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Fax 415-744-3128

HR TEXTRON

SFUND RECORDS CTR
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HR Textron Inc.
a Subsidiary of Textron Inc.

RECEIVED
JUL 08 1991
PRC ENVIRONMENTAL MANAGEMENT, INC.

25200 West Rye Canyon Road
Valencia, CA 91355-1265
805/259-4030
FAX 805/259-9622
Telex 65/1492

JWH-91-40

July 1, 1991

SFUND RECORDS CTR
88134164
ITX 2166-04743

Mr. Chris Stubbs
South Coast Groundwater Section (H-6-4)
U.S. Environmental Protection Agency
P.O. Box 193036
San Francisco, CA 92111-3036

Dear Mr. Stubbs:

The responses enclosed herein are submitted on behalf of HR Textron Inc. ("HR Textron"), a wholly owned subsidiary of Textron Inc. Although HR Textron's financial information is consolidated with that of Textron Inc., its parent, HR Textron is a separate entity with independent responsibilities and obligations. HR Textron is the lessee of the facilities located at 10445 Glenoaks, Pacoima, California, and 12137 Montague Street, Pacoima, California ("Facility").

HR Textron appreciates the Agency's cooperation in extending the company's time to respond to the Request for Information by thirty (30) days, to posting the materials dated July 3, 1991, and agreeing to relieve the company of the requirement of providing information on non-hazardous material (e.g., see question 11 of the Request).

As to the Request itself, HR Textron has several objections. It is our belief that many of the requests are unduly burdensome, overly broad and exceed the EPA's jurisdiction. Also, several of the requests ask for information that is controlled by third parties, such as the landlords, and governmental agencies (e.g., chain of title information), and not HR Textron. Nevertheless, without waiving any of the aforementioned objections, HR Textron has undertaken a good faith effort to provide the responses enclosed herein. These responses do not, however, constitute an admission that the company is liable for any contamination or other related matters arising from or relating to the Facility. Moreover, the company does not believe that it has a general duty to supplement our responses. HR Textron will, however, amend its responses if it should later learn of relevant information that

existed at the time of the Request and was not disclosed, or the information that was disclosed was in error. All representations or interpretations made by HR are based upon information and belief, and represent HR's belief of the most probable circumstances.

Finally, we request a meeting to discuss the purpose of the Request for Information, and EPA's interest in the Facility as a whole. I will telephone you to arrange such a meeting within the next month in order to give you time to digest the information.

Very truly yours,

J.W. Hedges
Vice President Contracts
and Production Programs

Enclosures

25200 WEST RYE CANYON ROAD • VALENCIA, CALIFORNIA 91355-1265 • (805) 259-4030 • TWX 910-336-1438 • TELEX 65/1492

EXHIBIT A

Question:

1. List the EPA RCRA Identification Numbers of the Respondent.

Response:

1. The EPA number for the Facility is CAD041162330.

Question:

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

Response:

2. From the inception of the lease (September 27, 1965), the Facilities have been used to design, develop, manufacture, assemble and test a variety of aerospace components, principally fuel and pneumatics products, filtration products, and hydraulic flight control systems and components.

Question:

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

Response:

3. Based upon information and belief, the property located at 10445 Glenoaks Boulevard, Pacoima, California is leased by HR Textron, and is currently owned by a partnership consisting of Gary L. O'Brien, William E. Tolson, Jean Blomberg, and Joan O'Brien, doing business as Wampum Investments, located at Gary L. O'Brien, c/o The Pacific Bank, 351 California Street, San Francisco, CA 94104. Attached hereto is a copy of the Lease. Also attached is a letter dated June 29, 1989 to HR Textron, from Lewis, D'Amato, Brisbois & Bisgaard, a law firm which at one time represented the current owners. Attached to this letter is what purports to be the chain of title, from approximately 1930 to the present. HR Textron does not know precisely when the current owners purchased the property, but the answer lies in the public record.

Based upon information and belief, the property located at 12137 Montague Street, Pacoima, California, has been leased by HR Textron since on or about September, 1965, and is currently owned by the Sundstrand Corporation, located at P.O. Box 7003, 4949 Harrison Avenue, Rockford, Illinois 61125. Attached hereto is a copy of a Sublease between Ledeen Incorporated (predecessor to HR Textron) and Sundstrand Corporation, dated September 27, 1965, and a Lease Agreement between Hydraulic Research and Manufacturing Company (predecessor to HR Textron) and Sundstrand Corporation, dated June 16, 1966,. Also attached is a Preliminary Title Report Dated as of December 1, 1989. HR Textron does not know precisely when the current owners purchased the property, but the answer lies in the public record.

HR Textron makes no representations that this information is accurate or complete, but it does represent the information available from HR Textron's files.

Question:

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

   a. The dates of ownership;

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

Response:

4. a. See response to question 3, above. HR Textron makes no representations that this information is accurate or complete, but it does represent the information available from HR Textron's files.

4. b. HR Textron is not aware of information pertaining to releases or threatened releases from the Facilities during any period of someone else's ownership or occupancy of the Facilities. Reports or investigations conducted prior to HR's occupancy, if existing, are not presently known to HR Textron.

Question:

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

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

b. The nature of their operations at the facility;

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

Response:

5. The response to questions 3 and 4, above, are responsive to this question 5.

Question:

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

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

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

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

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

Response:

6. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

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

Response:

7. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

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

a. The nature and scope of these investigations;
b. The contractors or other persons that will undertake these investigations;
c. The purpose of the investigations;
d. The dates when such investigations will take place and be completed;
e. Where on the facility such investigations will take place.

Response:

8. With the help of our consultants, ERM West-Inc., we have proposed to perform a soil investigation at the Facility (Glenoaks). This plan is attached at 8.a. The acceptance of this plan is subject to negotiations presently ongoing with the Regional Water Quality Control Board-Los Angeles. The question of groundwater monitoring is presently the subject of litigation. All documents concerning this litigation are attached as 8.b. Air quality audits and other audits of the facility are provided as attachment 8.c.

Question:

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

Response:

9. HR Textron is not aware of information pertaining to releases or threatened releases from the Facilities during any period of someone else's ownership or occupancy of the Facilities. Reports or investigations conducted prior to HR's occupancy, if existing, are not presently known to HR Textron.

Question:

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

Response:

10. HR Textron is not aware of information pertaining to releases or threatened releases from the Facilities during any period of someone else's ownership or occupancy of the Facilities. Reports or investigations conducted prior to HR's occupancy, if existing, are not presently known to HR Textron.

Question:

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

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

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

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

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

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

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

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

hazardous material was transported;

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

Response:

11. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

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

a. When such releases occurred or may occur;
b. How the releases occurred or may occur;
c. What hazardous materials were released or may be released;
d. What amount of each such hazardous material was so released;
e. Where such releases occurred or may occur, describing the location(s) and providing a map or diagram of such location(s);
f. Any and all activities undertaken in response to each such release or threatened release;
g. Any and all investigations of the circumstances, nature, extent, or location of each such release or threatened release, including the results of any soil, water (ground and surface), or air testing that was undertaken;
h. Whether any report(s) of any such release(s) was (were) made to any public agency, and the content of that (those) report(s);
i. All persons with information relating to subparts a. through h. of this Question.

Response:

12. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

13. If any releases or threatened release identified in response to Question 12, above, occurred into any subsurface disposal system, floor drain, sump, or dry well inside or under any

buildings located on the facility, further identify:

a. Precisely where the disposal system, floor drain, sump, or dry well is and was located;
b. When the disposal system, floor drain, sump, or dry well was installed;
c. Whether the disposal system, floor drain, sump, or dry well was connected to pipes;
d. Where such pipes are or were located, describing the location(s) and providing a map or diagram of such location(s);
e. When such pipes were installed;
f. How and when such pipes were replaced, repaired, or otherwise changed.

Response:

13. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

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

Response:

14. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

15. Describe any acts or omissions of any persons, other than your employees, agents, or those persons with whom you had a contractual relationship, that may have caused the release or threat of release of hazardous substances at the facility and damages relating therefrom and identify such persons. In addition:

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

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

Response:

15. HR Textron is not aware of any acts or omissions which may have caused a release or threat of release of hazardous substances at the Facilities. In response to "a" and "b", attached hereto is HR Textron's Safety Policy and Procedure Manual. In further response to "a" and "b", HR Textron has conducted training relative to the proper handling and disposal of hazardous materials. Attached hereto is attendance information for hazardous materials related training. The company conducts all of its operations in compliance with all applicable laws and regulations. The company has made significant investments with respect to removal of underground storage tanks, remediation, and introduction of procedures concerning the safe handling, use and storage of chemicals, both hazardous and non-hazardous. Also attached is HR Textron's Standards of Conduct Policy No. 55, which, among other things, provides company policy with respect to Equal Employment, Safety, Health and Environment matters. Security Procedures, attached hereto, and Business Conduct Guideline E-6, Environmental Protection.

Question:

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

a. The name and address of each insurer and of the insured;
b. The amount of coverage under each policy;
c. The commencement and expiration dates for each policy;

In addition, submit a complete copy of each policy.

Response:

16. Textron objects to this request as being overly burdensome and prohibitively time consuming, particularly in light of the short period of time allowed for Textron to respond to the Request for Information. Moreover, insurance policies concerning Textron are considered confidential and privileged. Without waiving or limiting its objections, Textron responds that during the relevant periods of time, it was covered by insurance policies, both primary and excess protection, which

included standard Comprehensive General Liability (CGL) coverage with companies including Aetna Casualty and Surety Company, CIGNA and INA (see attached matrix). The CGL coverage for some years may have contained "pollution exclusion" language. Litigation over whether any, or all, of such policies cover or exclude sudden, non-sudden or both types of accidents has been commenced on Textron's behalf. This litigation continues, thus Textron cannot state at this time whether these policies will provide coverage.

Question:

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

Response:

17. Textron Inc. files a consolidated return, which includes all of its subsidiaries (including HR Textron Inc.). Attached is Textron Inc.'s Annual Reports for the last five years, as well as an updated report for the first quarter of 1991. Textron believes that the provided information demonstrates Textron's financial ability to pay for costs of environmental remediation, should any be required. If you have further requirements for financial information, please contact HR Textron Inc.

Question:

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

Response:

18. Textron Inc. files a consolidated return, which includes all of its subsidiaries (including HR Textron Inc.). Attached is Textron Inc.'s Annual Reports for the last five years, as well as an updated report for the first quarter of 1991. Textron believes that the provided information demonstrates Textron's financial ability to pay for costs of environmental remediation, should any be required. If you have further requirements for financial information, please contact HR Textron Inc.

Question:

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

Response:

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Question:

20. Identify all subsidiaries and parent corporations of Respondent.

Response:

20. HR Textron has no subsidiary companies. HR Textron is wholly owned by Textron Inc.

Question:

21. Provide a copy of the most current articles of incorporation and by-laws of Respondent.

Response:

21. Attached.

Question:

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

Response

22. Attached is a senior level organization chart, and board resolution identifying officers and signature authority.

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PRC ENVIRONMENTAL MANAGEMENT, INC.

HR TEXTRON

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July 1, 1991

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Very truly yours,

J.W. Hedges
Vice President Contracts
and Production Programs

Enclosures

EXHIBIT A

Question:

1. List the EPA RCRA Identification Numbers of the Respondent.

Response:

1. The EPA number for the Facility is CAD041162330.

Question:

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

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2. From the inception of the lease (September 27, 1965), the Facilities have been used to design, develop, manufacture, assemble and test a variety of aerospace components, principally fuel and pneumatics products, filtration products, and hydraulic flight control systems and components.

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   a. The dates of ownership;

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

Response:

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

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

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

a. The nature and scope of these investigations;
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Question:

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

Response:

9. HR Textron is not aware of information pertaining to releases or threatened releases from the Facilities during any period of someone else's ownership or occupancy of the Facilities. Reports or investigations conducted prior to HR's occupancy, if existing, are not presently known to HR Textron.

Question:

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

Response:

10. HR Textron is not aware of information pertaining to releases or threatened releases from the Facilities during any period of someone else's ownership or occupancy of the Facilities. Reports or investigations conducted prior to HR's occupancy, if existing, are not presently known to HR Textron.

Question:

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

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

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

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

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

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

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

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

a. When such releases occurred or may occur;
b. How the releases occurred or may occur;
c. What hazardous materials were released or may be released;
d. What amount of each such hazardous material was so released;
e. Where such releases occurred or may occur, describing the location(s) and providing a map or diagram of such location(s);
f. Any and all activities undertaken in response to each such release or threatened release;
g. Any and all investigations of the circumstances, nature, extent, or location of each such release or threatened release, including the results of any soil, water (ground and surface), or air testing that was undertaken;
h. Whether any report(s) of any such release(s) was (were) made to any public agency, and the content of that (those) report(s);
i. All persons with information relating to subparts a. through h. of this Question.

Response:

12. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

13. If any releases or threatened release identified in response to Question 12, above, occurred into any subsurface disposal system, floor drain, sump, or dry well inside or under any

buildings located on the facility, further identify:

a. Precisely where the disposal system, floor drain, sump, or dry well is and was located;
b. When the disposal system, floor drain, sump, or dry well was installed;
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13. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

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

Response:

14. Attached is a memo from M.L. Ameel to John Hedges (with Exhibits) dated June 24, 1991, responsive to this question.

Question:

15. Describe any acts or omissions of any persons, other than your employees, agents, or those persons with whom you had a contractual relationship, that may have caused the release or threat of release of hazardous substances at the facility and damages relating therefrom and identify such persons. In addition:

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

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

Response:

15. HR Textron is not aware of any acts or omissions which may have caused a release or threat of release of hazardous substances at the Facilities. In response to "a" and "b", attached hereto is HR Textron's Safety Policy and Procedure Manual. In further response to "a" and "b", HR Textron has conducted training relative to the proper handling and disposal of hazardous materials. Attached hereto is attendance information for hazardous materials related training. The company conducts all of its operations in compliance with all applicable laws and regulations. The company has made significant investments with respect to removal of underground storage tanks, remediation, and introduction of procedures concerning the safe handling, use and storage of chemicals, both hazardous and non-hazardous. Also attached is HR Textron's Standards of Conduct Policy No. 55, which, among other things, provides company policy with respect to Equal Employment, Safety, Health and Environment matters. Security Procedures, attached hereto, and Business Conduct Guideline E-6, Environmental Protection.

Question:

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

a. The name and address of each insurer and of the insured;
b. The amount of coverage under each policy;
c. The commencement and expiration dates for each policy;

In addition, submit a complete copy of each policy.

Response:

16. Textron objects to this request as being overly burdensome and prohibitively time consuming, particularly in light of the short period of time allowed for Textron to respond to the Request for Information. Moreover, insurance policies concerning Textron are considered confidential and privileged. Without waiving or limiting its objections, Textron responds that during the relevant periods of time, it was covered by insurance policies, both primary and excess protection, which

included standard Comprehensive General Liability (CGL) coverage with companies including Aetna Casualty and Surety Company, CIGNA and INA (see attached matrix). The CGL coverage for some years may have contained "pollution exclusion" language. Litigation over whether any, or all, of such policies cover or exclude sudden, non-sudden or both types of accidents has been commenced on Textron's behalf. This litigation continues, thus Textron cannot state at this time whether these policies will provide coverage.

Question:

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

Response:

17. Textron Inc. files a consolidated return, which includes all of its subsidiaries (including HR Textron Inc.). Attached is Textron Inc.'s Annual Reports for the last five years, as well as an updated report for the first quarter of 1991. Textron believes that the provided information demonstrates Textron's financial ability to pay for costs of environmental remediation, should any be required. If you have further requirements for financial information, please contact HR Textron Inc.

Question:

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

Response:

18. Textron Inc. files a consolidated return, which includes all of its subsidiaries (including HR Textron Inc.). Attached is Textron Inc.'s Annual Reports for the last five years, as well as an updated report for the first quarter of 1991. Textron believes that the provided information demonstrates Textron's financial ability to pay for costs of environmental remediation, should any be required. If you have further requirements for financial information, please contact HR Textron Inc.

Question:

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

Response:

19. Textron Inc. files a consolidated return, which includes all of its subsidiaries (including HR Textron Inc.). Attached is Textron Inc.'s Annual Reports for the last five years, as well as an updated report for the first quarter of 1991. Textron believes that the provided information demonstrates Textron's financial ability to pay for costs of environmental remediation, should any be required. If you have further requirements for financial information, please contact HR Textron Inc.

Question:

20. Identify all subsidiaries and parent corporations of Respondent.

Response:

20. HR Textron has no subsidiary companies. HR Textron is wholly owned by Textron Inc.

Question:

21. Provide a copy of the most current articles of incorporation and by-laws of Respondent.

Response:

21. Attached.

Question:

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

Response

22. Attached is a senior level organization chart, and board resolution identifying officers and signature authority.

FIRST CLASS

HR TEXTRON

H R Textron Inc.
a Subsidiary of Textron Inc.

25200 West Rye Canyon Road
Valencia, Calif. 91355-1265
J. W. Hedges

Mr. Chris Stubbs
South Coast Groundwater Section (H-6-4)
U.S. Environmental Protection Agency
P.O. Box 193036
San Francisco, CA 92111-3036

The Controls Company

2166-04743

EXHIBIT D

TEXTRON ENVIRONMENTAL SELF SURVEY

RESPONSE TO QUESTION #7 PAGE 9

2166-04743

COMPANY PRIVATE

TEXTRON
ENVIRONMENTAL SURVEY

APRIL 1989

Prepared by:

Environmental Resources Management, Inc.
Exton, PA

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35?-5

TEXTRON
ENVIRONMENTAL SURVEY

Table of Contents

Introduction	
Section 1	Facility Background Information
Section 2	Facility Chemical Use
Section 3	CERCLA
Section 4	Community Right-to-Know
Section 5	Air Emissions
Section 6	Water and Wastewater
Section 7	Drinking Water
Section 8	Nonhazardous Waste
Section 9	Hazardous Waste
Section 10	Storage Tanks
Section 11	Used Oil
Section 12	Polychlorinated Biphenyls
Section 13	Asbestos
Section 14	Ground Water
Section 15	Community Relations
Appendix 1	Attachments
Appendix 2	Example Forms

TEXTRON
ENVIRONMENTAL SURVEY

INTRODUCTION

Purpose: The Textron Environmental Facility Self-Survey was developed by the Corporate Environmental Affairs Department to help facilities determine the status of their environmental programs. The Self-Survey provides facilities with the comprehensive information they need to identify potential program weaknesses. The program addresses not only compliance with regulatory requirements and corporate policies and procedures, but also liability and good management practice issues. The program also includes environmental guidance information, and therefore it is anticipated that completing the Self-Survey will be an educational process. As the Self-Survey also methodically reviews environmental activities, it provides an opportunity for a facility to organize its environmental files.

The Corporate Environmental Affairs Department plans to expand and update the Self-Survey each year. The Department also plans to help a number of facilities complete the review starting in 1989.

If you have any questions or suggestions regarding the Self-Survey, please contact your Divisional Environmental Coordinator or the Environmental Affairs Department at (401) 457-2363 or (401) 457-2347.

Use of the Self-Survey: Sections 2 to 15 of the Textron Environmental Self-Survey have two components:

- A series of survey questions
- A corresponding set of guidance information

The Self-Survey questions are located on the right-hand pages of the manual. They are intended to enable each facility to review its operations procedures against a standard, comprehensive set of criteria. At the beginning of most sections or subsections, there is an applicability statement which will enable the facility to determine if it is required to complete that set of questions. If there is not an applicability statement, all facilities must complete the questions. Answer the questions by checking one of the answer columns. Use the "Not Applicable" option only when a blank line has been provided.

Some questions will request that you provide additional information. Please provide the additional information in the space below the question or on one of the Self-Survey attachments found in the Appendix Section. Blank copies of each attachment are included for you to copy before use. If a question requests that you confirm

specific information, verify that a copy of the information is in your files. If the Corporate Environmental Affairs Department visits your facility, it is important that all information be available and be well organized. A copy of all information discussed in this Self-Survey must be located in one file cabinet in the Plant Environmental Coordinator's office. Copies of information should be organized according to the sections of this Self-Survey.

Question-specific guidance information has been provided on the left-hand pages of the Self-Survey. This information is intended to help the facility answer the questions. The guidance includes definitions, explanations of requirements, and/or regulatory citations. Additional guidance is provided at the beginning of each section.

Please note that the Self-Survey questions and guidance address federal requirements only. Facilities must actually comply with federal, state and local requirements. ***Be sure to obtain information regarding state and local requirements and consider these requirements in your survey process.***

IMPORTANT NOTE

If during this survey you discover or have reason to believe there is non-compliance with any regulation, rule, ordinance, role, or permit, or any other situation which could give rise to liability (e.g., release, spill, etc.), immediately contact the Textron Litigation Counsel (Andrew C. Spacone, (401)457-2428) or in his absence, the Director of Environmental Affairs (Paul B. Duff, (401)457-2437) or someone on either staff.

Do not provide any response that would indicate non-compliance until the above has been accomplished.

SECTION 1

FACILITY BACKGROUND INFORMATION

DIVISIONAL INFORMATION

Name: HR TEXTRON INC.

Divisional Environmental Coordinator: STEVE HART

FACILITY INFORMATION

Name: HR TEXTRON INC.

Date: JUNE 1989

Location: VALENCIA & PACOIMA, CA

Bldg: 1,2,3,4,5,6,10,11,14

Telephone: 805-259-4030

Telecopier: 805-259-9622

Primary Plant Environmental Coordinator:

STEVE HART

Title: MANAGER, FUNCTIONAL CERTIFICATION

Backup Plant Environmental Coordinator:

NONE

Title:

Products: AEROSPACE FLIGHT CONTROLS

SIC Codes: 3728, 3769, 3494, 3622

Employees:

No. of Hourly: 600

No. of Salary: 800

Building Data:

Building No.:	1	Square feet	185,000
	2		33,325
	3		51,345
	4		12,000
Building No.:	5	Square feet	12,240
	6		3,775
Building No.:	10	Square feet	8,000
	11		30,000
	14		24,000

(SEE ATTACHED INDIVIDUAL SHEETS)

Property Area: _____ Acres

_____ % Covered by building

_____ % Paved

Owner: _____

If leased, specify term: _____

_____

Other tenants, if applicable: _____

Description of land use in vicinity of facility: _____

_____

_____

Provide a map, layout or plot plan (preferably, 8-1/2 x 11" or 11 x 14") that shows facility boundaries, surrounding land use, and major transportation routes. If not depicted on the map, provide distances to major population centers, other industrial facilities (label and identify type of operation) and significant public buildings e.g., schools and hospitals.

On the map provided above or another plan, show the configuration of the facility. Label all buildings and process areas. Identify areas where chemicals are used or stored. Include significant topographical features, e.g., rivers, lakes, etc.

Number of years Textron has operated the facility: _____

Number of years facility has operated in current configuration: _____

Description and date of major reconstruction projects: _____

_____

_____

Prior uses of facility property (try to reconstruct usage back to when property was virgin land): _____

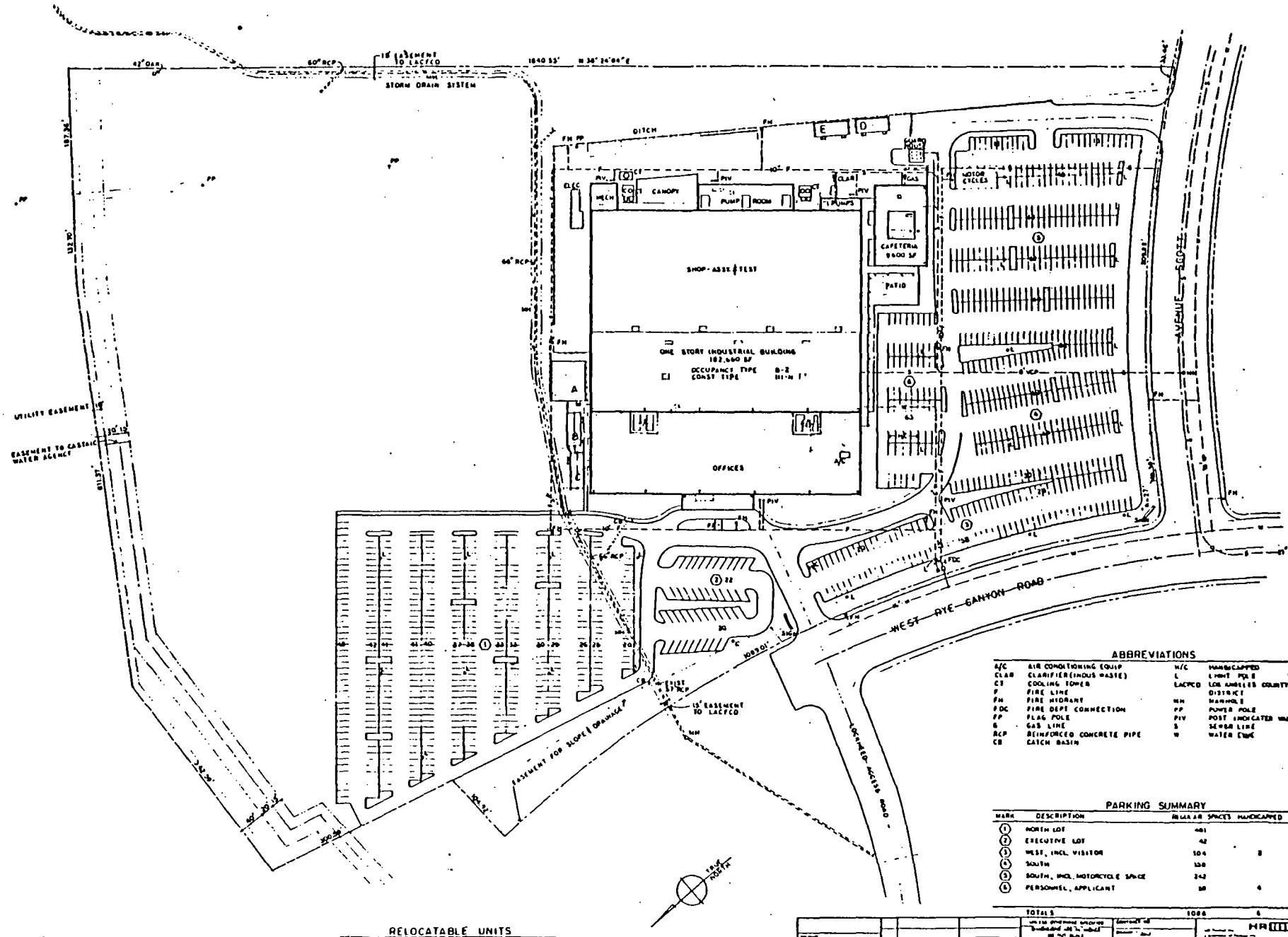
_____

_____

Please make an effort to obtain aerial photographs. These can be obtained from the library, public works, airport, weather service, or city hall.

Describe, in general terms, current manufacturing and other operations conducted at the facility. Locate these processes on the facility plan.

Process Name	***Description*** ***(Include Size or Production Rate)***	***Raw Materials***
Example:		
Injection Molding	Produces plastic parts	PVC and solvents
Wastewater Treatment	Plating operation only; 10,000 gph	Peroxide



ABBREVIATIONS

A/C	AIR CONDITIONING EQUIP	H/C	HANDICAPPED
CLAR	CLARIFIER (INDUS WASTE)	L	LIGHT POLE
CT	COOLING TOWER	LACFCD	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
F	FIRE LINE		
FH	FIRE HYDRANT	MH	MANHOLE
FDC	FIRE DEPT CONNECTION	PP	POWER POLE
FP	FLAG POLE	PIV	POST INDICATER VALVE (PWBE)
G	GAS LINE	S	SEWER LINE
RCP	REINFORCED CONCRETE PIPE	W	WATER LINE
CB	CATCH BASIN		

PARKING SUMMARY

MARK	DESCRIPTION	REGULAR SPACES	HANDICAPPED	COMPACT	TOTAL
1	NORTH LOT	401			401
2	EXECUTIVE LOT	42			42
3	WEST, INCL. VISITOR	104	2		106
4	SOUTH	138			138
5	SOUTH, INCL. MOTORCYCLE SPACE	242			242
6	PERSONNEL, APPLICANT	59	4		63
	TOTALS	1086	6		1092

RELOCATABLE UNITS

DESIGNATION	SIZE	AREA (SF)	USE
A	24 x 80'	3840	ENGR OFFICES
B	50 x 20	1000	ENGR OFFICES
C	50 x 20'	1000	ENGR OFFICES
D	50 x 20'	1000	FACILITIES ENGR OFFICES
E	50 x 20	1000	INDUSTRIAL VALVE MFG

HUGHES AIRCRAFT COMPANY

SITE PLAN

VALENCIA FACILITY
28100 WEST RYE CANYON ROAD
VALENCIA, CA.

E 81873

608

B26

BUILDING 1

Property Area: 34 Acres
13 % Covered by building
34 % Paved

Owner: HR TEXTRON, INC.

If leased, specify term: N/A

Other tenants, if applicable: N/A

Description of land use in vicinity of facility: INDUSTRIAL PARK

Provide a map, layout or plot plan (preferably, 8-1/2 x 11" or 11 x 14") that shows facility boundaries, surrounding land use, and major transportation routes. If not depicted on the map, provide distances to major population centers, other industrial facilities (label and identify type of operation) and significant public buildings e.g., schools and hospitals.

On the map provided above or another plan, show the configuration of the facility. Label all buildings and process areas. Identify areas where chemicals are used or stored. Include significant topographical features, e.g., rivers, lakes, etc.

Number of years Textron has operated the facility: 20

Number of years facility has operated in current configuration: 20

Description and date of major reconstruction projects:

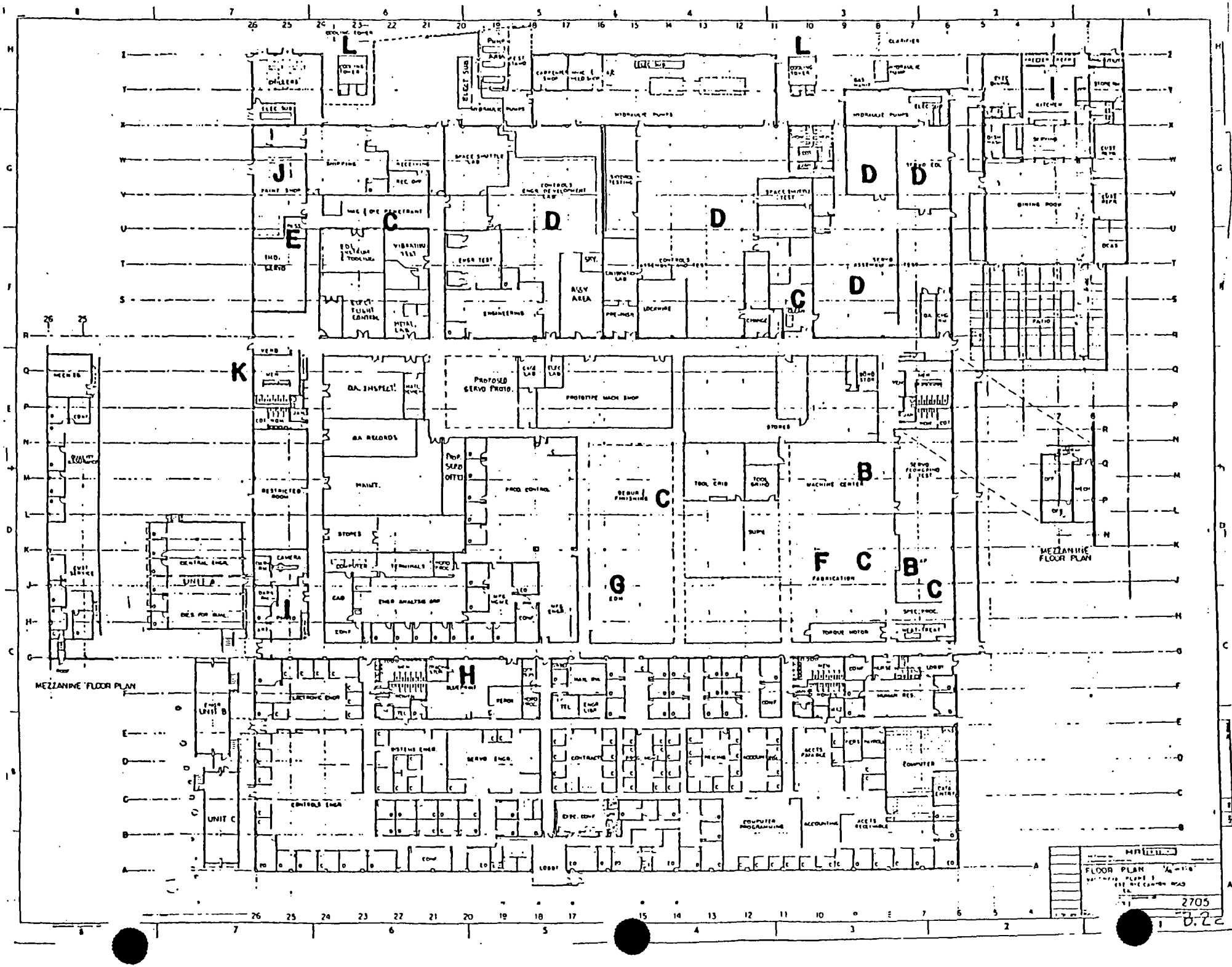
Prior uses at facility property (try to reconstruct usage back to when property was virgin land): FARM LAND

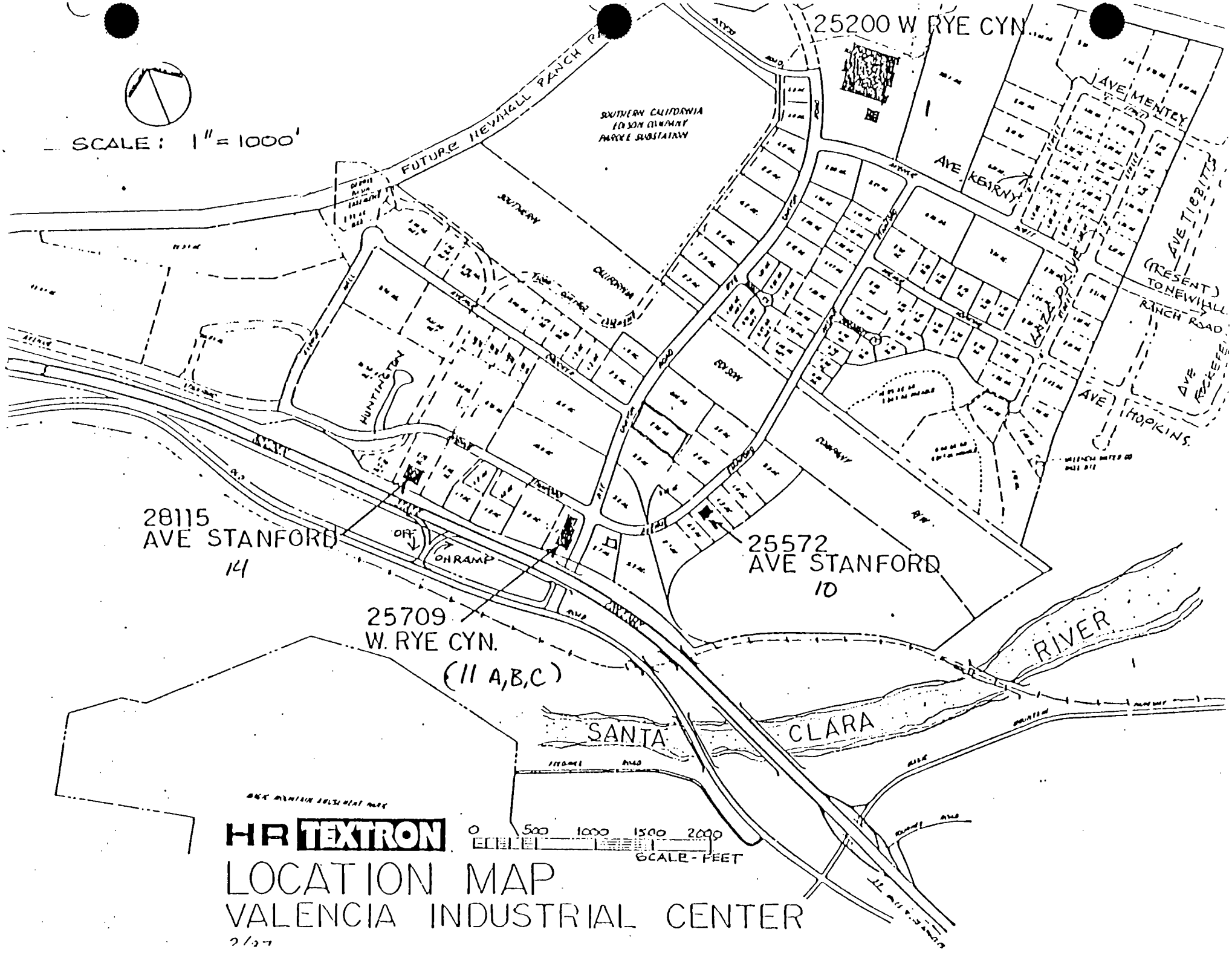
Please make an effort to obtain aerial photographs. These can be obtained from the library, public works, airport, weather service, or city hall.

Building 1

Describe, in general terms, current manufacturing and other operations conducted at the facility. Locate these processes on the facility plan.

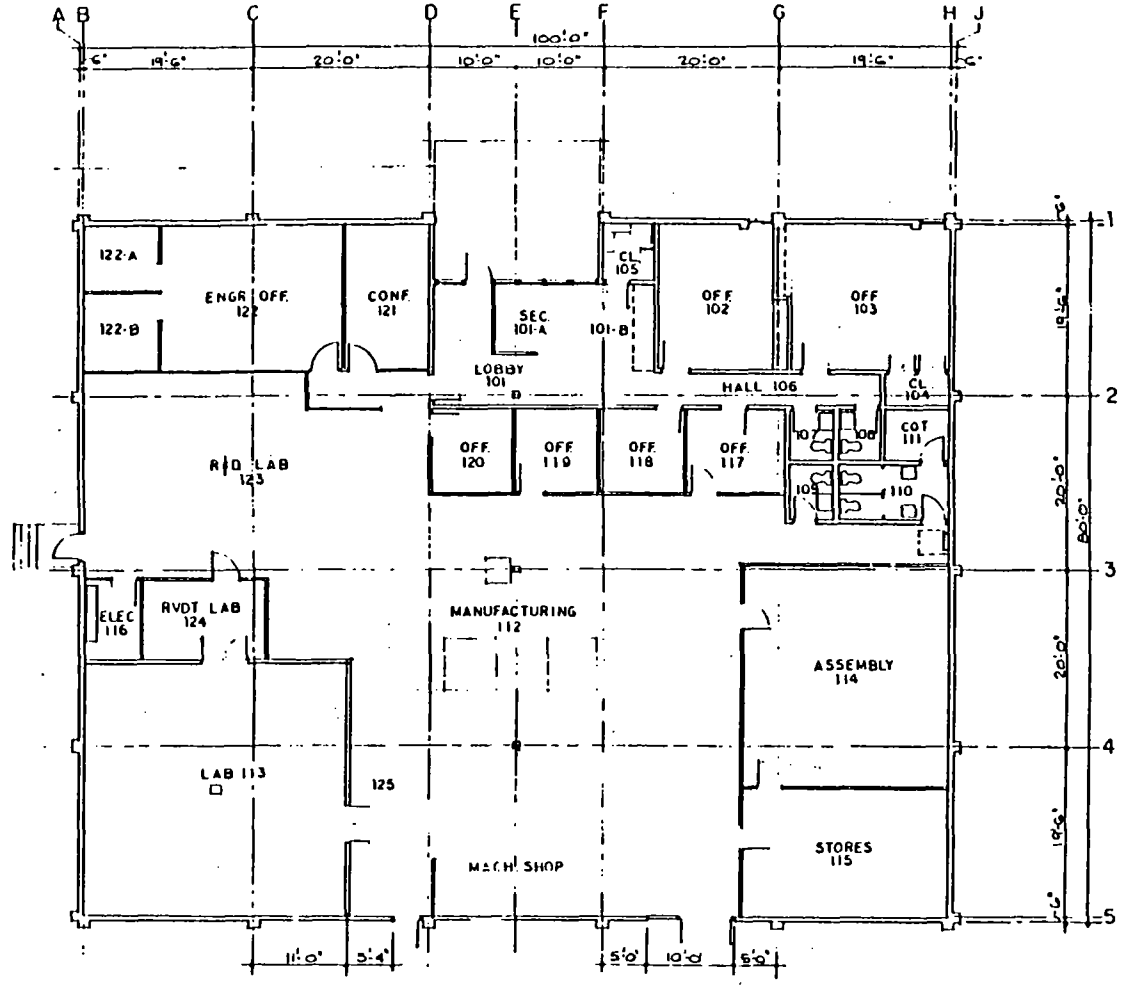
Process Name	*Description (Include Size or Production Rate)*	*Raw Materials*
Example:		
Injection Molding	Produces plastic parts	PVC and solvents
Wastewater Treatment	Plating operation only; 10,000 gph	Peroxide
A. Machining	Cut & Grind	MP+2 (water soluble)
B. Parts cleaning	Wash	Stoddard solvent
C. Parts cleaning	Degrease	Freon or 1,1,1 Trich.
D. Testing	Hydraulic test 500-1000 psi	MIL-H-5606 MIL-H-83282
E. Etching	Passivate	Nitric acid
F. Plating	Polishing	Phosphoric acid Sulfuric acid
G. EDM		Oil (dielectric)
H. Blueprint	Blueprint	Ammonia
I. Photo shop	Photography	Silver
J. Spray booth	Paint spray	Paint & MEK
K. Air scrubber	Underground water	Active carbon
L. Cooling tower	Cooling tower	Anaacor 2569


MEZZANINE FLOOR PLAN
MEZZANINE FLOOR PLAN
FLOOR PLAN
2705
B.22

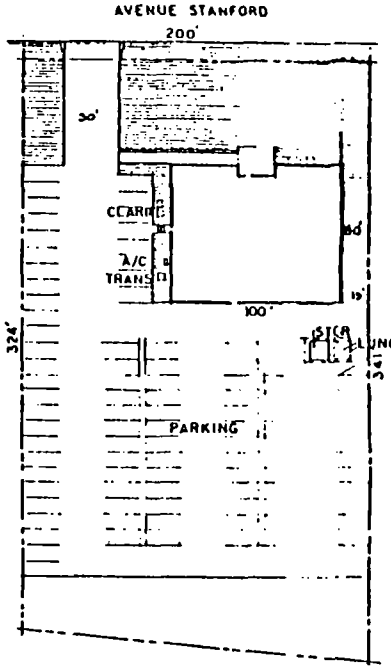


HR TEXTRON

LOCATION MAP
VALENCIA INDUSTRIAL CENTER



FLOOR PLAN
1/8"-1'-0"



PLOT PLAN
1"-40'

DWG NO	SH	REV

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED

WEIGHT			
STRESS			
D A		11.26.85	
VAL ENGRG		6.5.85	
MATL	DASH NO	8/31/83 NEXT ASSEMBLY	USED ON
		APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DO NOT SCALE
TOLERANCES: ANGLES ± 0° 30'
.XX ± .01 .XXX ± .005
REMOVE ALL BURRS
BREAK CORNERS .005 - .010
INTERNAL RADII .005 - .040
INTERPRET DRAWING PER DOD-STD-100
MATERIAL | HEAT TREAT | FINISH

CONTRACT NO	
DRAWN	
CHECKED	
APPROVED	
DESIGN APPROVED	
APPROVED	
ENGRG RLSE	
RELEASE DATE	

HARTRON
HR Textron Inc. a Subsidiary of Textron Inc. Valencia, Calif.

