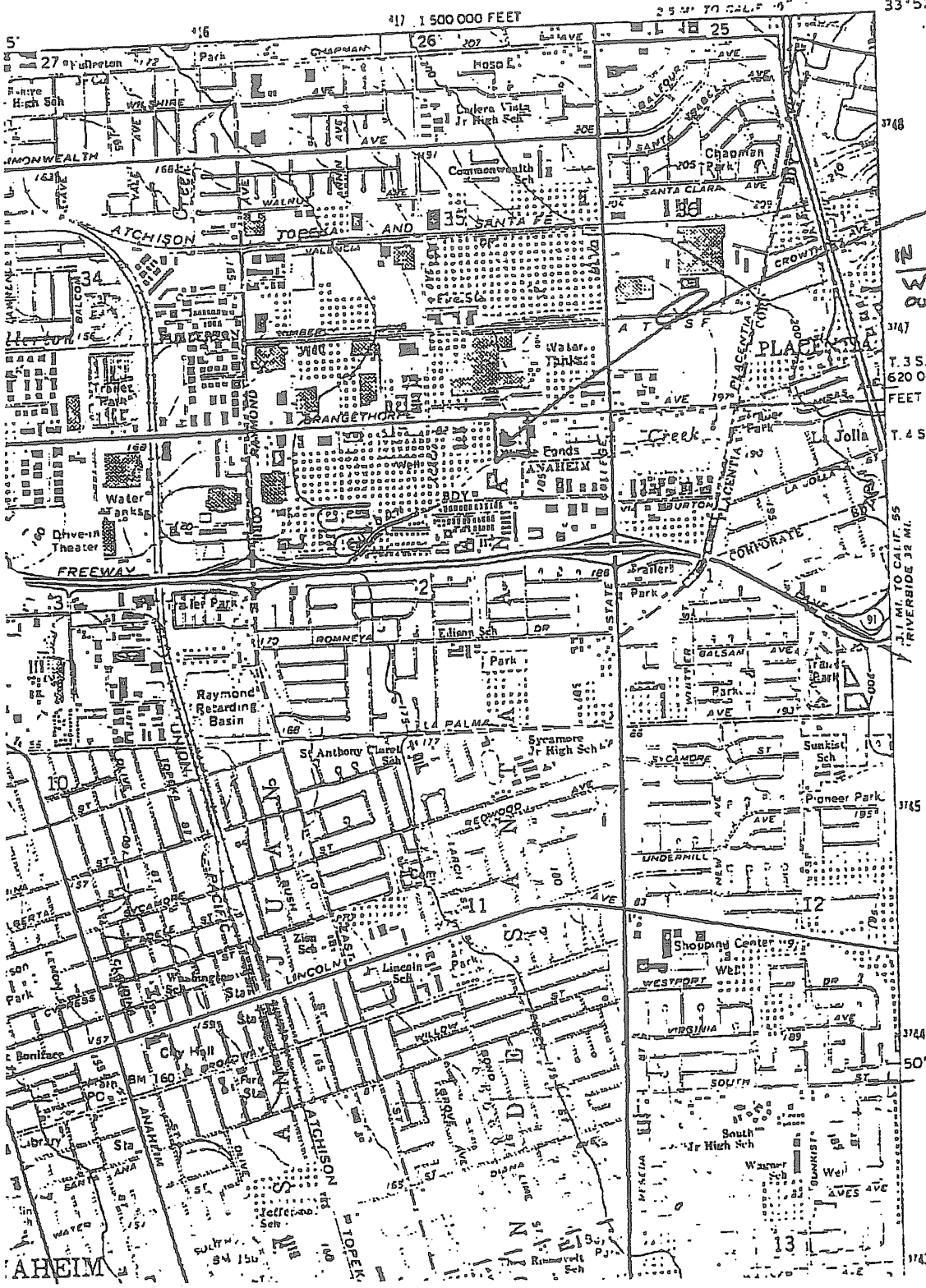
33°52'30"



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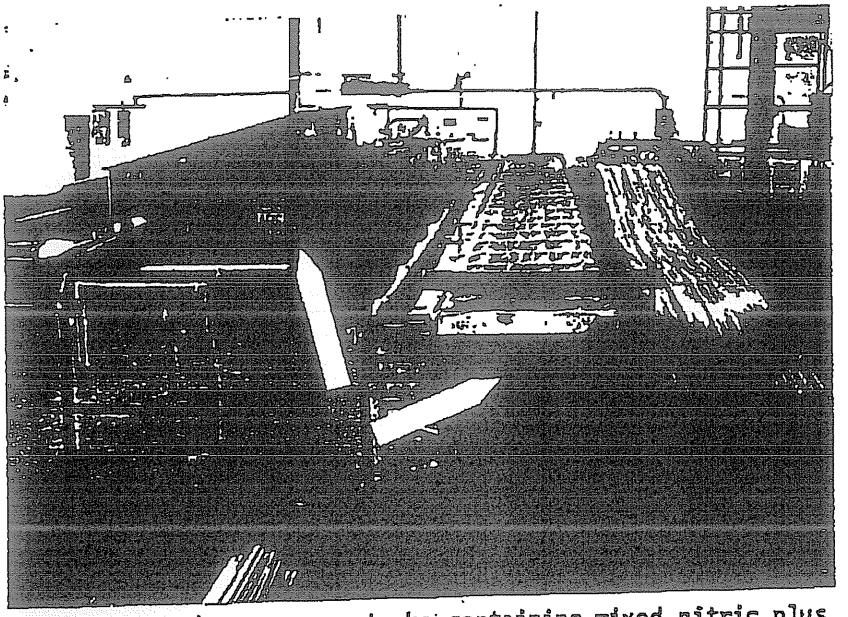

Figure 5 - In-door process tanks containing mixed nitric plus hydrofluoric acid solutions. Spent acid is neutralized within the process tanks. The neutralized spent acid is then pumped into a tank truck for disposal at BKK landfill in West Covina, California. (Located in SE sector of plant.)

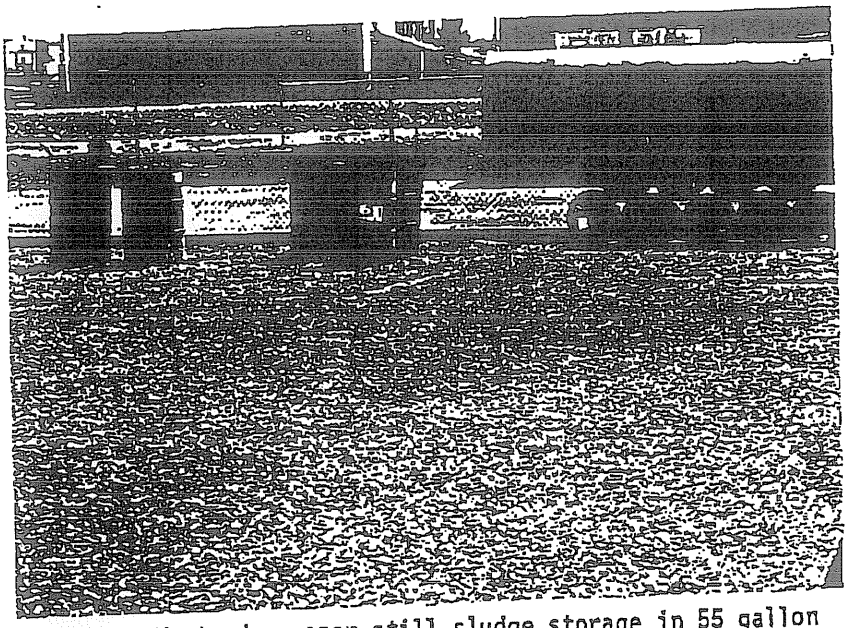

Figure 3 - Waste degreaser still sludge storage in 55 gallon drums at southern edge of property. Upright drums contain waste. Stacked drums are empty. This material is sold for reclamation. Tank in upper right is on adjacent property and does not belong to Trent Tube.

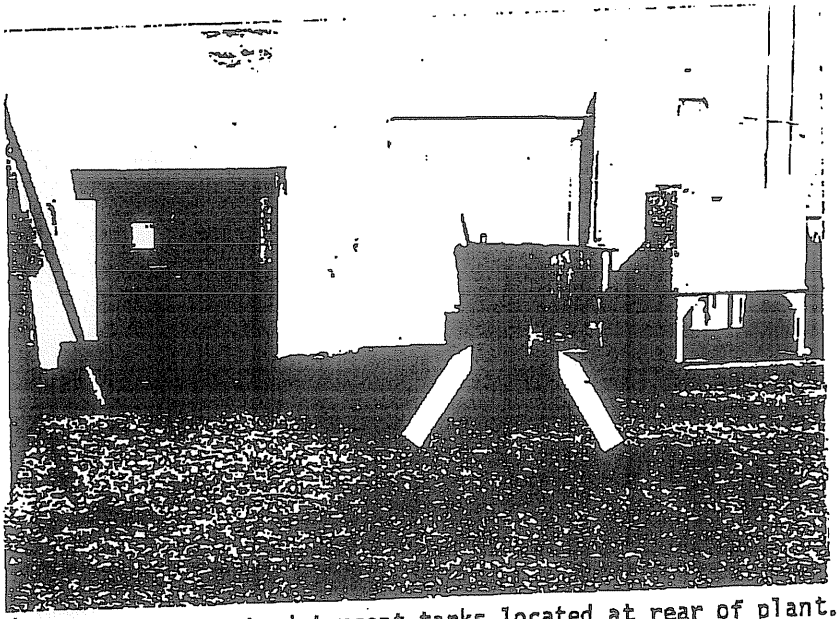

Figure 4 - Two waste detergent tanks located at rear of plant. Each tank has a 200 gallon capacity. When full waste is pumped into a tank truck for disposal at BKK.

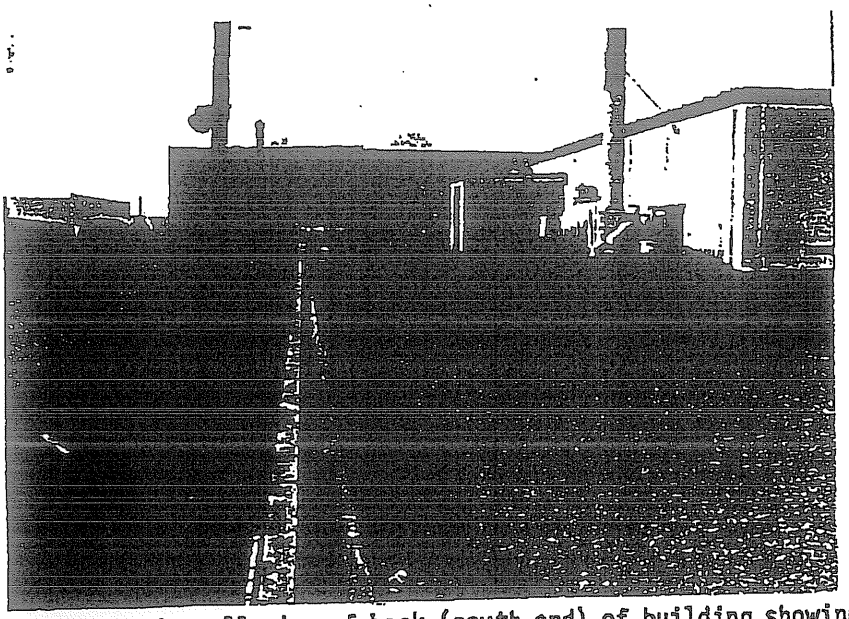

Figure 1 - Overall view of back (south end) of building showing drum storage adjacent to curbing. Photo taken from south east corner looking west. Grey building in background and area to left of chainlink fence is ajoining property not belonging to Trent Tube.

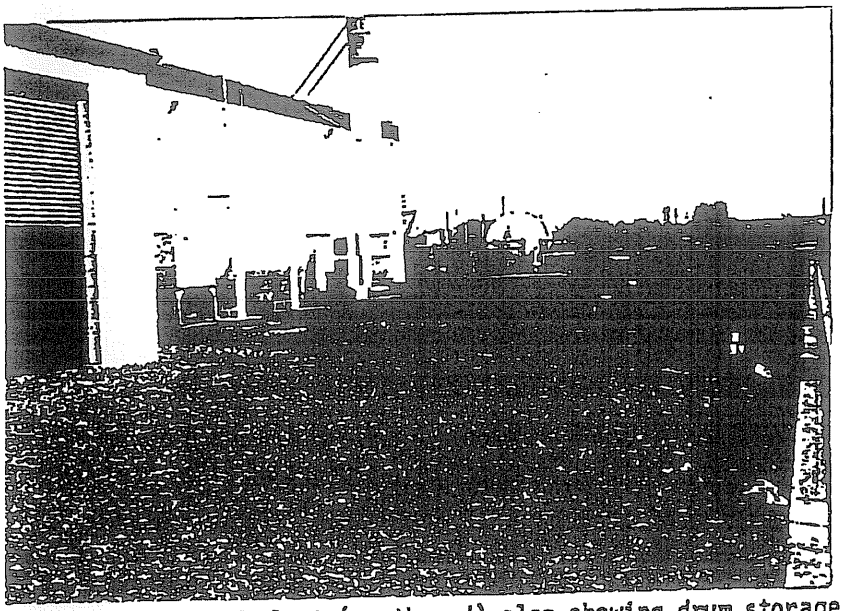

Figure 2 - Rear of plant (south end) also showing drum storage adjacent to curbing. Taken from south west corner of property looking east.

Exhibit 13

FREY ENVIRONMENTAL, INC.

Environmental Geologists, Engineers, Assessors

2817 A Lafayette Avenue
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(949) 723-1645
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Email: freyinc@freyinc.com

December 24, 2002
420-01

Ms. Leona Winner
Hazardous Substances Scientist
Department of Toxic Substance Control
8800 Cal Center Drive
Sacramento, CA 95826

RECEIVED DEC 2 7 2002

Re: LaBarron Investments
2100 East Orangethorpe Avenue
Fullerton, California

Dear Ms. Winner:

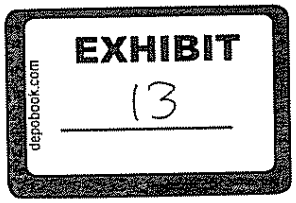
Enclosed please find three copies of our report entitled "Soil and Soil Vapor Assessment, Labarron Investments, 2100 East Orangethorpe Avenue, Fullerton, California" dated December 4, 2002.

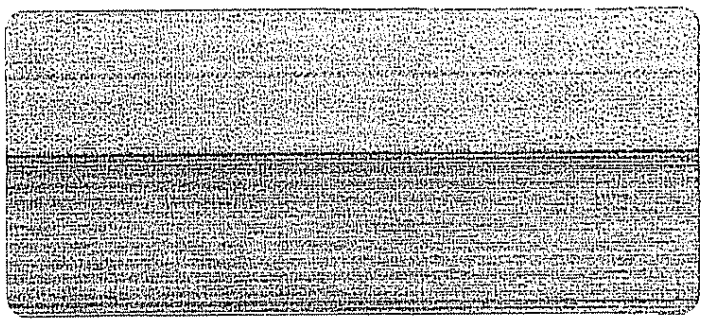
Please phone us at (949) 723-1645 with any questions.

Sincerely,
FREY Environmental, Inc.

Joe Frey
Principal Registered
Engineering Geologist
CEG #1500

cc: Eddie Fischer
LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831





SOIL AND SOIL VAPOR ASSESSMENT
LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Prepared for:

LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831

Prepared by:

FREY Environmental, Inc.
2817A Lafayette Ave.
Newport Beach, California 92663-3715
(949) 723-1645

Project No.: 420-01

December 4, 2002

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FREY

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OCVOCEF 000597

1.0 INTRODUCTION

This report presents the results of soil and soil vapor sampling activities conducted at 2100 East Orangethorpe Avenue in Fullerton, California (Site - Figure 1). The activities described below were conducted in general accordance with a revised RCRA Facility Investigation Workplan prepared by FREY Environmental, Inc. (FREY) dated October 15, 2002 and approved by the Department of Toxic Substance Control in a letter to LaBarron Investments dated October 18, 2002.

2.0 BACKGROUND

2.1 FORMER FACILITY OPERATIONS

The facility was constructed in the late 1950's by the Trent Tube Company. The Trent Tube Company manufactured stainless steel tubing until 1984. The manufacturing process required the use of numerous regulated chemicals including oil, kerosene, liquid hydrogen, liquid ammonia, organic solvents, acids and pickle liquor.

Trent Tube constructed one building with approximate dimensions of 300 feet from north to south and 130 feet from east to west. The majority of the building housed the manufacturing operations for the Trent Tube Company. Offices, a laboratory and a locker room were located in the northernmost section of the building. A second building used for maintenance activities was located on the eastern portion of the Site. The maintenance building had approximate dimensions of 40 feet by 60 feet (DTSC, 2000).

2.2 CHEMICAL / CHEMICAL WASTE STORAGE AREAS

The DTSC identified five areas of the Site where chemicals and/or chemical waste were either used or stored for extended periods of time. The five areas discussed below are shown on Figure 2.

1. Drum Storage Area: Fifty five gallon capacity, steel drums were formerly located on the south side of the manufacturing building as shown on Figure 2. Soil samples previously collected from this area have reportedly contained perchloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), ethylbenzene and xylenes at concentrations of 1.7 parts per million (ppm), 1.5 ppm, 1.7 ppm and 1.7 ppm, respectively (DTSC, 2000).

2. Aboveground Waste Oil Tanks: Two, 200 gallon capacity, aboveground, steel tanks were formerly located on concrete and set within a brick berm in the approximate area shown on Figure 2. It was reported that soils were excavated from this area and transported off Site for disposal (DTSC, 2000).

3. Aboveground Pickle Liquor Tanks: Two, 2,000 gallon capacity, aboveground tanks were formerly located inside the southeast portion of the manufacturing building. Pickle liquor generally consists of hydrochloric acid which is effective in removing unwanted metallic deposits from steel. It was reported that the spent pickle liquor contained hexavalent chromium and possibly lead (DTSC, 2000).

4. Degreasing Pit: It was reported that a 10,000 gallon capacity degreasing pit was located in the central portion of the manufacturing building. The degreasing pit reportedly may have contained 1,1,1-TCA, PCE and/or trichloroethene (TCE) (DTSC, 2000).

5. Southern Property Line: It was reported that an approximate 50 foot by 200 foot area located south of the manufacturing building was used for the aeration of soils which reportedly contained organic solvents at concentrations up to 5 ppm. It was reported that aerated soils were placed in the top two feet of soil (DTSC, 2000).

The Department of Health Services issued a certification of closure for the Site in a letter dated April 16, 1985 (DHS, 1985). No further background information was made available to FREY at the time of this document preparation (DTSC, 2000).

2.3 CURRENT SITE CONFIGURATION

The Site comprises approximately 5.2 acres of flat ground on the south side of East Orangethorpe Avenue approximately equidistant between State College Boulevard and Acacia Avenue in Fullerton, California. The Site parcel is rectangular in shape with dimensions of approximately 550 feet from north to south and 415 feet from east to west. The Site elevation is approximately 187 feet above mean sea level (Topo, 1987).

One building is currently located on Site and it is the same building as the larger building originally constructed by the Trent Tube Company. The northern most section of the Site building is currently used as office space while the majority of the building is used for recreational vehicle storage. An addition to the building was constructed on the southwest corner of the original building at an unspecified date. The addition to the building is used for recreational vehicle repair.

The entire Site is paved with concrete with the exception of some small planters located along the northern building perimeter and the frontage with East Orangethorpe Avenue.

The Site is bound by a Vista Paint facility on the west, East Orangethorpe Avenue and a BASF facility to the north, a self storage facility on the east and a thin strip (approximately 40 feet) of Vista Paint parcel and Carbon Creek on the south.

2.4 HYDROGEOLOGIC SETTING

Soils beneath the Site consist of silt and sand from below the concrete to approximately 2 feet below the ground surface (bgs). Fine to coarse grained sand is located below the silt and sand and extends to a depth of approximately 20 feet bgs (Moore & Taber, 1984). Soil lithology beneath 20 feet bgs has not been investigated.

Regionally, the Site is located on the northeastern section of the Orange County Coastal Plain, which is part of the larger Coastal Plain of Los Angeles (OCWD, 1984). The central and northern portions of the Orange County Coastal Plain consist of downfolded strata of Upper Pleistocene and older age strata, that form a broad synclinal trough. The trough includes successively permeable and impermeable strata that reach a depth of up to 20,000 feet near the Anaheim area (OCWD, 1982).

The Upper Pleistocene and older unconsolidated deposits consist predominantly of marine and lagoonal sediments that include interbedded silts and clays with occasional lenses of sand and gravel. These deposits overlie a thick sequence of Late Cretaceous to Quaternary-age semiconsolidated sedimentary rocks and basement units (OCWD, 1984). The Upper Pleistocene and older formations are overlain by recent alluvium, derived from the surrounding hills and the Santa Ana River. Recent alluvial deposits attain a maximum thickness of approximately 300 feet in the Site area, and consist of sands with interbedded gravels, silts and clays (OCWD, 1984).

The Site is located in the Main Santa Ana Pressure Groundwater Sub-basin, within the Lower Santa Ana Watershed (RWQCB, 1984). The Site area is located within a pressure zone where semi-confined to confined water conditions may exist. Groundwater is estimated to flow toward the west-southwest in the Site Vicinity (OCWD, 1984). First groundwater is estimated to be located at approximately 80 feet bgs (DTSC, 2000).

2.5 NEAREST GROUNDWATER PRODUCTION WELL

The City of Fullerton operates a groundwater production well (labeled Kimberly Well #2) south of Kimberly Avenue and east of Acacia Avenue. Kimberly Well #2 is located approximately 1,500 feet to the north-northwest of the Site (Fullerton, 2002).

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3.0 OBJECTIVES

The objectives of the work described below were to assess the presence of: 1) volatile organic compounds and selected metals in soil; and, 2) volatile organic compounds in soil vapor beneath the Site.

4.0 SCOPE OF WORK

The scope of work, designed to provide the information needed to meet the objectives of the investigation, was as follows:

- Implement a site-specific health and safety plan;
- Advance 20 soil borings to depths between 1 to 20 feet below the ground surface (bgs);
- Collect soil samples at depths of 1, 5, 10 or 20 feet bgs dependent on borehole depth;
- Field screen collected soil samples for total undifferentiated volatile organic compounds (UVOCs);
- Advance 8 soil vapor probes to depths of 5 feet bgs;
- Advance 1 soil vapor probe to a depth of 20 feet bgs. Collect vapor samples at depths of 10 feet bgs and 20 feet bgs;
- Analyze selected soil and soil vapor samples for chemical constituents;
- Evaluate data and prepare a report discussing field activities conducted as part of this investigation.

A more detailed description of the field investigation and laboratory testing program is provided in Section 5.0.

5.0 CURRENT INVESTIGATION

FREY marked the proposed soil boring and soil gas sampling locations 72 hours prior to drilling activities. FREY obtained an underground service alert number prior to the conduct of any drilling or soil gas sampling activities.

On the morning of October 22, 2002, FREY held a health and safety meeting on Site prior to the conduct of any drilling or soil gas sampling activities. The health and safety meeting was attended by members of the DTSC, FREY, the drilling contractor and the mobile laboratory chemist. The DTSC approved health and safety plan was discussed and Site specific concerns were highlighted by FREY during the health and safety meeting.

5.1 SOIL VAPOR SAMPLING

Soil vapor probes SV1 through SV8 were advanced in locations mutually agreed upon, on October 22, 2002, by personnel from FREY and the DTSC as shown on Figure 2. Four inch diameter concrete cores were drilled in the agreed upon vapor probe locations just prior to the conduct of probe advancement operations.

Soil vapor samples were collected using a Post Run Tubing System which is described in greater detail in the field procedures section in Appendix A. Each soil vapor probe was purged of approximately 3 probe volumes prior to sample collection. The probe volume of 0.005 cubic feet was calculated by multiplying the 2-inch probe hole diameter by the retracted probe height of approximately 3-inches. Soil vapor was purged into a 1-liter tedlar bag until it was approximately one half full which equates to approximately 0.015 cubic feet or 3 probe volumes.

The sample tubing was replaced between the purging of the probe and the sample collection. Soil vapor samples were collected in laboratory supplied 1-liter tedlar bags with a peristaltic pump. Soil vapor samples were labeled with the job number, time of sample collection, date, soil vapor probe number and depth of sample. Soil vapor samples were delivered to the on-Site mobile laboratory immediately after sample collection.

5.1.1. Former Degreaser Pit

Soil vapor samples were collected from boring B1 from depths of 10 feet bgs and 20 feet bgs using the protocol described in Section 5.1.

5.1.2. Drum Storage Areas

Soil vapor samples were collected at depths of 5-feet bgs from soil vapor probes SV1 through SV4 using the protocol described in Section 5.1.

5.1.3. Southern Property Line

Soil vapor samples were collected at depths of 5-feet bgs from soil vapor probes SV5 through SV8 using the protocol described in Section 5.1.

5.2 ADVANCEMENT AND SAMPLING OF SOIL BORINGS

Soil borings B1 through B20 were drilled in locations mutually agreed upon on October 22, 2002 by personnel from FREY and the DTSC as shown on Figure 2. Where applicable, soil borings were advanced through the same 4-inch concrete core as the soil vapor probes. Additional 4-inch cores were drilled through the concrete in the locations of borings B2 through B9 and borings B18, B19 and B20.

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Field procedures used in the advancement and sampling of soil borings B1 through B20 are presented in Appendix A. Boring logs and explanations regarding the format, terms and soil classification system used to describe the soil conditions are presented in Appendix B.

5.2.1. Former Degreasing Pit

Soil borings B1, B2, B3 and B4 were advanced on the north, east, south and west sides, respectively, of the former degreasing pit. Soil borings B1, B2, B3 and B4 were advanced to final depths of 20 feet bgs (boring B1) and 10 feet bgs (borings B2, B3 and B4) with a direct push drilling rig.

Soil samples were collected from boring B1 at depths of 2, 10 and 20 feet bgs. Soil samples were collected from borings B2, B3 and B4 at depths of 1 and 10 feet bgs Soil samples were collected in a 2-inch diameter California split spoon sampler lined with acetate driven into native soils with the direct push drilling rig. The split spoon sampler was opened and the acetate liner transported directly to the sample preparation table.

FREY collected five, 5-gram samples according to EPA 5035 sampling protocol. The five, 5-gram samplers were placed in sample bags which were labeled with the job number, time of sample collection, date, borehole number and depth of sample. Soil samples collected according to EPA 5035 protocol were transported directly to the on-Site mobile laboratory for analyses.

The acetate liner was cut to remove areas which had been sampled according to 5035 protocol. An approximate 6-inch piece of the remaining acetate liner was cut and capped with teflon tape and a plastic cap. Each sample was labeled with the job number, time of sample collection, date, borehole number and depth of sample and placed in a cooler. These samples were picked up by a courier from American Scientific Laboratories after the completion of sampling activities on October 22, 2002.

Soil remaining in each acetate liner not used for sampling purposes was visually examined for staining or odors which may be associated with the presence of VOCs or metals. In addition, soil remaining in each acetate liner was also examined for UVOCs with a photoionization detector (PID) as explained in Appendix A. UVOC concentrations in excess of 1 part per million (ppm) were not detected in the soil samples collected from borings B1, B2, B3 or B4.

Soil borings B1, B2, B3 and B4 were backfilled with bentonite powder, hydrated and resurfaced with approximately 6 inches of concrete.

5.2.2. Aboveground Pickle Liquor Tanks

Soil borings B5 and B6 were advanced in the northwest and southwest footprint of the former aboveground pickle liquor tanks. Soil boring B7 was advanced in the eastern side of the former aboveground pickle liquor tanks.

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Soil borings B5, B6, and B7 were advanced to final depths of 1 foot bgs using a hand operated auger. One soil sample was collected from the bottom of each borehole in a 2.25-inch diameter sample barrel lined with a 2-inch diameter brass or stainless steel tube. A slide hammer was used to drive the sample barrel into native soils at the bottom of each boring.

The 2-inch diameter tube was extruded from the sample barrel and each end of the tube capped with teflon tape and fitted with an air tight end cap. Each sample was labeled with the job number, time of sample collection, date, borehole number and depth of sample and placed in a cooler. These samples were picked up by a courier from American Scientific Laboratories after the completion of sampling activities on October 22, 2002.

Soils excavated as part of the hand auger drilling process were visually examined for staining or odors which may be associated with the presence of VOCs or metals. A PID was used to monitor UVOC concentrations emanating from each borehole and from the soil pile created during soil boring operations. UVOC concentrations in excess of 1 ppm were not detected in the soils generated during the drilling of borings B5, B6 or B7.

After the completion of drilling activities, excavated soils were placed into their respective boreholes, compacted with a tamping rod and resurfaced with approximately 6-inches of concrete.

5.2.3. Aboveground Waste Oil Tanks

Soil borings B8 and B9 were advanced to final depths of 2 feet bgs using a hand operated auger. One soil sample was collected from the bottom of each borehole in a 2.25-inch diameter sample barrel lined with a 2-inch diameter brass or stainless steel tube. A slide hammer was used to drive the sample barrel into native soils at the bottom of the boring.

The 2-inch diameter tube was extruded from the sample barrel and each end of the tube capped with teflon tape and fitted with an air tight end cap. Soil samples collected from borings B8 and B9 were labeled with the job number, time of sample collection, date, borehole number and depth of sample. These samples were picked up by a courier from American Scientific Laboratories after the completion of sampling activities on October 22, 2002.

Soils excavated as part of the hand auger drilling process were visually examined for staining or odors which may be associated with the presence of VOCs or metals. A PID was used to monitor UVOC concentrations emanating from each borehole and from the soil pile created during soil boring operations. UVOC concentrations in excess of 1 ppm were not detected in the soils generated during the advancement of borings B8 or B9.

After the completion of drilling activities, excavated soils were placed into their respective boreholes, compacted with a tamping rod and resurfaced with approximately 6-inches of concrete.

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5.2.4. Drum Storage Areas

Soil borings B10 and B11 were advanced outside the southern wall of the Site building approximately 6 feet and 48 feet west of the southeastern building corner. Soil borings B12 and B13 were drilled inside the building addition (described in Section 2.2) at distances of 14 feet and 53 feet from the western building wall (Figure 2).

Soil borings B10, B11, and B13 were advanced to final depths of 10 feet bgs with a direct push drilling rig. Soil boring B12 was drilled to a final depth of 10 feet bgs with a hand operated auger. Soil samples were collected from borings B10, B11, B12 and B13 from depths of 1, 5 and 10 feet bgs.

Soil samples were collected from borings B10, B11 and B13 in a 2-inch diameter California split spoon sampler lined with acetate driven into native soils with the direct push drilling rig. The split spoon sampler was opened and the acetate liner transported directly to the sample preparation table. An approximate 6-inch piece of sample of acetate liner was cut from that portion of the liner positioned nearest to the shoe in the sampler. Each end of the 6-inch portion of acetate liner was capped with teflon tape and an air tight plastic cap and labeled with the job number, time of sample collection, date, borehole number and depth of sample.

The 2-inch diameter tube was extruded from the sample barrel and each end of the tube capped with teflon tape and fitted with an air tight end cap. The soil samples collected from B12 were labeled with the job number, time of sample collection, date, borehole number and depth of sample. Soil samples collected from borings B10 through B13 were picked up by a courier from American Scientific Laboratories after the completion of sampling activities on October 22, 2002.

Soil remaining in each acetate liner not used for sampling purposes was visually examined for staining or odors which may be associated with the presence of VOCs or metals. In addition, soil remaining in each acetate liner was also examined for UVOCs with a PID as explained in Appendix B. UVOC concentrations in excess of 1 ppm were not detected in the soil samples collected from borings B10 through B13.

Soil borings B10, B11 and B13 were backfilled with bentonite powder, hydrated and resurfaced with approximately 6 inches of concrete. Approximately one vertical foot of medium bentonite chips were placed in the bottom of the boring B12 and hydrated with 2 gallons of tap water. Boring B12 was then backfilled with soil cuttings and resurfaced with approximately 6 inches of concrete.

5.2.5. Southern Property Line

Soil borings B14 through B17 were advanced along the southern property line in the locations shown on Figure 2. Soil borings B14 through B17 were advanced to final depths of 10 feet bgs with a direct push drilling rig.

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Soil samples were collected from borings B14 through B17 from depths of 1, 5 and 10 feet bgs. Soil samples were collected from borings B14 through B17 in a 2-inch diameter California split spoon sampler lined with acetate driven into native soils with the direct push drilling rig. The split spoon sampler was opened and the acetate liner transported directly to the sample preparation table. An approximate 6-inch piece of sample of acetate liner was cut from that portion of the liner positioned nearest to the shoe in the sampler. Each end of the 6-inch portion of acetate liner was capped with teflon tape and an air tight plastic cap and labeled with the job number, time of sample collection, date, borehole number and depth of sample. Soil samples collected from borings B14 through B17 were picked up by a courier from American Scientific Laboratories after the completion of sampling activities on October 22, 2002.

Soil remaining in each acetate liner not used for sampling purposes was visually examined for staining or odors which may be associated with the presence of VOCs or metals. In addition, soil remaining in each acetate liner was also examined for UVOCs with a PID as explained in Appendix B. UVOC concentrations in excess of 1 ppm were not detected in the soil samples collected from borings B14 through B17.

Soil borings B14 through B17 were backfilled with bentonite powder, hydrated and resurfaced with approximately 6 inches of concrete.

5.2.6. Background Soil Samples

Soil borings B18, B19 and B20 were drilled in the locations shown on Figure 2. The background soil sample locations were selected as these locations were believed to have been away from any chemical usage areas of the Site.

Soil borings B18, B19, and B20 were advanced to final depths of 3 feet bgs using a hand operated auger. One soil sample was collected from the bottom of each borehole in a 2.25-inch diameter sample barrel lined with a 2-inch diameter brass or stainless steel tube. A slide hammer was used to drive the sample barrel into native soils at the bottom of the boring.

FREY collected five, 5-gram samples according to EPA 5035 sampling protocol. The five, 5-gram samplers were placed in sample bags which were labeled with the job number, time of sample collection, date, borehole number and depth of sample. Soil samples collected according to EPA 5035 protocol were transported directly to the on-Site mobile laboratory for analyses.

Soil remaining in the 2-inch diameter tube was extruded from the sample barrel and each end of the tube capped with teflon tape and fitted with an air tight end cap. Soil samples collected from borings B18, B19 and B20 were labeled with the job number, time of sample collection, date, borehole number and depth of sample. Soil samples collected in 2-inch diameter brass tubes from borings B18 through B20 were picked up by a courier from American Scientific Laboratories after the completion of sampling activities on October 22, 2002.

FREY

Soils excavated as part of the hand auger drilling process were visually examined for staining or odors which may be associated with the presence of VOCs or metals. A PID was used to monitor UVOC concentrations emanating from each borehole and from the soil pile created during soil boring operations. UVOC concentrations in excess of 1 ppm were not detected in the soils generated during the drilling of borings B18, B19 or B20.

After the completion of drilling activities, excavated soils were placed into their respective boreholes, compacted with a tamping rod and resurfaced with approximately 6-inches of concrete.

5.3 LABORATORY ANALYSES

5.3.1 Soil Samples

Soil samples collected from borings B1 through B4 were analyzed for volatile organic compounds according to EPA Method No. 8260B. In addition, soil samples collected from borings B1 through B4 were also analyzed for hexavalent chromium, nickel and total lead in accordance with EPA Method Nos. 7196A, 6010 and 7421, respectively.

Soil samples collected from borings B5, B6 and B7 were analyzed for hexavalent chromium, nickel and total lead in accordance with EPA Method Nos. 7196A, 6010 and 7421, respectively. In addition, soil samples collected from borings B5, B6 and B7 were also analyzed for hydrogen ion concentration (pH) in accordance with EPA Method No. 150.1.

Soil samples collected from borings B8 and B9 were analyzed for nickel, total chrome and total lead in accordance with EPA Method Nos. 6010, 6010 and 7421, respectively. In addition, soil samples collected from borings B8 and B9 were also analyzed for total recoverable petroleum hydrocarbons (TRPH) in accordance with EPA Method No. 418.1.

Soil samples collected from borings B10 through B17 were analyzed for nickel, total chrome and total lead in accordance with EPA Method Nos. 6010, 6010 and 7421, respectively.

Soil samples collected from borings B18, B19 and B20 were analyzed for all constituents discussed for borings B1 through B17 with the exception of pH.

Soil samples submitted for VOC and TRPH analyses were conducted on-Site in a mobile laboratory provided by Baseline On-Site Analysis, a State of California licensed hazardous waste testing laboratory based in Huntington Beach, California. Soil samples submitted for metals analyses and pH analyses were conducted at American Scientific Laboratories, a State of California licensed hazardous waste testing laboratory based in Los Angeles, California.

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5.3.2 Soil Vapor Samples

Soil vapor samples collected from boring B1 and soil vapor probes SV1 through SV8 were analyzed for volatile organic compounds and fuel oxygenates in accordance with EPA Method No. 8260B. Soil vapor samples were analyzed in an on-Site mobile laboratory provided by Baseline On-Site Analysis, a licensed hazardous waste testing laboratory based in Huntington Beach, California.

6.0 RESULTS OF THE INVESTIGATION

6.1 SOIL LITHOLOGY

In general, subsurface materials encountered during drilling operations generally consisted of fine to medium grained sands from just below the concrete surface to the bottom of the deepest boring at approximately 20 feet bgs.

Exceptions to the fine to medium sand lithology were a silty fine grained sand which was observed in borings B10 through B13 from beneath the concrete surface to approximately 3 feet bgs and throughout the length of boring B15. In addition, a sandy clay was present in boring B16 from just below the concrete surface to approximately 3 feet bgs.

6.2 LABORATORY ANALYSES

Laboratory and quality assurance/quality control reports appear in Appendix C.

6.2.1 Analytical Data for Soil Vapor

Soil vapor samples collected from boring B1 at depths of 10 and 20 feet bgs and vapor samples collected from probes SV1 through SV7 contained concentrations of various chlorinated VOCs. Concentrations of VOCs were limited to analytes such as tetrachloroethene (PCE), trichloroethene (TCE), cis -1,2-dichloroethene (cis 1,2-DCE), 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), 1,1,1-trichloroethane (1,1,1-TCA) and 1,1,1,2 tetrachloroethane (1,1,1,2-PCA). VOCs were not detected in the soil vapor sample collected from SV8.

PCE was the VOC analyte detected in the greatest concentration at 130 micrograms per liter (ug/L) (SV2-5). Soil vapor sample SV2-5 was collected from soil vapor probe SV2 from a depth of 5 feet bgs. SV2 was advanced in the location of a former chemical storage area located in the building addition to the southwest corner of the main Site building.

1,1,1-TCA was detected at concentrations ranging from 24 ug/L to 86 ug/L. 1,1,1-TCA was not detected in SV2-5, SV5-5, SV6-5, SV7-5 or SV8-5. The highest concentration of 1,1,1-TCA was detected in soil vapor probe B1-10 was collected from boring B1 at a depth of 10 feet bgs on the north side of the former degreasing tank.

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1,1-DCE was detected at concentrations ranging from 5.2 ug/L to 80 ug/L. The highest concentration of 1,1-DCE was detected in soil vapor probe B1-10. 1,1-DCE was not detected in SV2-5, SV7-5 or SV8-5.

Soil vapor sample SV1-5 contained the greatest concentration of TCE (38 ug/L), 1,1-DCA (9.5 ug/L) and cis-1,2-DCE (16 ug/L). Soil vapor sample SV1-5 was collected from soil vapor probe SV1 from a depth of 5 feet bgs. SV1 was advanced in the location of a former chemical storage area located in the building addition to the southwest corner of the main Site building.

Soil vapor sample results have been summarized in Table 1.

6.2.2 Analytical Data for Soil

VOCs were not detected in soil samples collected as part of this investigation. TRPH was detected at a concentration of 59 milligrams per kilogram (mg/kg) in soil sample B9-2, drilled and sampled in the southeastern portion of the former aboveground oil tank storage area. TRPH was not detected in soil sample B8-2.

Total chromium was detected at concentrations ranging from 1.81 mg/kg to 381 mg/kg in soil samples collected from borings B8 through B20. Total chromium was detected at concentrations ranging from 7.16 mg/kg to 10.8 mg/kg in the background soil samples collected from borings B18, B19 and B20. Soil samples collected from borings B1 through B7 did not contain concentrations of total chromium above the laboratory detection limit of 5 mg/kg.

Hexavalent chromium was detected at concentrations ranging from 0.13 mg/kg to 1.15 mg/kg in soil samples collected from a depth of 1 foot from borings B1, B2, B5, B6 and B7. Hexavalent chromium was not detected in soil samples collected from borings B3, B4, B8 and B9 or from soil samples collected from depths of 10 feet from borings B1 and B2. Background soil samples collected from borings B18, B19 and B20 contained hexavalent chromium at concentrations ranging from 0.16 mg/kg to 0.20 mg/kg.

Total lead and nickel were present in all soil samples collected as part of this investigation. The greatest concentrations of total lead and nickel were 25.7 mg/kg (B13-1) and 71.2 mg/kg (B14-1), respectively.

Soil samples B5-1, B6-1 and B7-1 had pH readings between 8.47 and 8.97 while background samples had pH readings between 8.56 and 9.04.

Soil sample VOC and TRPH results have been summarized in Table 2. Soil sample results for metals analyses have been summarized in Table 3.

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7.0 CONCLUSIONS

The following conclusions have been drawn based on data collected during this investigation:

7.1 SOIL

- VOCs were not detected above the laboratory detection limits of 5 ug/kg in soil samples collected from borings B1 through B4 or in the background samples collected from B18 through B20.

- Low concentrations of TRPH (59 mg/kg) were detected in soil sample B9-2, collected from the southeast portion of the former waste oil aboveground tank locations. Soil sample B8-2, drilled and sampled approximately 20 feet to the northwest of B9-2, did not contain TRPH above the laboratory detection limit of 10 mg/kg.

- Soil sample B15-1, collected from a depth of approximately one foot bgs from boring B15 drilled along the southern property line, contained the greatest concentration of total chromium (381 mg/kg) which is below the Environmental Protection Agency's Preliminary Remediation Goal (PRG) for Industrial Soils of 450 mg/kg.

- The greatest concentrations of hexavalent chromium (1.15 mg/kg), total lead (25.7 mg/kg) and nickel (71.2 mg/kg) detected in soil samples collected as part of this investigation were well below PRGs for Industrial Soils as published by the EPA. PRGs for Industrial Soils for hexavalent chromium, total lead and nickel are 64 mg/kg, 450 mg/kg and 41,000 mg/kg, respectively.

7.2 SOIL VAPOR

- Relatively low concentrations of chlorinated VOCs were detected in soil vapor samples collected as part of this investigation with the exception of SV8-5. Chlorinated VOCs were not detected in soil vapor sample SV8-5.

- PCE was the chlorinated VOC detected in the greatest concentration (130 ug/L) and detected in the greatest number of soil vapor samples (8 out of 9 soil vapor samples).

- Concentrations of chlorinated VOCs kin general decreased with depth in soil vapor samples collected from B1. Concentrations of 1,1-DCE decreased from 80 ug/L at 10 feet bgs to 17 ug/L at 20 feet bgs. Concentrations of 1,1,1-TCA decreased from 86 ug/L at 10 feet bgs to 24 ug/L at 20 feet bgs.

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- In general, soil vapor samples collected along the southern property line (SV5 through SV8) contained lower concentrations of chlorinated VOCs than soil vapor samples collected from the former waste storage areas (SV1 through SV4).

8.0 LIMITATIONS

The judgements described in this report are professional opinions based solely within the limits of the scope of work authorized, and pertain to conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein, and this report is not intended for future evaluations of this Site unless an update is conducted by a consultant familiar with environmental assessments.

This report was compiled partially on information supplied to FREY Environmental, Inc. from outside sources, other information that is in the public domain and a visual inspection of the property. FREY Environmental, Inc. makes no warranty as to the accuracy of statements made by others, which may be contained in this report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report, except that it has been prepared in accordance with the current accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing similar services.

Site conditions may change with time as the result of natural alterations or man-made changes on this or adjacent properties. Future environmental investigations conducted at the Site may reveal Site conditions not indicated in the data reviewed by FREY Environmental, Inc. Additionally, changes in standards or regulations applicable to the Site may occur. The findings of this report may be partially or wholly invalidated by changes of which FREY Environmental, Inc. is not aware or has not had the opportunity to evaluate.

Environmental assessments provide an additional source on information regarding the environmental conditions of a particular property or facility. The report is a professional opinion and judgement to the Client, dependent upon FREY's knowledge and information obtained during the course of performance of the services.

Sincerely,
FREY Environmental, Inc.

Joe Frey
Principal Certified Engineering Geologist
CEG #1500

Evan Privett
Senior Project Geologist

FREY

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DHS (Department of Health Services), 1985, Certification of Closure letter addressed to Robert M. Phillips, Trent Tube Division dated April 16, 1985.

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Tables

TABLES

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TABLE 1
CHEMICAL ANALYSES OF SOIL VAPOR SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per liter)

SAMPLE NUMBER	DATE SAMPLED	SAMPLE LOCATION	cis-1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA	1,1,1,2-PCA
B1-10	10/22/2002	North Side of Former	5.5	8.6	28	80	9.0	86	ND<1.0
B1-20	10/22/2002	Degreasing Pit	7.7	9.9	25	17	5.2	24	ND<1.0
SV1-5	10/22/2002	Former Waste Storage Area	16	38	74	8.7	9.5	76	ND<1.0
SV2-5	10/22/2002	Former Waste Storage Area	1.3	5.3	130	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV3-5	10/22/2002	Former Waste Storage Area	7.2	22	96	16	5.1	54	ND<1.0
SV4-5	10/22/2002	Former Waste Storage Area	5.1	15	47	23	3.4	39	ND<1.0
SV5-5	10/22/2002	Southern Property Line	1.7	7.0	37	12	ND<1.0	ND<1.0	ND<1.0
SV6-5	10/22/2002	Southern Property Line	5.5	13	63	5.2	4.3	ND<1.0	56
SV7-5	10/22/2002	Southern Property Line	3.9	5.5	43	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV8-5	10/22/2002	Southern Property Line	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Notes

1 Soil vapor samples were analyzed in general accordance with EPA Method No. 8260B for the full list of compounds. Only detected compounds have been listed in this table.