PLANT 10
25572 AVENUE STANFORD
VALENCIA, CA.

SIZE	FSCM NO	DRAWING NO	
D	81873	1801	
SCALE	WEIGHT	SHEET	

B.36

Building 10

Property Area: 1.53 Acres

12 % Covered by building

59 % Paved

Owner: MRS. MINNIE POPE, 585 VENTURE OUT, MESA, AZ 85202-8095

If leased, specify term: 5/31/90

Other tenants, if applicable: N/A

Description of land use in vicinity of facility: INDUSTRIAL PARK

Provide a map, layout or plot plan (preferably, 8-1/2 x 11" or 11 x 14") that shows facility boundaries, surrounding land use, and major transportation routes. If not depicted on the map, provide distances to major population centers, other industrial facilities (label and identify type of operation) and significant public buildings e.g., schools and hospitals.

On the map provided above or another plan, show the configuration of the facility. Label all buildings and process areas. Identify areas where chemicals are used or stored. Include significant topographical features, e.g., rivers, lakes, etc.

Number of years Textron has operated the facility: 12

Number of years facility has operated in current configuration: 12

Description and date of major reconstruction projects: N/A

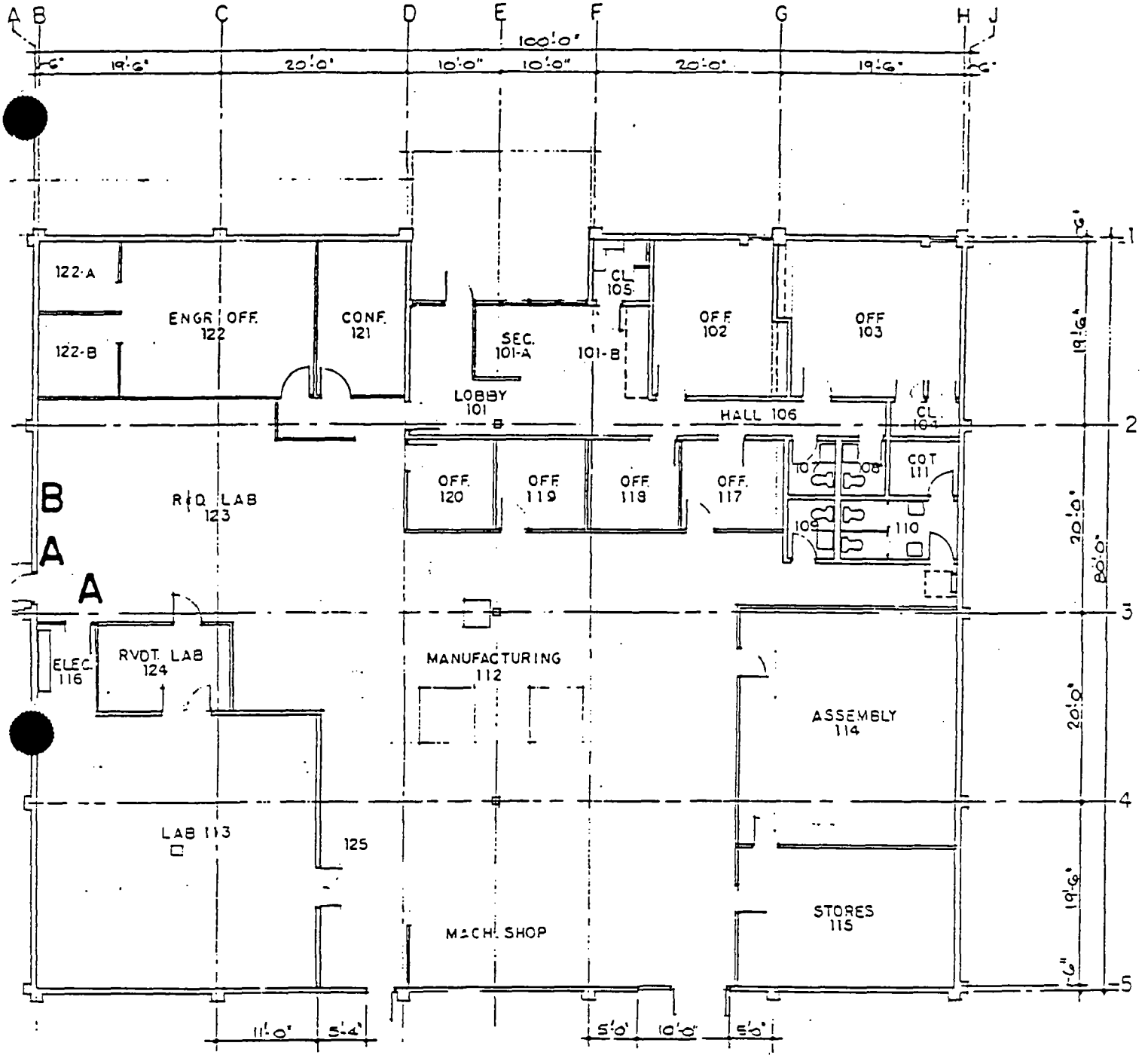
Prior uses of facility property (try to reconstruct usage back to when property was virgin land): FARM LAND

Please make an effort to obtain aerial photographs. These can be obtained from the library, public works, airport, weather service, or city hall.

Building 10

Describe, in general terms, current manufacturing and other operations conducted at the facility. Locate these processes on the facility plan.

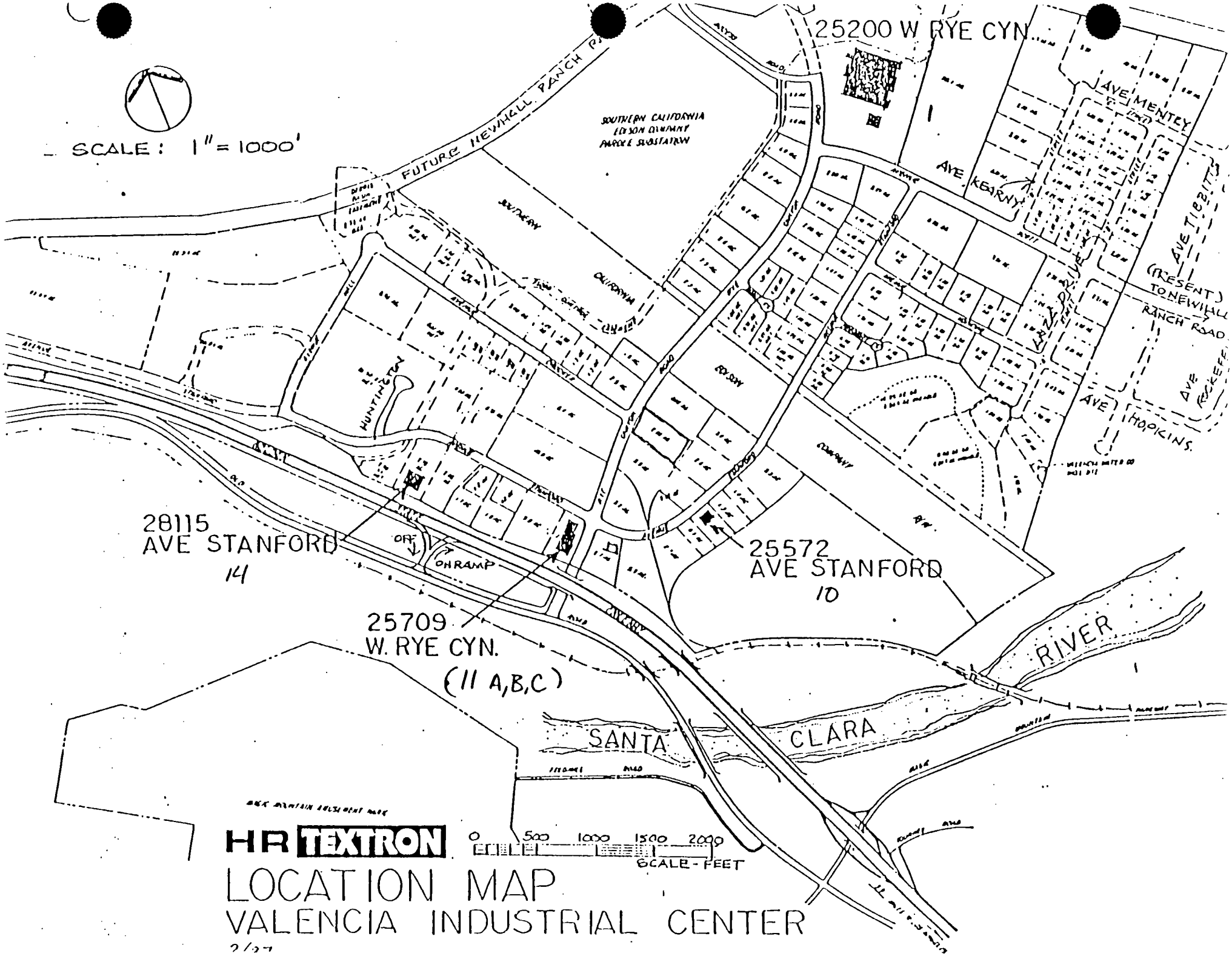
Process Name	*Description (Include Size or Production Rate)*	*Raw Materials*
Example:		
Injection Molding	Produces plastic parts	PVC and solvents
Wastewater Treatment	Plating operation only; 10,000 gph	Peroxide
A. Clenaing	Degrease	Freon or 1,1,1 Trich.
B. Cleaning	Wash	Stoddard solvent

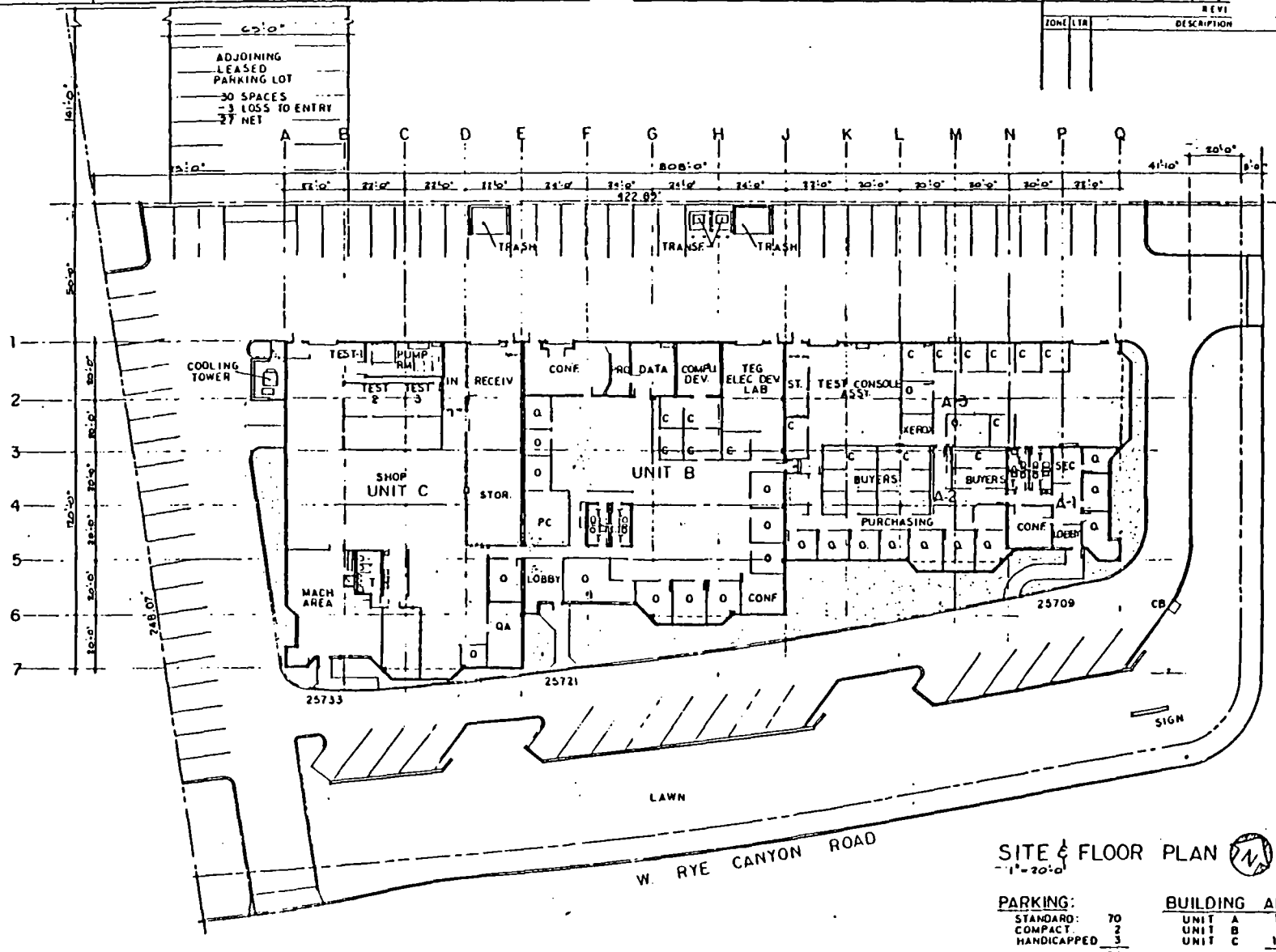


FLOOR PLAN
1/8"=1'-0"

HR TEXTRON PL 10

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE
WEIGHT		TOLERANCES: ANGLES = 0° 30' .XX = .01 .XXX = .005 REMOVE ALL BURRS BREAK CORNERS .005 - .010 INTERNAL RADII .005 - .010 INTERPRET DRAWING PER
STRESS	11.26.85	
Q A	G.B.85	


SCALE: 1" = 1000'
FUTURE NEWHALL RANCH RD
SOUTHERN CALIFORNIA EDISON COMPANY
25200 W RYE CYN.
AVE MENTRY
AVE KEARNY
AVE TIBBITT
(PRESENT) NEWHALL RANCH ROAD
LAZY D DRIVE
AVE HOPKINS
AVE ROCKEFELLER
HUNTINGTON
28115 AVE STANFORD 14
OFF
ON RAMP
25709 W. RYE CYN. (11 A,B,C)
25572 AVE STANFORD 10
SANTA CLARA RIVER
HR TEXTRON
0 500 1000 1500 2000
SCALE - FEET
LOCATION MAP
VALENCIA INDUSTRIAL CENTER
2/27



SITE & FLOOR PLAN
1"=20'-0"

PARKING:

STANDARD:	70
COMPACT	2
HANDICAPPED	3
TOTAL	75
ADJOING LOT	27
TOTAL	102

BUILDING AREA:

UNIT	A	10,001 SF
UNIT	B	9,586
UNIT	C	10,413
TOTAL		30,000 SF

WEIGHT		
STRESS		2.11.87
Q A		11.26.85
VAL ENGRG		4.25.83
MATL	DASH NO / NEXT ASSEMBLY	USED ON
	APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE
TOLERANCES: ANGLES ± 0° 30' .XX ± .01 .XXX ± .005
REMOVE ALL BURRS
BREAK CORNERS .005 - .010
INTERNAL RADII .005 - .010
INTERPRET DRAWING PER DOD STD-100
MATERIAL / HEAT TREAT / FINISH

CONTRACT NO
DRAWN AW
CHECKED
APPROVED
DESIGN APPROVED
APPROVED
ENGRG RLSE
RELEASE DATE

HR TEXTRON
HR Textron Inc. a Subsidiary of Textron Inc. Valencia, Calif.

PLANT 11 FACILITY
25709-721-733 W. RYE CANYON ROAD
VALENCIA, CA.

SIZE D | FSCM NO 81873 | DRAWING NO 910
SCALE | WEIGHT | SHEET

B.4

Building 11

Property Area: 2.02 Acres

34 % Covered by building

46 % Paved

Owner: NEWHALL LAND & FARM, P.O. BOX 55000, Valencia, CA 91355

If leased, specify term: 3/31/90

Other tenants, if applicable: N/A

Description of land use in vicinity of facility: INDUSTRIAL PARK

Provide a map, layout or plot plan (preferably, 8-1/2 x 11" or 11 x 14") that shows facility boundaries, surrounding land use, and major transportation routes. If not depicted on the map, provide distances to major population centers, other industrial facilities (label and identify type of operation) and significant public buildings e.g., schools and hospitals.

On the map provided above or another plan, show the configuration of the facility. Label all buildings and process areas. Identify areas where chemicals are used or stored. Include significant topographical features, e.g., rivers, lakes, etc.

Number of years Textron has operated the facility: 10

Number of years facility has operated in current configuration: 10

Description and date of major reconstruction projects: N/A

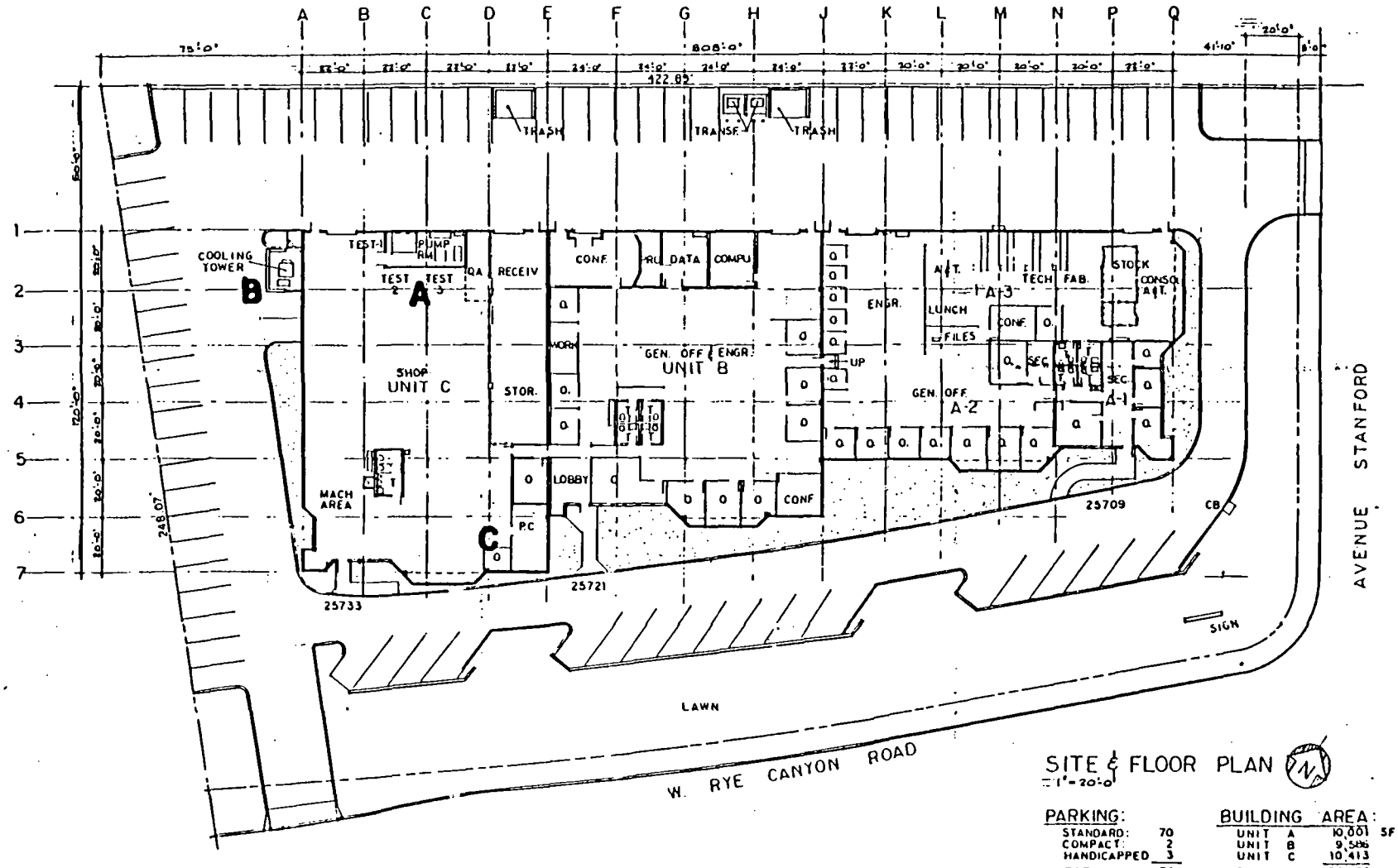
Prior uses of facility property (try to reconstruct usage back to when property was virgin land): FARM LAND

Please make an effort to obtain aerial photographs. These can be obtained from the library, public works, airport, weather service, or city hall.

Building 11

Describe, in general terms, current manufacturing and other operations conducted at the facility. Locate these processes on the facility plan.

Process Name	*Description (Include Size or Production Rate)*	*Raw Materials*
Example:		
Injection Molding	Produces plastic parts	PVC and solvents
Wastewater Treatment	Plating operation only; 10,000 gph	Peroxide
A. Testing	Hydraulic 5000 psi	MIL-H-5606
B. Cooling tower	Cooling water	Sanacor 256P
C. Blueprint	Blueprint	Ammonia



SITE & FLOOR PLAN

1"=20'-0"

N

PARKING:		BUILDING AREA:		
STANDARD:	70	UNIT A	10,001	SF
COMPACT:	2	UNIT B	9,586	
HANDICAPPED	3	UNIT C	10,413	
TOTAL	75	TOTAL	30,000	SF

DWG NO	SH	REV
REVISION		
ZONE	LTR	DESCRIPTION

DATE	APPROVED

HR TEXTRON

PLANT II FACILITY
25709-721-733 W RYE CANYON ROAD
VALENCIA, CA.

SIZE	FSCM NO	DRAWING NO
D	81873	910

SCALE	WEIGHT	SHEET

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DO NOT SCALE
TOLERANCES: ANGLES ± 0° 30'
.XX ± .01 .XXX ± .005
REMOVE ALL BURRS
BREAK CORNERS .005 - .010
INTERNAL RADII .005 - .010
INTERPRET DRAWING PER
DOD STD 100

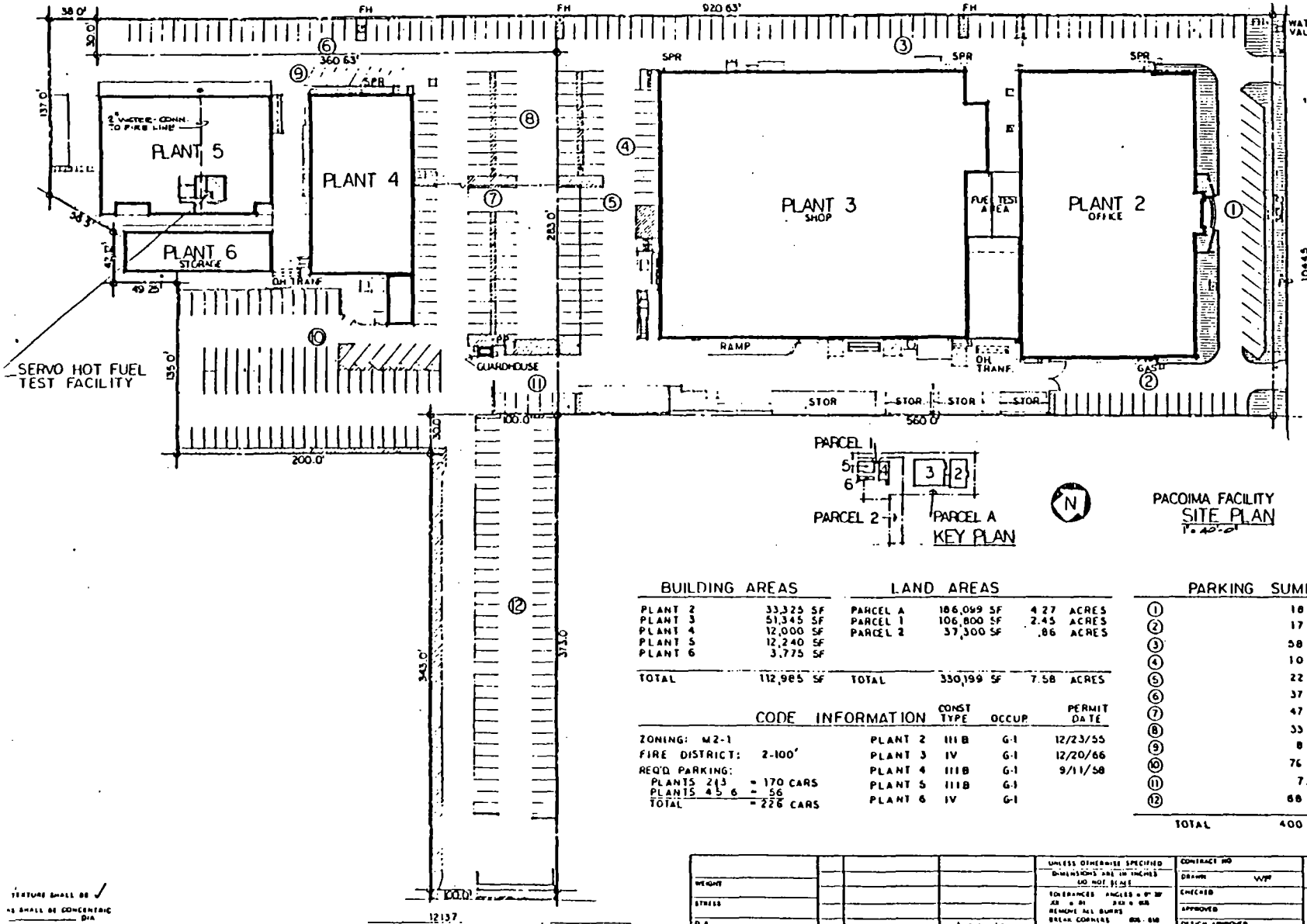
MATERIAL | HEAT TREAT | FINISH

CONTRACT NO
DRAWN
CHECKED
APPROVED
DESIGN APPROVED
APPROVED
ENGRG RLSE
RELEASE DATE

WEIGHT
STRESS
Q A
VAL ENGRG
MATL

DASH NO | NEXT ASSEMBLY | USED ON
4.25.83
APPLICATION

CENTRIC DIA
SPARES ONLY.
AND LATEST REV LTR.
SPECIFIED



BUILDING AREAS

PLANT 2	33,325	SF
PLANT 3	51,345	SF
PLANT 4	12,000	SF
PLANT 5	12,240	SF
PLANT 6	3,775	SF
TOTAL	112,985	SF

LAND AREAS

PARCEL A	186,099 SF	4.27	ACRES
PARCEL 1	106,800 SF	2.45	ACRES
PARCEL 2	37,300 SF	.86	ACRES
TOTAL	330,199 SF	7.58	ACRES

CODE INFORMATION

ZONING: M2-1
FIRE DISTRICT: 2-100'
REQ'D PARKING:
PLANTS 2&3 = 170 CARS
PLANTS 4 5 6 = 56
TOTAL = 226 CARS

	CONST TYPE	OCCUP	PERMIT DATE
PLANT 2	III B	G-1	12/23/55
PLANT 3	IV	G-1	12/20/66
PLANT 4	III B	G-1	9/11/58
PLANT 5	III B	G-1	
PLANT 6	IV	G-1	

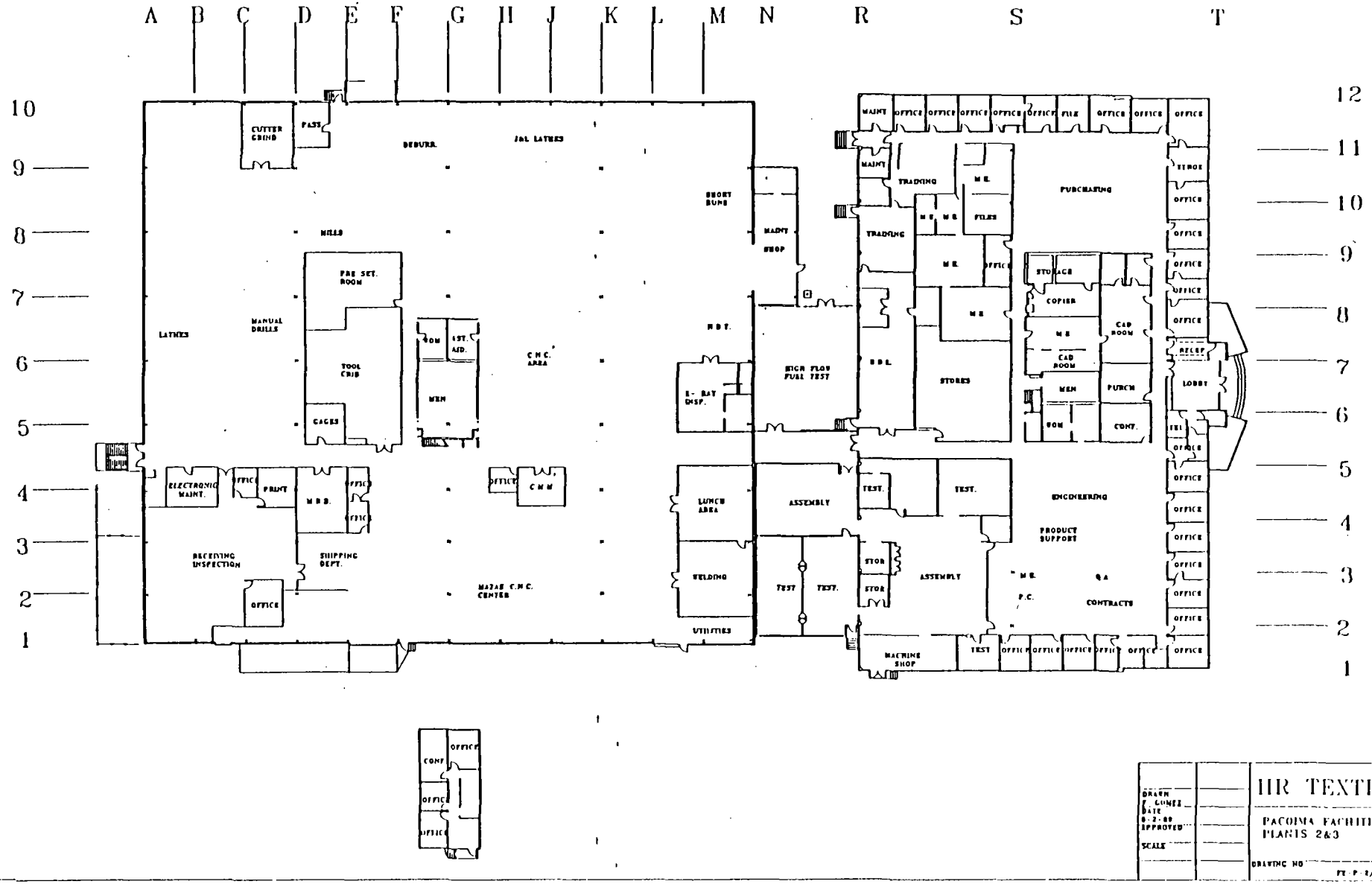
PARKING SUMMARY

①	18 SPACES
②	17
③	58
④	10
⑤	22
⑥	37
⑦	47
⑧	33
⑨	8
⑩	76
⑪	7
⑫	68
TOTAL	400 SPACES

HARTMAN

SERVO HOT FUEL TEST FACILITY
PACOIMA PLANT 5
12137 MONTAGUE ST
PACOIMA, CA.

SIZE D | FSCM NO 81873 | DRAWING NO 4503



DRAWN F. GOMEZ
DATE 8-2-89
APPROVED
SCALE

HR TEXTRON

PACOIMA FACILITIES
PLANTS 2&3

DRAWING NO

Buildings 2 & 3

Property Area: 4.27 Acres

45 % Covered by building

54 % Paved

Owner: William Tolson, 999 Green St., San Francisco, CA 94135

If leased, specify term: 9/30/2006

Other tenants, if applicable:

Description of land use in vicinity of facility: COMMERCIAL, INDUSTRIAL, RESIDENTIAL, RECREATIONAL

Provide a map, layout or plot plan (preferably, 8-1/2 x 11" or 11 x 14") that shows facility boundaries, surrounding land use, and major transportation routes. If not depicted on the map, provide distances to major population centers, other industrial facilities (label and identify type of operation) and significant public buildings e.g., schools and hospitals.

On the map provided above or another plan, show the configuration of the facility. Label all buildings and process areas. Identify areas where chemicals are used or stored. Include significant topographical features, e.g., rivers, lakes, etc.

Number of years Textron has operated the facility: 24

Number of years facility has operated in current configuration: 24

Description and date of major reconstruction projects: N/A

Prior uses of facility property (try to reconstruct usage back to when property was virgin land): UNK

ALUVIAL DRAIN BASIN

Please make an effort to obtain aerial photographs. These can be obtained from the library, public works, airport, weather service, or city hall.

Buildings 2 & 3

Describe, in general terms, current manufacturing and other operations conducted at the facility. Locate these processes on the facility plan.

Process Name	***Description (Include Size or Production Rate)***	***Raw Materials***
Example:		
Injection Molding	Produces plastic parts	PVC and solvents
Wastewater Treatment	Plating operation only; 10,000 gph	Peroxide
A. Testing	Hydraulic	Stoddard solvent
B. Testing	Hydraulic	Oil
C. Machining	Cutting	Oil mist
D. Spray booth	Marking	Ink

Buildings 4, 5, & 6

Property Area: 3.31 Acres

19 % Covered by building

80 % Paved

Owner: SUNDSTRAND CORP.

If leased, specify term: 9/30/2006

Other tenants, if applicable:

Description of land use in vicinity of facility: COMMERCIAL, INDUSTRIAL RESIDENTIAL, RECREATIONAL

Provide a map, layout or plot plan (preferably, 8-1/2 x 11" or 11 x 14") that shows facility boundaries, surrounding land use, and major transportation routes. If not depicted on the map, provide distances to major population centers, other industrial facilities (label and identify type of operation) and significant public buildings e.g., schools and hospitals.

On the map provided above or another plan, show the configuration of the facility. Label all buildings and process areas. Identify areas where chemicals are used or stored. Include significant topographical features, e.g., rivers, lakes, etc.

Number of years Textron has operated the facility: 23

Number of years facility has operated in current configuration: 23

Description and date of major reconstruction projects: N/A

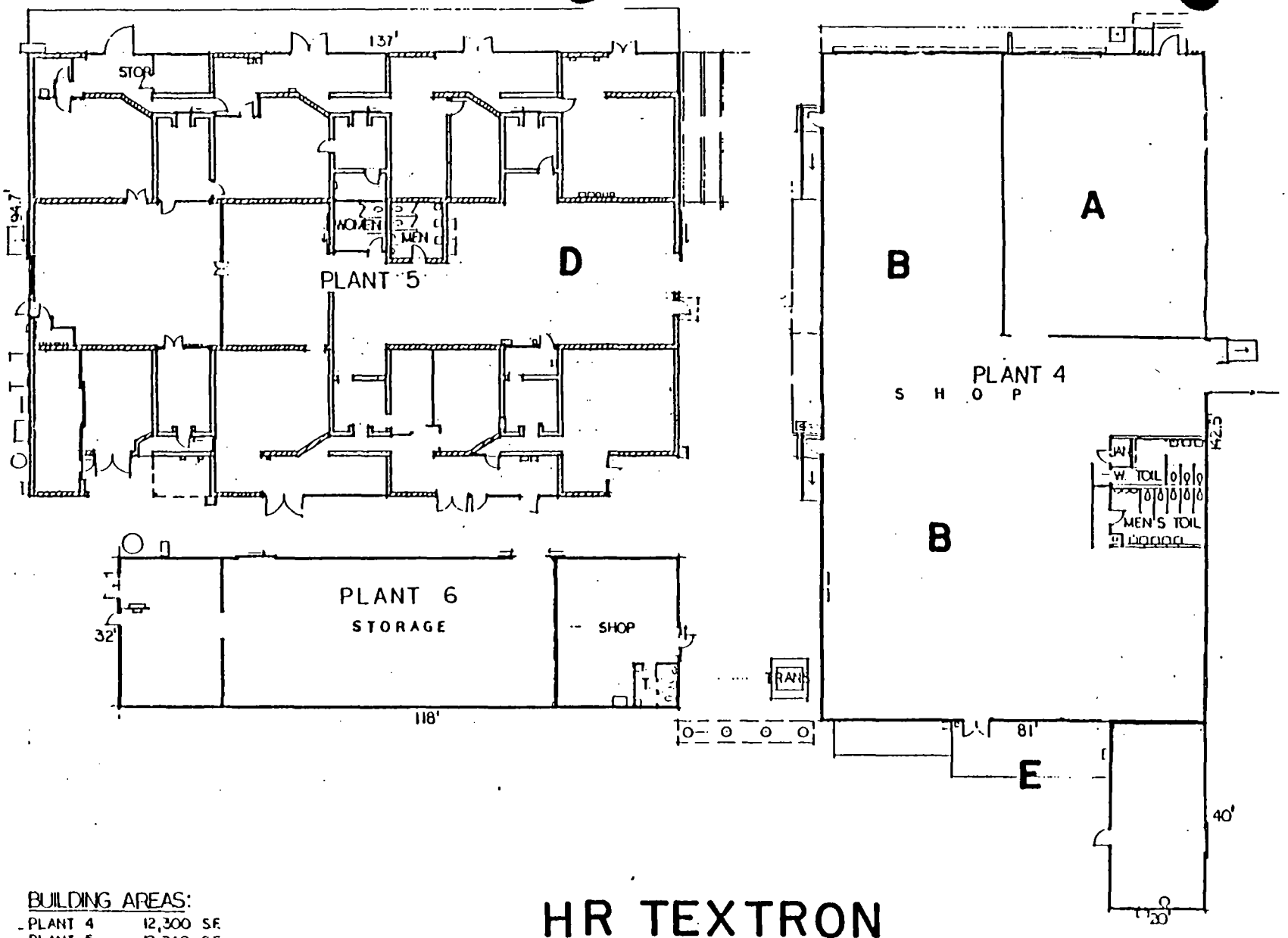
Prior uses of facility property (try to reconstruct usage back to when property was virgin land): UNK ALUVIAL DRAIN BASIN

Please make an effort to obtain aerial photographs. These can be obtained from the library, public works, airport, weather service, or city hall.

Buildings 4, 5, & 6

Describe, in general terms, current manufacturing and other operations conducted at the facility. Locate these processes on the facility plan.

Process Name	*Description (Include Size or Production Rate)*	*Raw Materials*
Example:		
Injection Molding	Produces plastic parts	PVC and solvents
Wastewater Treatment	Plating operation only; 10,000 gph	Peroxide
A. EDM		Oil mist
B. Grinding		Oil mist
C. Testing	Hydraulic	JP-5
D. Deburr	Sand blast	Dust
E. Cooling tower		Sanacor 2569



BUILDING AREAS:

- PLANT 4	12,300	S.F.
- PLANT 5	12,240	S.F.
- PLANT 6	3,775	S.F.
	28,315	S.F.

HR TEXTRON

SITE PLAN

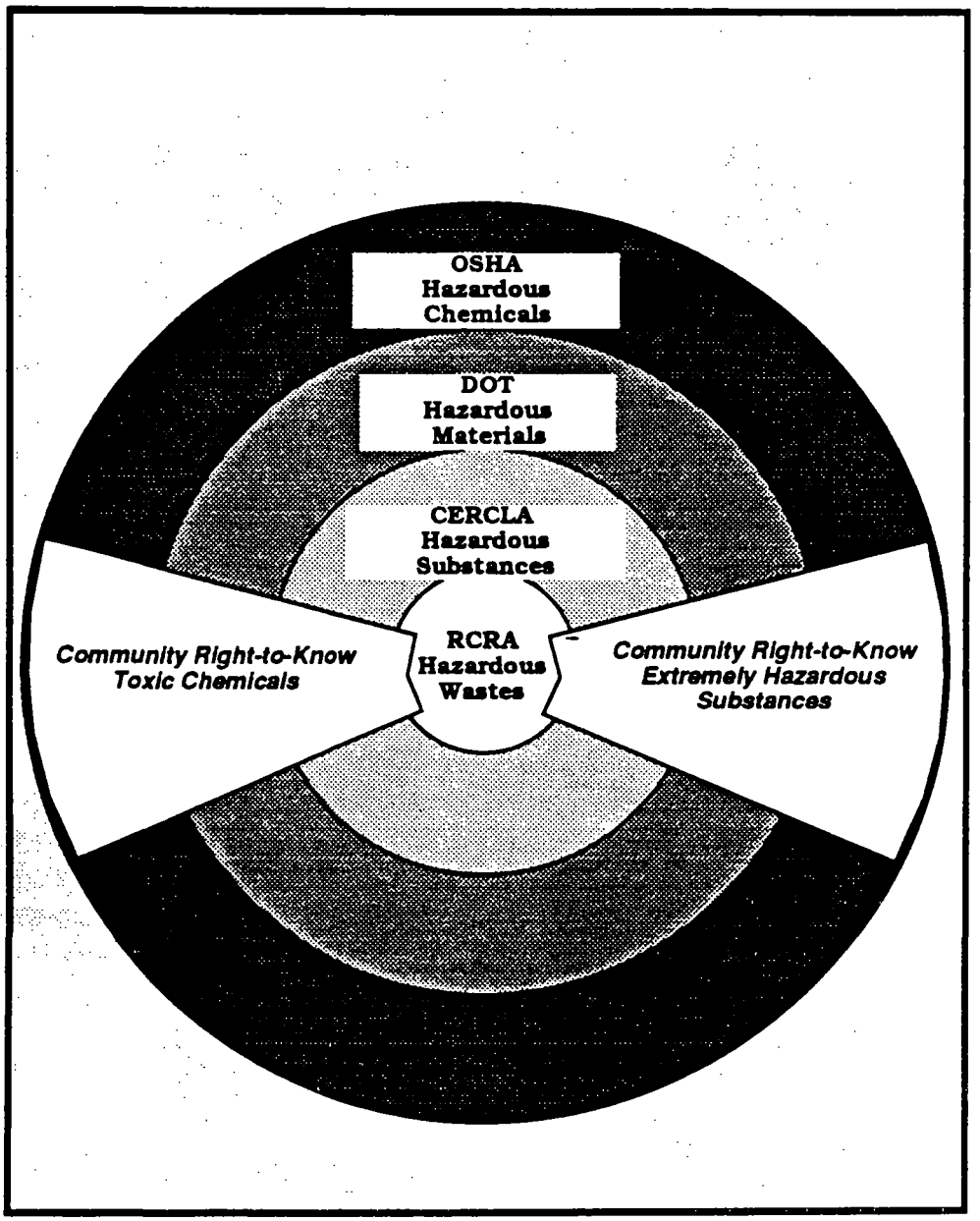
N

SECTION 2

FACILITY CHEMICAL USE

Introduction

Chemicals are regulated by many sets of regulations: The types of chemicals regulated by individual regulations are discussed in detail in other sections of this manual. The following diagram shows the interrelationship between several major regulations and the types of chemicals subject to each regulation.



SECTION 2

FACILITY CHEMICAL USE

Survey Questions

All facilities should complete this section.