2 ND<1.0 - Chemical constituent not present above the stated detection limit.

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TABLE 2
VOLATILE ORGANIC COMPOUND ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TRPH	cis 1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA
B1-2	2	North Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B1-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B1-20	20		10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B2-1	1	East Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B2-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B3-1	1	South Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B3-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B4-1	1	West Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B4-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B8-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	ND<10,000	NA	NA	NA	NA	NA	NA
B9-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	59,000	NA	NA	NA	NA	NA	NA
B18-1	3	Background Sample Northwestern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

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TABLE 2
VOLATILE ORGANIC COMPOUND ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TRPH	cis 1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA
B19-1	3	Background Sample Northeastern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B20-1	3	Background Sample Souteastern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

Notes
1 TRPH = Total recoverable petroleum hydrocarbons analyzed in general accordance with EPA Method No. 418.1
2 Soil samples analyzed for EPA 8260B full list including fuel oxygenates.
3 NA = Not analyzed for listed constituent

OCVOCEF 000617

TABLE 3
METAL ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in milligrams per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TOTAL CHROMIUM	HEXAVALENT CHROMIUM	TOTAL LEAD	NICKEL	pH
B13-1	1	Fomer Drum	10/22/2002	49.9	NA	25.7	51.6	NA
B13-5	5	Storage Area	10/22/2002	5.90	NA	0.90	6.03	NA
B13-10	10		10/22/2002	9.81	NA	0.57	5.63	NA
B14-1	1	Southeast Corner	10/22/2002	57.5	NA	5.19	71.2	NA
B14-5	5	of Site	10/22/2002	4.61	NA	1.16	5.30	NA
B14-10	10		10/22/2002	2.81	NA	0.57	2.78	NA
B15-1	1	Southern Property	10/22/2002	381	NA	17.3	67.4	NA
B15-5	5	Line	10/22/2002	4.44	NA	0.62	2.87	NA
B15-10	10		10/22/2002	3.95	NA	1.24	4.61	NA
B16-1	1	Southern Property	10/22/2002	25.4	NA	7.52	19.1	NA
B16-5	5	Line	10/22/2002	10.2	NA	2.45	11.0	NA
B16-10	10		10/22/2002	3.68	NA	1.01	3.87	NA
B17-1	1	Southern Property	10/22/2002	7.14	NA	3.57	8.93	NA
B17-5	5	Line	10/22/2002	4.18	NA	0.98	4.53	NA
B17-10	10		10/22/2002	2.51	NA	1.04	2.41	NA
B18-3	3	Background Sample Northwestern Portion of Site	10/22/2002	10.8	0.20	7.76	16.4	8.56
B19-3	3	Background Sample Northeastern Portion of Site	10/22/2002	7.85	0.17	1.97	7.95	9.04
B20-3	3	Background Sample Southeastern Portion of Site	10/22/2002	7.16	0.16	2.25	8.78	8.84
EPA PRG (Industrial Soils)				450	64	750	41,000	

Notes
1 TRPH = Total recoverable petroleum hydrocarbons analyzed in general accordance with EPA Method No. 418.1
2 Soil samples analyzed for EPA 8260B full list including fuel oxygenates
3 NA = Not analyzed for listed constituent

OCVOCEF 000618

TABLE 3
METAL ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in milligrams per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TOTAL CHROMIUM	HEXAVALENT CHROMIUM	TOTAL LEAD	NICKEL	pH
B1-2	2	North Side of	10/22/2002	ND<5.0	0.13	2.23	11.5	NA
B1-10	10	Degreasing Pit	10/22/2002	ND<5.0	ND<0.100	0.81	2.02	NA
B2-1	1	East Side of	10/22/2002	ND<5.0	0.24	1.12	4.13	NA
B2-10	10	Degreasing Pit	10/22/2002	ND<5.0	ND<0.100	0.95	3.81	NA
B3-1	1	South Side of	10/22/2002	ND<5.0	ND<0.100	1.38	4.66	NA
B3-10	10	Degreasing Pit	10/22/2002	ND<5.0	ND<0.100	0.76	3.02	NA
B4-1	1	West Side of	10/22/2002	ND<5.0	ND<0.100	1.05	4.35	NA
B4-10	10	Degreasing Pit	10/22/2002	ND<5.0	ND<0.100	1.01	3.53	NA
B5-1	1	Northwest Portion of Former Process Tanks	10/22/2002	ND<5.0	0.32	3.00	12.2	8.97
B6-1	1	Southwest Portion of Former Process Tanks	10/22/2002	ND<5.0	0.17	2.40	9.19	8.68
B7-1	1	Eastern Portion of Former Process Tanks	10/22/2002	ND<5.0	1.15	9.51	16.9	8.47
B8-2	2	Fomer AboveGround Waste Oil Tank	10/22/2002	11.3	ND<5.0	3.21	11.6	NA
B9-2	2	Fomer AboveGround Waste Oil Tank	10/22/2002	11.0	ND<5.0	4.78	10.5	NA
B10-1	1	Fomer Acid	10/22/2002	10.4	NA	2.61	12.9	NA
B10-5	5	Storage Area	10/22/2002	1.81	NA	0.60	2.28	NA
B10-10	10		10/22/2002	3.03	NA	0.74	2.54	NA
B11-1	1	Fomer Kerosene	10/22/2002	17.2	NA	9.71	15.5	NA
B11-5	5	Storage Area	10/22/2002	2.07	NA	0.73	2.67	NA
B11-10	10		10/22/2002	2.88	NA	0.65	3.20	NA
B12-1	1	Fomer Drum	10/22/2002	26.6	NA	8.52	31.3	NA
B12-5	5	Storage Area	10/22/2002	4.00	NA	0.84	4.84	NA
B12-10	10		10/22/2002	4.26	NA	1.00	4.21	NA

Figures

FIGURES

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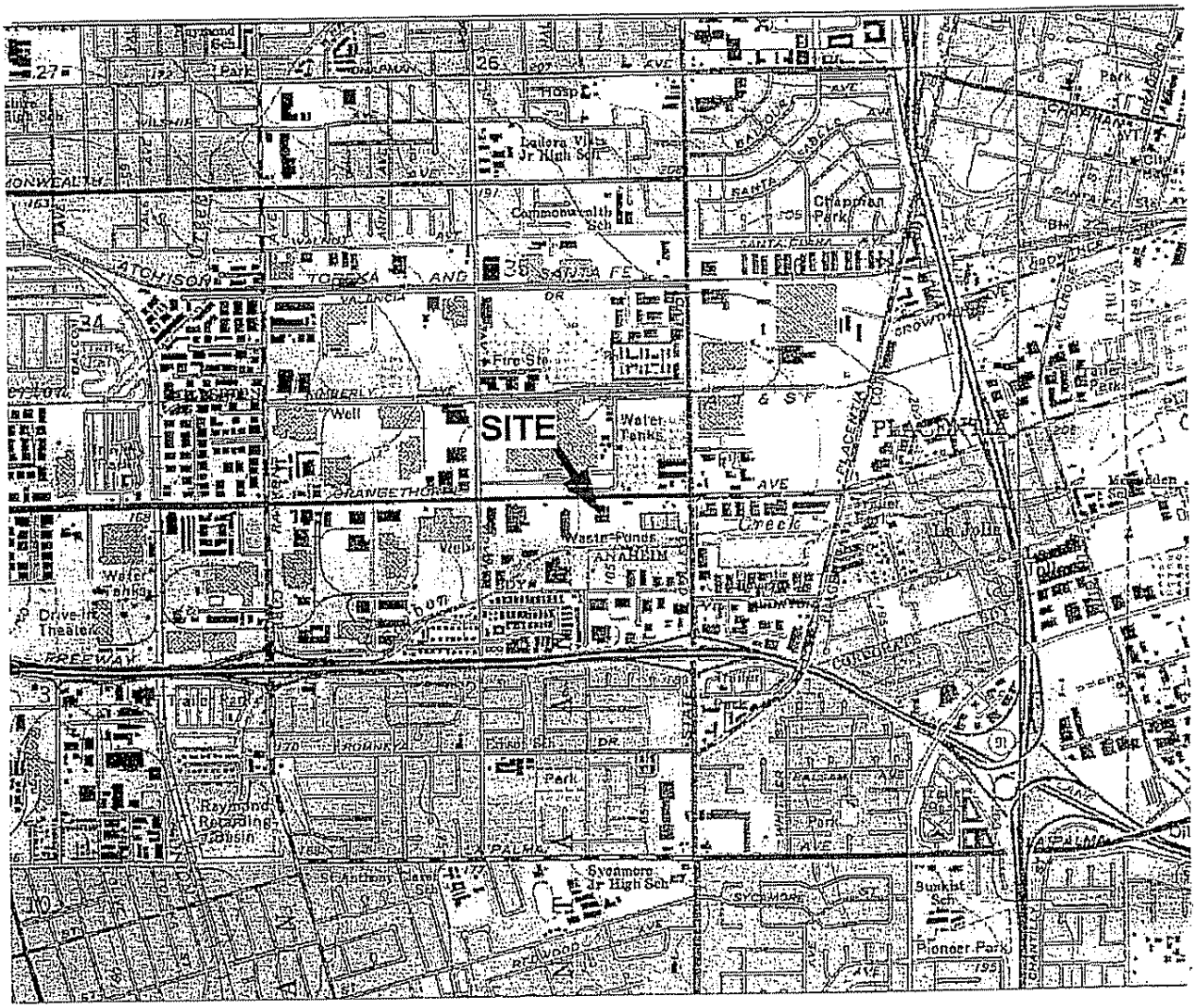


FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS

Project No.: 420-01

FREY ENVIRONMENTAL, INC.

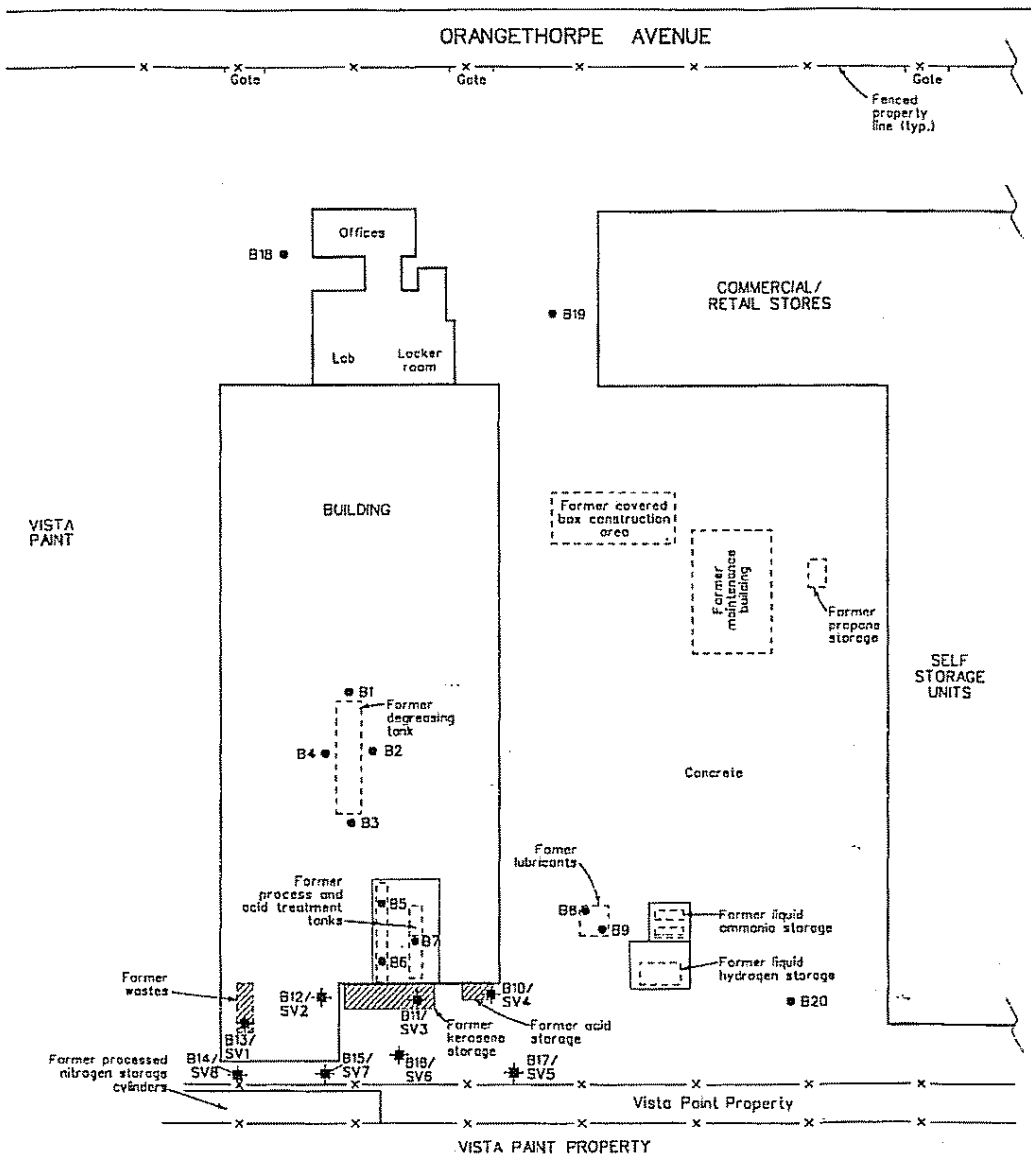
NOTE:

1) All locations and dimensions are approximate.
2) Base map from USGS 7.5 minute California topographic quadrangle, printed from Topo.

SITE LOCATION MAP

Date: AUGUST 2002

Figure: 1



EXPLANATION

- BARREL STORAGE AREA
- B17/ SV5 — SOIL BORING AND VAPOR PROBE LOCATIONS
- B1 — SOIL BORING LOCATIONS

NOTES:

1) Allocations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2130 EAST ORANGETHORPE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

FREY ENVIRONMENTAL, INC.

SITE SKETCH SHOWING SOIL BORING AND SOIL VAPOR PROBE LOCATIONS

Date: NOVEMBER 2002 Figure 2

420SI-3.dgn

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Appendix A

APPENDIX A

FIELD PROCEDURES

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APPENDIX A
FIELD PROCEDURES

A.1 DRILLING PROCEDURES

1. Borings B12, B13, B15, B17 and B18 were advanced with a direct push drill rig. Boring B16 was drilled with a hollow stem auger drilling rig.

2. Down hole drilling equipment was steam-cleaned prior to use at the Site and was cleaned between each boring.

3. Soil descriptions, sample type and depth, and related drilling information were recorded on a boring log under the supervision of a State-Certified Engineering Geologist from FREY Environmental, Inc.

4. Soil samples were collected using a split-spoon modified California sampler.

5. Samplers were cleaned between sample intervals using a brush and tap water rinse followed by a brush and TSP solution (non-phosphate), a tap water rinse, and deionized water rinse. The sampler was dried by air or with a towel prior to sampling.

6. Soil samples collected from borings B12, B13, B15, B17 and B18 were collected in 1-inch diameter acetate liner. Soil samples collected from boring B16 were collected in 2-inch by 6-inch brass tubes.

7. Following retrieval of the sampler, the liner or brass tubes were removed from the sampler, and, given sample recovery, the ends covered with teflon tape, capped with PVC endcaps. Each sample was labeled.

8. The samples were placed in ziploc bags and stored in a cooler packed with ice.

9. The samples were delivered to a State of California-certified hazardous waste testing laboratory following collection. Sample handling, transport, and delivery to the laboratory are documented using Chain-of-Custody forms.

OCVOCEF 000626

A.2 HEAD-SPACE ANALYSIS

1. Samples were extruded directly into the mason jar and capped.

2. The sample was allowed to equilibrate.

3. The sample was then connected to a flame ionization detector, organic vapor analyzer.

4 The maximum gauge reading was recorded as the concentration in parts per million (ppm) (volume to volume).

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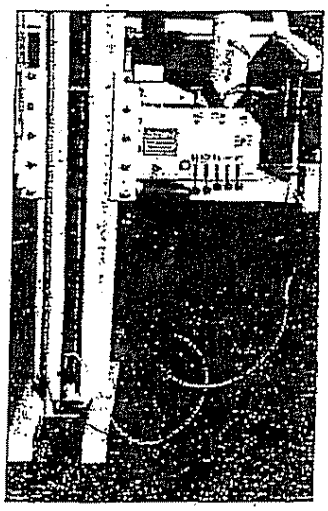
Soil Gas Sampling

Post-Run Tubing System

The Post-Run Tubing System

The Post-Run Tubing System (PRT) allows the user to collect soil vapor samples quickly and easily at the desired sampling depth WITHOUT the time-consuming complications associated with rod leakage and contamination. O-ring connections enable the PRT system to deliver a vacuum-tight seal that prevents sample contamination from UP hole, and assures that the sample is taken from the desired depth at the BOTTOM of the hole. The sample is drawn through the point holder, through the adapter, and into the sample tubing. The tubing can be replaced after each sample, thus eliminating sample carryover problems and the need to decontaminate the probe rods. The resulting time-savings translates into a higher productivity rate for you and your client.



Using the Post-Run Tubing (PRT) system for soil vapor sampling.

Sampling Methods

Some of the more common methods of active soil gas sample collectioninclude:

- Direct sampling from the PRT using a gas chromatograph-compatible syringe used when the Geoprobe van is equipped with a mobile laboratory and gas chromatograph for immediate analysis of the collected samples.

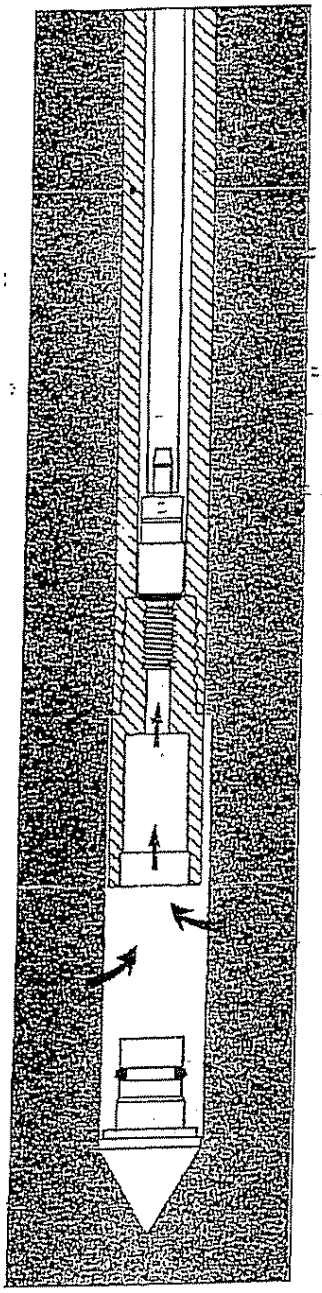
- Inline sampling using glass sampling bulbs or Tedlar bags. The sampling device is placed inline, between the PRT adapter and the vacuum/volume system. As the sampling system is purged, soil gas is trapped in the bulb or bag. These samples may be stored for limited periods of time and either analyzed on site or at an off-site laboratory.

- Summa cannisters, pre-evacuated steel devices that are connected to the surface end to the PRT tubing, also provide another sampling option for soil gas. A valve on the canister is opened and the vacuum inside the canister pulls in soil gases from the sample interval. This system is expensive and is usually reserved for sending samples to an off-site laboratory for specialized analyses or quality control purposes.

FIELD QUESTION . . .

Q. Is it possible to use a retractable point with the PRT system?

A. Yes! You will need a Retractable Point (AT21B) with a PRT Retractable Point Holder (PH21B). (See page 8.)



A cross section of the PRT System showing how soil gas (arrows) is drawn through the inner tubing system.

OCVOCEF 000628

Appendix B

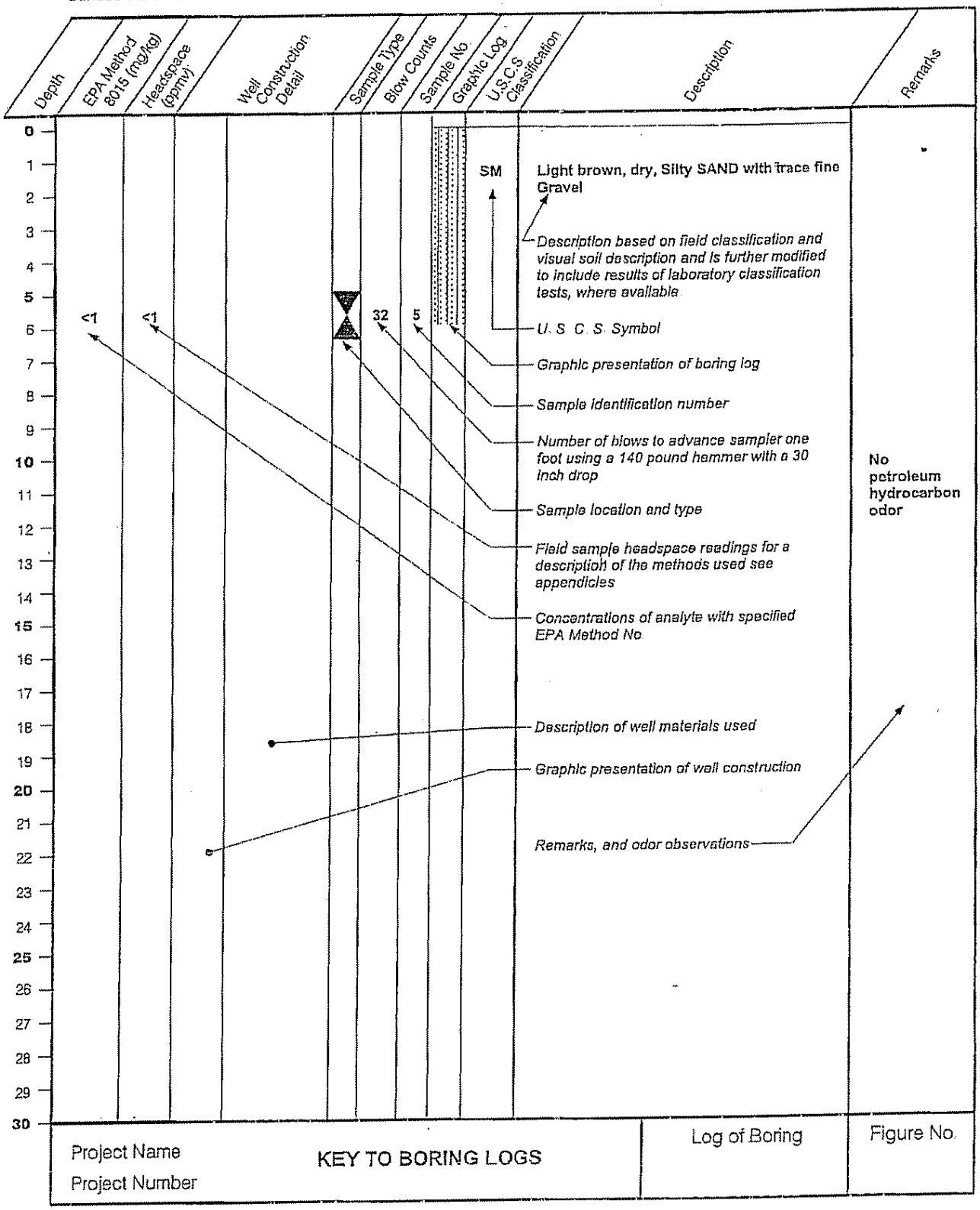
APPENDIX B

BORINGS LOGS

FREY

Date drilled/completed _____
Geologist _____
Drilling equipment _____
Surface elevation _____

Top of casing elevation _____
Boring depth _____
Water depth _____
Well screen depth _____



Project Name Project Number	KEY TO BORING LOGS	Log of Boring	Figure No.

FREY ENVIRONMENTAL, INC.

SOIL DESCRIPTION

MOISTURE CONTENT	
DRY	No perceptible moisture
DAMP	Some perceptible moisture, no moisture remains on hands after squeezing
MOIST	Perceptible moisture, moisture remains on hands after squeezing
WET	Some pore/voids filled with liquid, typical of capillary fringe
SATURATED	All pores/voids filled with liquid, free liquid visible, typical of below ground water table

CONSISTENCY AND DENSITY (assumes Modified Standard Penetration Test)	
Fine-grained soils (consistency)	
	blows/foot
very soft	0 - 2
soft	2 - 4
firm	4 - 8
stiff	8 - 16
very stiff	16 - 32
hard	>32
Fine-grained soils (consistency)	
	blows/foot
very loose	0 - 4
loose	4 - 10
medium-dense	10 - 30
dense	30 - 50
very dense	over 50

GRADING
Well Graded Wide range of grain sizes and substantial amounts of all intermediate particle sizes
Poorly Graded Predominantly one grain size or is obviously missing intermediate grain sizes

MODIFIERS	
trace	<5%
minor	5 -12%
some	12 - 20%

PERCENTAGES			
5%	12%	20%	50%

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			Group Symbol	Graphic Symbol	GROUP NAME
Coarse-grained Soils More than 50% retained on no. 200 sieve	Gravels 50% or more of coarse fraction retained on no. 4 sieve	Clean Gravels	GW		Well-graded GRAVEL Well-graded GRAVEL with Sand
		Gravels with fines	GP		Poorly-graded GRAVEL Poorly graded GRAVEL with Sand
			GM		Silty GRAVEL Silty GRAVEL with Sand
			GC		Clayey GRAVEL Clayey GRAVEL with Sand
	Sands More than 50% of coarse fraction passes no. 4 sieve	Clean Sands	SW		Well graded SAND Well-graded SAND with Gravel
			SP		Poorly-graded SAND Poorly-graded SAND with Gravel
		Sands with fines	SM		Silty SAND / Clayey SAND with Gravel
			SC		Silty SAND / Clayey SAND with Gravel
Fine-grained Soils 50% or more passes no. 200 sieve	Silts and Clays Liquid limit 50% or less		ML		SILT / SILT with Sand or Gravel Sandy SILT / Sandy SILT with Gravel Gravelly SILT / Gravelly SILT with Sand
			CL		Lean CLAY / Lean CLAY with Sand or Gravel Sandy lean CLAY / Sandy lean Clay with Gravel Gravelly lean CLAY / Gravelly lean CLAY with Sand
			OL		Organic SILTS or organic CLAYS of low plasticity
	Silts and Clays Liquid limit greater than 50%		MH		Elastic SILT / Elastic SILT with Sand or Gravel Sandy elastic SILT / Sandy elastic SILT with Gravel Gravelly elastic SILT / Gravelly elastic SILT with Sand
			CH		Fat CLAY / Fat CLAY with Sand or Gravel Sandy fat CLAY / Sandy fat CLAY with Gravel Gravelly fat CLAY / Gravelly fat CLAY with Sand
			OH		Organic CLAYS or organic SILTS of medium to high plasticity
Highly Organic Soils			PT		PEAT, MUCK and other highly organic soils

SAMPLE TYPES

	2" O.D. modified California Sampler	2" O.D. manual driven hand Sampler	1" O.D. Geoprobe liner Sampler
Relatively Undisturbed			
Disturbed			
No Recovery			

NOTES:

1) Subsurface information from boring and test pit logs depict conditions only at the specific locations and dates indicated. Soil conditions and water levels at other locations may differ from conditions at these locations. Also the conditions at these locations may change with time.

2) Blow counts on logs are the number of blows to drive the sampler 12 inches with a 140 pound hammer falling 30 inches unless otherwise specified.

3) USCS soil classification reference = ASTM Standard D2487-85.

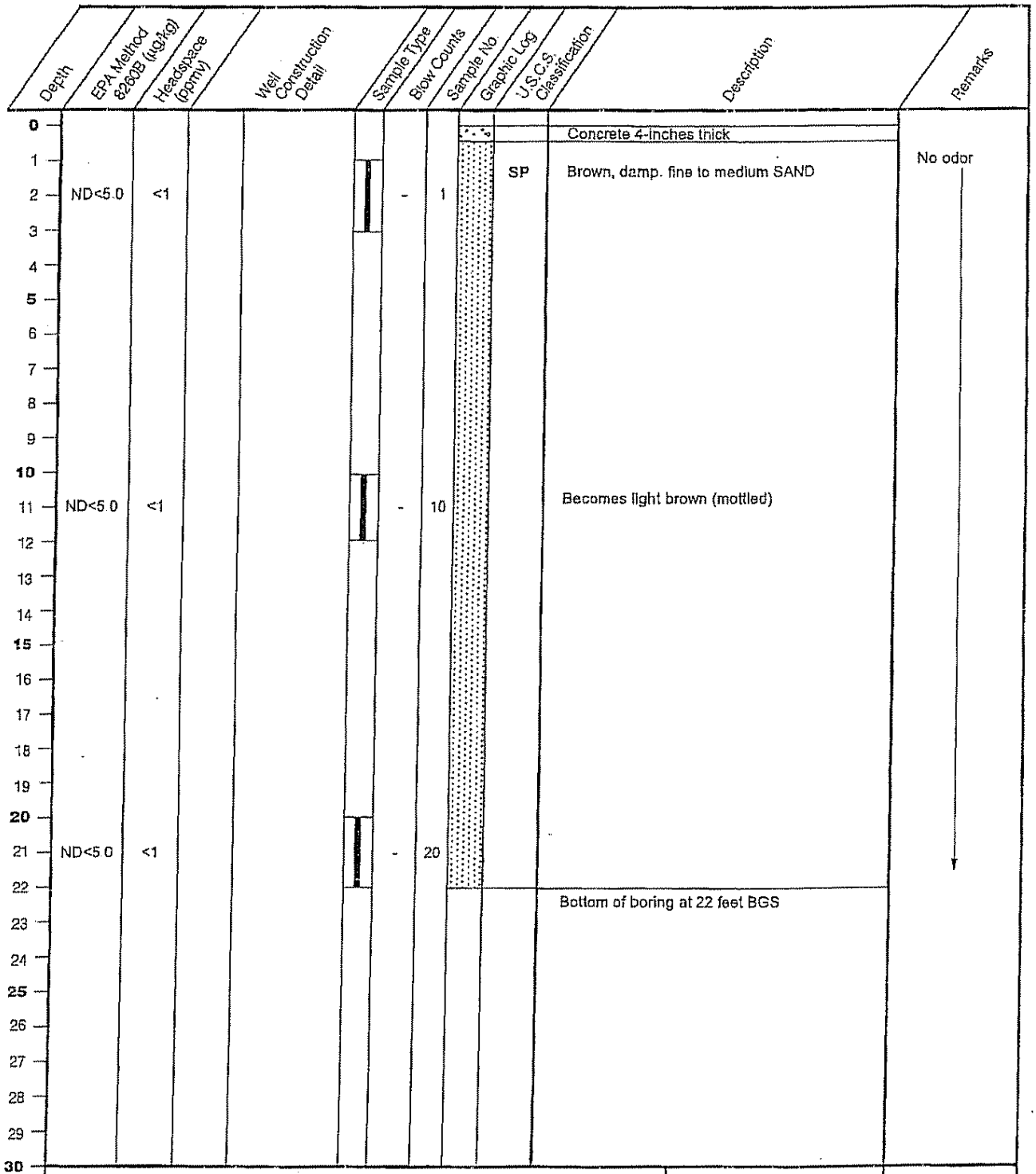
▽ 1-1-98 water level and date measured (if applicable)

FREY ENVIRONMENTAL, INC.

BORING LOG LEGEND AND UNIFIED SOIL CLASSIFICATION SYSTEM

OCVOCEF 000632

Date drilled/completed	October 22, 2002	Top of casing elevation	NA
Geologist	M. Eder	Boring depth	Approx. 22 feet BGS
Drilling equipment	Geoprobe	Water depth	Not encountered
Surface elevation	Approx. 185 feet MSL	Well screen depth	NA

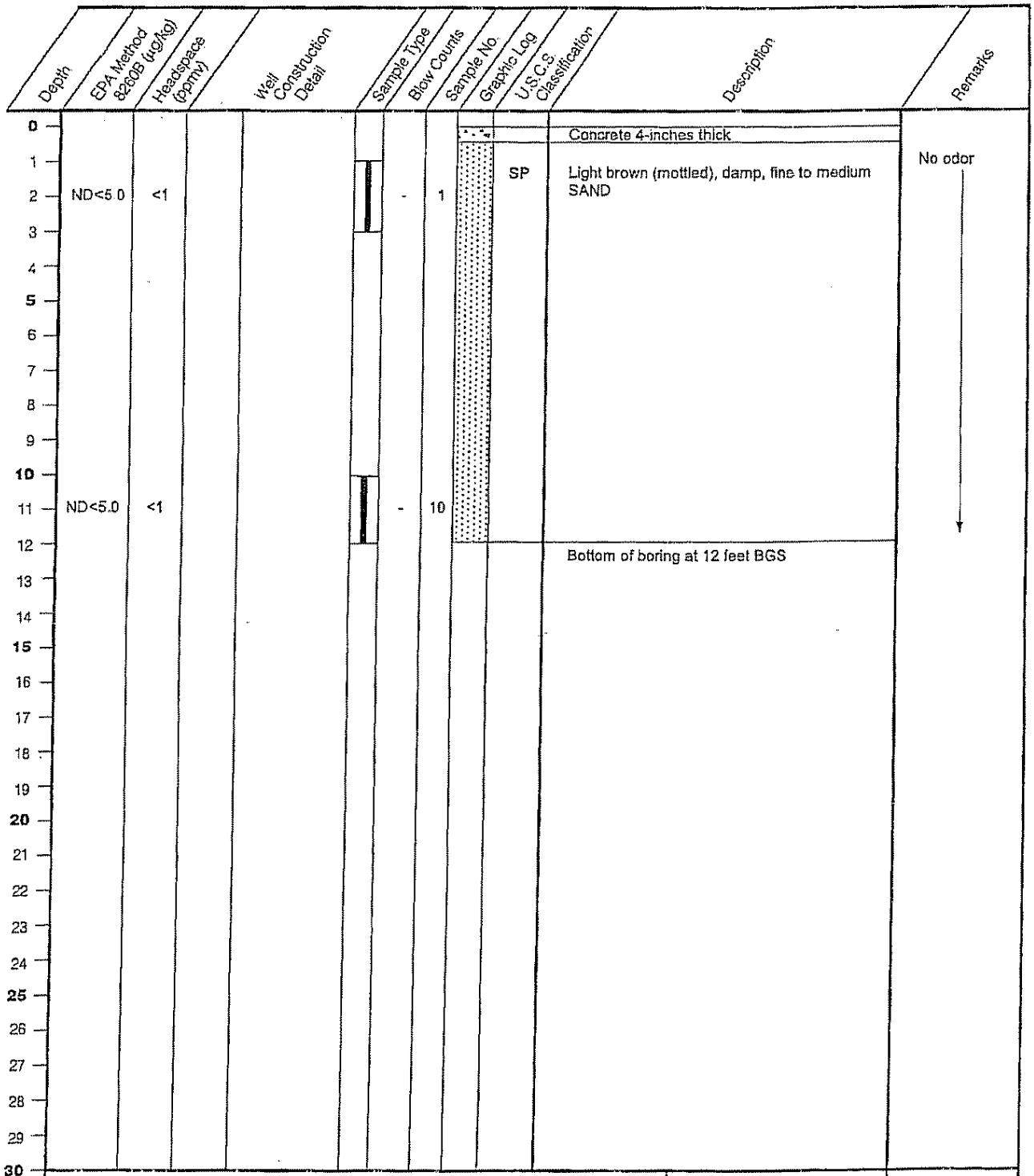


Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No.
Project Number	420-01	B1	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: M. Eder
Drilling equipment: Geoprobe
Surface elevation: Approx. 185 feet MSL

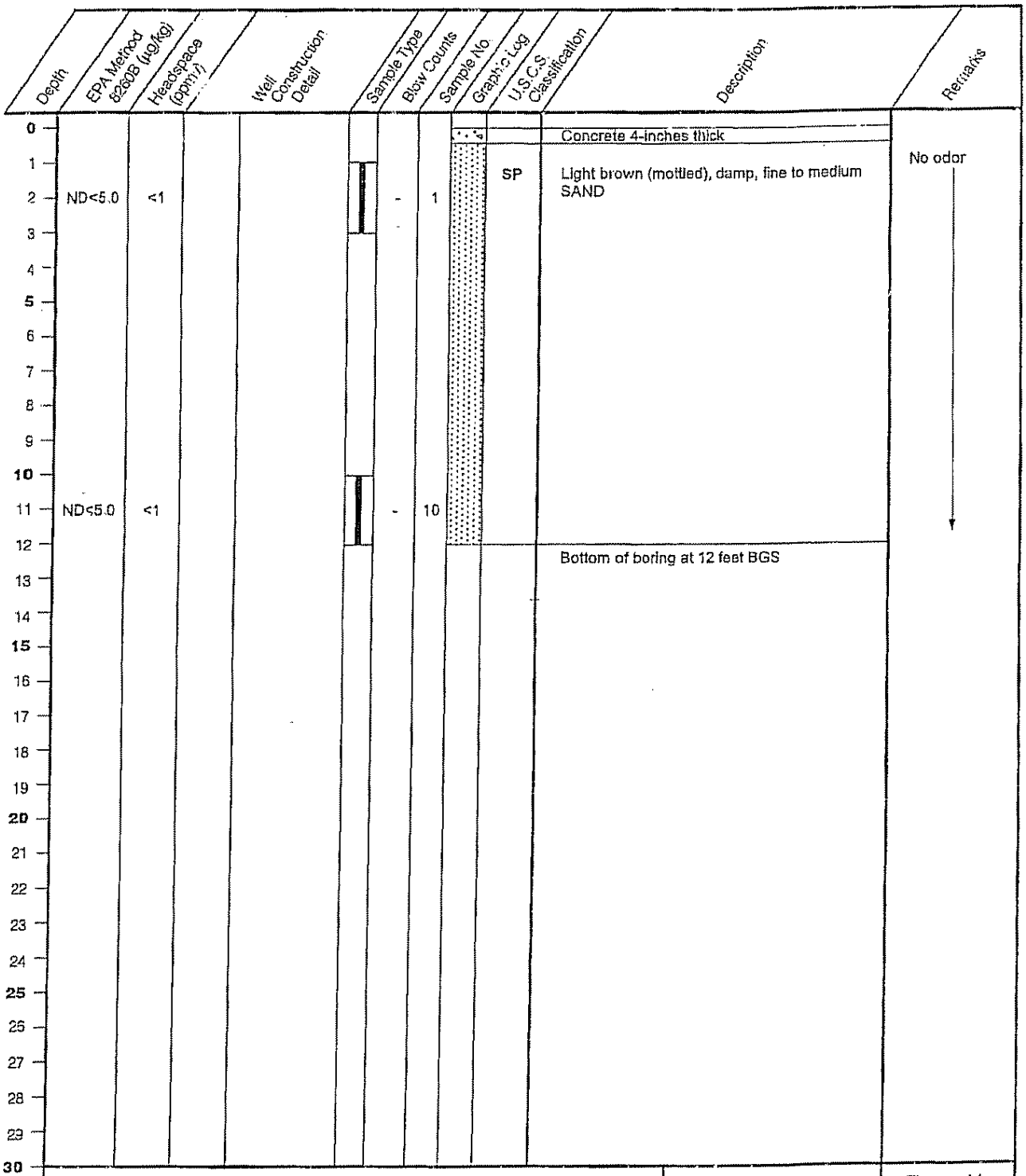
Top of casing elevation: NA
Boring depth: Approx. 12 feet BGS
Water depth: Not encountered
Well screen depth: NA



Project Name: FORMER TRENT TUBE FULLERTON Project Number: 420-01	Log of Boring B2	Figure No 1

FREY ENVIRONMENTAL, INC.

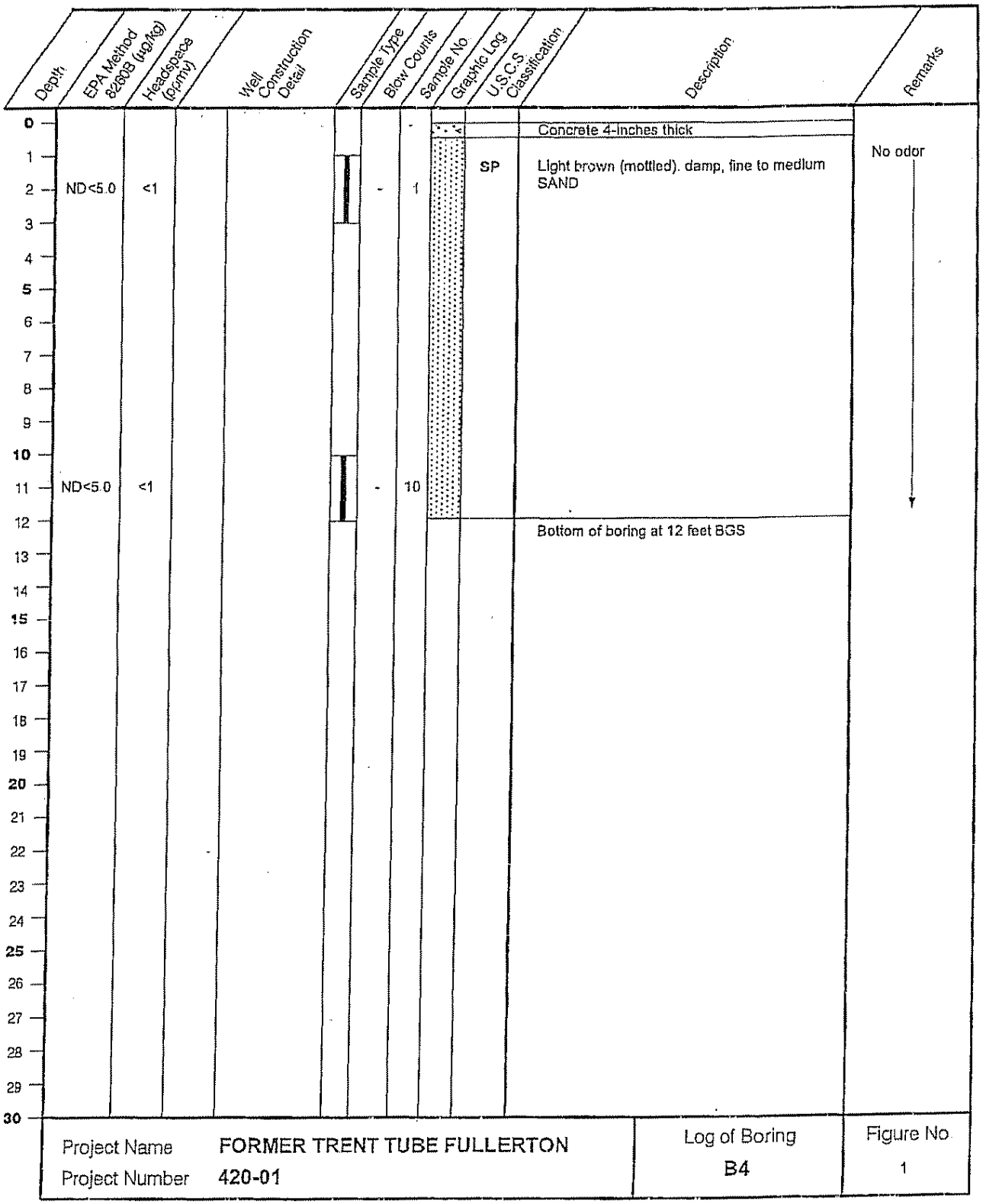
Date drilled/completed	October 22, 2002	Top of casing elevation	NA
Geologist	M. Eder	Boring depth	Approx. 12 feet BGS
Drilling equipment	Geoprobe	Water depth	Not encountered
Surface elevation	Approx. 185 feet MSL	Well screen depth	NA



Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No.
Project Number	420-01	B3	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed	October 22, 2002	Top of casing elevation	NA
Geologist	M. Eder	Boring depth	Approx. 12 feet BGS
Drilling equipment	Geoprobe	Water depth	Not encountered
Surface elevation	Approx. 185 feet MSL	Well screen depth	NA



Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No
Project Number	420-01	B4	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: V. Ramirez
Drilling equipment: Hand Auger
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 2 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (ug/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1	NA	<1		G	-	1		SP	Brown, damp, fine to medium SAND	No petroleum hydrocarbon odor
2									Bottom of boring at 2 feet BGS	
3										
4										
5										
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Project Name: FORMER TRENT TUBE FULLERTON
Project Number: 420-01

Log of Boring: B5

Figure No.: 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed October 22, 2002
Geologist V. Ramirez
Drilling equipment Hand Auger
Surface elevation Approx. 185 feet MSL

Top of casing elevation NA
Boring depth Approx. 2 feet BGS
Water depth Not encountered
Well screen depth NA

Depth	EPA Method 8260B (µg/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1	NA	<1		G	-	1		SP	Brown, damp, fine to medium SAND	No petroleum hydrocarbon odor
2									Bottom of boring at 2 feet BGS	
3										
4										
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Project Name FORMER TRENT TUBE FULLERTON
Project Number 420-01

Log of Boring B6

Figure No. 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed October 22, 2002
Geologist V. Ramirez
Drilling equipment Hand Auger
Surface elevation Approx. 185 feet MSL

Top of casing elevation NA
Boring depth Approx. 2 feet BGS
Water depth Not encountered
Well screen depth NA

Depth	EPA Method 8260B (µg/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4 inches thick	
1	NA	<1		G	-	1		SP	Brown, damp, fine to medium SAND	No petroleum hydrocarbon odor
2									Bottom of boring at 2 feet BGS	
3										
4										
5										
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Project Name FORMER TRENT TUBE FULLERTON
Project Number 420-01

Log of Boring B7

Figure No 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: J. Moeller
Drilling equipment: Hand Auger
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 3 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (ug/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SP	Brown, damp. fine to medium SAND	No petroleum hydrocarbon odor
2	NA	<1		G	-	2				
3									Bottom of boring at 3 feet BGS	
4										
5										
6										
7										
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Project Name	Project Number	Log of Boring	Figure No
FORMER TRENT TUBE FULLERTON	420-01	B8	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: J. Moeller
Drilling equipment: Hand Auger
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 3 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (ug/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SP	Brown, damp, fine to medium SAND	
2	NA	<1		G	-	2				No petroleum hydrocarbon odor
3									Bottom of boring at 3 feet BGS	
4										
5										
6										
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Project Name: FORMER TRENT TUBE FULLERTON
Project Number: 420-01

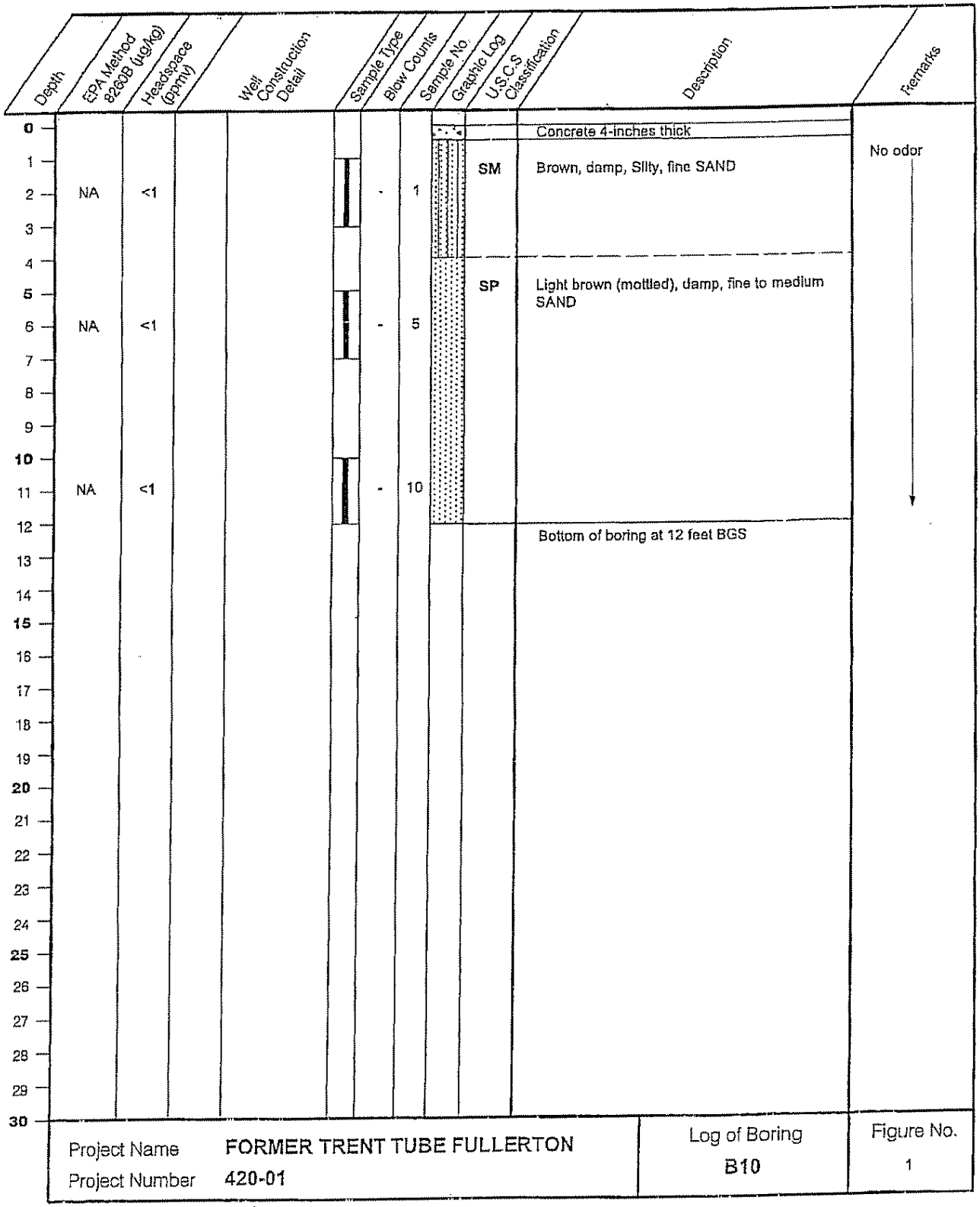
Log of Boring: B9

Figure No: 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: M. Eder
Drilling equipment: Geoprobe
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 12 feet BGS
Water depth: Not encountered
Well screen depth: NA



Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No.
Project Number	420-01	B10	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: M. Eder
Drilling equipment: Geoprobe
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 12 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (µg/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SM	Brown, damp, Silty. fine to medium SAND	No odor
2	NA	<1		-	1					
3		-						SP	Light brown (mottled), damp, fine to medium SAND	
4										
5										
6	NA	<1		-	5					
7										
8										
9										
10										
11	NA	<1		-	10					
12									Bottom of boring at 12 feet BGS	
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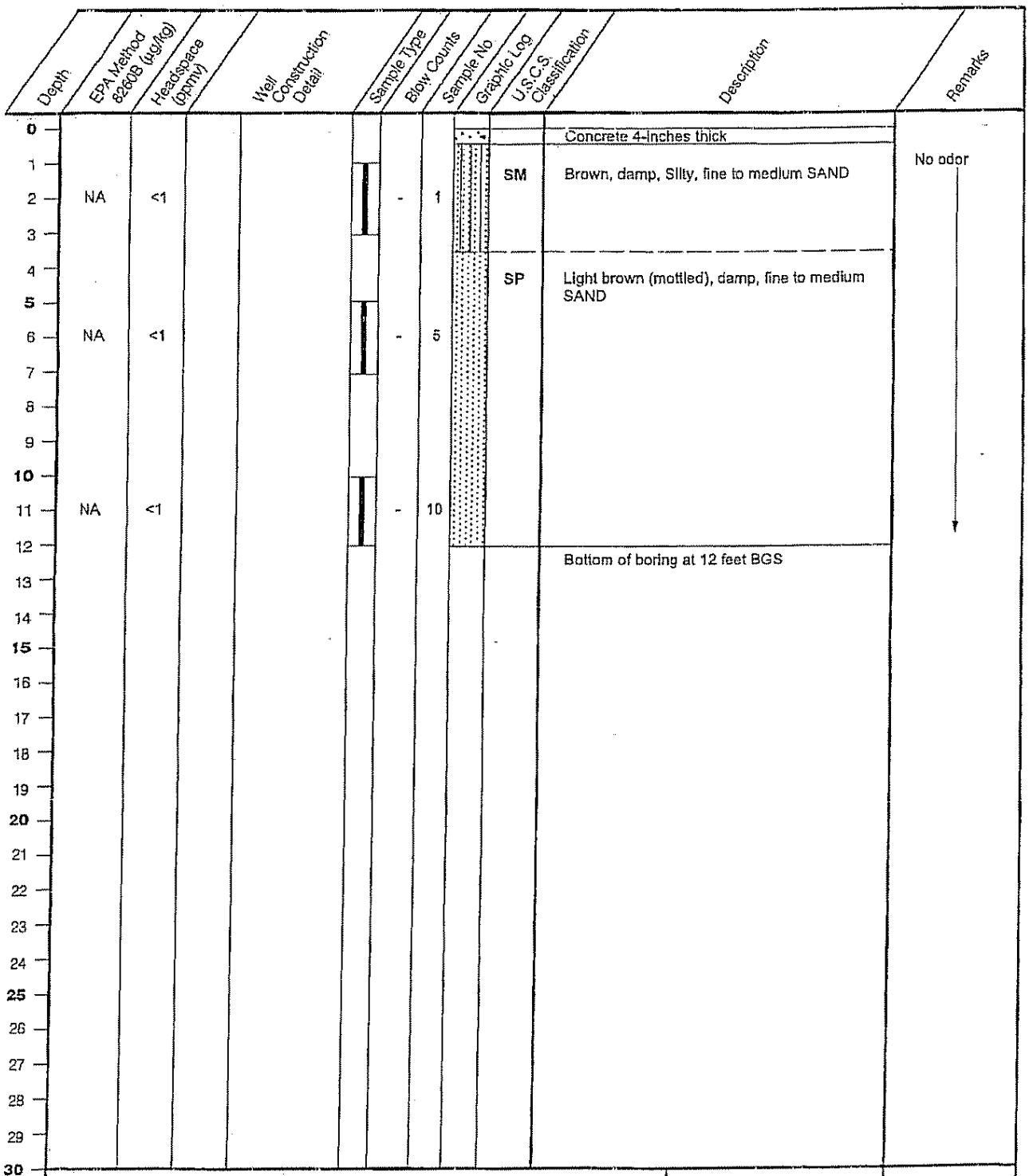
Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No
Project Number	420-01	B11	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed October 22, 2002
Geologist M. Eder
Drilling equipment Geoprobe
Surface elevation Approx. 185 feet MSL

Top of casing elevation NA
Boring depth Approx. 12 feet BGS
Water depth Not encountered
Well screen depth NA

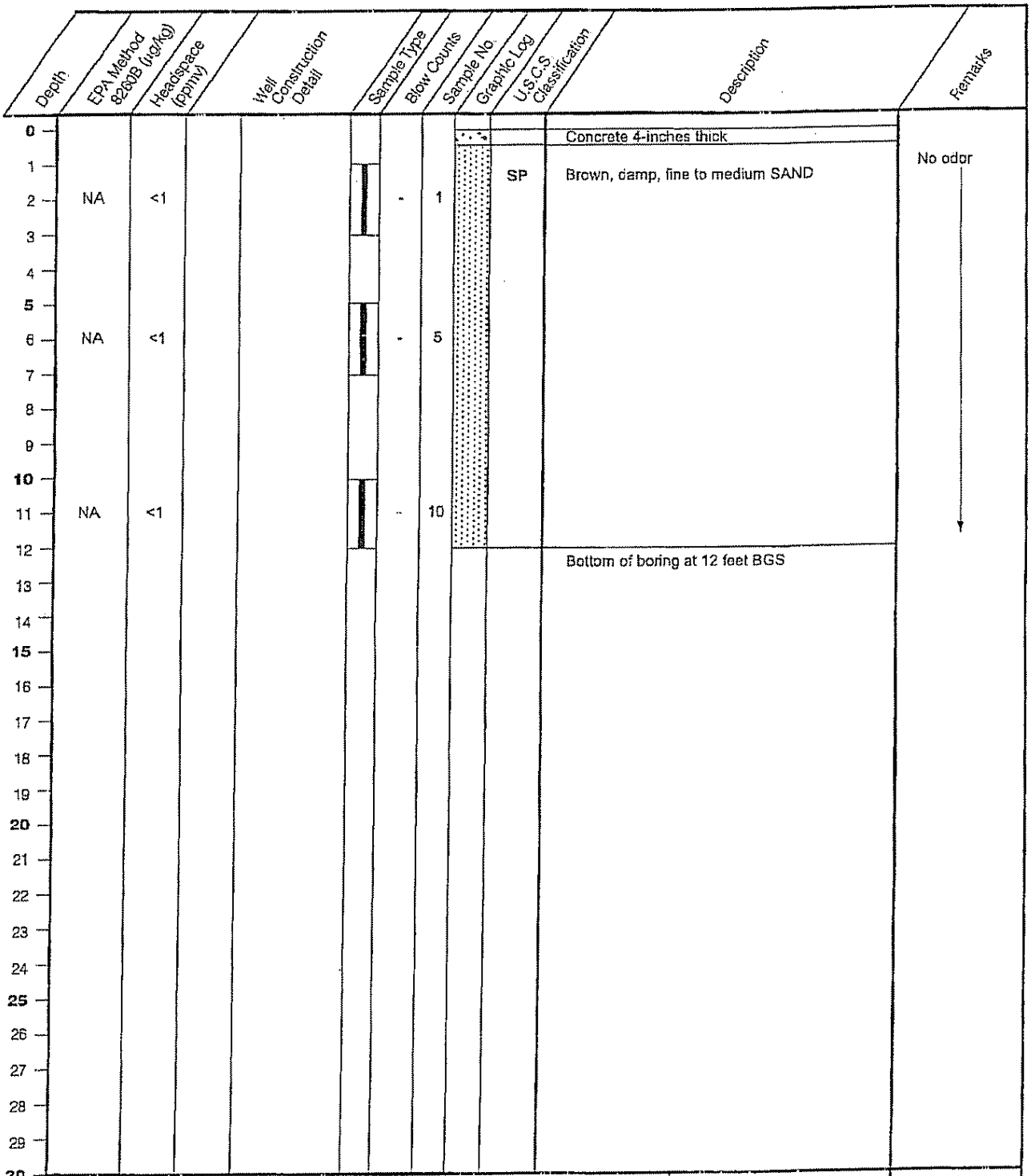


Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No.
Project Number	420-01	B13	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: M. Eder
Drilling equipment: Geoprobe
Surface elevation: Approx. 185 feet MSL

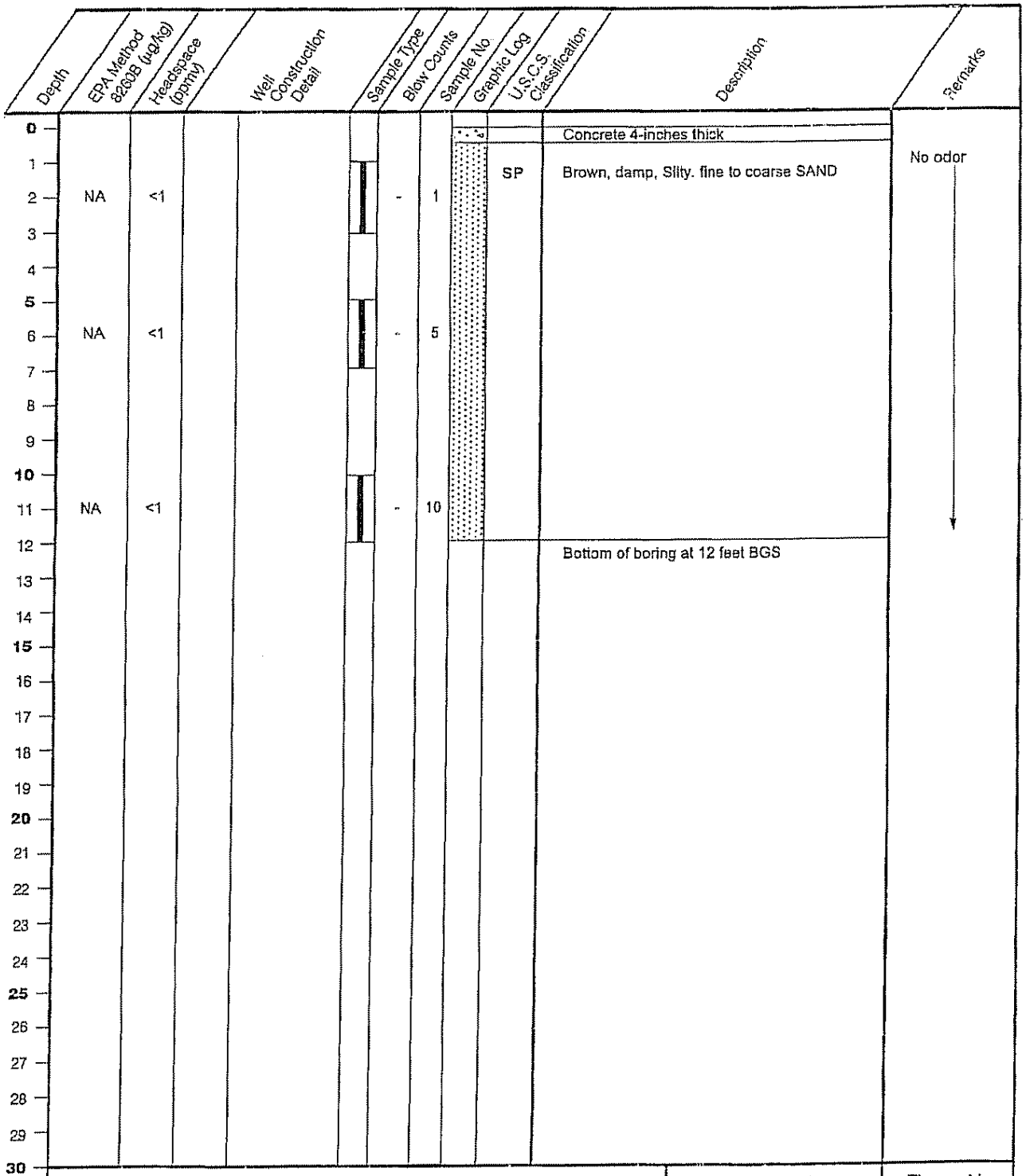
Top of casing elevation: NA
Boring depth: Approx. 12 feet BGS
Water depth: Not encountered
Well screen depth: NA



Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No
Project Number	420-01	B14	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed	October 22, 2002	Top of casing elevation	NA
Geologist	M. Eder	Boring depth	Approx. 12 feet BGS
Drilling equipment	Geoprobe	Water depth	Not encountered
Surface elevation	Approx. 185 feet MSL	Well screen depth	NA



Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No.
Project Number	420-01	B15	1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: M. Eder
Drilling equipment: Geoprobe
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 12 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (ug/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								CL	Gray, damp, Sandy CLAY, w/some Silt, low plasticity	Slight odor
2	NA	<1		-	1					
3										
4								SP	Brown, damp, fine to medium SAND w/minor amount of Silt	
5										
6	NA	<1		-	5					
7										
8										
9										
10										
11	NA	<1		-	10				Becomes light brown (mottled), no Silt	No odor
12									Bottom of boring at 12 feet BGS	
13										
14										
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Project Name: FORMER TRENT TUBE FULLERTON
Project Number: 420-01

Log of Boring: B16

Figure No.: 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: M. Eder
Drilling equipment: Geoprobe
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 12 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (ug/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SP	Brown (mottled), damp, fine to medium SAND w/minor amount of Silt	No odor
2	NA	<1		-	1					
3										
4										
5									No Silt	
6	NA	<1		-	5					
7										
8										
9										
10										
11	NA	<1		-	10					
12									Bottom of boring at 12 feet BGS	
13										
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Project Name: FORMER TRENT TUBE FULLERTON
Project Number: 420-01

Log of Boring: B17

Figure No.: 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: V. Ramirez
Drilling equipment: Hand Auger
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 4 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (µg/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SP	Brown, damp, fine to medium SAND	
2										
3	ND<5.0	<1		G	-	3				No petroleum hydrocarbon odor
4									Bottom of boring at 4 feet BGS	
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Project Name: FORMER TRENT TUBE FULLERTON
Project Number: 420-01

Log of Boring: B18

Figure No: 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: V. Ramirez
Drilling equipment: Hand Auger
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 4 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (µg/kg)	Headspace (ppmv)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SP	Brown, damp, fine to medium SAND	
2										No petroleum hydrocarbon odor
3	ND<5.0	<1		G	-	3				
4									Bottom of boring at 4 feet BGS	
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Project Name: FORMER TRENT TUBE FULLERTON
Project Number: 420-01

Log of Boring: B19

Figure No.: 1

FREY ENVIRONMENTAL, INC.

Date drilled/completed: October 22, 2002
Geologist: V. Ramirez
Drilling equipment: Hand Auger
Surface elevation: Approx. 185 feet MSL

Top of casing elevation: NA
Boring depth: Approx. 4 feet BGS
Water depth: Not encountered
Well screen depth: NA

Depth	EPA Method 8260B (ug/kg)	Headspace (ppmV)	Well Construction Detail	Sample Type	Blow Counts	Sample No.	Graphic Log	U.S.C.S. Classification	Description	Remarks
0									Concrete 4-inches thick	
1								SP	Brown, damp, fine to medium SAND	
2										
3	ND<5.0	<1		G	-	3				No petroleum hydrocarbon odor
4									Bottom of boring at 4 feet BGS	
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

Project Name	FORMER TRENT TUBE FULLERTON	Log of Boring	Figure No.
Project Number	420-01	B20	1

FREY ENVIRONMENTAL, INC.

Appendix C

APPENDIX C

LABORATORY REPORTS

FREY

Baseline On-Site Analysis
P. O Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil & Vapor

Analyses Requested:

1. EPA 418.1 – Total Recoverable Petroleum Hydrocarbons (TRPH)
2. EPA 8260B – Chlorinated Volatile Organic Compounds
3. EPA 8260B – Volatile Aromatics (BTEX)

On October 22, 2002, *Baseline* received samples from the project shown above. A Chain-of-Custody Record (COC) is attached.

Baseline analyzed the samples for the parameters shown above per the COC. In this report, *Baseline* presents the results and QA/QC summary for these analyses.

Brian K. Kato
Approved
Brian K. Kato, Laboratory Manager

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

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FAX: 714.840.1584

Laboratory Report

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Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil

EPA 418.1: Total Recoverable Petroleum Hyrocarbons (TRPH) Results

Constituent:	TRPH
Method:	418.1
Units:	mg/kg
Sample ID	
B8-2	ND<10
B9-2	59
B18-1	ND<10
B19-1	ND<10
B20-1	ND<10
Method Blank	ND<10

ND: Not detected at the indicated reporting limit.

Baseline On-Site Analysis
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Huntington Beach, CA 92647

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Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil

Volatile Aromatics (BTEX) & Chlorinated Volatile Organic Compounds (EPA 8260B)

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**B1-2**	**B1-10**	**B1-20**	**B2-1**	**B2-10**	**B3-1**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorinated VOC's						
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000656

BASELINE ON-SITE ANALYSIS INC.

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil

Volatile Aromatics (BTEX) & Chlorinated Volatile Organic Compounds (EPA 8260B)

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**B3-10**	**B4-1**	**B4-10**	**B18-1**	**B19-1**	**B20-1**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorinated VOC's						
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000657

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714 840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil

Volatile Aromatics (BTEX) & Chlorinated Volatile Organic Compounds (EPA 8260B)

EPA Method:	8260B
Units:	µg/kg
Dilution Factor:	1
Sample ID:	**MB**
Compound Name	
Volatile Aromatics (BTEX)	
Benzene	ND<5.0
Toluene	ND<5.0
Ethylbenzene	ND<5.0
Total Xylenes	ND<5.0
Chlorinated VOC's	
Carbon Tetrachloride	ND<5.0
2-Chlorotoluene	ND<5.0
4-Chlorotoluene	ND<5.0
Chlorobenzene	ND<5.0
Chloroethane	ND<5.0
Chloroform	ND<5.0
Chloromethane	ND<5.0
1,2-Dichlorobenzene	ND<5.0
1,3-Dichlorobenzene	ND<5.0
1,4-Dichlorobenzene	ND<5.0
Dichlorodifluoromethane	ND<5.0
1,1-Dichloroethane	ND<5.0
1,2-Dichloroethane	ND<5.0
1,1-Dichloroethene	ND<5.0
cis-1,2-Dichloroethene	ND<5.0
trans-1,2-Dichloroethene	ND<5.0
1,2-Dichloropropane	ND<5.0
1,3-Dichloropropane	ND<5.0
2,2-Dichloropropane	ND<5.0
1,1-Dichloropropene	ND<5.0
Hexachlorobutadiene	ND<5.0
Methylene Chloride	ND<5.0
Tetrachloroethene	ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0
1,1,1-Trichloroethane	ND<5.0
1,1,2-Trichloroethane	ND<5.0
Trichloroethene	ND<5.0
1,2,3-Trichloropropane	ND<5.0
Vinyl Chloride	ND<5.0

MB: Method Blank
ND: Not detected at the indicated reporting limit

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888 753.7553
FAX: 714.840.1584

Laboratory Report

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Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Vapor

Volatile Aromatics (BTEX) & Chlorinated Volatile Organic Compounds (EPA 8260B)

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**B1-10**	**B1-20**	**SV1-5**	**SV2-5**	**SV3-5**	**SV4-5**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Toluene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Ethylbenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Total Xylenes	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chlorinated VOC's						
Carbon Tetrachloride	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
2-Chlorotoluene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Chlorotoluene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloromethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,2-Dichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,3-Dichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,4-Dichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Dichlorodifluoromethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	9.0	5.2	9.5	ND<1.0	5.1	3.4
1,2-Dichloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	80	17	8.7	ND<1.0	16	23
cis-1,2-Dichloroethene	5.5	7.7	16	1.3	7.2	5.1
trans-1,2-Dichloroethene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,2-Dichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,3-Dichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
2,2-Dichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloropropene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Hexachlorobutadiene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Methylene Chloride	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	28	25	74	130	96	47
1,1,1,2-Tetrachloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,2,2-Tetrachloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,2,3-Trichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,2,4-Trichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	86	24	76	ND<1.0	54	39
1,1,2-Trichloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	8.6	9.9	38	5.3	22	15
1,2,3-Trichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Vinyl Chloride	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

ND: Not detected at the indicated reporting limit.

BASELINE ON-SITE ANALYSIS™

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Toll Free: 888 753 7553
FAX: 714 840 1584

Laboratory Report

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Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Vapor

Volatile Aromatics (BTEX) & Chlorinated Volatile Organic Compounds (EPA 8260B)

EPA Method:	8260B	8260B	8260B	8260B		8260B
Units:	µg/L	µg/L	µg/L	µg/L		µg/L
Dilution Factor:	1	1	1	1		1
Sample ID:	**SV5-5**	**SV6-5**	**SV7-5**	**SV8-5**		**MB**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Toluene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Ethylbenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Total Xylenes	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Chlorinated VOC's						
Carbon Tetrachloride	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
2-Chlorotoluene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
4-Chlorotoluene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Chlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Chloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Chloroform	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Chloromethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,2-Dichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,3-Dichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,4-Dichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Dichlorodifluoromethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,1-Dichloroethane	ND<1.0	4.3	ND<1.0	ND<1.0		ND<1.0
1,2-Dichloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,1-Dichloroethene	12	5.2	ND<1.0	ND<1.0		ND<1.0
cis-1,2-Dichloroethene	1.7	5.5	3.9	ND<1.0		ND<1.0
trans-1,2-Dichloroethene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,2-Dichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,3-Dichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
2,2-Dichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,1-Dichloropropene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Hexachlorobutadiene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Methylene Chloride	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Tetrachloroethene	37	63	43	ND<1.0		ND<1.0
1,1,1,2-Tetrachloroethane	ND<1.0	56	ND<1.0	ND<1.0		ND<1.0
1,1,2,2-Tetrachloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,2,3-Trichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,2,4-Trichlorobenzene	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,1,1-Trichloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
1,1,2-Trichloroethane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Trichloroethene	7.0	13	5.5	ND<1.0		ND<1.0
1,2,3-Trichloropropane	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0
Vinyl Chloride	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0

MB: Method Blank
ND: Not detected at the indicated reporting limit

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FAX: 714 840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil

Quality Control Summary - Soil Samples

Analytes	MS Recovery (%)	MSD Recovery (%)	RPD (%)	QC Sample
EPA 418.1 (TRPH)	89	93	4	B20-1
EPA 8260B				
1,1-Dichloroethene	97	101	4	B1-2
Benzene	96	98	2	B1-2
Trichloroethene	97	100	3	B1-2
Toluene	95	96	1	B1-2
Chlorobenzene	98	101	3	B1-2
Acceptable QC Limits:	(65-135)	(65-135)	(0-30)	

MS: Matrix Spike; MSD: Matrix Spike Duplicate; RPD: Relative Percent Difference
LCS/LCSD: Lab Control Sample/Duplicate

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Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92618

Project Name: 2100 E. Orangethorpe Ave
Project Address: 2100 E. Orangethorpe Ave
Fullerton, California
Contact: Evan Privett

Report Date: 11/1/02
Lab Project Number: 02457
Client Project Number: 420-01

Dates Sampled: 10/22/02
Dates Received: 10/22/02
Dates Analyzed: 10/22/02
Sample Matrix: Soil

Quality Control Summary - Vapor Samples

QC Parameter:	SAMPLE	DUPLICATE	%RSD
Units:	µg/L	µg/L	%
Method:	8260B	8260B	8260B
Sample ID:	**SV1-5**	**SV1-5 Dup**	**---**
Compound Name			
Carbon Tetrachloride	ND<1	ND<1	---
2-Chlorotoluene	ND<1	ND<1	---
4-Chlorotoluene	ND<1	ND<1	---
Chlorobenzene	ND<1	ND<1	---
Chloroethane	ND<1	ND<1	---
Chloroform	ND<1	ND<1	---
Chloromethane	ND<1	ND<1	---
1,2-Dibromo-3-Chloropropane	ND<1	ND<1	---
1,2-Dichlorobenzene	ND<1	ND<1	---
1,3-Dichlorobenzene	ND<1	ND<1	---
1,4-Dichlorobenzene	ND<1	ND<1	---
1,1-Dichloroethane	9.5	9.2	3.2
1,2-Dichloroethane	ND<1	ND<1	---
1,1-Dichloroethene	8.7	8.4	3.5
cis-1,2-Dichloroethene	16	16	0.0
trans-1,2-Dichloroethene	ND<1	ND<1	---
1,2-Dichloropropane	ND<1	ND<1	---
1,3-Dichloropropane	ND<1	ND<1	---
2,2-Dichloropropane	ND<1	ND<1	---
1,1-Dichloropropene	ND<1	ND<1	---
Hexachlorobutadiene	ND<1	ND<1	---
Methylene Chloride	ND<1	ND<1	---
Tetrachloroethene	74	74	0.0
1,1,1,2-Tetrachloroethane	ND<1	ND<1	---
1,1,2,2-Tetrachloroethane	ND<1	ND<1	---
1,2,3-Trichlorobenzene	ND<1	ND<1	---
1,2,4-Trichlorobenzene	ND<1	ND<1	---
1,1,1-Trichloroethane	76	64	17
1,1,2-Trichloroethane	ND<1	ND<1	---
Trichloroethene	38	39	3.2
1,2,3-Trichloropropane	ND<1	ND<1	---
Vinyl Chloride	ND<1	ND<1	---

ND: Not detected at the indicated reporting limit.

FREY Environmental, Inc.	Project Name: 2100 E. ORANGETHORPE LABAREON INVESTIGATION	
2817-A Lafayette Avenue	Project Address: 2100 E. Orangethorpe Ave	
Newport Beach, California 92663	Fullerton, CA	
Phone:949.723.1645; FAX: 949.723.1654	Project Number: 420-01	
Contact: Evan Privett	Sampler Name: Mike Eder	

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Laboratory Project #: 02457

Sample ID	Sample Location	Date	Time Rec'd	Lab ID	Soil (S), Water (W), Air (A)	Analysis: Chlorinated VOCs	Analysis: BTEX	Analysis: TRPH (418.1)	Analysis:	Number of Containers	Comments
SV8-5		22-Oct-02	0910	1	V	X	X			1	
SV1-5		22-Oct-02	0948	2	V	X	X			1	
SV2-5		22-Oct-02	1016	3	V	X	X			1	
B1-2		22-Oct-02	1033	4	S	X	X			4	
B1-10		22-Oct-02	1036	5	V	X	X			1	
B1-10		22-Oct-02	1044	6	S	X	X			4	
B1-20		22-Oct-02	1057	7	V	X	X			1	
B8-2		22-Oct-02	1104	8	S			X		1	
B1-20		22-Oct-02	1119	9	S	X	X			4	
B4-1		22-Oct-02	1133	10	S	X	X			4	
SV4-5		22-Oct-02	1202	11	V	X	X			1	
B4-10		22-Oct-02	12'15	12	S	X	X			4	
B2-1		22-Oct-02	1220	13	S	X	X			4	
B2-10		22-Oct-02	1220	14	S	X	X			4	
B3-1		22-Oct-02	1220	15	S	X	X			4	
B3-10		22-Oct-02	1220	16	S	X	X			4	
SV5-5		22-Oct-02	1231	17	V	X	X			1	
SV6-5		22-Oct-02	1255	18	V	X	X			1	
B19-1		22-Oct-02	1514	19	S	X	X	X		5	
SV3-5		22-Oct-02	1327	20	V	X	X			1	
B18-1		22-Oct-02	1340	21	S	X	X	X		5	
B20-1		22-Oct-02	1340	22	S	X	X	X		5	
SV7-5		22-Oct-02	1354	23	V	X	X	X		1	
B9-2		22-Oct-02	1415	24	S			X		1	

Turnaround Time: On-Site Mobile Laboratory; samples were relinquished on the date(s)/times shown above.

Sample Condition: Chilled? Y / N Sealed? Y / N Comments:

Relinquished by	Received by Brian Kato	Special Instructions:
signature: X	signature: X	
of FREY Environmental, Inc.	of Baseline Analytical Services	

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ANALYTICAL RESULTS

Ordered By

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2817 A Lafayette Ave.
Newport Beach, CA 92663

Site

2100 Orangethorpe Ave.
Fullerton, CA

Telephone: (949)723-1645
Attn: Evan Privett

Page: 2
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Chromium (ICP)

Our Lab I.D.		95875	95876	95877	95878	95879
Sample ID		B8-2	B9-2	B10-1	B10-5	B10-10
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Chromium	0.50	11.3	11.0	10.4	1.81	3.03

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Chromium	85	80-120								

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Page: 3
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Chromium (ICP)

Our Lab I.D.		95880	95881	95882	95883	95884
Sample ID		B11-1	B11-5	B11-10	B12-1	B12-5
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Chromium	0.50	17.2	2.07	2.88	26.6	4.00

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD %Limit								
ICP Metals										
Chromium	82	80-120								

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Page: 4
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Chromium (ICP)

Our Lab I.D.		95885	95886	95887	95888	95889
Sample ID		B12-10	B13-1	B13-5	B13-10	B14-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Chromium	0.50	4.26	49.9	5.90	9.81	57.5

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD %Limit								
ICP Metals										
Chromium	82	80-120								

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Page: 5
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Chromium (ICP)

Our Lab I.D.		95890	95891	95892	95893	95894
Sample ID		B14-5	B14-10	B15-1	B15-5	B15-10
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	POL	Results	Results	Results	Results	Results
ICP Metals						
Chromium	0.50	4.61	2.81	381	4.44	3.95

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Chromium	82	80-120								

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ANALYTICAL RESULTS

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Page: 6
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Chromium (ICP)

Our Lab I.D.		95895	95896	95897	95898	95899
Sample ID		B16-1	B16-5	B16-10	B17-1	B17-5
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Chromium	0.50	25.4	10.2	3.68	7.14	4.18

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Chromium	84	80-120								

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ANALYTICAL RESULTS

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Page: 7
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Chromium (ICP)

Our Lab I.D.		95900	95901	95902	95903	
Sample ID		B17-10	B18-3	B19-3	B20-3	
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	
Matrix		Soil	Soil	Soil	Soil	
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Detection Limit Multiplier		1	1	1	1	
Analytes	PQL	Results	Results	Results	Results	
ICP Metals						
Chromium	0.50	2.51	10.8	7.85	7.16	

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Chromium	84	80-120								

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ANALYTICAL RESULTS

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Attn: Evan Privett

Page: 8
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.			95864	95865	95866	95867	95868
Sample ID			B1-2	B1-10	B2-1	B2-10	B3-1
Date Sampled			10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted			10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method							
Date Analyzed			10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier			1	1	1	1	1
Analytes		PQL	Results	Results	Results	Results	Results
ICP Metals							
Nickel		0.50	11.5	2.02	4.13	3.81	4.66

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	92	80-120								

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ANALYTICAL RESULTS

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Attn: Evan Privett

Page: 9
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95869	95870	95871	95872	95873
Sample ID		B3-10	B4-1	B4-10	B5-1	B6-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	3.02	4.35	3.53	12.2	9.19

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	92	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95874	95875	95876	95877	95878
Sample ID		B7-1	B8-2	B9-2	B10-1	B10-5
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	16.9	11.6	10.5	12.9	2.28

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	92	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95879	95880	95881	95882	95883
Sample ID		B10-10	B11-1	B11-5	B11-10	B12-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	2.54	15.5	2.67	3.20	31.3

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	89	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95884	95885	95886	95887	95888
Sample ID		B12-5	B12-10	B13-1	B13-5	B13-10
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	4.84	4.21	51.6	6.03	5.63

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	89	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95889	95890	95891	95892	95893
Sample ID		B14-1	B14-5	B14-10	B15-1	B15-5
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	71.2	5.30	2.78	67.4	2.87

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	89	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95894	95895	95896	95897	95898
Sample ID		B15-10	B16-1	B16-5	B16-10	B17-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	4.61	19.1	11.0	3.87	8.93

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	91	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Nickel (ICP)

Our Lab I.D.		95899	95900	95901	95902	95903
Sample ID		B17-5	B17-10	B18-3	B19-3	B20-3
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Nickel	0.50	4.53	2.41	16.4	7.95	8.78

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Nickel	91	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95864	95865	95866	95867	95868
Sample ID		B1-2	B1-10	B2-1	B2-10	B3-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	2.23	0.81	1.12	0.95	1.38

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	90	80-120								

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15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95869	95870	95871	95872	95873
Sample ID		B3-10	B4-1	B4-10	B5-1	B6-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	0.76	1.05	1.01	3.00	2.40

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	90	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95874	95875	95876	95877	95878
Sample ID		B7-1	B8-2	B9-2	B10-1	B10-5
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	9.51	3.21	4.78	2.61	0.60

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	90	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95879	95880	95881	95882	95883
Sample ID		B10-10	B11-1	B11-5	B11-10	B12-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	0.74	9.71	0.73	0.65	8.52

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	90	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95884	95885	95886	95887	95888
Sample ID		B12-5	B12-10	B13-1	B13-5	B13-10
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	0.84	1.00	25.7	0.90	0.57

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	90	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab ID		95889	95890	95891	95892	95893
Sample ID		B14-1	B14-5	B14-10	B15-1	B15-5
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	5.19	1.16	0.57	17.3	0.62

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	90	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95894	95895	95896	95897	95898
Sample ID		B15-10	B16-1	B16-5	B16-10	B17-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	1.24	7.52	2.45	1.01	3.57

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	92	80-120								

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15730	10/22/2002	FREY

Method: 6010B, Lead (ICP)

Our Lab I.D.		95899	95900	95901	95902	95903
Sample ID		B17-5	B17-10	B18-3	B19-3	B20-3
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/24/2002	10/24/2002	10/24/2002	10/24/2002	10/24/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	POL	Results	Results	Results	Results	Results
ICP Metals						
Lead	0.25	0.98	1.04	7.76	1.97	2.25

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Lead	92	80-120								

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Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 7199, Hexavalent Chromium by Ion Chromatography

Our Lab I.D.		95864	95865	95866	95867	95868
Sample ID		B1-2	B1-10	B2-1	B2-10	B3-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/25/2002	10/25/2002	10/25/2002	10/25/2002	10/25/2002
Preparation Method						
Date Analyzed		10/25/2002	10/25/2002	10/25/2002	10/25/2002	10/25/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
Conventionals						
Chromium (VI)	0.100	0.13	ND	0.24	ND	ND

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD %RPD								
Conventionals										
Chromium (VI)	96	80-120								

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15730	10/22/2002	FREY

Method: 7199, Hexavalent Chromium by Ion Chromatography

Our Lab I.D.		95869	95870	95871	95872	95873
Sample ID		B3-10	B4-1	B4-10	B5-1	B6-1
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/25/2002	10/25/2002	10/25/2002	10/25/2002	10/25/2002
Preparation Method						
Date Analyzed		10/25/2002	10/25/2002	10/25/2002	10/25/2002	10/25/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
Conventionals						
Chromium (VI)	0.100	ND	ND	ND	0.32	0.17

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD %Limit								
Conventionals										
Chromium (VI)	96	80-120								

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Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Frey Environmental, Inc.
2817 A Lafayette Ave.
Newport Beach, CA 92663

Site

2100 Orangethorpe Ave.
Fullerton, CA

Telephone: (949)723-1645
Attn: Evan Privett

Page: 26
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 7199, Hexavalent Chromium by Ion Chromatography

Our Lab I.D.		95874	95901	95902	95903	
Sample ID		B7-1	B18-3	B19-3	B20-3	
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	
Date Extracted		10/25/2002	10/25/2002	10/25/2002	10/25/2002	
Preparation Method						
Date Analyzed		10/25/2002	10/25/2002	10/25/2002	10/25/2002	
Matrix		Soil	Soil	Soil	Soil	
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Detection Limit Multiplier		1	1	1	1	
Analytes	PQL	Results	Results	Results	Results	
Conventionals						
Chromium (VI)	0.100	1.15	0.20	0.17	0.16	

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
Conventionals										
Chromium (VI)	96	80-120								

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ANALYTICAL RESULTS

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Frey Environmental, Inc.
2817 A Lafayette Ave.
Newport Beach, CA 92663

Site

2100 Orangethorpe Ave.
Fullerton, CA

Telephone: (949)723-1645
Attn: Evan Privett

Page: 27
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 9045C, Soil and Waste pH

Our Lab I.D.		95872	95873	95874	95901	95902
Sample ID		B5-1	B6-1	B7-1	B18-3	B19-3
Date Sampled		10/22/2002	10/22/2002	10/22/2002	10/22/2002	10/22/2002
Date Extracted		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Preparation Method						
Date Analyzed		10/23/2002	10/23/2002	10/23/2002	10/23/2002	10/23/2002
Matrix		Soil	Soil	Soil	Soil	Soil
Units		pH Units	pH Units	pH Units	pH Units	pH Units
Detection Limit Multiplier		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
Conventionals						
pH	1.00	8.97	8.68	8.47	8.56	9.04

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD %Limit								
Conventionals										
pH	100	80-120								

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ANALYTICAL RESULTS

Ordered By

Frey Environmental, Inc.
2817 A Lafayette Ave.
Newport Beach, CA 92663

Site

2100 Orangethorpe Ave.
Fullerton, CA

Telephone: (949)723-1645
Attn: Evan Privett

Page: 28
Project ID: 420-01
Project Name: Labarron Investment

Job Number	Order Date	Client
15730	10/22/2002	FREY

Method: 9045C, Soil and Waste pH

Our Lab I.D.		95903				
Sample ID		B20-3				
Date Sampled		10/22/2002				
Date Extracted		10/23/2002				
Preparation Method						
Date Analyzed		10/23/2002				
Matrix		Soil				
Units		pH Units				
Detection Limit Multiplier		1				
Analytes	PQL	Results				
Conventionals						
pH	1.00	8.84				

QUALITY CONTROL REPORT

Analytes	LCS %REC	LCS/LCSD %-IM								
Conventionals										
pH	100	80-120								

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Newport Beach, CA 92663

Telephone (949)723-1645
Attn Evan Privett

Number of Pages 28
Date Received 10/22/2002
Date Reported 10/29/2002

Job Number	Ordered	Client
15730	10/22/2002	FREY

Project ID: 420-01
Project Name: Labarron Investment
Site: 2100 Orangethorpe Ave.
Fullerton, CA

Enclosed are the results of analyses on 40 samples analyzed as specified on attached chain of custody.

Amolk MOLKY Brar
Laboratory Manager

Rojert G. Araghi
Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents) regarding samples being submitted to ASL is complete and accurate. ASL accepts all samples subject to the following conditions:

1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

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Environmental Testing Services
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ASL JOB# 15730

CHAIN OF CUSTODY RECORD

Company: FREY Environmental Inc.	Report To: Evan Privett
Address: 2817-A Lafayette Ave	Project Name: Labarron Investment
Newport Beach, CA	Site Address: 2100 orangethorpe ave
Telephone: (949) 723-1645 Fax: -1854	Fullerton, CA
Special Instruction:	Project ID: 420-01
	Project Manager: Evan Privett
	Address: 2100 orangethorpe
	Invoice To:
	Address:
	P.O.#: 420-01

ANALYSIS REQUESTED

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Container(s) Type	Matrix	Preservation	Chromium VI EPA 7196	PH 150.1	Nickel 6010	Total Chrome 6010	Total Lead 7421	Remarks
	05864	B1-2	10/22/02		1	Plastic Tube	SOIL		X	X	X			
	05865	B1-10			1									
	05866	B2-1			1									
	05867	B2-10			1									
	05868	B3-1			1									
	05869	B3-10			1									
	05870	B4-1			1									
	05871	B4-10			1	↓								
	05872	B5-1			1	Stainless Steel Tube				X				
	05873	B6-1	↓		2	↓	↓		↓	X	↓	↓		

Collected By:	Date	Time	Relinquished By: Date Time
Relinquished By:	Date 10/22/02	Time 15:35	Received For Laboratory Date 102202 Time 15:35
Condition of Sample: Good Condition/chilled			Temp Blank 4.2°C

TAT: [X] Normal [ ] Rush

White Copy Yellow Laboratory Pink Client

OCVOCEF 000692

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ASL JOB# 15730

Company: FREY Environmental Inc.		Report To:	
Address: 2817-A Lafayette Ave	Project Name:	Address:	
Newport Beach	Site Address:	Invoice To:	
Telephone: Fax:		Address:	
Special Instruction:	Project ID: 420-01		
	Project Manager: Evan Privett	P.O.#: 420-01	

ANALYSIS REQUESTED

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Container(s) Type	Matrix	Preservation	Chromium VI 7196	PH 150.1	Nickel 6010	Total Chrome 6010	Total Lead 7421								Remarks
	95874	B7-1	10/22/02		1	STAINLESS STEEL TUBE			X	X	X		X								
	95875	B8-2	↓		1	↓					X	X	X								
	95876	B9-2	↓		1	↓					X	X	X								
	95877	B10-1	↓		1	Plastic TUBE					↓	↓	↓								
	95878	B10-5	↓		1	↓					↓	↓	↓								
	95879	B10-10	↓		1	↓					↓	↓	↓								
	95880	B11-1	↓		1	↓					↓	↓	↓								
	95881	B11-5	↓		1	↓					↓	↓	↓								
	95882	B11-10	↓		1	↓					↓	↓	↓								
	95883	B12-1	↓		1	STAINLESS STEEL TUBE					↓	↓	↓								

Collected By:	Date	Time	Relinquished By:	Date	Time
Relinquished By: [signature]	Date 10/22/02	Time 15:35	Received For Laboratory [signature]	Date 102202	Time 15:35
Condition of Sample: G/C Chilled					

TAT: ☒ Normal ☐ Rush

White - Report. Yellow - Laboratory. Pink - Client

CHAIN OF CUSTODY RECORD

OCVOCEF 000693

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ASL JOB# 15730

CHAIN OF CUSTODY RECORD

Company: FREY Environmental Inc.
Address: 2817-A Lafayette Ave.
Newport Beach, CA
Telephone:
Fax:
Special Instruction:

Project Name:
Site Address:
Project ID: 420-01
Project Manager: Evan Privett

Report To:
Address:
Invoice To:
Address:
P.O.#: 420-01

ANALYSIS REQUESTED: Chromium VI 7196; PH 150.1; Nickel 6010; Total Chrome 6010; Total Lead 7421

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	Remarks
1	05884	B12-5	10/22/02		1	STAINLESS STEEL TUBE	SOIL		
2	05885	B12-10			1	↓			
3	05886	B13-1			1	PLASTIC TUBE			
4	05887	B13-5			1				
5	05888	B13-10			1				
6	05889	B14-1			1				
7	05890	B14-5			1				
8	05891	B14-10			1				
9	05892	B15-1			1				
10	05893	B15-5			1				

Collected By: Date Time
Relinquished By: Date 10/22/02 Time 15:35
Condition of Sample: G/C chilled

Relinquished By: Date Time
Received For Laboratory Date 102202 Time 15:35

TAT: ☒ Normal ☐ Rush

White - Report, Yellow - Laboratory, Pink - Client

OCVOCEF 000694

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Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

CHAIN OF CUSTODY RECORD

COC# № 20003 GLOBAL ID _____ ELECTRONIC REPORT: ☐ EDF ☐ EDD ASL JOB# 15730

Company: FREY Environmental Inc.		Report To:
Address: 2817-A Lafayette	Project Name:	Address:
Newport Beach, CA	Site Address:	Invoice To:
Telephone: / Fax:		Address:
Special Instruction:	Project ID: 420-01	
	Project Manager: Evan Privett	P.O.#: 420-01

ANALYSIS REQUESTED

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	Chromium VI 7196	pH 150.1	Nickel 6010	Total Chrome 6010	Total lead 7421	Remarks
	95894	B15-10	10/22/02		1	PLASTIC TUBE				X	X	X		
	95895	B16-1			1									
	95896	B16-5			1									
	95897	B16-10			1									
	95898	B17-1			1									
	95899	B17-5			1									
	95900	B17-10			1									
	95901	B18-3			1	STAINLESS STEEL TUBE			X	X				
	95902	B19-3			1									
	95903	B20-3			1									

Collected By:	Date	Time	Relinquished By:	Date	Time
Relinquished By:	Date 10/22/02	Time 15:35	Received For Laboratory	Date 102202	Time 15:35
Condition of Sample: g/c chilled			Temp Blank 4.2°		

TAT ☒ Normal ☐ Rush

White - Report, Yellow - Laboratory, Pink - Client

OCVOCEF 000695

Exhibit 14

REVISED RCRA FACILITY INVESTIGATION WORKPLAN
LA BARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Prepared for:

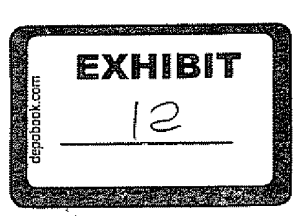
Eddie Fisher
La Barron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831

Prepared by:

FREY Environmental, Inc.
2817A Lafayette Avenue
Newport Beach, California 92663-3715
(949) 723-1645

Project No.: 420-01

October 15, 2002



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FREY

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FREY

OCVOCEF 000705

1.0 INTRODUCTION

This Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) workplan, for the assessment of regulated chemicals, at the La Barron Investments property located at 2100 East Orangethorpe in Fullerton, California (Site - Figure 1), has been prepared to fulfill the requests set forth by the Department of Toxic Substance Control (DTSC) in a letter dated December 27, 2001.

The RFI workplan dated August 30, 2002 has been revised to reflect comments prepared by the DTSC and summarized in a letter to LaBarron Investments dated October 10, 2002 and in two memorandums dated September 16, 2002 and October 4, 2002.

The scope of work summarized in this RFI workplan has been dictated by a Corrective Action Consent Order dated December 13, 2001. The Corrective Action Consent Order was issued by the Standardized Permits section of the DTSC. The Site has an identification number of CAD0008325110. This workplan has been organized according to the RCRA Facility Investigation Workplan format presented on pages 11 through 21 of Attachment D of the Corrective Action Consent Agreement.

2.0 INVESTIGATION OBJECTIVES

2.1 Project Objective

The objective of the activities described in the RFI workplan is to assess the occurrence of petroleum hydrocarbons, aromatic and chlorinated hydrocarbons, and selected metals in subsurface soils and soil vapor beneath the Site.

2.2 Data Quality Objectives

Selected soil samples will be analyzed for aromatic and chlorinated hydrocarbons, total recoverable petroleum hydrocarbons and selected metals. Soil sample laboratory data results will be compared with Environmental Protection Agency (EPA) preliminary remediation goals (PRGs) for industrial soils for each respective compound, where applicable, for dermal and ingestion exposure. In addition, soil sample laboratory results may be compared with PRG soil screening levels with respect to contaminant migration to groundwater.

Soil vapor samples will be analyzed for aromatic and chlorinated hydrocarbons and compared with the ambient air concentrations listed in the PRGs. A multiple of the ambient air PRGs will most likely be used as the facility is not occupied by personnel on a full time (40 hour work week) basis.

FREY

3.0 PROJECT MANAGER

Joe Frey, owner and principal, of FREY Environmental, Inc. (FREY) will oversee the project. Mr. Frey will design the scope of work for upcoming workplans and review all field, laboratory and reporting activities. Mr. Frey has over 15 years of experience in the assessment and remediation of hazardous wastes.

Evan Privett will be responsible for the day to day management of the project. Mr. Privett will schedule and oversee field activities, coordinate subcontractors and prepare a rough draft of the RFI report. Mr. Privett has over 10 years of experience in the assessment and remediation of hazardous wastes.

Mike Eder, a Hazwopper trained geologist with 3 years of experience in the environmental consulting industry, will conduct all EPA 5035 soil sampling. Mr. Eder will also collect soil samples in brass tubes using the drive sampler, where appropriate. Kehoe Testing will collect the soil gas samples.

The tentative schedule for the scope of work described in this Revised RCRA Facility Investigation Workplan is as follows:

Underground Service Alert Markings	October 17, 2002
Field Activities	October 22, 2002
Receipt of Laboratory Data	October 30, 2002
Report submittal to DTSC	November 22, 2002

4.0 BACKGROUND

4.1 Site Description

The facility was constructed in the late 1950's by the Trent Tube Company and operated until 1984. Trent Tube constructed one building with approximate dimensions of 300 feet from north to south and 130 feet from east to west. The majority of the building housed the manufacturing operations for Trent Tube. Offices, a laboratory and a locker room were located in the northernmost section of the building. A second building used for maintenance activities was located on the eastern portion of the Site. The maintenance building has approximate dimensions of 40 feet by 60 feet.

Trent Tube manufactured stainless steel tubing which required the use of numerous regulated chemicals including oil, kerosene, liquid hydrogen, liquid ammonia, organic solvents, acids and pickle liquor (DTSC, 2000).

OCVOCEF 000707

The two buildings constructed by Trent Tube remain on Site. The Site is covered with concrete with the exception of the southern-most area of the Site which bounds Carbon Creek. Currently, the Site is used for the storage of recreational vehicles.

4.2 Waste Storage Areas

The DTSC identified five areas of the Site where chemicals were either used or stored for extended periods of time. The five areas discussed below are shown on Figure 2.

- Drum Storage Area: Fifty five gallon capacity, steel drums were formerly located on the south side of the manufacturing building as shown on Figure 2. Soil samples previously collected from this area have reportedly contained perchloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), ethylbenzene and xylenes at concentrations of 1.7 parts per million (ppm), 1.5 ppm, 1.7 ppm and 1.7 ppm, respectively (DTSC, 2000).

- Aboveground Waste Oil Tanks: Two, 200 gallon capacity, aboveground, steel tanks were formerly located along the southern wall of the manufacturing building. The two tanks were located on concrete and set within a brick berm. It was reported that soils were excavated from this area and transported off Site for disposal (DTSC, 2000).

- Aboveground Pickle Liquor Tanks: Two, 2,000 gallon capacity, aboveground tanks were formerly located inside the southeast portion of the manufacturing building. Pickle liquor generally consists of hydrochloric acid which is effective in removing unwanted metallic deposits from steel. It was reported that the spent pickle liquor contained hexavalent chormium and possibly lead (DTSC, 2000).

- Degreasing Pit: It was reported that a 10,000 gallon capacity degreasing pit was located in the central portion of the manufacturing building. The degreasing pit reportedly may have contained 1,1,1-TCA, PCE and/or trichloroethene (TCE). Reported dimensions of the degreasing pit were 13 feet by 16 feet and 7 feet deep.

- Southern Property Line: It was reported that an approximate 50 foot by 200 foot area located south of the manufacturing building was used for the aeration of soils which reportedly contained organic solvents at concentrations up to 5 ppm. It was reported that aerated soils were placed in the top two feet of soil. It should be noted that the drum storage area and the southern property line areas represent the area between the southern wall of the former manufacturing building and the southern property line.

No further background information was made available to FREY at the time of this document preparation (DTSC, 2000). The Department of Health Services issued a certification of closure for the Site in a letter dated April 16, 1985 (DHS, 1985).

FREY

4.3 Hydrogeologic Setting

Soils beneath the Site consist of silt and sand from below the concrete to approximately 2 feet below the ground surface (bgs). Fine to coarse grained sand is located below the silt and sand and extends to a depth of approximately 20 feet bgs (Moore & Taber, 1984). Soil lithology beneath 20 feet bgs has not been investigated.

Regionally, the Site is located on the northeastern section of the Orange County Coastal Plain, which is part of the larger Coastal Plain of Los Angeles (OCWD, 1984). The central and northern portions of the Orange County Coastal Plain consist of downfolded strata of Upper Pleistocene and older age strata, that form a broad synclinal trough. The trough includes successively permeable and impermeable strata that reach a depth of up to 20,000 feet near the Anaheim area (OCWD, 1982).

The Upper Pleistocene and older unconsolidated deposits consist predominantly of marine and lagoonal sediments that include interbedded silts and clays with occasional lenses of sand and gravel. These deposits overlie a thick sequence of Late Cretaceous to Quaternary-age semiconsolidated sedimentary rocks and basement units (OCWD, 1984). The Upper Pleistocene and older formations are overlain by recent alluvium, derived from the surrounding hills and the Santa Ana River. Recent alluvial deposits attain a maximum thickness of approximately 300 feet in the Site area, and consist of sands with interbedded gravels, silts and clays (OCWD, 1984).

The Site is located in the Main Santa Ana Pressure Groundwater Sub-basin, within the Lower Santa Ana Watershed (RWQCB, 1984). The Site area is located within a pressure zone where semi-confined to confined water conditions may exist. Groundwater is estimated to flow toward the west-southwest in the Site Vicinity (OCWD, 1984). First groundwater is estimated to be located at approximately 80 feet bgs (DTSC, 2000).

5.0 FIELD INVESTIGATION

5.1 Task Description and Sampling Rationale

5.1.1 Soil Vapor Probe Sampling

Page 13 of the RCRA Facility Assessment "recommends that a comprehensive soil vapor sampling plan be implemented in these areas (drum storage area and southern property line area). The RCRA facility assessment did not recommend soil vapor sampling be conducted in the area of the degreasing pit, pickle liquor tanks or waste oil tanks.

FREY

The area in question (drum storage area and southern property line area) is approximately 50 feet from north to south and 200 feet from east to west. Specifically, the area in question is located between the southern property line and the southern wall of the former manufacturing building as shown on Figure 2. Based on these dimensions, it is proposed that 8 soil vapor probes driven to depths of 5 feet bgs be placed in the locations shown on Figure 2.

A soil vapor sampling depth of 5 feet bgs has been proposed as soils were reportedly excavated to depths of 2 feet bgs and backfilled with aerated soils which contained concentrations of chlorinated and aromatic hydrocarbons. Thus, a sampling point at 5 feet bgs is anticipated to be deep enough to reduce the likelihood of ambient air from the surface entering the soil vapor probes yet still close enough to the source depth to adequately characterize concentrations of chlorinated and aromatic hydrocarbons, if present.

The stated soil vapor sampling frequency is equivalent to one vapor probe per each approximate 35 foot by 35 foot surface area. This sampling frequency is sufficient based on the last possible date of release (approximately February, 1985) and on the relatively high vapor pressures of contaminants of concern such as aromatic and chlorinated hydrocarbons.

Finally, the DTSC memorandum dated October 4, 2002 requested the extension of one soil boring, proposed to be advanced in the vicinity of the former degreasing pit, to a final depth of 20 feet bgs. Soil gas samples will be collected from depths of 10 feet and 20 feet bgs from the boring advanced on the north side of the former degreasing pit.

5.1.2 Soil Boring Sampling

Pages 13 and 14 of the RCRA Facility Assessment state the requirements for soil sampling in the five areas of interest. All soil boring locations have been shown on Figure 2. Soil descriptions, sample type and depth, and related drilling information will be recorded on a boring log under the supervision of a State-Certified Engineering Geologist from FREY Environmental, Inc. All soils will be described using the Unified Soil Classification System. All field activities will follow the protocol presented in the health and safety plan attached in Appendix A.

- Drum Storage Area: Four soil borings will be advanced to final depths of 10 feet bgs with a combination of hand auger and pneumatic drilling methods (Geoprobe). Soil samples will be collected from depths of 1 foot bgs with a hand auger and drive sampler. Soil samples will be collected from depths of 5 and 10 feet bgs with a Geoprobe. Collected soil samples will be analyzed for nickel, chrome and total lead in accordance with EPA Method Nos. 6010, 6010 and 7421, respectively.

- Aboveground Waste Oil Tanks: Two soil borings will be drilled to final depths of 2 feet bgs with a hand auger. One soil sample will be collected from each boring from a depth of 2 feet bgs with a drive sampler. Each of the soil samples will be analyzed for total recoverable

petroleum hydrocarbons (TRPH) in accordance with EPA Method No. 418.1. In addition, each of the two soil samples will be analyzed for nickel, chrome and total lead in accordance with EPA Method Nos. 6010, 6010 and 7421, respectively.

- Aboveground Pickle Liquor Tanks: Three soil borings will be drilled to final depths of 1 foot below the bottom of the concrete surface. One soil sample will be collected from the bottom of each boring with a hand auger and drive sampler. Each of the soil samples will be analyzed for TRPH in accordance with EPA Method No. 418.1. In addition, each of the three soil samples will be analyzed for nickel, chrome and total lead in accordance with EPA Method Nos. 6010, 6010 and 7421, respectively. Each of the three soil samples will be analyzed for pH in accordance with EPA Method No. 150.1.

- Degreasing Pit: One soil boring will be advanced on the east, west and south sides of the former degreasing pit to final depths of 10 feet bgs with a combination of hand auger and Geoprobe. One soil boring will be advanced on the north side of the former degreasing pit and extended to a final depth of 20 feet bgs per the DTSC memorandum dated October 4, 2002. Soil samples will be collected from depths of 1 foot bgs with a hand auger and drive sampler. Soil samples will be collected from a depth of 10 feet bgs and 20 feet bgs for the boring on the north side of the degreasing pit with a Geoprobe.

  Soil samples collected from depths of 1 foot and 10 feet bgs (total of 8) will be analyzed for nickel and total lead in accordance with EPA Method No. 6010 and 7421, respectively, and hexavalent chromium in accordance with EPA Method No. 7196. In addition, each soil sample will be analyzed for pH and chlorinated hydrocarbons in accordance with EPA Method Nos. 150.1 and 8021B, respectively. The soil sample collected from 20 feet bgs will be analyzed only for chlorinated hydrocarbons in accordance with EPA Method No. 8021B per the DTSC memorandum dated October 4, 2002.

- Southern Property Line: Four soil borings will be advanced to final depths of 10 feet bgs with a combination of hand auger and Geoprobe. Soil samples will be collected from depths of 1 foot bgs with a hand auger and drive sampler. Soil samples will be collected from depths of 5 and 10 feet bgs with a Geoprobe. Soil samples collected from depths of 1 and 5 feet bgs will be analyzed for chrome, nickel and total lead in accordance with EPA Method No. 6010, 6010 and 7421, respectively. The soil samples collected from depths of 10 feet bgs from each boring will be analyzed for the selected metals only if the 5 foot samples exceed the concentrations detected in the background soil samples.

FREY proposes to collect a total of three background soil samples from the locations shown on Figure 2. Background samples have been located in areas of the Site which have the lowest likelihood of having been impacted by chemicals formerly used at the Site. Background soil samples will be collected from depths of 3 feet bgs with a hand auger and drive sampler. Background soil samples will be analyzed for all analytes listed in the five areas of interest.

FREY

5.2 Sample Analyses

5.2.1. Soil Vapor Samples

Soil vapor samples will be analyzed for chlorinated and aromatic hydrocarbons in accordance with EPA Method No. 8021B. Baseline On-Site Analysis (California certification number 2282) will conduct the analyses of soil vapors immediately after sample collection. The detection limits for chlorinated and aromatic hydrocarbons will be set at 5 micrograms per liter.

5.2.2. Soil Boring Samples

The following analytes of concern have been listed in the RCRA facility assessment on pages 13 and 14. Soil samples slated for analyses by EPA Method Nos. 418.1 and 8021B will be conducted in an on-Site mobile laboratory provided by Baseline On-Site Analysis. American Scientific Laboratories LLC (California certification number 2200) will conduct the analyses for the selected metals and pH.

Analyte	Analytical Method	PQLs	PRG-I	PRG-S.S.
Nickel	EPA 6010	0.5	4,100	1,300
Chrome	EPA 6010	0.5	100,000	n.a.
Lead	EPA 7421	0.5	750	n.a.
TRPH	EPA 418.1	10	n.a.	n.a.
Hex. Chrome	EPA 7196	5	64	38
pH	EPA 150.1	n.a.	n.a.	n.a.
Chlorinated& Aromatic Hydrocarbons	EPA 8021B (PCE)	0.005	19	0.06

Concentrations shown in the table are in milligrams per kilogram (mg/kg). The PRG-I represents the value for industrial soils while the PRG-S.S. represents the soil screening level with a dilution attenuation factor of 20 to account for a depth to groundwater of 80 feet bgs. n.a. indicates that no value was listed for the analyte in question.

FREY

5.3 Sample Collection Procedures

Soil vapor sample points will be located by constructing a grid between the southern wall of the former manufacturing building and the southern property line. White paint marks will be placed at 10 foot increments along the western property line, south of the former manufacturing building, and at 10 foot increments along the southern property line and along the southern wall of the former manufacturing building. The intersection of each grid line will be used to specifically locate the proposed soil vapor probe locations.

Soil vapor samples will be collected by placing a retractable, perforated tip on the end of the direct push rods. Tygon tubing will connect the perforated tip to a vacuum box. One 1-liter tedlar bag will be placed in the vacuum box. Soil vapor will be extracted through the perforated tip and collected in the tedlar bag. The tedlar bag will be labeled with the borehole number, sample depth, date, and time of collection, and delivered to the on-Site mobile laboratory.

Soil boring locations in the areas south of the former manufacturing building will be located using the grid system established for soil vapor sampling locations. Soil boring locations for the aboveground waste oil tanks, aboveground pickle liquor tanks and degreasing pit will be located with the assistance of Mr. Eddie Fisher. Mr. Fisher, principal of LaBarron Investments, knows the specific locations of the former features mentioned above.

Soil samples will be collected with the assistance of a hand auger and drive sampler or with Geoprobe equipment. When using the Geoprobe equipment, a completely sealed, 18-inch long sampler will be pushed or driven to approximately 9 inches above the desired sampling depth. The sampler will be lined with acetate, if drilling conditions are easier, or with brass or stainless steel tubes, if drilling conditions are difficult. A piston stop pin at the top end of the sampler will be removed by means of an extension rods inserted down the inside of diameter of the probe rods. This will enable the piston to retract into the sample tube, as the sampler is further driven into the soil which allows for the collection of an approximate 18-inch sample to be collected in the 1.5 inch diameter liner or tubes. The lowest portion of the 18-inch sample will be used for soil sample collection purposes

A drive sampler will be used to collect soil samples from the hand auger borings. Soil samples will be collected in a single 2-inch by 6-inch brass or stainless steel tube placed in a core barrel attached to the hand auger rod. A slide hammer attached to the top of the hand auger rod will be lifted and lowered imparting a force onto the hand auger rod thereby driving the core barrel into native soil.

Soil samples suspected of containing volatile anlaytes will be collected using EPA 5035 sampling protocol. The disposable "En Core" sampler will be placed into a stainless steel "En Core" T-handle sampling tool. Using the T-handle, the disposable "En Core" sampler will be pushed into the sample core, and a soil sample will be collected. Following sample collection, the disposable "En Core" sampler will be capped with an "En Core" push end cap. Each sample will be labeled with the

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sample number, project number, date and time of collection. The sample number will be expressed as the boring number followed by the depth of sample collection. For example, the soil sample collected from boring number one from a depth of five feet bgs will be labeled as B1-5.

Soil samples anticipated to be analyzed for metals and non-volatile petroleum hydrocarbon compounds will be collected in the 1.5-inch or 2-inch by 6-inch brass or stainless steel tubes. In the event that an acetate liner can be used for soil samples collected by the Geoprobe, then an approximate 6-inch long sample will be cut from the liner. Each sample, whether liner or tube, will be capped with teflon tape on an air tight plastic end cap and labeled with the sample number, project number, date, and time of sample collection.

5.3.1. Equipment Decontamination

All downhole drilling and sampling equipment will be decontaminated using a brush and tap water rinse followed by a brush and TSP solution (non-phosphate soap), a tap water rinse, and a deionized water rinse. All downhole drilling and sampling equipment will be dried by air or with a towel prior to sampling. Disposable latex gloves and ziploc bags will be used to prevent cross contamination of the samples. Drilling and sampling equipment connected to the rig will be decontaminated with a steam cleaner prior to sampling at the Site.

5.3.2. Equipment Calibration and Maintenance

The photoionization detector scheduled for use at the Site to monitor ambient air conditions when subsurface investigative activities are taking place will be calibrated to hexane. The PID is cleaned and calibrated by a manufacturers certified representative on a quarterly basis. Calibration procedures have been attached in Appendix B

5.3.3. Sample Packaging and Shipment

Sample handling, transport, and delivery to the laboratory will be documented using Chain-of-Custody procedures, including the use of Chain-of-Custody forms. Copies of Chain of Custody's for Baseline On-Site Analysis and American Scientific Laboratories LLC have been included in Appendix C.

5.3.4. Sample Documentation

Each sample will be labeled with the sample number, project number, date and time of collection. The sample number will be expressed as the boring number followed by the depth of sample collection. For example, the soil sample collected from boring number one from a depth of five feet bgs will be labeled as B1-5.

FREY

5.3.5. Disposal of Contaminated Materials

It is anticipated that wash water generated during the decontamination of the downhole drilling equipment will be the only waste generated as part of soil vapor and soil sampling operations. The decon water will be placed in 55-gallon drums and temporarily stored on Site. The decon water will be profiled, manifested and transported to Crosby and Overton, a State-licensed recycling facility located in Long Beach, California within 90 days of generation.

6.0 QUALITY ANALYSES/QUALITY CONTROL

Quality analyses and quality control documentation is summarized in Appendix D.

METHOD EPA 7196

1.0 SCOPE AND APPLICATION
1.1 Method 7196 is used to determine the concentration of dissolved hexavalent chromium [Cr(VI)] in EP/TCLP characteristic extracts and ground waters. This method may also be applicable to certain domestic and industrial wastes, provided that no interfering substances are present (see Paragraph 3.1 below).

1.2 Method 7196 may be used to analyze samples containing from 0.5 to 50 mg of Cr(VI) per liter.

2.0 SUMMARY OF METHOD
Dissolved hexavalent chromium, in the absence of interfering amounts of substances such as molybdenum, vanadium, and mercury, may be determined colorimetrically by reaction with diphenylcarbazide in acid solution. A red-violet color of unknown composition is produced. The reaction is very sensitive, the absorbancy index per gram atom of chromium being about 40,000 at 540 nm. Addition of an excess of diphenylcarbazide yields the red-violet product, and its adsorbance is measured photometrically at 540 nm.

METHOD 5035 – Extraction Procedure for 8015, 8021, and 8260
CLOSED-SYSTEM PURGE-AND-TRAP AND EXTRACTION FOR VOLATILE ORGANICS IN SOIL AND WASTE SAMPLES

1.0 SCOPE AND APPLICATION
1.1 This method describes a closed-system purge-and-trap process for the analysis of volatile organic compounds (VOCs) in solid materials (e.g., soils, sediments, and solid waste). While the method is designed for use on samples containing low levels of VOCs, procedures are also provided for collecting and preparing solid samples containing high concentrations of VOCs and for oily wastes. For these high concentration and oily materials, sample collection and preparation are performed using the procedures described here, and sample introduction is performed using the aqueous purge-

FREY

and-trap procedure in Method 5030. These procedures may be used in conjunction with any appropriate determinative gas chromatographic procedure, including, but not limited to, Methods 8015, 8021, and 8260.

METHOD 6010B
INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY
1.0 SCOPE AND APPLICATION

Inductively coupled plasma-atomic emission spectrometry (ICP-AES) determines trace elements, including metals, in solution. The method is applicable to all of the elements listed in Table 1. All matrices, excluding filtered groundwater samples but including ground water, aqueous samples, TCLP and EP extracts, industrial and organic wastes, soils, sludges, sediments, and other solid wastes, require digestion (i. E., acid digestion) prior to analysis. Groundwater samples that have been prefiltered and acidified will not need acid digestion. Samples which are not digested must either use an internal standard or be matrix matched with the standards. Refer to Chapter Three for the appropriate digestion procedures.

Method 150.0 – pH
Direct Read with pH Meter.

Method 418.1 –TRPH

The samples are prepared using a solvent extraction (Freon). The extracts are analyzed by IR spectraphotometry (absorbance measurements).

7.0 DATA MANAGEMENT AND REPORTING

Field measurements, observations and chemical analyses of soil and soil vapor samples will be evaluated and interpreted in context with the existing on-site soil conditions and the hydrogeological setting.

Should you have any questions regarding this workplan, please contact us at (949) 723-1645.

Sincerely,
FREY Environmental, Inc.

Joe Frey
Principal Certified
Engineering Geologist
CEG #1500

Evan Privett
Senior Project Geologist

FREY

8.0 REFERENCES

DHS (Department of Health Services), 1985, Certification of Closure letter addressed to Robert M. Phillips, Trent Tube Division dated April 16, 1985.

DTSC (Department of Toxic Substances), 2000; *RCRA Facility Assessment for Trent Tube Division, Crucible Materials Corporation, 2100 East Orangethorpe Avenue, Fullerton, California 92634*; dated May 2000.

EPA (Environmental Protection Agency), Preliminary Remediation Goals dated November 1, 2000

Moore & Taber, 1984; *Foundation Investigation, Commercial Property, 2100 Orangethorpe Avenue, Fullerton, California*, dated August 16, 1984.

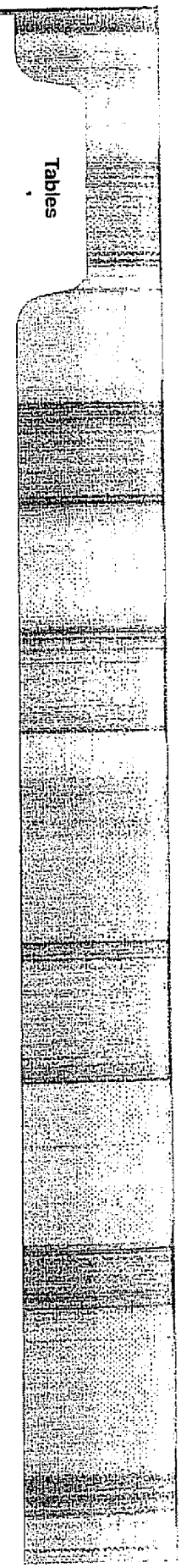
OCWD (Orange County Water District), 1982, Talbert Barrier Status Report, July 1979-June 1982, dated November 1982.

----, 1984, Groundwater Management, Irvine area, Orange County, California.

RWQCB (Regional Water Quality Control Board - Santa Ana Region), 1984, Water Quality Control Plan, Santa Ana River Basin.

USGS (United States Geological Survey), 1966, 7.5-minute topographic quadrangle of Anaheim, California, photorevised 1988.

FREY



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TABLES

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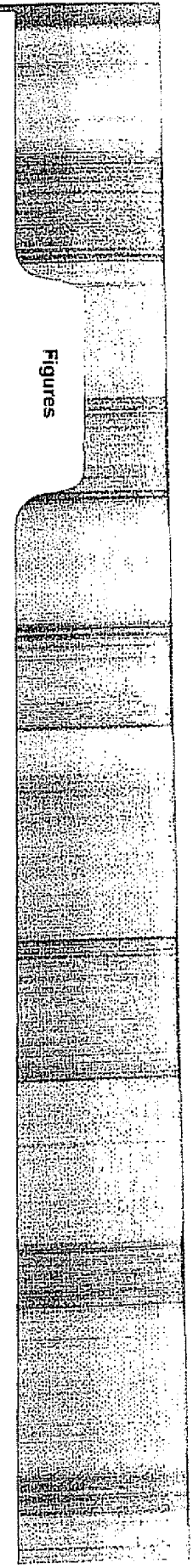
TABLE 1
SUMMARY OF SAMPLE COLLECTION DATA
LA BARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Boring Number	Boring Location	Sample Depth for Each Boring or Soil Vapor Probe (Feet bgs)	Sample Matrix	Sample Containers	Analytical Parameters: Chlor. & Aromatics EPA 8021B	Chromium VI EPA 7196	pH EPA 150.1	Nickel EPA 6010	Total Chrome EPA 6010	Total Lead EPA 7421	TRPH EPA 418.1
B1, B2, B3, B4	North, east, south and west side of former degreasing pit	1	Soil	(5) EPA 5035 tubes/ (3) 6-inch brass tubes	x	x		x		x	
		10	Soil	(5) EPA 5035 tubes/ (3) 6-inch brass tubes	x	x		x		x	
B1	North side of former degreasing pit	20	Soil	(5) EPA 5035 tubes	x						
B1	North side of former degreasing pit	10	Vapor	(1) 1-Liter Tedlar Bag	x						
		20	Vapor	(1) 1-Liter Tedlar Bag	x						
B5, B6 and B7	Pickle Liquor Tanks	1	Soil	(2) 6-inch brass tubes		x	x	x		x	
B8 and B9	Waste Oil Tanks	2	Soil	(2) 6-inch brass tubes				x	x	x	x
B10 - B17	Drum Storage Area & Southern Property Line	1	Soil	(2) 6-inch brass tubes				x	x	x	
		5	Soil	(2) 6-inch brass tubes				x	x	x	
		10	Soil	(2) 6-inch brass tubes				x	x	x	
SV1 - SV8	Drum Storage Area & Southern Property Line	5	Vapor	(1) 1-Liter Tedlar Bag	x						

Holding Times are as follows:
[1] EPA 8021B = 72 hours for vapor /14 days for soil • soil and soil vapor will be analyzed in on-Site mobile laboratory immediately after sample collection
[2] EPA 6010 = 180 days
[3] EPA 7421 = 180 days
[4] EPA 7196 = 24 hours
[5] EPA 150.1 = none
[6] EPA 418.1 = 28 days - will be analyzed in mobile laboratory immediately after sample collection



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FIGURES

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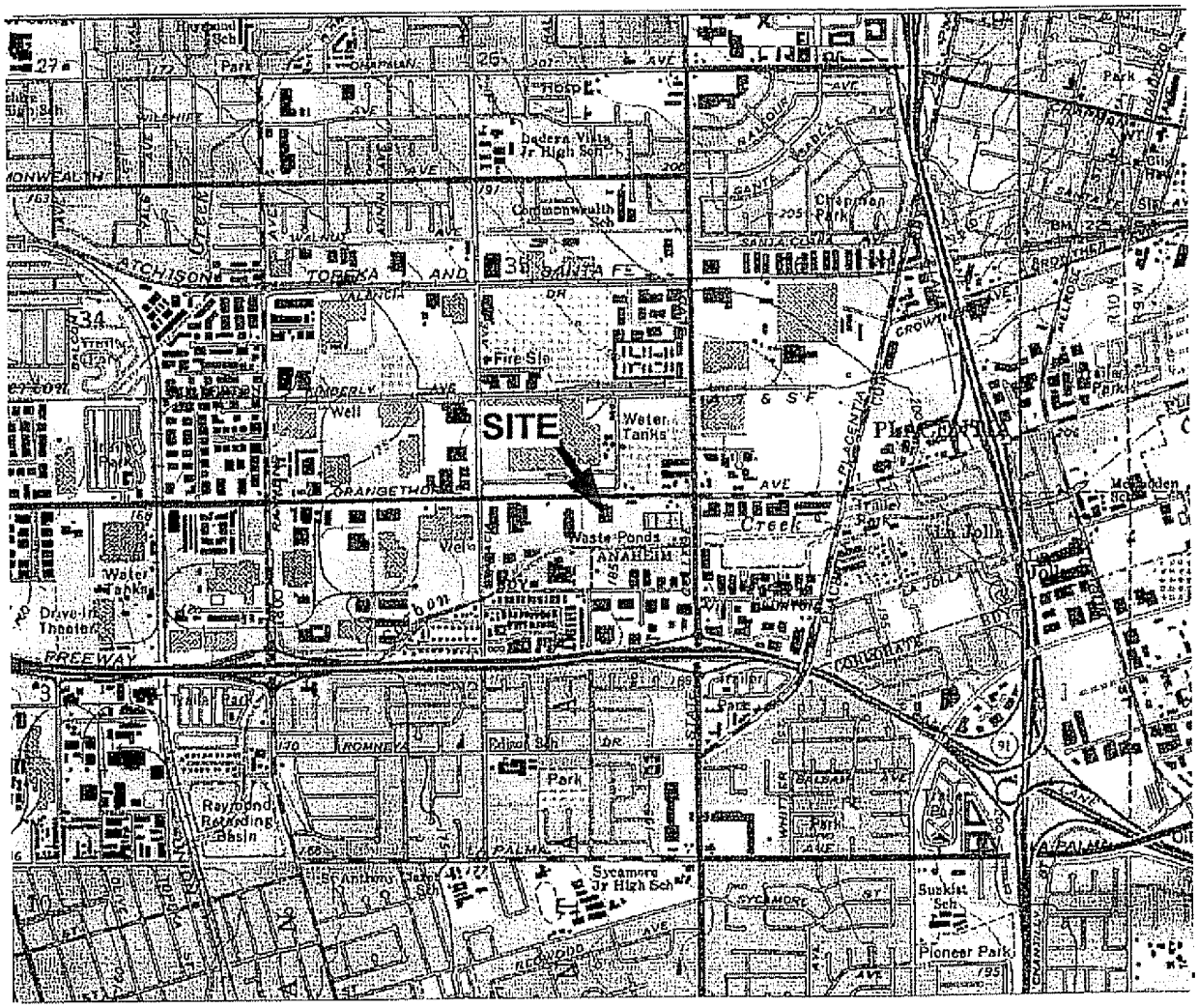

NORTH

0 1/2 1

SCALE IN MILES

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No : 420-01

FREY ENVIRONMENTAL, INC.

NOTE:

1) All locations and dimensions are approximate.
2) Base map from USGS 7.5 minute California topographic quadrangle, printed from Topo

SITE LOCATION MAP

Date: AUGUST 2002 Figure: 1

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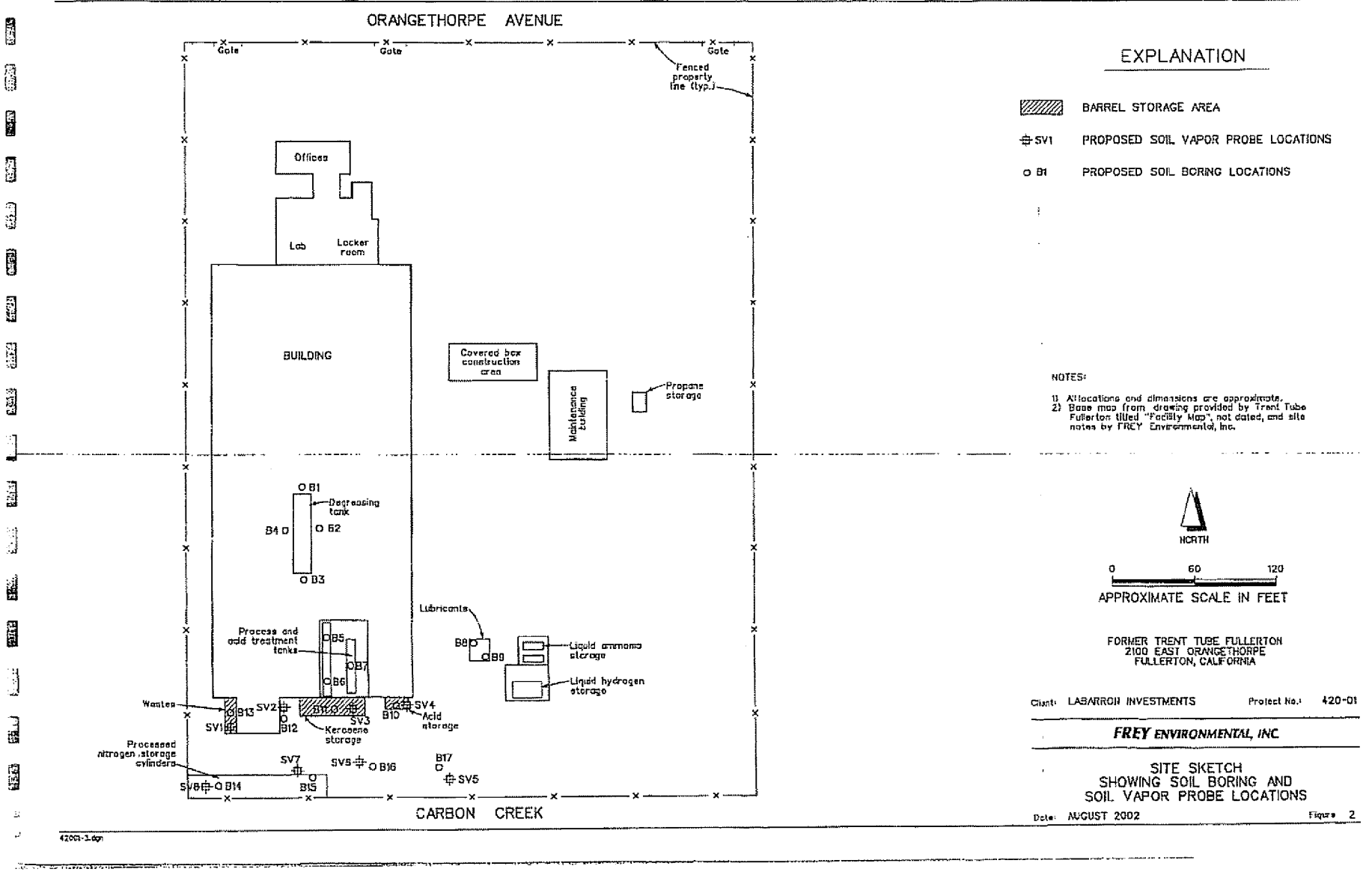

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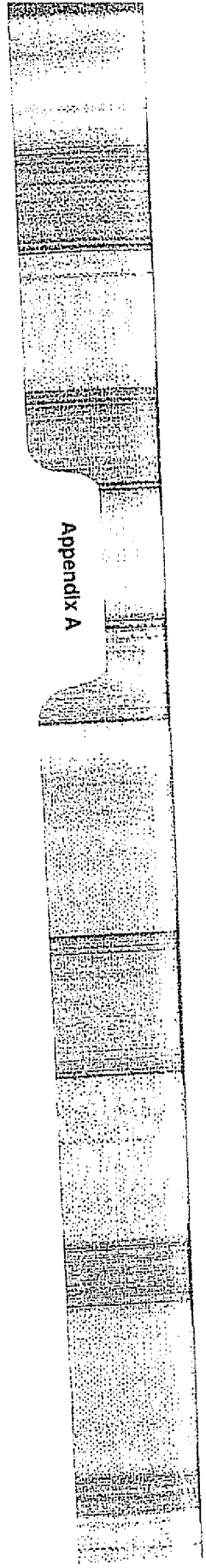

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APPENDIX A

HEALTH AND SAFETY PLAN

FREY

REVISED SITE SAFETY PLAN

210 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

PROJECT NO. 420-01

FREY ENVIRONMENTAL, INC.
2817 A Lafayette Avenue
Newport Beach, CA 92663

October 11, 2002

U.S.A. Number _____

Reviewed by:

Project Manager	Date
Site Geologist	Date
Driller	Date
Driller's Assistant	Date
Visitor	Date

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1.0 INTRODUCTION

FREY Environmental, Inc. (FREY), has been retained by LaBarron Investments to conduct soil and soil vapor sampling activities at 2100 East Orangethorpe Avenue in Fullerton, California (Site).

This document presents the health and safety procedures that are intended to guide field activities at the Site. The provisions of this plan apply to employees of FREY and its subcontractors. Regulatory agencies are expected to observe the safety rules and regulations established by their respective organizations in addition to the requirements of this document.

2.0 PROJECT SAFETY PERSONNEL

2.1 SAFETY PERSONNEL

FREY has been responsible for the preparation of this health and safety plan, and is to monitor compliance of its personnel, those of its subcontractors and visitors to the Site, with its provisions. FREY personnel responsible for the distribution of this health and safety plan and for the compliance audit are the Site Safety Officer and/or Project Manager.

The Project Safety Officer is responsible for delivering the plan and any addenda to the Project Manager and for advising the Project Manager and Site Safety Officer on health and safety provisions of this plan, suspend work or modify work practices for safety reasons, and to dismiss individuals whose conduct on site endangers the health and safety of others.

The Project Manager is responsible for distributing the plan to all FREY field personnel and to an authorized representative of each firm contracted to assist with on-Site work. The Project Manager is also responsible for implementing the provisions of this plan and its addenda. Implementation will include training of field personnel involved with the project, provision for the appropriate safety equipment, and that the required health and safety documents are submitted to the Project Safety Officer.

The Site Safety Officer is responsible for assisting the Project Manager with on-Site implementation of this Site safety plan. His responsibilities include: 1) maintaining safety equipment supplies, 2) performing air quality measurements as required or needed, 3) directing decontamination operations and emergency response operations, 4) setting up work zone markers and signs if such zones are specified in the Site safety plan, and 5) reporting all accidents, incidents, and infractions of safety rules and requirements to the Project Manager and the Project Safety Officer.

The Site Safety Officer has the authority to suspend work any time he determines that the provisions of the Site safety plan are inadequate to provide a working environment conducive to worker safety and he is to inform the Project Manager of individuals whose on-Site presence jeopardizes their health and safety or the health and safety of others.

FREY Environmental, Inc. phone numbers

Project Safety Officer/Manager	Evan Privett	(949) 723-1645
Site Safety Officer and Field Personnel	Mike Eder Vitelio Rameriz	(949) 500-3008 cell phone

3.0 WORK DESCRIPTION

- Core up to 17 four inch diameter cores through the concrete;
- Advance soil vapor probes and soil borings to depths ranging from 1 foot below the ground surface (bgs) to 10 feet bgs with a direct push drilling rig or hand operated auger;
- Collect soil and soil vapor samples at depths ranging from 1 to 10 feet bgs;
- Analyze soil and soil vapor samples for chlorinated aliphatics in an on-Site mobile laboratory. Submit soil samples for metals analyses to a stationary laboratory;
- Backfill each boring with bentonite powder;
- Resurface each borehole to match the surrounding surface;

4.0 HAZARD ASSESSMENT

According to available information, the chemical concern most likely to be encountered during the field work appears to be chlorinated solvents. This health and safety plan will use perchloroethylene (PCE) as the contaminant of concern based on its lower health and safety thresh-hold than many other chlorinated solvents detected during previous investigations. The overall hazard to FREY personnel and associated subcontractors is estimated to be low. The following is a brief description of the potential hazards associated with these compounds:

4.1 HAZARDOUS CHEMICAL COMPOUNDS

PCE has been tentatively classified as a known or suspected human or mammalian carcinogen. Direct skin or eye contact or exposure to high vapor concentrations may result in dermatitis, eye and/or lung irritation; acute overexposure may cause central nervous system depression, liver and or kidney damage, convulsions, coma, and even death. Symptoms can include headache, nausea, dizziness, increased perspiration, staggering gait, and slowing of mental ability.

A. Anticipated Concentrations: Based on previous investigations, concentrations of PCE are not anticipated to exceed 100 parts per billion. The borings will be drilled by a combination of hand auger drilling and direct push rig drilling. Minimal amounts of soil will be disturbed using these drilling techniques which should reduce worker exposure to soil vapor.

B. Exposure Routes: Inhalation, dermal/eye contact, absorption

C. PCE Exposure Limit - 100 ppm TWA/200 ppm Ceiling (OSHA PEL). 150 ppm IDLH.

4.2 INHALATION HAZARD

The major toxicity concern is PCE. PCE has a Threshold Limit Value (TLV) of 25 ppm, which is defined as the average exposure for a period of 8 hours per day, 5 days per week that is believed will not cause harm to worker health.

Vapor concentrations expected to encountered during soil boring activities are not expected to exceed recommended exposure limits, based on available Site information. However, respiratory protection (level C) must be used if concentrations reach 10 ppm as measured with a photoionization detector (PID).

4.3 DERMAL EXPOSURE HAZARD

Contact of sufficient duration to cause significant absorption of toxic components is highly unlikely. Repeated daily or prolonged contact with excavated objects or soils may be expected to defat the skin and perhaps, over a long period of time, lead to irritation and dermatitis. For this reason, direct contact with highly contaminated objects or soils should be avoided when possible by wearing gloves. However, if prolonged skin contact does occur, the exposed areas shall be washed with soap and water and rinsed thoroughly.

4.4 EXPLOSION HAZARD

PCE is not susceptible to explosions except under extreme temperatures which will not be attained during Site work. Explosive Limits have been listed as not applicable for PCE.

4.5 OTHER HAZARDS

Sufficient attention must be paid to other possible hazards on the Site including but not limited to:

- Improper use of hand tools. Hand tool usage includes the manual excavation of boreholes to maximum depths of 5 feet below the ground surface (bgs) using a hand auguer. The hand auger is a non motorized manually drilling tool operated by a single person. Hazards associated with the use of this tool are minimal. However, the operator must wear steel toed work boots and gloves.

- Operation of mechanized drilling equipment. A Geoprobe 5400 will be used for drilling of soil borings deeper than 5 feet bgs and for the advancement of soil gas probes. The Geoprobe uses a pneumatic press to push 2-inch diameter steel rods into the earth. A second motor vibrates the drilling rods to further enhance penetration. The Geoprobe produces a maximum noise level of 70 decibels. Personnel within 25 feet of the Geoprobe will be required to use earplugs for hearing protection. The driller and driller's assistant will be the only workers permitted to approach the Geoprobe when in operation.

- Tripping on objects. The subject site is entirely covered with concrete or asphalt. Equipment which presents a tripping hazard is limited to the hand auger. The hand auger consists of 3/4-inch diameter rods which have been painted red so that they may be identified when placed on the ground.

- Dehydration or sun stroke of the personnel. The average temperature and humidity for Fullerton, California for the middle of October are 75 degrees Farhenheit and 40 percent humidity.

- Lack of oxygen through blockage of face masks. The area of exposure is limited to a four inch circular hole (0.087 square feet) cut through concrete. Thus, the use of respirators is extremely unlikely. However, personnel on Site will have new respirator cartridges which have been factory certified for reliability and quality.

5.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

5.1 SAFETY ORIENTATION MEETING

All field personnel should attend a safety orientation meeting before commencing the field work. The meeting will be scheduled and conducted by the project manager or the Site safety officer. The meeting will include presentation of the site safety plan.

5.2 WORK ZONE

A restricted zone will be maintained to a distance of 25 feet from the work activity area if significant soil contamination is detected in the field. Significant soil contamination is defined in this case to be soil which registers in excess of 10 ppm on the photoionization equipment. Protective clothing and equipment, as described in subsection 5.3 are to be worn by all personnel working within the restricted zone.

The areas of investigation will be conducted on a fenced property with no pedestrian access. Four employees of the facility will be on the approximate 5 acre property at the time of the investigation. However, employee work areas will be a minimum of 300 feet from the areas of investigation. Otherwise the only other personnel on the Site will include the Geoprobe operator, FREY staff geologist, FREY field assistant, mobile laboratory operator (located in the front of the Site) and up to two DTSC employees.

The staff geologist will be responsible from preventing access to the area of investigation. The restricted work zone (area of investigation) will be coned off with the staff geologist located on the outside of the coned area to prevent access into the restricted zone. The decontamination area will be located outside the restricted zone and will consist of two 5-gallon buckets filled with tap water and one 5-gallon bucket filled with deionized water. The first bucket in series will contain TSP with tap water, the second bucket will contain tap water and the third bucket will contain the deionized water.

~~Communication will be by verbal commands when applicable and by cell phone when distances~~ exceed those applicable through verbal communication.

5.3 PROTECTIVE EQUIPMENT AND CLOTHING

Protective clothing required to be on Site is limited to level C and level D as defined by the EPA Office of Emergency and Remedial Response. Levels C and D were selected based on the knowledge that previous subsurface soil investigations have not detected concentrations of PCE or 1,1,1-TCA in excess of 1.7 ppm and 1.5 ppm in soil. Both concentrations are below the EPA's preliminary remediation goals for industrial soils of 19 mg/kg and 1,400 mg/kg, respectively. In addition, the exposure pathways are anticipated to be minimal and are realistically limited to: 1) vapors emanating through 4-inch diameter cores (0.087 square feet) cut in the concrete and, 2) the handling of each sample tube (1-inch in diameter and 6-inches long). Finally, all work will be accomplished in one day thus limiting exposure time for on Site personnel.

5.3.1 EQUIPMENT REQUIRED FOR FIELD PERSONNEL (LEVEL D)

- Full length trousers, shirts
- Leather work shoes or Safety Boots
- Hard hats when near within the tower height distance of the direct push drill rig
- Gloves, Glasses or Goggles

5.3.2 EQUIPMENT REQUIRED TO BE AVAILABLE ON SITE

- Four respirators (North 7700 Series Half Mask Facepiece)
- Disposable Coveralls (Tyveks)
- Gloves (Montgomery Premium Nitrile)
- First-aid kit
- Fire extinguisher
- A vehicle must be kept on Site when personnel are working for the transport of slightly injured personnel to the hospital. Severely injured personnel must only be transported by paramedics.

5.3.3 RESPIRATOR USAGE

The Project Safety Officer and/or the Project Manager is responsible for deciding if respirators should be used. Usage would be based on PID measurements. The TLV concentrations as noted in section 4.1 should be used as the critical concentration. If concentrations of organic vapors in the ambient air (as measured by the PID) exceed 25 ppm, the field personnel must move out of the area. If the concentration remains at or above the TLV for more than 5 minutes, the Project Safety Officer and/or the Project Manager should be contacted and a decision made regarding whether to proceed with the work wearing respirators and extending the restricted work zone. Cartridges for the respirators must be replaced daily or when break-through occurs, whichever occurs first.

6.0 ORGANIC VAPOR MONITORING

The organic vapor concentrations (as measured by the PID) in the breathing zone of the individual working closest to the vapor source will be monitored as needed. Respirators must be worn if the concentrations exceed 10 ppmv as measured with the PID.

7.0 EMERGENCY RESPONSE PROCEDURES

7.1 PHYSICAL INJURY

In the event of an accident resulting in physical injury, apply first aid. Severely injured personnel are to be transported only by paramedics and/or by ambulance personnel. At the hospital, a physicians attention is mandatory regardless of how serious the injury appears.

The Project Manager is to be notified by the Site Safety Officer, as soon after the injury as practical, regarding the nature of the accident. A written report is also to be prepared and submitted by the Site Safety Officer.

7.2 FIRE, EXPLOSION, AND PROPERTY DAMAGE

In the event of a fire or explosion, notify the Fire department immediately by dialing 911. The Project Manager is to be notified by the Site Safety Officer as soon as practical and a written report prepared.

7.3 DECONTAMINATION PROCEDURES

Decontamination procedures will consist of washing down the exposed skin area in the event that chemical exposure. The affected area of exposure will be washed with TSP and water then rinsed with a deionized water rinse. Personnel protective equipment was described in 5.3.1. Drilling equipment will be decontaminated with a three bucket system. The first bucket will contain TSP and tap water followed by a tap water rinse and a deionized water rinse. All down drilling equipment will be dried with towel used one single time. Discarded towels will be placed in a plastic bag and washed at a later date.

The rest area will be anywhere outside of the restricted zone. Worker fatigue is not anticipated due to the lack of physical labor required for this job.

All decontamination water will be placed in a Department of Transportation approved 55-gallon drum and disposed of at Crosby and Overton, a State of California licensed hazardous waste recycling facility in Long Beach, California.

7.4 SANITATION

The Site is an operating recreation storage facility with restroom facilities located in the northern section of the building.

7.5 TRAINING

All on Site personnel have received 40 hour HAZWOPER training. 8-Hour HAZWOPER Refresher training certificates have been attached for FREY employees who will be on Site.

7.6 MEDICAL MONITORING

Personnel will be observed in the field by the Staff Geologist for signs of fatigue or chemical exposure. Visual observation is sufficient due the minor amounts of chemicals present in subsurface soils at the Site, minimal exposure pathways as discussed Section 5.3, and the short term duration of the project (one day).

7.7 GENERAL SAFE WORK PRACTICES

Site entry is limited through the gate on the northern section of the Site and is monitored by Site employees. No smoking or eating will be allowed on Site. Geoprobe access will be limited to the driller who will always have a hard hat and eye protection in addition to the Level D apparel as described Section 5.3.1.