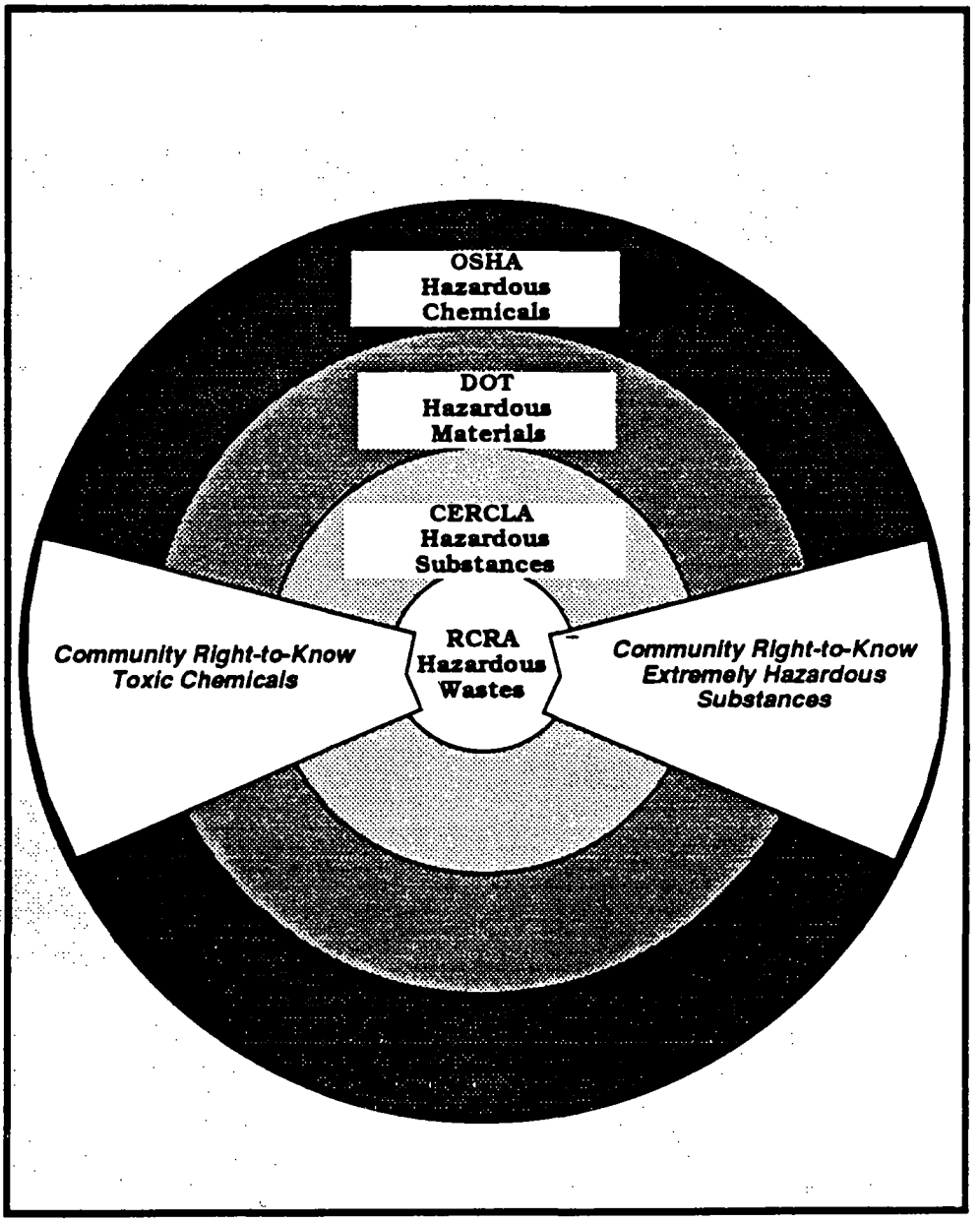
1. Use Attachment A to list each chemical used by the facility. Provide annual usage and storage amounts.

SECTION 2

FACILITY CHEMICAL USE

Introduction

Chemicals are regulated by many sets of regulations: The types of chemicals regulated by individual regulations are discussed in detail in other sections of this manual. The following diagram shows the interrelationship between several major regulations and the types of chemicals subject to each regulation.



SECTION 2

FACILITY CHEMICAL USE

Survey Questions

All facilities should complete this section.

1. Use Attachment A to list each chemical used by the facility. Provide annual usage and storage amounts.

ATTACHMENT "A"

CHEMICAL USEAGE

KEY
V = Valencia
V1 = Valencia Satellite
P = Pacoima
T = Total

TRADE NAME	CHEMICAL COMPOSITION CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
Kleen B Industrial Chm. Supply Chem-Tab Chemical Corp	Ethylene Glycol Monobutyl Ether 9%				21 lb. V = 40 V1= 40 P = 36 T = 116	V = 38.6 V1 = 38.6 P = 38.6
Mentor 28 Exxon	Chemically Neutral Middle Distillate, Petroleum 100% 64 742-30-9				V = 3002 V1 = N/A P = 2001 T = 5003	V = 550 V1 = -0- P = 550
Trim-Sol Master Chemical	Petroleum Oil, Chlorinated Wax, Emulsifiers				Max. daily 20 gal. V = 250 V1 = 100 P = 200 T = 550	V = 50 V1 = 15 P = 30
Excelene 5631 (Stuart-Ironsides Inc) D. A. Stuart	Severly Hydrotreated Petroleum Oil				V = 726 V1 = 242 P = 242 T = 1210	V = 330 V1 = 330 P = 330
Cutting Oil 2190 White & Bagley	Petroleum Distillates Middle Run 75% 64741-44-2	Severly Hydrotreated Heavy Naphthenic Distillate 6% 64742-52-5	Sulfurized Fatty Oil 11% 51790-49-6 Chlorinated Paraffin 2% 51788-76-9	Sulfurized Olefin 6%	V = 2904 V1 = 1452 P = 2904 T = 7260	V = 1210 V1 = 605 P = 1210
Kerosene Solvent Shell	Aliphatic Hydrocarbons Cycloaliphatic Hydrocarbons Alkylated Aromatic Hydrocarbons				V = 420 V1 = N/A P = 420 T = 840	V = 210 V1 = -0- P = 210
Skydrol LD-4 Monsanto	Tributyl Phosphate 126-73-8	Dibutyl Phenyl Phosphate 2528-36-1	2,6--Di-Tert-Butyl-P-Cresol 128-37-0		V = 5775 V1 = ---- P = ---- T = 5775	V = 2310 inc. reserv V1 = ----- P = 210

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Mobilarma 245 Mobil Oil Corp.	Aliphatic Petroleum Solvent 70%	Refined Mineral Oils 25%			874 V = 400 V1 = 74 P = 400 T = 874	105 V = 100 V1 = 50 P = 100
Pasa - Jell 101 Products Research and Chemical Corp.	Nitric Acid 7697-37-2	Phosphuric Acid 7664-38-2	Hydrofluosilicic Acid 16961-83-4		90 V = 90 V1 = --- P = --- T = 90	11.5 V = 11.5 V1 = ---- P = ----
HM406 Fluorescent Penetrant Sherwin, Inc.	Hydrotreated Refined Aliphatic Oil				V = 650 V1 = ---- P = 650 T = 1300	217 V = 220 V1 = ---- P = 220
Sodium Propionate Spectrum Chemical	Sodium Propionate 137-40-6				15 V = 7.5 V1 = ---- P = 7.5 T = 15	5 V = 5 V1 = ---- P = 5
Sili Gel Base Teledyne Dental Prod.	Silicone Material				V = 20 V1 = 10 P = 10 T = 40	21 V = 10 V1 = 5 P = 5
FR 83A Emulsifier Sherwin, Inc.	Detergent				V = 400 V1 = ---- P = 300 T = 700	V = 200 V1 = ---- P = 100
Technolube FB004 (Brayco 783 Has Same Mil-Spec) Technolube Prod.					V = 3026.8 V1 = ---- P = 2086.2 T = 5113	V = 300 V1 = ---- P = 300

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Isopropyl Alcohol Shell RHO Chem	Iso Propyl 67-63-0				V V1 Unknown P T	V V1 Unknown P
Dykem Remover and Thinner 138 Dykem Co.	Denatured Alcohol 80%	Butyl Acetate 20% 123-26-4			V V1 P Unknown T	V V1 P Unknown
Kodak Industrex Fixer & Replenisher Part A Eastman Kodak	Ammonium Thiosulfate 45% 7783-18-8	Water 40% 7732-18-5	Sodium Acetate 5% 127-09-3	Acetic Acid 5% 64-19-7 Sodium Sulfite 5% 7757-83-7	1387 V = 1387 V1 = ---- P = ---- T = 1387	444 V = 450 V1 = ---- P = ----
Kodak Industrex Developer Replenisher Part A Eastman Kodak	Water 60% 7732-18-5	Potassium Sulfite 25% 10117-38-1	Hydropuinune 10% 123-31-9	Potassium Hydroxide 5% 1310-58-3	1365 V = 600 V1 = ---- P = 265 T = 1365	437 V = 220 V1 = ---- P = 200
Deoxidizer 102-TNC (ICP) Industrial Chem.Prod.	Ferric Sulfate 40% 10028-22-5	Nitric Acid 15% 7697-37-2			1355 V = 1355 V1 = ---- P = ---- T = 1355	390 V = 390 V1 = ---- P = ----
Magna Flux/Magna Glo Carrier II Magnaflux Corp.	White Mineral Oil 100% 8042-47-5				V = 1400 V1 = ---- P = ---- T = 1400	V = 300 V1 = ---- P = ----
14A Magnaglo Powder Magnaflux Corp.	Iron Oxide 75% 1317-61-9				V = 250 V1 = -0- P = 250 T = 500	V = 50 V1 = ---- P = 50

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Freon TF Baron Blakeslee	1,1,2-Trichloro-1,2,2-Tri Fluoroethane 100% 76-13-1				V = 18,000 V1 = 14,674 P = 18,000 T = 50,674	V = 3432 V1 = ---- P = 3432
1,1,1 Trichloroethane Baron Blakeslee	1,1,1 - Trichloro-ethane 71-55-6				V = 117,144 V1 = 100 P = 41,147	V = 31,200 V1 = 50 P = 3,000
Freon TMC RHO-Chem Holchem	1,1,2 - Trichloro - 1,2,2 - Trifluorco-ethane 50.5 76-13-1	Methylene Chloride 49.5 75-09-2			V = 2983 V1 = 2980 P = 1193 T = 7156	V = 600 V1 = 600 P = 600
Stoddard Solvent Shell RHO-Chem Baron Blakeslee					V = 14,545 V1 = ---- P = 29,091 T = 43,636	V = 1200 V1 = ---- P = 20,000
Freon PCA DuPont	1,1,2 - Trichloro - 1,2,2 - Trifluoro-ethane 76-13-1				V = 690 V1 = ---- P = ---- T = 690	V = 690 V1 = ---- P = ----
Acetone 	Acetone 67-64-1				V = 422 V1 = 100 P = 170 T = 692	V = 200 V1 = 30 P = 60
Sulfuric Acid Chase	Sulfuric Acid 7664-93-9				V = 265 V1 = ---- P = 176 T = 441	V = 35.28 V1 = ---- P = 17.6

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
CP296LL Activator	Trisodium Phosphate 5%	Glycerine 5%	Methylaminoethanol 5%	Sodium Sulfite 5%	108 V = 60 V1 = ---- P = 48 T = 108	9 V = 4.5 V1 = ---- P = 4.5
AGFA Gievaert. Inc.	7601-54-9 5.41b	56-81-5 5.41b	109-83-1 5.41b	7757-83-7 5.41b		
413 - F Thinner	Isopropyl Alcohol 70%	IsoButyl Alcohol 20%	2-Methoxyethanol 10%		34 V = 34 V1 = ---- P = ---- T = 34	34 V = 34
Alpna Metals	67-63-0 23.81bs	78-83-1 6.81bs	109-86-4 3.41bs			
Alpha 565 Cleaning Solvent	1,1,1-Trichloroethane 90%	Normal Propyl Alcohol 5%	Diethylene Ether 5%		10.6 V = 10.6 V1 = ---- P = ---- T = 10.6	10.6 V = 10.6
Alpha Metals	71-55-6 9.61bs	71-23-8 .51b	123-91-1 .51b			
Alpha 611-F Rosin Flux	Water White Gum Rosin 37%	Solvent-Alcohol Blend Plus Organic Activator			38.5 V = 35 V1 = 3.5 P = ---- T = 38.5	38.5 V = 5 V1 = 1 P = ----
Alpha Metals	Mixture 14.21bs	Mixture				
620-F Flux	Isopropyl Alcohol 50%	Diethanolamine 2%	Terpene Solvent 24%	Hexylene Glycol 24%	86.6 V = 80 V1 = 6.6 P = ---- T = 86.6	38 V = 20 V1 = 2 P = ----
Alpha Metals	67-63-0 44.31bs	111-42-2 1.81bs	138-86-3 21.21bs	107-41-5 21.21bs		
810 Thinner	Isopropyl Alcohol 85%	Terpene Solvent 15%			25.9 V = 20 V1 = 6 P = ---- T = 26	V = 10 V1 = 3 P = ----
Alpha Metals	67-63-0 22	138-86-3 3.9				
Alodine 1200	Chromic Acid 30%	Sodium Fludborate 40%	Potassium Ferricyande 20%	Potassium Fluozirconate 10%	V = 60 V1 = 20 P = 38 T = 118	V = 20 V1 = 20 P = 20
Amchem Products	11115-74-5 .3	.4	.2	.2		

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Alodine 1201 Amchem Products	Chromic Acid 1% 11115-74-5 3.4	Potassium Ferricyanide 1% 3.4	Hydrofluoric Acid .1% 7664-39-3 .4		336 V = 12 V1 = 11.6 P = 10 T = 33.6	V = 4 V1 = 4 P = 2
Bernite 45 Flux Remover Bernite Products	Metal Cleaning Compound				V = 10 V1 = 5 P = 2 T = 17	V = 2 V1 = 2 P = 1
Crystal Clear Acrylic Spray Coating Borden, Inc.	Heptane	Iso Butane	Xylene 1330-20-7	Propane	V = 595 V1 = ---- P = ---- T = 595	V = 35
	Acetone 67-64-1	Toluene 108-88-3	Ardmatic Naphtha		V V1 P Unknown T	Unknown
Brayco Micronic 882 (Mil-H-83282A) Bray Oil Co.	Synthetic Hydrocarbon Base - Formula - MXE75-8	Tricresyl Phosphate 3%			V = 1600 V1 = 300 P = 47 T = 1947	V = 800 V1 = 100 P = 20
Methyl Ethyl Ketone (MEK) Chase Chemical	Methyl Ethyl Ketone 100% 2 - Butanone 78-93-3	1/2 - 1/2%			55 V = 8200 V1 = 800 P = 6096 T =15096	V = V1
Freeze - It Chemtronics	Dicvloro Difluoro-methane 100% 75-71-8	.5			11 V = ---- V1 = 11 P = ---- T = 11	V = ---- V1 = 5 P = ----

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Formula 409 Clorox Co.	Ethylene Glycol Monobutyl Ether 5% 111-76-2 .25lb	.3oz 1gal.			51 V = 260 V1 = 85 P = 41 T = 386	V = 10 V1 = 10 P = 10
Comp - Hold Comp-Hold Products	Non - Ionic Resins 8%	Alcohol 64%	LPG Aerosol Grade 28%	13 oz. can	65 V = 65 V1 = ---- P = ---- T = 65	V = 65 V1 = ---- P = ----
Dow - Corning 200 Fluid 2 cst 5 cst Dow-Corning 20 cst	Silicone 141-63-9 63143-62-9 63148-62-9				V = 12 V1 = 10 P = 2 T = 24	V = 5 V1 = 4 P = 2
Dow - Corning 1204 Prime Coat Dow-Corning	VM&P Naphtha (Petroleum Distillates) 65%	Toluene (Methyl Benzene) 19% 108-88-3 2.51b			13 V = 13 V1 = ---- P = ---- T = 13	31 V = 13 V1 = ---- P =
Dow - Corning 3452 Chemical Resistant Valve Lubricant Dow-Corning	Fluoro Silicone Mixture				V = 20 V1 = ---- P = T = 20	V = 20 V1 P =
Molykote 55M Grease Dow-Corning	Lubricant				V = 300 V1 = ---- P = 900 T =1200	V = 50 V1 = ---- P = 100
Dow - Corning 730RTV Fluoro Silicone Sealant Dow-Corning	Silicone Mixture	Acetoxysilane 5%			V = 135 V1 = 35 P = ---- T = 170	V = 25 V1 = 5 P = ----

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Dow-Corning 3145RTV Adhesive/Sealant Dow-Corning	Silicone Elastomer Mixture	Methoxysilane 7%			V = 125 V1 = 100 P = 10 T = 235	V = 10 V1 = 10 P = 3
Dow-Corning 4 Electrical Insulating Paste/Compound Dow-Corning	Silicone Mixture	Amophorous Silica 9% 7631-86-9			V = 100 V1 = 100 P = ---- T = 200	V = 20 V1 = 20 P = ----
Krytox 240AC,AD,AZ DuPont	Fluorine End-Capped Homopolymers of Hexafluoropropoylene Epoxide 85%	Telomers of Tetra-fluoroethlene 15%			V = 30 V1 = ---- P = ---- T = 30	V = 30 V1 = P =
Kodak Rapid Fixer, Part A Eastman Kodak	Water 45% 7732-18-5 28	Ammonium Thiosulfate 45% 7783-18-8 28	Sodium Acetate 5% 127-09-3 3	Boric Acid 5% 10043-35-3 3	62 V = ---- V1 = 62 P = ---- T = 62	V = 62 V1 = P =
Kodak Rapid Fixer, Part B Eastman Kodak	Water 70% 7732-18-5 44.8	Aluminum Sulfate 17% 10043-01-3 10.7	Sulfric Acid 13% 7664-93-9 8.3		V = 64 V1 = ---- P = T = 64	V = 64 V1 = ---- P =
Eccostrip 93 Emerson & Suming	Methylene Chloride 70% 75-09-2	Phenol 10% 108-95-2	Formic Acid 10% 64-18-6		V = ---- V1 = 11 P = ---- T = 11	V = ---- V1 = 11
SM-1573-12 Spotmask EPE Technology	Ammonia 1% 7664-41-7	Ethylene Glycol 3.2% 107-21-1	1. oz 1 gal		V = 10 V1 = ---- P = ---- T = 10	V = 10 V1 P

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
EPI Bond 1536 A Furane Products	Epoxy Resins 95%	Silicone Dioxide 5%			V = 150 V1 = ---- P = ---- T = 150	V = 150
EPI Bond 1536 B Furane Products	Polyamides 100%				V = 140	V = 140
Uralane 5750 A Furane	4,4 - Diphenylmethane Diisocyanate 90% 101-68-8	Tolvene 10% 108-88-3			V = 120	V = 120
Uralane 5750-B Furane	Hydroxy Terminated Polyols 80%	Tolvene 10% 108-88-3	Methyl Ethyl Ketone 10% 78-93-3	Fluorescent Dye 1%	100 GR 3167 GR CAN <1#	<1#
Brayco 756 Bray Products	Solvent Refined, Hydrotreated Middle Distillate 90% 64742-46-7	TR-Phenyl Phosphate .5% 115-86-6			V = 4500 V1 = 800 P = 4500 T = 9800	V = 1200 V1 = 350 P = 1600
Brayco 933 Castrol	Aliphatic Hydrocarbon 75% 540-84-1 1172	Tolvene 25% 108-88-3 391			V = 1000 V1 = 200 P = 363 T = 1563	V = 600 V1 = 45 P = 600
Braycote Micronic 762 Castrol	Petrochem Solvent 64742-46-7				V = 220 V1 = 170 P = ---- T = 390	V = 45 V1 = 45 P = ----

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
2-26 (Aerosol) #02004, 02005 CRC Chemicals	Petroleum Distillate 42% 64742-47-8	1,1,1-Trichloroethane 29% 71-55-6	Inhibited Paraffinic Oil 25% 	Carbon Dioxide , 4% 124-38-7	V = 40 V1 = 5 P = 10 T = 55	V = 10 V1 = 2 P = 3
ReproDirect, PMS, CS, Special Inks Gans Ink	Petroleum Hydrocarbon (Severly Hydro-treated) 12% 64742-46-7				V = 20 V1 = 40 P = ---- T = 60	V = 5 V1 = 10 P = ----
Handy Flux Type Tec Handy and Herman	Fluorides (Potassium Salts of Fluorine) 32%	Borates (Potassium Salts of Boron)			V = 90 V1 = 15 P = ---- T = 105	V = 20 V1 = 5 P = ----
Once Hand Cleaner Hardman Inc.					V = 200 V1 = 50 P = 200 T = 450	V = 25 V1 = 10 P = 25
Catalyst B-3 (HD5003) Hysol (Dexter-Hysol)	2,4,6-Tri(Dimethyla-minomethyl) Phenol 10% 90-72-2	Tetraethylene Pentamine 20% 112-57-2	Polyomine Salt 20% 51365-70-9	Ethylene Glycol Monobotyl Ether 50% 111-76-2	V = 5 V1 = ---- P = ---- T = 5	V = 5 V1 = ---- P = ----
EA 934NA Part A Hysol	4-Glycidyloxy-N,N-Diglycidylaniline 35% 5026-74-4	Aluminum Powder 30% 7429-90-5	Silica 15% 7631-86-9		V = 45 V1 = ---- P = 45 T = 90	V = 20 V1 = ---- P = 20
EA934NA Part B Hysol	Diethylene Triamine 15% 111-40-0	Triethylene Tetra-mine 10% 112-24-3			V = 45 V1 = ---- P = 45 T = 90	V = 20 V1 = ---- P = 20

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
EA 9309 Part A Hysol	Asbestos 2% 1332-21-4				V = 102 V1 = ---- P = ---- T - 102	V = 102 V1 P =
Superdrop Debonder Hysol	Acetonitrile 100% 75-05-8				V V1 P T (1#	V
EA9309 Part B Hysol	Alkylamines				V = 85 V1 = P = T = 85	V = 45 V1 =
Roll-R-Wash #2 I.C. Compound Co.	Stoddard Solvent 109-73-9	2-Ethoxyethanol 110-80-5			V V1 P Unknown T	V V1 P Unknown T
Roll-R-Wash #1 I.C. Compound Co.	Stoddard Solvent 109-73-9				V V1 P Unknown T	V V1 P Unknown
Glaze Free I.C. Compound Co.	Stoddard Solvent 109-73-9	2-Ethoxyethanol 110-80-5	Aromatic Hydrocarbon Distillates 109-73-9		V V1 Unknown P T	V V1 Unknown P
73X Reconditioner Independent Ink Inc.	Isopropanol, Annydrous 67-63-0	Butyl Carbitol 112-34-5	Annydrol 200 (Contains) Ethanol 86% Isopropanol 9% Hexone 1% Methanol 4% 64-17-5		V V1 Unknown P T	V V1 Unknown P

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
P-80 Rubber Lubricant Emulsion International Prod.					Unknown	Unknown
#197 Rosin Flux Kester	Isopropanol 56% 67-63-0	Rosin 37% 8050-09-7			Unknown	Unknown
Loctite Sealant Grade C Loctite Corp.	Dimethacrylate Esters 70%	Aliphatic Ester Plasticizer 19%	Tertiaryamine 2.4%		Unknown	Unknown
Grade A Loctite Corp.	Polyglycol Dimeth-acrylates 90%	Cumene Hydroperoxides 7%	Triackylamine 3%		Unknown	Unknown
Grade AV Loctite	Polyglycol Dimethacry-lates 85%	Cumene Hydroperoxides 6%	Polyglycol Dioctoates 3% Cellulose Acetate Butyrate 3% Trialkylamine 3%		.15 T - 1#	Unknown
Grade AVV Loctite	Polyglycol Dimetha-crylates 60%	Bis-Phenol A Fumarate Resin 35%	Cumene Hydroperoxides 3%	N,N-Dialkyltolui-dines 1% Saccharin 1%	T - 2#	Unknown
Locquic Primer T Loctite	1,1,1-Trichloroethane 90% 71-55-6	Isopropyl Acohol 5%	N,N-Dialkyltoluidine 3%	Mercaptobenzo-thiazole 2%		

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Locquic Primer N Loctite	1,1,1-Trichloroethane 97% 71-55-6	Organo-Copper Salt 1%	Trialkylamine Carboxylate 1%	Aliphatic Carboxylic Acid 1%		
Tak Pac Metered Mist Activater Loctite	1.1,2-Trichloro-1,2,2-Trifluoroethane 80% 76-13-1	Butane 10%	Acetone 5%	Propane 3%		
	N,N-Dialkyltoluidine 1%	Hydroquinone 1% 123-31-9				
Lonco-Solve TMS+ London Chemical	1,1,2-Trichloro-1.2,2-Trifluoroethane 76-13-1 4108	Methyl Alcohol 4% 67-56-1 183	Ethyl Alcohol 4% 64-17-5 183	Isopropyl Alcohol 1% 67-63-0 Nitromethane 1% 79-24-3 46	V = 1700 V1 = 650 P = 2150 T = 4566	V = 660 V1 = 300 P = 660
3M-Onyx Developer 3M	Water 75% 7732-18-5	Sodium Sulfite 5% 7757-83-7	Potassium Sulfite 5% 10117-38-1	Hydroquinone 5% 123-31-9		
	Potassium Hydroxide 5% 1310-58-3	Sodium Thiocyanate 5% 540-72-7		5.5 oz. 1 gal.		
3M-Onyx Film Plate Stabilizer 3M	Water 90% 7732-18-5	Potassium Phosphate 5% (Monobasic) 7778-77-0	Potassium Phosphate 5% (Dibasic) 7758-11-4			

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
3M - "R" Scratch Remover 3M	Water 60% 7732-18-5	Stoddard Solvent 30% 8052-41-3	Potassium Hydroxide 2% 1310-58-3	Sodium Silicate, 6%		
Scotch Seal 801 3M						
3M Brand Liquid Lith Developer-LLD Part A 3M	Sodium Methanol Bisulfite 30% 870-72-4	Triethylene Glycol 30% 112-27-6	Hydroquinone 20% 123-31-9	Water 10% 7732-18-5		
	Sodium Sulfite 5% 7757-83-7	Boric Acid 5% 10043-35-3		7.4 oz. 1 gal.		
3M Brand Liquid Lith Developer LLD Part B 3M	Water 70% 7732-18-5	Potassium Carbonate 20% 584-08-7	Sodium Hydroxide 5% 1310-73-2	Sodium Bromide 5% 7647-15-6		
3M Image-N-Transfer Developer 3M	Sodium Metasilicate 2% 6834-92-0	Sodium Carbonate 1% 497-19-8	Water 97% 7732-18-5			
3M Fountain Concentrate 3M	Water 70% 7732-18-5	Zinc Salt 25%	Phosphoric Acid(75%) 3% 7664-38-2	Ammonium Dichromate 2%		

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Electrolyte Formula MSC 1 Marking Methods Inc.						
Wonder Wash MasterlithIndustries	(May have Glycol Ether - ?]					
Skydrol 500D-4 Monsanto	Tributyl Phosphate 126-73-8	Dibutyl Phenol Phosphate 2528-36-1			V = 660 V1 = 100 P = 300 T =1060	V = 660 V1 = 60 P = 120
Cee-Bee A-202 McGean-Rohco Inc.	Methylene Chlororide 75% 75-09-2	Phenol 15% 108-95-2	Formic Acid 10% 64-18-6		No longer used product substitution	
Oakite Aluminum Cleaner 164 Oakite Products	Sodium Carbonate 35% 497-19-8	Trisodium Phosphate 30% 10101-89-0	Tetrasodium Pyrophosphate 20% 7722-88-5	Sodium Metasilicate 10% 6834-92-0 Sodium Silicate 5% 1344-09-8	V = 300 V1 = ---- P = 300 T = 600	V = 100 V1 = ---- P = 100
Brite Boy Metal Polish Olde Tyme Prod., Inc.	Ammonia 7664-41-7	Oxalic Acid 144-62-7			V = 40 V1 = ---- P = 5 T = 45	V = 10 V1 = ---- P = 10
Torque Seal F-900 Organic Products Co.	Methanol 37% 67-56-1	Ethanol 9% 64-17-5			V V1 P T	V V1 P

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Chloroethene SM Panduit	1,1,1-Trichloroethane 96% 71-55-6	Diethylene Ether 2% 123-91-1	1,2-Butylene Oxide 1% 106-88-7	 75-52-5	V = 12 Fl. oz	2 oz.
Permabond 910 Adhesive PermaBond Interntl.	Methyl-2-Cyanoacry-late 90% 137-05-3				V = 5 V1 = 1 P = 2 T = 8	V = <1# V1 = ---- P <1#
Eccobond 45 Poly-Freeze Inc.	Epichlorohydrin 106-89-8					
PR-1560-MIC Part A Products Research	Polymethylene Polyphenylene_ Polyisocyanate (contains)---^ 9016-87-9	Monomeric 4,4' Diphenyl Methane Diisocyanate 101-68-8	Gamma-Mercaptopro-pyl-Trimethoxy-silane 4420-74-0			
PR-1560-MK Part B Products Research	MEK 108-88-3	VM&P Naphtha 8032-32-4	Ethyl Benzene 100-41-4	N-Butyl Acetate 123-86-4		
PR-1422-G Class A Products Research	Calcium Bichromate 5% Soluble Metallic-chromate 3%	Tolvene 7%	MEK 5% 108-88-3	Dimethyl Formamide 3%		
PR-1422-G Class B Products Research	Calcium Dichromate 4%	Tolvene 5%	Dimethyl Formamide 3%			

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Mold Release RAM Chemicals	Aliphatic Hydrocarbon 100% 64742-88-7				V = 10 V1 = ---- P = 5 T = 15	V = <1# V1 = ---- P = <1#
Break Through Roberts and Porter	Aliphatic Petroleum Naphtha 50% 64742-88-7	Aromatic Hydrocarbon Solvent 50% 64742-95-6				
Glaze-A-Way Roberts and Porter	2-Butoxyethanol 30% 111-76-2	Aromatic Hydrocarbon 25% 64742-95-6				
T. D. Isofount Roberts and Porter	Acetic Acid 3% 64-19-7	Phosphoric Acid 2% 7664-38-2	Chromium Salts (CR+3 only) 2% 7440-47-3	1,2 Benzisothiazolin 1% 26-34-33-5 (81-07-3)	1.5 oz 1 gallon	
02009 TMC Cleaner Sprayon Products	Freon TF 50% 76-13-1	Methylene Chloride 45% 75-9-2	Carbon Dioxide 5% 124-38-9			
Tapmatic Cutting Fluid #2 Tapmatic Corp.	Mixed Fatty Acid Esters 25%	Petroleum Distillate 75%				
TC-3285 Techform Labs						

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
A-12 Parts A & B Armstrong Products	Expoxy Resin & Adhesive					
Acetic Acid Eastman Kodak	Acetic Acid 64-19-7				V = 10 V1 = 20 P = ---- T = 30	V = V1 =
Adhesive Sealant #290 Loctite Corp.	Polyglycol Dimeth-acrylates 90%	Hydroperoxides 4%	Sulfimide 3%	N,N Dialkyltolvidines 1%		
Brayco Micronic 883 Brav Products	Triphenyl Phosphate .2% 115-86-6				V = 160 V1 = ---- P = 175 T = 335	V = 100 V1 = ---- P = 100
Caustic Soda Chase	Sodium Hydroxide 1310-73-2				V = 500 V1 = ---- P = 500 T =1000	V = 200 V1 = ---- P = 200
Cellulose Nitrate Gloss Lacquer Koppers Co.	Butyl Acetate	Isopropyl Alcohol	N Butanol 71-36-3	MEK	V = 10 V1 = ---- P = ---- T = 10	V = 10
	Tolvene	Butvl Cellosolve	MIBK 108-10-1 MIBC VM&P - Naphtha	Lead 7439-92-1 Chromium 7440-47-3	V V1 = 541 P = T = 541	V1 = 72

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Solvent Soluble Holding Web Tech Spray	1,1,1-Trichloroethane 65% 71-55-6				V = 15 V1 = 5 P = 5 T = 25	V = 5 V1 = 35 P = 5
Sili-Gel (Catalyst) Teledyne Getz	Organotin 95%					
E-Cast F-28 United Resin	Epoxy Resin 25068-38-6					
Hardener 380 United Resin	Catalyst 60-56-0	Odormask 61790-23-6			V = 5 V1 = ---- P = ---- T = 5	V = 3
Lapping Compound United States Prod.					V = 6556 V1 = 50 P = 100 T = 6706	V = 1000 V1 = 10 P = 20
3M Cleaner Conditioner 3M	Water 80% 7732-18-5	Stoddard Solvent 9% 8052-41-3	Phosphoric Acid 2% 7664-38-2	Formaldehyde .1% 50-00-00		
Cleaner Formula APC Marking Methods						

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
D-305 Cleaner/ Degreaser Direct Image Corp.	Water 80% 7732-18-5	Nitric Acid 3% 7697-37-2	Aluminum Silicates 17%		V = 350 V1 = ---- P = 600 T = 950	V = 150 V1 = ---- P = 200
D-325 Tray Cleaner Direct Image Corp.	Sulphoric Acid 5%	Organic Bichromates 10%			V = 400 V1 = ---- P = 500 T = 900	V = 200 V1 = ---- P = 200
Propane	Dimethyl Methane 65% (Min.)	Ethane 4%	Propylene 2.5%	C4 & Higher Hydro-carbons 2.5%	V = 225 V1 = 50 P = 250 T = 525	V = 50 V1 = ---- P = 100
3135A Epoxy Crest Products	Bisphenol A 80-05-7				V = 50 V1 = 20 P = ---- T = 70	V = 10 V1 = 5 P = ----
Gauge Oil-Red Dwyer Instruments	Kerosene 91% 8008-20-6	Carbon Tetrachloride 9% 56-23-5	Red Dye .01%		V = 20 V1 = ---- P = 20 T = 40	V = 7 V1 = ---- P = 7
G - P Sudsy Ammonia Georgia-Pacific	Ammonia 5%				V = 700 V1 = 150 P = 500 T = 1350	V = 50 V1 = 25 P = 50
Gentsolve DM Azeotrope Allied Micro Care Chem Corp	Trichlorotrifluoro-ethane 51% 76-13-1	Methylene Chloride 49% 75-09-2			V = 300 V1 = 257 P = 150 T = 707	V = 50 V1 = 50 P = 20

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
HD 3615 Hysol Div., Dexter Corp.	4,4'-Diaminodiphenyl-methane (P,P'-Methylenedia-niline) 101-77-9				V = 10 V1 = 15 P = ---- T = 25	V = .5 V1 = 1 P = ----
Humiseal 1B31 Columbia Chase	Aromatic Solvent 50%	Ketone Solvent 15%			V = 15 V1 = 27 P = ---- T = 42	V = 8 oz. V1 = 1# P =
Humiseal Thinner #521 Columbia Chase	Aromatic Solvent 100%				V = 10 V1 = 15 P = ---- T = 25	V = 1 V1 = 2 P =
Humiseal Thinner #535 Columbia Chase	Aromatic Solvent 100%				V = 10 V1 = 15 P = ---- T = 25	V = 2 V1 = 2 P =
5606F Hydraulic Oil Technolube	Light Petroleum Fractions	Viscosity Index Improver	Oxidation Inhibiter	TCP Anti-wear Agents	V = 3,500 V1 = ---- P = 1,000 T = 4,500	V = 2,772 V1 = ---- P = 500
Hydrochloric ACD 7647-01-0	Hydrogen Chloride 38% 7647-01-0	Water 7732-18-5			V = 50 V1 = ---- P= T=	V = 7
73X Marking Ink Independent Ink Inc.	Isopropyl Alcohol 30% 67-63-0					

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
LPS 2 General Purpose Lubricant Holt Lloyd	Aliphatic Hydrocarbons 70% 64742-96-7	Petroleum Oil 10%			V = 2000 V1 = ---- P = 3500 T = 5500	V = 300 V1 = ---- P = 300
Mobil Vacuum Pump Oil Mobil Oil	Refined Mineral Oil 100%				V = 1200 V1 = 800 P = 1200 T = 3200	V V1 P
Mold Lubricant Mitann, Inc.	Halogenated Hydro-carbons 95%	Glycol Fluid 5%			V V1 P Unknown T	V V1 P Unknown
Molycote BR-2-Plus Grease Dow-Corning					V = 60 V1 = 20 P = ---- T = 80	V = 10 V1 = 10 P = ----
Molykote 33 Grease Dow-Corning					V = 60 V1 = 30 P = ---- T = 90	V = 10 V1 = 10 P = ----
Neutralizing Solution Seragen Diagnostics	Methanol 67-56-1	Water 7732-18-5			V V1 P Unknown T	V V1 P Unknown
Nitrogen LN2/GN2 7727-37-9					V = 3,000 V1 = 3,200 P = 4,800 T =11,000	V = 800 V1 = 400 P = 800

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
PC16-M Part A Hysol Div.,Dexter Corp	Butyl Glycidyl Ethel Modified Epoxy Resin 6% 2426-08-6					
PC16-M Part B Hysol Div,Dexter Corp	Reactive Polyamide 100% 37189-83-6					
Pro-Seal 870-B 1/2 Products Research and Chemical	MEK 78-93-3	Tolvene 108-88-3	Phenol Polymer with Formaldehyde 9003-35-4			
PR03 Fountain Solution Printers Research Pac	Iso Prophy Alcohol 9% 41lbs	Ethylene Glycol Mono Butyl Ether 9% 41lbs			V = 20 V1 = 19 P = 20 T = 49	V = 10 V1 = 2 P = 10
Reducing Varnish Hurst Graphics	Linseed Oil				V = 20 V1 = ---- P = 15 T = 35	V = 5 V1 = ---- P = 5
Silastic 734 RTV Adhesive/Sealant Dow-Corning	Acetoxy Silane 5%				V = 25 V1 = 15 P = 40	V = 5 V1 = 5 P = ---
Salt	Sodium Chloride 7647-14-5					

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Sodium Dichromate Chase JT Baker	Sodium Dichromate 10588-01-9				2.52 V = 60 V1 = ---- P = 60 T = 120	V = 20 V1 = ---- P = 20
Sodium Hydroxide	Sodium Hydroxide 1310-73-2				V = 300 V1 = ---- P = 350 T = 650	V = 50 V1 = ---- P = 50
Sodium Sulfite, Anhydrous Eastman Kodak	7757-83-7				2.633 V = ---- V1= 55 P = ---- T = 55	V = ---- V1 = 2 P = ----
Tolvene VWR Scientific JT Baker	108-88-3				V = ---- V1 = 262 P = ---- T = 262	V = ---- V1 = 73 P = ----
Vessel Solution Part A Seragen	Pyridine/Sulfur Dioxide Mixture 110-86-1				unknown	unknown
Vessel Solution Part B Seragen	Karl Fischer Reagent in Menthanol				unknown	unknown
Wonder Wash MasterLith Industries	Glycol Ether	Detergents	Citrus Oils		unknown	unknown

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Zip Aerosol D-5675 MC Clearner Mitann, Inc.	1,1,1-Trichloroethane 75% 71-55-6	Dichloro Fluoro Methane 25% 75-71-8			V = 50 V1 = 10 P = ---- T = 60	V = 50 V1 = 5 P = ----
Scotch-Grip Brand 4475 Plastic AD 3M	MEK 50% 78-93-3	Polyurethane Resin 20% 	Vinyl Chloride/Vinyl 20% 25085-82-9	Acetate/Maleic Anhydride Terpolymer 108-31-6	V1 = .15 oz.	V1 = 1 oz.
Scotch-Weld Brand Structural Adhesive 2216 Part A 3M	Aliphatic Amine 60%					
Scotch-Weld Brand Structural Adhesive 2216 Part B 3M	Bisphenol A Epoxy Resin 70%					
Scotch-Clad Brand Fuel Resistant Coating 776 3M	Methyl Iso Butyl Ketone 6%	Ethyl Alcohol 6%				
Prime Coat P527E Part A Koppers Kop-Coat Inc.	Strontium Chromium 20% (As Chromate) 5% 7789-06-2 Amorphous Silicon Dioxide 5% 61790-53-2	MEK 10% 78-93-3	TALC 14807-96-6 10% Titanium Dioxide 13463-67-7 5% Crystalline Silicon Dioxide 14808-60-7 .5	Tolvene 5% 108-88-3	V = 595 V1 = ---- P = ---- T = 595	V = 70 V1 = ---- P = ----
Prime Coat P527E Part B Koppers Kop-Coat, Inc.	Tolvene 20% 108-88-3	Isopropyl Alcohol 60% 67-63-0	N-Propyl Alcohol 10% 71-23-8		V = 600 V1 = ---- P = ---- T = 600	V = 65 V1 = ---- P = ----

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Super Lube Synco	Synthetic Hydrocarbons Base Fluid 9003-29-6 Teflon 9002-84-0 Fumed Silica 68611-44-9				V = 1200 V1 = ---- P = 500 T = 1700	V = 300 V1 = ---- P = 200
Perma Wash Helco Division	Ammonium Sulfite 20% 10196-04-0	Sodium Fulfite 7%			V = 400 V1 = ---- P = 400 T = 800	V = 150 V1 = ---- P = 150
Fast Setting Acrylate Acryweld 7993-A/B Hardman	Methyl Methacrylate 55% 80-62-6	Denzyl Peroxide Plasticizer			unknown	unknown
Silicone Adhesive/ Sealant 07914 Hardman	Silicone/Acetoxy-silane				unknown	unknown
3-36 Aerosol 3005 CRC Chemical	Petroleum Distillate 67% 64742-47-8	Carbon Dioxide 124-38-9	Inhibited Paraffinic Oil 29%		V = 25 V1 = ---- P = 10 T = 35	V = 5 V1 = ---- P = ----
Rust Remover Concentrate CRC Chemical	Phosphoric Acid 75% 62.4% 7664-38-2	2 Butoxy Ethanol (Ethylene Glycol Monobutyl Ether) 111-76-2			V = 60 V1 = ---- P = 30 T = 90	V = 20 V1 = ---- P = 10
MolyKote 321R Lub Dow-Corning	Methylene Chloride (Dichloromethane) 13% 75-09-2	1,1,1-Trichloroethane 40% 71-55-6	Butylacetate (N-Butyl Acetate) 123-86-4		V = 600 V1 = ---- P = 1200 T = 1800	V = 200 V1 = ---- P = 500

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Edocast 1615 B Furane	Ethanol, 2-Amino 10% 141-43-5	1,2-Ethanediamine, N-Methyl-(2-Aminoethyl) 45% 111-40-0	P,P'-Isopropylidene Diphenol 45% 80-05-7			
Dolph Spray AC-29-7S John C. Dolph	V,M,&P Naphtha 6% 54742-48-9	Xylene 20% 1330-20-7	Butyl Alcohol 17% 71-36-3			
Chico A Sehling Compound Croose-Hinds ECM Div.	Aluminum Oxide 1344-28-1 Calcium Oxide 1305-78-8	Ferric Oxide 1309-37-1 Ferrous Oxide 1345-25-1	Silicone Dioxide 7631-86-9 Titanium Dioxide 13463-67-7	Portland Cement 65997-15-1		
Tool Makers Blue Spray Ink 40-670 Ideal Industries	Magnesium Silicate as a Dust 1% 14807-96-6 Tolvene 10% 108-88-3	Xylene under 5% 1330-20-7 MEK under 5% 78-93-3	MIBK under 5% 108-10-1 IsoButyl Alcohol under 5% 73-83-1	N-Butanol under 5% 71-36-3 Acetone 30% 67-64-1	V = 250 V1 = 15 P = 300 T = 565	V = 80 V1 = 10 P = ----
	Ethyl-Ethoxypropio-nate, under 5% 763-69-9	Methylene Chloride 25% 75-09-2	Propane 15% 74-98-6			
Zip Aerosol L-345 Mold Release Zip-Chem	Methane, Dichlorodi-fluoro 75-71-8	Methane, Trichloro-fluoro 75-69-4	Polyalkylene Glycol Fluid		V = 80 V1 = 5 P = ---- T = 85	V = 10 V1 = 1 P = ----
Aip Aerosol Stud Mold Release Zip-Chem	Methane, Dichlorodi-fluoro 75-71-8	Methane, Trichloro-fluoro 75-69-4	Polydimethyl Siloxane 63148-62-9		V = 40 V1 = 5 P = ---- T = 45	V = 10 V1 = 2 P = ----