7.8 EMERGENCY TELEPHONE NUMBERS

Fire Department/Paramedics.....911
Police Department 911

7.9 HOSPITAL ADDRESS AND ROUTE

Anaheim Memorial Medical Center
1111 West La Palma Avenue
Anaheim, CA 92804

(714) 774-1450

ROUTE - See attached figure

8.0 PROJECT PERSONNEL

Project Safety Officer/Manager	Evan Privett
Site Safety Officer and Field Personnel	Mike Eder Vitelio Rameriz
Drilling Contractor	Kehoe Testing
Mobile Laboratory	Baseline On-Site Analysis
Stationary Laboratory	American Scientific Laboratory

OCVOCEF 000736

Frey Environmental, Inc.

Hazardous Material Training

This is to verify that

EVAN PRIVETT

has participated in and passed an examination which qualifies him/her for completion in Hazardous Material Eight Hour Refresher Safety Training as required by 29 CFR1910.120 and CCR Title 8 Section 5192

This training was conducted by **David Roland**, and was completed June 10, 2002

David Roland
Certified Instructor

June 10, 2002

Date

Employer

Employer confirms that the required training as indicated above has been completed

6-10-02

Date

JoshuaCasey
Corporate Training and Education
(714) 245-9440 Fax (714) 245-9443
www.joshuacasey.com

GA75-451

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AA 21870

OCVOCEF 000737

11858-35

ESTC Environmental Safety Training Center

HEREBY CERTIFIES THAT

Mike Eder

Student # 011116

has successfully completed

8 Hour HAZWOPER Refresher Training

in compliance with 29CFR1910.120 (e)(8) on

November 26, 2001

Environmental Safety Training Center
1016 East Katella Ave., Anaheim, CA, 92805
(714) 634-9221

David B. Roland, Health & Safety Instructor

AA 21871
OCVOCEF 000
11858-36

Frey Environemnetal, Inc.

Hazardous Material Training

This is to verify that

VITELIO RAMIREZ

has participated in and passed an examination which qualifies him/her for completion in Hazardous Material Eight Hour Refresher Safety Training as required by 29 CFR1910.120 and CCR Title 8 Section 5192.

This training was conducted by David Roland, and was completed April 15, 2002

David Roland
Certified Instructor

April 15, 2002
Date

Employer

Employer confirms that the required training as indicated above has been completed.

Date

JoshuaCasey
Corporate Training and Education
(714) 245-9480 Fax (714) 245-9443
www.joshuacasey.com

GA75-161

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Welcome, ecpriv Edit/Create My Locations - Sign Ou

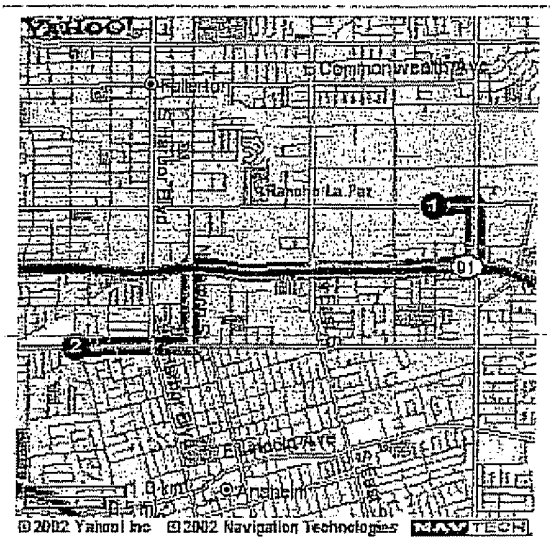
Yahoo! Maps - Driving Directions

Starting from: 2100 East Orangethorpe Avenue, Fullerton, CA 92831-5328

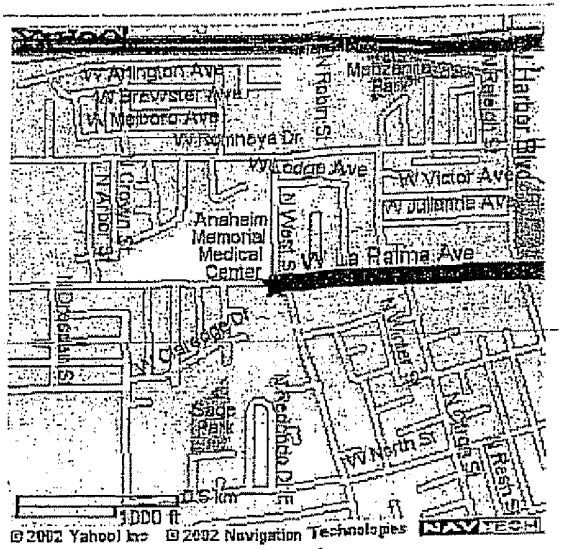
Arriving at: 1111 West La Palma Avenue, Anaheim, CA 92801-2804

Distance: 3.5 miles **Approximate Travel Time:** 6 mins

Email Directions
Get Reverse Directions
Text Only Driving Directions



Full Route



Destination

OCVOCEF 000740

11858-38

AA 21873

	Directions	Miles
1.	Start on E ORANGETHORPE AVE	0.3
2.	Turn Right on N STATE COLLEGE BLVD/S STATE COLLEGE BLVD	0.1
3.	Continue on N STATE COLLEGE BLVD	0.2
4.	Take the CA-91 WEST ramp towards RIVERSIDE FWY/LOS ANGELES	0.3
5.	Merge on CA-91 WEST	1.2
6.	Take the LEMON ST/ANAHEIM BLVD/HARBOR BLVD exit	0.3
7.	Turn Left on N LEMON ST	0.5
8.	Turn Right on W LA PALMA AVE	0.7

When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

New Location

Driving Directions

1 Enter a starting address or select from My Locations

My Locations: -- My Locations -- Edit

Address (Address, Intersection or Airport Code): 2100 East Orangethorpe Av

City, State or Zip: Fullerton, CA 92831-5328

Country: United States

2 Enter a destination address or select from My Locations

My Locations: -- My Locations -- Edit

Address (Address, Intersection or Airport Code): 1111 West La Palma Avenue

City, State or Zip: Anaheim, CA 92801-2804

Country: United States

Get Directions

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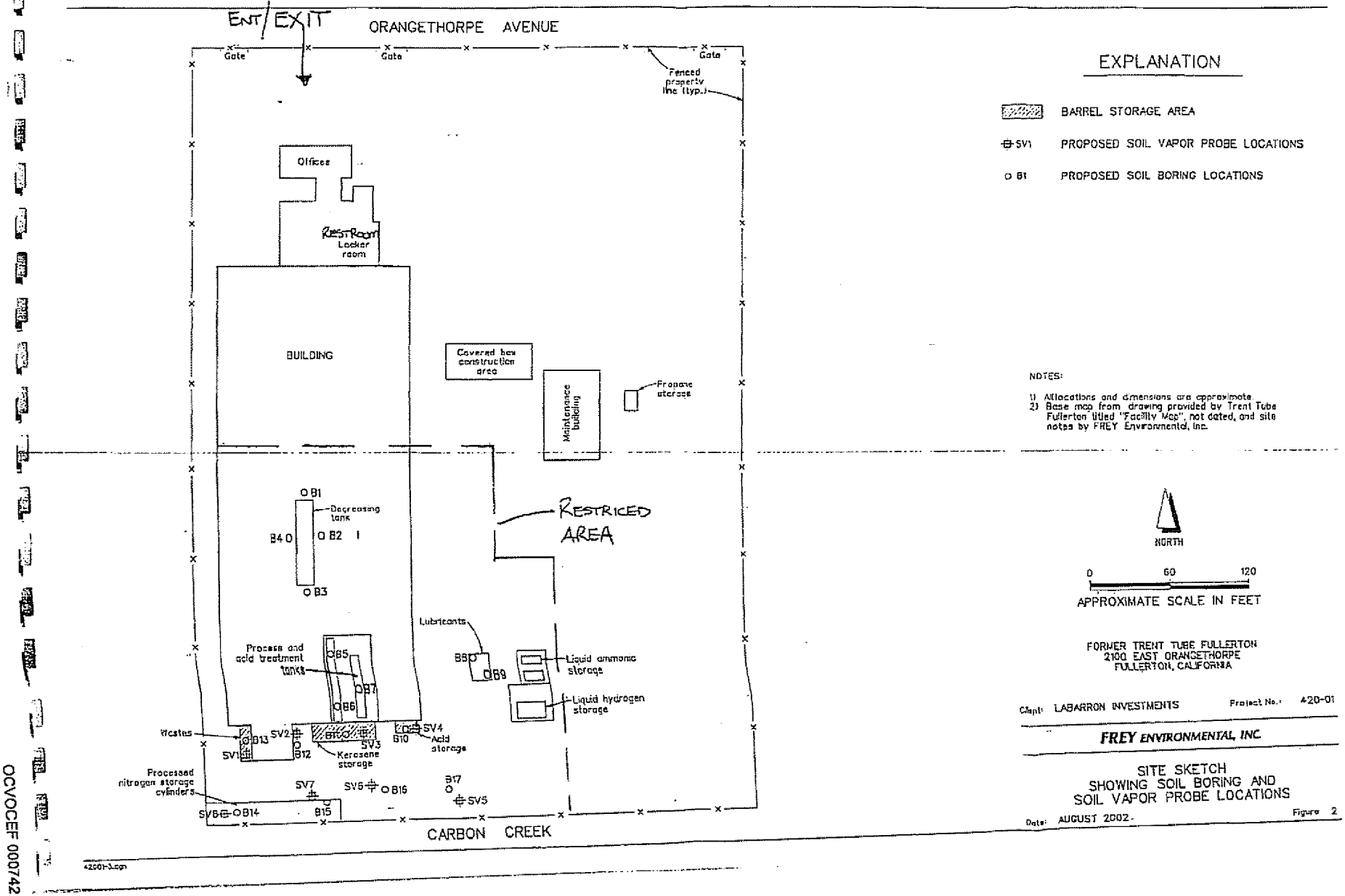

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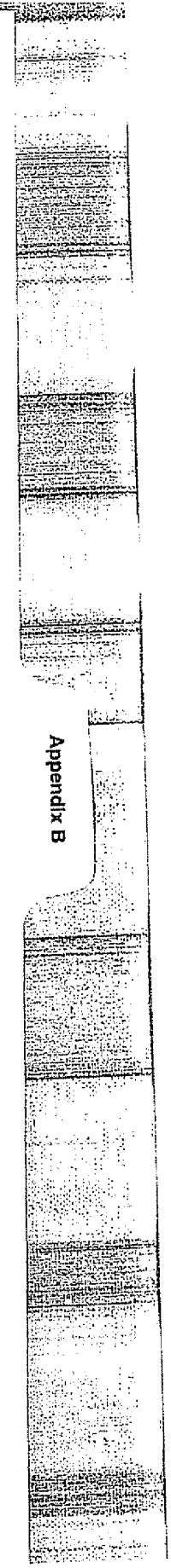

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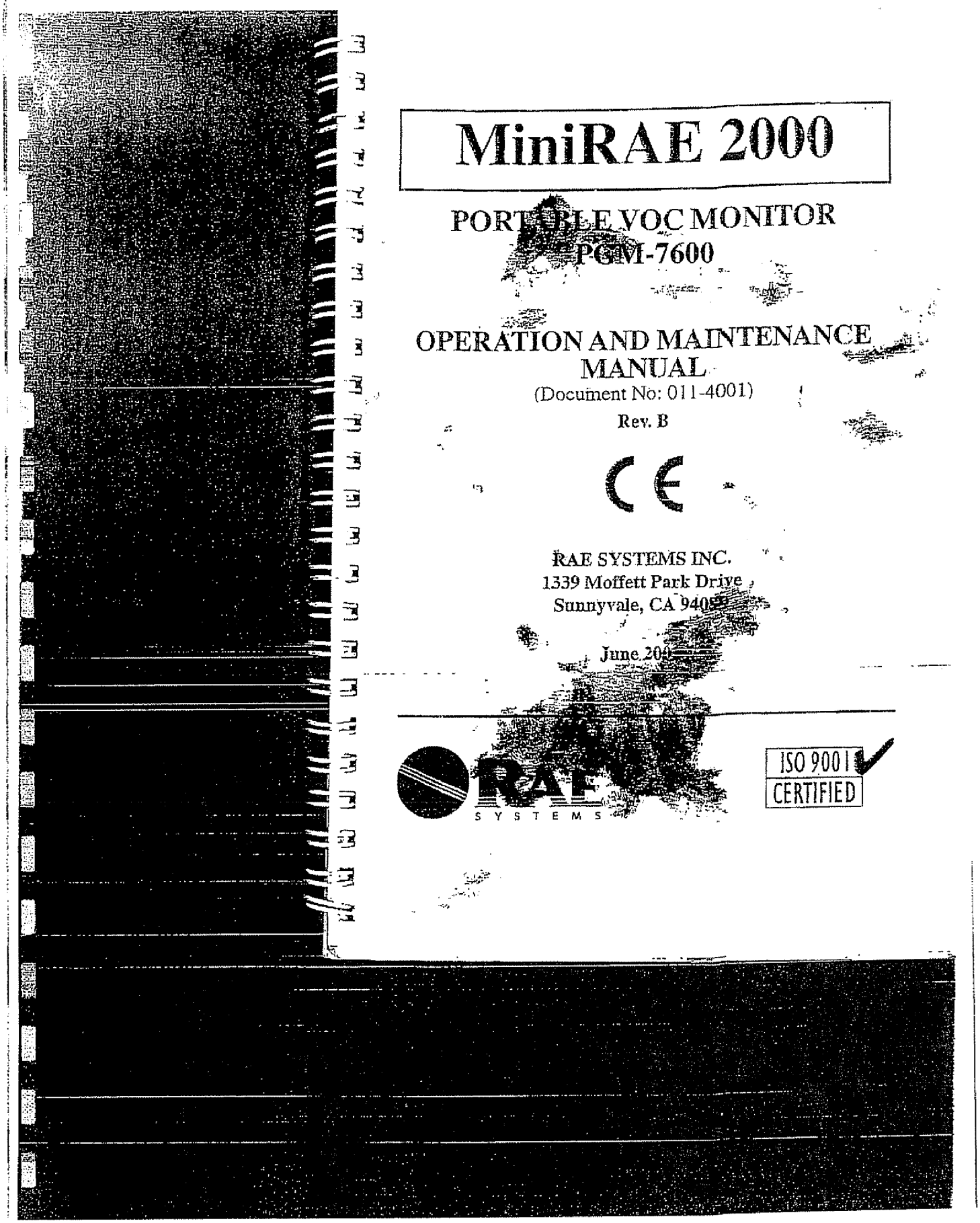
APPENDIX B

EQUIPMENT CALIBRATION AND MAINTENANCE

FREY



MiniRAE 2000

PORTABLE VOC MONITOR
PGM-7600

OPERATION AND MAINTENANCE MANUAL

(Document No: 011-4001)

Rev. B

CE

RAE SYSTEMS INC.
1339 Moffett Park Drive
Sunnyvale, CA 94089

June 200

RAE SYSTEMS

ISO 9001 CERTIFIED

OCVOCEF 000745

11858-43

AA 21878

4.4 Calibrate and Select Gas

In the first menu of the programming mode, the user can perform functions such as calibration of the MiniRAE 2000 monitor, select default cal memories, and modify cal memories. See Table 4.4.

Table 4.4

Calibrate/Select Gas Sub-Menu
Fresh Air Cal?
Span Cal?
Select Cal Memory?
Change Span Value?
Modify Cal Memory?
Change Correction Factor?

Calibrating the MiniRAE 2000 monitor is a two-point process using "fresh air" and the standard reference gas (also known as span gas). First a "fresh air" calibration, which contains no detectable VOC (0.0 ppm), is used to set the zero point for the sensor. Then a standard reference gas that contains a known concentration of a given gas is used to set the second point of reference.

Note: The span value must be set prior to calibrating for fresh air or span.

In addition to calibrations, the first menu allows the user to store calibrations for up to 8 different measurement gases.

The default gas selections are as follows:

OCVOCEF 000746

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AA 21879

Cal Memory #0.....Isobutylene
Cal Memory #1.....Hexane
Cal Memory #2.....Xylene
Cal Memory #3.....Benzene
Cal Memory #4.....Styrene
Cal Memory #5.....Toluene
Cal Memory #6.....Vinyl Chloride
Cal Memory #7.....Custom?

Memory #0 cannot be modified. The other 7 cal memories may be modified to one of 102 preprogrammed chemicals or to a user-defined custom gas. In the gas library, only the gases that can be detected by the installed UV lamp will actually be displayed. If Isobutylene in memory #0 is calibrated and the selected gas in memory #1 to #7 is not calibrated, the correction factor from the library will be used automatically, so the reading for the selected gas will be correct even without calibration. If the selected gas has been calibrated, no correction factor is applied.

To change a default gas to a library or custom gas, first go to Select Cal Memory (Section 4.4.3) and then proceed to Modify Cal Memory (Section 4.4.5) to enter the desired gas.

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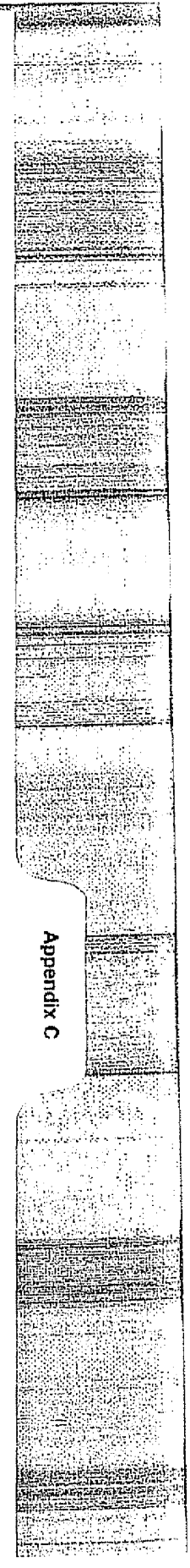
Appendix C

APPENDIX C

CHAIN OF CUSTODY BLANKS

FREY

AMERICAN SCIENTIFIC LABORATORIES, LLC

Environmental Testing Services

2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

Page _____ Of _____

ASL JOB# _____

CHAIN OF CUSTODY RECORD

Company:		Report To:
Address:	Project Name:	Address:
	Site Address:	Invoice To:
Telephone:		Address:
Fax:		
Special Instruction:	Project ID:	
	Project Manager:	P.O.#:

ANALYSIS REQUESTED

ITEM	LAB USE ONLY	SAMPLE DESCRIPTION			Container(s)		Matrix	Preservation												Remarks
	Lab ID	Sample ID	Date	Time	#	Type														

Collected By:	Date	Time	Relinquished By:	Date	Time
Relinquished By:	Date	Time	Received For Laboratory	Date	Time
Condition of Sample:					

TAT ☐ Normal ☐ Rush

White - Report, Yellow - Laboratory, Pink - Client

OCVOCEF 000750

AA 21883

11858-48

FREY Environmental, Inc.	Project Name	Soil (S), Water (W), Vapor (V)	Number of Containers	Requested Analyses						CHAIN-OF-CUSTODY RECORD
2817-A Lafayette Avenue	Project Address									Page of
Newport Beach, California 92663										Laboratory Project #:
Phone:949.723.1645; FAX:949.723.1854	Project Number									
Contact:										

Sample ID	Sample Location	Sampling Date	Sampling Time	Lab ID	Soil (S), Water (W), Vapor (V)	Number of Containers						Comments

1. Relinquished by	2. Received by	Turnaround Time:
signature: X	signature: X	Special Instructions/Notes:
Date/Time:	Date/Time:	
3. Relinquished by	4. Received by	
signature: X	signature: X	Sample Condition: Sealed? Y / N Chilled? Y / N
Date/Time:	Date/Time:	

BASELINE ON-SITE ANALYSIS™
P. O. Box 2243
Huntington Beach, California 92647
Telephone: (888) 753-7553
FAX: (714) 840-1584

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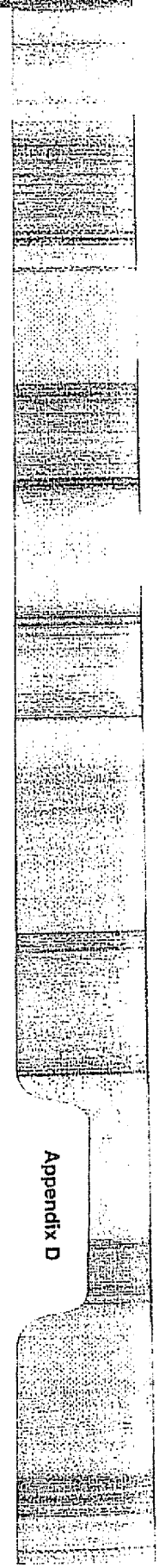
AA 21884



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APPENDIX D

QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION

FREY

QC Overview

Precision and Accuracy

Precision measures the ability to obtain reproducible results for a given parameter in the same sample. Precision is expressed by calculating the relative percent difference (RPD) of duplicate analyses. Precision is assessed by the following means:

1. Analysis of duplicate samples
2. Analysis of duplicate matrix spikes
3. Analysis of duplicate laboratory spikes
4. Control charts

Accuracy measures the deviation of a measurement with the known true value for the quantity being measured. Accuracy is assessed by the following means:

1. Reference or performance evaluation samples (obtained from an outside source)
2. Laboratory control spikes
3. Matrix spikes
4. Control charts from multiple laboratory and matrix spike analyses

Internal Quality Checks

Calibration Check Standard

At the start of every day, a calibration check standard is run to verify calibration. The standard contains all of the analytes to be measured (internal standard, and surrogates, if applicable.) If the standard does not pass the acceptance criteria, a new calibration curve must be generated. Calibration must be verified at least once every twelve hours or between every 10 samples (depending on method.)

Instrument Performance Criteria

Instrument performance criteria must be demonstrated when running GC/MS methods. At the beginning of every twelve-hour period the instrument must pass the performance criteria that is defined in the EPA methods.

Laboratory Control and Matrix Spikes

Laboratory control and matrix spikes are performed by spiking blanks or samples, respectively, with a spiking solution, which contains some or all of the analytes of interest. These analyses are a measure of method performance and accuracy and are performed at a rate of one out of every twenty samples for all methods. If the calculated laboratory spike recoveries do not fall into acceptable ranges, corrective action must be taken before any further analyses are performed. Out-of-control matrix spike recoveries which are extracted and analyzed with laboratory control spikes which exhibit in-control recoveries are usually indicative of some form of matrix interference with the chosen methodology and are footnoted as such on the reported data.

Analysis of Duplicate Samples
Samples are analyzed in duplicate to measure precision. Duplicates are run at minimum rate of one per batch of twenty samples for all methods. In addition, duplicate matrix and/or laboratory control spikes will be run to demonstrate method accuracy. If acceptable results are not achieved, action must be taken to correct the problem before any further analysis is performed.

Control Limits
Control charts are prepared for each parameter determined by a method.
Control charts are prepared for all matrices and compared to previous charts in order to validate or change existing control limits. This is performed at least annually.

Method Blanks
Before analyzing any samples a method blank must be run to assure that the analytical system and reagents being used are free of contamination. If it is determined that the blank is not free of contamination then corrective action must be taken before any samples are analyzed.

Internal Standards
A known concentration of internal standard is added to every standard, blank and sample being analyzed for organic parameters. The internal standard is used to measure relative responses of other method analytes. The internal standard compensates for minor fluctuations in instrument response. If fluctuations in the internal standard are more than the acceptable criteria, corrective action must be taken to solve the problem.

Surrogate Standards
Surrogates are compounds closely related to the compounds of interest.
Samples are spiked with a known concentration of the surrogate compound(s) before sample preparation. Surrogate recovery limits for each matrix are calculated. The sample must be reanalyzed if surrogate recoveries for a sample fall outside of the acceptable range.

Summary of Data Quality Objectives

Analysis Group (EPA Method)	Matrix	Practical Quantitation Limits (PQL)	Precision	Accuracy
			Duplicate Control Limits	Spike Recovery Limits
			% RPD	% Recovery
Volatile Oragnic Compounds (8260B)	Soil	5.0 µg/kg	20	80-120
Volatile Oragnic Compounds (8260B)	Vapor	1.0 µg/L	20	N/A
TRPH (418.1)	Soil	10 mg/kg	20	65-130
Aromatic Volatiles (8021B)	Soil	5.0 µg/kg	20	80-120

Note:
The QA sample frequency is one set of spike/spike duplicate for every set of twenty samples (soil samples).

Exhibit 15

FREY ENVIRONMENTAL, INC.

Environmental Geologists, Engineers, Assessors

2817 A Lafayette Avenue
Newport Beach, CA 92663
(949) 723-1645
Fax (949) 723-1854
Email: freyinc@freyinc.com

July 23, 2003
420-01

RECEIVED JUL 2 5 2003

Ms. Leona Winner
Hazardous Substances Scientist
Department of Toxic Substance Control
8800 Cal Center Drive
Sacramento, CA 95826

Re: LaBarron Investments
2100 East Orangethorpe Avenue
Fullerton, California

Dear Ms. Winner:

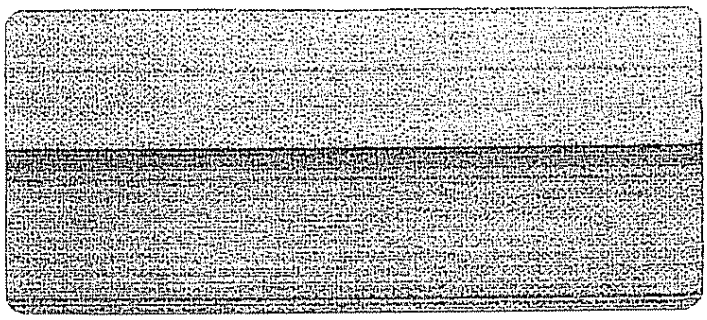
Enclosed please find three copies of our report entitled "Additional Soil Vapor Assessment, La Barron Investments, 2100 East Orangethorpe Avenue, Fullerton, California". The report is dated July 22, 2003.

Please phone us at (949) 723-1645 with any questions.

Sincerely,
FREY Environmental, Inc.

Evan Privett
Senior Project Geologist

cc: Eddie Fischer
LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831



ADDITIONAL SOIL VAPOR ASSESSMENT
LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Prepared for:

LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831

Prepared by:

FREY Environmental, Inc.
2817A Lafayette Ave.
Newport Beach, California 92663-3715
(949) 723-1645

Project No.: 420-01

July 22, 2003

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FREY

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2 METALS ANALYSES OF SOIL SAMPLES
3 CHEMICAL ANALYSES FOR SOIL VAPOR SAMPLES

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2 SITE SKETCH SHOWING SOIL BORING AND SOIL VAPOR PROBE LOCATIONS
3 SITE SKETCH SHOWING PCE CONCENTRATIONS IN SOIL VAPOR AT 5 AND 10 FEET BGS
4 SITE SKETCH SHOWING 1,1-DCE CONCENTRATIONS IN SOIL VAPOR AT 5 AND 10 FEET BGS

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A FIELD PROCEDURES
B LABORATORY REPORTS

OCVOCEF 000259

1.0 INTRODUCTION

This report presents the results of additional soil vapor sampling activities conducted at 2100 East Orangethorpe Avenue in Fullerton, California (Site - Figure 1). The activities described below were conducted in general accordance with a RFI Workplan Addendum prepared by FREY Environmental, Inc. (FREY) dated April 25, 2003. The Department of Toxic Substance Control (DTSC) requested minor revisions to the April 25, 2003 workplan addendum in a letter to LaBarron Investments dated May 16, 2003. The revisions were incorporated into the workplan addendum via a letter dated May 19, 2003 prepared by FREY and transmitted to the DTSC.

2.0 BACKGROUND

2.1 FORMER FACILITY OPERATIONS

The facility was constructed in the late 1950's by the Trent Tube Company. The Trent Tube Company manufactured stainless steel tubing until 1984. The manufacturing process required the use of numerous regulated chemicals including oil, kerosene, liquid hydrogen, liquid ammonia, organic solvents, acids and pickle liquor

Trent Tube constructed one building with approximate dimensions of 300 feet from north to south and 130 feet from east to west. The majority of the building housed the manufacturing operations for the Trent Tube Company. Offices, a laboratory and a locker room were located in the northernmost section of the building. A second building used for maintenance activities was located on the eastern portion of the Site. The maintenance building had approximate dimensions of 40 feet by 60 feet (DTSC, 2000).

2.2 CHEMICAL / CHEMICAL WASTE STORAGE AREAS

The DTSC identified five areas of the Site where chemicals and/or chemical waste were either used or stored for extended periods of time. The five areas discussed below are shown on Figure 2.

1. Drum Storage Area: Fifty-five gallon capacity, steel drums were formerly located on the south side of the manufacturing building as shown on Figure 2. Soil samples previously collected from this area reportedly contained perchloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), ethylbenzene and xylenes at concentrations of 1.7 parts per million (ppm), 1.5 ppm, 1.7 ppm and 1 7 ppm, respectively (DTSC, 2000).

2. Aboveground Waste Oil Tanks: Two, 200 gallon capacity, aboveground, steel tanks were formerly located on concrete and set within a brick berm in the approximate area shown on Figure 2. It was reported that soils were excavated from this area and transported off Site for disposal (DTSC, 2000).

3. Aboveground Pickle Liquor Tanks: Two, 2,000 gallon capacity, aboveground tanks were formerly located inside the southeast portion of the manufacturing building. Pickle liquor generally consists of hydrochloric acid which is effective in removing unwanted metallic deposits from steel. It was reported that the spent pickle liquor contained hexavalent chromium and possibly lead (DTSC, 2000).

4. Degreasing Pit: It was reported that a 10,000 gallon capacity degreasing pit was located in the central portion of the manufacturing building. The degreasing pit reportedly may have contained 1,1,1-TCA, PCE and/or trichloroethene (TCE) (DTSC, 2000).

5. Southern Property Line: It was reported that an approximate 50 foot by 200 foot area located south of the manufacturing building was used for the aeration of soils which reportedly contained organic solvents at concentrations up to 5 ppm. It was reported that aerated soils were placed in the top two feet of soil (DTSC, 2000).

The Department of Health Services issued a certification of closure for the Site in a letter dated April 16, 1985 (DHS, 1985). No further background information was made available to FREY at the time of this document preparation (DTSC, 2000).

2.3 CURRENT SITE CONFIGURATION

The Site comprises approximately 5.2 acres of flat ground on the south side of East Orangethorpe Avenue approximately equidistant between State College Boulevard and Acacia Avenue in Fullerton, California. The Site parcel is rectangular in shape with dimensions of approximately 550 feet from north to south and 415 feet from east to west. The Site elevation is approximately 187 feet above mean sea level (Topo, 1987).

One building is currently located on Site and it is the same building as the larger building originally constructed by the Trent Tube Company. The northern most section of the Site building is currently used as office space while the majority of the building is used for recreational vehicle storage. An addition to the building was constructed on the southwest corner of the original building at an unspecified date. The addition to the building is used for recreational vehicle repair. The entire Site is paved with concrete with the exception of some small planters located along the northern building perimeter and the frontage with East Orangethorpe Avenue.

The Site is bound by a Vista Paint facility on the west, East Orangethorpe Avenue and a BASF facility to the north, a self storage facility on the east and a thin strip (approximately 40 feet) of Vista Paint parcel and Carbon Creek on the south.

2.4 HYDROGEOLOGIC SETTING

Soils beneath the Site consist of silt and sand from below the concrete to approximately 2 feet below the ground surface (bgs). Fine to coarse grained sand is located below the silt and sand and extends to a depth of approximately 20 feet bgs (Moore & Taber, 1984). Soil lithology beneath 20 feet bgs has not been investigated.

Regionally, the Site is located on the northeastern section of the Orange County Coastal Plain, which is part of the larger Coastal Plain of Los Angeles (OCWD, 1984). The central and northern portions of the Orange County Coastal Plain consist of downfolded strata of Upper Pleistocene and older age strata, that form a broad synclinal trough. The trough includes successively permeable and impermeable strata that reach a depth of up to 20,000 feet near the Anaheim area (OCWD, 1982).

The Upper Pleistocene and older unconsolidated deposits consist predominantly of marine and lagoonal sediments that include interbedded silts and clays with occasional lenses of sand and gravel. These deposits overlie a thick sequence of Late Cretaceous to Quaternary-age semiconsolidated sedimentary rocks and basement units (OCWD, 1984). The Upper Pleistocene and older formations are overlain by recent alluvium, derived from the surrounding hills and the Santa Ana River. Recent alluvial deposits attain a maximum thickness of approximately 300 feet in the Site area, and consist of sands with interbedded gravels, silts and clays (OCWD, 1984).

The Site is located in the Main Santa Ana Pressure Groundwater Sub-basin, within the Lower Santa Ana Watershed (RWQCB, 1984). The Site area is located within a pressure zone where semi-confined to confined water conditions may exist. Groundwater is estimated to flow toward the west-southwest in the Site Vicinity (OCWD, 1984). First groundwater is estimated to be located at approximately 80 feet bgs (DTSC, 2000).

2.5 NEAREST GROUNDWATER SUPPLY WELL

The City of Fullerton operates a groundwater supply well (labeled Kimberly Well #2) south of Kimberly Avenue and east of Acacia Avenue. Kimberly Well #2 is located approximately 1,500 feet to the north-northwest of the Site (Fullerton, 2002).

2.6 SOIL AND SOIL VAPOR ASSESSMENT

On October 22, 2002, FREY drilled and sampled twenty (20) soil borings and advanced and sampled nine (9) soil vapor probes to assess the presence of volatile organic compounds (VOCs) and selected metals in the former chemical and chemical waste storage areas listed in Section 2.2.

2.6.1 Soil Sampling

Soil borings B1 through B4, drilled around the former degreasing pit, and borings B10 through B17, drilled in the former chemical storage area located between the southern building wall and the southern property line, were drilled to final depths of 10 feet bgs.

Soil borings B5 through B9 and B18 through B20 were drilled to final depths of between 1 and 3 feet bgs. Soil borings B5, B6 and B7 were drilled in the location of the former process and hydrochloric acid treatment tanks, borings B8 and B9 were drilled in the former location of two aboveground oil tanks and borings B18, B19 and B20 were drilled for purpose of background soil sample collection.

VOCs were not detected above the laboratory detection limits of 5 micrograms per kilogram (ug/kg) in soil samples collected from borings B1 through B4 or in the background samples collected from borings B18 through B20. Total recoverable petroleum hydrocarbons (TRPH) were either not detected, or were detected in low concentrations (less than 100 mg/kg), in soil samples collected from borings B1 through B4, B8, B9 and B18 through B20.

Concentrations of selected metals were detected but at concentrations well below the Environmental Protection Agency's (EPA) Preliminary Remediation Goal (PRG) for Industrial Soils for each respective metal. Soil sample data has been summarized in Tables 1 and 2.

2.6.2 Soil Vapor Sampling

One soil vapor probe (B1) was installed and sampled adjacent to the former degreasing pit. Soil vapor samples were collected from B1 at depths of 10 and 20 feet bgs. Soil vapor probes SV1 through SV4 and SV5 through SV8 were installed to depths of 5 feet bgs in the former chemical storage area and along the southern property line.

Relatively low concentrations of chlorinated VOCs were detected in soil vapor samples collected as part of this investigation with the exception of SV8. Chlorinated VOCs were not detected in soil vapor sample SV8.

PCE was the chlorinated VOC detected in the greatest concentration (130 ug/L) and detected in the greatest number of soil vapor samples (8 out of 9 soil vapor samples). Concentrations of chlorinated VOCs in general decreased with depth in soil vapor samples collected from B1.

Concentrations of 1,1-DCE decreased from 80 ug/L at 10 feet bgs to 17 ug/L at 20 feet bgs. Concentrations of 1,1,1-TCA decreased from 86 ug/L at 10 feet bgs to 24 ug/L at 20 feet bgs.

Soil vapor sample data has been summarized in Table 3.

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3.0 OBJECTIVE

The objective of the work described below was to assess the lateral and vertical extent of VOCs in soil vapor beneath the Site.

4.0 SCOPE OF WORK

The scope of work, designed to provide the information needed to meet the objectives of the investigation, was as follows:

- Implement a site-specific health and safety plan;
- Advance 12 soil vapor probes to depths between 5 and 40 feet bgs;
- Collect soil vapor samples at depths of 5, 10, 20 or 40 feet bgs;
- Analyze selected soil vapor samples for chemical constituents;
- Evaluate data and prepare a report discussing field activities conducted as part of this investigation.

A more detailed description of the field investigation and laboratory testing program is provided in Section 5.0.

5.0 CURRENT INVESTIGATION

FREY marked the proposed soil vapor sampling locations 72 hours prior to drilling activities and obtained an underground service alert number prior to the conduct of any soil vapor sampling activities.

On the morning of June 11, 2003, FREY held a health and safety meeting on Site prior to the conduct of any field activities. The health and safety meeting was attended by members of the DTSC, FREY, the drilling contractor and the mobile laboratory chemist. The DTSC approved health and safety plan was discussed and Site specific concerns were highlighted by FREY during the health and safety meeting.

5.1 SOIL VAPOR SAMPLING

5.1.1 Soil Vapor Probe Locations and Sample Depths

Soil vapor probes SV9 through SV20 were advanced in locations mutually agreed upon by personnel from FREY and the DTSC on June 11, 2003. Soil vapor probe locations are shown on Figure 2. A one-inch diameter hole was drilled through the concrete in each proposed vapor probe location prior to probe advancement operations.

Soil vapor samples were collected at depths of 5-feet bgs from soil vapor probes SV9 through SV13 using the protocol described in Section 5.1.2. Soil vapor probes SV9 through SV13 were advanced in the locations shown to laterally assess concentrations of VOCs previously detected in soil vapor samples SV1 through SV7.

Soil vapor samples were collected at depths of 10, 20 and 40 feet bgs from soil vapor probes SV14 and SV15 using the protocol described in Section 5.1.2. Soil vapor probes SV14 and SV15 were advanced in the locations shown to vertically assess concentrations of VOCs previously detected in soil vapor samples SV1 and SV3, respectively.

Soil vapor samples were collected at a depth of 40 feet bgs from soil vapor probe SV16 using the protocol described in Section 5.1.2. Soil vapor probe SV16 was advanced in the location shown to vertically assess concentrations of VOCs previously detected in soil vapor samples collected from B1.

Soil vapor samples were collected at depths of 10, 20 and 40 feet bgs from soil vapor probes SV17 through SV20 using the protocol described in Section 5.1.2. Soil vapor probes SV17 through SV20 were advanced in the locations shown to laterally and vertically assess concentrations of VOCs previously detected in the soil vapor samples collected from B1.

5.1.2 Soil Vapor Sample Collection Procedures

Soil vapor samples were collected using a Post Run Tubing System which is described in greater detail in the field procedures section in Appendix A. Each soil vapor probe was purged of approximately 3 probe volumes prior to sample collection. The probe volume of 0.005 cubic feet was calculated by multiplying the 2-inch probe hole diameter by the retracted probe height of approximately 3-inches. Soil vapor was purged into a 1-liter tedlar bag until it was approximately one half full which equates to approximately 0.015 cubic feet or 3 probe volumes.

The sample tubing was replaced between the purging of the probe and the sample collection. Soil vapor samples were collected in laboratory supplied 1-liter tedlar bags with a peristaltic pump. Soil vapor samples were labeled with the job number, time of sample collection, date, soil vapor probe number and depth of sample. Soil vapor samples were delivered to the on-Site mobile laboratory immediately after sample collection.

5.2 LABORATORY ANALYSES

Soil vapor samples collected from soil vapor probes SV9 through SV20 were analyzed for VOCs and fuel oxygenates in accordance with EPA Method No. 8260B. Soil vapor samples were analyzed in an on-Site mobile laboratory provided by Baseline On-Site Analysis, a licensed hazardous waste testing laboratory based in Huntington Beach, California.

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6.0 RESULTS OF THE INVESTIGATION

Soil vapor samples collected from vapor probes SV9 through SV20 contained a maximum of 6 analytes according to EPA Method No. 8260B. The 6 analytes were cis 1,2-dichloroethene (cis 1,2-DCE), TCE, PCE, 1,1-DCE, 1,1-DCA, and 1,1,1-TCA.

PCE, 1,1-DCE and 1,1,1-TCA were the VOC analytes detected in the greatest concentrations in soil vapor samples collected from soil vapor probes SV9 through SV20. The greatest concentrations of PCE, 1,1-DCE and 1,1,1-TCA were 69 ug/L (SV14-10), 70 ug/L (SV12-5) and 80 ug/L (SV10-5), respectively. Figures 3 and 4 present site sketches of PCE and 1,1-DCE concentrations at 5 and 10 feet bgs.

Soil vapor sample results have been summarized in Table 3. Laboratory and quality assurance/quality control reports appear in Appendix B.

7.0 DISCUSSION OF RESULTS

Comparison of soil gas concentrations with the maximum contaminant level (MCL) established for each analyte can provide an assessment of the threat to drinking water. MCLs are enforceable standards for drinking water as established by the EPA. Although MCLs are applicable to drinking water, the comparison of soil vapor concentrations to each analytes MCL can be used to evaluate the threat of the present VOCs to groundwater.

7.1 LATERAL EXTENT OF VOCS

The lateral extent of VOCs has been adequately assessed as discussed below. Based on the data presented in Sections 2.6 and 6.0, the former drum storage area, southern property line area and the former degreasing pit are the three areas which contain concentrations of VOCs in soil gas. The former drum storage area and the southern property line area can be discussed as one area which encompasses the area south of the building and north of the southern property line.

7.1.1 Former Drum Storage Area and Southern Property Line

Soil vapor probes SV9, SV10, SV11, SV12 and SV13 were advanced to depths of 5 feet bgs in locations which encircled the former drum storage area and southern property line area. Soil vapor samples were collected at five feet bgs.

Soil vapor samples collected from probes SV9, SV10, SV11, SV12 and SV13 contained relatively low concentrations of cis 1,2-DCE (non-detect to 11 ug/L), TCE (non-detect to 26 ug/L), PCE (32 ug/L to 64 ug/L), 1,1-DCE (19 ug/L to 70 ug/L), 1,1-DCA (non-detect to 11 ug/L) and 1,1,1-TCA (37 ug/L to 80 ug/L).

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TCE, PCE and 1,1-DCA have an MCL of 5 ug/L. When detected, concentrations of TCE, PCE and 1,1-DCA slightly exceeded the MCL of 5 ug/L.

The MCL is 6 ug/L for cis 1,2-DCE and 1,1-DCE. Concentrations of cis 1,2-DCE and 1,1-DCE were either not detected or slightly exceeded the MCL of 6 ug/L.

The MCL for 1,1,1-TCA is 200 ug/L. None of the soil vapor samples collected and analyzed as part of the this investigation, or the previous investigation, contained concentrations of 1,1,1-TCA which exceeded the MCL of 200 ug/L.

7.1.2 Former Degreasing Pit

Soil vapor probes SV17, SV18, SV19, and SV20 were advanced to depths of 40 feet bgs in locations which encircled the former degreasing pit.

Soil vapor samples collected from soil vapor probes SV17, SV18, SV19 and SV20 contained slightly lower concentrations of cis 1,2-DCE (non-detect to 6.3 ug/L), TCE (non-detect to 13 ug/L), PCE (non-detect to 41 ug/L), 1,1-DCE (non-detect to 66 ug/L), 1,1-DCA (non-detect to 8.3 ug/L) and 1,1,1-TCA (non detect to to 69 ug/L) than did soil vapor samples collected from probes SV9, SV10, SV11, SV12 and SV13. VOCs, when detected, slightly exceeded the MCLs for respective analytes.

7.2 VERTICAL EXTENT OF VOCS

7.2.1 Former Drum Storage Area and Southern Property Line

Soil vapor samples were collected from depths of 10, 20 and 30 feet bgs from vapor probes SV14 and SV15. The greatest concentrations of VOCs were detected in the soil vapor samples collected from 10 feet bgs. Concentrations of VOCs decreased significantly from the soil gas samples collected from 10 feet bgs to 30 feet bgs. The soil vapor sample collected from 30 feet bgs from SV15 did not contain VOCs. The soil vapor sample collected at 30 feet bgs from SV14 contained only PCE, 1,1-DCE and 1,1,1-TCA at concentrations of 6.8 ug/L, 5.4 ug/L and 7.8 ug/L, respectively.

7.2.2 Former Degreasing Pit

Soil vapor probe SV16 was advanced in the same location as previously sampled soil vapor probe B1. Soil vapor samples were collected from probe B1 from depths of 10 and 20 feet bgs and from a depth of 40 feet bgs from SV16. Soil vapor samples were collected from depths of 10, 20 and 40 feet bgs from soil vapor probes SV17, SV18, SV19 and SV20.

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Concentrations of VOCs were greatest in the soil vapor samples collected from depths of 10 feet bgs and decreased dramatically with depth. Soil vapor samples collected from 40 feet bgs from probes SV16, SV17, SV18, SV19 and SV20 did not contain detectable concentrations of VOCs.

8.0 CONCLUSIONS

The following conclusions have been drawn based on data collected during this investigation and previous investigations:

8.1 SOIL VAPOR ASSESSMENT

- The vertical extent of VOCs in soil vapor has been adequately assessed based upon data collected during the two subsurface investigations. VOCs in soil vapor extend to maximum depths of 30 feet bgs. Soil vapor samples collected from 40 feet bgs did not contain concentrations of VOCs. The depth to groundwater is approximately 80 feet bgs resulting in a minimum 40 foot 'clean zone' between VOCs present in soil vapor beneath the Site and first encountered groundwater.

  PCE was the VOC analyte in soil vapor detected in the greatest concentrations (130 ug/L in SV2 and 96 ug/L in SV3). Soil vapor probes SV14 and SV15, advanced adjacent to SV2 and SV3, were sampled at depths of 10, 20 and 30 feet bgs. Concentrations of VOCs, where detected, were slightly above the detection limits in the 30 foot vapor sample collected from SV14. Concentrations decreased to non-detect levels in the 30 foot vapor sample collected from SV15.

- The lateral extent of VOCs in soil vapor has been adequately assessed based upon data collected during the two subsurface investigations. PCE was detected in the greatest concentration (130 ug/L in SV2-5 and 96 ug/L in SV3-5). As shown on Figure 3, PCE concentrations decrease to 43 ug/L (SV9) to the west, 32 ug/L (SV13) to the south, 48 ug/L (SV12) to the east, and 36 ug/L (SV20) to the north of SV2-5 and SV3-5.

8.2 SOIL ASSESSMENT

- VOCs were not detected above the laboratory detection limits of 5 ug/kg in soil samples collected from borings B1 through B4 or in the background samples collected from B18 through B20.

- Selected metals were detected in soils sampled during the subsurface investigation conducted in October of 2002 but at concentrations below the EPA's PRG for Industrial Soils.

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8.3 GROUNDWATER THREAT ASSESSMENT

- The DTSC performed a screening level human health evaluation for the VOCs and metals detected during the initial investigation in October of 2002. The DTSC concluded that "The results indicate that the risks and hazards posed by the chemicals detected at this former facility are, for the most part, below target levels of concern" (DTSC, 2003).

- The nearest groundwater supply well is located 1,500 feet north-northwest of the Site. Groundwater is estimated to flow toward the west-southwest which places the Site in the hydrogeologic down-gradient or cross-gradient direction from the nearest groundwater supply well.

- The Site is entirely paved with concrete which minimizes the occurrence of surface water infiltration. Vapor concentrations in the vicinity of the former degreasing pit and concentrations of VOCs detected in soil vapor probes SV1, SV2, SV10, SV11 and SV14 are located inside the Site building virtually eliminating the possibility of surface water infiltration.

9.0 RECOMMENDATION

FREY recommends that no further action be required for this Site. It has been clearly demonstrated that the low concentrations of VOCs where present beneath the Site, do not present a threat to human health or groundwater beneath the Site.

10.0 LIMITATIONS

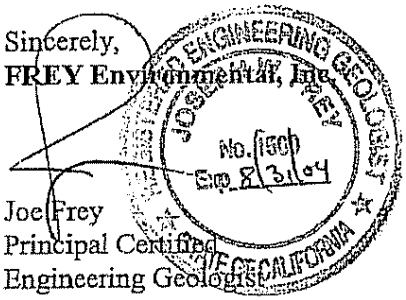
The judgements described in this report are professional opinions based solely within the limits of the scope of work authorized, and pertain to conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein, and this report is not intended for future evaluations of this Site unless an update is conducted by a consultant familiar with environmental assessments.