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Pro-Seal 890B Products Research/Chem	Methyl Benzene (Tolvene) under 5% 108-88-3	Phenol Formaldehyde Resin (Phenolic Resin) under 5% 9003-35-4				
PR-1560-MK Part C Products Research & Chemical	MEK 78-93-3					
Dubl-Chek Penetrants RC-65 Sherwin Inc.	Mixture Esters, Phosphate/Phthalate Plasticizing Agents 27961-21-5 68515-49-1	Aliphatic Oil Refined Aydrotreated Middle Distillate 64742-46-7			V = 1000 V1 = ---- P = 1000 T = 2000	V = 200 V1 = ---- P = 225
I-319 Fluorescent Penetrant Sherwin Inc.	Ethoxylated Nonyl-phenol 15% 9016-45-9				V = 800 V1 = ---- P = 750 T = 1550	V = 300 V1 = ---- P = 250
Dubl-Chek D113G Developer Sherwin Inc.	Sodium Nitrate under 5% 7632-00-0				V = 180 V1 = ---- P = 150 T = 330	V = 30 V1 = ---- P = 30
Dubl-Chek D100 Developer Sherwin, Inc.	Hydrocarbon Propellant (LPG) 68476-85-7	Isopropyl Alcohol 67-63-0			V = 200 V1 = ---- P = 220 T = 420	V = 30 V1 = ---- P = 30
Dubl-Chek Clearner/ Remover DR60 Sherwin, Inc.	Hydrocarbon Propellant (LPG) 68476-85-7	Light Petroleum Distillate 64742-48-9			V = 245 V1 = ---- P = 240 T = 485	V = 35 V1 = ---- P = 25

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Kodak Dektol Developer (Single Powder) Eastman Kodak	Sodium Carbonate, Monohydrate 50% 5968-11-6	Sodium Sulfite 35% 7757-83-7	Hydroquinone 6% 123-31-9	P-Methylaminophenol Sulfate 5% 55-55-0 Sodium Tetraphosphate 5% 14986-84-6	V = 100 V1 = 150 P = ---- T = 250	V = 25 V1 = 15 P = ----
Kodak Developer D-76 Eastman Kodak	Sodium Sulfite 85% 7757-83-7	Hydroquinone 5% 123-31-9	P-Methylaminophenol Sulfate 5% 55-55-0	Sodium Tetraborate, Pentahydrate 5% 1330-43-4	V = 200 V1 = 210 P = ---- T = 410	V = 15 V1 = 15 P = ----
Kodak Replenisher D-76R Eastman Kodak	Sodium Sulfite 7757-83-7 75% Sodium Tetraborate. Pentahydrate 10% 1330-43-4	Hydroquinone 6% 123-31-9	P-Methylaminophenol under 5% 55-55-0	Diethylene Triamine Pentaacetic Acid Pentasodium Salt under 5% 140-01-2	V = 200 V1 = 310 P = ---- T = 510	V = 20 V1 = 20 P = ----
Kodak HC-110 Developer/Replenisher Eastman Kodak	Diethanolamine-Sulfur Dioxide Complex 35% Water 20% 7732-18-5	Diethanolamino 10% 111-42-2 Diethylene Glycol 5% 111-42-6	2-Aminoethanol 5% 141-43-5	Hydroquinone 9% 123-31-9	V = 305 V1 = 400 P = ---- T = 705	V = 40 V1 = 20 P = ----
Kodak T-Max Developer Eastman Kodak	Diethanolamine Sulfur Dioxide 45% 63149-47-3	Water 40% 7732-18-5	Hydroquinone 4% 123-31-9	Sodium Bisulfite 5% 7631-90-5	V = 410 V1 = 450 P = ---- T = 860	V = 40 V1 = 20 P = ----
Fuser Oil for Kodak Starmate 500 Eastman Kodak	Silicone Oils 100% 63148-62-9				V = 180 V1 = 150 P = ---- T = 330	V = 10 V1 = 5 P = ----
Fuser Oil, Functional Eastman Kodak	Organopolysiloxane 100%				V = 80 V1 = 125 P = ---- T = 205	V = 5 V1 = 1 P = ----

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	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Kodak Brushing Lacquer #4 Eastman Kodak	Ethyl Alcohol 40% 64-17-5	Butyl Acetate 25% 123-86-4 Butyl Alcohol 13% 71-36-3	Naphtha #1 5% 8030-30-6 Acetone 5% 67-64-1	Lamp Black 5%	V = 25 V1 = 35 P = ---- T = 60	V = 5 V1 = 5 P = ----
Kodak Chromium Intensifier Part A Eastman Kodak	Potassium Chloro-chromate 100% 16037-50-6				V = 70 V1 = 60 P = ---- T = 130	V = 5 V1 = 5 P = ----
Kodak Chromium Intensifier Part B Eastman Kodak	Sodium Metabisulfite 100% 7681-57-4				V = 75 V1 = 60 P = ---- T = 135	V1 = 5 V1 = 5 P = ----
Kodak Farmer's Reducer Part A Eastman Kodak	Potassium Ferricy-anide N 100% 13746-66-2				V = 30 V1 = 45 P = ---- T = 75	V = 7 V1 = 7 P = ----
Kodak Farmer's Reducer Part B Eastman Kodak	Sodium Thiosulfate, Anaydrous 100% 7772-98-7				V = 30 V1 = 45 P = ---- T = 75	V = 8 V1 = 8 P = ----
Kodak Photo-Flo 200 Solution Eastman Kodak	Water 60% 7732-18-5	Propylene Gycol 25% 57-55-6	P-Tertiary-Octyl-phenoxy Polyethyl Alcohol 10% 9002-93-1		V = 190 V1 = 220 P = ---- T = 410	V = 30 V1 = 25 P = ----
Kodak Sodium Thio-sulfate Pentahydrate Eastman Kodak	Sodium Thiosulfate Pentahydrate N 100% 10102-17-7				V = 25 V1 = 35 P = ---- T = 60	V = 10 V1 = 10 P = ----

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	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Kodak Sepia Toner Part A Eastman Kodak	Potassium Bromide 55% 7758-02-3	Potassium Ferricyanide 45% 13746-66-2			V = ---- V1 = 220 P = ---- T = 220	V = ---- V1 = 40 P = ----
Kodak Sepia Toner Part B Eastman Kodak	Sodium Sulfide Hydrate 100% 1313-84-4				V = ---- V1 = 220 P = ---- T = 220	V = ---- V1 = 40 P = ----
44 Kleen Anti-Offset Compound Hurst Graphics	Petroleum Hydrocarbons 64742-46-7					
#220 All Purpose 3-Way Drier Hurst Graphics	Naphtha 64742-88-7	Cobalt Naphthenade 61789-51-3	Manganase Naphthenade 61788-57-6			
#230 Ink Conditioner Hurst Graphics	Ethyl Alcohol 64-17-5 Napthalene 91-20-3	Nonane 111-84-2 Trimethyl Benzene 95-63-6	Xylene 1330-20-7 Alkaline Methl Silicate 14801-96-6	Petroleum Distillate 64742-46-7 Organophyillic Clay 68953-58-2		
#337 Padding Compound Hurst Graphics	Pathalate 84-74-2					
#8 Plactic Gloss Ink Base Hurst Graphics	Heavy Mineral Spirits 647-42-478				V = ---- V1 = 800 P = ---- T = 800	V = ---- V1 = 100 P = ----

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CHEMICAL USEAGE

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	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
D-305 Clearner Degreaser (DICO) Direct Image Corp.	Aluminum Silicate 1302-76-7	Bentonite 1302-78-9	Nitric Acid 7697-37-2			
Wilhold Gilv-Bird White Glue Dap Inc.	Butyl Benezyl Phthalate 22% 85-68-7	Vinyl Acetate Monomer under 5% 108-05-4			V = 300 V1 = ---- P = 150 T = 450	V = 65 V1 = ---- P = 65
Dap Weldwood Carpenter's Glue Dap Inc.	Vinyl Acetate Monomer under 5% 108-05-4				V = 400 V1 = ---- P = 150 T = 550	V = 100 V1 = ---- P = 55
Roll-On-Stamp Pad Inker Sanford Corp	Water 7732-18-5 --- Dye 56-81-5	Glycerine 111-46-6	Diethylene Glycol 25322-68-3	Polyethylene Glycol	V = ---- V1 = 600 P = ---- T = 600	V = ---- V1 = 200 P = ----
Rubber Cement Sanford Corp	Heptane 142-82-5	Ethyl Alcohol 64-17-5				
Quick'N Slick (Read and Co.) Masterlith Ind.	V.M.&P Naphtha 90% 64742-88-7	Perchloroethylene (Tetrachloroethylene) 10% 127-18-4				
Superior #23 Flux Superior Flux Mfg Co	Zinc Chloride 30% 7646-85-7	Hydrochloric Acid 15% 7647-01-1	Acetic Acid 4% 64-19-7	Water 50% 7732-18-5	V = 143 V1 = ---- P = ---- T = 143	V = 56 V1 = ---- P = ----

ATTACHMENT "A"

CHEMICAL USEAGE

TRADE NAME	CHEMICAL COMPOSITION				ANNUAL USAGE (POUNDS)	MAXIMUM VOLUME OF MATERIAL STORED AT ANY ONE TIME (POUNDS)
	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Pliobond 20 (Ashland Chemical) W.J. Ruscoe Co.	Synthetic Rubber 10%	Alkyphenolic Resin 10%	Calcium Carbonate 2% 471-34-1	MEK 78% 78-93-3		
Turco Liquid Smut-Go NC Turco Products Inc	Nitric Acid 10% 7697-37-2	Ferric Sulfate 5% 10028-22-5	Hydrofluoric Acid 1% 7664-39-3		V = ---- V1 = ---- P = 350 T = 350	V = ---- V1 = ---- P = 50
Oakite 33 Oakite Products Inc.	Phosphoric Acid 50% 7664-38-2	2-Butoxyethanol 15% 111-76-2	Nonylphenoxy Polyethoxyethanol 5% 9016-45-9		V = 600 V1 = ---- P = 650 T = 1250	V = 55 V1 = ---- P = 110
Crystal Clear #1301 Spray Coating, Krylon Borden	Acetone 67-64-1 10% Propane 10% 74-98-6	Isobutane 75-28-5 20% Tolvene 10% 108-88-3	Heptane 142-82-5 20% Xylene 20% 1330-20-7	Heavy Aromatic Solvent Naphtha 5% 64742-94-5	V = 50 V1 = 5 P = 10 T = 65	V = 24 V1 = 5 P = 5
Krylon 1310 Pulling Spray Borden	Isopropyl Alcohol 20% 67-63-0	1,1,1-Trichloroethane 15% 71-55-6	Propane 15% 74-98-6	Isobutane 75-28-5 25% Heptane 25% 142-82-5	V = 46 V1 = ---- P = ---- T = 46	V = 24 V1 = ---- P = ----
Krylon 1311 Matte Finish Spray Borden	Acetone 12.6% 67-64-1	Propane 12.9% 74-98-6	Isobutane 17.1% 75-28-5	Tolvene 49.9% 108-88-3	V = 18 V1 = ---- P = ---- T = 18	V = 9 V1 = ---- P = ----
Speedbonder 324 Structural Adhesive Loctite Corp	Polyurethane Methacrylate Resins 50%	Hydroxyalkyl Methacrylate 25%	T-Butyl Perbenzoate 3% Acrylic Acid 2% 79-10-7	Saccharin 2% 81-07-2 Higher Boiling Methacrylate 15%		

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CHEMICAL USEAGE

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	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Speedbonder 325 Structural Adhesive Loctite Corp	Polyurethane Methacrylate Resin 45% Polyglycol Dimethacrylates 30%	Acrylic Acid 50% 79-10-7 Hydroxyalkyl Methacrylate 10%	Cumene Hydroperoxide 2% 80-15-9 T-Butyl Perbenzoate 2%	Saccharin 1% 81-07-2 Methacrylated Silane 1%		
Speedbonder 326 Structural Adhesive Loctite Corp.	Polyurethane Methacrylate Resin 45% Hydroxyalkyl Methacrylate 30%	Acrylic Acid 79-10-7 3% Cumene Hydroperoxide 1% 80-15-9	Saccharin 81-07-2 1% Acetylphenyhydrazine 1%	Higher Boiling Methacrylate 15%		
Adhesive/Sealant 242 Loctite Corp.	Polyglycol Dimethacrylates 60% Polyglycol Oleates 25%	Saccharin 5% 81-07-2 Silicon Dioxide	Cumene Hydroperoxide 2% 80-15-9	N,N-Dialkyltolvidine 1%		
Nut Lock/Grade CV Loctite Corp.	Polyglycol Dimethacrylates 75% Polyglycol Dioctoates 15%	Cumene Hydroperoxide 3% 80-15-9	Cellulose Acetate Butyrate, under 3%	Trialkylamine under 3%		
Bearing Mount/Garde B Loctite Corp.	Polyglycol Dimethacrylates 75% Polyglycol Dioctoates 15%	Cumene Hydroperoixde 3% 80-15-9	Saccharin 2% 81-07-2	Cellulose Acetate Butyrate 3% N,N-Dialkyltolvidines 1%		
Loctite Garde A Loctite Corp	Polyglycol Dimethacrylates 90%	Cumene Hydroperoxide 7% 80-15-9	Trialkylamine 3%			
Restine Solvent and Thinner Union Rubber, Inc.	Hexane 100% 110-54-3					

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	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
Best-Test Paper Cement Union Rubber, Inc.	Hexane 87% 110-54-3					
3M Image Guard 3M	Water 60% 7732-18-5 Ethyl Butyl Ketone 25% 106-35-4	Bisphenol A-Epichlorohydrin Cupolymer 5% 25068-38-6 Cellulose Sodium Glycolate 5% 9004-32-4	Phosphoric Acid under 1% 7664-38-2	Furmaldehvde under 1% 50-00-0		
Solder S.B.5 Kester	Tin 95% 7440-31-5	Antimony 5% 7440-36-0			V = 400 V1 = 200 P = 50 T = 650	V = 100 V1 = 50 P = 20
Solder SN96 Kester	Tin 96% 7440-31-5	Silver 4% 7440-22-4			V = 420 V1 = 150 P = 50 T = 620	V = 50 V1 = 50 P = 10
Solder SN60 Kester	Tin 60% 7440-31-5	Lead 39.65% 7439-92-1	Antimony .35% 7440-36-0		V = 150 V1 = 200 P = 50 T = 400	V = 50 V1 = 50 P = 10
1544 Rosin Flux Kester	Ethanol 25% 64-17-5	Sec-Butanol (Sec-Butyl Alcohol) 25% 78-92-2	Rosin 50% 8050-09-7		V = 73 V1 = 42 P = 23 T = 138	V = 10 V1 = 10 P = 5
#15 Black Marking Ink Independent Ink Inc.	Cresylic Acid 75% 1319-77-3	Aniline 8% 62-53-3				

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	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)		
T-7 Solvent Independent Ink Inc.	Ethanol 64-17-5	Isopropanol 67-63-0	Monohydroxymethane (Methanol) 5% 67-56-1	2-Pentatone,4-Methyl (MIK) 2% 108-10-1		
Letraset Color-Key Developer 3M	Water 50% 7732-18-5	Propyl Alcohol 45% 71-23-8	Triethylene Glycol 5% 112-27-6			
Starrett Cleaner Sorpy Chemicals	Dipropylene Glycol Monomethyl Ether 2% 34590-94-8	Potassium Hydroxide .5% 1310-58-3	Ethylenediamine Tetraacetic Acid (EDTA) .25% 64-02-8	Nonionic Surfactants 68131-40-8 2% Dye 2610-10-8 .001% Water Remainder 7732-18-5		
Scotch-Weld 1838-B Epoxy Adhesive 3M	Epoxy Resin 25068-38-6 70% Kaolinite 20% 1318-74-7	Clay 5% 68953-58-2	Limestone 5% 1317-65-3	Titanium Dioxide 1% 13463-67-7		
3M Brand TFE Lube 5 3M	1,1,1-Trichloroethane 71-55-6 70% Propane 10% 74-98-6	1,1,2-Trichloro-1,2,2-Trifluoro Ethane 76-13-1 5% Dimethoxymethane 5% 109-87-5	Polytetrafluoroethy-(PTFE) 5% 9002-84-0	1,4-Dioxane 5% 123-91-1		
Scotch Weld 1838-A Epoxy Adhesive 3M	Polyamide Resin 80% 68410-23-1	Kaolinite 10% 1318-74-7	Amorphous Silicon Dioxide 5% 7631-86-9			
Scotch-Weld AF-42/3 Mil Structural Adhesive Film 3M	Polyamide Resin 60% 32131-17-2	Epoxy Resin 20% 25068-38-6	Caprolactam 10% 105-60-2	Dicyandiamide 10% 461-58-5		

TEXTRON
ENVIRONMENTAL SURVEY

INTRODUCTION

Purpose: The Textron Environmental Facility Self-Survey was developed by the Corporate Environmental Affairs Department to help facilities determine the status of their environmental programs. The Self-Survey provides facilities with the comprehensive information they need to identify potential program weaknesses. The program addresses not only compliance with regulatory requirements and corporate policies and procedures, but also liability and good management practice issues. The program also includes environmental guidance information, and therefore it is anticipated that completing the Self-Survey will be an educational process. As the Self-Survey also methodically reviews environmental activities, it provides an opportunity for a facility to organize its environmental files.

The Corporate Environmental Affairs Department plans to expand and update the Self-Survey each year. The Department also plans to help a number of facilities complete the review starting in 1989.

If you have any questions or suggestions regarding the Self-Survey, please contact your Divisional Environmental Coordinator or the Environmental Affairs Department at (401) 457-2363 or (401) 457-2347.

Use of the Self-Survey: Sections 2 to 15 of the Textron Environmental Self-Survey have two components:

- A series of survey questions
- A corresponding set of guidance information

The Self-Survey questions are located on the right-hand pages of the manual. They are intended to enable each facility to review its operations procedures against a standard, comprehensive set of criteria. At the beginning of most sections or subsections, there is an applicability statement which will enable the facility to determine if it is required to complete that set of questions. If there is not an applicability statement, all facilities must complete the questions. Answer the questions by checking one of the answer columns. Use the "Not Applicable" option only when a blank line has been provided.

Some questions will request that you provide additional information. Please provide the additional information in the space below the question or on one of the Self-Survey attachments found in the Appendix Section. Blank copies of each attachment are included for you to copy before use. If a question requests that you confirm

specific information, verify that a copy of the information is in your files. If the Corporate Environmental Affairs Department visits your facility, it is important that all information be available and be well organized. A copy of all information discussed in this Self-Survey must be located in one file cabinet in the Plant Environmental Coordinator's office. Copies of information should be organized according to the sections of this Self-Survey.

Question-specific guidance information has been provided on the left-hand pages of the Self-Survey. This information is intended to help the facility answer the questions. The guidance includes definitions, explanations of requirements, and/or regulatory citations. Additional guidance is provided at the beginning of each section.

Please note that the Self-Survey questions and guidance address federal requirements only. Facilities must actually comply with federal, state and local requirements. ***Be sure to obtain information regarding state and local requirements and consider these requirements in your survey process.***

IMPORTANT NOTE

If during this survey you discover or have reason to believe there is non-compliance with any regulation, rule, ordinance, role, or permit, or any other situation which could give rise to liability (e.g., release, spill, etc.), Immediately contact the Textron Litigation Counsel (Andrew C. Spacone, (401)457-2428) or in his absence, the Director of Environmental Affairs (Paul B. Duff, (401)457-2437) or someone on either staff.

Do not provide any response that would indicate non-compliance until the above has been accomplished.

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SECTION 3

CERCLA

Introduction

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund, was enacted in December 1980 to provide the federal government with the authority to identify and clean up releases of Hazardous Substances from both operating facilities and closed or abandoned disposal sites.

CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act of 1986 (SARA). SARA clarified and strengthened provisions under the original CERCLA, and enlarged the scope of Superfund by adding several new provisions, including Community Right-to-Know (Section 4).

The regulations under CERCLA are divided into two parts:

- The National Contingency Plan - Provides guidance for the discovery and remediation of Hazardous Substance releases.

- Hazardous Substance Spill Reporting - Defines the Hazardous Substances that require reporting when released into the environment and establishes a release reporting system.

National Contingency Plan: The National Contingency Plan (NCP) provides the regulatory framework and procedures for all federal response activities to releases of Hazardous Substances (HSs) under CERCLA. Hazardous Substances are specifically listed materials defined by reference to other environmental statutes including the Clean Water Act, the Resource Conservation and Recovery Act, the Clean Air Act, and the Toxic Substances Control Act. A complete listing of Hazardous Substances is provided in Attachment B. Additional Hazardous Substances may be designated by the EPA if they present substantial danger to public health or welfare or the environment when released. Certain substances, including petroleum and natural and synthetic gas, are exempt. Any Hazardous Substance disposed of in the past may present a potential liability if the material was sent to a site from which there are uncontrolled releases or threats of such releases.

Contributors of Hazardous Substances to such a site, along with the owner and operator of the site, and anyone who transported materials to the site can be considered a potentially responsible party (PRP). Site PRPs may be required to conduct site studies and cleanup activities, repay the government for its cleanup costs, and pay penalty costs if they fail to undertake activities ordered by the government.

The NCP includes provisions for the following activities:

• Site Discovery - EPA has established a national inventory of sites subject to possible response action based on the agency's site discovery activities. This list is maintained and updated on a data base called the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS). A site may be added to this list based on information received in several ways, the most common of which are listed below:

- EPA may have received a report of a Reportable Quantity release of a Hazardous Substance (Section 103(a) - see Hazardous Spill Reporting below);

- the owner or operator may have identified the facility in complying with the one time reporting requirement for owners or operators of treatment, storage and disposal facilities that did not obtain RCRA interim status (Section 103 (c) Report;

- a citizen or a member of a police, health, or fire department may have filed a report of a suspected site;

- EPA or the state may have initiated a survey (e.g., 1979 Eckhardt survey regarding off-site disposal facilities used by major U.S. companies);

- information may be uncovered during facility closures or property transfers; and

- EPA may have conducted an investigation under Section 104 (e). Under such an investigation, EPA may send a letter requesting any and all relevant information on the recipient's possible contribution to a specific site. This letter is usually the first notice that the recipient has that he/she may be involved in a Superfund action. Any facility which receives such a letter should contact the Corporate Legal Department immediately.

• Site Investigation - After a potential site has been identified, a Site Investigation is conducted to determine the extent of contamination and the most appropriate type of response. This phase includes a Preliminary Assessment and possibly a more detailed Site Inspection. The Preliminary Assessment is based upon information from site management practices, generators, current and historic aerial photographs, personal interviews and possibly perimeter inspections. Site Inspections are more detailed studies designed to assess pathways of contamination from the site. Site Inspections usually involve sampling and a review of historic information. EPA or a designated consultant will contact you to arrange a Site Investigation. Notify the Corporate Environmental Affairs Department and Corporate Legal Department as soon as such contact is made.

- Ranking - The results of the Site Investigation are utilized to rank the facility in terms of the severity of the release, its threat to human health or the environment, and the necessity for remedial action. This is accomplished using the Hazard Ranking System (HRS). The HRS weights the risks posed by chemical releases from each site and assigns a numerical score. These site scores allow the agency to rank sites according to the relative severity of the risks they pose, which determines whether or not they will be added to the National Priority List (NPL). Sites on the NPL are eligible for remedial cleanup activities financed by the federal Superfund. If a site scores more than 28.5 on the HRS, it can be proposed for addition to the NPL.

- Removal Actions - After the site has been listed, a removal action may be initiated. A removal action is a short-term or temporary response action implemented to alleviate immediate or significant risks to public health and the environment. Note, that a Remedial Action is a much longer process and requires preliminary steps as described below.

- Remedial Investigations/Feasibility Studies (RI/FS) - After a site is on the NPL but before a remedial action is conducted, EPA must conduct an RI/FS. This consists of studies which further characterize the extent of the release and the threat to public health and the environment, and which develop and evaluate remedial alternatives with regard to their consistence with the provisions of the NCP.

- Selection of Remedy - The information developed during the RI/FS is used to select a specific remedial option. This process includes an evaluation of alternative remedies and selection of the remedy which is consistent with CERCLA guidelines. During this phase, EPA is required to document the advantages and disadvantages of alternatives and specify the selected remedy. This EPA documentation is known as a Record of Decision, or ROD.

- Remedial Action - This phase develops an engineering design for the selected cleanup alternative, implements the remedial action, and monitors the effectiveness of the remedial action.

Hazardous Substance Spill Reporting: CERCLA also requires the reporting of uncontrolled spills or releases of Hazardous Substances. Under CERCLA, a release is defined as "any spilling, leaking, pumping, pouring, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, but excludes any release which results in exposure to persons solely within a workplace..." Environment is defined to include "(A) the navigable waters, the waters of the contiguous zone, and the ocean waters
of which the natural resources are under the exclusive management authority of the U.S. under the Fishery Conservation and Management Act of 1976, and (B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the U.S. or under the jurisdiction of the U.S."

For each Hazardous Substance, the EPA has established a Reportable Quantity or RQ. The RQ is the amount of that material that, if released, requires notification and response. A listing of CERCLA RQs is also provided in Attachment B.

If a facility releases into the environment a Reportable Quantity of a Hazardous Substance in a 24-hour period, they must notify the National Response Center (NRC) at (800) 424-8802 as soon as a Reportable Quantity has been released. The NRC duty officer will relay information to the On-Scene Coordinator (OSC) at either the EPA Regional
Office or the U.S. Coast Guard District Office. The OSC will determine whether, and in what manner, to respond to the release. Textron Corporate Environmental Affairs Department must also be immediately notified at (401) 457-2437. In addition, the party responsible for the release notify potentially injured parties through notices published in local newspapers within fifteen days of the release (Section 111(g)).

Both CERCLA and SARA (Section 4) have emergency release notification requirements that apply to Hazardous Substances. If a facility releases a Hazardous Substance, it is important that the facility comply with applicable requirements of both regulations. Note that while CERCLA reporting is triggered whenever the facility has a release that enters the environment, SARA reporting is required only when the release goes beyond the property line. In addition, CERCLA requires notification to the NRC, while SARA requires notification to local and state agencies. Finally, CERCLA reporting relates to Hazardous Substances only, but SARA requirements apply to Hazardous Substances and Extremely Hazardous Substances.

NOTE: If a release occurs that is below a reportable quantity, yet has "significant impact" to the environmental or surrounding community, be certain to contact the Corporate Environmental Affairs Department immediately.

SECTION 3

CERCLA

Guidance

Regulatory Authority:	The Comprehensive Environmental Response Compensation and Liability Act or "Superfund"; Corresponding State Statutes
Regulatory Citation:	40 CFR 300 and 40 CFR 302; Corresponding state regulations
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State Agencies

1. - 2. Questions are self-explanatory.

SECTION 3

CERCLA

Survey Questions

Complete this section if the facility:

- ***uses or stores any Hazardous Substances;***
- ***has had a Reportable Quantity of a Hazardous Substance; or***
- ***has treated, stored, or disposed of hazardous wastes either on site or at an off-site facility.***

	Yes	No	Unk	N/A
1. If the facility has been subject to an inspection regarding CERCLA issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that the facility has copies of reports or correspondence: _____	___	X	___	
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to CERCLA? If so, describe and confirm that the facility has copies of all documents. _____	___	X	___	___

3-7. See Introduction to this section.

	Yes	No	Unk	N/A
3. Has the facility ever prepared or filed a CERCLA 103(a) Notice with the U.S. EPA or the state? If so, confirm that the facility has a copy.	___	X	___	
4 a. Has the facility ever prepared or filed a CERCLA 103(c) Notice with the U.S. EPA? If so, confirm that the facility has a copy.	___	X	___	
b. Has the U.S. EPA ever conducted a follow-up inspection to the 103(c) Notice? If yes, confirm that the facility has a copy of the inspection report and Hazard Ranking Scoring (if any).	___	X	___	
Inspection Date: N/A Hazard Ranking Score: N/A				
5. Is the facility included on the CERCLIS list?	___	___	X	
6. Has the facility ever been listed or been considered for listing on the federal National Priorities List (NPL) or a comparable state list intended for remedial action? If yes, check the stage that currently applies to the facility.	___	X	___	
___ Site Discovery ___ Preliminary Assessment ___ Site Inspection ___ Ranking ___ Removal Action ___ RI/FS ___ Selection of Remedy ___ Remedial Action				
7. Has the facility received a Section 104(e) information request? If so, confirm that the facility has a copy.	___	X	___	

8. As discussed in Sections 8 and 9, it is a good management practice to audit all facilities used to treat or dispose of wastes. This practice enables the facility to identify facilities that present secondary liabilities.

10. CERCLA requires facilities to notify the NRC if they release a Reportable Quantity of a Hazardous Substance into the environment in a 24-hour period. See the Introduction to this section for additional details.

	Yes	No	Unk	N/A
8. Are audits performed of off-site disposal locations presently used by the facility? If yes, record on Attachments J and M and explain below:	X			
9. Has neighboring real property been subjected to CERCLA enforcement or cleanup, or experienced spills, leaks, or other releases of hazardous substances? If so, explain.			X	
10. Has the facility ever had a CERCLA Reportable Quantity release? If so, record on Attachment C.		X		
11. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.		X		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
83-32-9		Acenaphthene			X	100			
208-96-8		Acenaphthylene			X	5000			
75-07-0		Acetaldehyde		O	X	1000			
107-20-0		Acetaldehyde, chloro- (see Chloroacetaldehyde)			X	1000			
75-87-6		Acetaldehyde, trichloro-			X	1			
60-35-5		Acetamide		O					
640-19-7		Acetamide, 2-fluoro- (see Fluoroacetamide)	X		X	100	100/10000		
62-44-2		Acetamide, N-(4-ethoxyphenyl)-			X	1			
591-08-2		Acetamide, N-(aminothioxomethyl)-			X	1000			
53-96-3		Acetamide, N-9H-fluoren-2-yl-		X	X	1			
64-19-7 3, 17, 18, 32		Acetic acid Kodak Fiver & Replenisher, TD Isofount, Superior #23 Flux			X	5000			
141-78-6		Acetic acid, ethyl ester			X	5000			
62-74-8		Acetic acid, fluoro-, sodium salt	X		X	10	10/10000		
301-04-2		Acetic acid, lead salt			X	5000			
563-68-8		Acetic acid, thallium (I) salt (see Thallium (I) acetate)			X	100			
108-24-7		Acetic anhydride			X	5000			
16752-77-5		Acetimidic acid, N-(methylcarbamoyl) oxy]thio-, methyl ester	X		X	100	500/10000		
67-64-1 4, 6, 13, 27, 30, 33, 33		Acetone Crystal Clear Acrylic Coating, Tac-Pac Mist Activator, Spray Ink, Kodak Brushing, Lacquer #4, Krylon Crystal Clear Spray 1301, Krylon 1311 Spray		O	X	5000			

O TOXIC CHEMICAL FOR SECTION 313 REPORTING PAGE

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-86-5		Acetone cyanohydrin	X		X	10	1000		
1752-30-3		Acetone thiosemicarbazide	X			1	1000/10000		
75-05-8		Acetonitrile Super Drop Debonder		O	X	5000			
11									
81-81-2	3-(alpha-	Acetonylbenzyl)-4-hydroxycoumarin and salts	X		X	100	500/10000		
98-86-2		Acetophenone			X	5000			
506-96-7		Acetyl bromide			X	5000			
75-36-5		Acetyl chloride			X	5000			
591-08-2	1-	Acetyl-2-thiourea			X	1000			
53-96-3	2-	Acetylaminofluorene		O	X	1			
107-02-8		Acrolein	X	O	X	1	500		
79-06-1		Acrylamide	X	O	X	5000	1000/10000		
79-10-7		Acrylic acid Speed Bonder 324 Structural Adhesive, Speed Bonder 325, Speed Bonder 326		O	X	5000			
33, 34, 34									
107-13-1		Acrylonitrile	X	O	X	100	10000		
814-68-6		Acrylyl chloride	X			1	100		
124-04-9		Adipic acid			X	5000			
111-69-3		Adiponitrile	X			1	1000		
148-82-3		Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-,L			X	1			
116-06-3		Aldicarb	X		X	1	100/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
309-00-2		Aldrin [1,4:5.8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1 alpha,4 alpha,4a beta,5 alpha,8 alpha,8a beta)-]	X	O	X	1	500/10000		
107-18-6		Allyl alcohol	X		X	100	1000		
107-05-1		Allyl chloride		O	X	1000			
107-11-9		Allylamine	X			1	500		
7429-90-5		Aluminum (fume or dust)		0					
1344-28-1		Aluminum oxide Chicoa Sealing Compound		O					
20859-73-8		Aluminum phosphide	X		X	100	500		
10043-01-3		Aluminum sulfate Kodak Rapid Fixer			X	5000			
95-53-4	2-	Amino-1-methyl benzene		X	X	1			
106-49-0	4-	Amino-1-methyl benzene			X	1			
82-28-0	1-	Amino-2-Methylanthraquinone		O					
117-79-3	2-	Aminoanthraquinone		O					
60-09-3	4-	Aminoazobenzene		O					
97-56-3	o-	Aminoazotoluene		X					
92-67-1	4-	Aminobiphenyl		O					
2763-96-4	5-(	Aminomethyl)-3-isoxazolol	X		X	1000	10000		
54-62-6		Aminopterin	X			1	500/10000		
504-24-5	4-	Aminopyridine	X		X	1000	500/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
78-53-5	Amiton	X			1	500		
3734-97-2	Amiton oxalate	X			1	100/10000		
61-82-5	Amitrole			X	1			
7664-41-7	Ammonia SM-1573-12 Spotmask, Brite Boy Metal Polish, G-P Sudsy Ammonia	X	O	X	100	500		
8, 15 20								
631-61-8	Ammonium acetate			X	5000			
1863-63-4	Ammonium benzoate			X	5000			
1066-33-7	Ammonium bicarbonate			X	5000			
7789-09-5	Ammonium bichromate			X	1000			
1341-49-7	Ammonium bifluoride			X	100			
10192-30-0	Ammonium bisulfite			X	5000			
1111-78-0	Ammonium carbamate			X	5000			
506-87-6	Ammonium carbonate			X	5000			
12125-02-9	Ammonium chloride			X	5000			
7788-98-9	Ammonium chromate			X	1000			
3012-65-5	Ammonium citrate, dibasic			X	5000			
13826-83-0	Ammonium fluoborate			X	5000			
12125-01-8	Ammonium fluoride			X	100			
1336-21-6	Ammonium hydroxide			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
6484-52-2		Ammonium nitrate (solution)		0					
5972-73-6		Ammonium oxalate			X	5000			
6009-70-7		Ammonium oxalate			X	5000			
14258-49-2		Ammonium oxalate			X	5000			
131-74-8		Ammonium picrate			X	10			
16919-19-0		Ammonium silicofluoride			X	1000			
7773-06-0		Ammonium sulfamate			X	5000			
7783-20-2		Ammonium sulfate (solution)		O					
12135-76-1		Ammonium sulfide			X	100			
10196-04-0 26		Ammonium sulfite Perma Wash			X	5000			
3164-29-2		Ammonium tartrate			X	5000			
14307-43-8		Ammonium tartrate			X	5000			
1762-95-4		Ammonium thiocyanate			X	5000			
7783-18-8 3, 8		Ammonium thiosulfate Kodak Fixer & Replenisher, Kodak Rapid Fixer			X	5000			
7803-55-6		Ammonium vanadate			X	1000			
300-62-9		Amphetamine	X			1	1000		
123-92-2	iso-	Amyl acetate			X	5000			
625-16-1	tert-	Amyl acetate			X	5000			

O - TOXIC CHEMICAL FOR SECTION [illegible]

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
626-38-0	sec-	Amyl acetate			X	5000			
628-63-7		Amyl acetate			X	5000			
62-53-3		Aniline #15 Black Marking Ink	X	O	X	5000	1000		
35									
88-05-1		Aniline, 2,4,6-trimethyl-	X			1	500		
90-04-0	o-	Anisidine		O					
104-94-9	p-	Anisidine		O					
134-29-2	o-	Anisidine Hydrochloride		O					
120-12-7		Anthracene		O	X	5000			
7440-36-0		Antimony Kester SB5 Solder, SN 60 Solder		O	X	5000			
35, 35									
7647-18-9		Antimony pentachloride			X	1000			
7783-70-2		Antimony pentafluoride	X			1	500		
28300-74-5		Antimony potassium tartrate			X	100			
7789-61-9		Antimony tribromide			X	1000			
10025-91-9		Antimony trichloride			X	1000			
7783-56-4		Antimony trifluoride			X	1000			
1309-64-4		Antimony trioxide			X	1000			
1309-64-4		Antimony trioxide, handling and use as Sb			X	1000			
1309-64-4		Antimony trioxide, production			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1397-94-0		Antimycin A	X			1	1000/10000		
86-88-4		ANTU	X		X	100	500/10000		
12674-11-2		Aroclor 1016			X	10			
11104-28-2		Aroclor 1221			X	10			
11141-16-5		Aroclor 1232			X	10			
53469-21-9		Aroclor 1242			X	10			
12672-29-6		Aroclor 1248			X	10			
11097-69-1		Aroclor 1254			X	10			
11096-82-5		Aroclor 1260			X	10			
7440-38-2		Arsenic		O	X	1			
1327-53-3		Arsenic (III) oxide	X		X	5000	100/10000		
1303-28-2		Arsenic (V) oxide	X		X	5000	100/10000		
1327-52-2		Arsenic acid			X	1			
7778-39-4		Arsenic acid			X	1			
1303-32-8		Arsenic disulfide			X	5000			
1303-28-2		Arsenic pentoxide	X		X	5000	100/10000		
7784-34-1		Arsenic trichloride	X		X	5000	500		
1327-53-3		Arsenic trioxide	X		X	5000	100/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1327-53-3		Arsenic trioxide production	X		X	5000	100/10000		
1303-33-9		Arsenic trisulfide			X	5000			
1327-53-3		Arsenous oxide	X		X	5000	100/10000		
7784-42-1		Arsine	X			1	100		
692-42-2		Arsine, diethyl			X	1			
1332-21-4		Asbestos		X	X	1			
1332-21-4		Asbestos (friable) EA 9309 Part A		O	X	1			
11									
492-80-8		Auramine, manufacture of		X	X	1			
492-80-8		Auramine, technical grade		X	X	1			
115-02-6		Azaserine			X	1			
2642-71-9		Azinphos-ethyl	X			1	100/10000		
86-50-0		Azinphosmethyl	X		X	1	10/10000		
151-56-4		Aziridine	X	X	X	1	500		
50-07-7		Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione,6-amino-8-[((amino-carbonyl) oxy) Imethyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-	X		X	1	500		
7440-39-3		Barium		O					
542-62-1		Balium cyanide			X	10			
225-51-4	3,4-	Benzacridine			X	1			
98-87-3		Benzal chloride	X	O	X	5000	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
55-21-0		Benzamide		O					
56-55-3	1,2-	Benzanthracene			X	1			
57-97-6	1,2-	Benzanthracene, 7,12-dimethyl-			X	1			
62-53-3		Benzenamine	X	X	X	5000	1000		
636-21-5		Benzenamine, 2-methyl-, hydrochloride		X	X	1			
99-55-8		Benzenamine, 2-methyl-5-nitro			X	1			
98-16-8		Benzenamine, 3-(trifluoromethyl)-	X			1	500		
492-80-8		Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-		X	X	1			
101-14-4		Benzenamine, 4,4'-methylenebis(2-chloro-		X	X	1			
106-47-8		Benzenamine, 4-chloro			X	1000			
3165-93-3		Benzenamine, 4-chloro-2-methyl-, hydrochloride			X	1			
100-01-6		Benzenamine, 4-nitro			X	5000			
60-11-7		Benzenamine, N,N-dimethyl-4-phenylazo-		X	X	1			
71-43-2		Benzene		O	X	1000			
95-94-3		Benzene, 1,2,4,5-tetrachloro-			X	5000			
95-50-1		Benzene, 1,2-dichloro-		X	X	100			
94-59-7		Benzene, 1,2-methylenedioxy-4-allyl-		X	X	1			
120-58-1		Benzene, 1,2-methylenedioxy-4-propenyl-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
94-58-6		Benzene, 1,2-methylenedioxy-4-propyl-			X	1			
99-35-4		Benzene, 1,3,5-trinitro			X	10			
541-73-1		Benzene, 1,3-dichloro		X	X	100			
100-14-1		Benzene, 1-(chloromethyl)-4-nitro-	X			1	500/10000		
101-55-3		Benzene, 1-bromo-4-phenoxy-			X	100			
121-14-2		Benzene, 1-methyl-2,4-dinitro-		X	X	1000			
606-20-2		Benzene, 1-methyl-2,6-dinitro-		X	X	1000			
98-82-8		Benzene, 1-methylethyl-		X	X	5000			
91-08-7		Benzene, 2,4-diisocyanatomethyl-	X	X	X	100	100		
584-84-9		Benzene, 2,4-diisocyanatomethyl-	X	X	X	100	500		
26471-62-5		Benzene, 2,4-diisocyanatomethyl-			X	100			
108-90-7		Benzene, chloro-		X	X	100			
100-44-7		Benzene, chloromethyl- (Benzyl chloride)	X	X	X	100	500		
98-87-3		Benzene, dichloromethyl-	X	X	X	5000	500		
95-47-6	o-	Benzene, dimethyl		X	X	1000			
106-42-3	p-	Benzene, dimethyl-		X	X	1000			
108-38-3	m-	Benzene, dimethyl-		X	X	1000			
1330-20-7		Benzene, dimethyl-		X	X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
118-74-1		Benzene, hexachloro-		X	X	1			
110-82-7		Benzene, hexahydro-		X	X	1000			
108-95-2		Benzene, hydroxy-	X	X	X	1000	500/10000		
108-88-3		Benzene, methyl-		X	X	1000			
98-95-3		Benzene, nitro	X	X	X	1000	10000		
608-93-5		Benzene, pentachloro-			X	10			
82-68-8		Benzene, pentachloronitro-		X	X	1			
98-07-7		Benzene, trichloromethyl-	X	X	X	1	100		
106-46-7		Benzene,1,4-dichloro		X	X	100			
510-15-6		Benzeneacetic acid,4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy,ethyl ester		X	X	1			
98-05-5		Benzenearsonic acid	X			1	10/10000		
85-44-9	1,2-	Benzenedicarboxylic acid anhydride		X	X	5000			
117-84-0	1,2-	Benzenedicarboxylic acid, di-n-octyl ester		X	X	5000			
84-74-2	1,2-	Benzenedicarboxylic acid, dibutyl ester		X	X	10			
84-66-2	1,2-	Benzenedicarboxylic acid, diethyl ester		X	X	1000			
131-11-3	1,2-	Benzenedicarboxylic acid, dimethyl ester		X	X	5000			
117-81-7	1,2-	Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester		X	X	1			
108-46-3	1,3-	Benzenediol			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
51-43-4	1,2-	Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-			X	1000			
98-09-9		Benzenesulfonic acid chloride			X	100			
98-09-9		Benzenesulfonyl chloride			X	100			
108-98-5		Benzenethiol	X		X	100	500		
92-87-5		Benzidine		O	X	1			
3615-21-2		Benzimidazole, 4,5-dichloro-2-(trifluoromethyl)-	X			1	500/10000		
81-07-2	1,2-	Benzisothiazolin-3-one,1,1-dioxide, and salts TD ISO Fount		X	X	1			
17									
191-24-2		Benzo [ghi] perylene			X	5000			
56-55-3		Benzo(a)anthracene			X	1			
205-99-2		Benzo(b)fluoranthene			X	1			
207-08-9		Benzo(k)fluoranthene			X	1			
65-85-0		Benzoic acid			X	5000			
98-07-7		Benzoic trichloride (Benzotrichloride)	X	O	X	1	100		
100-47-0		Benzonitrile			X	5000			
50-32-8	3,4-	Benzopyrene			X	1			
106-51-4	p-	Benzoquinone		X	X	10			
98-07-7		Benzotrichloride	X	X	X	1	100		
98-88-4		Benzoyl chloride		O	X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
94-36-0		Benzoyl peroxide		O					
50-32-8		Benzo[a]pyrene			X	1			
206-44-0		Benzo[j,k]fluorene			X	100			
218-01-9	1,2-	Benzphenanthrene			X	1			
100-44-7		Benzyl chloride	X	O	X	100	500		
140-29-4		Benzyl cyanide	X			1	500		
56-55-3		Benz[a]anthracene			X	1			
225-51-4		Benz[c]acridine			X	1			
56-49-5		Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-			X	1			
7440-41-7		Beryllium		O	X	1			
7787-47-5		Beryllium chloride			X	5000			
7440-41-7		Beryllium dust		X	X	1			
7787-49-7		Beryllium fluoride			X	5000			
7787-55-5		Beryllium nitrate			X	5000			
13597-99-4		Beryllium nitrate			X	5000			
58-89-9	gamma-	BHC	X	X	X	1	1000/10000		
319-84-6	alpha-	BHC			X	1			
319-85-7	beta-	BHC			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
319-86-8	delta-	BHC			X	1			
15271-41-7		Bicyclo [2.2.1] Heptane- 2-Carbonitrile, 5-Chloro- 6- (((Methylamino)Carbonyl) Oxy) Imino) -1S- (1-alpha, 2-beta, 4-alpha, 5-alpha, 6E))-.	X			1	500/10000		
1464-53-5	2,2'-	Bioxirane	X	X	X	1	500		
92-52-4		Biphenyl		O					
92-87-5	(1,1'-	Biphenyl)-4,4'diamine		X	X	1			
91-94-1	(1,1'-	Biphenyl)-4,4'diamine,3,3'dichloro-		X	X	1			
119-90-4	(1,1'-	Biphenyl)-4,4'diamine,3,3'dimethoxy-		X	X	1			
119-93-7	(1,1'-	Biphenyl)-4,4'diamine,3,3'dimethyl-		X	X	1			
111-44-4		Bis (2-chloroethyl) ether	X	O	X	1	10000		
108-60-1		Bis(2-Chloro-1-Methylethyl) ether		O	X	1000			
111-91-1		Bis(2-chloroethoxy) methane			X	1000			
108-60-1		Bis(2-chloroisopropyl) ether		X	X	1000			
103-23-1		Bis(2-ethylhexyl) adipate		O					
117-81-7		Bis(2-ethylhexyl)phthalate		X	X	1			
542-88-1		Bis(chloromethyl) ether	X	O	X	1	100		
534-07-6		Bis(chloromethyl) ketone	X			1	10/10000		
137-26-8		Bis(dimethylthiocarbamoyl) disulfide			X	10			
542-88-1		Bis-chloromethyl ether (BCME)	X	X	X	1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
4044-65-9		Bitoscanate	X			1	500/10000		
10294-34-5		Boron Trichloride	X			1	500		
7637-07-2		Boron trifluoride	X			1	500		
353-42-4		Boron trifluoride compound with methyl ether (1:1)	X			1	1000		
28772-56-7		Bromadiolone	X			1	100/10000		
7726-95-6		Bromine	X			1	500		
506-68-3		Bromine cyanide	X		X	1000	500/10000		
598-31-2		Bromoacetone			X	1000			
75-25-2		Bromoform		X	X	100			
75-25-2		Bromoform (Tribromomethane)		O	X	100			
74-83-9		Bromomethane (Methyl Bromide)	X	O	X	1000	1000		
101-55-3	4-	Bromophenyl phenyl ether			X	100			
357-57-3	4-	Brucine			X	100			
106-99-0	1,3-	Butadiene		O					
106-99-0		Butadiene		X					
87-68-3	1,3-	Butadiene, 1,1,2,3,4,4-hexachloro-		X	X	1			
924-16-3	1-	Butanamine, N-butyl-N-nitroso-		X	X	1			
305-03-3		Butanoic acid 4-[bis(2-chloroethyl)amino]benzene-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
71-36-3	1-	Butanol Cellulose Nitrate Gloss Lacquer, Spray Ink 18, 27		X	X	5000			
78-93-3	2-	Butanone		X	X	5000			
1338-23-4	2-	Butanone peroxide			X	10			
123-73-9	2-	Butenal	X		X	100	1000		
4170-30-3	2-	Butenal	X		X	100	1000		
764-41-0	2-	Butene, 1,4-dichloro-			X	1			
105-46-4	sec-	Butyl acetate			X	5000			
110-19-0	iso-	Butyl acetate			X	5000			
123-86-4		Butyl acetate Dykem Thinner 138, Cellulose Nitrate Gloss Lacquer 3, 18			X	5000			
123-86-4	n-	Butyl acetate Pro-1560-MK Part B, MolyKote 321R Lub, Kodak Brushing Lacquer #4 16, 26, 30			X	5000			
540-88-5	tert-	Butyl acetate			X	5000			
141-32-2		Butyl acrylate		O					
71-36-3	n-	Butyl alcohol Dolph Spray AC-29-IS, Kodak Brushing Lacquer #4 27, 30		O	X	5000			
75-65-0	tert-	Butyl alcohol		O					
78-92-2	sec-	Butyl alcohol #1544 Rosin Flux 35		O					
85-68-7		Butyl benzyl phthalate Wilhold White Glue 32		O	X	100			
84-74-2	n-	Butyl phthalate		X	X	10			
84-74-2	Di-n-	Butyl phthalate		X	X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-64-9	tert-	Butylamine			X	1000			
78-81-9	iso-	Butylamine			X	1000			
109-73-9		Butylamine			X	1000			
513-49-5	sec-	Butylamine			X	1000			
13952-84-6	sec-	Butylamine			X	1000			
106-88-7	1,2-	Butylene oxide		O					
123-72-8		Butyraldehyde		O					
79-31-2	iso-	Butyric acid			X	5000			
107-92-6		Butyric acid			X	5000			
4680-78-8		C.I. Acid Green 3		O					
569-64-2		C.I. Basic Acid Green 4		O					
989-38-8		C.I. Basic Red 1		O					
1937-37-7		C.I. Direct Black 38		O					
72-57-1		C.I. Direct Blue 14			X	1			
2602-46-2		C.I. Direct Blue 6		O					
16071-86-6		C.I. Direct Brown 95		O					
82-28-0		C.I. Disperse Orange 11		X					
2832-40-8		C.I. Disperse Yellow 3		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
81-88-9		C.I. Food Red 15		O					
3761-53-3		C.I. Food Red 5		O					
3118-97-6		C.I. Solvent Orange 7		O					
492-80-8		C.I. Solvent Yellow 34 (Auramine)		O	X	1			
842-07-9		C.I. Solvent Yellow 14		O					
97-56-3		C.I. Solvent Yellow 3		O					
128-66-5		C.I. Vat Yellow 4		O					
75-60-5		Cacodylic acid			X	1			
7440-43-9		Cadmium		O	X	1			
543-90-8		Cadmium acetate			X	100			
7789-42-6		Cadmium bromide			X	100			
10108-64-2		Cadmium chloride			X	100			
1306-19-0		Cadmium oxide	X			1	100/10000		
1306-19-0		Cadmium oxide, fume, as Cd	X			1	100/10000		
1306-19-0		Cadmium oxide, production	X			1	100/10000		
2223-93-0		Cadmium stearate	X			1	1000/10000		
7778-44-1		Calcium arsenate	X		X	1000	500/10000		
52740-16-6		Calcium arsenite			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-20-7	Calcium carbide			X	10			
13765-19-0	Calcium chromate			X	1000			
156-62-7	Calcium cyanamide		O					
592-01-8	Calcium cyanide			X	10			
26264-06-2	Calcium dodecylbenzene sulfonate			X	1000			
7778-54-3	Calcium hypochlorite			X	10			
8001-35-2	Camphechlor	X	X	X	1	500/10000		
8001-35-2	Camphene, octachloro-	X	X	X	1	500/10000		
56-25-7	Cantharidin	X			1	100/10000		
133-06-2	Captan [1H-Isoindole-1,3(2H)-dione,3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-]		O	X	10			
51-83-2	Carbachol chloride	X			1	500/10000		
51-79-6	Carbamic acid, ethyl ester		X	X	1			
26419-73-8	Carbamic acid, methyl-0-(((2,4-dimethyl-1,3-dithiolan-2-yl)methylene)amino)-	X			1	100/10000		
615-53-2	Carbamic acid, methylnitroso-, ethyl ester			X	1			
759-73-9	Carbamide, N-ethyl-N-nitroso-		X	X	1			
684-93-5	Carbamide, N-methyl-N-nitroso-		X	X	1			
62-56-6	Carbamide, thio-		X	X	1			
630-10-4	Carbamimidoselenoic acid			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-44-7		Carbamoyl chloride, dimethyl-		X	X	1			
63-25-2		Carbaryl [1-Naphthalenol,methylcarbamate]		O	X	100			
1563-66-2		Carbofuran	X		X	10	10/10000		
75-15-0		Carbon disulfide	X	O	X	100	10000		
353-50-4		Carbon oxyfluoride			X	1000			
56-23-5		Carbon tetrachloride Gauge Oil/Red		O	X	5000			
6533-73-9		Carbonic acid, dithallium (I) salt	X		X	100	100/10000		
79-22-1		Carbonochloridic acid, methyl ester	X		X	1000	500		
75-44-5		Carbonyl chloride	X	X	X	10	10		
353-50-4		Carbonyl fluoride			X	1000			
463-58-1		Carbonyl sulfide		O					
786-19-6		Carbophenothion	X			1	500		
120-80-9		Catechol		O					
120-80-9		Catechol (Pyrocatechol)		X					
75-87-6		Chloral			X	1			
133-90-4		Chloramben [Benzoic acid,3-amino-2,5-dichloro-]		O					
305-03-3		Chlorambucil			X	1			
57-74-9		Chlordane [4,7-Methanoindan,1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-]	X	O	X	1	1000		

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
57-74-9		Chlordane, technical	X	X	X	1	1000		
470-90-6		Chlorfenvinfos	X			1	500		
76-13-1		Chlorinated fluorocarbon (Freon 113)		O					
7782-50-5		Chlorine	X	O	X	10	100		
506-77-4		Chlorine cyanide			X	10			
10049-04-4		Chlorine dioxide		O					
24934-91-6		Chlormephos	X			1	500		
999-81-5		Chlormequat chloride	X			1	100/10000		
494-03-1		Chlornaphazine			X	1			
106-89-8	1-	Chloro-2,3-epoxypropane	X	X	X	1000	1000		
59-50-7	4-	Chloro-m-cresol			X	5000			
59-50-7	p-	Chloro-m-cresol			X	5000			
3165-93-3	4-	Chloro-o-toluidine, hydrochloride			X	1			
107-20-0		Chloroacetaldehyde			X	1000			
79-11-8		Chloroacetic acid	X	O		1	100/10000		
532-27-4	2-	Chloroacetophenone		O					
532-27-4	alpha-	Chloroacetophenone		X					
106-47-8	p-	Chloroaniline			X	1000			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
108-90-7		Chlorobenzene		O	X	100			
510-15-6		Chlorobenzilate [Benzeneacetic acid,4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-,ethyl ester]		O	X	1			
124-48-1		Chlorodibromomethane			X	100			
75-00-3		Chloroethane		X	X	100			
75-00-3		Chloroethane (Ethyl Chloride)		O	X	100			
107-07-3		Chloroethanol	X			1	500		
627-11-2		Chloroethyl chloroformate	X			1	1000		
110-75-8	2-	Chloroethyl vinyl ether			X	1000			
67-66-3		Chloroform	X	O	X	5000	10000		
74-87-3		Chloromethane (Methyl Chloride)		O	X	1			
542-88-1		Chloromethyl ether	X	X	X	1	100		
107-30-2		Chloromethyl methyl ether	X	O	X	1	100		
91-58-7	2-	Chloronaphthalene			X	5000			
91-58-7	beta-	Chloronaphthalene			X	5000			
3691-35-8		Chlorophacinone	X			1	100/10000		
95-57-8	o-	Chlorophenol			X	100			
95-57-8	2-	Chlorophenol			X	100			
7005-72-3	4-	Chlorophenyl phenyl ether			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
5344-82-1	1-(o-	Chlorophenyl)thiourea	X		X	100	100/10000		
126-99-8		Chloroprene		O					
542-76-7	3-	Chloropropionitrile	X		X	1000	1000		
7790-94-5		Chlorosulfonic acid			X	1000			
1897-45-6		Chlorothalonil [1,3-Benzenedicarbonitrile,2,4,5,6-tetrachloro-]		O					
21923-23-9		Chlorothiophos	X			1	500		
1982-47-4		Chloroxuron	X			1	500/10000		
2921-88-2		Chlorpyrifos			X	1			
10101-53-8		Chomic sulfate			X	1000			
1066-30-4		Chromic acetate			X	1000			
7738-94-5		Chromic acid			X	1000			
11115-74-5		Chromic acid Alodine 1200, 1201			X	1000			
5, 6									
13765-19-0		Chromic acid, calcium salt			X	1000			
10025-73-7		Chromic chloride	X			1	1/10000		
7440-47-3		Chromium		O	X	1			
18		Cellulose Nitrate Gloss Lacquer							
10049-05-5		Chromous chloride			X	1000			
218-01-9		Chrysene			X	1			
7440-48-4		Cobalt		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
10210-68-1		Cobalt carbonyl	X			1	10/10000		
62207-76-5		Cobalt, ((2,2'- (1,2-ethanediylbis (nitrilomethylidyne)) bis-(6-fluoro phenolato))(2-) -N, N, '0, 0')-.	X			1	100/10000		
7789-43-7		Cobaltous bromide			X	1000			
544-18-3		Cobaltous formate			X	1000			
14017-41-5		Cobaltous sulfamate			X	1000			
64-86-8		Colchicine	X			1	10/10000		
7440-50-8		Copper		O	X	5000			
12002-03-8		Copper acetoarsenite	X		X	100	500/10000		
544-92-3		Copper cyanide			X	10			
56-72-4		Coumaphos	X		X	10	100/10000		
5836-29-3		Coumatetralyl	X			1	500/10000		
8001-58-9		Creosote			X	1			
120-71-8	p-	Cresidine		O					
95-48-7	o-	Cresol	X	O	X	1000	1000/10000		
106-44-5	p-	Cresol		O	X	1000			
108-39-4	m-	Cresol		O	X	1000			
1319-77-3		Cresol (mixed isomers)		O	X	1000			
1319-77-3		Cresol(s)		X	X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
95-48-7		Cresylic acid	X	X	X	1000	1000/10000		
95-48-7	o-	Cresylic acid	X	X	X	1000	1000/10000		
106-44-5	p-	Cresylic acid		X	X	1000			
108-39-4	m-	Cresylic acid		X	X	1000			
1319-77-3		Cresylic acid #15 Black Marking Ink		X	X	1000			
535-89-7		Crimidine	X			1	100/10000		
4170-30-3		Crotonaldehyde	X		X	100	1000		
123-73-9		Crotonaldehyde,(E)-	X		X	100	1000		
98-82-8		Cumene		O	X	5000			
80-15-9		Cumene hydroperoxide Loctite Grade A, AV, AVV, Speed Bonder 325, Speed Bonder 326, Loctite 242 Adhesive/Sealant, Nut Lock CV, Bearing Mount Grade B, Loctite Grade A		O	X	10			
135-20-6		Cupferron [Benzeneamine,N-hydroxy-N-nitroso,ammonium salt]		O					
142-71-2		Cupric acetate			X	100			
12002-03-8		Cupric acetoarsenite	X		X	100	500/10000		
7447-39-4		Cupric chloride			X	10			
3251-23-8		Cupric nitrate			X	100			
5893-66-3		Cupric oxalate			X	100			
7758-98-7		Cupric sulfate			X	10			
10380-29-7		Cupric sulfate ammoniated			X	100			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
815-82-7		Cupric tartrate			X	100			
57-12-5		Cyanides (as Cn)			X	10			
57-12-5		Cyanides (soluble cyanide salts), not elsewhere specified			X	10			
460-19-5		Cyanogen			X	100			
506-68-3		Cyanogen bromide	X		X	1000	500/10000		
506-77-4		Cyanogen chloride			X	10			
506-78-5		Cyanogen iodide	X			1	1000/10000		
2636-26-2		Cyanophos	X			1	1000		
675-14-9		Cyanuric fluoride	X			1	100		
106-51-4	1,4-	Cyclohexadienedione		X	X	10			
110-82-7		Cyclohexane		O	X	1000			
108-94-1		Cyclohexanone			X	5000			
66-81-9		Cycloheximide	X			1	100/10000		
108-91-8		Cyclohexylamine	X			1	10000		
77-47-4	1,3-	Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	X	X	X	1	100		
50-18-0		Cyclophosphamide			X	1			
94-75-7	2,4-	D Acid		X	X	100			
94-11-1	2,4-	D esters			X	100			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
94-79-1	2,4-	D esters			X	100			
94-80-4	2,4-	D esters			X	100			
1320-18-9	2,4-	D esters			X	100			
1928-38-7	2,4-	D esters			X	100			
1928-61-6	2,4-	D esters			X	100			
1929-73-3	2,4-	D esters			X	100			
2971-38-2	2,4-	D esters			X	100			
25168-26-7	2,4-	D esters			X	100			
53467-11-1	2,4-	D esters			X	100			
94-75-7	2,4-	D [Acetic acid,(2,4-dichlorophenoxy)-]		0	X	100			
94-75-7	2,4-	D, salts and esters		X	X	100			
20830-81-3		Daunomycin			X	1			
72-54-8		DDD			X	1			
72-54-8	4,4'	DDD			X	1			
72-55-9		DDE			X	1			
72-55-9	4,4'	DDE			X	1			
50-29-3	4,4'-	DDT			X	1			
50-29-3		DDT			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
17702-41-9		Decaborane (14)	X			1	500/10000		
1163-19-5		Decabromodiphenyl oxide		O					
143-50-0		Decachloroctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one			X	1			
8065-48-3		Demeton	X			1	500		
919-86-8		Demeton-s-methyl	X			1	500		
117-81-7		Di(2-Ethylhexyl)phthalate (DEHP)		O	X	1			
117-84-0		Di-n-Octyl phthalate		X	X	5000			
10311-84-9		Dialifor	X			1	100/10000		
2303-16-4		Diallate [Carbamothioic acid,bis(1-methylethyl)-,S-(2,3-dichloro-2-propenyl) ester]		O	X	1			
302-01-2		Diamine	X	X	X	1	1000		
615-05-4	2,4-	Diaminoanisole		O					
39156-41-7	2,4-	Diaminoanisole sulfate		O					
101-80-4	4,4'-	Diaminodiphenyl Ether		X					
95-80-7	2,4-	Diaminotoluene		O	X	1			
95-80-7		Diaminotoluene		X	X	1			
496-72-0		Diaminotoluene			X	1			
823-40-5		Diaminotoluene			X	1			
25376-45-8		Diaminotoluene		X	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
25376-45-8		Diaminotoluene (mixed isomers)		O	X	1			
5333-41-5		Diazinon			X	1			
334-88-3		Diazomethane		O					
189-55-9		Dibenz(a,l)pyrene			X	1			
53-70-3	1,2:5,6-	Dibenzanthracene			X	1			
132-64-9		Dibenzofuran		O					
189-55-9	1,2:7,8-	Dibenzopyrene			X	1			
53-70-3		Dibenzo[a,h]anthracene			X	1			
189-55-9		Dibenzo[a,i] pyrene			X	1			
53-70-3		Dibenz[a,h]anthracene			X	1			
19287-45-7		Diborane	X			1	100		
96-12-8	1,2-	Dibromo-3-chloropropane		X	X	1			
96-12-8	1,2-	Dibromo-3-Chloropropane (DBCP)		O	X	1			
106-93-4	1,2-	Dibromoethane (Ethylene Dibromide)		O	X	1000			
84-74-2		Dibutyl phthalate		O	X	10			
1918-00-9		Dicamba			X	1000			
1194-65-6		Dichlobenil			X	100			
117-80-6		Dichlone			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
764-41-0	1,4-	Dichloro-2-butene			X	1			
23950-58-5	3,5-	Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide			X	5000			
2303-16-4	S-(2,3-	Dichloroallyl) diisopropylthiocarbamate		X	X	1			
95-50-1	1,2-	Dichlorobenzene		O	X	100			
95-50-1	o-	Dichlorobenzene		X	X	100			
106-46-7	1,4-	Dichlorobenzene		O	X	100			
106-46-7	p-	Dichlorobenzene		X	X	100			
541-73-1	1,3-	Dichlorobenzene		O	X	100			
541-73-1	m-	Dichlorobenzene		X	X	100			
25321-22-6		Dichlorobenzene (mixed isomers)		O	X	100			
91-94-1	3,3'-	Dichlorobenzidene		O	X	1			
75-27-4		Dichlorobromomethane		O	X	5000			
75-71-8		Dichlorodifluoromethane Zip D-5675 MC Cleaner, Zip L - 345 Mold Release, ZIP S-100 Mold Release			X	5000			
25, 27, 27									
72-54-8	Dept 125	Dichlorodiphenyl dichloroethane Freeze-It			X	1			
6									
50-29-3		Dichlorodiphenyl trichloroethane			X	1			
75-34-3	1,1-	Dichloroethane			X	1000			
107-06-2	1,2-	Dichloroethane		X	X	5000			
107-06-2	1,2-	Dichloroethane (Ethylene dichloride)		O	X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
111-44-4		Dichloroethyl ether	X	X	X	1	10000		
75-35-4	1,1-	Dichloroethylene		X	X	5000			
540-59-0	1,2-	Dichloroethylene		O					
75-09-2		Dichloromethane (Methylene Chloride) MolyKote 321 R Lub		O	X	1000			
149-74-6		Dichloromethylphenylsilane	X			1	1000		
87-65-0	2,6-	Dichlorophenol			X	100			
120-83-2	2,4-	Dichlorophenol		O	X	100			
94-75-7	2,4-	Dichlorophenoxyacetic acids, salts and esters		X	X	100			
696-28-6		Dichlorophenylarsine	X		X	1	500		
78-87-5	1,2-	Dichloropropane		O	X	1000			
78-99-9	1,1-	Dichloropropane			X	1000			
142-28-9	1,3-	Dichloropropane			X	1000			
26638-19-7		Dichloropropane			X	1000			
8003-19-8		Dichloropropane-Dichloropropene (mixture)			X	100			
542-75-6		Dichloropropene		X	X	100			
542-75-6	1,3-	Dichloropropene		X	X	100			
26952-23-8		Dichloropropene			X	100			
78-88-6	2,3-	Dichloropropene (isomer)			X	100			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
26952-23-8		Dichloropropene(s)			X	100			
75-99-0	2,2-	Dichloropropionic acid			X	5000			
542-75-6	1,3-	Dichloropropylene		O	X	100			
62-73-7		Dichlorvos [Phosphoric acid,2,2-dichloroethenyl dimethyl ester]	X	O	X	10	1000		
115-32-2		Dicofol [Benzenemethanol,4-chloro-alpha-(4-chlorophenyl)-alpha-(trichloromethyl)-]		O	X	10			
141-66-2		Dicrotophos	X			1	100		
60-57-1		Dieldrin			X	1			
1464-53-5		Diepoxybutane	X	O	X	1	500		
1464-53-5	1,2:3,4-	Diepoxybutane	X	X	X	1	500		
111-42-2		Diethanolamine 620-F Flux, Kodak HC-110 Replenisher		O					
5, 29									
814-49-3		Diethyl chlorophosphate	X			1	500		
297-97-2	0,0-	Diethyl O-pyrazinyl phosphorothioate	X		X	100	500		
84-66-2		Diethyl phthalate		O	X	1000			
3288-58-2	0,0-	Diethyl S-methyl dithiophosphate			X	5000			
298-04-4	0,0-	Diethyl S-[2-(ethylthio)ethyl]phosphorodithioate	X		X	1	500		
64-67-5		Diethyl sulfate		O					
311-45-5		Diethyl-p-nitrophenyl phosphate			X	100			
109-89-7		Diethylamine			X	100			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
692-42-2		Diethylarsine			X	1			
1642-54-2		Diethylcarbamazine citrate	X			1	100/10000		
123-91-1	1,4-	Diethylene dioxide		X	X	1			
1615-80-1	N,N'-	Diethylhydrazine			X	1			
1615-80-1	1,2-	Diethylhydrazine			X	1			
56-53-1		Diethylstibestrol			X	1			
71-63-6		Digitoxin	X			1	100/10000		
2238-07-5		Diglycidyl ether	X			1	1000		
2238-07-5		Diglycidyl ether (EGD)	X			1	1000		
20830-75-5		Digoxin	X			1	10/10000		
123-33-1	1,2-	Dihydro-3,6-pyridazinedione			X	5000			
94-58-6		Dihydrosafrole			X	1			
55-91-4		Diisopropyl fluorophosphate	X		X	100	100		
115-26-4		Dimefox	X			1	500		
60-51-5		Dimethoate	X		X	10	500/10000		
119-90-4	3,3'-	Dimethoxybenzidine		O	X	1			
57-14-7		Dimethyl hydrazine	X	X	X	1	1000		
57-14-7	1,1-	Dimethyl hydrazine	X	O	X	1	1000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
298-00-0	0,0	Dimethyl O-p-nitrophenyl phosphorothioate	X		X	100	100/10000		
2524-03-0		Dimethyl phosphorochloridothioate	X			1	500		
131-11-3		Dimethyl phthalate		O	X	5000			
77-78-1		Dimethyl sulfate	X	O	X	1	500		
75-18-3		Dimethyl sulfide	X			1	100		
39196-18-4	3,3-	Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime	X		X	100	100/10000		
99-98-9		Dimethyl-p-phenylenediamine	X			1	10/10000		
124-40-3		Dimethylamine			X	1000			
60-11-7	4-	Dimethylaminoazobenzene		O	X	1			
60-11-7		Dimethylaminoazobenzene		X	X	1			
121-69-7	N,N-	Dimethylaniline		O					
121-69-7		Dimethylaniline		X					
119-93-7	3,3'-	Dimethylbenzidine		X	X	1			
119-93-7	3,3'-	Dimethylbenzidine (o-Tolidine)		O	X	1			
80-15-9	alpha,alpha-	Dimethylbenzylhydroperoxide		X	X	10			
57-97-6	7,12-	Dimethylbenz[a]anthracene	0		X	1			
79-44-7		Dimethylcarbamyl chloride		O	X	1			
75-78-5		Dimethyldichlorosilane	X			1	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
540-73-8	1,2-	Dimethylhydrazine			X	1			
62-75-9		Dimethylnitrosamine	X	X	X	1	1000		
122-09-8	alpha,alpha-	Dimethylphenethylamine			X	5000			
105-67-9	2,4-	Dimethylphenol		O	X	100			
644-64-4		Dimetilan	X			1	500/10000		
534-52-1	4,6-	Dinitro-o-Cresol	X	O	X	10	10/10000		
534-52-1		Dinitro-o-cresol	X	X	X	10	10/10000		
534-52-1	4,6-	Dinitro-O-cresol and salts	X	X	X	10	10/10000		
131-89-5	4,6-	Dinitro-o-cyclohexylphenol			X	100			
99-65-0	m-	Dinitrobenzene			X	100			
100-25-4	p-	Dinitrobenzene			X	100			
528-29-0	o-	Dinitrobenzene			X	100			
25154-54-5		Dinitrobenzene (mixed)			X	100			
534-52-1		Dinitrocresol	X	X	X	10	10/10000		
51-28-5	2,4-	Dinitrophenol		O	X	10			
329-71-5	2,5-	Dinitrophenol			X	10			
573-56-8	2,6-	Dinitrophenol			X	10			
25550-58-7		Dinitrophenol			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
121-14-2	2,4-	Dinitrotoluene		O	X	1000			
606-20-2	2,6-	Dinitrotoluene		O	X	1000			
610-39-9	3,4-	Dinitrotoluene			X	1000			
25321-14-6		Dinitrotoluene			X	1000			
88-85-7		Dinoseb	X		X	1000	100/10000		
1420-07-1		Dinoterb	X			1	500/10000		
117-84-0		Dioctyl phthalate		X	X	5000			
117-84-0	n-	Dioctyl phthalate		O	X	5000			
123-91-1	1,4-	Dioxane Alpha 565 Solvent, Chloroethane 5M, TFELUB 5, 16, 36		O	X	1			
123-91-1		Dioxane		X	X	1			
123-91-1		Dioxane, technical grade		X	X	1			
78-34-2		Dioxathion	X			1	500		
82-66-6		Diphacinone	X			1	10/10000		
122-66-7	1,2-	Diphenylhydrazine		X	X	1			
122-66-7	1,2-	Diphenylhydrazine (Hydrazobenzene)		O	X	1			
152-16-9		Diphosphoramide, octamethyl-	X		X	100	100		
142-84-7		Dipropylamine			X	5000			
85-00-7		Diquat			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
2764-72-9		Diquat			X	1000			
1937-37-7		Direct Black 38		O					
1937-37-7		Direct Black 38, technical grade		X					
2602-46-2		Direct Blue 6		O					
2602-46-2		Direct Blue 6, technical grade		X					
16071-86-6		Direct Brown 95		O					
298-04-4		Disulfoton	X		X	1	500		
514-73-8		Dithiazanine iodide	X			1	500/10000		
541-53-7		Dithiobiuret	X		X	100	100/10000		
541-53-7	2,4-	Dithiobiuret	X		X	100	100/10000		
3689-24-5		Dithiopyrophosphoric acid, tetraethyl ester	X		X	100	500		
330-54-1		Diuron			X	100			
27176-87-0		Dodecylbenzenesulfonic acid			X	1000			
316-42-7		Emetine, dihydrochloride	X			1	1/10000		
115-29-7		Endosulfan	X		X	1	10/10000		
959-98-8	alpha-	Endosulfan			X	1			
33213-65-9	beta-	Endosulfan			X	1			
1031-07-8		Endosulfan sulfate			X	1			

O = TOXIC [illegible]

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
145-73-3		Endothall			X	1000			
2778-04-3		Endothion	X			1	500/10000		
72-20-8		Endrin	X		X	1	500/10000		
7421-93-4		Endrin aldehyde			X	1			
106-89-8		Epichlorohydrin	X	O	X	1000	1000		
16, 35		Eccobond 45, 3M Image Guard							
51-43-4		Epinephrine			X	1000			
2104-64-5		EPN	X			1	100/10000		
50-14-6		Ergocalciferol	X			1	1000/10000		
379-79-3		Ergotamine tartrate	X			1	500/10000		
75-07-0		Ethanal		X	X	1000			
122-09-8		Ethanamine, 1,1-dimethyl-2-phenyl			X	5000			
55-18-5		Ethanamine, N-ethyl-N-nitroso-		X	X	1			
111-44-4		Ethane, 1,1'-oxybis(2-chloro-	X	X	X	1	10000		
60-29-7		Ethane, 1,1'-oxybis-			X	100			
111-91-1		Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-			X	1000			
67-72-1		Ethane, 1,1,1,2,2,2-hexachloro-		X	X	1			
630-20-6		Ethane, 1,1,1,2-tetrachloro-			X	1			
72-43-5		Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-		X	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-34-5		Ethane, 1,1,2,2-tetrachloro-		X	X	1			
79-00-5		Ethane, 1,1,2-trichloro-		X	X	1			
75-34-3		Ethane, 1,1-dichloro-			X	1000			
106-93-4		Ethane, 1,2-dibromo-		X	X	1000			
107-06-2		Ethane, 1,2-dichloro-		X	X	5000			
76-01-7		Ethane, pentachloro-			X	1			
111-54-6	1,2-	Ethanediylbiscarbamodithioic acid			X	5000			
75-05-8		Ethanenitrile		X	X	5000			
1622-32-8		Ethanesulfonyl chloride, 2-chloro-	X			1	500		
62-55-5		Ethanethioamide		X	X	1			
10140-87-1		Ethanol, 1,2-dichloro-, acetate	X			1	1000		
1116-54-7		Ethanol, 2,2'-(nitrosoimino)bis-			X	1			
98-86-2		Ethanone, 1-phenyl-			X	5000			
75-36-5		Ethanoyl chloride			X	5000			
4549-40-0		Ethenamine, N-methyl-N-nitroso-		X	X	1			
127-18-4		Ethene, 1,1,2,2-tetrachloro-		X	X	1			
75-35-4		Ethene, 1,1-dichloro-		X	X	5000			
110-75-8		Ethene, 2-chloroethoxy-			X	1000			

MASTER CRTK CHEMICAL LIST–NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-01-4		Ethene, chloro-		X	X	1			
76-01-7		Ethene, pentachloro-			X	1			
156-60-5		Ethene, trans-1,2-dichloro-			X	1000			
4549-40-0		Ethenylamine, N-methyl-N-nitroso-		X	X	1			
563-12-2		Ethion	X		X	10	1000		
13194-48-4		Ethoprophos	X			1	1000		
110-80-5	2-	Ethoxyethanol		O					
11		Roll-R-Wash #2, Glaze Free							
510-15-6		Ethyl 4,4'-dichlorobenzilate		X	X	1			
141-78-6		Ethyl acetate			X	5000			
140-88-5		Ethyl acrylate		O	X	1000			
100-41-4		Ethyl benzene		X	X	1000			
16		PR-1560-MK Part B							
51-79-6		Ethyl carbamate		X	X	1			
51-79-6		Ethyl carbamate (Urethane)		X	X	1			
75-00-3		Ethyl chloride		X	X	100			
541-41-3		Ethyl chloroformate		O					
107-12-0		Ethyl cyanide	X		X	10	500		
60-29-7		Ethyl ether			X	100			
97-63-2		Ethyl methacrylate			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
62-50-0		Ethyl methanesulfonate			X	1			
542-90-5		Ethyl thiocyanate	X			1	10000		
75-04-7		Ethylamine			X	100			
100-41-4		Ethylbenzene		O	X	1000			
538-07-8		Ethylbis(2-chloroethyl)amine	X			1	500		
74-85-1		Ethylene		O					
107-07-3		Ethylene chlorohydrin	X			1	500		
106-93-4		Ethylene dibromide		X	X	1000			
107-06-2		Ethylene dichloride		X	X	5000			
371-62-0		Ethylene fluorohydrin	X			1	10		
107-21-1		Ethylene glycol SM-1573-12 Spot Mask		O					
8									
107-21-1		Ethylene glycol, vapor		X					
75-21-8		Ethylene oxide	X	O	X	1	1000		
96-45-7		Ethylene thiourea		O	X	1			
111-54-6		Ethylenebis (dithiocarbamic acid)			X	5000			
107-15-3		Ethylenediamine	X		X	5000	10000		
60-00-4		Ethylenediamine tetraacetic acid (EDTA) Starrett Cleaner			X	5000			
36									
151-56-4		Ethyleneimine (Aziridine)	X	O	X	1	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
96-45-7		Ethylenethiourea		X	X	1			
151-56-4		Ethylenimine	X	X	X	1	500		
75-34-3		Ethylidene dichloride			X	1000			
52-85-7		Famphur			X	1000			
22224-92-6		Fenamiphos	X			1	10/10000		
122-14-5		Fenitrothion	X			1	500		
115-90-2		Fensulfothion	X			1	500		
1185-57-5		Ferric ammonium citrate			X	1000			
2944-67-4		Ferric ammonium oxalate			X	1000			
55488-87-4		Ferric ammonium oxalate			X	1000			
7705-08-0		Ferric chloride			X	1000			
7783-50-8		Ferric fluoride			X	100			
10421-48-4		Ferric nitrate			X	1000			
10028-22-5		Ferric sulfate De-oxidizer 102-TNL. Turco Liquid Smut-Go NC			X	1000		542	156
3, 33									
10045-89-3		Ferrous ammonium sulfate			X	1000			
7758-94-3		Ferrous chloride			X	100			
7720-78-7		Ferrous sulfate			X	1000			
7782-63-0		Ferrous sulfate			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
4301-50-2		Fluenetil	X			1	100/10000		
2164-17-2		Fluometuron [Urea,N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl)-]		O					
206-44-0		Fluoranthene			X	100			
86-73-7		Fluorene			X	5000			
7782-41-4		Fluorine	X		X	10	500		
640-19-7		Fluoroacetamide	X		X	100	100/10000		
144-49-0		Fluoroacetic acid	X			1	10/10000		
62-74-8		Fluoroacetic acid, sodium salt	X		X	10	10/10000		
359-06-8		Fluoroacetyl chloride	X			1	10		
51-21-8		Fluorouracil	X			1	500/10000		
944-22-9		Fonofos	X			1	500		
50-00-0		Formaldehyde 3M Cleaner Conditioner, 3M Image Guard	X	O	X	1000	500		
19, 35									
50-00-0		Formaldehyde (gas)	X	X	X	1000	500		
107-16-4		Formaldehyde cyanohydrin	X			1	1000		
50-00-0		Formaldehyde, rosin core solder pyrolysis products as	X	X	X	1000	500		
23422-53-9		Formetanate Hydrochloride	X			1	500/10000		
64-18-6		Formic acid Eccostrip 93, Cee-Bee A-202			X	5000			
8, 15									
2540-82-1		Formothion	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
17702-57-7		Formparanate	X			1	100/10000		
21548-32-3		Fosthietan	X			1	500		
3878-19-1		Fuberidazole	X			1	100/10000		
628-86-4		Fulminic acid, mercury (II) salt			X	10			
110-17-8		Fumaric acid			X	5000			
110-00-9		Furan	X		X	100	500		
109-99-9		Furan, tetrahydro-			X	1000			
98-01-1	2-	Furancarboxaldehyde			X	5000			
108-31-6	2,5-	Furandione		X	X	5000			
98-01-1		Furfural			X	5000			
110-00-9		Furfuran	X		X	100	500		
13450-90-3		Gallium trichloride	X			1	500/10000		
18883-66-4	D-	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-			X	1			
765-34-4		Glycidylaldehyde			X	1			
70-25-7		Guanidine, N-nitroso-N-methyl-N'-nitro-			X	1			
86-50-0		Guthion	X		X	1	10/10000		
1024-57-3		Heptachlor opoxide			X	1			
76-44-8		Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene]		O	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
87-68-3		Hexachloro-1,3-butadiene		O	X	1			
465-73-6	1,2,3,4,10,10	Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8- endo- endo-dimethanonaphthalene	X		X	1	100/10000		
309-00-2	1,2,3,4,10-10	Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, exo- endo-dimethanonaphthalene	X	X	X	1	500/10000		
72-20-8	1,2,3,4,10,10	Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo, endo-1,4:5,8-dimethanonaphthalene	X		X	1	500/10000		
60-57-1	1,2,3,4,10,10	Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4:5,8-dimethanonaphthalene			X	1			
118-74-1		Hexachlorobenzene		O	X	1			
87-68-3		Hexachlorobutadiene		X	X	1			
608-73-1		Hexachlorocyclohexane (all isomers)			X				
58-89-9		Hexachlorocyclohexane (gamma isomer)	X	X	X	1	1000/10000		
77-47-4		Hexachlorocyclopentadiene	X	O	X	1	100		
67-72-1		Hexachloroethane		O	X	1			
465-73-6		Hexachlorohexahydro-endo, endo-dimethanonaphthalene	X		X	1	100/10000		
1335-87-1		Hexachloronaphthalene		O					
70-30-4		Hexachlorophene			X	100			
1888-71-7		Hexachloropropene			X	1000			
757-58-4		Hexaethyl tetraphosphate			X	100			
4835-11-4		Hexamethylenediamine, N,N'-dibutyl-	X			1	500		
680-31-9		Hexamethylphosphoramide		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
302-01-2		Hydrazine	X	O	X	1	1000		
10034-93-2		Hydrazine sulfate		O					
57-14-7		Hydrazine, 1,1-dimethyl-	X	X	X	1	1000		
1615-80-1		Hydrazine, 1,2-diethyl-			X	1			
540-73-8		Hydrazine, 1,2-dimethyl-			X	1			
122-66-7		Hydrazine, 1,2-diphenyl-		X	X	1			
60-34-4		Hydrazine, methyl-	X	X	X	10	500		
10034-93-2		Hydrazine, sulfate (1:1)		X					
79-19-6		Hydrazinecarbothioamide	X		X	100	100/10000		
7647-01-0		Hydrochloric acid Superior #23 Flux		O	X	5000			
21, 32									
74-90-8		Hydrocyanic acid	X	X	X	10	100		
7664-39-3		Hydrofluoric acid Alodine 1201, Turco Liquid Smut-Go, NC	X	X	X	100	100	1	1
6, 33									
7647-01-0		Hydrogen chloride (Gas Only)	X			1	500		
74-90-8		Hydrogen cyanide	X	O	X	10	100		
7664-39-3		Hydrogen fluoride	X	O	X	100	100		
7722-84-1		Hydrogen peroxide (Conc > 52%)	X			1	1000		
7803-51-2		Hydrogen phosphide	X		X	100	500		
7783-07-5		Hydrogen selenide	X			1	10		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7783-06-4		Hydrogen sulfide	X		X	100	500		
80-15-9		Hydroperoxide, 1-methyl-1-phenylethyl-		X	X	10			
123-31-9		Hydroquinone Kodak Developer Replenisher, 3M-Onyx Developer, Tac-Pac Mist 3M-LLD Parta, Kodak Dektol Developer, Kodak	X	O		1	500/10000	137	44
3,13,14,29,29,29,29,29		Developer D-76, Kodak Replenisher D-76R, HC-110 Developer							
7783-06-4		Hydrosulfuric acid Replenisher, T-MAX Developer (for above)	X		X	100	500		
75-60-5		Hydroxydimethylarsine oxide			X	1			
96-45-7	2-	Imidazolidinethione		X	X	1			
190-39-5		Indeno (1,2,3-cd) pyrene			X	1			
13463-40-6		Iron, Pentacarbonyl-	X			1	100		
123-92-2		Isoamyl acetate			X	5000			
297-78-9		Isobenzan	X			1	100/10000		
110-19-0		Isobutyl acetate			X	5000			
78-83-1		Isobutyl alcohol 413-F Thinner, Spray Ink			X	5000			
5, 27									
78-84-2		Isobutyraldehyde		O					
78-82-0		Isobutyronitrile	X			1	1000		
102-36-3		Isocyanic acid, 3,4-dichlorophenyl ester	X			1	500/10000		
624-83-9		Isocyanic acid, methyl ester	X	X	X	1	500		
465-73-6		Isodrin	X		X	1	100/10000		
55-91-4		Isofluorphate	X		X	100	100		