This report was compiled partially on information supplied to FREY Environmental, Inc. from outside sources, other information that is in the public domain and a visual inspection of the property. FREY Environmental, Inc. makes no warranty as to the accuracy of statements made by others, which may be contained in this report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report, except that it has been prepared in accordance with the current accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing similar services.

Site conditions may change with time as the result of natural alterations or man-made changes on this or adjacent properties. Future environmental investigations conducted at the Site may reveal Site conditions not indicated in the data reviewed by FREY Environmental, Inc. Additionally, changes in standards or regulations applicable to the Site may occur. The findings of this report may be partially or wholly invalidated by changes of which FREY Environmental, Inc. is not aware or has not had the opportunity to evaluate.

Environmental assessments provide an additional source on information regarding the environmental conditions of a particular property or facility. The report is a professional opinion and judgement to the Client, dependent upon FREY's knowledge and information obtained during the course of performance of the services.

Sincerely,
FREY Environmental, Inc.



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Tables

TABLES

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TABLE 1
VOLATILE ORGANIC COMPOUND ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TRPH	cis 1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA
B1-2	2	North Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B1-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B1-20	20		10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B2-1	1	East Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B2-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B3-1	1	South Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B3-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B4-1	1	West Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B4-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B8-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	ND<10,000	NA	NA	NA	NA	NA	NA
B9-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	59,000	NA	NA	NA	NA	NA	NA
B18-1	3	Background Sample Northwestern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

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TABLE 1
VOLATILE ORGANIC COMPOUND ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TRPH	cis 1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA
B19-1	3	Background Sample Northeastern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B20-1	3	Background Sample Souteastern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

Notes

1 TRPH = Total recoverable petroleum hydrocarbons analyzed in general accordance with EPA Method No. 418.1

2 Soil samples analyzed for EPA 8260B full list including fuel oxygenates.

3 NA = Not analyzed for listed constituent

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TABLE 2
METALS ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in milligrams per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TOTAL CHROMIUM	HEXAVALENT CHROMIUM	TOTAL LEAD	NICKEL	pH
B1-2	2	North Side of	10/22/02	ND<5.0	0.13	2.23	11.5	NA
B1-10	10	Degreasing Pit	10/22/02	ND<5.0	ND<0 100	0.81	2.02	NA
B2-1	1	East Side of	10/22/02	ND<5.0	0.24	1.12	4.13	NA
B2-10	10	Degreasing Pit	10/22/02	ND<5 0	ND<0.100	0.95	3.81	NA
B3-1	1	South Side of	10/22/02	ND<5 0	ND<0.100	1.38	4.66	NA
B3-10	10	Degreasing Pit	10/22/02	ND<5 0	ND<0.100	0.76	3 02	NA
B4-1	1	West Side of	10/22/02	ND<5.0	ND<0.100	1.05	4.35	NA
B4-10	10	Degreasing Pit	10/22/02	ND<5.0	ND<0.100	1.01	3 53	NA
B5-1	1	Northwest Portion of Former Process Tanks	10/22/02	ND<5.0	0 32	3 00	12 2	8.97
B6-1	1	Southwest Portion of Former Process Tanks	10/22/02	ND<5 0	0.17	2.40	9.19	8.68
B7-1	1	Eastern Portion of Former Process Tanks	10/22/02	ND<5 0	1 15	9.51	16.9	8.47
B8-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	11.3	ND<5.0	3.21	11.6	NA
B9-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	11 0	ND<5.0	4.78	10.5	NA
B10-1	1	Fomer Acid	10/22/02	10.4	NA	2.61	12.9	NA
B10-5	5	Storage Area	10/22/02	1.81	NA	0.60	2.28	NA
B10-10	10		10/22/02	3.03	NA	0.74	2.54	NA
B11-1	1	Fomer Kerosene	10/22/02	17.2	NA	9.71	15.5	NA
B11-5	5	Storage Area	10/22/02	2.07	NA	0.73	2.67	NA
B11-10	10		10/22/02	2.88	NA	0.65	3.20	NA
B12-1	1	Fomer Drum	10/22/02	26.6	NA	8.52	31.3	NA
B12-5	5	Storage Area	10/22/02	4.00	NA	0.84	4.84	NA
B12-10	10		10/22/02	4.26	NA	1.00	4.21	NA

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TABLE 2
METALS ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in milligrams per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TOTAL CHROMIUM	HEXAVALENT CHROMIUM	TOTAL LEAD	NICKEL	pH
B13-1	1	Fomer Drum	10/22/02	49.9	NA	25.7	51.6	NA
B13-5	5	Storage Area	10/22/02	5.90	NA	0.90	6.03	NA
B13-10	10		10/22/02	9.81	NA	0.57	5.63	NA
B14-1	1	Southeast Corner	10/22/02	57.5	NA	5.19	71.2	NA
B14-5	5	of Site	10/22/02	4.61	NA	1.16	5.30	NA
B14-10	10		10/22/02	2.81	NA	0.57	2.78	NA
B15-1	1	Southern Property	10/22/02	381	NA	17.3	67.4	NA
B15-5	5	Line	10/22/02	4.44	NA	0.62	2.87	NA
B15-10	10		10/22/02	3.95	NA	1.24	4.61	NA
B16-1	1	Southern Property	10/22/02	25.4	NA	7.52	19.1	NA
B16-5	5	Line	10/22/02	10.2	NA	2.45	11.0	NA
B16-10	10		10/22/02	3.68	NA	1.01	3.87	NA
B17-1	1	Southern Property	10/22/02	7.14	NA	3.57	8.93	NA
B17-5	5	Line	10/22/02	4.18	NA	0.98	4.53	NA
B17-10	10		10/22/02	2.51	NA	1.04	2.41	NA
B18-3	3	Background Sample Northwestern Portion of Site	10/22/02	10.8	0.20	7.76	16.4	8.56
B19-3	3	Background Sample Northeastern Portion of Site	10/22/02	7.85	0.17	1.97	7.95	9.04
B20-3	3	Background Sample Souteastern Portion of Site	10/22/02	7.16	0.16	2.25	8.78	8.84
EPA PRG (Industrial Soils)				450	64	750	41,000	

Notes
1 TRPH = Total recoverable petroleum hydrocarbons analyzed in general accordance with EPA Method No. 418.1
2 Soil samples analyzed for EPA 8260B full list including fuel oxygenates
3 NA = Not analyzed for listed constituent

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TABLE 3
CHEMICAL ANALYSES OF SOIL VAPOR SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per liter)

SAMPLE NUMBER	SAMPLE DEPTH (feet bgs)	SAMPLE LOCATION	DATE SAMPLED	cis-1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA	1,1,1,2-PCA
B1-10	10	North Side of Former	10/22/02	5.5	8.6	28	80	9.0	86	ND<1.0
B1-20	20	Degreasing Pit	10/22/02	7.7	9.9	25	17	5.2	24	ND<1.0
SV1-5	5	Former Waste Storage Area	10/22/02	16	38	74	8.7	9.5	76	ND<1.0
SV2-5	5	Former Waste Storage Area	10/22/02	1.3	5.3	130	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV3-5	5	Former Waste Storage Area	10/22/02	7.2	22	96	16	5.1	54	ND<1.0
SV4-5	5	Former Waste Storage Area	10/22/02	5.1	15	47	23	3.4	39	ND<1.0
SV5-5	5	Southern Property Line	10/22/02	1.7	7.0	37	12	ND<1.0	ND<1.0	ND<1.0
SV6-5	5	Southern Property Line	10/22/02	5.5	13	63	5.2	4.3	ND<1.0	56
SV7-5	5	Southern Property Line	10/22/02	3.9	5.5	43	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV8-5	5	Southern Property Line	10/22/02	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV9-5	5	Southwestern Corner of Site	06/11/03	ND<5.0	12	43	25	ND<5.0	41	ND<5.0
SV9-5 Dup	5	Duplicate sample	06/11/03	ND<5.0	11	40	23	ND<5.0	37	ND<5.0
SV10-5	5	Approx. 40 feet north of SV1/B13	06/11/03	ND<5.0	18	64	59	11	80	ND<5.0
SV11-5	5	Approx. 40 feet north of SV3/B11	06/11/03	11	26	35	49	5.2	64	ND<5.0
SV12-5	5	Approx. 40 feet west of SV4/B10	06/11/03	5.4	12	48	70	6.1	75	ND<5.0
SV13-5	5	Approx. 40 feet south of SV6/B16	06/11/03	ND<5.0	ND<5.0	32	19	ND<5.0	46	ND<5.0
SV14-10	10	Adjacent to SV1/B13	06/11/03	16	43	69	27	7.5	45	ND<5.0
SV14-20	20	Adjacent to SV1/B13	06/11/03	9.6	18	35	24	5.4	39	ND<5.0
SV14-30	30	Adjacent to SV1/B13	06/11/03	ND<5.0	ND<5.0	6.8	5.4	ND<5.0	7.8	ND<5.0

OCVOCEF 000278

TABLE 3
CHEMICAL ANALYSES OF SOIL VAPOR SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per liter)

SAMPLE NUMBER	SAMPLE DEPTH (feet bgs)	SAMPLE LOCATION	DATE SAMPLED	cis-1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA	1,1,2-PCA
SV15-10	10	Adjacent to SV3/B11	06/11/03	ND<5.0	11	28	41	ND<5.0	78	ND<5.0
SV15-20	20	Adjacent to SV3/B11	06/11/03	ND<5.0	ND<5.0	10	14	ND<5.0	45	ND<5.0
SV15-30	30	Adjacent to SV3/B11	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV16-40	40	Adjacent to B1	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV17-10	10	Approx. 40 feet northwest of B1/SV16	06/11/03	5.7	6.0	14	36	ND<5.0	46	ND<5.0
SV17-20	20	Approx. 40 feet northwest of B1/SV16	06/11/03	6.3	7.4	18	42	ND<5.0	65	ND<5.0
SV17-40	40	Approx. 40 feet northwest of B1/SV16	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV18-10	10	Approx. 15 feet west of B4	06/11/03	ND<5.0	5.5	21	40	ND<5.0	35	ND<5.0
SV18-20	20	Approx. 15 feet west of B4	06/11/03	ND<5.0	7.4	22	59	8.3	49	ND<5.0
SV18-40	40	Approx. 15 feet west of B4	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV19-10	10	Approx. 30 feet west of B2	06/11/03	6.2	8.0	41	48	ND<5.0	29	ND<5.0
SV19-10 Dup	10	Approx. 30 feet west of B2	06/11/03	6.1	7.7	38	46	ND<5.0	28	ND<5.0
SV19-20	20	Approx. 30 feet west of B2	06/11/03	ND<5.0	5.2	8.8	25	ND<5.0	17	ND<5.0
SV19-40	40	Approx. 30 feet west of B2	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV20-10	10	Approx. 20 feet south of B3	06/11/03	ND<5.0	13	36	66	7.2	69	ND<5.0
SV20-20	20	Approx. 20 feet south of B3	06/11/03	ND<5.0	ND<5.0	14	21	ND<5.0	48	ND<5.0
SV20-40	40	Approx. 20 feet south of B3	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

Notes

1. Soil vapor samples were analyzed in general accordance with EPA Method No. 8260B for the full list of compounds. Only detected compounds have been listed in this table.
2. ND<5.0 - Chemical constituent not present above the stated detection limit.

OCVOCEF 000279

Figures

FIGURES

FREY

NORTH

0 1/2 1

SCALE IN MILES

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

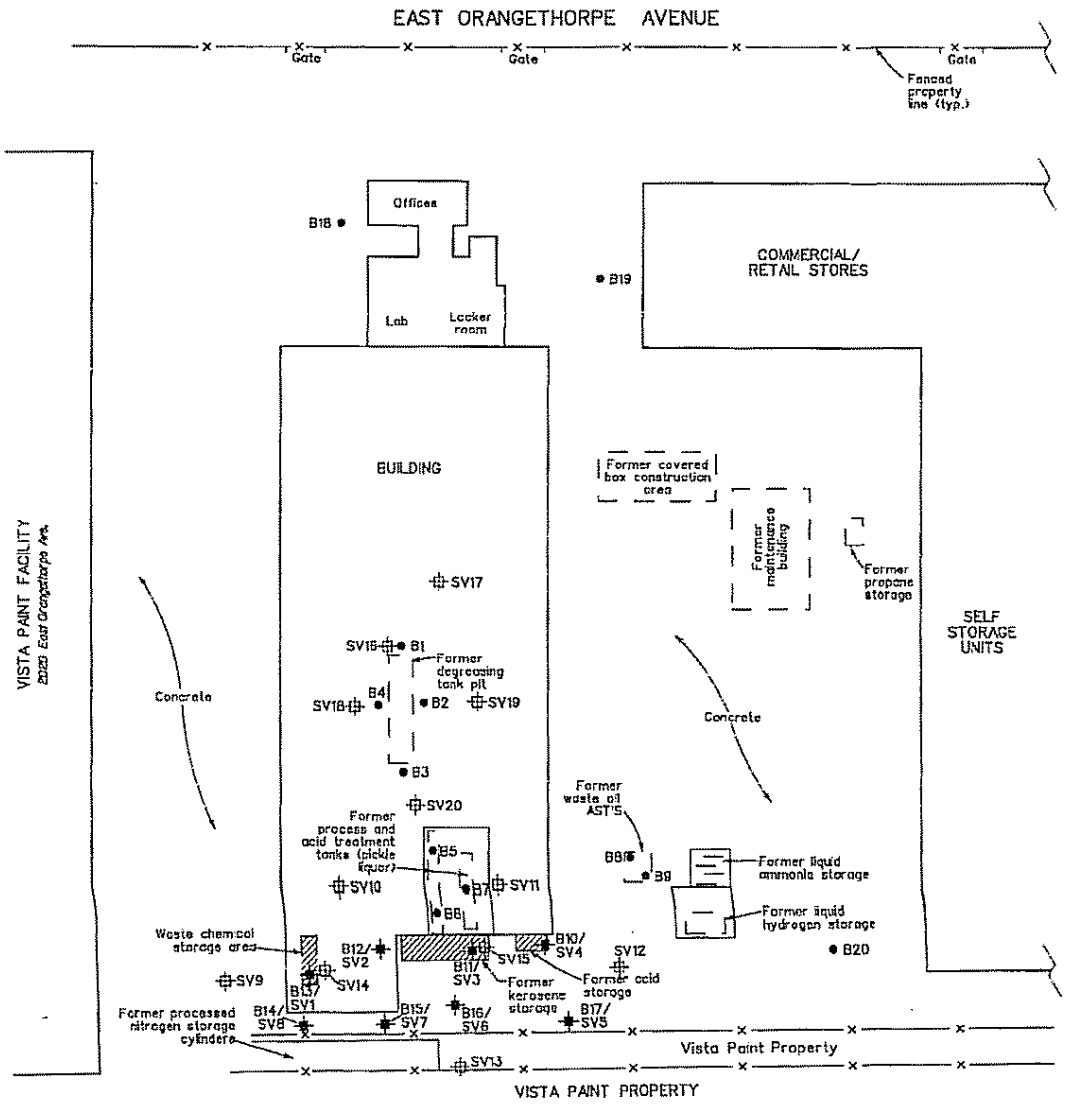
FREY ENVIRONMENTAL, INC.

NOTE:

1) All locations and dimensions are approximate.
2) Base map from USGS 7.5 minute California topographic quadrangle, printed from Topo.

SITE LOCATION MAP

Date: AUGUST 2002 Figure: 1



EXPLANATION

- BARREL STORAGE AREA
- B17/ SV5 — SOIL BORING AND VAPOR PROBE LOCATION (October 22, 2002)
- B1 — SOIL BORING LOCATIONS (October 22, 2002)
- SV9 — SOIL VAPOR PROBE LOCATION (June 11, 2003)

NOTES:

1) All locations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

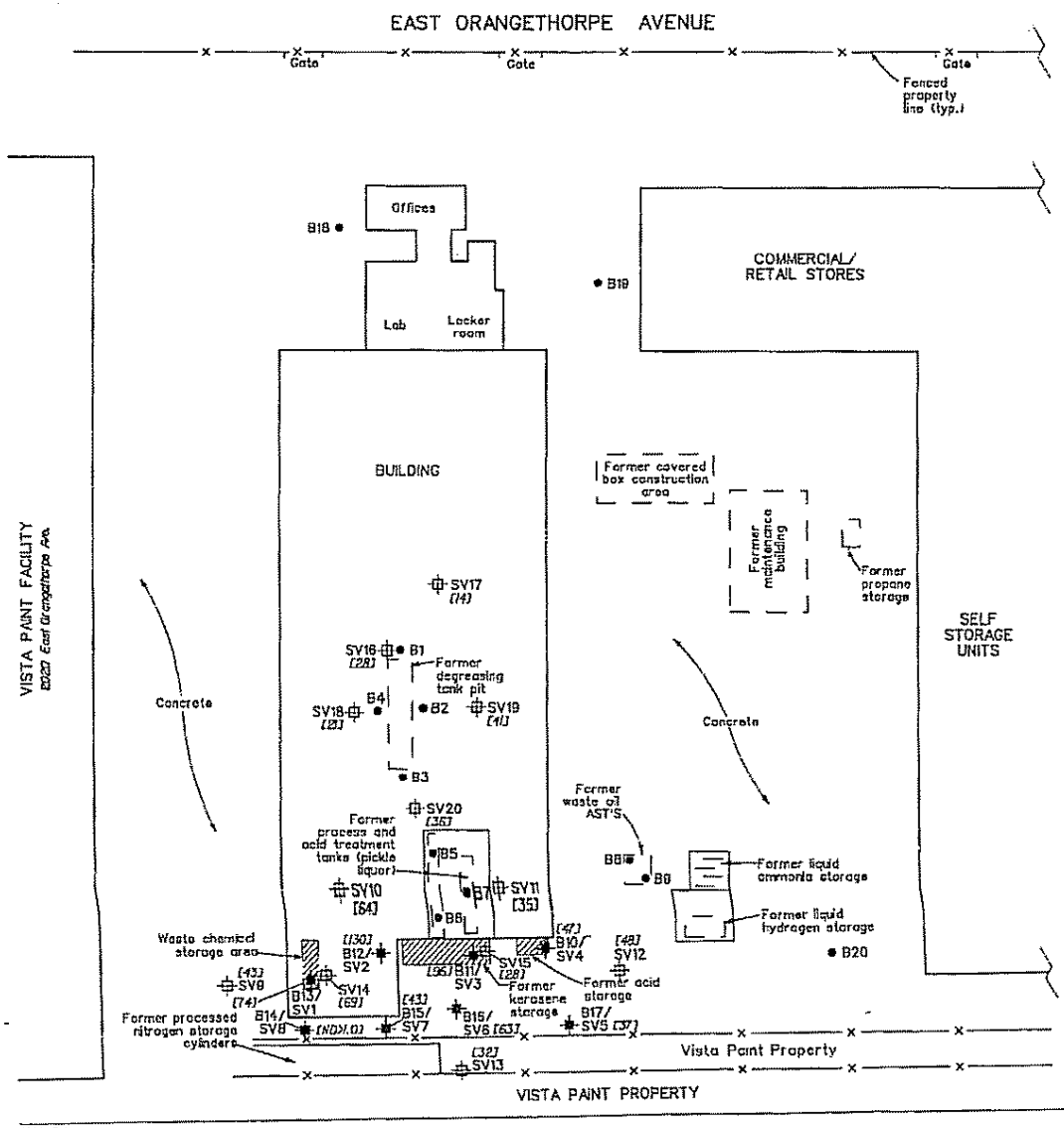
FREY ENVIRONMENTAL, INC.

SITE SKETCH
SHOWING SOIL BORING AND
SOIL VAPOR PROBE LOCATIONS

Date: JULY 2003 Figure 2

4200I-3.dgn

OCVOCEF 000283



EXPLANATION

- BARREL STORAGE AREA
- B17/SV5 — SOIL BORING AND VAPOR PROBE LOCATION (October 22, 2002)
- B1 — SOIL BORING LOCATIONS (October 22, 2002)
- SV9 — SOIL VAPOR PROBE LOCATION (June 11, 2003)
- [41] — With PCE concentration in soil at 5 and 10 feet BGS (in ug/l; ND=not detected above laboratory detection limit)

NOTES:

1) Allocations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

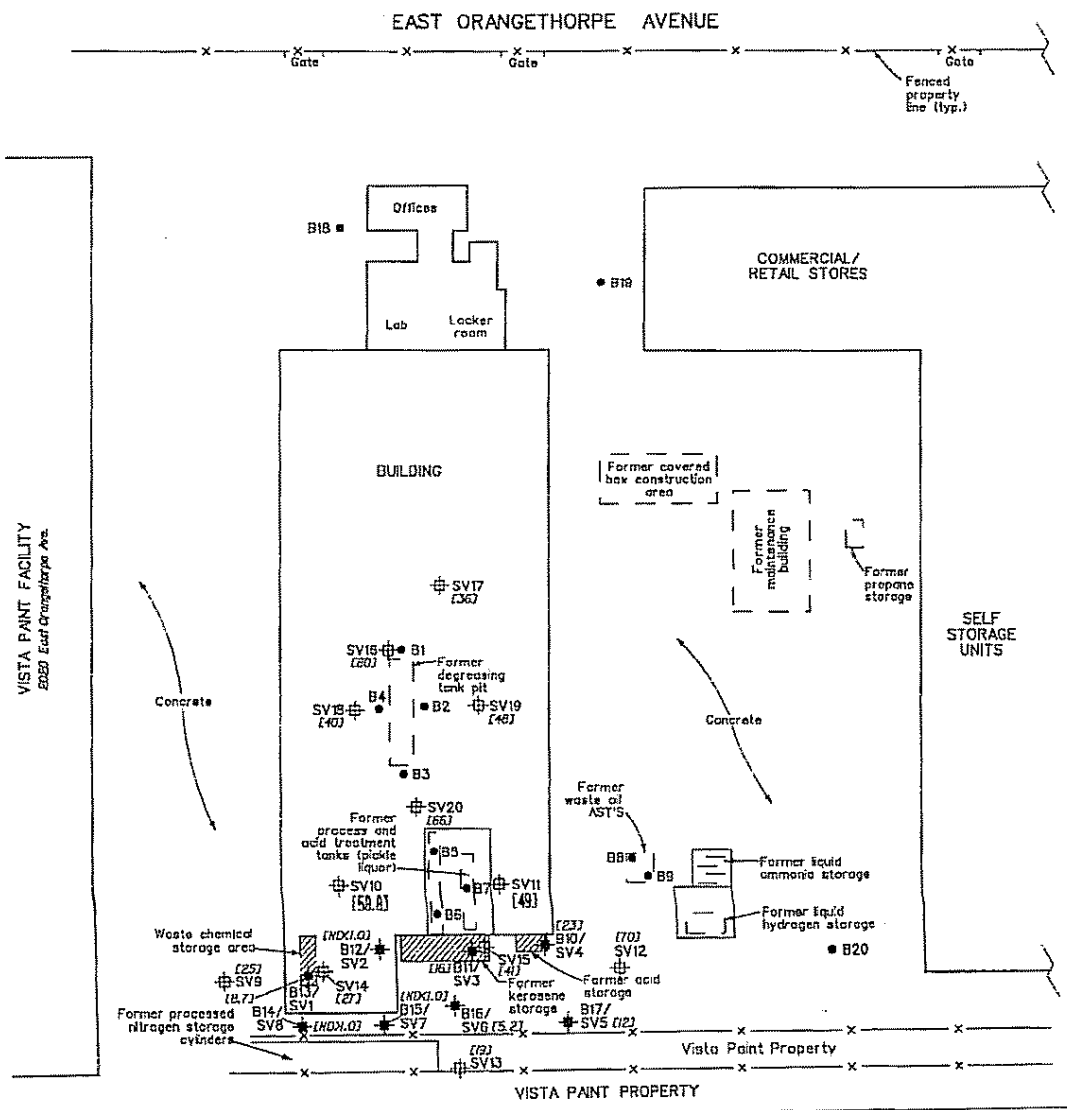
FREY ENVIRONMENTAL, INC.

SITE SKETCH
SHOWING PCE CONCENTRATIONS IN SOIL
VAPOR AT 5 AND 10 FEET BGS

Date: JULY 2003 Figure 3

42001-3.dgn

OCVOCEF 000284



EXPLANATION

- BARREL STORAGE AREA
- B17/ SV6 — SOIL BORING AND VAPOR PROBE LOCATION (October 22, 2002)
- B1 — SOIL BORING LOCATIONS (October 22, 2002)
- SV9 — SOIL VAPOR PROBE LOCATION (June 11, 2003)
- [70] — With 1, 1-DCE concentration in soil at 5 and 10 feet BGS (in ug/l; ND=not detected above laboratory detection limit)

NOTES:

1) All locations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

FREY ENVIRONMENTAL, INC.

SITE SKETCH
SHOWING 1, 1-DCE CONCENTRATIONS IN SOIL VAPOR AT 5 AND 10 FEET BGS

Date: JULY 2003 Figure 4

420SH-3.dgn

OCVOCEF 000285

Appendix A

APPENDIX A

FIELD PROCEDURES

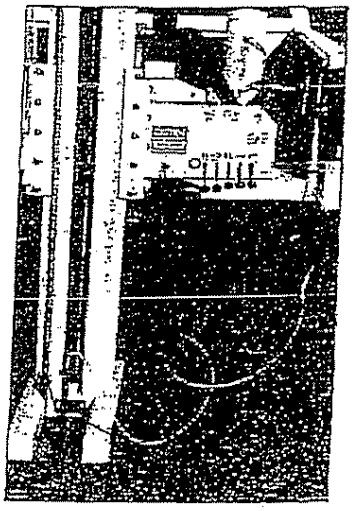
FREY

Soil Gas Sampling

Post-Run Tubing System

The Post-Run Tubing System

The Post-Run Tubing System (PRT) allows the user to collect soil vapor samples quickly and easily at the desired sampling depth WITHOUT the time-consuming complications associated with rod leakage and contamination. O-ring connections enable the PRT system to deliver a vacuum-tight seal that prevents sample contamination from UP hole, and assures that the sample is taken from the desired depth at the BOTTOM of the hole. The sample is drawn through the point holder, through the adapter, and into the sample tubing. The tubing can be replaced after each sample, thus eliminating sample carryover problems and the need to decontaminate the probe rods. The resulting time-savings translates into a higher productivity rate for you and your client.



Using the Post-Run Tubing (PRT) system for soil vapor sampling.

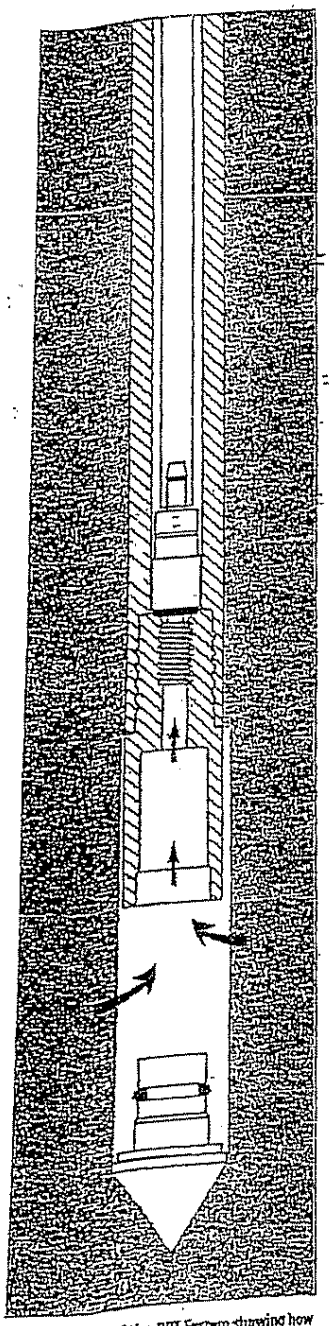
Sampling Methods

Some of the more common methods of active soil gas sample collection include:

- Direct sampling from the PRT using a gas chromatograph-compatible syringe used when the Geoprobe van is equipped with a mobile laboratory and gas chromatograph for immediate analysis of the collected samples.

- Inline sampling using glass sampling bulbs or Tedlar bags. The sampling device is placed inline, between the PRT adapter and the vacuum/volume system. As the sampling system is purged, soil gas is trapped in the bulb or bag. These samples may be stored for limited periods of time and either analyzed on site or at an off-site laboratory.

- Summa canisters, pre-evacuated steel devices that are connected to the surface end to the PRT tubing, also provide another sampling option for soil gas. A valve on the canister is opened and the vacuum inside the canister pulls in soil gases from the sample interval. This system is expensive and is usually reserved for sending samples to an off-site laboratory for specialized analyses or quality control purposes.



A cross section of the PRT System showing how soil gas (arrows) is drawn through the inner tubing system.

FIELD QUESTION . . .

Q. Is it possible to use a retractable point with the PRT system?

A. Yes! You will need a Retractable Point (AT21B) with a PRT Retractable Point Holder (PR21B). (See page 8.)

OCVOCEF 00028

Appendix B

APPENDIX B

LABORATORY REPORTS

FREY

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Analyses Requested:

1. EPA 8260B – Volatile Organic Compounds (VOC's)
2. EPA 8260B – Fuel Oxygenates

Baseline received samples collected from the project shown above. A Chain-of-Custody Record (COC) is attached.

All of the samples were analyzed for the parameters shown above per the COC. In this report, Baseline presents the results and a QA/QC summary for these analyses.

Brian K. Kato

Approved
Brian K. Kato, Laboratory Manager

BASELINE ON-SITE ANALYSIS

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV9-5**	**SV9-5 DUPLICATE**	**SV10-5**	**SV11-5**	**SV12-5**	**SV13-5**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000292

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV9-5**	**SV9-5 DUPLICATE**	**SV10-5**	**SV11-5**	**SV12-5**	**SV13-5**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	11	5.2	6.1	ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	25	23	59	49	70	19
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	11	5.4	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	43	40	64	35	48	32
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	41	37	80	64	75	46
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	12	11	18	26	12	ND<5.0
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit

OCVOCEF 000293

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV14-10**	**SV14-20**	**SV14-30**	**SV15-10**	**SV15-20**	**SV15-30**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

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Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV14-10**	**SV14-20**	**SV14-30**	**SV15-10**	**SV15-20**	**SV15-30**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	7.5	5.4	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	14	ND<5.0
1,1-Dichloroethene	27	24	5.4	41	ND<5.0	ND<5.0
cis-1,2-Dichloroethene	16	9.6	ND<5.0	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	10	ND<5.0
Tetrachloroethene	69	35	6.8	28	ND<5.0	ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	45	ND<5.0
1,1,1-Trichloroethane	45	39	7.8	78	ND<5.0	ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	43	18	ND<5.0	11	ND<5.0	ND<5.0
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000295

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Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV16-40**	**SV17-10**	**SV17-20**	**SV17-40**	**SV18-10**	**SV18-20**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

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Project Name: La Baron Investments
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Contact: Evan Privett

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV16-40**	**SV17-10**	**SV17-20**	**SV17-40**	**SV18-10**	**SV18-20**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	8.3
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	ND<5.0	36	42	ND<5.0	40	59
cis-1,2-Dichloroethene	ND<5.0	5.7	6.3	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	ND<5.0	14	18	ND<5.0	21	22
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	ND<5.0	46	65	ND<5.0	35	49
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	ND<5.0	6.0	7.4	ND<5.0	5.5	7.4
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

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Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV18-40**	**SV19-10**	**SV19-10 Duplicate**	**SV19-20**	**SV19-40**	**SV20-10**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV18-40**	**SV19-10**	**SV19-10 Duplicate**	**SV19-20**	**SV19-40**	**SV20-10**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	7.2
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	ND<5.0	48	46	25	ND<5.0	66
cis-1,2-Dichloroethene	ND<5.0	6.2	6.1	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	ND<5.0	41	38	8.8	ND<5.0	36
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	ND<5.0	29	28	17	ND<5.0	69
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	ND<5.0	8.0	7.7	5.2	ND<5.0	13
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000299

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Baseline On-Site Analysis
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FAX: 714.840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B			8260B
Units:	µg/L	µg/L	µg/L			µg/L
Dilution Factor:	1	1	1			1
Sample ID:	**SV20-20**	**SV20-40**	**Equipment Blank**			**Method Blank**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25			ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
p-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0			ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0

ND: Not detected at the indicated reporting limit.

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
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Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B			8260B
Units:	µg/L	µg/L	µg/L			µg/L
Dilution Factor:	1	1	1			1
Sample ID:	**SV20-20**	**SV20-40**	**Equipment Blank**			**Method Blank**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1-Dichloroethene	21	ND<5.0	ND<5.0			ND<5.0
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Tetrachloroethene	14	ND<5.0	ND<5.0			ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1,1-Trichloroethane	48	ND<5.0	ND<5.0			ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Trichloroethene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0			ND<5.0

ND: Not detected at the indicated reporting limit.

BASELINE ON-SITE ANALYSIS

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Quality Control Summary

QC Parameter:	SAMPLE	DUPLICATE	%RSD	SAMPLE	DUPLICATE	%RSD
Units:	µg/L	µg/L	%	µg/L	µg/L	%
Method:	8260B	8260B	8260B	8260B	8260B	8260B
Sample ID:	**SV9-5**	**SV9-5 DUP**	**---**	**SV19-10**	**SV19-10 DUP**	**---**
Compound Name						
Bromobenzene	ND<5	ND<5	---	ND<5	ND<5	---
Bromochloromethane	ND<5	ND<5	---	ND<5	ND<5	---
Bromoform	ND<5	ND<5	---	ND<5	ND<5	---
Bromomethane	ND<5	ND<5	---	ND<5	ND<5	---
Carbon Tetrachloride	ND<5	ND<5	---	ND<5	ND<5	---
2-Chlorotoluene	ND<5	ND<5	---	ND<5	ND<5	---
4-Chlorotoluene	ND<5	ND<5	---	ND<5	ND<5	---
Chlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
Chloroethane	ND<5	ND<5	---	ND<5	ND<5	---
Chloroform	ND<5	ND<5	---	ND<5	ND<5	---
Chloromethane	ND<5	ND<5	---	ND<5	ND<5	---
Dibromochloromethane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dibromo-3-Chloropropane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dibromomethane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dichlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
1,3-Dichlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
1,4-Dichlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
Dichlorodifluoromethane	ND<5	ND<5	---	ND<5	ND<5	---
1,1-Dichloroethane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dichloroethane	ND<5	ND<5	---	ND<5	ND<5	---
1,1-Dichloroethene	25	23	8	48	46	4
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	---	6.2	6.1	2
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2-Dichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,3-Dichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
2,2-Dichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,1-Dichloropropene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Hexachlorobutadiene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Methylene Chloride	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Tetrachloroethene	43	40	7	41	38	8
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,1,1-Trichloroethane	41	37	10	29	28	---
1,1,2-Trichloroethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Trichloroethene	12	11	9	8	7.7	4
Trichlorofluoromethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2,3-Trichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Vinyl Chloride	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---

ND: Not detected at the indicated reporting limit.

FREY Environmental, Inc.	Project Name: 2100 E. Orangethorpe Ave
2817-A Lafayette Avenue	Project Address: 2100 E. Orangethorpe Ave
Newport Beach, California 92663	Fullerton, CA
Phone:949.723.1645; FAX: 949.723.1854	Project Number: 420-01
Contact: Evan Privett	Sampler Name: Mike Eder

CHAIN-OF-CUSTODY RECORD

Laboratory Project #: **03214**

Sample ID	Sample Location	Date	Time	Lab ID	Soil (S), Water (W), Vapor (V)	Analysis: VOC's (8260B)	Analysis: Fuel Oxygenates (8260B)	Analysis	Analysis	Number of Containers	Comments
SV12-5		16-Jun-03	0932	1	V	X	X			1	1 L Tedlar Bags
SV15-10		16-Jun-03	0953	2	V	X	X			1	
SV15-20		16-Jun-03	1006	3	V	X	X			1	
SV15-30		16-Jun-03	1030	4	V	X	X			1	
SV17-10		16-Jun-03	1109	5	V	X	X			1	
SV17-20		16-Jun-03	1122	6	V	X	X			1	
SV17-40		16-Jun-03	1143.	7	V	X	X			1	
SV18-10		16-Jun-03	1212	8	V	X	X			1	
SV18-20		16-Jun-03	1221	9	V	X	X			1	
SV18-40		16-Jun-03	1238	10	V	X	X			1	
SV16-40		16-Jun-03	1250	11	V	X	X			1	
SV19-10		16-Jun-03	1414	12	V	X	X			1	
SV19-10 Duplicate		16-Jun-03	1416	13	V	X	X			1	
SV19-20		16-Jun-03	1426	14	V	X	X			1	
SV19-40		16-Jun-03	1438	15	V	X	X			1	
SV20-10		16-Jun-03	1458	16	V	X	X			1	
SV20-20		16-Jun-03	1511	17	V	X	X			1	
SV20-40		16-Jun-03	1530	18	V	X	X			1	
SV10-5		16-Jun-03	1602	19	V	X	X			1	
SV11-5		16-Jun-03	1620	20	V	X	X			1	
SV14-10		16-Jun-03	1644	21	V	X	X			1	
SV14-20		16-Jun-03	1655	22	V	X	X			1	
SV14-30		16-Jun-03	1702	23	V	X	X			1	
SV9-5		16-Jun-03	1723	24	V	X	X			1	
SV9-5 DUPLICATE		16-Jun-03	1725	25	V	X	X			1	

Turnaround Time: On-Site Mobile Laboratory; samples were relinquished on the date(s)/times shown above.

Sample Condition: Chilled? Y / N Sealed? Y / N Comments:

Relinquished by	Received by Brian Kato	Special Instructions:
	Dates/Times shown above	
signature: x Mark Eder	signature: x Brian Kato	
of FREY Environmental, Inc.	of Baseline Analytical Services	

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P. O. Box 2243
Huntington Beach, California 92647
Phone: (888) 753-7553
FAX: (714) 840-1584

FREY Environmental, Inc.	Project Name: 2100 E. Orangethorpe Ave	Analysis					CHAIN-OF-CUSTODY RECORD
2817-A Lafayette Avenue	Project Address: 2100 E. Orangethorpe Ave	Soil (S), Water (W), Vapor (V)	VOC's (8260B)	Fuel Oxygenates (8260B)		Number of Containers	Page 2 of 2
Newport Beach, California 92663	Fullerton, CA						Laboratory Project #: 03214
Phone:949.723.1645; FAX: 949.723.1854	Project Number: 420-01						
Contact: Evan Privett	Sampler Name: Mike Eder						

Sample ID	Sample Location	Date	Time	Lab ID	Soil (S), Water (W), Vapor (V)	VOC's (8260B)	Fuel Oxygenates (8260B)			Number of Containers	Comments
Equipment Blank		16-Jun-03	1728	26	V	X	X			1	1 L Tedlar Bags
SV13-5		16-Jun-03	1750	27	V	X	X			1	

Turnaround Time: On-Site Mobile Laboratory; samples were relinquished on the date(s)/times shown above.

Sample Condition: Chilled? Y / N Sealed? Y / N Comments:

Relinquished by	Received by Brian Kato	Special Instructions:
	Date/Times shown above	
signature: X	signature: X Brian K. Kato	
of FREY Environmental, Inc.	of Baseline Analytical Services	

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Huntington Beach, California 92647
Phone: (888) 753-7553
FAX: (714) 840-1584

Exhibit 16

Department of Toxic Substances Control

Edwin F. Lowry, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

MEMORANDUM

TO: Leona Winner
Hazardous Substances Scientist
Standardized Permits and Corrective Action Branch
DTSC Sacramento Field Office

FROM: Paul Carpenter, CHG
Engineering Geologist
Geology and Corrective Action Branch
Geological Services Unit – Northern California

EXHIBIT 14
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CONCUR: Brian Lewis, CEG, CHG Dan Gallagher for Brian Lewis
Engineering Geologist Supervisor I
Geology and Corrective Action Branch
Geological Services Unit – Northern California

DATE: January 15, 2003

SUBJECT: REVIEW OF RFI REPORT, FORMER TRENT TUBE FACILITY, FULLERTON, CALIFORNIA
Codes: 22120/ 400390-00 / 36-PER

Document Reviewed

Soil and Soil Vapor Assessment, Labarron Investments, Fullerton California, prepared by FREY Environmental Inc., dated December 4, 2002 (RFI Report).

The Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) has reviewed the above document and provides the following comments and recommendations. If you have any questions, please contact Paul Carpenter at (916) 255-6534

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BACKGROUND

The Former Trent Tube facility in Fullerton, California, was the location of a stainless steel tube manufacturing company from the late 1950's until 1984. The manufacturing process involved the use of compounds such as oil, kerosene, solvents, acids, pickle liquor, ammonia, and liquid hydrogen. Impacts to soil at the site were identified at the time of the facility closure in 1984, and solvent-impacted soil was excavated and aerated onsite. The Department of Health Services issued a closure certification for the site in April 1986. Subsequently, unpaved areas of the site have been paved with concrete, and the property is now used for the storage and maintenance of large recreational vehicles and buses. DTSC prepared a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) in May 2000, and identified five areas where wastes were used or stored during operations. A RCRA Facility Investigation (RFI) Workplan was prepared and submitted pursuant to a DTSC letter dated December 27, 2001. This RFI Workplan was reviewed and approved with conditions by GSU in a Memorandum dated October 18, 2002. RFI field work occurred at the site on October 22, 2002, with Paul Carpenter of GSU and Leona Winner (DTSC Project Manager) present.

COMMENTS

1. Adherence to Approved Workplan.

   Soil and soil gas samples collected during the October 22, 2002 field investigation were collected, preserved, and analyzed in accordance with the conditions of the approved Workplan. The locations from which samples were collected were verified with the existing maps and documentation.

2. Data Quality Assurance and Quality Control

   Soil samples collected for analysis of volatile organic compounds (VOCs) were collected and preserved using the US EPA Method 5035 Encore™ method, and were analyzed in the mobile laboratory on the same date as sample collection. The laboratory hold times for soil samples analyzed for metals were found to be within the two week hold period.

3. Soil Sample Analytical Results

   Total Recoverable Petroleum Hydrocarbons (TRPH). Five soil samples were analyzed for TRHP by EPA Method 418.1. Of these, one sample (B9-2) contained reportable TRPH, at a concentration of 59 milligrams per kilogram (mg/kg).

   VOCs. None of the soil samples were reported contain VOCs above the EPA

Method 8260B Method Reporting Limits (MRLs)

Metals. Metals concentrations of both investigation and background samples are reported in the RFI Report Table 3 (Metal Analysis of Soil Samples) The highest metals concentrations were reported in shallow (1 foot below ground surface (bgs)) soil samples from borings B-12, B-13, B-14, B-15, and B-16 (all near the Southern Property Line.) The highest reported concentrations are as follows:

Total Chromium	381 mg/kg
Hexavalent Chromium	1.15 mg/kg
Total Lead	25.7 mg/kg
Nickel	71.2 mg/kg

For total chromium, total lead, and nickel, the trends in concentration versus depth (at sample intervals of 1, 5, and 10 feet bgs) strongly suggest that these three metals were released at the near surface at concentrations above background. Additional investigation and removal of metals contaminated soil in this area may be merited if a health based risk assessment of the reported concentrations indicates a significant exposure risk.

4. Soil Gas Sample Results

Ten soil gas samples were collected at the site on October 22, 2002. The results show that significant concentrations of seven VOCs (cis-1,2-DCE, TCE, PCE, 1,1-DCE, 1,1-DCA, 1,1,1-TCA, and 1,1,1,2-PCA) were detected in nine of the ten samples. The total VOC concentrations in these six borings ranged from a high of 222.2 micrograms per liter (µg/l) to a low of 52.4 µg/l

A contoured map showing the total VOC concentrations for the eight soil pore gas samples collected at 5 feet bgs along the southern property margin boundary is included as Attachment 1. This contoured data shows that the extent of contamination is not completely defined in this area, but is most likely from one or more onsite sources.

The soil gas samples collected from 10 feet and 20 feet bgs on the northern side of the Former Degreasing Pit show that total VOC concentrations are decreasing with depth at this location, from 217.1 µg/l at 10 feet bgs to 88.8 µg/l at 20 feet bgs. This data trend and the elevated concentrations suggest that a release of VOCs occurred from the Former Degreasing Pit.

RECOMMENDATIONS

1 Additional investigation should be performed to define the vertical and horizontal

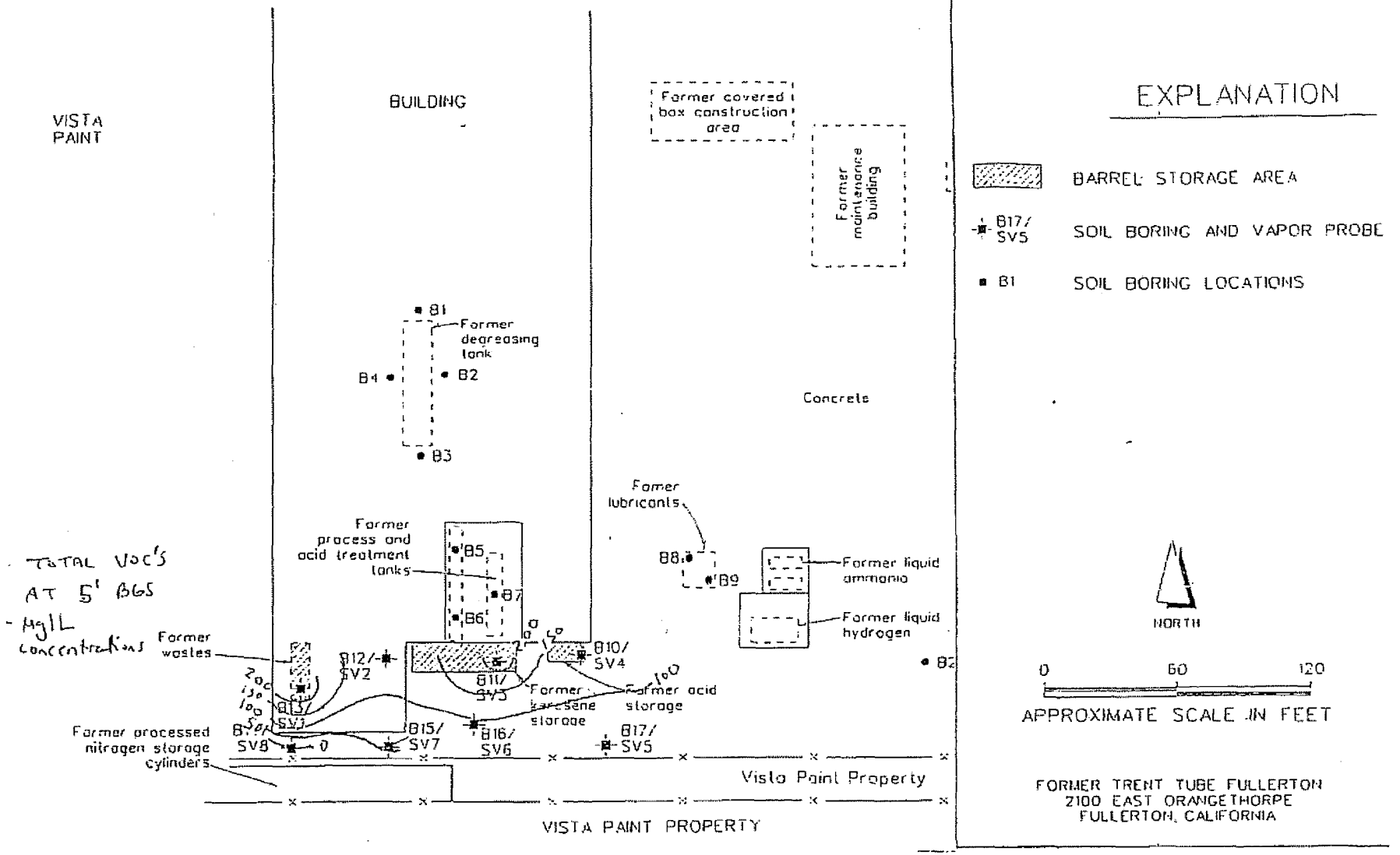
extent of VOC contamination in soil gas in the vicinity of both the Former Degreasing Pit and the Southern Property Boundary Line.

2. When the extent of soil gas VOC contamination is defined, a health based risk assessment on both indoor air and ambient exposure should be performed to determine the human health risk for these compounds.

3. A health based risk assessment should be performed to determine if the elevated concentrations of TRPH, total chromium, lead, and nickel near the southern Property Boundary Line are within acceptable limits for closure. If the concentrations reported in the RFI Report are determined to have an unacceptable level of risk, additional investigation and removal of impacted soil may be merited.

Attachment 1. Contoured Soil Gas Data, Total Volatile Organic Compounds (VOCs)

cc: Dr. Kimi Klein, DTSC Human and Ecological Risk Division



ATTACHMENT 1 CONTOURED SOIL GAS DATA, TOTAL VOLATILE ORGANIC COMPOUNDS (VOCs)

(Modified from RFI Report Figure 2)

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11860-5

Exhibit 17

FREY ENVIRONMENTAL, INC.

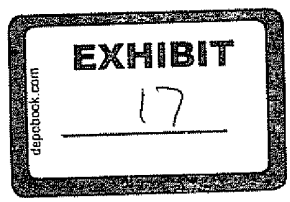
Environmental Geologists, Engineers, Assessors

2817 A Lafayette Avenue
Newport Beach, CA 92663
(949) 723-1645
Fax (949) 723-1854
Email: freyinc@freyinc.com

April 25, 2003
420-01

Ms. Leona Winner
Hazardous Substances Scientist
Department of Toxic Substance Control
8800 Cal Center Drive
Sacramento, CA 95826

Re: RFI Workplan Addendum
LaBarron Investments
2100 East Orangethorpe Avenue
Fullerton, California



Dear Ms. Winner:

This letter serves as an addendum to the Revised RFI Facility Investigation Workplan dated October 15, 2002 prepared by FREY Environmental, Inc. (FREY) as requested by the Department of Toxic Substance Control (DTSC) in their letter dated March 20, 2003. The March 20, 2003 letter requested the further assessment of volatile organic compounds (VOCs) previously detected beneath the property located at 2100 East Orangethorpe Avenue in Fullerton (Site - Figure 1).

BACKGROUND

Former Facility Operations

The facility was constructed in the late 1950's by the Trent Tube Company. The Trent Tube Company manufactured stainless steel tubing until 1984. The manufacturing process required the use of numerous regulated chemicals including oil, kerosene, liquid hydrogen, liquid ammonia, organic solvents, acids and pickle liquor (DTSC, 2000).

Trent Tube constructed one building with approximate dimensions of 300 feet from north to south and 130 feet from east to west. The majority of the building housed the manufacturing operations for the Trent Tube Company. Offices, a laboratory and a locker room were located in the northernmost section of the building. A second building used for maintenance activities was formerly located on the eastern portion of the Site. The maintenance building had approximate dimensions of 40 feet by 60 feet (DTSC, 2000).

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Chemical Storage Areas

The DTSC identified five areas of the Site where chemicals and/or chemical waste were either used or stored for extended periods of time. The five areas listed below are shown on Figure 2.

1. Drum Storage Area: Fifty five gallon capacity, steel drums were formerly located on the south side of the manufacturing building. Shallow soil samples previously collected from this area reportedly contained perchloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), ethylbenzene and xylenes at concentrations of 1.7 parts per million (ppm), 1.5 ppm, 1.7 ppm and 1.7 ppm, respectively (DTSC, 2000).

2. Aboveground Waste Oil Tanks: Two, 200 gallon capacity, aboveground, steel tanks were formerly located on concrete and set within a brick berm in the approximate area shown on Figure 2. It was reported that soils were excavated from this area and transported off Site for disposal (DTSC, 2000).

3. Aboveground Pickle Liquor Tanks: Two, 2,000 gallon capacity, aboveground tanks, which reportedly contained pickle liquor (hydrochloric acid), were formerly located inside the southeast portion of the manufacturing building. It was reported that the spent pickle liquor contained hexavalent chromium and possibly lead (DTSC, 2000).

4. Degreasing Pit: It was reported that a 10,000 gallon capacity degreasing pit was located in the central portion of the manufacturing building. The degreasing pit reportedly contained 1,1,1-TCA, PCE and/or trichloroethene (TCE) (DTSC, 2000).

5. Southern Property Line: It was reported that an approximate 50 foot by 200 foot area located south of the manufacturing building was used for the aeration of soils which reportedly contained organic solvents at concentrations up to 5 ppm. It was reported that aerated soils were placed in the top two feet of soil (DTSC, 2000).

Soil and Soil Vapor Investigation

On October 22, 2002, FREY advanced and collected soil samples from 20 soil borings. In addition, ten soil vapor samples were collected from nine different locations in the five areas of concern noted above. Soil boring and soil vapor prove locations are shown on Figure 2.

Eight soil vapor probes were advanced to final depths of 5 feet below the ground surface (bgs) in the drum storage area and the southern property line. In addition, soil vapor samples were collected from depths of 10 feet bgs and 20 feet bgs from boring B1 advanced on the north side of the former degreasing pit. VOCs were detected in relatively low concentrations in the 10 soil vapor samples. The greatest concentrations of VOCs were detected in soil vapor samples SV1 and SV3 which were advanced in the drum storage area. The cumulative concentrations of VOCs in samples SV1 and

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SV3 were 222 micrograms per liter (ug/L) and 200 ug/L, respectively. The soil vapor sample collected from a depth of 10 feet bgs from boring B1 contained a cumulative VOC concentration of 217 ug/L (FREY, 2002). Soil vapor sample data has been summarized in Table 1.

Soil borings were advanced to depths between 2 and 10 feet bgs in the five areas of concern. In general, soil samples were analyzed for either VOCs and total recoverable petroleum hydrocarbons (TRPH) or selected metals, depending upon chemicals or wastes formerly used or stored in the specific area of concern (FREY, 2002).

VOCs were not present above the laboratory detection limits of 5 micrograms per kilogram (ug/kg) in any of the soil samples collected and analyzed for VOCs. This includes soil samples collected from borings B1 through B4 (advanced around the former degreasing pit) or in the background samples collected from B18 through B20. Total recoverable petroleum hydrocarbons (TRPH) were detected in only one of the 14 soil samples collected and analyzed for TRPH. Low concentrations of TRPH were detected in a soil sample collected from the former aboveground waste oil tank area (FREY, 2002).

Selected metals were detected in soil samples but at concentrations below the Environmental Protection Agency's Preliminary Remediation Goal for Industrial Soils. Soil sample results have been summarized in Tables 2 and 3.

OBJECTIVES

The objective of the activities described below are to assess the lateral and vertical extent of vapor phase VOCs previously detected in soil gas samples collected from the drum storage area, southern property line and near the former degreasing pit.

FIELD INVESTIGATION

Prefield Activities

FREY will mark proposed soil vapor probe locations with white paint and obtain an underground service alert number prior to the implementation of any field activities. FREY will follow procedures set forth in the Site Safety Plan previously used at the Site.

Lateral and Vertical Assessment of VOCs in the Former Drum Storage Area/Southern Property Line

FREY proposes to advance and sample soil vapor probes SV9 through SV13 in the locations shown on Figure 2 in order to assess the lateral extent of VOCs previously detected in soil vapor probes SV1 through SV7. Soil vapor probes will be driven through the asphalt or concrete with a direct push drilling rig to a depth of 5 feet bgs. Soil vapor samples will be collected from a depth of 5 feet bgs by placing a retractable, perforated tip at the end of a direct push rod.

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The vertical extent of VOCs in the drum storage area and southern property line will be assessed by advancing soil vapor probes SV14 and SV15 to depths of 30 feet bgs in the location of previously sampled soil vapor probes SV1 and SV3, respectively. Soil vapor samples SV1 and SV3 contained the greatest concentrations of VOCs during the previous investigation. Soil vapor samples will be collected from depths of 10, 20 and 30 feet bgs from soil vapor probes SV14 and SV15.

Lateral and Vertical Assessment VOCs near the Former Degreasing Pit

The lateral and vertical extent of vapor phase VOCs previously detected in vapor samples collected from boring B1 will be assessed through the advancement and sampling of soil vapor probes SV16 through SV19. Soil vapor probe SV16 will be advanced and sampled in the same location as previously sampled boring/soil vapor probe B1. Soil vapor probes SV17 through SV19 will be advanced approximately 45 feet to the north, southwest and southeast of soil vapor probe SV16, respectively.

Soil vapor probes SV16 through SV19 will driven through the concrete with a direct push drilling rig to final depths of 40 feet bgs. Soil vapor samples will be collected from soil vapor probe SV16 at depths of 30 and 40 feet bgs by placing a retractable, perforated tip at the end of the direct push rod. Soil vapor samples will be collected from soil vapor probes SV17, SV18 and SV19 at depths of 10, 20, 30 and 40 feet bgs by placing a retractable, perforated tip at the end of a direct push rod.

Soil Vapor Sampling Protocol

All vapor samples will be collected through tygon tubing connected to a perforated tip at the end of the direct push rod. The tygon tubing, which extends from the direct push rod at the ground surface, will be connected to a peristaltic pump. The peristaltic pump will pump vapor directly into each tedlar bag. The tedlar bag will be labeled with the soil vapor probe number, sample depth, date, and time of collection, and immediately delivered to the on-Site mobile laboratory. Each vapor probe will be purged of one liter of vapor prior to soil vapor sample collection.

All down hole pneumatic push and sampling equipment will be decontaminated between each vapor probe. The decontamination process consists of three five gallon buckets. The first bucket will contain tap water and tri-sodium phosphate. A scrub brush is used in the first bucket to enhance the removal of soil and contaminants from the equipment. The second bucket will contain tap water and the third bucket will be filled with de-ionized water. Downhole equipment will be allowed to air dry or will be dried with a clean towel.

Soil Vapor Sample Analyses

Soil vapor samples will be analyzed for VOCs in accordance with EPA Method No. 8260B in an on Site mobile laboratory. Baseline On-Site Analysis (California certification number 2282) will conduct the analyses of soil vapor samples immediately after sample collection. The detection limits for VOCs will be set at 5 ug/L.

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Additional Considerations

Equipment decontamination, calibration and maintenance, sample handling and documentation procedures and quality control measures will follow the procedures outlined in Sections 5.3 and 6.0 of FREY's Revised RCRA Facility Investigation Workplan which is dated October 15, 2002 (FREY, 2002).

DATA MANAGEMENT AND REPORTING

Field measurements, observations and chemical analyses of soil vapor samples will be evaluated and interpreted in context with the existing on-site soil conditions and the hydrogeological setting.

Please phone us at (949) 723-1645 with any questions.

Sincerely,
FREY Environmental, Inc.

Joe Frey
Principal
CEG #1500

Evan Privett
Senior Project Geologist

Attachments:
Table 1 - Chemical Analyses of Soil Vapor Samples
Table 2 - TRPH and Volatile Organic Compound Analyses of Soil Samples
Table 3 - Metal Analyses of Soil Samples
Figure 1 - Site Location Map
Figure 2 - Site Sketch Showing Proposed Soil Vapor Probe Locations

cc: Eddie Fischer
LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831

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SELF
STORAGE
UNITS

EXPLANATION

BARREL STORAGE AREA

B17/SV5 — SOIL BORING AND VAPOR PROBE LOCATION

B1 — SOIL BORING LOCATIONS

SV9 — PROPOSED SOIL VAPOR PROBE LOCATION

NOTES:

1) All locations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

FREY ENVIRONMENTAL, INC.

SITE SKETCH SHOWING PROPOSED SOIL VAPOR PROBE LOCATIONS

Date: APRIL 2003 Figure 2

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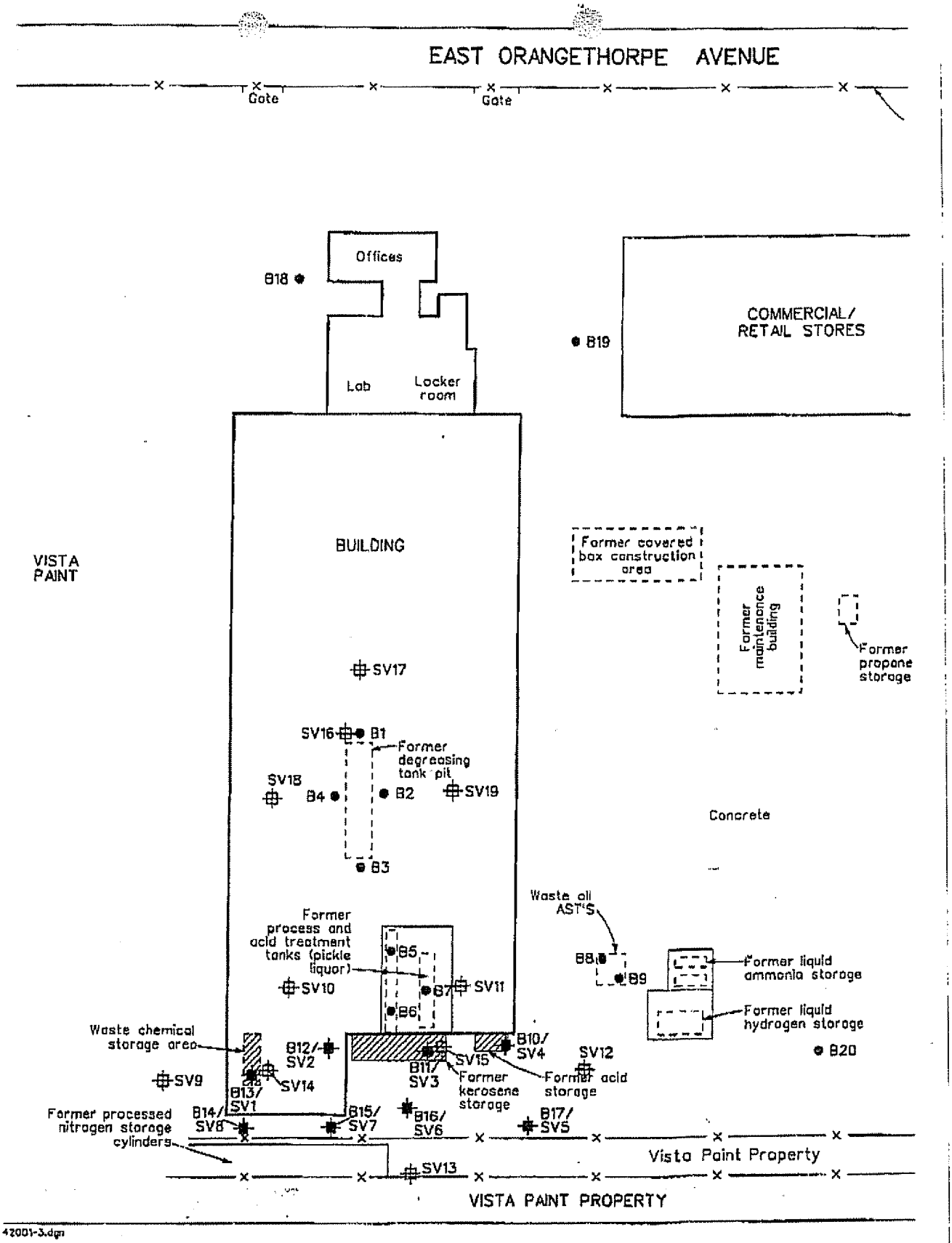

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ESTIMATED BUDGET
WORKPLAN ADDENDUM
LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

The estimated costs for the proposed scope of work presented below are based on FREY's 2003 schedule of fees

TASK	QUANTITY	UNIT PRICE	LINE TOTAL	TOTAL COST
1.0 PRE-FIELD ACTIVITIES				
o Site visit to mark soil vapor probe locations				
Personnel				
Senior Project Geologist	4 hrs	$95.00 /hr	$380.00	
Equipment				
Truck	0.5 day	$60.00 /day	$30.00	
TOTAL FOR TASK 1.0				**$410.00**
2.0 FIELD ACTIVITIES				
o Advance 5 soil vapor probes to depths of 5 feet bgs. Sample at 5 feet				
o Advance 2 soil vapor probes to depths of 30 feet bgs. Sample at 10, 20 and 30 feet bgs				
o Advance 3 soil vapor probes to depths of 40 feet bgs. Sample at 10, 20, 30 and 40 feet bgs				
o Advance 1 soil vapor probes to a depth of 40 feet bgs Sample at 40 feet bgs				
Personnel				
Senior Project Geologist	2 hrs	$95.00 /hr	$190.00	
Staff Geologist	12 hrs	$70.00 /hr	$840.00	
Equipment				
Truck	2 days	$60.00 /day	$120.00	
Materials				
Tedlar Bags	23 units	$12.00 /unit	$276.00	
Concrete	2 bags	$5.00 /bag	$10.00	
Subcontractors				
Direct Push Driller	1 unit	$1,850.00 /unit	$1,850.00	
Mobile Laboratory				
VOCs - EPA 8260B	23 smpls	$90.00 /smple	$2,070.00	
TOTAL FOR TASK 2.0				**$5,356.00**
3.0 PROJECT OVERSIGHT/DATA EVALUATION/REPORT/CONSULTATION				
o Report will include response to requests made by the DTSC in their March 20, 2003				
Personnel				
Principal Geologist	2 hrs	$125.00 /hr	$250.00	
Senior Project Geologist	16 hrs	$95.00 /hr	$1,520.00	
Technical Illustrator	6 hrs	$55.00 /hr	$330.00	
Office Assistant	2 hrs	$45.00 /hr	$90.00	
TOTAL TASK 4.0				**$2,190.00**
TOTAL JOB COST				**$7,956.00**

Notes:

1) Costs assume borings and probes will be terminated at proposed depths.
2) Extra charges will be incurred if obstacles or difficult drilling conditions are encountered.

The costs shown above have been accepted by: _____ on _____

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Exhibit 18

Department of Toxic Substances Control

Edwin F. Lowry, Director
1001 I Street, 25th Floor
P. O. Box 806
Sacramento, California 95812-0806

Winston H. Hickox
Agency Secretary
California
Environmental
Protection Agency

Gray Davis
Governor

MEMORANDUM

TO: Leona Winner
Standardized Permits and Corrective Action Branch
8800 Cal Center Drive
Sacramento CA 95826

FROM: Kimiko Klein, Ph.D.
Staff Toxicologist
Human and Ecological Risk Division (HERD)

DATE: August 19, 2003

SUBJECT: Soil and Soil Vapor Assessment
LABARRON INVESTMENTS, FULLERTON CA
PCA: 22120 SITE: 400390-00 MPC: 38

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Background

The site comprises about 5.2 acres with one building that formerly housed a stainless steel tubing manufacturing plant. The site is located in a commercial/industrial area. There are five areas where chemicals were either used or stored, including a drum storage area, an area where aboveground waste oil tanks were located, aboveground pickle liquor tanks, a degreasing pit, and an area where soil containing organic solvents were aerated.

The Human and Ecological Risk Division (HERD) has been requested to provide technical support in the review of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) carried out for this former facility. On February 10, 2003, the HERD provided comments on a soil and soil vapor assessment report and performed a preliminary endangerment assessment for the facility using the data contained in that report.

Document Reviewed

"Additional Soil Vapor Assessment, LaBarron Investments, 2100 East Orangethorpe Avenue, Fullerton, California". This document, dated July 22, 2003, was prepared for LaBarron Investments by FREY Environmental, Inc., and was received by the HERD on August 4, 2003.

EXHIBIT
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General Comments

This assessment describes additional soil vapor sampling carried out to define the extent of the soil gas volatile organic chemical (VOC) plume. Although the HERD read the entire document, the HERD understands that other Department of Toxic Substances Control (DTSC) staff have both overseen the work described in this assessment and reviewed this document with respect to its accuracy in describing the sampling collection, analysis methodology, and data quality.

In the previous soil and soil vapor assessment of December 4, 2002, seven VOCs were detected in soil vapor samples. The maximum concentration for each VOC was evaluated in a preliminary endangerment assessment (PEA) performed by the HERD (memorandum, February 10, 2003). In that PEA, the cumulative cancer risk from potential indoor air exposure to VOCs by future residents was 5×10^{-6}, and the total cancer risk from all exposure pathways and all chemicals of concern was 8×10^{-6}. These are within the acceptable range of one in 10,000 to one in a million (10^{-4} to 10^{-6}) cancer risk, as defined by the US Environmental Protection Agency (US EPA).

In the subject sampling event, six VOCs were detected in soil vapor samples, and the maximum concentrations for three (tetrachloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane) were less than the previously reported maximum concentrations. The maximum concentrations of the remaining three VOCs (cis-1,2 dichloroethylene, trichloroethylene, 1,1 dichloroethane) were virtually identical to maximum concentrations previously reported. The VOC responsible for the highest risk in the PEA was 1,1,1,2-tetrachloroethane (4×10^{-6} risk), which was not detected in the subject sampling event. Therefore, the cumulative cancer risk posed by inhalation exposure to vapors intruding into indoor air from soil at concentrations measured in this sampling event will be close to one in a million, or at *de minimus*.

Specific Comments

1. In Section 7.0 Discussion of Results, soil gas concentrations are compared to chemical-specific maximum contaminant levels (MCLs) for drinking water. This comparison is totally inappropriate, and all mention of MCLs in this document in such a context must be eliminated. A MCL is established by calculating a safe drinking water concentration based on the toxicity of the chemical via ingestion and assumptions of how persons can be exposed to the chemical via ingestion and considering the cost and effectiveness of methods for removing the chemical from potential drinking water supplies. On the other hand, calculating an acceptable soil gas concentration for a chemical is based on the fate and transport of the chemical

through the sub-surface to air, with subsequent exposure to soil gas via inhalation and the toxicity of the chemical via that exposure route.

2. On February 10, 2003, the HERD provided comments on the soil and soil vapor assessment, dated December 4, 2002. A formal response to those comments and an assessment report revised to address those comments should be submitted to the DTSC for review.

Conclusions

If the site is now considered to be adequately characterized, then the risks calculated in the PEA remain applicable, represent very conservative estimates and are within the range of acceptable risks. If there are no preferential pathways in the subsurface by which soil vapors may migrate relatively unimpeded to the surface, then the vapor intrusion model utilized by the HERD to simulate the migration of soil vapors into indoor air may be considered a reasonably conservative approach to evaluating the risks posed by this pathway at this site. Therefore, the HERD believes that no further action should be considered with respect to potential health risks. The evaluation performed by the HERD focuses only on human health risks and does not address the potential of contaminants in soil to affect groundwater quality.

If you have further questions, please do not hesitate to contact me at 916 255 6643, 510 540 3762 or via electronic mail at kklein@dtsc.ca.gov.

Reviewed by: David Berry, Ph.D.
Senior Toxicologist
Human and Ecological Risk Division

cc: Paul Carpenter, C.H.G.
Geology and Corrective Action Branch

Exhibit 19

FREY ENVIRONMENTAL, INC.

Environmental Geologists, Engineers, Assessors

2817 A Lafayette Avenue
Newport Beach, CA 92663
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Fax (949) 723-1854
Email: freyinc@freyinc.com

October 8, 2003
420-01

RECEIVED OCT 1 4 2003

Ms. Leona Winner
Hazardous Substances Scientist
Department of Toxic Substance Control
8800 Cal Center Drive
Sacramento, CA 95826

Re: LaBarron Investments
2100 East Orangethorpe Avenue
Fullerton, California

Dear Ms. Winner:

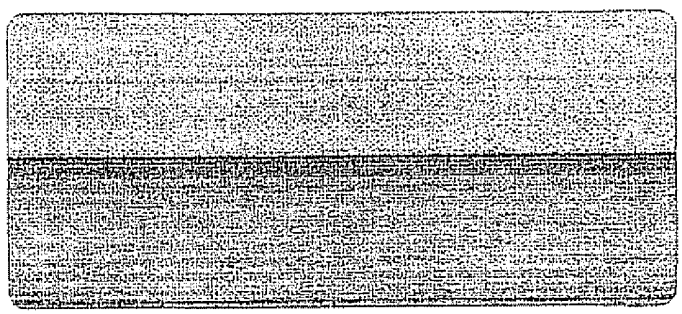
Enclosed please find three copies of our report entitled "Revised Additional Soil Vapor Assessment, La Barron Investments, 2100 East Orangethorpe Avenue, Fullerton, California". The report is dated October 7, 2003. Also included is a compact disk with the text, figures, and tables from the report.

Please phone us at (949) 723-1645 with any questions.

Sincerely,
FREY Environmental, Inc.

Evan Privett
Senior Project Geologist

cc: Eddie Fischer (one copy)
LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831



FREY ENVIRONMENTAL

Environmental Geologists, Engineers, Assessors

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11869-2

REVISED ADDITIONAL
SOIL VAPOR ASSESSMENT
LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Prepared for:

LaBarron Investments
2020 East Orangethorpe Avenue
Fullerton, California 92831

Prepared by:

FREY Environmental, Inc.
2817A Lafayette Ave.
Newport Beach, California 92663-3715
(949) 723-1645

Project No.: 420-01

October 7, 2003

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1.0 INTRODUCTION

This report presents the results of additional soil vapor sampling activities conducted at 2100 East Orangethorpe Avenue in Fullerton, California (Site - Figure 1). The activities described below were conducted in general accordance with a RFI Workplan Addendum prepared by FREY Environmental, Inc. (FREY) dated April 25, 2003. The Department of Toxic Substance Control (DTSC) requested minor revisions to the April 25, 2003 workplan addendum in a letter to LaBarron Investments dated May 16, 2003. The revisions were incorporated into the workplan addendum via a letter dated May 19, 2003 prepared by FREY and transmitted to the DTSC.

This report was first transmitted to the DTSC on July 22, 2003. The DTSC requested additional information in a letter to Mr. Eddie Fisher dated September 9, 2003. This report has been revised to provide the additional information requested by the DTSC in their September 9, 2003 letter.

2.0 BACKGROUND

2.1 FORMER FACILITY OPERATIONS

The facility was constructed in the late 1950's by the Trent Tube Company. The Trent Tube Company manufactured stainless steel tubing until 1984. The manufacturing process required the use of numerous regulated chemicals including oil, kerosene, liquid hydrogen, liquid ammonia, organic solvents, acids and pickle liquor.

Trent Tube constructed one building with approximate dimensions of 300 feet from north to south and 130 feet from east to west. The majority of the building housed the manufacturing operations for the Trent Tube Company. Offices, a laboratory and a locker room were located in the northernmost section of the building. A second building used for maintenance activities was located on the eastern portion of the Site. The maintenance building had approximate dimensions of 40 feet by 60 feet (DTSC, 2000).

2.2 CHEMICAL / CHEMICAL WASTE STORAGE AREAS

The DTSC identified five areas of the Site where chemicals and/or chemical waste were either used or stored for extended periods of time. The five areas discussed below are shown on Figure 2.

1. Drum Storage Area: Fifty-five gallon capacity, steel drums were formerly located on the south side of the manufacturing building as shown on Figure 2. Soil samples previously collected from this area reportedly contained perchloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), ethylbenzene and xylenes at concentrations of 1.7 parts per million (ppm), 1.5 ppm, 1.7 ppm and 1.7 ppm, respectively (DTSC, 2000).

2. Aboveground Waste Oil Tanks: Two, 200 gallon capacity, aboveground, steel tanks were formerly located on concrete and set within a brick berm in the approximate area shown on Figure 2. It was reported that soils were excavated from this area and transported off Site for disposal (DTSC, 2000).

3. Aboveground Pickle Liquor Tanks: Two, 2,000 gallon capacity, aboveground tanks were formerly located inside the southeast portion of the manufacturing building. Pickle liquor generally consists of hydrochloric acid which is effective in removing unwanted metallic deposits from steel. It was reported that the spent pickle liquor contained hexavalent chromium and possibly lead (DTSC, 2000).

4. Degreasing Pit: It was reported that a 10,000 gallon capacity degreasing pit was located in the central portion of the manufacturing building. The degreasing pit reportedly may have contained 1,1,1-TCA, PCE and/or trichloroethene (TCE) (DTSC, 2000).

5. Southern Property Line: It was reported that an approximate 50 foot by 200 foot area located south of the manufacturing building was used for the aeration of soils which reportedly contained organic solvents at concentrations up to 5 ppm. It was reported that aerated soils were placed in the top two feet of soil (DTSC, 2000).

The Department of Health Services issued a certification of closure for the Site in a letter dated April 16, 1985 (DHS, 1985). No further background information was made available to FREY at the time of this document preparation (DTSC, 2000).

2.3 CURRENT SITE CONFIGURATION

The Site comprises approximately 5.2 acres of flat ground on the south side of East Orangethorpe Avenue approximately equidistant between State College Boulevard and Acacia Avenue in Fullerton, California. The Site parcel is rectangular in shape with dimensions of approximately 550 feet from north to south and 415 feet from east to west. The Site elevation is approximately 187 feet above mean sea level (Topo, 1987).

One building is currently located on Site and it is the same building as the larger building originally constructed by the Trent Tube Company. The northern most section of the Site building is currently used as office space while the majority of the building is used for recreational vehicle storage. An addition to the building was constructed on the southwest corner of the original building at an unspecified date. The addition to the building is used for recreational vehicle repair. The entire Site is paved with concrete with the exception of some small planters located along the northern building perimeter and the frontage with East Orangethorpe Avenue.

The Site is bound by a Vista Paint facility on the west, East Orangethorpe Avenue and a BASF facility to the north, a self storage facility on the east and a thin strip (approximately 40 feet) of Vista Paint parcel and Carbon Creek on the south.

2.4 HYDROGEOLOGIC SETTING

Soils beneath the Site consist of silt and sand from below the concrete to approximately 2 feet below the ground surface (bgs). Fine to coarse grained sand is located below the silt and sand and extends to a depth of approximately 20 feet bgs (Moore & Taber, 1984). Soil lithology beneath 20 feet bgs has not been investigated.

Regionally, the Site is located on the northeastern section of the Orange County Coastal Plain, which is part of the larger Coastal Plain of Los Angeles (OCWD, 1984). The central and northern portions of the Orange County Coastal Plain consist of downfolded strata of Upper Pleistocene and older age strata, that form a broad synclinal trough. The trough includes successively permeable and impermeable strata that reach a depth of up to 20,000 feet near the Anaheim area (OCWD, 1982).

The Upper Pleistocene and older unconsolidated deposits consist predominantly of marine and lagoonal sediments that include interbedded silts and clays with occasional lenses of sand and gravel. These deposits overlie a thick sequence of Late Cretaceous to Quaternary-age semiconsolidated sedimentary rocks and basement units (OCWD, 1984). The Upper Pleistocene and older formations are overlain by recent alluvium, derived from the surrounding hills and the Santa Ana River. Recent alluvial deposits attain a maximum thickness of approximately 300 feet in the Site area, and consist of sands with interbedded gravels, silts and clays (OCWD, 1984).

The Site is located in the Main Santa Ana Pressure Groundwater Sub-basin, within the Lower Santa Ana Watershed (RWQCB, 1984). The Site area is located within a pressure zone where semi-confined to confined water conditions may exist. Groundwater is estimated to flow toward the west-southwest in the Site Vicinity (OCWD, 1984). First groundwater is estimated to be located at approximately 80 feet bgs (DTSC, 2000).

2.5 GROUNDWATER SUPPLY WELLS

The City of Fullerton operates three groundwater supply wells within one mile of the Site. The nearest groundwater supply well (labeled Kimberly Well #2) is located south of Kimberly Avenue and east of Acacia Avenue approximately 1,500 feet to the north-northwest of the Site. The two other groundwater supply wells (labeled #1A and #13) are also shown on Figure 1 (Wise, 2003).

The City of Anaheim operates one groundwater supply well (labeled #A-26) within one mile of the Site (Wilson, 2003). Groundwater supply wells within one mile of the Site are shown on Figure 1.

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2.6 SOIL AND SOIL VAPOR ASSESSMENT

On October 22, 2002, FREY drilled and sampled twenty (20) soil borings and advanced and sampled nine (9) soil vapor probes to assess the presence of volatile organic compounds (VOCs) and selected metals in the former chemical and chemical waste storage areas listed in Section 2.2.

2.6.1 Soil Sampling

Soil borings B1 through B4, drilled around the former degreasing pit, and borings B10 through B17, drilled in the former chemical storage area located between the southern building wall and the southern property line, were drilled to final depths of 10 feet bgs.

Soil borings B5 through B9 and B18 through B20 were drilled to final depths of between 1 and 3 feet bgs. Soil borings B5, B6 and B7 were drilled in the location of the former process and hydrochloric acid treatment tanks, borings B8 and B9 were drilled in the former location of two aboveground oil tanks and borings B18, B19 and B20 were drilled for purpose of background soil sample collection.

VOCs were not detected above the laboratory detection limits of 5 micrograms per kilogram (ug/kg) in soil samples collected from borings B1 through B4 or in the background samples collected from borings B18 through B20. Total recoverable petroleum hydrocarbons (TRPH) were either not detected, or were detected in low concentrations (less than 100 mg/kg), in soil samples collected from borings B1 through B4, B8, B9 and B18 through B20.

Concentrations of selected metals were detected but at concentrations well below the Environmental Protection Agency's (EPA) Preliminary Remediation Goal (PRG) for Industrial Soils for each respective metal. Soil sample data has been summarized in Tables 1 and 2.

2.6.2 Soil Vapor Sampling

One soil vapor probe (B1) was installed and sampled adjacent to the former degreasing pit. Soil vapor samples were collected from B1 at depths of 10 and 20 feet bgs. Soil vapor probes SV1 through SV4 and SV5 through SV8 were installed to depths of 5 feet bgs in the former chemical storage area and along the southern property line.

Relatively low concentrations of chlorinated VOCs were detected in soil vapor samples collected as part of this investigation with the exception of SV8. Chlorinated VOCs were not detected in soil vapor sample SV8.

PCE was the chlorinated VOC detected in the greatest concentration (130 ug/L) and detected in the greatest number of soil vapor samples (8 out of 9 soil vapor samples). Concentrations of chlorinated VOCs in general decreased with depth in soil vapor samples collected from B1.

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Concentrations of 1,1-DCE decreased from 80 ug/L at 10 feet bgs to 17 ug/L at 20 feet bgs. Concentrations of 1,1,1-TCA decreased from 86 ug/L at 10 feet bgs to 24 ug/L at 20 feet bgs.

Soil vapor sample data has been summarized in Table 3.

3.0 OBJECTIVE

The objective of the work described below was to assess the lateral and vertical extent of VOCs in soil vapor beneath the Site.

4.0 SCOPE OF WORK

The scope of work, designed to provide the information needed to meet the objectives of the investigation, was as follows:

- Implement a site-specific health and safety plan;
- Advance 12 soil vapor probes to depths between 5 and 40 feet bgs;
- Collect soil vapor samples at depths of 5, 10, 20 or 40 feet bgs;
- Analyze selected soil vapor samples for chemical constituents;
- Evaluate data and prepare a report discussing field activities conducted as part of this investigation.

A more detailed description of the field investigation and laboratory testing program is provided in Section 5.0.

5.0 CURRENT INVESTIGATION

FREY marked the proposed soil vapor sampling locations 72 hours prior to drilling activities and obtained an underground service alert number prior to the conduct of any soil vapor sampling activities.

On the morning of June 11, 2003, FREY held a health and safety meeting on Site prior to the conduct of any field activities. The health and safety meeting was attended by members of the DTSC, FREY, the drilling contractor and the mobile laboratory chemist. The DTSC approved health and safety plan was discussed and Site specific concerns were highlighted by FREY during the health and safety meeting.

5.1 SOIL VAPOR SAMPLING

5.1.1 Soil Vapor Probe Locations and Sample Depths

Soil vapor probes SV9 through SV20 were advanced in locations mutually agreed upon by personnel from FREY and the DTSC on June 11, 2003. Soil vapor probe locations are shown on Figure 2. A one-inch diameter hole was drilled through the concrete in each proposed vapor probe location prior to probe advancement operations.

Soil vapor samples were collected at depths of 5-feet bgs from soil vapor probes SV9 through SV13 using the protocol described in Section 5.1.2. Soil vapor probes SV9 through SV13 were advanced in the locations shown to laterally assess concentrations of VOCs previously detected in soil vapor samples SV1 through SV7.

Soil vapor samples were collected at depths of 10, 20 and 40 feet bgs from soil vapor probes SV14 and SV15 using the protocol described in Section 5.1.2. Soil vapor probes SV14 and SV15 were advanced in the locations shown to vertically assess concentrations of VOCs previously detected in soil vapor samples SV1 and SV3, respectively.

Soil vapor samples were collected at a depth of 40 feet bgs from soil vapor probe SV16 using the protocol described in Section 5.1. 2. Soil vapor probe SV16 was advanced in the location shown to vertically assess concentrations of VOCs previously detected in soil vapor samples collected from B1.

Soil vapor samples were collected at depths of 10, 20 and 40 feet bgs from soil vapor probes SV17 through SV20 using the protocol described in Section 5.1.2. Soil vapor probes SV17 through SV20 were advanced in the locations shown to laterally and vertically assess concentrations of VOCs previously detected in the soil vapor samples collected from B1.

5.1.2 Soil Vapor Sample Collection Procedures

Soil vapor samples were collected using a Post Run Tubing System which is described in greater detail in the field procedures section in Appendix A. Each soil vapor probe was purged of approximately 3 probe volumes prior to sample collection. The probe volume of 0.005 cubic feet was calculated by multiplying the 2-inch probe hole diameter by the retracted probe height of approximately 3-inches. Soil vapor was purged into a 1-liter tedlar bag until it was approximately one half full which equates to approximately 0.015 cubic feet or 3 probe volumes.

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The sample tubing was replaced between the purging of the probe and the sample collection. Soil vapor samples were collected in laboratory supplied 1-liter tedlar bags with a peristaltic pump. Soil vapor samples were labeled with the job number, time of sample collection, date, soil vapor probe number and depth of sample. Soil vapor samples were delivered to the on-Site mobile laboratory immediately after sample collection.

5.2 LABORATORY ANALYSES

Soil vapor samples collected from soil vapor probes SV9 through SV20 were analyzed for VOCs and fuel oxygenates in accordance with EPA Method No. 8260B. Soil vapor samples were analyzed in an on-Site mobile laboratory provided by Baseline On-Site Analysis, a licensed hazardous waste testing laboratory based in Huntington Beach, California.

6.0 RESULTS OF THE INVESTIGATION

Soil vapor samples collected from vapor probes SV9 through SV20 contained a maximum of 6 analytes according to EPA Method No. 8260B. The 6 analytes were cis 1,2-dichloroethene (cis 1,2-DCE), TCE, PCE, 1,1-DCE, 1,1-DCA, and 1,1,1-TCA.

PCE, 1,1-DCE and 1,1,1-TCA were the VOC analytes detected in the greatest concentrations in soil vapor samples collected from soil vapor probes SV9 through SV20. The greatest concentrations of PCE, 1,1-DCE and 1,1,1-TCA were 69 ug/L (SV14-10), 70 ug/L (SV12-5) and 80 ug/L (SV10-5), respectively. Figures 3 and 4 present site sketches of PCE and 1,1-DCE concentrations at 5 and 10 feet bgs.

Soil vapor sample results have been summarized in Table 3. Laboratory and quality assurance/quality control reports appear in Appendix B.

7.0 DISCUSSION OF RESULTS

7.1 LATERAL EXTENT OF VOCS

The lateral extent of VOCs has been adequately assessed as discussed below. Based on the data presented in Sections 2.6 and 6.0, the former drum storage area, southern property line area and the former degreasing pit are the three areas which contain concentrations of VOCs in soil gas. The former drum storage area and the southern property line area can be discussed as one area which encompasses the area south of the building and north of the southern property line.

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7.1.1 Former Drum Storage Area and Southern Property Line

Soil vapor probes SV9, SV10, SV11, SV12 and SV13 were advanced to depths of 5 feet bgs in locations which encircled the former drum storage area and southern property line area. Soil vapor samples were collected at five feet bgs.

Soil vapor samples collected from probes SV9, SV10, SV11, SV12 and SV13 contained relatively low concentrations of cis 1,2-DCE (non-detect to 11 ug/L), TCE (non-detect to 26 ug/L), PCE (32 ug/L to 64 ug/L), 1,1-DCE (19 ug/L to 70 ug/L), 1,1-DCA (non-detect to 11 ug/L) and 1,1,1-TCA (37 ug/L to 80 ug/L).

7.1.2 Former Degreasing Pit

Soil vapor probes SV17, SV18, SV19, and SV20 were advanced to depths of 40 feet bgs in locations which encircled the former degreasing pit.

Soil vapor samples collected from soil vapor probes SV17, SV18, SV19 and SV20 contained slightly lower concentrations of cis 1,2-DCE (non-detect to 6.3 ug/L), TCE (non-detect to 13 ug/L), PCE (non-detect to 41 ug/L), 1,1-DCE (non-detect to 66 ug/L), 1,1-DCA (non-detect to 8.3 ug/L) and 1,1,1-TCA (non detect to 69 ug/L) than did soil vapor samples collected from probes SV9, SV10, SV11, SV12 and SV13.

7.2 VERTICAL EXTENT OF VOCS

7.2.1 Former Drum Storage Area and Southern Property Line

Soil vapor samples were collected from depths of 10, 20 and 30 feet bgs from vapor probes SV14 and SV15. The greatest concentrations of VOCs were detected in the soil vapor samples collected from 10 feet bgs. Concentrations of VOCs decreased significantly from the soil gas samples collected from 10 feet bgs to 30 feet bgs. The soil vapor sample collected from 30 feet bgs from SV15 did not contain VOCs. Soil vapor sample SV14-30 contained only PCE, 1,1-DCE and 1,1,1-TCA at concentrations of 6.8 ug/L, 5.4 ug/L and 7.8 ug/L, respectively.

7.2.2 Former Degreasing Pit

Soil vapor probe SV16 was advanced in the same location as previously sampled soil vapor probe B1. Soil vapor samples were collected from probe B1 from depths of 10 and 20 feet bgs and from a depth of 40 feet bgs from SV16. Soil vapor samples were collected from depths of 10, 20 and 40 feet bgs from soil vapor probes SV17, SV18, SV19 and SV20.

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Concentrations of VOCs were greatest in the soil vapor samples collected from depths of 10 feet bgs and decreased dramatically with depth. Soil vapor samples collected from 40 feet bgs from probes SV16, SV17, SV18, SV19 and SV20 did not contain detectable concentrations of VOCs.

7.3 VOC IMPACT ON POTENTIAL SENSITIVE RECEPTORS

A search was conducted to identify sensitive receptors located within 1/4-mile of the Site. Sensitive receptors include, but are not limited to schools, day car centers, hospitals, nursing homes, residential homes, and groundwater supply wells.

FREY conducted a search for the sensitive receptors listed above using a Yahoo search engine. None of the sensitive receptors listed above are present within 1/4 mile or the Site. As previously mentioned, the nearest groundwater supply well to the Site is located approximately 1,500 feet to the north/northwest.

Carbon Creek is located approximately feet 50 south of the Site. Carbon Creek appears to be an ephemeral stream. FREY has observed little or no standing water in the Creek during recent Site visits. It is possible that VOCs in soil vapor could leach out of the creek embankment. However, the soil vapor would be immediately diluted by ambient air resulting in a negligible impact on habitat in the creek.

Consequently, there is minimal likelihood that potential sensitive receptors could be impacted by the presence of VOCs in soil gas detected beneath the Site.

7.4 QUALITY CONTROL/QUALITY ASSURANCE

To check sampling and analytical precision, the quality assurance and quality control (QA/QC) program requires the collection and analysis of duplicate vapor samples. Duplicate samples should be collected at a frequency of 10 percent of all field samples. In addition, duplicate vapor samples should be collected from locations where detectable concentrations of target compound are present. The sample results, the sample duplicate result, and the relative percent difference between those results are reported in the final laboratory report.

To assure that the sampling equipment and analytical systems being used are free of contamination, blank samples are collected and analyzed. An *equipment blank* must be collected from vapor sampling apparatus. Using air that is free of contamination, the equipment vapor blank is collected in the same way that the field samples are collected. Similarly, an analytical *method blank* must be analyzed to assure that the laboratory reagents and analytical instruments (i.e., syringes, purge vessels, etc.) are free of contamination. Method blanks are analyzed for vapor, soil, and water analyses. Blank samples should be collected at a frequency of 1 blank (equipment and method) for every 20 field samples. The sample results of both the equipment and method blanks are presented in the final laboratory report.

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For soil and water samples, laboratory control and matrix spikes are performed by spiking blanks or samples, respectively, with a spiking solution, which contains some or all of the target analytes. These analyses are used to measure the accuracy (percent recovery) and precision (relative percent difference) of the methods. Matrix spike analyses are performed at a rate of one out of twenty samples analyzed and apply to soil and water analyses. The results of the matrix spike analyses are presented in the final laboratory report.

7.5 DATA VALIDATION

Data validation for the soil vapor samples was achieved through the collection and analysis of duplicate samples and blanks for vapor samples and by the analysis of matrix spike samples for soil and water analyses. All validation results via these parameters are shown in the final laboratory results.

8.0 CONCLUSIONS

The following conclusions have been drawn based on data collected during this investigation and previous investigations:

8.1 SOIL VAPOR ASSESSMENT

- The vertical extent of VOCs in soil vapor has been adequately assessed based upon data collected during the two subsurface investigations. VOCs in soil vapor extend to maximum depths of 30 feet bgs. Soil vapor samples collected from 40 feet bgs did not contain concentrations of VOCs. The depth to groundwater is approximately 80 feet bgs resulting in a minimum 40 foot 'clean zone' between VOCs present in soil vapor beneath the Site and first encountered groundwater.

  PCE was the VOC analyte in soil vapor detected in the greatest concentrations (130 ug/L in SV2 and 96 ug/L in SV3). Soil vapor probes SV14 and SV15, advanced adjacent to SV2 and SV3, were sampled at depths of 10, 20 and 30 feet bgs. Concentrations of VOCs, where detected, were slightly above the detection limits in the 30 foot vapor sample collected from SV14. Concentrations decreased to non-detect levels in the 30 foot vapor sample collected from SV15.

- The lateral extent of VOCs in soil vapor has been adequately assessed based upon data collected during the two subsurface investigations. PCE was detected in the greatest concentration (130 ug/L in SV2-5 and 96 ug/L in SV3-5). As shown on Figure 3, PCE concentrations decrease to 43 ug/L (SV9) to the west, 32 ug/L (SV13) to the south, 48 ug/L (SV12) to the east, and 36 ug/L (SV20) to the north of SV2-5 and SV3-5.

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8.2 SOIL ASSESSMENT

- VOCs were not detected above the laboratory detection limits of 5 ug/kg in soil samples collected from borings B1 through B4 or in the background samples collected from B18 through B20.

- Selected metals were detected in soils sampled during the subsurface investigation conducted in October of 2002 but at concentrations below the EPA's PRG for Industrial Soils.

8.3 GROUNDWATER THREAT ASSESSMENT

- The DTSC performed a screening level human health evaluation for the VOCs and metals detected during the initial investigation in October of 2002. The DTSC concluded that "The results indicate that the risks and hazards posed by the chemicals detected at this former facility are, for the most part, below target levels of concern" (DTSC, 2003).

- The nearest groundwater supply well is located 1,500 feet north-northwest of the Site. Groundwater is estimated to flow toward the west-southwest which places the Site in the hydrogeologic down-gradient or cross-gradient direction from the nearest groundwater supply well.

- The Site is entirely paved with concrete which minimizes the occurrence of surface water infiltration. Vapor concentrations in the vicinity of the former degreasing pit and concentrations of VOCs detected in soil vapor probes SV1, SV2, SV10, SV11 and SV14 are located inside the Site building virtually eliminating the possibility of surface water infiltration.

9.0 RECOMMENDATION

FREY recommends that no further action be required for this Site. It has been clearly demonstrated that the low concentrations of VOCs where present beneath the Site, do not present a threat to human health or groundwater beneath the Site.

10.0 LIMITATIONS

The judgements described in this report are professional opinions based solely within the limits of the scope of work authorized, and pertain to conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein, and this report is not intended for future evaluations of this Site unless an update is conducted by a consultant familiar with environmental assessments.