O = TOXIC PULMONAL FOR SECTION 4 REPORTING PURPOSES

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
78-59-1		Isophorone			X	5000			
4098-71-9		Isophorone diisocyanate	X			1	100		
78-79-5		Isoprene			X	100			
42504-46-1		Isopropanolamine dodecylbenzensulfonate			X	1000			
67-63-0		Isopropyl alcohol (manufacture - strong acid processes)		O					
108-23-6		Isopropyl chloroformate	X			1	1000		
625-55-8		Isopropyl formate	X			1	500		
80-05-7	4,4-	Isopropylidenediphenol 3135 A Epoxy, Scotchweld 2216 Part B, Epucast 1615B 3M Image Guard		O					
20, 25, 27, 35									
119-38-0		Isopropylmethylpyrazolyl dimethylcarbamate	X			1	500		
120-58-1		Isosafrole			X	1			
2763-96-4	3(2H)-	Isoxazolone, 5-(aminomethyl)-	X		X	1000	10000		
115-32-2		Kelthane		X	X	10			
143-50-0		Kepone			X	1			
115-02-6		L-Serine, diazoacetate (ester)			X	1			
78-97-7		Lactonitrile	X			1	1000		
303-34-4		Lasiocarpine			X	1			
7439-92-1		Lead Cellulose Nitrate Gloss Lacquer, Kester SN60 Solder		O	X	1			
18, 35									
301-04-2		Lead acetate			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7645-25-2		Lead arsenate			X	5000			
7784-40-9		Lead arsenate			X	5000			
10102-48-4		Lead arsenate			X	5000			
7758-95-4		Lead chloride			X	100			
13814-96-5		Lead fluoborate			X	100			
7783-46-2		Lead fluoride			X	100			
10101-63-0		Lead iodide			X	100			
10099-74-8		Lead nitrate			X	100			
7446-27-7		Lead phosphate			X	1			
1072-35-1		Lead stearate			X	5000			
7428-48-0		Lead stearate			X	5000			
52652-59-2		Lead stearate			X	5000			
56189-09-4		Lead stearate			X	5000			
1335-32-6		Lead subacetate			X	1			
7446-14-2		Lead sulfate			X	100			
15739-80-7		Lead sulfate			X	100			
1314-87-0		Lead sulfide			X	5000			
592-87-0		Lead thiocyanate			X	100			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
21609-90-5		Leptophos	X			1	500/10000		
541-25-3		Lewisite	X			1	10		
58-89-9	gamma-	Lindane	X	X	X	1	1000/10000		
58-89-9		Lindane and other hexachlorocyclohexane isomers	X	X	X	1	1000/10000		
58-89-9		Lindane [Cyclohexane,1,2,3,4,5,6-hexachloro-(1 alpha,2 alpha,3 beta,4 alpha,5 alpha,6 beta)-]	X	O	X	1	1000/10000		
14307-35-8		Lithium chromate			X	1000			
7580-67-8		Lithium hydride	X			1	100		
121-75-5		Malathion			X	100			
110-16-7		Maleic acid			X	5000			
108-31-6		Maleic anhydride		O	X	5000			
123-33-1		Maleic hydrazide			X	5000			
109-77-3		Malononitrile	X		X	1000	500/10000		
12427-38-2		Maneb [Carbamodithioic acid,1,2-ethanediylbis-,manganese complex]		O					
7439-96-5		Manganese		O					
12108-13-3		Manganese, tricarbonyl methylcyclopentadienyl	X			1	100		
51-75-2		Mechlorethamine	X	X		1	10		
108-78-1		Melamine		O					
148-82-3		Melphalan			X	1			

Scotch Grip 4475

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
950-10-7		Mephosfolan	X			1	500		
2032-65-7		Mercaptodimethur	X		X	10	500/10000		
1600-27-7		Mercuric acetate	X			1	500/10000		
7487-94-7		Mercuric chloride	X			1	500/10000		
592-04-1		Mercuric cyanide			X	1			
10045-94-0		Mercuric nitrate			X	10			
21908-53-2		Mercuric oxide	X			1	500/10000		
7783-35-9		Mercuric sulfate			X	10			
592-85-8		Mercuric thiocyanate			X	10			
7782-86-7		Mercurous nitrate			X	10			
10415-75-5		Mercurous nitrate			X	10			
7439-97-6		Mercury		O	X	1			
628-86-4		Mercury fulminate			X	10			
62-38-4		Mercury, (acetato-O)phenyl-	X		X	100	500/10000		
10476-95-6		Methacrolein diacetate	X			1	1000		
760-93-0		Methacrylic anhydride	X			1	500		
126-98-7		Methacrylonitrile	X		X	1	500		
920-46-7		Methacryloyl chloride	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
30674-80-7		Methacryloyloxyethyl isocyanate	X			1	100		
10265-92-6		Methamidophos	X			1	100/10000		
124-40-3		Methanamine, N-methyl-			X	1000			
74-83-9		Methane, bromo-	X	X	X	1000	1000		
74-87-3		Methane, chloro-		X	X	1			
107-30-2		Methane, chloromethoxy-	X	X	X	1	100		
74-95-3		Methane, dibromo-		X	X	1000			
75-09-2		Methane, dichloro-		X	X	1000			
75-71-8		Methane, dichlorodifluoro-			X	5000			
74-88-4		Methane, iodo-		X	X	1			
542-88-1		Methane, oxybis(chloro-	X	X	X	1	100		
56-23-5		Methane, tetrachloro-		X	X	5000			
509-14-8		Methane, tetranitro-	X		X	10	500		
75-25-2		Methane, tribromo-		X	X	100			
67-66-3		Methane, trichloro-	X	X	X	5000	10000		
75-69-4		Methane, trichlorofluoro-			X	5000			
594-42-3		Methanesulfenyl chloride, trichloro-	X		X	100	500		
62-50-0		Methanesulfonic acid, ethyl ester			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
558-25-8		Methanesulfonyl fluoride	X			1	1000		
74-93-1		Methanethiol	X		X	100	500		
76-44-8	4,7-	Methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-		X	X	1			
64-18-6		Methanoic acid			X	5000			
57-74-9	4,7-	Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-	X	X	X	1	1000		
67-56-1		Methanol Torque Seal F-900, Neutralizing Solution, T-7 Solvent		O	X	5000			
15, 21, 36									
91-80-5		Methapyrilene			X	5000			
950-37-8		Methidathion	X			1	500/10000		
2032-65-7		Methiocarb	X		X	10	500/10000		
16752-77-5		Methomyl	X		X	100	500/10000		
72-43-5		Methoxychlor]Benzene,1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy]		O	X	1			
109-86-4	2-	Methoxyethanol 413-F Thinner		O				3	3
5									
151-38-2		Methoxyethylmercuric acetate	X			1	500/10000		
80-63-7		Methyl 2-chloroacrylate	X			1	500		
96-33-3		Methyl acrylate		O					
67-56-1		Methyl alcohol Lonco-Solve TMST		X	X	5000		185	
13									
74-83-9		Methyl bromide	X	X	X	1000	1000		
74-87-3		Methyl chloride		X	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-22-1	Methyl chlorocarbonate	X		X	1000	500		
71-55-6	Methyl chloroform		X	X	1000			
79-22-1	Methyl chloroformate	X		X	1000	500		
107-30-2	Methyl chloromethyl ether	X	X	X	1	100		
624-92-0	Methyl disulfide	X			1	100		
78-93-3	Methyl ethyl ketone Uralane 5750, PR-1560-MK Part B, PR-1422,G Class A Cellulose Nitrate Gloss Lacquer, Pro-Seal 870-B, Scotch Grip 4475 Prime Coat P527 E Pt A/B Spray Ink,		O	X	5000			
,9,16,18,23,25,27,28,33								
1338-23-4	Methyl ethyl ketone peroxide /PR-1560-MK Part C, PL10 Bond #20/			X	10			
60-34-4	Methyl hydrazine	X	O	X	10	500		
74-88-4	Methyl iodide		O	X	1			
108-10-1	Methyl isobutyl ketone Cellulose Nitrate Gloss Lacquer, Scotch-clad Fuel Resistant Coating, Spray Ink, T-7 Solvent		O	X	5000			
18, 25, 27, 36								
624-83-9	Methyl isocyanate	X	O	X	1	500		
556-61-6	Methyl isothiocyanate	X			1	500		
74-93-1	Methyl mercaptan	X		X	100	500		
80-62-6	Methyl methacrylate Acryweld 7993-A		O	X	1000			
26								
298-00-0	Methyl parathion	X		X	100	100/10000		
3735-23-7	Methyl phenkapton	X			1	500		
676-97-1	Methyl phosphonic dichloride	X			1	100		
1634-04-4	Methyl tert-butyl ether		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
556-64-9		Methyl thiocyanate	X			1	10000		
78-94-4		Methyl vinyl ketone	X			1	10		
108-10-1	4-	Methyl-2-pentanone		X	X	5000			
70-25-7	N-	Methyl-N'-nitro-N-nitrosoguanidine			X	1			
74-89-5		Methylamine			X	100			
75-55-8	2-	Methylaziridine	X	X	X	1	10000		
504-60-9	1-	Methylbutadiene			X	100			
56-49-5	3-	Methylcholanthrene			X	1			
74-95-3		Methylene bromide		O	X	1000			
75-09-2		Methylene chloride Eccostrip 93, Cee-Bee A-202, 02 009, TMC Cleaner, Genesolve DM, Spray Ink		X	X	1000			
8,15,17,20,27									
50-00-0		Methylene oxide	X	X	X	1000	500		
101-68-8		Methylenebis (phenyliso cyanate) (MBI)		O					
101-14-4	4,4'-	Methylenebis(2-chloroaniline) (MBOCA)		O	X	1			
70-30-4	2,2'-	Methylenebis(3,4,6-trichlorophenol)			X	100			
101-61-1	4,4'-	Methylenebis(N, N-dimethyl) benzenamine		O					
101-68-8		Methylenebisphenyl isocyanate Uralane 5750A		X					
9									
101-77-9	4,4-	Methylenedianiline		X					
101-77-9	4,4'-	Methylenedianiline HD 3615		O					
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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-86-5	2-	Methyllactonitrile	X		X	10	1000		
74-93-1		Methylmercaptan	X		X	100	500		
502-39-6		Methylmercuric dicyanamide	X			1	500/10000		
56-04-2		Methylthiouracil			X	1			
75-79-6		Methyltrichlorosilane	X			1	500		
1129-41-5		Metolcarb	X			1	100/10000		
7786-34-7		Mevinphos	X		X	10	500		
315-18-4		Mexacarbate	X		X	1000	500/10000		
90-94-8		Michler's ketone		O					
50-07-7		Mitomycin C	X		X	1	500/10000		
1313-27-5		Molybdenum trioxide		O					
6923-22-4		Monocrotophos	X			1	10/10000		
75-04-7		Monoethylamine			X	100			
74-89-5		Monomethylamine			X	100			
2763-96-4		Muscimol	X		X	1000	10000		
505-60-2		Mustard gas [Ethane,1,1'-thiobis[2-chloro-]	X	O		1	500		
300-76-5		Naled			X	10			
20830-81-3	5,12-	Naphthacenedione(8S-cis)-8-acetyl-10-[3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
134-32-7	1-	Naphthalenamine		X	X	1			
91-20-3		Naphthalene		O	X	100			
91-58-7		Naphthalene, 2-chloro-			X	5000			
130-15-4	1,4-	Naphthalenedione			X	5000			
72-57-1	2,7-	Naphthalenedisulfonic acid 3,3'-[(3,3'-dimethyl-(l,1'-biphenyl)-4,4'-diyl)-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt			X	1			
1338-24-5		Naphthenic acid			X	100			
130-15-4	1,4-	Naphthoquinone			X	5000			
91-59-8	beta-	Naphthylamine		O	X	1			
91-59-8	2-	Naphthylamine		X	X	1			
134-32-7	alpha-	Naphthylamine		O	X	1			
134-32-7	1-	Naphthylamine		X	X	1			
494-03-1	2-	Naphthylamine, N,N-bis(2-chloroethyl)-			X	1			
86-88-4	alpha-	Naphthylthiourea	X		X	100	500/10000		
7440-02-0		Nickel		O	X	1			
557-19-7		Nickel (II) cyanide			X	1			
15699-18-0		Nickel ammonium sulfate			X	5000			
7440-02-0		Nickel and compounds	X	X	X	1	10000		
13463-39-3		Nickel carbonyl	X		X	1	1		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7718-54-9		Nickel chloride			X	5000			
37211-05-5		Nickel chloride			X	5000			
557-19-7		Nickel cyanide			X	1			
12054-48-7		Nickel hydroxide			X	1000			
14216-75-2		Nickel nitrate			X	5000			
7786-81-4		Nickel sulfate			X	5000			
13463-39-3		Nickel tetracarbonyl	X		X	1	1		
54-11-5		Nicotine	X		X	100	100		
54-11-5		Nicotine and salts	X		X	100	100		
65-30-5		Nicotine sulfate	X			1	100/10000		
7697-37-2		Nitric acid Pasa-Jell 101, Deoxidizer 102-TNC, D-305 Cleaner Degreaser, Turco Liquid Smut-Go NC	X	O	X	1000	1000		
23, 20, 32, 33									
10102-43-9		Nitric oxide	X		X	10	100		
139-13-9		Nitrilotriacetic acid		O					
99-59-2	5-	Nitro-o-anisidine		O					
99-55-8	5-	Nitro-o-toluidine			X	1			
100-01-6	p-	Nitroaniline			X	5000			
98-95-3		Nitrobenzene	X	O	X	1000	10000		
92-93-3	4-	Nitrobiphenyl		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1122-60-7		Nitrocyclohexane	X			1	500		
1836-75-5		Nitrofen (technical grade)		X					
1836-75-5		Nitrofen [Benzene,2,4-dichloro-1-(4-nitrophenoxy)-]		O					
10102-43-9		Nitrogen (II) oxide	X		X	10	100		
10102-44-0		Nitrogen (IV) oxide	X		X	10	100		
10544-72-6		Nitrogen (IV) oxide			X	10			
10102-44-0		Nitrogen dioxide	X		X	10	100		
10544-72-6		Nitrogen dioxide			X	10			
51-75-2		Nitrogen mustard [2-Chloro-N(2-chloroethyl)-N-methylethanamine]	X	O		1	10		
55-63-0		Nitroglycerine		O	X	10			
88-75-5	2-	Nitrophenol		X	X	100			
100-02-7	4-	Nitrophenol		O	X	100			
88-75-5	o-	Nitrophenol (mixed)		X	X	100			
100-02-7	p-	Nitrophenol (mixed)		X	X	100			
554-84-7	m-	Nitrophenol (mixed)			X	100			
25154-55-6		Nitrophenol (mixed)			X	100			
79-46-9	2-	Nitropropane		O	X	1			
759-73-9	N-	Nitroso-N-ethylurea		O	X	1			

MASTER CRTK CHEMICAL LIST–NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
684-93-5	N-	Nitroso-N-methylurea		O	X	1			
615-53-2	N-	Nitroso-N-methylurethane			X	1			
924-16-3	N-	Nitrosodi-N-butylamine		O	X	1			
621-64-7	N-	Nitrosodi-n-propylamine		O	X	1			
1116-54-7	N-	Nitrosodiethanolamine			X	1			
55-18-5	N-	Nitrosodiethylamine		O	X	1			
62-75-9	N-	Nitrosodimethylamine	X	O	X	1	1000		
62-75-9		Nitrosodimethylamine	X	X	X	1	1000		
86-30-6	N-	Nitrosodiphenylamine		O	X	100			
156-10-5	p-	Nitrosodiphenylamine		O					
4549-40-0	N-	Nitrosomethylvinylamine		O	X	1			
59-89-2	N-	Nitrosomorpholine		O					
16543-55-8	N-	Nitrosonornicotine		O					
100-75-4	N-	Nitrosopiperidine		O	X	1			
930-55-2	N-	Nitrosopyrrolidine			X	1			
88-72-2	o-	Nitrotoluene			X	1000			
99-08-1	m-	Nitrotoluene			X	1000			
99-99-0	p-	Nitrotoluene			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1321-12-6		Nitrotoluene			X	1000			
991-42-4		Norbormide	X			1	100/10000		
115-29-7	5-	Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite	X		X	1	10/10000		
2234-13-1		Octachloronapthalene		O					
152-16-9		Octamethylpyrophosphoramide	X		X	100	100		
20816-12-0		Osmium oxide		X	X	1000			
20816-12-0		Osmium tetroxide		O	X	1000			
145-73-3	7-	Oxabicyclo [2, 2,1] heptane-2,3-dicarboxylic acid			X	1000			
23135-22-0		Oxamyl	X			1	100/10000		
1120-71-4	1,2-	Oxathiolane, 2,2-dioxide		X	X	1			
50-18-0	2H-1,3,2-	Oxazaphosphorine,2-[bis(2-chloroethyl)amino]tetrahydro-2-oxide			X	1			
78-71-7		Oxetane, 3,3-bis(chloromethyl)-	X			1	500		
75-21-8		Oxirane	X	X	X	1	1000		
106-89-8		Oxirane, 2-(chloromethyl)-	X	X	X	1000	1000		
2497-07-6		Oxydisulfoton	X			1	500		
10028-15-6		Ozone	X			1	100		
30525-89-4		Paraformaldehyde			X	1000			
123-63-7		Paraldehyde			X	1000			

O = TOXIC CHEMICAL FOR SECTION 313 REPORTING; PAGE 61

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1910-42-5		Paraquat	X			1	10/10000		
2074-50-2		Paraquat methosulfate	X			1	10/10000		
56-38-2		Parathion [Phosphorothioic acid,O,O-diethyl-O-(4-nitrophenyl)ester]	X	O	X	1	100		
298-00-0		Parathion-methyl	X		X	100	100/10000		
12002-03-8		Paris green	X		X	100	500/10000		
19624-22-7		Pentaborane	X			1	500		
608-93-5		Pentachlorobenzene			X	10			
76-01-7		Pentachloroethane			X	1			
82-68-8		Pentachloronitrobenzene		X	X	1			
87-86-5		Pentachlorophenol (PCP)		O	X	10			
2570-26-5		Pentadecylamine	X			1	100/10000		
504-60-9	1,3-	Pentadiene			X	100			
79-21-0		Peracetic acid	X	O		1	500		
594-42-3		Perchloromethylmercaptan	X		X	100	500		
62-44-2		Phenacetin			X	1			
62-44-2		Phenacetin, analgesic mixtures containing			X	1			
85-01-8		Phenanthrene			X	5000			
108-95-2		Phenol Eccostrip 93, Cee-Bee A-202	X	O	X	1000	500/10000	1	1

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
97-18-7		Phenol, 2,2'-thiobis(4,6-dichloro-	X			1	100/10000		
4418-66-0		Phenol, 2,2'-thiobis(4-chloro-6-methyl-	X			1	100/10000		
58-90-2		Phenol, 2,3,4,6-tetrachloro-			X	10			
95-95-4		Phenol, 2,4,5-trichloro-		X	X	10			
88-06-2		Phenol, 2,4,6-trichloro-		X	X	10			
131-74-8		Phenol, 2,4,6-trinitro- ammonium salt			X	10			
120-83-2		Phenol, 2,4-dichloro-		X	X	100			
105-67-9		Phenol, 2,4-dimethyl-		X	X	100			
51-28-5		Phenol, 2,4-dinitro-		X	X	10			
88-85-7		Phenol, 2,4-dinitro-6-(1-methylpropyl)-	X		X	1000	100/10000		
534-52-1		Phenol, 2,4-dinitro-6-methyl- and salts	X	X	X	10	10/10000		
87-65-0		Phenol, 2,6-dichloro-			X	100			
95-57-8		Phenol, 2-chloro			X	100			
131-89-5		Phenol, 2-cyclohexyl-4,6-dinitro-			X	100			
64-00-6		Phenol, 3-(1-methylethyl)-, methylcarbamate	X			1	500/10000		
59-50-7		Phenol, 4-chloro-3-methyl-			X	5000			
100-02-7		Phenol, 4-nitro-		X	X	100			
87-86-5		Phenol, pentachloro-		X	X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
58-36-6		Phenoxarsine, 10, 10'-oxydi-	X			1	500/10000		
696-28-6		Phenyl dichloroarsine	X		X	1	500		
108-98-5		Phenyl mercaptan	X		X	100	500		
193-39-5	1,10-(1,2-	Phenylene)pyrene			X	1			
106-50-3	p-	Phenylenediamine		O					
59-88-1		Phenylhydrazine hydrochloride	X			1	1000/10000		
62-38-4		Phenylmercuric acetate	X		X	100	500/10000		
62-38-4		Phenylmercury acetate	X		X	100	500/10000		
90-43-7	2-	Phenylphenol		O					
2097-19-0		Phenylsilatrane	X			1	100/10000		
103-85-5		Phenylthiourea	X		X	100	100/10000		
103-85-5	N-	Phenylthiourea	X		X	100	100/10000		
298-02-2		Phorate	X		X	10	10		
4104-14-7		Phosacetim	X			1	100/10000		
947-02-4		Phosfolan	X			1	100/10000		
75-44-5		Phosgene	X	O	X	10	10		
732-11-6		Phosmet	X			1	10/10000		
13171-21-6		Phosphamidon	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7803-51-2	Phosphine	X		X	100	500		
2665-30-7	Phosphonothioic acid, methyl-, 0-(4-nitrophenyl) O-phenyl ester	X			1	500		
2703-13-1	Phosphonothioic acid, methyl-, 0-ethyl 0-(4-(methylthio)phenyl)ester	X			1	500		
50782-69-9	Phosphonothioic acid, methyl-, S- (2-(bis (1-methylethyl) amino)-ethyl) O-ethyl ester	X			1	100		
7664-38-2	Phosphoric acid Pasa-Jell 101, 3M Fountain Concentrate, TD Isofount, 3M Cleaner Conditioner, CRC Rust Remover, Oakite 33, 3M Image Guard		O	X	5000			
2,14,17,9, 26,33,35								
311-45-5	Phosphoric acid, diethyl p-nitrophenyl ester			X	100			
3254-63-5	Phosphoric acid, dimethyl 4-(methylthio)phenyl ester	X			1	500		
7446-27-7	Phosphoric acid, lead salt			X	1			
298-02-2	Phosphorodithioic acid,O,O-diethyl S-(ethylthio), methyl ester	X		X	10	10		
3288-58-2	Phosphorodithioic acid,O,O-diethyl S-methylester			X	5000			
60-51-5	Phosphorodithioic acid,O,O-dimethyl S-[2(methylamino)-2-oxoethyl]ester	X		X	10	500/10000		
55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester	X		X	100	100		
56-38-2	Phosphorothioic acid,O,O-diethyl O-(4-nitrophenyl) ester	X	X	X	1	100		
297-97-2	Phosphorothioic acid,O,O-diethyl O-pyrazinyl ester	X		X	100	500		
52-85-7	Phosphorothioic acid,O,O-dimethyl-O-[p-[(dimethylamino)-sulfonyl]phenyl]ester			X	1000			
2587-90-8	Phosphorothioic acid,O,O-dimethyl-S-(2-Methylthio)Ethyl Ester	X			1	500		
7723-14-0	Phosphorus	X	X	X	1	100		
7723-14-0	Phosphorus (yellow or white)	X	O	X	1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
10025-87-3		Phosphorus oxychloride	X		X	1000	500		
10026-13-8		Phosphorus pentachloride	X			1	500		
1314-80-3		Phosphorus pentasulfide			X	100			
1314-56-3		Phosphorus pentoxide	X			1	10		
1314-80-3		Phosphorus sulfide			X	100			
7719-12-2		Phosphorus trichloride	X		X	1000	1000		
85-44-9		Phthalic anhydride		O	X	5000			
57-47-6		Physostigmine	X			1	100/10000		
57-64-7		Physostigmine, salicylate (1:1)	X			1	100/10000		
109-06-8	2-	Picoline			X	5000			
88-89-1		Picric acid		O					
124-87-8		Picrotoxin	X			1	500/10000		
110-89-4		Piperidine	X			1	1000		
5281-13-0		Piprotal	X			1	100/10000		
23505-41-1		Pirimifos-ethyl	X			1	1000		
78-00-2		Plumbane, tetraethyl-	X		X	10	100		
1336-36-3		Polychlorinated Biphenyls (PCBs)		O	X	10			
11096-82-5		Polychlorinated Biphenyls (PCBs)			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
11097-69-1		Polychlorinated Biphenyls (PCBs)			X	10			
11104-28-2		Polychlorinated Biphenyls (PCBs)			X	10			
11141-16-5		Polychlorinated Biphenyls (PCBs)			X	10			
12672-29-6		Polychlorinated Biphenyls (PCBs)			X	10			
12674-11-2		Polychlorinated Biphenyls (PCBs)			X	10			
53469-21-9		Polychlorinated Biphenyls (PCBs)			X	10			
3761-53-3		Ponceau MX		X					
7784-41-0		Potassium arsenate			X	1000			
10124-50-2		Potassium arsenite	X		X	1000	500/10000		
7778-50-9		Potassium bichromate			X	1000			
7789-00-6		Potassium chromate			X	1000			
151-50-8		Potassium cyanide	X		X	10	100		
1310-58-3		Potassium hydroxide Kodak Developer Replenisher, 3M-Onyx Developer 3M "R" Scratch Remover, Starrett Cleaner			X	1000			
3,13,14,36									
7722-64-7		Potassium permanganate			X	100			
506-61-6		Potassium silver cyanide	X		X	1	500		
2631-37-0		Promecarb	X			1	500/10000		
23950-58-5		Pronamide			X	5000			
765-34-4	1-	Propanal, 2,3-epoxy-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
116-06-3		Propanal, 2-methyl-2-(methylthio)-,O-[(methylamino)carbonyl]oxime	X		X	1	100/10000		
107-10-8	1-	Propanamine			X	5000			
142-84-7	1-	Propanamine, N-propyl			X	5000			
1120-71-4		Propane sultone		O	X	1			
1120-71-4	1,3-	Propane sultone		X	X	1			
96-12-8		Propane, 1,2-dibromo-3-chloro-		X	X	1			
108-60-1		Propane, 2,2'-oxybis(2-chloro-		X	X	1000			
79-46-9		Propane, 2-nitro-		X	X	1			
109-77-3		Propanedinitrile	X		X	1000	500/10000		
107-12-0		Propanenitrile	X		X	10	500		
75-86-5		Propanenitrile, 2-hydroxy-2-methyl-	X		X	10	1000		
542-76-7		Propanenitrile, 3-chloro-	X		X	1000	1000		
55-63-0	1,2,3-	Propanetriol, trinitrate-		X	X	10			
126-72-7	1-	Propanol, 2,3-dibromo-, phosphate (3:1)		X	X	1			
78-83-1	1-	Propanol, 2-methyl-			X	5000			
67-64-1	2-	Propanone		X	X	5000			
598-31-2	2-	Propanone, 1-bromo-			X	1000			
2312-35-8		Propargite			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
107-19-7		Propargyl alcohol			X	1000			
106-96-7		Propargyl bromide	X			1	10		
107-18-6	2-	Propen-1-ol	X		X	100	1000		
107-02-8	2-	Propenal	X	X	X	1	500		
79-06-1	2-	Propenamide	X	X	X	5000	1000/10000		
1888-71-7	1-	Propene, 1,1,2,3,3,3-hexachloro-			X	1000			
542-75-6		Propene, 1,3-dichloro-		X	X	100			
107-13-1	2-	Propenenitrile	X	X	X	100	10000		
126-98-7	2-	Propenenitrile, 2-methyl-	X		X	1	500		
79-10-7	2-	Propenoic acid		X	X	5000			
97-63-2	2-	Propenoic acid, 2-methyl-, ethyl ester			X	1000			
80-62-6	2-	Propenoic acid, 2-methyl-, methyl ester		X	X	1000			
140-88-5	2-	Propenoic acid, ethyl ester		X	X	1000			
57-57-8	beta-	Propiolactone	X	O		1	500		
123-38-6		Propionaldehyde		O					
79-09-4		Propionic acid			X	5000			
93-72-1		Propionic acid, 2-(2,4,5-trichlorophenoxy)-			X	100			
123-62-6		Propionic anhydride			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
107-12-0		Propionitrile	X		X	10	500		
542-76-7		Propionitrile, 3-chloro-	X		X	1000	1000		
70-69-9		Propiophenone, 4'-amino	X			1	100/10000		
114-26-1		Propoxur [Phenol,2-(1-methylethoxy)-,methylcarbamate]		O					
109-61-5		Propyl chloroformate	X			1	500		
107-10-8	n-	Propylamine			X	5000			
115-07-1		Propylene Propane		X					
20									
115-07-1		Propylene (Propene)		O					
78-87-5		Propylene dichloride		X	X	1000			
75-56-9		Propylene oxide	X	O	X	100	10000		
75-55-8		Propyleneimine	X	O	X	1	10000		
75-55-8	1,2-	Propylenimine	X	X	X	1	10000		
621-64-7	Di-n-	propylnitrosamine		X	X	1			
107-19-7	2-	Propyn-1-ol			X	1000			
2275-18-5		Prothoate	X			1	100/10000		
95-63-6		Pseudocumene		X					
129-00-0		Pyrene	X		X	5000	1000/10000		
121-21-1		Pyrethrins			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
121-29-9		Pyrethrins			X	1			
8003-34-7		Pyrethrins			X	1			
504-24-5	4-	Pyridinamine	X		X	1000	500/10000		
110-86-1		Pyridine		O	X	1000			
24		Vessel Solution Part A							
54-11-5		Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts	X		X	100	100		
109-06-8		Pyridine, 2-methyl-			X	5000			
140-76-1		Pyridine, 2-methyl-5-vinyl-	X			1	500		
91-80-5		Pyridine, 2-[(2-(dimethylamino)ethyl)-2-thenylamino]-			X	5000			
504-24-5		Pyridine, 4-amino-	X		X	1000	500/10000		
1124-33-0		Pyridine, 4-nitro, 1-oxide	X			1	500/10000		
100-75-4		Pyridine, hexahydro-N-nitroso-		X	X	1			
56-04-2	4(1H)-	Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-			X	1			
53558-25-1		Pyriminil	X			1	100/10000		
107-49-3		Pyrophosphoric acid, tetraethyl ester	X		X	10	100		
930-55-2		Pyrrole, tetrahydro-N-nitroso-			X	1			
630-60-4		Quabain	X			1	100/10000		
91-22-5		Quinoline		O	X	5000			
106-51 4		Quinone		O	X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
82-68-8		Quintozene [Pentachloronitrobenzene]		O	X				
50-55-5		Reserpine			X	5000			
108-46-3		Resorcinol			X	5000			
81-07-2		Saccharin (manufacturing) [1,2-Benzisothiazol-3(2H)-one,1,1-dioxide]		O	X	1			
81-07-2		Saccharin (saccharine) Speed Bonder 324 Structural Adhesive Speed-		X	X	1			
33,34,34,34,34		bonder 325, Speed Bonder 326, Coctite 242 Adhesive/Sealant Bearing Mount Grade B							
81-07-2		Saccharin and salts		X	X	1			
94-59-7		Safrole		O	X	1			
14167-18-1		Salcomine	X			1	500/10000		
107-44-8		Sarin	X			1	10		
7783-00-8		Selenious acid	X		X	10	1000/10000		
7782-49-2		Selenium		O	X	100			
7446-08-4		Selenium dioxide (selenium oxide)			X	10			
7488-56-4		Selenium disulfide			X	1			
7446-08-4		Selenium oxide			X	10			
7791-23-3		Selenium oxychloride	X			1	500		
630-10-4		Selenourea			X	1000			
563-41-7		Semicarbazide hydrochloride	X			1	1000/10000		
3037-72-7		Silane, (4-aminobutyl)diethoxymethyl-	X			1	1000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7440-22-4		Silver		O	X	1000			
35		Kester SN96 Solder							
506-64-9		Silver cyanide			X	1			
7761-88-8		Silver nitrate			X	1			
93-72-1		Silvex			X	100			
7440-23-5		Sodium			X	10			
7631-89-2		Sodium arsenate	X		X	1000	1000/10000		
7784-46-5		Sodium arsenite	X		X	1000	500/10000		
26628-22-8		Sodium azide	X		X	1000	500		
26628-22-8		Sodium azide (Na(N3))	X		X	1000	500		
10588-01-9		Sodium bichromate			X	1000			
1333-83-1		Sodium bifluoride			X	100			
7631-90-5		Sodium bisulfite			X	5000			
29		Kodak T-Max Developer							
124-65-2		Sodium cacodylate	X			1	100/10000		
7775-11-3		Sodium chromate			X	1000			
143-33-9		Sodium cyanide	X		X	10	100		
143-33-9		Sodium cyanide (Na(CN))	X		X	10	100		
25155-30-0		Sodium dodecybenzene sulfonate			X	1000			
7681-49-4		Sodium fluoride			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
62-74-8		Sodium fluoroacetate	X		X	10	10/10000		
16721-80-5		Sodium hydrosulfide			X	5000			
1310-73-2		Sodium hydroxide 3M-LLD Part B, Caustic Soda			X	1000			
14, 18, 24									
1310-73-2		Sodium hydroxide (solution)		O	X	1000			
7681-52-9		Sodium hypochlorite			X	100			
10022-70-5		Sodium hypochlorite			X	100			
124-41-4		Sodium methylate			X	1000			
7632-00-0		Sodium nitrite DOB 6-Chek D-113G Developer			X	100			
28									
131-52-2		Sodium pentachlorophenate	X			1	100/10000		
7558-79-4		Sodium phosphate, dibasic			X	5000			
10039-32-4		Sodium phosphate, dibasic			X	5000			
10140-65-5		Sodium phosphate, dibasic			X	5000			
7601-54-9		Sodium phosphate, tribasic CP 2 96 LL Activator			X	5000			
5									
7758-29-4		Sodium phosphate, tribasic			X	5000			
7785-84-4		Sodium phosphate, tribasic			X	5000			
10101-89-0		Sodium phosphate, tribasic			X	5000			
15		Oakite 164							
10124-56-8		Sodium phosphate, tribasic			X	5000			
10361-89-4		Sodium phosphate, tribasic			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
13410-01-0		Sodium selenate	X			1	100/10000		
7782-82-3		Sodium selenite			X	100			
10102-18-8		Sodium selenite	X		X	100	100/10000		
7757-82-6		Sodium sulfate (solution)		O					
10102-20-2		Sodium tellurite	X			1	500/10000		
900-95-8		Stannane, acetoxytriphenyl-	X			1	500/10000		
56-53-1	4,4-	Stilbenediol, alpha,alpha'-1-diethyl-			X	1			
18883-66-4		Streptozotocin			X	1			
7789-06-2		Strontium chromate Prime Coat P527E Part A			X	1000			
357-57-3		Strychnidin-10-one,2,3-dimethoxy-			X	100			
57-24-9		Strychnine	X		X	10	100/10000		
57-24-9		Strychnine and salts	X		X	10	100/10000		
60-41-3		Strychnine, sulfate	X			1	100/10000		
57-24-9		Strychnine-10-one, and salts	X		X	10	100/10000		
100-42-5		Styrene		O	X	1000			
100-42-5		Styrene (monomer)		X	X	1000			
96-09-3		Styrene oxide		O					
3689-24-5		Sulfotep	X		X	100	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
3569-57-1		Sulfoxide, 3-chloropropyl octyl	X			1	500		
7446-09-5		Sulfur dioxide Vessel Solution Part A	X			1	500		
24									
7783-06-4		Sulfur hydride	X		X	100	500		
12771-08-3		Sulfur monochloride			X	1000			
1314-80-3		Sulfur phosphide			X	100			
7488-56-4		Sulfur selenide			X	1			
7783-60-0		Sulfur tetrafluoride	X			1	100		
7446-11-9		Sulfur trioxide	X			1	100		
7664-93-9		Sulfuric acid Kodak Rapid Fixer, D-325 Traycleaner	X	O	X	1000	1000		
4, 8, 20									
8014-95-7		Sulfuric acid (mixture with sulfa trioxide)			X	1000			
77-78-1		Sulfuric acid, dimethyl ester	X	X	X	1	500		
7446-18-6		Sulfuric acid, thallium (I) salt	X		X	100	100/10000		
10031-59-1		Sulfuric acid, thallium (I) salt	X		X	100	100/10000		
93-76-5	2,4,5-	T			X	1000			
93-76-5	2,4,5-	T acid			X	1000			
1319-72-8	2,4,5-	T amines			X	5000			
2008-46-0	2,4,5-	T amines			X	5000			
3813-14-7	2,4,5-	T amines			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
6369-96-6	2,4,5-	T amines			X	5000			
6369-97-7	2,4,5-	T amines			X	5000			
93-79-8	2,4,5-	T esters			X	1000			
1928-47-8	2,4,5-	T esters			X	1000			
2545-59-7	2,4,5-	T esters			X	1000			
25168-15-4	2,4,5-	T esters			X	1000			
61792-07-2	2,4,5-	T esters			X	1000			
13560-99-1	2,4,5-	T salts			X	1000			
77-81-6		Tabun	X			1	10		
72-54-8		TDE			X	1			
13494-80-9		Tellurium	X			1	500/10000		
7783-80-4		Tellurium hexafluoride	X			1	100		
107-49-3		TEPP	X		X	10	100		
13071-79-9		Terbufos	X			1	100		
100-21-0		Terephthalic acid		O					
95-94-3	1,2,4,5-	Tetrachlorobenzene			X	5000			
1746-01-6		Tetrachlorodibenzo-dioxin			X	1			
1746-01-6	2,3,7,8-	Tetrachlorodibenzo-p-dioxin (TCDD)			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-34-5	1,1,2,2-	Tetrachloroethane		O	X	1			
630-20-6	1,1,1,2-	Tetrachloroethane			X	1			
127-18-4		Tetrachloroethylene (Perchloroethylene) Quick 'N Slick		O	X	1			N 3 lbs
58-90-2	2,3,4,6-	Tetrachlorophenol			X	10			
961-11-5		Tetrachlorvinphos [Phosphoric acid,2-chloro-1-(2,4,5-trichlorophenyl)ethenyl dimethyl ester]		O					
78-00-2		Tetraethyl lead	X		X	10	100		
107-49-3		Tetraethyl pyrophosphate	X		X	10	100		
3689-24-5		Tetraethyldithiopyrophosphate	X		X	100	500		
597-64-8		Tetraethyltin	X			1	100		
109-99-9		Tetrahydrofuran			X	1000			
75-74-1		Tetramethyl lead	X			1	100		
75-74-1		Tetramethyl lead, as Pb	X			1	100		
509-14-8		Tetranitromethane	X		X	10	500		
757-58-4		Tetraphosphoric acid, hexaethyl ester			X	100			
1314-32-5		Thallic oxide			X	100			
7440-28-0		Thallium		O	X	1000			
563-68-8		Thallium (I) acetate			X	100			
6533-73-9		Thallium (I) carbonate	X		X	100	100/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7791-12-0		Thallium (I) chloride	X		X	100	100/10000		
10102-45-1		Thallium (I) nitrate			X	100			
12039-52-0		Thallium (I) selenide			X	1000			
7446-18-6		Thallium (I) sulfate	X		X	100	100/10000		
10031-59-1		Thallium (I) sulfate	X		X	100	100/10000		
1314-32-5		Thallium (III) oxide			X	100			
6533-73-9		Thallous carbonate	X		X	100	100/10000		
7791-12-0		Thallous chloride	X		X	100	100/10000		
2757-18-8		Thallous malonate	X			1	100/10000		
7446-18-6		Thallous sulfate	X		X	100	100/10000		
10031-59-1		Thallous sulfate	X		X	100	100/10000		
62-55-5		Thioacetamide		O	X	1			
2231-57-4		Thiocarbazide	X			1	1000/10000		
139-65-1	4,4'-	Thiodianiline		O					
39196-18-4		Thiofanox	X		X	100	100/10000		
74-93-1		Thiomethanol	X		X	100	500		
541-53-7		Thiomidodicarbonic diamide	X		X	100	100/10000		
297-97-2		Thionazin	X		X	100	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
108-98-5		Thiophenol	X		X	100	500		
79-19-6		Thiosemicarbazide	X		X	100	100/10000		
62-56-6		Thiourea		O	X	1			
5344-82-1		Thiourea, (2-chlorophenyl)-	X		X	100	100/10000		
614-78-8		Thiourea, (2-methylphenyl)-	X			1	500/10000		
86-88-4		Thiourea, 1-naphthalenyl-	X		X	100	500/10000		
103-85-5		Thiourea, phenyl-	X		X	100	100/10000		
137-26-8		Thiram			X	10			
1314-20-1		Thorium dioxide		O					
7550-45-0		Titanium tetrachloride	X	O		1	100		
108-88-3		Toluene -Crystal Clear Acrylic Coating, Dow 1204 PrimeCoat Uralane 5750, Brayco 933, PR-1422-G Class A/B, Cellulose Nitrate & Loss Lacquer, Pro-Seal 870B Prime Coat P527-E A/B Spray Inc, Pro-Seal 890B, Krylow Crystal Clear Spray 1301		O	X	1000			
7,9,16,18,23,24,25,27,33,33									
91-08-7		Toluene 2,6-diisocyanate /Krylon 1311/Spray /	X	O	X	100	100		
91-08-7		Toluene diisocyanate	X	X	X	100	100		
584-84-9		Toluene diisocyanate	X	X	X	100	500		
26471-62-5		Toluene diisocyanate			X	100			
584-84-9		Toluene- 2,4-diisocyanate	X	O	X	100	500		
95-80-7		Toluenediamine		X	X	1			
496-72-0		Toluenediamine			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
823-40-5		Toluenediamine			X	1			
25376-45-8		Toluenediamine		X	X	1			
95-53-4	o-	Toluidine		O	X	1			
106-49-0	p-	Toluidine			X	1			
636-21-5	o-	Toluidine hydrochloride		O	X	1			
8001-35-2		Toxaphene	X	O	X	1	500/10000		
8001-35-2	o-	Toxaphene	X	X	X	1	500/10000		
93-72-1	2,4,5-	TP acid			X	100			
32534-95-5	2,4,5-	TP acid esters			X	100			
110-57-6		trans-1,4 Dichlorobutene	X			1	500		
110-57-6		Trans-1,4-dichlorobutene	X			1	500		
156-60-5	1,2-	trans-Dichloroethylene			X	1000			
1031-47-6		Triamiphos	X			1	500/10000		
68-76-8		Triaziquone [2,5-Cyclohexadiene-1,4-dione,2,3,5-tris(1-azindinyl)-]		O					
24017-47-8		,Triazofos	X			1	500		
61-82-5	1H-1,2,4-	Triazol-3-amine			X	1			
52-68-6		Trichlorfon [Phosphonic acid,(2,2,2-trichloro-1-hydroxyethyl),dimethyl ester]		O	X	100			
1558-25-4		Trichloro(chloromethyl)silane	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
27137-85-5		Trichloro(dichlorophenyl)silane	X			1	500		
76-13-1	1,1,2-	Trichloro-1,2,2-trifluoroethane Freon TF, TMC, PCA, TAC-PAC Mist Activator, Lonco-Solve TMS4, 02 009 TMC Cleaner, Gene-Solve DM, TFE Lube		X					
3,17,20,36									
76-02-8		Trichloroacetyl chloride	X			1	500		
120-82-1	1,2,4-	Trichlorobenzene		O	X	100			
71-55-6	1,1,1-	Trichloroethane Alpha 565 Solvent, 2-26 Aerosol #02004/02005, Locquic Primer T Locquic Primer N, Chloroethane 5M, Solvent		X	X	1000			
,10,12,13,16,19,25,26		Soluble Holding Web, Zip D-5675 MC Cleaner, MolyCote 321R							
36									
79-00-5	1,1,2-	Trichloroethane /Lub, Krylon 1310 Dulling Spray, TFE Lub/		O	X	1			
71-55-6	1,1,1-	Trichloroethane (Methyl chloroform)		O	X	1000			
79-01-6		Trichloroethene		X	X	1000			
79-01-6		Trichloroethylene		O	X	1000			
115-21-9		Trichloroethylsilane	X			1	500		
75-69-4		Trichlorofluoromethane Zip L-345 Mold Release, Zip S-100 Mold Release			X	5000			
27, 27									
594-42-3		Trichloromethanesulfenyl chloride	X		X	100	500		
75-69-4		Trichloromonofluoromethane			X	5000			
327-98-0		Trichloronate	X			1	500		
88-06-2	2,4,6-	Trichlorophenol		O	X	10			
95-95-4	2,4,5-	Trichlorophenol		O	X	10			
609-19-8	3,4,5-	Trichlorophenol			X	10			
933-75-5	2,3,6-	Trichlorophenol			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
933-78-8	2,3,5-	Trichlorophenol			X	10			
15950-66-0	2,3,4-	Trichlorophenol			X	10			
25167-82-2		Trichlorophenol			X	10			
93-76-5	2,4,5-	Trichlorophenoxyacetic acid			X	1000			
98-13-5		Trichlorophenylsilane	X			1	500		
52-68-6		Trichlorphon		X	X	100			
27323-41-7		Triethanolamine dodecylbenzenesulfonate			X	1000			
998-30-1		Triethoxysilane	X			1	500		
121-44-8		Triethylamine			X	5000			
1582-09-8		Trifluralin [Benzeneamine,2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-1]		O					
75-50-3		Trimethylamine			X	100			
95-63-6	1,2,4-	Trimethylbenzene #230 Ink Conditioner		O					
75-77-4		Trimethylchlorosilane	X			1	1000		
824-11-3		Trimethylolpropane phosphite	X			1	100/10000		
1066-45-1		Trimethyltin chloride	X			1	500/10000		
99-35-4	sym-	Trinitrobenzene			X	10			
123-63-7	1,3,5-	Trioxane,2,4,6-trimethyl-			X	1000			
639-58-7		Triphenyltin chloride	X			1	500/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
126-72-7		Tris (2,3-dibromopropyl) phosphate		O	X	1			
555-77-1		Tris(2-chloroethyl)amine	X			1	100		
68-76-8		Tris(aziridinyl)-para-benzoquinone		X					
72-57-1		Trypan blue			X	1			
66-75-1		Uracil mustard			X	1			
66-75-1		Uracil, 5-[bis(2-chloroethyl)amino]-			X	1			
541-09-3		Uranyl acetate			X	100			
10102-06-4		Uranyl nitrate			X	100			
36478-76-9		Uranyl nitrate			X	100			
51-79-6		Urethane (Ethyl carbamate)		O	X	1			
2001-95-8		Valinomycin	X			1	1000/10000		
7803-55-6		Vanadic acid, ammonium salt			X	1000			
7440-62-2		Vanadium (fume or dust)		O					
1314-62-1		Vanadium (V) oxide	X		X	1000	100/10000		
1314-62-1		Vanadium (V2O5), fume	X		X	1000	100/10000		
1314-62-1		Vanadium (V2O5), respirable dust	X		X	1000	100/10000		
1314-62-1		Vanadium pentoxide	X		X	1000	100/10000		
27774-13-6		Vanadyl sulfate			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
108-05-4		Vinyl acetate	X	O	X	5000	1000		
108-05-4		Vinyl acetate monomer Wilhold White Glu, DAP Weld Wood Carpenters Glue	X	X	X	5000	1000		
593-60-2		Vinyl bromide		O					
75-01-4		Vinyl chloride Scotch - Grip 4475		O	X	1			
75-01-4		Vinyl chloride (monomer)		X	X	1			
75-35-4		Vinylidene chloride		O	X	5000			
81-81-2		Warfarin	X		X	100	500/10000		
129-06-6		Warfarin sodium	X			1	100/10000		
95-47-6	o-	Xylene		O	X	1000			
106-42-3	p-	Xylene		O	X	1000			
108-38-3	m-	Xylene		O	X	1000			
1330-20-7		Xylene Crystal Clear Acrylic Coating, Dolph Spray,AC-29-7S Spray Ink Blue, #230 Ink Conditioner, Krylon Crystal Clear Spray 1301		X	X	1000			
1330-20-7		Xylene (mixed isomers)		O	X	1000			
1330-20-7		Xylene (mixed)		X	X	1000			
1300-71-6		Xylenol			X	1000			
87-62-7	2,6-	Xylidine		O					
28347-13-9		Xylylene dichloride	X			1	100/10000		
50-55-5		Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxy benzoyl) oxy]-, methyl ester			X	5000			

32, 32

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27,27,31,33

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7440-66-6		Zinc		X	X	1000			
7440-66-6		Zinc (fume or dust)		O	X	1000			
557-34-6		Zinc acetate			X	1000			
14639-97-5		Zinc ammonium chloride			X	1000			
14639-98-6		Zinc ammonium chloride			X	1000			
52628-25-8		Zinc ammonium chloride			X	1000			
1332-07-6		Zinc borate			X	1000			
7699-45-8		Zinc bromide			X	1000			
3486-35-9		Zinc carbonate			X	1000			
7646-85-7		Zinc chloride Superior #23 Flux			X	1000			
557-21-1		Zinc cyanide			X	10			
7783-49-5		Zinc fluoride			X	1000			
557-41-5		Zinc formate			X	1000			
7779-86-4		Zinc hydrosulfite			X	1000			
7779-88-6		Zinc nitrate			X	1000			
127-82-2		Zinc phenolsulfonate			X	5000			
1314-84-7		Zinc phosphide	X		X	100	500		
16871-71-9		Zinc silicofluoride			X	5000			

O = TOXIC CHEMICAL FOR SECTIC EPORTING/ PAGE 86

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7733-02-0		Zinc sulfate			X	1000			
58270-08-9		Zinc, dichloro(4,4-dimethyl-5-((((methylamino)carbonyl)oxy)imino) pentanenitrile)-, (T-4)-	X			1	100/10000		
12122-67-7		Zineb [Carbamodithioic acid,1,2-ethanediylbis-,zinc complex]		O					
13746-89-9		Zirconium nitrate			X	5000			
16923-95-8		Zirconium potassium fluoride Alodine 1200			X	1000			
5									
14644-61-2		Zirconium sulfate			X	5000			
10026-11-6		Zirconium tetrachloride			X	5000			
- -		Antimony compounds		O	X				
- -		Arsenic compounds		O					
- -		Barium compounds		O					
- -		Beryllium compounds		O	X				
- -		Cadmium compounds		O	X				
- -		Chlordane (technical mixture and metabolites)			X				
- -		Chlorinated Benzenes			X				
- -		Chlorinated Ethanes			X				
- -		Chlorinated Naphthalene			X				

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
--	Chlorinated Phenols			X				
--	Chloroalkyl ethers			X				
--	Chlorophenols		O					
--	Chromium compounds Ammonia Dichromate (2%) 3M Fountain Concentrate Calcium Dichromate (5%) & Soluble Metalic Chromates (3%) PR-1422-G Class A/B. Chromium Salts 2% TDISO Fount.		O	X				
16,17,24,25								
--	Cobalt compounds /Sodium Dichromate, Prime Coat P527E, #220 All Purpose 3-Way Drier(Cobalt Naphthenade)/		O					
--	Copper compounds		O	X				
--	Cyanide compounds Potassium Ferricyanide (20%) Alodine 1200, (1%) Alodine 1201 Kodak Farmer's Reducer Part A, Kodak Sepia Toner Part A		O	X				
6, 30, 31								
--	DDT and metabolites			X				
--	Dichlorobenzidine			X				
--	Diphenylhydrazine			X				
--	Endosulfan and metabolites			X				
--	Endrin and metabolites			X				
--	Glycol ethers Wonderwash, Kleen B, Formula 409, Catalyst B-3 (HD5003) PC16 - M Part A, 73X Reconditioner, Glaz-A-Way, Pro 3 Fountain Solution CRC Rust Remover, Oakite 33		O					
,7,10,23,11,17,23,26	Ethylene Glycol Mono Butyl Ether							
--	Haloethers			X				
--	Halomethanes			X				
--	Heptachlor and metabolites			X				
--	Lead compounds		O	X				
--	Manganese compounds #220 All Purpose 3-Way Drier (Manganese Naphthenadf)		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
- -	Mercury compounds		O	X				
- -	Nickel compounds		O	X				
- -	Nitrophenols			X				
- -	Nitrosamines			X				
- -	Phthalate esters			X				
- -	Polybrominated Biphenyls (PBBs)		O					
- -	Polynuclear aromatic hydrocarbons			X				
- -	Radionuclides			X	1			
- -	Selenium compounds		O	X				
- -	Silver compounds		O	X				
- -	Thallium compounds		X	X				
- -	Zinc compounds Zinc salt (25%) in 3M Fountain Concentrate		X	X				
D004	Unlisted haz. waste characteristic of EP toxicity - arsenic			X	1			
D005	Unlisted haz. waste characteristic of EP toxicity - barium			X	1000			
D006	Unlisted haz. waste characteristic of EP toxicity - cadmium			X	1			
D007	Unlisted haz. waste characteristic of EP toxicity - chromium			X	1			
D012	Unlisted haz. waste characteristic of EP toxicity - endrin			X	1			
D008	Unlisted haz. waste characteristic of EP toxicity - lead			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
D013		Unlisted haz. waste characteristic of EP toxicity - lindane			X	1			
D009		Unlisted haz. waste characteristic of EP toxicity - mercury			X	1			
D014		Unlisted haz. waste characteristic of EP toxicity - methoxychlor			X	1			
D010		Unlisted haz. waste characteristic of EP toxicity - selenium			X	1			
D011		Unlisted haz. waste characteristic of EP toxicity - silver			X	1			
D015		Unlisted haz. waste characteristic of EP toxicity - toxaphene			X	1			
D016		Unlisted haz. waste characteristic of EP toxicity-2,4,-D			X	100			
D017		Unlisted haz. waste characteristic of EP toxicity-2,4,5-TP			X	100			
D002		Unlisted hazardous wastes-characteristic of corrosivity			X	100			
D001		Unlisted hazardous wastes-characteristic of ignitability			X	100			
D003		Unlisted hazardous wastes-characteristic of reactivity			X	100			
F027		Discarded, unused formu. w/tri, tetra, pentachlorophenols or derivatives			X	1			
F008		Electroplating bath sludges from bottoms using cyanides with exceptions --except for precious metals electroplating bath sludges			X	10			
F010		Quenching bath sludge (oil bath) (metal heat treating) using cyanides --except for precious metals heat treating quenching bath sludges			X	10			
F012		Quenching wastewater treat sludges fr. metal heat treat using cyanides --except for precious metal heat treating quenching wastewater treatmnt sludges			X	10			
F028		Residue fr. incin./thermal treat. soil contaminated w/specified waste			X	1			
F002		Specified spent halogenated solvents and still bottoms fr. recovery includ. Tetrachloroethylene, Methylene Chloride, Trichloroethylene, 1,1,1-Trichloroethane, Chlorobenzene, 1,1,2- Trichloro-1, 2, 2-trifluoroethane, Dichlorobenzene, Trichlorofluoromethane			X	1			
F001		Specified spent halogenated solvents used degreasing and sludges fr. recovery including Tetrachloroethylene, Trichloroethylene, Methylene chloride, 1,1,1- Trichloroethane, Carbon Tetrachloride, Carbonated Fluorocarbons			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
F005	Specified spent non-halogenated solvents & still bottoms fr. recovery including Carbon disulfide, Isobutanol, Methyl ethyl ketone, Toluene, Pyridine			X	100			
F003	Specified spent non-halogenated solvents and still bottoms fr. recovery including Xylene, Acetone, Ethyl acetate, Ethylbenzene, Ethyl ether, Methyl isobutyl ketone, Butyl alcohol, Cyclohexanone, Methanol			X	100			
F004	Specified spent non-halogenated solvents and still bottoms from recovery including Nitrobenzene, Cresols/cresylic acid			X	1000			
F007	Spent cyanide electroplating bath solutions w/specified exceptions --except for precious metals electroplating spent CN plating bath solutions			X	10			
F011	Spent cyanide solutions fr. salt bath pot cleaning (metal heat treat) --except for precious metals heat tr. spent fr.salt bath pot cleaning			X	10			
F009	Spent stripping and cleaning solutions (electroplating) using cyanides with excpt. --except for precious metals electroplating spent stripping/cleaning bath sol.			X	10			
F022	Wastes fr. manu. use of tetra-, penta-, or hexachlorobenzene (alkaline)			X	1			
F026	Wastes fr. prod. materials on equip. for tetra-, penta-, hexachlorobenze			X	1			
F023	Wastes fr. prod. of materials on equip. for tri- and tetrachlorophenols			X	1			
F021	Wastes fr. prod. or use of pentachlorophenol/intermed. to prod. deriv			X	1			
F024	Wastes from production of chlorinated aliphatic hydrocarbons (C content 1-5)			X	1			
F020	Wastes in prod. or use of tri- or tetrachlorophenol, or pest. deriv			X	1			
F006	Wastewater treatment sludges (electroplating) w/specified exceptions 1) sulfuric acid anodizing Al, 2) Sn plating on carbon steel, 3) Zn plating on carbon steel, 4) Al or Zn-Al plating on carbon steel, 5) Cleaning/Stripping assoc w/Sn,Zn and Al plating on carbon steel 6) chemical etching of Al			X	1			
F019	Wastewater treatment sludges from chem. conversion coating of aluminum			X	1			
K064	Acid plant blowdown slurry/sludge resulting from thickening of blowdown slurry from primary copper production			X	1			
K060	Ammonia still lime sludge from coking operations			X	1			
K051	API separator sludge fr. petroleum refining industry			X	1			
K021	Aqueous spent antimony catalyst waste fr. fluoromethanes prod.			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K013		Bottom stream from acetonitrile column in production of acrylonitrile			X	1			
K011		Bottom stream from wastewater stripper in production of acrylonitrile			X	1			
K014		Bottoms from acetonitrile purif. column in production of acrylonitrile			X	5000			
K071		Brine purif. muds. fr. mercury cell process in chlorine prod. except...			X	1			
K031		By-product salts generated in prod. of MSMA and cacodylic acid			X	1			
K027		Centrifuge and distillation residues fr. toluene diisocyanate prod.			X	1			
K073		Chlorinated hydrocarbon waste fr. purif. step of... in chlorine prod.			X	1			
K030		Column bottoms/heavy ends fr. combined prod. tri- and perchloroethylene			X	1			
K087		Decanter tank tar sludge from coking operations			X	100			
K043	2,6-	Dichlorophenol waste from 2,4-D prod.			X	1			
K048		Dissolved air flotation (DAF) float fr. petroleum refining industry			X	1			
K022		Distillation bottom tars fr. prod. of phenol/acetone fr. cumene			X	1			
K095		Distillation bottoms fr. prod. 1,1,1-trichloroethane			X	1			
K025		Distillation bottoms fr. prod. nitrobenzene by nitration of benzene			X	1			
K024		Distillation bottoms fr. prod. phthalic anhydride fr. naphthalene			X	5000			
K094		Distillation bottoms fr. prod. phthalic anhydride fr. ortho-xylene			X	5000			
K083		Distillation bottoms from aniline extraction			X	100			
K009		Distillation bottoms from production of acetaldehyde from ethylene			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K023		Distillation light ends fr. prod. phthalic anhydride fr. naphthalene			X	5000			
K093		Distillation light ends fr. prod. phthalic anhydride fr. ortho-xylene			X	5000			
K085		Distillation or fractionation column bottoms from chlorobenzene prod.			X	1			
K010		Distillation side cuts from production of acetaldehyde from ethylene			X	1			
K091		Emission control dust or sludge from ferrochromium production			X	1			
K090		Emission control dust or sludge from ferrochromiumsilicon production			X	1			
K061		Emission control dust/sludge fr. prim. prod. steel in elec. furnaces			X	1			
K069		Emission control dust/sludge fr. secondary lead smelting			X	1			
K039		Filter cake fr. filtr. diethylphosphorodithioic acid in phorate prod.			X	10			
K034		Filter solids fr. filtr. hexachlorocyclopentadiene in chlordane prod.			X	1			
K050		Heat exchanger bundle cleaning sludge fr. petroleum refining industry			X	1			
K017		Heavy ends (still bottoms) from purif. column in prod. epichlorohydrin			X	1			
K096		Heavy ends fr. heavy ends column fr. prod. 1,1,1-trichloroethane			X	1			
K019		Heavy ends from distillation in production of ethylene dichloride			X	1			
K020		Heavy ends from distillation in production of vinyl chloride monomers			X	1			
K018		Heavy ends from fractionation column in production of ethyl chloride			X	1			
K016		Heavy ends or distillation residues from prod. of carbon tetrachloride			X	1			
K042		Heavy ends/dist. residues fr. dist. tetrachlorobenzene in 2,4,5-T pr.			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K008	Oven residue from the production of chrome oxide green pigments			X	1			
K047	Pink/red water from TNT operations			X	10			
K049	Slop oil emulsion solids from the petroleum refining industry			X	1			
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production			X	1			
K001	Sludge of wood preserving processes using creosote/pentachlorophenol			X	1			
K086	Solvent, water, caustic washes and sludge cleaning equip. for ink formu.			X	1			
K045	Spent carbon from treat. of wastewater containing explosives			X	10			
K028	Spent catalyst fr. hydrochlorinator reactor in prod. 1,1,1-trichloroethane			X	1			
K062	Spent pickle liquor fr. steel finishing operations			X	1			
K088	Spent potliners from primary aluminum reduction			X	1			
K036	Still bottoms fr. toluene reclamation distil. in disulfoton prod.			X	1			
K015	Still bottoms from the distillation of benzyl chloride			X	1			
K026	Stripping still tails fr. prod. methyl ethyl pyridines			X	1000			
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities			X	1			
K052	Tank bottoms (leaded) fr. petroleum refining industry			X	10			
K098	Untreated process wastewater fr. toxaphene prod.			X	1			
K099	Untreated wastewater fr. 2,4-D prod.			X	1			
K097	Vacuum stripper discharge fr. chlordane chlorinator in chlordane prod.			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K029		Waste fr. product steam stripper in 1,1,1-trichloroethane prod.			X	1			
K033		Waste- and scrubwater fr. chlorin. cyclopentadiene in chlordane prod.			X	1			
K038		Wastewater fr. washing and stripping of phorate prod.			X	1			
K006		Wastewater sludge fr. prod. chrome oxide green pigments (anhy. and hyd.)			X	1			
K002		Wastewater sludge from production of chrome yellow and orange pigments			X	1			
K003		Wastewater sludge from production of molybdate orange pigments			X	1			
K046		Wastewater tr. sludge from manu. formu. loading of lead-based initiating cmpd.			X	100			
K040		Wastewater treat. sludge from phorate prod.			X	1			
K032		Wastewater treat. sludge from prod. of chlordane			X	1			
K041		Wastewater treat. sludge from toxaphene prod.			X	1			
K037		Wastewater treat. sludges from disulfoton prod.			X	1			
K044		Wastewater treat. sludges from manu. and processing of explosives			X	10			
K035		Wastewater treat. sludges generated in creosote prod.			X	1			
K084		Wastewater treat. sludges in prod. of veterinary pharmaceut. (arsenic)			X	1			
K005		Wastewater treatment sludge from production of chrome green pigments			X	1			
K007		Wastewater treatment sludge from production of iron blue pigments			X	1			
K004		Wastewater treatment sludge from production of zinc yellow pigments			X	1			
K104		Combined wastewater streams gen. nitrobenzene/aniline chlorobenzenes			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K113		Condensed liquid light ends fr. purif. toluenediamine in prod. via...			X	1			
K101		Distillation tar residues fr. aniline-based compounds vet. pharmaceut			X	1			
K115		Heavy ends purif. toluenediamine in prod. via hydrog. dinitrotoluene			X	1			
K116		Organic condens. fr. solvent recovery column toluene diisocyanate via...			X	1			
K103		Process residues from aniline extraction from aniline prod.			X	100			
K111		Product washwaters from prod. dinitrotoluene via. nitration of toluene			X	1			
K112		React. by-prod. water fr. drying column prod. toluenediamine via...			X	1			
K102		Residue fr. activated carbon for decolorization prod. vet. pharmaceut.			X	1			
K105		Separated aqueous stream fr. reactor prod. washing step in chlorobenz.			X	1			
K118		Spent absorbent solids fr. purif. ethylene dibromide in prod. of it			X	1			
K136		Still bottoms fr. purif. ethylene dibromide in prod. via bromination of ethene			X	1			
K114		Vicinals fr. purif. toluenediamine in prod. via hydrog. dinitrotoluene			X	1			
K100		Waste leaching solution...(components identical with those of K069)			X	1			
K117		Wastewater fr. reaction vent gas scrubber prod. ethylene bromide via...			X	1			
K106		Wastewater treatment sludges fr. mercury cell process in chlorine prod.			X	1			
NA		Coke oven emissions			X	1			
PMN 82147		Organorhodium complex	X			1	10/10000		

SECTION 4

COMMUNITY RIGHT-TO-KNOW

Introduction

Overview: The Emergency Planning and Community Right-to-Know Act was adopted by Congress as Title III of the Superfund Amendments and Reauthorization Act (SARA). The provisions of Superfund or CERCLA (Comprehensive Emergency Response, Compensation, and Liability Act) are described in Section 3.

The purpose of Community Right-to-Know is to develop emergency preparedness capabilities on the local level, provide information about the Hazardous Chemicals present at facilities to the local community, and make available information about the Toxic Chemicals used and released by industries during day-to-day operations. Facility Right-to-Know requirements can be broken down into four components:

- Emergency Response Planning
- Emergency Release Reporting
- Hazardous Chemical Inventory Reporting
- Toxic Chemical Release Reporting

Emergency Response Planning (Sections 301-303): The Emergency Response Planning requirements were developed to increase the ability of local communities to respond to emergencies. Under the Act, each state was required to create a State Emergency Response Commission (SERC), which designated Local Emergency Planning Districts and appointed Local Emergency Planning Committees (LEPCs). The LEPCs were required to develop and distribute local emergency response plans by October 17, 1988.

The Act also established requirements for facilities. These requirements apply to any facility which has an Extremely Hazardous Substance (EHS) on site in a quantity that exceeds the Threshold Planning Quantity (TPQ). Extremely Hazardous Substances are chemicals identified by EPA as having the potential to cause significant injury or damage during an emergency; a listing is provided in Attachment B. A TPQ is a chemical-specific quantity which EPA designated as being sufficient to trigger emergency planning. A listing of TPQs is also provided in Attachment B.

Regulated facilities were required to notify the State Commission that they are subject to these requirements by submitting a notice by May 17, 1987. They were also required to appoint a facility Emergency Coordinator and submit his/her name to the Local Committee by September 17, 1987. If the facility was not subject to these requirements on the date of notifications, the notice must be submitted within sixty days of becoming regulated. Regulated facilities must also notify the LEPC of any changes

at the facility that might affect the local emergency response plan and submit pertinent information to the LEPC. Facilities must also promptly submit information requested by the LEPC for the local emergency response plan. Note: It is a good management practice to participate in LEPC activities and Textron encourages facilities with an interest in participating to do so.

Emergency Release Reporting (Section 304): Many federal and state environmental regulations require the reporting of certain accidental chemical releases. The SARA Emergency Release Reporting requirements expand existing reporting procedures to ensure that emergency response personnel in local communities have the information they need to respond promptly to emergencies.

Reporting is required by any facility that produces, uses, or stores a hazardous chemical, and which releases a CERCLA Hazardous Substance or an Extremely Hazardous Substance to the environment in an amount which exceeds the Reportable Quantity during a 24-hour period if any amount of the chemical is likely to migrate beyond the facility boundary.

Under these requirements, facilities must provide immediate, oral notification to the State Commission and the Community Emergency Coordinator of the Local Committee; if the substance is a CERCLA Hazardous Substance, oral notification must also be provided to the National Response Center. In addition, a written, follow-up notice must be provided to the State Commission and the Local Committee. See the Introduction to Section 3 for a comparison of SARA and CERCLA release reporting requirements.

Hazardous Chemical Inventory Reporting (Sections 311-312): The Hazardous Chemical Inventory Reporting requirements were enacted to provide public access to information on Hazardous Chemicals used or stored by local facilities. Hazardous Chemicals are those which pose physical or health hazards as defined by OSHA's Hazard Communication Standard. It may be helpful to think of a Hazardous Chemical as any material for which a Material Safety Data Sheet (MSDS) is required.

Facilities are subject to these requirements if they have on site, at any time, a Hazardous Chemical in an amount which equals or exceeds a certain threshold quantity. Regulated facilities must submit MSDSs, or a list of Hazardous Chemicals, to the local fire department, the State Commission, and the Local Committee by the dates specified in Question 9. If the facility prefers to submit a list, chemicals on the list must be categorized by OSHA Hazard Categories. Facilities are also required to complete annual inventory reports (Tier I or Tier II Reports) by the dates specified in Question 11. Copies of these reports are provided in the Appendix section. These reports require information on Hazardous Chemical usage and storage amounts, storage methods, and locations.

Toxic Chemical Release Reporting (Section 313): The Toxic Chemical Release Reporting requirements are intended to provide information to the general public and communities surrounding regulated facilities about accidental and routine releases of Toxic Chemicals. Toxic Chemicals are specific chemcials and chemical categories listed in the Act (see Attachment B for a listing). The federal Toxic Chemical List is a combination of the New Jersey and Maryland Community Right-to-Know Lists. Additional chemicals may be added if EPA determines that "(A) the chemical is known to cause, or can reasonably be anticipated to cause, significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility site boundaries as a result of continuous or frequently recurring releases, (B) the chemical is known to cause or can be reasonably anticipated to cause cancer or teratogenic effects, or serious or irreversible reproductive dysfunctions, neurologic disorders, heritable genetic mutations, or other chronic heatlh effects, or (C) the chemical is known to cause, or can be reasonably expected to cause, a significant adverse effect on the environment."

The requirements apply to facilities with ten or more employees in SIC Codes 20 through 39 which manufacture, process, or otherwise use a Toxic Chemical in excess of certain threshold quantities during the calendar year. The regulated SIC Codes are:

20 Food and Kendred Products Manufacturing
21 Tobacco Manufacturers
22 Textile Mill Products
23 Apparel and Other Finished Products Made From Fabrics and Other Similar Materials
24 Lumber and Wood Products, Except Furniture
25 Furniture and Fixtures
26 Paper and Allied Products
27 Printing, Publishing and Allied Industries
28 Chemicals and Allied Products
29 Petroleum Refining and Related Industries
30 Rubber and Miscellaneous Plastic Products
31 Leather and Leather Products
32 Stone, Clay, Glass, and Concrete Products
33 Primary Metal Industries
34 Fabricated Metal Products, Except Machinery and Transportation Equipment
35 Machinery, Except Electrical
36 Electrical and Electronic Machinery, Equipment and Supplies
37 Transportation Equipment
38 Measuring, Analyzing and Controlling Instruments: Photographic, Medical and Optical Goods: Watches and Clocks
39 Miscellaneous Manufacturing Industries

These facilities are required to submit an annual report regarding the facility's Toxic Chemical emissions. Both permitted and non-permitted releases must be included. The report is filed on an EPA Toxic Chemical Release Inventory Form (Form R) and is submitted to EPA and the state. The Form requests the following information for each facility Toxic Chemical that exceeds the threshold: estimated annual releases to the environment, maximum amount on site at any one time, estimated treatment efficiencies, and the name and address of treatment/disposal facilities (see copy in Appendix). Forms must be submitted by July 1 of each year to describe emissions which occurred during the previous year. The first reporting date was July 1, 1988.

EPA is required to combine these reports and make information available to the public through the establishment of a data base called the National Inventory of Toxic Chemical Emissions. EPA will also use information on the forms to guide future EPA research.

SECTION 4

COMMUNITY RIGHT-TO-KNOW

Guidance

Regulatory Authority:	Superfund Amendments and Reauthorization Act of 1986
Regulatory Citation:	40 CFR Parts 300, 302, 350, 355, 370, 372, 373, 374; Corresponding State Regulations
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State Agencies

1. & 2. Questions 1 through 2 are self-explanatory.

3. In Attachment A, you listed all facility Hazardous Chemicals. Use this list to complete Attachment B, a complete listing of facility Community Right-to-Know regulated chemicals, i.e., Hazardous Substances, Extremely Hazardous Substances, and Toxic Chemicals. Note that calculations will be necessary to translate Attachment A mixture information into Attachment B chemical-specific information. Much of this information will be available from facility Tier I or Tier II Reports or Toxic Chemical Release Reports.

SECTION 4

COMMUNITY RIGHT-TO-KNOW

Complete individual portions of this section if the facility meets the applicability requirements detailed at the beginning of each subsection.

A. Background

Complete this section if the facility manufactures, processes, or uses any Hazardous Chemicals or any of the chemicals listed on Attachment B, i.e., Hazardous Substances, Extremely Hazardous Substances, or Toxic Chemicals.

	Yes	No	Unk	N/A
1. If the facility has been subject to an inspection regarding Community Right-to-Know issues during the last two years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that the facility has copies of inspection reports or correspondence: _____ _____ _____		X		
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to Community Right-to-Know? If so, describe and confirm that the facility has copies of all documents: _____ _____ _____		X		
3. Does the facility manufacture, process, use, or store any Community Right-to-Know regulated chemicals, i.e., Hazardous Substances, Extremely Hazardous Substances, and Toxic Chemicals? If yes, complete Attachment B by providing the annual quantity of the chemical used by your facility and the typical storage amount.	X			

4. An Extremely Hazardous Substance (EHS) is a chemical identified by EPA as having the potential to cause significant injury or damage during an emergency. EPA published a list of EHSs in the April 22, 1987 Federal Register (codified as 40 CFR 355, Appendix A). For each EHS, EPA identified a Threshold Planning Quantity (TPQ). A TPQ is a quantity which EPA has designated as being sufficient to trigger emergency planning activities for that chemical at the local level. A list of EHSs and TPQs is presented in Attachment B.

5. The Local Emergency Planning Committee (LEPC) is comprised of representatives of local government, the media, industry, and emergency response agencies. The LEPC has the responsibility of developing a local emergency response plan to handle clinical emergencies that pose a danger to the community. The LEPC has very broad powers in developing and exercising procedures necessary for the local plan. These procedures are community-specific and the facility must stay aware of them.

6. Each facility subject to these requirements must identify an Emergency Coordinator and submit his/her name to the Local Emergency Planning Committee (40 CFR 355.30 (c)).

7. Facilities are required to promptly notify the Local Emergency Planning Committee of any "relevant" facility changes, i.e., changes that could affect the local emergency plan (40 CFR 355.30 (d)(1)).

8. Local Emergency Planning Committees have very broad authority to request information from a facility for the development of the Local Emergency Plan. Facilities must respond to these requests "promptly" (40 CFR 355.30 (d)(2)).

9. The Emergency Release Reporting requirements (40 CFR 355.40) apply to any facility that:

- produces, uses, or stores a Hazardous Chemical, and
- releases a CERCLA Hazardous Substance or an Extremely Hazardous Substance to the environment in a quantity that exceeds the EPA designated Reportable Quantity (RQ) during a 24-hour period, if the release is likely migrate beyond the facility boundary.

It is a good management practice to identify facility chemicals that could be subject to reporting before a release occurs. This includes Extremely Hazardous Substances listed in 40 CFR 355 Appendix A and CERCLA Hazardous Substances listed in 40 CFR 302, Table 302.4.

		Yes	No	Unk	N/A
B.	**Emergency Response Planning**				
	Complete this section if the facility has on site any Extremely Hazardous Substances (EHSs) in quantities at or above the Threshold Planning Quantity (TPQ).				
4.	In Question 3 you identified all Extremely Hazardous Substances (EHSs). Now, check the Threshold Planning Quantity (TPQ) for each (Attachment B). Does the facility have any EHSs in quantities that equal or exceed the TPQ? If so, circle the TPQ column for that chemical. This exercise will confirm that you are subject to Emergency Response Planning requirements.	X			
5.	Did the facility notify the State Commission that it was subject to the Emergency Response Planning requirements by May 17, 1987, or within sixty days of becoming subject to the requirements?	X			
6.	Has the facility designated an Emergency Coordinator and submitted his/her name to the Local Emergency Planning Committee (LEPC)?			X	
	Name: _____				
7.	Has the LEPC been notified promptly of any facility changes which could affect the local emergency plan?			X	
8.	Has the facility promptly provided the LEPC with requested information about the facility?				
C.	**Emergency Release Reporting**				
	Complete this section if the facility uses or stores any Hazardous Substances (HSs) or Extremely Hazardous Substances (EHSs).				
9.	In Question 4, you identified all Hazardous Substances and Extremely Hazardous Substances (Attachment B). Now check the Reportable Quantity amounts. Does the facility have a Hazardous Substance or an Extremely Hazardous Susbtance in a Reportable Quantity amount? If so, circle the RQ column for that chemical. This exercise will enable you to identify which materials may be subject to release reporting requirements.	X			

10. This is a good management practice.

11. & 12. Detected releases must be reported "immediately," even during evening hours. Both oral reports and written, follow-up notices are required (40 CFR 355.40(b)).

13. The OSHA Hazard Communication Standard requires facilities to have an MSDS for each Hazardous Chemical used or stored at the facility in quantities greater than those used in households. A Hazardous Chemical is one which poses a physical or health hazard (29 CFR 1910.1200(c)).

	Yes	No	Unk	N/A
10. Are there procedures in place to determine whether a reportable release has occurred?	___	X	___	
11. Has the facility established 24-hour notification procedures which include the additional requirements under Emergency Release Reporting?	X	___	___	
12. Has the facility had a release which was reportable under SARA Title III? If yes, complete Attachment C.	___	X	___	
a. If so, did the facility provide immediate oral notification to the State Emergency Response Commission, the Emergency Coordinator of the LEPC, and the NRC (NRC notification required for HSs only)? Confirm that the facility recorded this information for each release.	___	___	___	___
b. If so, was a written, updated follow-up notice provided to the State Emergency Response Commission and the Emergency Coordinator of the LEPC? Confirm that the facility has this information for each release.	___	___	___	___

D. Hazardous Chemical Inventory

Complete this section if the facility has a Hazardous Chemical on site in a quantity that exceeds the thresholds provided in the guidance to Question 15.

13. Does the facility have available a Material Safety Data Sheet (MSDS) for each Hazardous Chemical used or stored on site, i.e., each listed in Attachment A?	X	___	___	___

14. MSDSs or lists must be submitted by the following deadlines for each Hazardous Chemical on site in quantities at or exceeding the thresholds on that particular day (40 CFR 370.21(a) and (b)):

October 17, 1987 and October 17, 1988

- Hazardous Chemicals (except EHSs) — 10,000 pounds
- Extremely Hazardous Substances — 500 pounds or TPQ, whichever is lower.

October 17, 1989

- Hazardous Chemicals (except EHSs) — 0 pounds
- Extremely Hazardous Substances — 500 pounds or TPQ, whichever is lower.

Note: The deadline was September 24, 1988 for facilities newly subject to the Hazard Communication Standard.

If a list is submitted, chemicals must be categorized by OSHA Hazard Category. The OSHA categories are Immediate Health Hazard, Delayed Health Hazard, Fire Hazard, Sudden Release of Pressure Hazard, and Reactive Hazard.

16. Tier I and Tier II reports require detailed information about each facility Hazardous Chemical. A blank example copy is provided in the Appendix Section. The requested information includes annual usage and storage amounts, storage methods, and storage locations. Tier II reports request greater detail. A facility may submit only the Tier I report unless it is specifically requested to provide the additional information by EPA or the LEPC. The reports are due by March 1 of each year for activities in the previous calendar year for Hazardous Chemicals on site at any time above the threshold quantity. The first report was due on March 1, 1988 (40 CFR 370.25). The thresholds are as follows:

Activities in 1987 and 1988

- Hazardous Chemicals (except EHSs) — 10,000 pounds
- Extremely Hazardous Substances — 500 pounds or TPQ, whichever is lower.

Activities in1989 and thereafter

- Hazardous Chemicals (except EHSs) — 0 pounds
- Extremely Hazardous Substances — 500 pounds or TPQ, whichever is lower.

17. See Attachment B for a listing of Toxic Chemicals. The information needed to complete this questions will be available from Toxic Chemical Release Reports. If the facility has not submitted a report, this exercise will help confirm if reporting was necessary.

	Yes	No	Unk	N/A
14. Did the facility submit MSDSs, or a list of Hazardous Chemicals, by October 17, 1987 for Hazardous Chemicals which were present in amounts equal to or above the threshold quantity to the fire department, the LEPC, and the State Commission? If a list was submitted, confirm that the facility has a copy. If MSDSs were submitted, confirm that the facility has a copy of the cover letter.	X	___	___	
15. If significant new information about a chemical has been discovered, or if a new Hazardous Chemical has been brought on site in quantities at or above the threshold amount, has an MSDS or revised list been submitted to the fire department, LEPC, and State Commission within three months? Confirm that the facility has a copy.	X	___	___	___
16. Did the facility submit a Tier I or Tier II report by March 1st for Hazardous Chemicals present on site during the previous calendar year, in amounts equal to or above the threshold amount, to the fire department, the LEPC, and the State Commission? Confirm that the facility has a copy.	X (both)	___	___	

Note: State or local reporting requirements may be more stringent than federal requirements. You are responsible for keeping your plant in compliance.

E. Toxic Chemical Release Reporting

Complete this section if the facility falls within SIC Codes 20 through 39, employs ten or more full-time employees and manufactures, processes, imports, or uses any Toxic Chemical in an amount that exceeds the threshold provided in the guidance to Question 18.

17. In Question 3, you identified all facility Toxic Chemicals (Attachment B). Now, check which Toxic Chemicals are manufactured, processed, or otherwise used in quantities that exceed the established thresholds. Does the facility manufacture, process, or otherwise use Toxic Chemicals in regulated quantities? If so, circle the Toxic Chemical column in Attachment B. This exercise will enable the facility to identify Toxic Chemical Release Reporting requirements.	X	___	___	

18. Toxic Chemical Release Reporting is an **annual** reporting requirement and applies to facilities which:

- have ten or more full-time employees;
- are in SIC codes 20 through 39; and
- manufacture, process, or otherwise use a listed Toxic Chemical in excess of the threshold quantity during a calendar year (40 CFR 372.10).

For facilities which manufacture or process a Toxic Chemical, the thresholds are (40 CFR 372.12):

- 75,000 pounds per year in 1987;
- 50,000 pounds per year in 1988; and
- 25,000 pounds per year in 1989 and thereafter.

For facilities which otherwise use a Toxic Chemical, the threshold is 10,000 pounds per year in 1987 and thereafter.

SARA provides the following definitions (40 CFR 372.3):

- "Manufacture" means to produce, prepare, import, or compound a Toxic Chemical including coincidental production of a Toxic Chemical.

- "Process" means the preparation of a Toxic Chemical after its manufacture for distribution in commerce (a) in the same form or physical state as, or in a different physical form or state from that in which it is received; or (b) as part of an article containing the Toxic Chemical. Process includes:
  - making mixtures,
  - repackaging,
  - incorporating a chemical into an article, or
  - use of a chemical as a feedstock or raw material for making another chemical.

  The term process also applies to the processing of a Toxic Chemical that is a component of a mixture or other trade name product (including processing of a Toxic Chemical that is an impurity in a product).

- "Otherwise use" refers to any use of a Toxic Chemical at a regulated facility that is not an activity covered by the terms manufacture or process and includes use of a Toxic Chemical contained in a mixture or trade name product.

Remember that this report must be submitted annually and must accurately describe activities during the preceding year. Information for the report must therefore be collected each year and the information must be updated before submission. A copy of this report is provided in the Appendix.