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This report was compiled partially on information supplied to FREY Environmental, Inc. from outside sources, other information that is in the public domain and a visual inspection of the property. FREY Environmental, Inc. makes no warranty as to the accuracy of statements made by others, which may be contained in this report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report, except that it has been prepared in accordance with the current accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing similar services.

Site conditions may change with time as the result of natural alterations or man-made changes on this or adjacent properties. Future environmental investigations conducted at the Site may reveal Site conditions not indicated in the data reviewed by FREY Environmental, Inc. Additionally, changes in standards or regulations applicable to the Site may occur. The findings of this report may be partially or wholly invalidated by changes of which FREY Environmental, Inc. is not aware or has not had the opportunity to evaluate.

Environmental assessments provide an additional source on information regarding the environmental conditions of a particular property or facility. The report is a professional opinion and judgement to the Client, dependent upon FREY's knowledge and information obtained during the course of performance of the services.

Sincerely,
FREY Environmental, Inc.

Joe Frey
Principal Certified
Engineering Geologist
CEG #1500

Evan Privett
Senior Project Geologist

FREY

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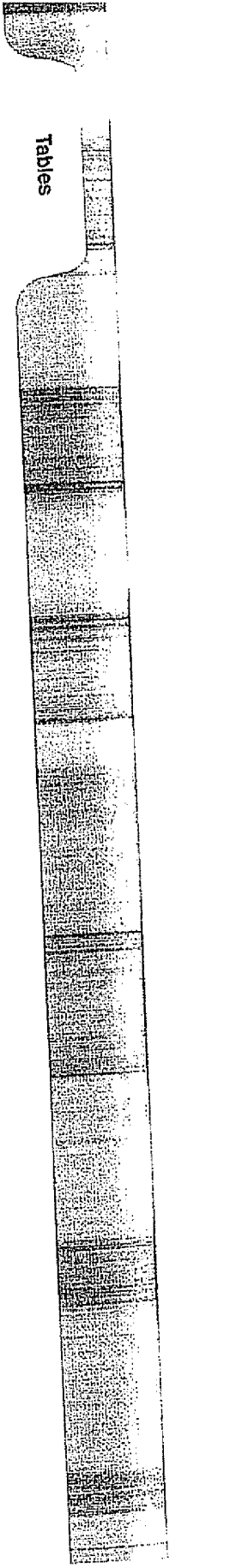
FREY



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TABLES

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TABLE 1
VOLATILE ORGANIC COMPOUND ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TRPH	cis 1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA
B1-2	2	North Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B1-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B1-20	20		10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B2-1	1	East Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B2-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B3-1	1	South Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B3-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B4-1	1	West Side of	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B4-10	10	Degreasing Pit	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B8-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	ND<10,000	NA	NA	NA	NA	NA	NA
B9-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	59,000	NA	NA	NA	NA	NA	NA
B18-1	3	Background Sample Northwestern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

AA 21941

OCVOCEF 000125

11869-21

TABLE 1
VOLATILE ORGANIC COMPOUND ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TRPH	cis 1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA
B19-1	3	Background Sample Northeastern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
B20-1	3	Background Sample Souteastern Portion of Site	10/22/02	ND<10,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

Notes
1 TRPH = Total recoverable petroleum hydrocarbons analyzed in general accordance with EPA Method No. 418.1
2 Soil samples analyzed for EPA 8260B full list including fuel oxygenates.
3 NA = Not analyzed for listed constituent

AA 21942
OCVOCEF 000126
11869-22

TABLE 2
METALS ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in milligrams per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TOTAL CHROMIUM	HEXAVALENT CHROMIUM	TOTAL LEAD	NICKEL	pH
B1-2	2	North Side of	10/22/02	ND<5.0	0.13	2.23	11.5	NA
B1-10	10	Degreasing Pit	10/22/02	ND<5.0	ND<0.100	0.81	2.02	NA
B2-1	1	East Side of	10/22/02	ND<5.0	0.24	1.12	4.13	NA
B2-10	10	Degreasing Pit	10/22/02	ND<5.0	ND<0.100	0.95	3.81	NA
B3-1	1	South Side of	10/22/02	ND<5.0	ND<0.100	1.38	4.66	NA
B3-10	10	Degreasing Pit	10/22/02	ND<5.0	ND<0.100	0.76	3.02	NA
B4-1	1	West Side of	10/22/02	ND<5.0	ND<0.100	1.05	4.35	NA
B4-10	10	Degreasing Pit	10/22/02	ND<5.0	ND<0.100	1.01	3.53	NA
B5-1	1	Northwest Portion of Former Process Tanks	10/22/02	ND<5.0	0.32	3.00	2.2	8.97
B6-1	1	Southwest Portion of Former Process Tanks	10/22/02	ND<5.0	0.17	2.40	.19	8.68
B7-1	1	Eastern Portion of Former Process Tanks	10/22/02	ND<5.0	1.15	9.51	.9	8.47
B8-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	11.3	ND<[illegible]0	3.21	.6	NA
B9-2	2	Fomer AboveGround Waste Oil Tank	10/22/02	11.0	ND<[illegible]0	4.78	5	NA
B10-1	1	Fomer Acid	10/22/02	10.4	N[illegible]	2.61	)	NA
B10-5	5	Storage Area	10/22/02	1.81	N[illegible]	0.60	1	NA
B10-10	10		10/22/02	3.03	N[illegible]	0.74	1	NA
B11-1	1	Fomer Kerosene	10/22/02	17.2	N[illegible]	9.71		NA
B11-5	5	Storage Area	10/22/02	2.07	N[illegible]	0.73		NA
B11-10	10		10/22/02	2.88	N[illegible]	0.65		NA
B12-1	1	Fomer Drum	10/22/02	26.6	N[illegible]	8.52		NA
B12-5	5	Storage Area	10/22/02	4.00	N[illegible]	0.84		NA
B12-10	10		10/22/02	4.26	N[illegible]	1.00		NA

:VOCEF

TABLE 2
METALS ANALYSES OF SOIL SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in milligrams per kilogram)

SAMPLE NUMBER	DEPTH OF SAMPLE	SAMPLE LOCATION	DATE SAMPLED	TOTAL CHROMIUM	HEXAVALENT CHROMIUM	TOTAL LEAD	NICKEL	pH
B13-1	1	Fomer Drum	10/22/02	49.9	NA	25.7	51.6	NA
B13-5	5	Storage Area	10/22/02	5.90	NA	0.90	6.03	NA
B13-10	10		10/22/02	9.81	NA	0.57	5.63	NA
B14-1	1	Southeast Corner	10/22/02	57.5	NA	5.19	71.2	NA
B14-5	5	of Site	10/22/02	4.61	NA	1.16	5.30	NA
B14-10	10		10/22/02	2.81	NA	0.57	2.78	NA
B15-1	1	Southern Property	10/22/02	381	NA	17.3	67.4	NA
B15-5	5	Line	10/22/02	4.44	NA	0.62	2.87	NA
B15-10	10		10/22/02	3.95	NA	1.24	4.61	NA
B16-1	1	Southern Property	10/22/02	25.4	NA	7.52	19.1	NA
B16-5	5	Line	10/22/02	10.2	NA	2.45	11.0	NA
B16-10	10		10/22/02	3.68	NA	1.01	3.87	NA
B17-1	1	Southern Property	10/22/02	7.14	NA	3.57	8.93	NA
B17-5	5	Line	10/22/02	4.18	NA	0.98	4.53	NA
B17-10	10		10/22/02	2.51	NA	1.04	2.41	NA
B18-3	3	Background Sample Northwestern Portion of Site	10/22/02	10.8	0.20	7.76	16.4	8.56
B19-3	3	Background Sample Northeastern Portion of Site	10/22/02	7.85	0.17	1.97	7.95	9.04
B20-3	3	Background Sample Southeastern Portion of Site	10/22/02	7.16	0.16	2.25	8.78	8.84
EPA PRG (Industrial Soils)				450	64	750	41,000	

Notes
1 TRPH = Total recoverable petroleum hydrocarbons analyzed in general accordance with EPA Method No. 418.1
2 Soil samples analyzed for EPA 8260B full list including fuel oxygenates.
3 NA = Not analyzed for listed constituent

OCVOCEF 000128

TABLE 3
CHEMICAL ANALYSES OF SOIL VAPOR SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per liter)

SAMPLE NUMBER	SAMPLE DEPTH (feet bgs)	SAMPLE LOCATION	DATE SAMPLED	cis-1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA	1,1,1,2-PCA
B1-10	10	North Side of Former	10/22/02	5.5	8.6	28	80	9.0	86	ND<1.0
B1-20	20	Degreasing Pit	10/22/02	7.7	9.9	25	17	5.2	24	ND<1.0
SV1-5	5	Former Waste Storage Area	10/22/02	16	38	74	8.7	9.5	76	ND<1.0
SV2-5	5	Former Waste Storage Area	10/22/02	1.3	5.3	130	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV3-5	5	Former Waste Storage Area	10/22/02	7.2	22	96	16	5.1	54	ND<1.0
SV4-5	5	Former Waste Storage Area	10/22/02	5.1	15	47	23	3.4	39	ND<1.0
SV5-5	5	Southern Property Line	10/22/02	1.7	7.0	37	12	ND<1.0	ND<1.0	ND<1.0
SV6-5	5	Southern Property Line	10/22/02	5.5	13	63	5.2	4.3	ND<1.0	56
SV7-5	5	Southern Property Line	10/22/02	3.9	5.5	43	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV8-5	5	Southern Property Line	10/22/02	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
SV9-5	5	Southwestern Corner of Site	06/11/03	ND<5.0	12	43	25	ND<5.0	41	ND<5.0
SV9-5 Dup	5	Duplicate sample	06/11/03	ND<5.0	11	40	23	ND<5.0	37	ND<5.0
SV10-5	5	Approx. 40 feet north of SV1/B13	06/11/03	ND<5.0	18	64	59	11	80	ND<5.0
SV11-5	5	Approx. 40 feet north of SV3/B11	06/11/03	11	26	35	49	5.2	64	ND<5.0
SV12-5	5	Approx. 40 feet west of SV4/B10	06/11/03	5.4	12	48	70	6.1	75	ND<5.0
SV13-5	5	Approx. 40 feet south of SV6/B16	06/11/03	ND<5.0	ND<5.0	32	19	ND<5.0	46	ND<5.0
SV14-10	10	Adjacent to SV1/B13	06/11/03	16	43	69	27	7.5	45	ND<5.0
SV14-20	20	Adjacent to SV1/B13	06/11/03	9.6	18	35	24	5.4	39	ND<5.0
SV14-30	30	Adjacent to SV1/B13	06/11/03	ND<5.0	ND<5.0	6.8	5.4	ND<5.0	7.8	ND<5.0

AA 21945

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TABLE 3
CHEMICAL ANALYSES OF SOIL VAPOR SAMPLES

LABARRON INVESTMENTS
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

(results in micrograms per liter)

SAMPLE NUMBER	SAMPLE DEPTH (feet bgs)	SAMPLE LOCATION	DATE SAMPLED	cis-1,2-DCE	TCE	PCE	1,1-DCE	1,1-DCA	1,1,1-TCA	1,1,1,2-PCA
SV15-10	10	Adjacent to SV3/B11	06/11/03	ND<5.0	11	28	41	ND<5.0	78	ND<5.0
SV15-20	20	Adjacent to SV3/B11	06/11/03	ND<5.0	ND<5.0	10	14	ND<5.0	45	ND<5.0
SV15-30	30	Adjacent to SV3/B11	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV16-40	40	Adjacent to B1	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV17-10	10	Approx. 40 feet northwest of B1/SV16	06/11/03	5.7	6.0	14	36	ND<5.0	46	ND<5.0
SV17-20	20	Approx. 40 feet northwest of B1/SV16	06/11/03	6.3	7.4	18	42	ND<5.0	65	ND<5.0
SV17-40	40	Approx. 40 feet northwest of B1/SV16	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV18-10	10	Approx. 15 feet west of B4	06/11/03	ND<5.0	5.5	21	40	ND<5.0	35	ND<5.0
SV18-20	20	Approx. 15 feet west of B4	06/11/03	ND<5.0	7.4	22	59	8.3	49	ND<5.0
SV18-40	40	Approx. 15 feet west of B4	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV19-10	10	Approx. 30 feet west of B2	06/11/03	6.2	8.0	41	48	ND<5.0	29	ND<5.0
SV19-10 Dup	10	Approx. 30 feet west of B2	06/11/03	6.1	7.7	38	46	ND<5.0	28	ND<5.0
SV19-20	20	Approx. 30 feet west of B2	06/11/03	ND<5.0	5.2	8.8	25	ND<5.0	17	ND<5.0
SV19-40	40	Approx. 30 feet west of B2	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SV20-10	10	Approx. 20 feet south of B3	06/11/03	ND<5.0	13	36	66	7.2	69	ND<5.0
SV20-20	20	Approx. 20 feet south of B3	06/11/03	ND<5.0	ND<5.0	14	21	ND<5.0	48	ND<5.0
SV20-40	40	Approx. 20 feet south of B3	06/11/03	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

Notes

1 Soil vapor samples were analyzed in general accordance with EPA Method No. 8260B for the full list of compounds. Only detected compounds have been listed in this table.

2 ND<5.0 - Chemical constituent not present above the stated detection limit.

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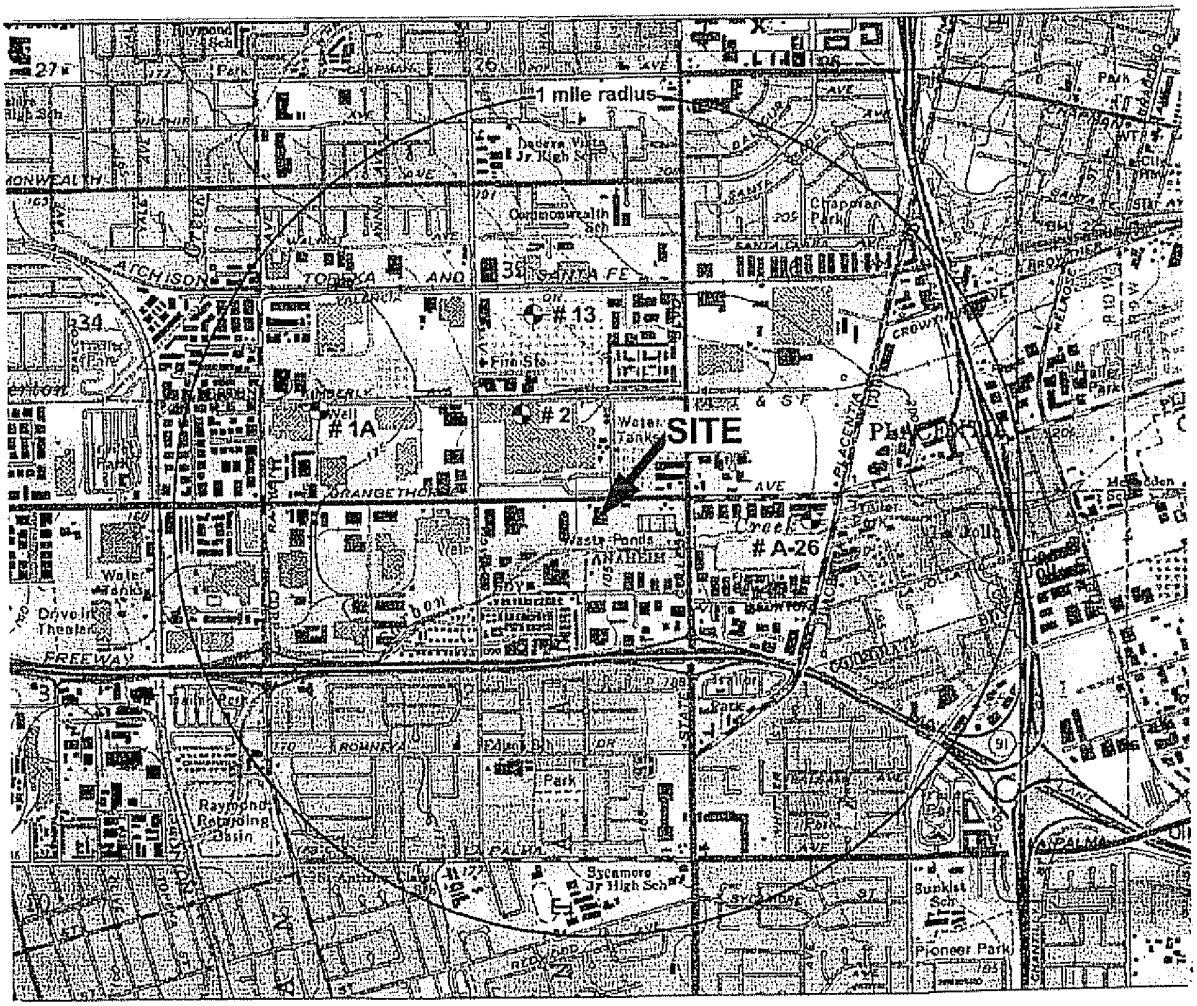
Figures

OCVOCEF 000131

FIGURES

FREY



EXPLANATION

⊕ # 1A Groundwater Supply Well and number

NORTH

0 1/2 1

SCALE IN MILES

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

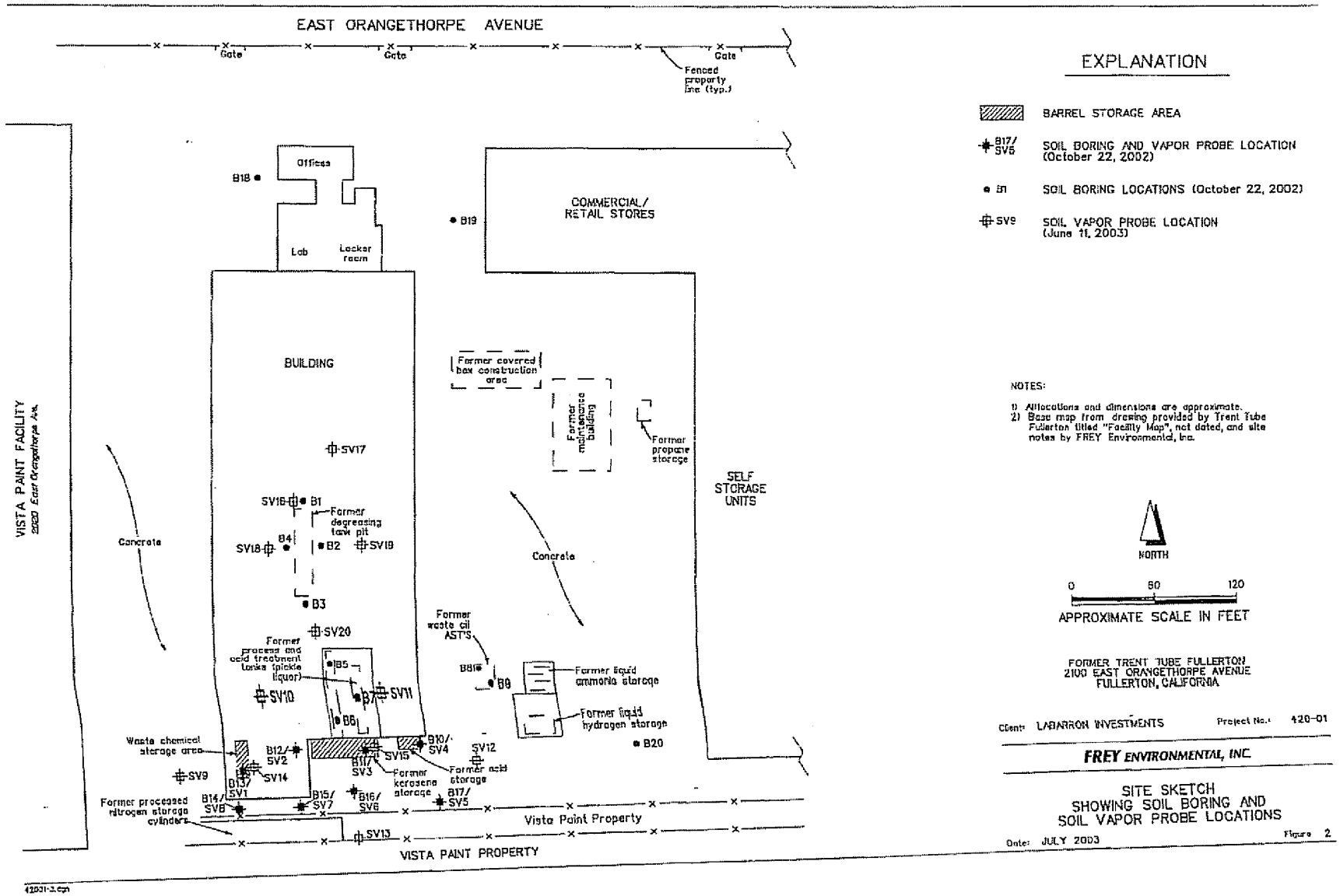
FREY ENVIRONMENTAL, INC.

NOTE:

1) All locations and dimensions are approximate
2) Base map from USGS 7.5 minute California topographic quadrangle, printed from Topo.
3) Fullerton well locations from City of Fullerton Water Department.
4) Anaheim well locations from Anaheim Public Utilities Department.

SITE LOCATION MAP

Date: OCTOBER 2003 Figure: 1



EXPLANATION

- BARREL STORAGE AREA
- B17/SV5 — SOIL BORING AND VAPOR PROBE LOCATION (October 22, 2002)
- B1 — SOIL BORING LOCATIONS (October 22, 2002)
- SV9 — SOIL VAPOR PROBE LOCATION (June 11, 2003)

NOTES:

1) Allocations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

FREY ENVIRONMENTAL, INC.

SITE SKETCH
SHOWING SOIL BORING AND
SOIL VAPOR PROBE LOCATIONS

Date: JULY 2003 Figure 2

OCVOCEF 000134

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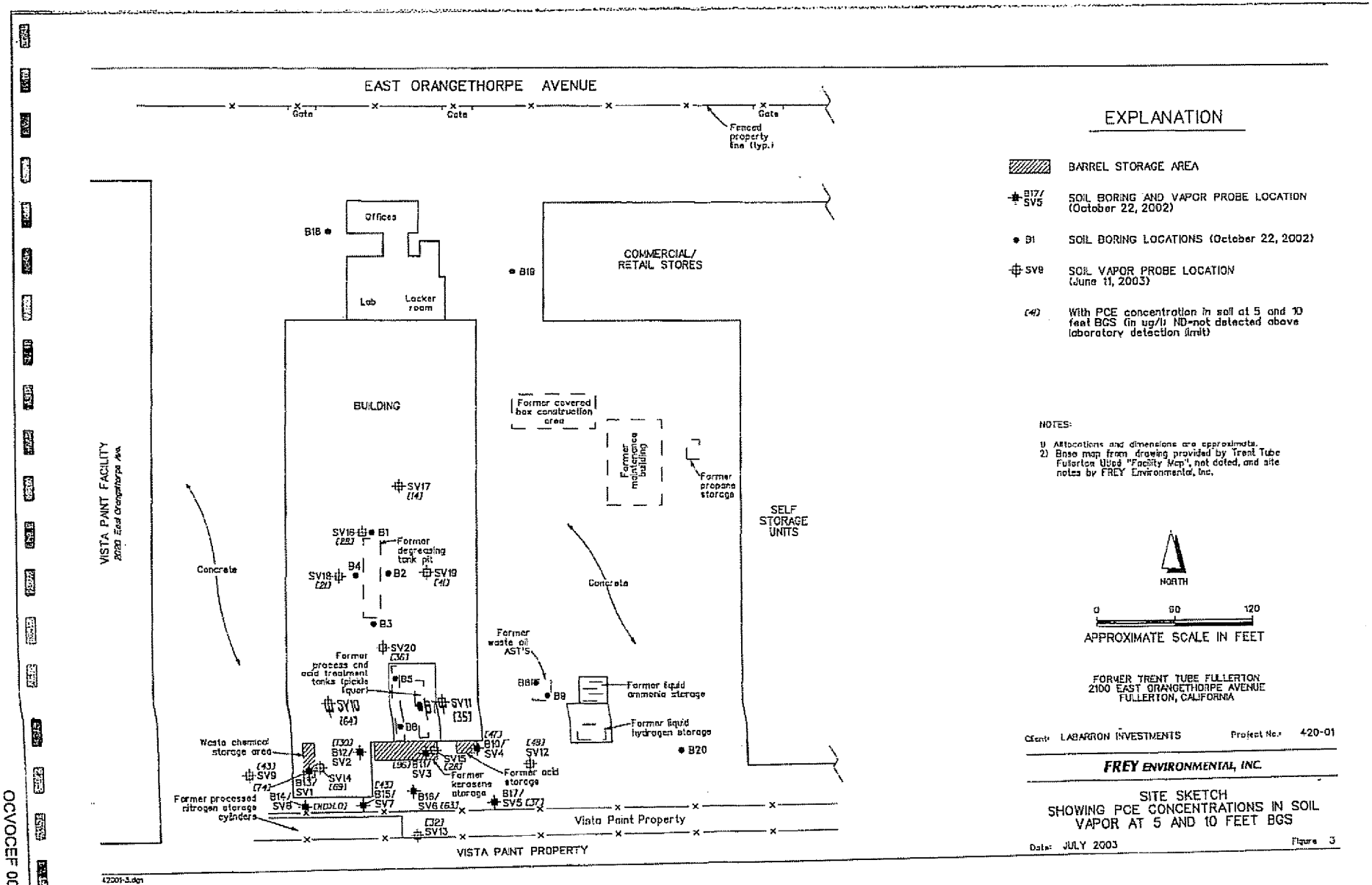


EXPLANATION

- BARREL STORAGE AREA
- B17/SV5 — SOIL BORING AND VAPOR PROBE LOCATION (October 22, 2002)
- B1 — SOIL BORING LOCATIONS (October 22, 2002)
- SV8 — SOIL VAPOR PROBE LOCATION (June 11, 2003)
- (4) — With PCE concentration in soil at 5 and 10 feet BGS (in ug/l) ND=not detected above laboratory detection limit)

NOTES:

1) Allocations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

FREY ENVIRONMENTAL, INC.

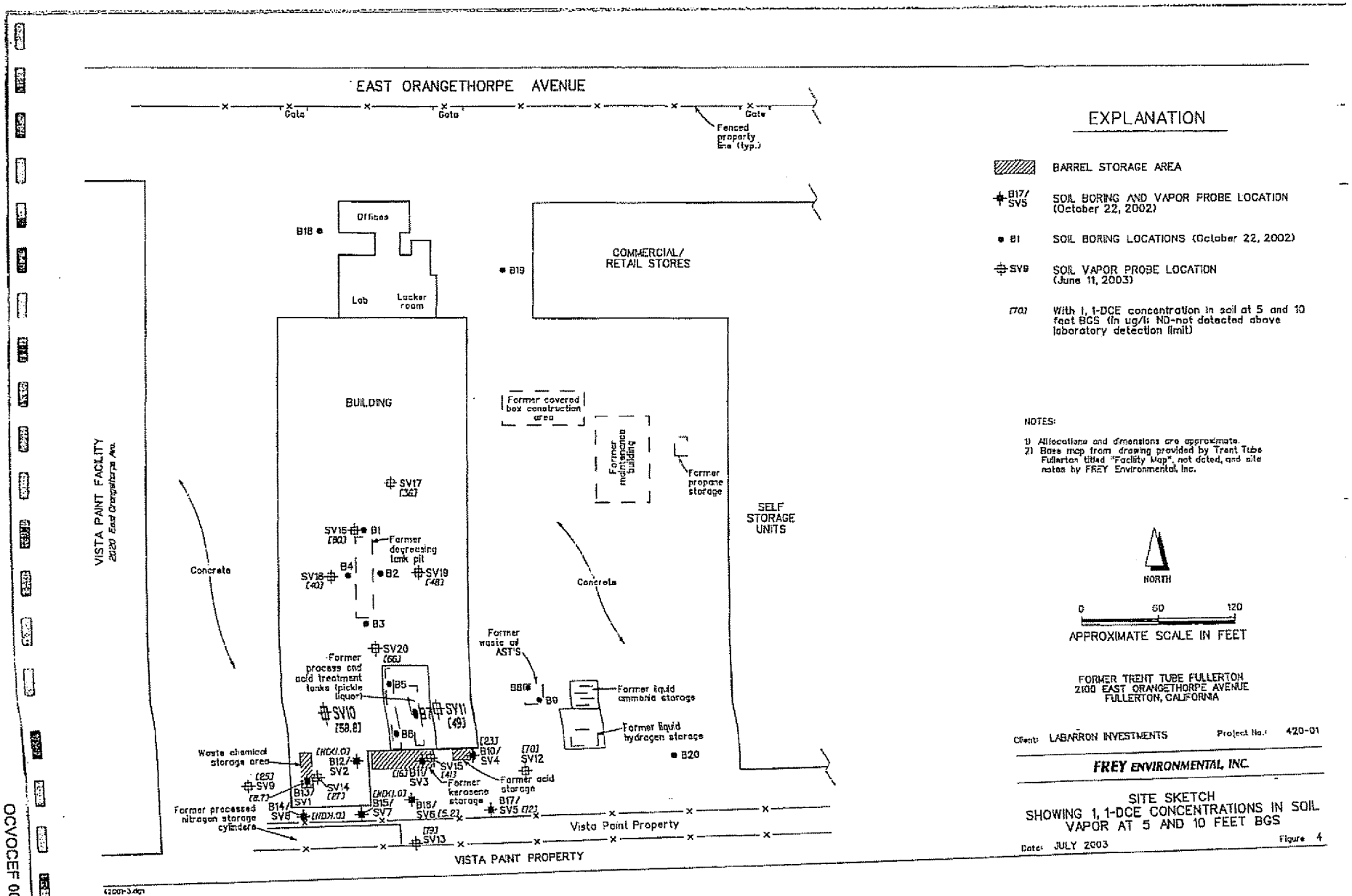
SITE SKETCH
SHOWING PCE CONCENTRATIONS IN SOIL
VAPOR AT 5 AND 10 FEET BGS

Date: JULY 2003 Figure 3

OCVOCEF 000135

AA 21951

11869-31



EXPLANATION

- BARREL STORAGE AREA
- B17/ SV5 — SOIL BORING AND VAPOR PROBE LOCATION (October 22, 2002)
- B1 — SOIL BORING LOCATIONS (October 22, 2002)
- SV9 — SOIL VAPOR PROBE LOCATION (June 11, 2003)
- (70) — With 1, 1-DCE concentration in soil at 5 and 10 feet BGS (in ug/l; ND-not detected above laboratory detection limit)

NOTES:

1) Allocations and dimensions are approximate.
2) Base map from drawing provided by Trent Tube Fullerton titled "Facility Map", not dated, and site notes by FREY Environmental, Inc.

NORTH

0 60 120

APPROXIMATE SCALE IN FEET

FORMER TRENT TUBE FULLERTON
2100 EAST ORANGETHORPE AVENUE
FULLERTON, CALIFORNIA

Client: LABARRON INVESTMENTS Project No.: 420-01

FREY ENVIRONMENTAL, INC.

SITE SKETCH
SHOWING 1, 1-DCE CONCENTRATIONS IN SOIL VAPOR AT 5 AND 10 FEET BGS

Date: JULY 2003 Figure 4

OCVOCEF 000136

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Appendix A

OCVOCEF 000137

APPENDIX A

FIELD PROCEDURES

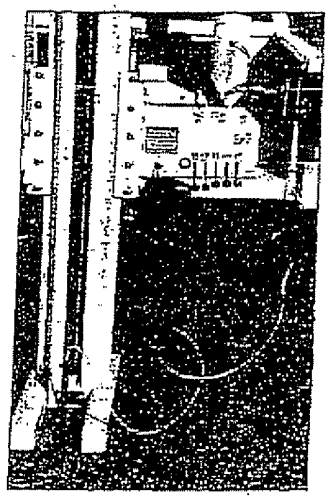
FREY

Soil Gas Sampling

Post-Run Tubing System

The Post-Run Tubing System

The Post-Run Tubing System (PRT) allows the user to collect soil vapor samples quickly and easily at the desired sampling depth WITHOUT the time-consuming complications associated with rod leakage and contamination. O-ring connections enable the PRT system to deliver a vacuum-tight seal that prevents sample contamination from UP hole, and ensures that the sample is taken from the desired depth at the BOTTOM of the hole. The sample is drawn through the point holder, through the adapter, and into the sample tubing. The tubing can be replaced after each sample, thus eliminating sample carryover problems and the need to decontaminate the probe rods. The resulting time-savings translates into a higher productivity rate for you and your client.

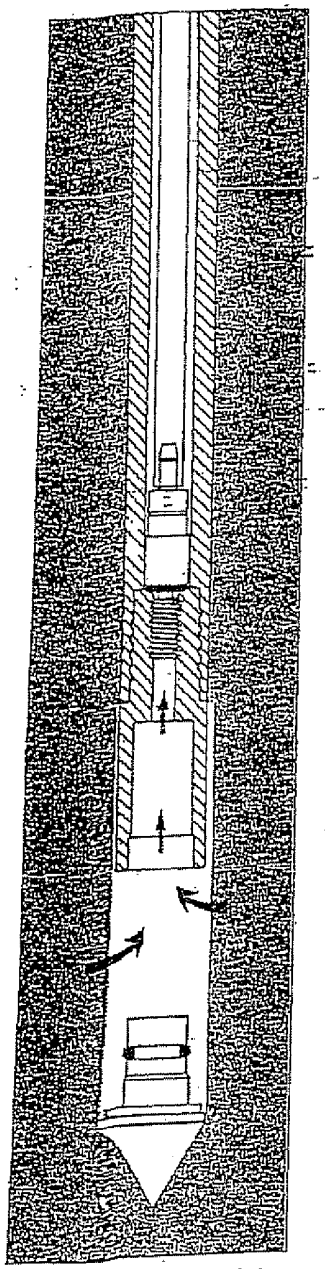


Using the Post-Run Tubing (PRT) system for soil vapor sampling.

Sampling Methods

Some of the more common methods of active soil gas sample collection include:

- Direct sampling from the PRT using a gas chromatograph-compatible syringe used when the Geoprobe van is equipped with a mobile laboratory and gas chromatograph for immediate analysis of the collected samples.
- Inline sampling using glass sampling bulbs or Tedlar bags. The sampling device is placed inline, between the PRT adapter and the vacuum/volume system. As the sampling system is purged, soil gas is trapped in the bulb or bag. These samples may be stored for limited periods of time and either analyzed on site or at an off-site laboratory.
- Summa canisters, pre-evacuated steel devices that are connected to the surface end to the PRT tubing, also provide another sampling option for soil gas. A valve on the canister is opened and the vacuum inside the canister pulls in soil gases from the sample interval. This system is expensive and is usually reserved for sending samples to an off-site laboratory for specialized analyses or quality control purposes.



A cross section of the PRT System showing how soil gas (arrows) is drawn through the inner tubing system.

FIELD QUESTION . . .

Q. Is it possible to use a retractable point with the PRT system?

A. *Yes! You will need a Retractable Point (AT21B) with a PRT Retractable Point Holder (PR21B). (See page 8.)*

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Appendix B

APPENDIX B

LABORATORY REPORTS

FREY

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BASELINE ON-SITE ANALYSIS

Baseline On-Site Analysis
P. O Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Analyses Requested:

1. **EPA 8260B – Volatile Organic Compounds (VOC's)**
2. **EPA 8260B – Fuel Oxygenates**

Baseline received samples collected from the project shown above. A Chain-of-Custody Record (COC) is attached.

All of the samples were analyzed for the parameters shown above per the COC. In this report, Baseline presents the results and a QA/QC summary for these analyses.

Brian K. Kato

Approved
Brian K. Kato, Laboratory Manager

OCVOCEF 000142

11869-38

AA 21958

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV9-5**	**SV9-5 DUPLICATE**	**SV10-5**	**SV11-5**	**SV12-5**	**SV13-5**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000143

11869-39

AA 21959

BASELINE ON-SITE ANALYSIS TM

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV9-5**	**SV9-5 DUPLICATE**	**SV10-5**	**SV11-5**	**SV12-5**	**SV13-5**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	11	5.2	6.1	ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	25	23	59	49	70	19
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	11	5.4	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	43	40	64	35	48	32
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	41	37	80	64	75	46
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	12	11	18	26	12	ND<5.0
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000144

11869-40

AA 21960

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
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Huntington Beach, CA 92647

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FAX: 714 840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV14-10**	**SV14-20**	**SV14-30**	**SV15-10**	**SV15-20**	**SV15-30**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit

OCVOCEF 000145

11869-41

AA 21961

BASELINE ON-SITE ANALYSIS INC.
Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647
Toll Free: 888 753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV14-10**	**SV14-20**	**SV14-30**	**SV15-10**	**SV15-20**	**SV15-30**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	7.5	5.4	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	27	24	5.4	41	14	ND<5.0
cis-1,2-Dichloroethene	16	9.8	ND<5.0	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	69	35	6.8	28	10	ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	45	39	7.8	78	45	ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	43	18	ND<5.0	11	ND<5.0	ND<5.0
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000146

11869-42

AA 21962

BASELINE ONSITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

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FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV16-40**	**SV17-10**	**SV17-20**	**SV17-40**	**SV18-10**	**SV18-20**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000147

11869-43

AA 21963

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV16-40**	**SV17-10**	**SV17-20**	**SV17-40**	**SV18-10**	**SV18-20**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	8.3
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	ND<5.0	36	42	ND<5.0	40	59
cis-1,2-Dichloroethene	ND<5.0	5.7	6.3	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	ND<5.0	14	18	ND<5.0	21	22
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	ND<5.0	46	65	ND<5.0	35	49
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	ND<5.0	6.0	7.4	ND<5.0	5.5	7.4
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000148

11869-44

AA 21964

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
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Toll Free: 888.753 7553
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Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV18-40**	**SV19-10**	**SV19-10 Duplicate**	**SV19-20**	**SV19-40**	**SV20-10**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
p-isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000149

11869-45

AA 21965

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
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Toll Free: 888.753.7553
FAX: 714 840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dilution Factor:	1	1	1	1	1	1
Sample ID:	**SV18-40**	**SV19-10**	**SV19-10 Duplicate**	**SV19-20**	**SV19-40**	**SV20-10**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	7.2
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloroethene	ND<5.0	48	46	25	ND<5.0	66
cis-1,2-Dichloroethene	ND<5.0	6.2	6.1	ND<5.0	ND<5.0	ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Tetrachloroethene	ND<5.0	41	38	8.8	ND<5.0	36
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,1,1-Trichloroethane	ND<5.0	29	28	17	ND<5.0	69
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Trichloroethene	ND<5.0	8.0	7.7	5.2	ND<5.0	13
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000150

11869-46

AA 21966

BASELINE ON-SITE ANALYSIS

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888 753 7553
FAX: 714 840 1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B			8260B
Units:	µg/L	µg/L	µg/L			µg/L
Dilution Factor:	1	1	1			1
Sample ID:	**SV20-20**	**SV20-40**	**Equipment Blank**			**Method Blank**
Compound Name						
Volatile Aromatics (BTEX)						
Benzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Toluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Total Xylenes	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Fuel Oxygenates						
Methyl t-Butyl Ether (MTBE)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
t-Butanol (TBA)	ND<25	ND<25	ND<25			ND<25
Di-Isopropyl Ether (DIPE)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Ethyl t-Butyl Ether (ETBE)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
t-Amyl Methyl Ether (TAME)	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Non-Halogenated VOC's						
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
tert-Butylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
p-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Naphthalene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Styrene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Halogenated VOC's (HVOC's)						
Bromobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Bromochloromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Bromoform	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Bromomethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Carbon Tetrachloride	ND<5.0	ND<5.0	ND<5.0			ND<5.0
2-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
4-Chlorotoluene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chloroform	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Chloromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000151

11869-47

AA 21967

BASELINE ON-SITE ANALYSIS

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
FAX: 714.840.1584

Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B			8260B
Units:	µg/L	µg/L	µg/L			µg/L
Dilution Factor:	1	1	1			1
Sample ID:	**SV20-20**	**SV20-40**	**Equipment Blank**			**Method Blank**
Compound Name						
HVOC's, continued						
Dibromochloromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dibromo-3-Chloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dibromomethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Dichlorodifluoromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1-Dichloroethene	21	ND<5.0	ND<5.0			ND<5.0
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,3-Dichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
2,2-Dichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1-Dichloropropene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Hexachlorobutadiene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Methylene Chloride	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Tetrachloroethene	14	ND<5.0	ND<5.0			ND<5.0
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,1,1-Trichloroethane	48	ND<5.0	ND<5.0			ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Trichloroethene	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Trichlorofluoromethane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
1,2,3-Trichloropropane	ND<5.0	ND<5.0	ND<5.0			ND<5.0
Vinyl Chloride	ND<5.0	ND<5.0	ND<5.0			ND<5.0

ND: Not detected at the indicated reporting limit.

OCVOCEF 000152

11869-48

AA 21968

BASELINE ON-SITE ANALYSIS™

Baseline On-Site Analysis
P. O. Box 2243
Huntington Beach, CA 92647

Toll Free: 888.753.7553
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Laboratory Report

Client: FREY Environmental, Inc.
Client Address: 2817-A Lafayette Avenue
Newport Beach, California 92663

Project Name: La Baron Investments
Project Address: 2100 E. Orangethorpe Ave
Fullerton, CA
Contact: Evan Privett

Report Date: 6/22/03
Lab Project Number: 03214
Client Project Number: 420-01

Dates Sampled: 6/16/03
Dates Received: 6/16/03
Dates Analyzed: 6/16/03
Sample Matrix: Vapor

Quality Control Summary

QC Parameter:	SAMPLE	DUPLICATE	%RSD	SAMPLE	DUPLICATE	%RSD
Units:	µg/L	µg/L	%	µg/L	µg/L	%
Method:	8260B	8260B	8260B	8260B	8260B	8260B
Sample ID:	**SV9-5**	**SV9-5 DUP**	---	**SV19-10**	**SV19-10 DUP**	---
Compound Name						
Bromobenzene	ND<5	ND<5	---	ND<5	ND<5	---
Bromochloromethane	ND<5	ND<5	---	ND<5	ND<5	---
Bromoform	ND<5	ND<5	---	ND<5	ND<5	---
Bromomethane	ND<5	ND<5	---	ND<5	ND<5	---
Carbon Tetrachloride	ND<5	ND<5	---	ND<5	ND<5	---
2-Chlorotoluene	ND<5	ND<5	---	ND<5	ND<5	---
4-Chlorotoluene	ND<5	ND<5	---	ND<5	ND<5	---
Chlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
Chloroethane	ND<5	ND<5	---	ND<5	ND<5	---
Chloroform	ND<5	ND<5	---	ND<5	ND<5	---
Chloromethane	ND<5	ND<5	---	ND<5	ND<5	---
Dibromochloromethane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dibromo-3-Chloropropane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dibromomethane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dichlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
1,3-Dichlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
1,4-Dichlorobenzene	ND<5	ND<5	---	ND<5	ND<5	---
Dichlorodifluoromethane	ND<5	ND<5	---	ND<5	ND<5	---
1,1-Dichloroethane	ND<5	ND<5	---	ND<5	ND<5	---
1,2-Dichloroethane	ND<5	ND<5	---	ND<5	ND<5	---
1,1-Dichloroethene	25	23	8	48	46	4
cis-1,2-Dichloroethene	ND<5.0	ND<5.0	---	6.2	6.1	2
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2-Dichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,3-Dichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
2,2-Dichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,1-Dichloropropene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Hexachlorobutadiene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Methylene Chloride	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Tetrachloroethene	43	40	7	41	38	8
1,1,1,2-Tetrachloroethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,1,2,2-Tetrachloroethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2,3-Trichlorobenzene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2,4-Trichlorobenzene	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,1,1-Trichloroethane	41	37	10	29	28	---
1,1,2-Trichloroethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Trichloroethene	12	11	9	8	7.7	4
Trichlorofluoromethane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
1,2,3-Trichloropropane	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---
Vinyl Chloride	ND<5.0	ND<5.0	---	ND<5.0	ND<5.0	---

ND: Not detected at the indicated reporting limit.

OCVOCEF 000153

11869-49

AA 21969

FREY Environmental, Inc.	Project Name: 2100 E. Orangethorpe Ave
2817-A Lafayette Avenue	Project Address: 2100 E. Orangethorpe Ave
Newport Beach, California 92663	Fullerton, CA
Phone:949.723 1645; FAX: 949.723 1854	Project Number: 420-01
Contact: Evan Privett	Sampler Name: Mike Eder

CHAIN-OF-CUSTODY RECORD

Laboratory Project #: 03214

Sample ID	Sample Location	Date	Time	Lab ID	Soil (S), Water (W), Vapor (V)	Analysis: VOC's (8260B)	Analysis: Fuel Oxygenates (8260B)	Analysis	Analysis	Number of Containers	Comments
SV12-5		16-Jun-03	0932	1	V	X	X			1	1 L Tedlar Bags
SV15-10		16-Jun-03	0953	2	V	X	X			1	
SV15-20		16-Jun-03	1006	3	V	X	X			1	
SV15-30		16-Jun-03	1030	4	V	X	X			1	
SV17-10		16-Jun-03	1109	5	V	X	X			1	
SV17-20		16-Jun-03	1122	6	V	X	X			1	
SV17-40		16-Jun-03	1143.	7	V	X	X			1	
SV18-10		16-Jun-03	1212	8	V	X	X			1	
SV18-20		16-Jun-03	1221	9	V	X	X			1	
SV18-40		16-Jun-03	1238	10	V	X	X			1	
SV16-40		16-Jun-03	1250	11	V	X	X			1	
SV19-10		16-Jun-03	1414	12	V	X	X			1	
SV19-10 Duplicate		16-Jun-03	1416	13	V	X	X			1	
SV19-20		16-Jun-03	1426	14	V	X	X			1	
SV19-40		16-Jun-03	1438	15	V	X	X			1	
SV20-10		16-Jun-03	1458	16	V	X	X			1	
SV20-20		16-Jun-03	1511	17	V	X	X			1	
SV20-40		16-Jun-03	1530	18	V	X	X			1	
SV10-5		16-Jun-03	1602	19	V	X	X			1	
SV11-5		16-Jun-03	1620	20	V	X	X			1	
SV14-10		16-Jun-03	1644	21	V	X	X			1	
SV14-20		16-Jun-03	1655	22	V	X	X			1	
SV14-30		16-Jun-03	1702	23	V	X	X			1	
SV9-5		16-Jun-03	1723	24	V	X	X			1	
SV9-5 DUPLICATE		16-Jun-03	1725	25	V	X	X			1	

Turnaround Time: On-Site Mobile Laboratory; samples were relinquished on the date(s)/times shown above.

Sample Condition: Chilled? Y / N Sealed? Y / N Comments:

Relinquished by	Received by Brian Kato	Special Instructions:
signature: x Mike Eder	Date/time shown above signature: x Brian Kato	
of FREY Environmental, Inc.	of Baseline Analytical Services	

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FREY Environmental, Inc.	Project Name: 2100 E. Orangethorpe Ave
2817-A Lafayette Avenue	Project Address: 2100 E. Orangethorpe Ave
Newport Beach, California 92663	Fullerton, CA
Phone:949.723.1645; FAX: 949.723.1854	Project Number: 420-01
Contact: Evan Privett	Sampler Name: Mike Eder

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Laboratory Project #: **03214**

Sample ID	Sample Location	Date	Time	Lab ID	Soil (S), Water (W), Vapor (V)	Analysis: VOC's (8260B)	Analysis: Fuel Oxygenates (8260B)	Analysis	Analysis	Number of Containers	Comments
Equipment Blank		16-Jun-03	1728	26	V	X	X			1	1 L Tedlar Bags
SV13-5		16-Jun-03	1750	27	V	X	X			1	

Turnaround Time: On-Site Mobile Laboratory; samples were relinquished on the date(s)/times shown above.

Sample Condition: Chilled? Y / N Sealed? Y / N Comments:

Relinquished by	Received by Brian Kato	Special Instructions:
signature: X	Date/Time Shown Above signature: X Brian K. Kato	
of FREY Environmental, Inc.	of Baseline Analytical Services	

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OCVOCEF 000155

11869-51

AA 21971