	Yes	No	Unk	N/A
18. Did the facility submit a Toxic Chemical Release Inventory Form by July 1st for each Toxic Chemical above the threshold to the EPA and the state governor's designee? Confirm that the facility has a copy.	X			
19. Are accurate data being collected to estimate Toxic Chemical releases for future reports?	X			
F. Miscellaneous				
20. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.		X		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
83-32-9	Acenaphthene			X	100			
208-96-8	Acenaphthylene			X	5000			
75-07-0	Acetaldehyde		O	X	1000			
107-20-0	Acetaldehyde, chloro- (see Chloroacetaldehyde)			X	1000			
75-87-6	Acetaldehyde, trichloro-			X	1			
60-35-5	Acetamide		O					
640-19-7	Acetamide, 2-fluoro- (see Fluoroacetamide)	X		X	100	100/10000		
62-44-2	Acetamide, N-(4-ethoxyphenyl)-			X	1			
591-08-2	Acetamide, N-(aminothioxomethyl)-			X	1000			
53-96-3	Acetamide, N-9H-fluoren-2-yl-		X	X	1			
64-19-7	Acetic acid			X	5000			
141-78-6	Acetic acid, ethyl ester			X	5000			
62-74-8	Acetic acid, fluoro-, sodium salt	X		X	10	10/10000		
301-04-2	Acetic acid, lead salt			X	5000			
563-68-8	Acetic acid, thallium (I) salt (see Thallium (I) acetate)			X	100			
108-24-7	Acetic anhydride			X	5000			
16752-77-5	Acetimidic acid, N-(methylcarbamoyl) oxy]thio-, methyl ester	X		X	100	500/10000		
67-64-1	Acetone		O	X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-86-5		Acetone cyanohydrin	X		X	10	1000		
1752-30-3		Acetone thiosemicarbazide	X			1	1000/10000		
75-05-8		Acetonitrile		O	X	5000			
81-81-2	3-(alpha-	Acetonylbenzyl)-4-hydroxycoumarin and salts	X		X	100	500/10000		
98-86-2		Acetophenone			X	5000			
506-96-7		Acetyl bromide			X	5000			
75-36-5		Acetyl chloride			X	5000			
591-08-2	1-	Acetyl-2-thiourea			X	1000			
53-96-3	2-	Acetylaminofluorene		O	X	1			
107-02-8		Acrolein	X	O	X	1	500		
79-06-1		Acrylamide	X	O	X	5000	1000/10000		
79-10-7		Acrylic acid		O	X	5000			
107-13-1		Acrylonitrile	X	O	X	100	10000		
814-68-6		Acrylyl chloride	X			1	100		
124-04-9		Adipic acid			X	5000			
111-69-3		Adiponitrile	X			1	1000		
148-82-3		Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-,L			X	1			
116-06-3		Aldicarb	X		X	1	100/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
309-00-2		Aldrin [1,4:5.8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1 alpha,4 alpha,4a beta,5 alpha,8 alpha,8a beta)-]	X	O	X	1	500/10000		
107-18-6		Allyl alcohol	X		X	100	1000		
107-05-1		Allyl chloride		O	X	1000			
107-11-9		Allylamine	X			1	500		
7429-90-5		Aluminum (fume or dust)		0					
1344-28-1		Aluminum oxide		O					
20859-73-8		Aluminum phosphide	X		X	100	500		
10043-01-3		Aluminum sulfate			X	5000			
95-53-4	2-	Amino-1-methyl benzene		X	X	1			
106-49-0	4-	Amino-1-methyl benzene			X	1			
82-28-0	1-	Amino-2-Methylanthraquinone		O					
117-79-3	2-	Aminoanthraquinone		O					
60-09-3	4-	Aminoazobenzene		O					
97-56-3	o-	Aminoazotoluene		X					
92-67-1	4-	Aminobiphenyl		O					
2763-96-4	5-(	Aminomethyl)-3-isoxazolol	X		X	1000	10000		
54-62-6		Aminopterin	X			1	500/10000		
504-24-5	4-	Aminopyridine	X		X	1000	500/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
78-53-5		Amiton	X			1	500		
3734-97-2		Amiton oxalate	X			1	100/10000		
61-82-5		Amitrole			X	1			
7664-41-7		Ammonia	X	O	X	100	500		
631-61-8		Ammonium acetate			X	5000			
1863-63-4		Ammonium benzoate			X	5000			
1066-33-7		Ammonium bicarbonate			X	5000			
7789-09-5		Ammonium bichromate			X	1000			
1341-49-7		Ammonium bifluoride			X	100			
10192-30-0		Ammonium bisulfite			X	5000			
1111-78-0		Ammonium carbamate			X	5000			
506-87-6		Ammonium carbonate			X	5000			
12125-02-9		Ammonium chloride			X	5000			
7788-98-9		Ammonium chromate			X	1000			
3012-65-5		Ammonium citrate, dibasic			X	5000			
13826-83-0		Ammonium fluoborate			X	5000			
12125-01-8		Ammonium fluoride			X	100			
1336-21-6		Ammonium hydroxide			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
6484-52-2		Ammonium nitrate (solution)		O					
5972-73-6		Ammonium oxalate			X	5000			
6009-70-7		Ammonium oxalate			X	5000			
14258-49-2		Ammonium oxalate			X	5000			
131-74-8		Ammonium picrate			X	10			
16919-19-0		Ammonium silicofluoride			X	1000			
7773-06-0		Ammonium sulfamate			X	5000			
7783-20-2		Ammonium sulfate (solution)		O					
12135-76-1		Ammonium sulfide			X	100			
10196-04-0		Ammonium sulfite			X	5000			
3164-29-2		Ammonium tartrate			X	5000			
14307-43-8		Ammonium tartrate			X	5000			
1762-95-4		Ammonium thiocyanate			X	5000			
7783-18-8		Ammonium thiosulfate			X	5000			
7803-55-6		Ammonium vanadate			X	1000			
300-62-9		Amphetamine	X			1	1000		
123-92-2	iso-	Amyl acetate			X	5000			
625-16-1	tert-	Amyl acetate			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
626-38-0	sec-	Amyl acetate			X	5000			
628-63-7		Amyl acetate			X	5000			
62-53-3		Aniline	X	O	X	5000	1000		
88-05-1		Aniline, 2,4,6-trimethyl-	X			1	500		
90-04-0	o-	Anisidine		O					
104-94-9	p-	Anisidine		O					
134-29-2	o-	Anisidine Hydrochloride		O					
120-12-7		Anthracene		O	X	5000			
7440-36-0		Antimony		O	X	5000			
7647-18-9		Antimony pentachloride			X	1000			
7783-70-2		Antimony pentafluoride	X			1	500		
28300-74-5		Antimony potassium tartrate			X	100			
7789-61-9		Antimony tribromide			X	1000			
10025-91-9		Antimony trichloride			X	1000			
7783-56-4		Antimony trifluoride			X	1000			
1309-64-4		Antimony trioxide			X	1000			
1309-64-4		Antimony trioxide, handling and use as Sb			X	1000			
1309-64-4		Antimony trioxide, production			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1397-94-0		Antimycin A	X			1	1000/10000		
86-88-4		ANTU	X		X	100	500/10000		
12674-11-2		Aroclor 1016			X	10			
11104-28-2		Aroclor 1221			X	10			
11141-16-5		Aroclor 1232			X	10			
53469-21-9		Aroclor 1242			X	10			
12672-29-6		Aroclor 1248			X	10			
11097-69-1		Aroclor 1254			X	10			
11096-82-5		Aroclor 1260			X	10			
7440-38-2		Arsenic		O	X	1			
1327-53-3		Arsenic (III) oxide	X		X	5000	100/10000		
1303-28-2		Arsenic (V) oxide	X		X	5000	100/10000		
1327-52-2		Arsenic acid			X	1			
7778-39-4		Arsenic acid			X	1			
1303-32-8		Arsenic disulfide			X	5000			
1303-28-2		Arsenic pentoxide	X		X	5000	100/10000		
7784-34-1		Arsenic trichloride	X		X	5000	500		
1327-53-3		Arsenic trioxide	X		X	5000	100/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1327-53-3		Arsenic trioxide production	X		X	5000	100/10000		
1303-33-9		Arsenic trisulfide			X	5000			
1327-53-3		Arsenous oxide	X		X	5000	100/10000		
7784-42-1		Arsine	X			1	100		
692-42-2		Arsine, diethyl			X	1			
1332-21-4		Asbestos		X	X	1			
1332-21-4		Asbestos (friable)		O	X	1			
492-80-8		Auramine, manufacture of		X	X	1			
492-80-8		Auramine, technical grade		X	X	1			
115-02-6		Azaserine			X	1			
2642-71-9		Azinphos-ethyl	X			1	100/10000		
86-50-0		Azinphosmethyl	X		X	1	10/10000		
151-56-4		Aziridine	X	X	X	1	500		
50-07-7		Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione,6-amino-8-[((amino-carbonyl) oxy) methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-	X		X	1	500		
7440-39-3		Barium		O					
542-62-1		Barium cyanide			X	10			
225-51-4	3,4-	Benzacridine			X	1			
98-87-3		Benzal chloride	X	O	X	5000	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
55-21-0		Benzamide		O					
56-55-3	1,2-	Benzanthracene			X	1			
57-97-6	1,2-	Benzanthracene, 7,12-dimethyl-			X	1			
62-53-3		Benzenamine	X	X	X	5000	1000		
636-21-5		Benzenamine, 2-methyl-, hydrochloride		X	X	1			
99-55-8		Benzenamine, 2-methyl-5-nitro			X	1			
98-16-8		Benzenamine, 3-(trifluoromethyl)-	X			1	500		
492-80-8		Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-		X	X	1			
101-14-4		Benzenamine, 4,4'-methylenebis(2-chloro-		X	X	1			
106-47-8		Benzenamine, 4-chloro			X	1000			
3165-93-3		Benzenamine, 4-chloro-2-methyl-, hydrochloride			X	1			
100-01-6		Benzenamine, 4-nitro			X	5000			
60-11-7		Benzenamine, N,N-dimethyl-4-phenylazo-		X	X	1			
71-43-2		Benzene		O	X	1000			
95-94-3		Benzene, 1,2,4,5-tetrachloro-			X	5000			
95-50-1		Benzene, 1,2-dichloro-		X	X	100			
94-59-7		Benzene, 1,2-methylenedioxy-4-allyl-		X	X	1			
120-58-1		Benzene, 1,2-methylenedioxy-4-propenyl-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
94-58-6		Benzene, 1,2-methylenedioxy-4-propyl-			X	1			
99-35-4		Benzene, 1,3,5-trinitro			X	10			
541-73-1		Benzene, 1,3-dichloro		X	X	100			
100-14-1		Benzene, 1-(chloromethyl)-4-nitro-	X			1	500/10000		
101-55-3		Benzene, 1-bromo-4-phenoxy-			X	100			
121-14-2		Benzene, 1-methyl-2,4-dinitro-		X	X	1000			
606-20-2		Benzene, 1-methyl-2,6-dinitro-		X	X	1000			
98-82-8		Benzene, 1-methylethyl-		X	X	5000			
91-08-7		Benzene, 2,4-diisocyanatomethyl-	X	X	X	100	100		
584-84-9		Benzene, 2,4-diisocyanatomethyl-	X	X	X	100	500		
26471-62-5		Benzene, 2,4-diisocyanatomethyl-			X	100			
108-90-7		Benzene, chloro-		X	X	100			
100-44-7		Benzene, chloromethyl- (Benzyl chloride)	X	X	X	100	500		
98-87-3		Benzene, dichloromethyl-	X	X	X	5000	500		
95-47-6	o-	Benzene, dimethyl		X	X	1000			
106-42-3	p-	Benzene, dimethyl-		X	X	1000			
108-38-3	m-	Benzene, dimethyl-		X	X	1000			
1330-20-7		Benzene, dimethyl-		X	X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
118-74-1		Benzene, hexachloro-		X	X	1			
110-82-7		Benzene, hexahydro-		X	X	1000			
108-95-2		Benzene, hydroxy-	X	X	X	1000	500/10000		
108-88-3		Benzene, methyl-		X	X	1000			
98-95-3		Benzene, nitro	X	X	X	1000	10000		
608-93-5		Benzene, pentachloro-			X	10			
82-68-8		Benzene, pentachloronitro-		X	X	1			
98-07-7		Benzene, trichloromethyl-	X	X	X	1	100		
106-46-7		Benzene,1,4-dichloro		X	X	100			
510-15-6		Benzeneacetic acid,4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy,ethyl ester		X	X	1			
98-05-5		Benzenearsonic acid	X			1	10/10000		
85-44-9	1,2-	Benzenedicarboxylic acid anhydride		X	X	5000			
117-84-0	1,2-	Benzenedicarboxylic acid, di-n-octyl ester		X	X	5000			
84-74-2	1,2-	Benzenedicarboxylic acid, dibutyl ester		X	X	10			
84-66-2	1,2-	Benzenedicarboxylic acid, diethyl ester		X	X	1000			
131-11-3	1,2-	Benzenedicarboxylic acid, dimethyl ester		X	X	5000			
117-81-7	1,2-	Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester		X	X	1			
108-46-3	1,3-	Benzenediol			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
51-43-4	1,2-	Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-			X	1000			
98-09-9		Benzenesulfonic acid chloride			X	100			
98-09-9		Benzenesulfonyl chloride			X	100			
108-98-5		Benzenethiol	X		X	100	500		
92-87-5		Benzidine		O	X	1			
3615-21-2		Benzimidazole, 4,5-dichloro-2-(trifluoromethyl)-	X			1	500/10000		
81-07-2	1,2-	Benzisothiazolin-3-one,1,1-dioxide, and salts		X	X	1			
191-24-2		Benzo [ghi] perylene			X	5000			
56-55-3		Benzo(a)anthracene			X	1			
205-99-2		Benzo(b)fluoranthene			X	1			
207-08-9		Benzo(k)fluoranthene			X	1			
65-85-0		Benzoic acid			X	5000			
98-07-7		Benzoic trichloride (Benzotrichloride)	X	O	X	1	100		
100-47-0		Benzonitrile			X	5000			
50-32-8	3,4-	Benzopyrene			X	1			
106-51-4	p-	Benzoquinone		X	X	10			
98-07-7		Benzotrichloride	X	X	X	1	100		
98-88-4		Benzoyl chloride		O	X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
94-36-0		Benzoyl peroxide		O					
50-32-8		Benzo[a]pyrene			X	1			
206-44-0		Benzo[j,k]fluorene			X	100			
218-01-9	1,2-	Benzphenanthrene			X	1			
100-44-7		Benzyl chloride	X	O	X	100	500		
140-29-4		Benzyl cyanide	X			1	500		
56-55-3		Benz[a]anthracene			X	1			
225-51-4		Benz[c]acridine			X	1			
56-49-5		Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-			X	1			
7440-41-7		Beryllium		O	X	1			
7787-47-5		Beryllium chloride			X	5000			
7440-41-7		Beryllium dust		X	X	1			
7787-49-7		Beryllium fluoride			X	5000			
7787-55-5		Beryllium nitrate			X	5000			
13597-99-4		Beryllium nitrate			X	5000			
58-89-9	gamma-	BHC	X	X	X	1	1000/10000		
319-84-6	alpha-	BHC			X	1			
319-85-7	beta-	BHC			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
319-86-8	delta-	BHC			X	1			
15271-41-7		Bicyclo [2.2.1] Heptane- 2-Carbonitrile, 5-Chloro- 6- (((Methylamino)Carbonyl) Oxy) Imino) -1S-(1-alpha, 2-beta, 4-alpha, 5-alpha, 6E))-.	X			1	500/10000		
1464-53-5	2,2'-	Bioxirane	X	X	X	1	500		
92-52-4		Biphenyl		O					
92-87-5	(1,1'-	Biphenyl)-4,4'diamine		X	X	1			
91-94-1	(1,1'-	Biphenyl)-4,4'diamine,3,3'dichloro-		X	X	1			
119-90-4	(1,1'-	Biphenyl)-4,4'diamine,3,3'dimethoxy-		X	X	1			
119-93-7	(1,1'-	Biphenyl)-4,4'diamine,3,3'dimethyl-		X	X	1			
111-44-4		Bis (2-chloroethyl) ether	X	O	X	1	10000		
108-60-1		Bis(2-Chloro-1-Methylethyl) ether		O	X	1000			
111-91-1		Bis(2-chloroethoxy) methane			X	1000			
108-60-1		Bis(2-chloroisopropyl) ether		X	X	1000			
103-23-1		Bis(2-ethylhexyl) adipate		O					
117-81-7		Bis(2-ethylhexyl)phthalate		X	X	1			
542-88-1		Bis(chloromethyl) ether	X	O	X	1	100		
534-07-6		Bis(chloromethyl) ketone	X			1	10/10000		
137-26-8		Bis(dimethylthiocarbamoyl) disulfide			X	10			
542-88-1		Bis-chloromethyl ether (BCME)	X	X	X	1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
4044-65-9		Bitoscanate	X			1	500/10000		
10294-34-5		Boron Trichloride	X			1	500		
7637-07-2		Boron trifluoride	X			1	500		
353-42-4		Boron trifluoride compound with methyl ether (1:1)	X			1	1000		
28772-56-7		Bromadiolone	X			1	100/10000		
7726-95-6		Bromine	X			1	500		
506-68-3		Bromine cyanide	X		X	1000	500/10000		
598-31-2		Bromoacetone			X	1000			
75-25-2		Bromoform		X	X	100			
75-25-2		Bromoform (Tribromomethane)		O	X	100			
74-83-9		Bromomethane (Methyl Bromide)	X	O	X	1000	1000		
101-55-3	4-	Bromophenyl phenyl ether			X	100			
357-57-3	4-	Brucine			X	100			
106-99-0	1,3-	Butadiene		O					
106-99-0		Butadiene		X					
87-68-3	1,3-	Butadiene, 1,1,2,3,4,4-hexachloro-		X	X	1			
924-16-3	1-	Butanamine, N-butyl-N-nitroso-		X	X	1			
305-03-3		Butanoic acid 4-[bis(2-chloroethyl)amino]benzene-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
71-36-3	1-	Butanol		X	X	5000			
78-93-3	2-	Butanone		X	X	5000			
1338-23-4	2 -	Butanone peroxide			X	10			
123-73-9	2 -	Butenal	X		X	100	1000		
4170-30-3	2 -	Butenal	X		X	100	1000		
764-41-0	2 -	Butene, 1,4-dichloro-			X	1			
105-46-4	sec-	Butyl acetate			X	5000			
110-19-0	iso-	Butyl acetate			X	5000			
123-86-4		Butyl acetate			X	5000			
123-86-4	n-	Butyl acetate			X	5000			
540-88-5	tert-	Butyl acetate			X	5000			
141-32-2		Butyl acrylate		O					
71-36-3	n-	Butyl alcohol		O	X	5000			
75-65-0	tert-	Butyl alcohol		O					
78-92-2	sec-	Butyl alcohol		O					
85-68-7		Butyl benzyl phthalate		O	X	100			
84-74-2	n-	Butyl phthalate		X	X	10			
84-74-2	Di-n-	Butyl phthalate		X	X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-64-9	tert-	Butylamine			X	1000			
78-81-9	iso-	Butylamine			X	1000			
109-73-9		Butylamine			X	1000			
513-49-5	sec-	Butylamine			X	1000			
13952-84-6	sec-	Butylamine			X	1000			
106-88-7	1,2-	Butylene oxide		O					
123-72-8		Butyraldehyde		O					
79-31-2	iso-	Butyric acid			X	5000			
107-92-6		Butyric acid			X	5000			
4680-78-8		C.I. Acid Green 3		O					
569-64-2		C.I. Basic Acid Green 4		O					
989-38-8		C.I. Basic Red 1		O					
1937-37-7		C.I. Direct Black 38		O					
72-57-1		C.I. Direct Blue 14			X	1			
2602-46-2		C.I. Direct Blue 6		O					
16071-86-6		C.I. Direct Brown 95		O					
82-28-0		C.I. Disperse Orange 11		X					
2832-40-8		C.I. Disperse Yellow 3		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
81-88-9		C.I. Food Red 15		O					
3761-53-3		C.I. Food Red 5		O					
3118-97-6		C.I. Solvent Orange 7		O					
492-80-8		C.I. Solvent Yellow 34 (Auramine)		O	X	1			
842-07-9		C.I. Solvent Yellow 14		O					
97-56-3		C.I. Solvent Yellow 3		O					
128-66-5		C.I. Vat Yellow 4		O					
75-60-5		Cacodylic acid			X	1			
7440-43-9		Cadmium		O	X	1			
543-90-8		Cadmium acetate			X	100			
7789-42-6		Cadmium bromide			X	100			
10108-64-2		Cadmium chloride			X	100			
1306-19-0		Cadmium oxide	X			1	100/10000		
1306-19-0		Cadmium oxide, fume, as Cd	X			1	100/10000		
1306-19-0		Cadmium oxide, production	X			1	100/10000		
2223-93-0		Cadmium stearate	X			1	1000/10000		
7778-44-1		Calcium arsenate	X		X	1000	500/10000		
52740-16-6		Calcium arsenite			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-20-7		Calcium carbide			X	10			
13765-19-0		Calcium chromate			X	1000			
156-62-7		Calcium cyanamide		O					
592-01-8		Calcium cyanide			X	10			
26264-06-2		Calcium dodecylbenzene sulfonate			X	1000			
7778-54-3		Calcium hypochlorite			X	10			
8001-35-2		Camphechlor	X	X	X	1	500/10000		
8001-35-2		Camphene, octachloro-	X	X	X	1	500/10000		
56-25-7		Cantharidin	X			1	100/10000		
133-06-2		Captan [1H-Isoindole-1,3(2H)-dione,3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-]		O	X	10			
51-83-2		Carbachol chloride	X			1	500/10000		
51-79-6		Carbamic acid, ethyl ester		X	X	1			
26419-73-8		Carbamic acid, methyl-0-(((2,4-dimethyl-1,3-dithiolan-2-yl)methylene)amino)-	X			1	100/10000		
615-53-2		Carbamic acid, methylnitroso-, ethyl ester			X	1			
759-73-9		Carbamide, N-ethyl-N-nitroso-		X	X	1			
684-93-5		Carbamide, N-methyl-N-nitroso-		X	X	1			
62-56-6		Carbamide, thio-		X	X	1			
630-10-4		Carbamimidoselenoic acid			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-44-7		Carbamoyl chloride, dimethyl-		X	X	1			
63-25-2		Carbaryl [1-Naphthalenol,methylcarbamate]		O	X	100			
1563-66-2		Carbofuran	X		X	10	10/10000		
75-15-0		Carbon disulfide	X	O	X	100	10000		
353-50-4		Carbon oxyfluoride			X	1000			
56-23-5		Carbon tetrachloride		O	X	5000			
6533-73-9		Carbonic acid, dithallium (I) salt	X		X	100	100/10000		
79-22-1		Carbonochloridic acid, methyl ester	X		X	1000	500		
75-44-5		Carbonyl chloride	X	X	X	10	10		
353-50-4		Carbonyl fluoride			X	1000			
463-58-1		Carbonyl sulfide		O					
786-19-6		Carbophenothion	X			1	500		
120-80-9		Catechol		O					
120-80-9		Catechol (Pyrocatechol)		X					
75-87-6		Chloral			X	1			
133-90-4		Chloramben [Benzoic acid,3-amino-2,5-dichloro-]		O					
305-03-3		Chlorambucil			X	1			
57-74-9		Chlordane [4,7-Methanoindan,1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-]	X	O	X	1	1000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
57-74-9		Chlordane, technical	X	X	X	1	1000		
470-90-6		Chlorfenvinfos	X			1	500		
76-13-1		Chlorinated fluorocarbon (Freon 113)		O					
7782-50-5		Chlorine	X	O	X	10	100		
506-77-4		Chlorine cyanide			X	10			
10049-04-4		Chlorine dioxide		O					
24934-91-6		Chlormephos	X			1	500		
999-81-5		Chlormequat chloride	X			1	100/10000		
494-03-1		Chlornaphazine			X	1			
106-89-8	1-	Chloro-2,3-epoxypropane	X	X	X	1000	1000		
59-50-7	4-	Chloro-m-cresol			X	5000			
59-50-7	p-	Chloro-m-cresol			X	5000			
3165-93-3	4-	Chloro-o-toluidine, hydrochloride			X	1			
107-20-0		Chloroacetaldehyde			X	1000			
79-11-8		Chloroacetic acid	X	O		1	100/10000		
532-27-4	2-	Chloroacetophenone		O					
532-27-4	alpha-	Chloroacetophenone		X					
106-47-8	p-	Chloroaniline			X	1000			

O = TOXIC CHEMICAL FOR SECTION 313 REPORTING (PAGE 1)

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
108-90-7		Chlorobenzene		O	X	100			
510-15-6		Chlorobenzilate [Benzeneacetic acid,4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-,ethyl ester]		O	X	1			
124-48-1		Chlorodibromomethane			X	100			
75-00-3		Chloroethane		X	X	100			
75-00-3		Chloroethane (Ethyl Chloride)		O	X	100			
107-07-3		Chloroethanol	X			1	500		
627-11-2		Chloroethyl chloroformate	X			1	1000		
110-75-8	2-	Chloroethyl vinyl ether			X	1000			
67-66-3		Chloroform	X	O	X	5000	10000		
74-87-3		Chloromethane (Methyl Chloride)		O	X	1			
542-88-1		Chloromethyl ether	X	X	X	1	100		
107-30-2		Chloromethyl methyl ether	X	O	X	1	100		
91-58-7	2-	Chloronaphthalene			X	5000			
91-58-7	beta-	Chloronaphthalene			X	5000			
3691-35-8		Chlorophacinone	X			1	100/10000		
95-57-8	o-	Chlorophenol			X	100			
95-57-8	2-	Chlorophenol			X	100			
7005-72-3	4-	Chlorophenyl phenyl ether			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
5344-82-1	1-(o-	Chlorophenyl)thiourea	X		X	100	100/10000		
126-99-8		Chloroprene		O					
542-76-7	3-	Chloropropionitrile	X		X	1000	1000		
7790-94-5		Chlorosulfonic acid			X	1000			
1897-45-6		Chlorothalonil [1,3-Benzenedicarbonitrile,2,4,5,6-tetrachloro-]		O					
21923-23-9		Chlorothiophos	X			1	500		
1982-47-4		Chloroxuron	X			1	500/10000		
2921-88-2		Chlorpyrifos			X	1			
10101-53-8		Chomic sulfate			X	1000			
1066-30-4		Chromic acetate			X	1000			
7738-94-5		Chromic acid			X	1000			
11115-74-5		Chromic acid			X	1000			
13765-19-0		Chromic acid, calcium salt			X	1000			
10025-73-7		Chromic chloride	X			1	1/10000		
7440-47-3		Chromium		O	X	1			
10049-05-5		Chromous chloride			X	1000			
218-01-9		Chrysene			X	1			
7440-48-4		Cobalt		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
10210-68-1		Cobalt carbonyl	X			1	10/10000		
62207-76-5		Cobalt, ((2,2'- (1,2-ethanediylbis (nitrilomethylidyne)) bis-(6-fluoro phenolato))(2-) -N, N, '0, 0')-.	X			1	100/10000		
7789-43-7		Cobaltous bromide			X	1000			
544-18-3		Cobaltous formate			X	1000			
14017-41-5		Cobaltous sulfamate			X	1000			
64-86-8		Colchicine	X			1	10/10000		
7440-50-8		Copper		O	X	5000			
12002-03-8		Copper acetoarsenite	X		X	100	500/10000		
544-92-3		Copper cyanide			X	10			
56-72-4		Coumaphos	X		X	10	100/10000		
5836-29-3		Coumatetralyl	X			1	500/10000		
8001-58-9		Creosote			X	1			
120-71-8	p-	Cresidine		O					
95-48-7	o-	Cresol	X	O	X	1000	1000/10000		
106-44-5	p-	Cresol		O	X	1000			
108-39-4	m-	Cresol		O	X	1000			
1319-77-3		Cresol (mixed isomers)		O	X	1000			
1319-77-3		Cresol(s)		X	X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
95-48-7		Cresylic acid	X	X	X	1000	1000/10000		
95-48-7	o-	Cresylic acid	X	X	X	1000	1000/10000		
106-44-5	p-	Cresylic acid		X	X	1000			
108-39-4	m-	Cresylic acid		X	X	1000			
1319-77-3		Cresylic acid		X	X	1000			
535-89-7		Crimidine	X			1	100/10000		
4170-30-3		Crotonaldehyde	X		X	100	1000		
123-73-9		Crotonaldehyde,(E)-	X		X	100	1000		
98-82-8		Cumene		O	X	5000			
80-15-9		Cumene hydroperoxide		O	X	10			
135-20-6		Cupferron [Benzeneamine,N-hydroxy-N-nitroso,ammonium salt]		O					
142-71-2		Cupric acetate			X	100			
12002-03-8		Cupric acetoarsenite	X		X	100	500/10000		
7447-39-4		Cupric chloride			X	10			
3251-23-8		Cupric nitrate			X	100			
5893-66-3		Cupric oxalate			X	100			
7758-98-7		Cupric sulfate			X	10			
10380-29-7		Cupric sulfate ammoniated			X	100			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
815-82-7		Cupric tartrate			X	100			
57-12-5		Cyanides (as Cn)			X	10			
57-12-5		Cyanides (soluble cyanide salts), not elsewhere specified			X	10			
460-19-5		Cyanogen			X	100			
506-68-3		Cyanogen bromide	X		X	1000	500/10000		
506-77-4		Cyanogen chloride			X	10			
506-78-5		Cyanogen iodide	X			1	1000/10000		
2636-26-2		Cyanophos	X			1	1000		
675-14-9		Cyanuric fluoride	X			1	100		
106-51-4	1,4-	Cyclohexadienedione		X	X	10			
110-82-7		Cyclohexane		O	X	1000			
108-94-1		Cyclohexanone			X	5000			
66-81-9		Cycloheximide	X			1	100/10000		
108-91-8		Cyclohexylamine	X			1	10000		
77-47-4	1,3-	Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	X	X	X	1	100		
50-18-0		Cyclophosphamide			X	1			
94-75-7	2,4-	D Acid		X	X	100			
94-11-1	2,4-	D esters			X	100			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
94-79-1	2,4-	D esters			X	100			
94-80-4	2,4-	D esters			X	100			
1320-18-9	2,4-	D esters			X	100			
1928-38-7	2,4-	D esters			X	100			
1928-61-6	2,4-	D esters			X	100			
1929-73-3	2,4-	D esters			X	100			
2971-38-2	2,4-	D esters			X	100			
25168-26-7	2,4-	D esters			X	100			
53467-11-1	2,4-	D esters			X	100			
94-75-7	2,4-	D [Acetic acid,(2,4-dichlorophenoxy)-]		0	X	100			
94-75-7	2,4-	D, salts and esters		X	X	100			
20830-81-3		Daunomycin			X	1			
72-54-8		DDD			X	1			
72-54-8	4,4'	DDD			X	1			
72-55-9		DDE			X	1			
72-55-9	4,4'	DDE			X	1			
50-29-3	4,4'-	DDT			X	1			
50-29-3		DDT			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
17702-41-9		Decaborane (14)	X			1	500/10000		
1163-19-5		Decabromodiphenyl oxide		O					
143-50-0		Decachloroctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one			X	1			
8065-48-3		Demeton	X			1	500		
919-86-8		Demeton-s-methyl	X			1	500		
117-81-7		Di(2-Ethylhexyl)phthalate (DEHP)		O	X	1			
117-84-0		Di-n-Octyl phthalate		X	X	5000			
10311-84-9		Dialifor	X			1	100/10000		
2303-16-4		Diallate [Carbamothioic acid,bis(1-methylethyl)-,S-(2,3-dichloro-2-propenyl) ester]		O	X	1			
302-01-2		Diamine	X	X	X	1	1000		
615-05-4	2,4-	Diaminoanisole		O					
39156-41-7	2,4-	Diaminoanisole sulfate		O					
101-80-4	4,4'-	Diaminodiphenyl Ether		X					
95-80-7	2,4-	Diaminotoluene		O	X	1			
95-80-7		Diaminotoluene		X	X	1			
496-72-0		Diaminotoluene			X	1			
823-40-5		Diaminotoluene			X	1			
25376-45-8		Diaminotoluene		X	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
25376-45-8		Diaminotoluene (mixed isomers)		O	X	1			
5333-41-5		Diazinon			X	1			
334-88-3		Diazomethane		O					
189-55-9		Dibenz(a,i)pyrene			X	1			
53-70-3	1,2:5,6-	Dibenzanthracene			X	1			
132-64-9		Dibenzofuran		O					
189-55-9	1,2:7,8-	Dibenzopyrene			X	1			
53-70-3		Dibenzo[a,h]anthracene			X	1			
189-55-9		Dibenzo[a,i] pyrene			X	1			
53-70-3		Dibenz[a,h]anthracene			X	1			
19287-45-7		Diborane	X			1	100		
96-12-8	1,2-	Dibromo-3-chloropropane		X	X	1			
96-12-8	1,2-	Dibromo-3-Chloropropane (DBCP)		O	X	1			
106-93-4	1,2-	Dibromoethane (Ethylene Dibromide)		O	X	1000			
84-74-2		Dibutyl phthalate		O	X	10			
1918-00-9		Dicamba			X	1000			
1194-65-6		Dichlobenil			X	100			
117-80-6		Dichlone			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
764-41-0	1,4-	Dichloro-2-butene			X	1			
23950-58-5	3,5-	Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide			X	5000			
2303-16-4	S-(2,3-	Dichloroallyl) diisopropylthiocarbamate		X	X	1			
95-50-1	1,2-	Dichlorobenzene		O	X	100			
95-50-1	o-	Dichlorobenzene		X	X	100			
106-46-7	1,4-	Dichlorobenzene		O	X	100			
106-46-7	p-	Dichlorobenzene		X	X	100			
541-73-1	1,3-	Dichlorobenzene		O	X	100			
541-73-1	m-	Dichlorobenzene		X	X	100			
25321-22-6		Dichlorobenzene (mixed isomers)		O	X	100			
91-94-1	3,3'-	Dichlorobenzidene		O	X	1			
75-27-4		Dichlorobromomethane		O	X	5000			
75-71-8		Dichlorodifluoromethane			X	5000			
72-54-8		Dichlorodiphenyl dichloroethane			X	1			
50-29-3		Dichlorodiphenyl trichloroethane			X	1			
75-34-3	1,1-	Dichloroethane			X	1000			
107-06-2	1,2-	Dichloroethane		X	X	5000			
107-06-2	1,2-	Dichloroethane (Ethylene dichloride)		O	X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
111-44-4		Dichloroethyl ether	X	X	X	1	10000		
75-35-4	1,1-	Dichloroethylene		X	X	5000			
540-59-0	1,2-	Dichloroethylene		O					
75-09-2		Dichloromethane (Methylene Chloride)		O	X	1000			
149-74-6		Dichloromethylphenylsilane	X			1	1000		
87-65-0	2,6-	Dichlorophenol			X	100			
120-83-2	2,4-	Dichlorophenol		O	X	100			
94-75-7	2,4-	Dichlorophenoxyacetic acids, salts and esters		X	X	100			
696-28-6		Dichlorophenylarsine	X		X	1	500		
78-87-5	1,2-	Dichloropropane		O	X	1000			
78-99-9	1,1-	Dichloropropane			X	1000			
142-28-9	1,3-	Dichloropropane			X	1000			
26638-19-7		Dichloropropane			X	1000			
8003-19-8		Dichloropropane-Dichloropropene (mixture)			X	100			
542-75-6		Dichloropropene		X	X	100			
542-75-6	1,3-	Dichloropropene		X	X	100			
26952-23-8		Dichloropropene			X	100			
78-88-6	2,3-	Dichloropropene (isomer)			X	100			

O - IS THIS CHEMICAL FOR SECTION 313 REPORTING PURPOSES?

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
26952-23-8		Dichloropropene(s)			X	100			
75-99-0	2,2-	Dichloropropionic acid			X	5000			
542-75-6	1,3-	Dichloropropylene		O	X	100			
62-73-7		Dichlorvos [Phosphoric acid,2,2-dichloroethenyl dimethyl ester]	X	O	X	10	1000		
115-32-2		Dicofol [Benzenemethanol,4-chloro-alpha-(4-chlorophenyl)-alpha-(trichloromethyl)-]		O	X	10			
141-66-2		Dicrotophos	X			1	100		
60-57-1		Dieldrin			X	1			
1464-53-5		Diepoxybutane	X	O	X	1	500		
1464-53-5	1,2:3,4-	Diepoxybutane	X	X	X	1	500		
111-42-2		Diethanolamine		O					
814-49-3		Diethyl chlorophosphate	X			1	500		
297-97-2	0,0-	Diethyl O-pyrazinyl phosphorothioate	X		X	100	500		
84-66-2		Diethyl phthalate		O	X	1000			
3288-58-2	0,0-	Diethyl S-methyl dithiophosphate			X	5000			
298-04-4	0,0-	Diethyl S-[2-(ethylthio)ethyl]phosphorodithioate	X		X	1	500		
64-67-5		Diethyl sulfate		O					
311-45-5		Diethyl-p-nitrophenyl phosphate			X	100			
109-89-7		Diethylamine			X	100			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
692-42-2		Diethylarsine			X	1			
1642-54-2		Diethylcarbamazine citrate	X			1	100/10000		
123-91-1	1,4-	Diethylene dioxide		X	X	1			
1615-80-1	N,N'-	Diethylhydrazine			X	1			
1615-80-1	1,2-	Diethylhydrazine			X	1			
56-53-1		Diethylstibestrol			X	1			
71-63-6		Digitoxin	X			1	100/10000		
2238-07-5		Diglycidyl ether	X			1	1000		
2238-07-5		Diglycidyl ether (EGD)	X			1	1000		
20830-75-5		Digoxin	X			1	10/10000		
123-33-1	1,2-	Dihydro-3,6-pyridazinedione			X	5000			
94-58-6		Dihydrosafrole			X	1			
55-91-4		Diisopropyl fluorophosphate	X		X	100	100		
115-26-4		Dimefox	X			1	500		
60-51-5		Dimethoate	X		X	10	500/10000		
119-90-4	3,3'-	Dimethoxybenzidine		O	X	1			
57-14-7		Dimethyl hydrazine	X	X	X	1	1000		
57-14-7	1,1-	Dimethyl hydrazine	X	O	X	1	1000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
298-00-0	0,0	Dimethyl O-p-nitrophenyl phosphorothioate	X		X	100	100/10000		
2524-03-0		Dimethyl phosphorochloridothioate	X			1	500		
131-11-3		Dimethyl phthalate		O	X	5000			
77-78-1		Dimethyl sulfate	X	O	X	1	500		
75-18-3		Dimethyl sulfide	X			1	100		
39196-18-4	3,3-	Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime	X		X	100	100/10000		
99-98-9		Dimethyl-p-phenylenediamine	X			1	10/10000		
124-40-3		Dimethylamine			X	1000			
60-11-7	4-	Dimethylaminoazobenzene		O	X	1			
60-11-7		Dimethylaminoazobenzene		X	X	1			
121-69-7	N,N-	Dimethylaniline		O					
121-69-7		Dimethylaniline		X					
119-93-7	3,3'-	Dimethylbenzidine		X	X	1			
119-93-7	3,3'-	Dimethylbenzidine (o-Tolidine)		O	X	1			
80-15-9	alpha,alpha-	Dimethylbenzylhydroperoxide		X	X	10			
57-97-6	7,12-	Dimethylbenz[a]anthracene	0		X	1			
79-44-7		Dimethylcarbamyl chloride		O	X	1			
75-78-5		Dimethyldichlorosilane	X			1	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
540-73-8	1,2-	Dimethylhydrazine			X	1			
62-75-9		Dimethylnitrosamine	X	X	X	1	1000		
122-09-8	alpha,alpha-	Dimethylphenethylamine			X	5000			
105-67-9	2,4-	Dimethylphenol		O	X	100			
644-64-4		Dimetilan	X			1	500/10000		
534-52-1	4,6-	Dinitro-o-Cresol	X	O	X	10	10/10000		
534-52-1		Dinitro-o-cresol	X	X	X	10	10/10000		
534-52-1	4,6-	Dinitro-O-cresol and salts	X	X	X	10	10/10000		
131-89-5	4,6-	Dinitro-o-cyclohexylphenol			X	100			
99-65-0	m-	Dinitrobenzene			X	100			
100-25-4	p-	Dinitrobenzene			X	100			
528-29-0	o-	Dinitrobenzene			X	100			
25154-54-5		Dinitrobenzene (mixed)			X	100			
534-52-1		Dinitrocresol	X	X	X	10	10/10000		
51-28-5	2,4-	Dinitrophenol		O	X	10			
329-71-5	2,5-	Dinitrophenol			X	10			
573-56-8	2,6-	Dinitrophenol			X	10			
25550-58-7		Dinitrophenol			X	10			

O - TOXIC CHEMICAL FOR SECTION 313 REPORTING PURPOSES

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
121-14-2	2,4-	Dinitrotoluene		O	X	1000			
606-20-2	2,6-	Dinitrotoluene		O	X	1000			
610-39-9	3,4-	Dinitrotoluene			X	1000			
25321-14-6		Dinitrotoluene			X	1000			
88-85-7		Dinoseb	X		X	1000	100/10000		
1420-07-1		Dinoterb	X			1	500/10000		
117-84-0		Dioctyl phthalate		X	X	5000			
117-84-0	n-	Dioctyl phthalate		O	X	5000			
123-91-1	1,4-	Dioxane		O	X	1			
123-91-1		Dioxane		X	X	1			
123-91-1		Dioxane, technical grade		X	X	1			
78-34-2		Dioxathion	X			1	500		
82-66-6		Diphacinone	X			1	10/10000		
122-66-7	1,2-	Diphenylhydrazine		X	X	1			
122-66-7	1,2-	Diphenylhydrazine (Hydrazobenzene)		O	X	1			
152-16-9		Diphosphoramide, octamethyl-	X		X	100	100		
142-84-7		Dipropylamine			X	5000			
85-00-7		Diquat			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
2764-72-9		Diquat			X	1000			
1937-37-7		Direct Black 38		O					
1937-37-7		Direct Black 38, technical grade		X					
2602-46-2		Direct Blue 6		O					
2602-46-2		Direct Blue 6, technical grade		X					
16071-86-6		Direct Brown 95		O					
298-04-4		Disulfoton	X		X	1	500		
514-73-8		Dithiazanine iodide	X			1	500/10000		
541-53-7		Dithiobiuret	X		X	100	100/10000		
541-53-7	2,4-	Dithiobiuret	X		X	100	100/10000		
3689-24-5		Dithiopyrophosphoric acid, tetraethyl ester	X		X	100	500		
330-54-1		Diuron			X	100			
27176-87-0		Dodecylbenzenesulfonic acid			X	1000			
316-42-7		Emetine, dihydrochloride	X			1	1/10000		
115-29-7		Endosulfan	X		X	1	10/10000		
959-98-8	alpha-	Endosulfan			X	1			
33213-65-9	beta-	Endosulfan			X	1			
1031-07-8		Endosulfan sulfate			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
145-73-3	Endothall			X	1000			
2778-04-3	Endothion	X			1	500/10000		
72-20-8	Endrin	X		X	1	500/10000		
7421-93-4	Endrin aldehyde			X	1			
106-89-8	Epichlorohydrin	X	O	X	1000	1000		
51-43-4	Epinephrine			X	1000			
2104-64-5	EPN	X			1	100/10000		
50-14-6	Ergocalciferol	X			1	1000/10000		
379-79-3	Ergotamine tartrate	X			1	500/10000		
75-07-0	Ethanal		X	X	1000			
122-09-8	Ethanamine, 1,1-dimethyl-2-phenyl			X	5000			
55-18-5	Ethanamine, N-ethyl-N-nitroso-		X	X	1			
111-44-4	Ethane, 1,1'-oxybis(2-chloro-	X	X	X	1	10000		
60-29-7	Ethane, 1,1'-oxybis-			X	100			
111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-			X	1000			
67-72-1	Ethane, 1,1,1,2,2,2-hexachloro-		X	X	1			
630-20-6	Ethane, 1,1,1,2-tetrachloro-			X	1			
72-43-5	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-		X	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-34-5		Ethane, 1,1,2,2-tetrachloro-		X	X	1			
79-00-5		Ethane, 1,1,2-trichloro-		X	X	1			
75-34-3		Ethane, 1,1-dichloro-			X	1000			
106-93-4		Ethane, 1,2-dibromo-		X	X	1000			
107-06-2		Ethane, 1,2-dichloro-		X	X	5000			
76-01-7		Ethane, pentachloro-			X	1			
111-54-6	1,2-	Ethanediylbiscarbamodithioic acid			X	5000			
75-05-8		Ethanenitrile		X	X	5000			
1622-32-8		Ethanesulfonyl chloride, 2-chloro-	X			1	500		
62-55-5		Ethanethioamide		X	X	1			
10140-87-1		Ethanol, 1,2-dichloro-, acetate	X			1	1000		
1116-54-7		Ethanol, 2,2'-(nitrosoimino)bis-			X	1			
98-86-2		Ethanone, 1-phenyl-			X	5000			
75-36-5		Ethanoyl chloride			X	5000			
4549-40-0		Ethenamine, N-methyl-N-nitroso-		X	X	1			
127-18-4		Ethene, 1,1,2,2-tetrachloro-		X	X	1			
75-35-4		Ethene, 1,1-dichloro-		X	X	5000			
110-75-8		Ethene, 2-chloroethoxy-			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-01-4		Ethene, chloro-		X	X	1			
76-01-7		Ethene, pentachloro-			X	1			
156-60-5		Ethene, trans-1,2-dichloro-			X	1000			
4549-40-0		Ethenylamine, N-methyl-N-nitroso-		X	X	1			
563-12-2		Ethion	X		X	10	1000		
13194-48-4		Ethoprophos	X			1	1000		
110-80-5	2-	Ethoxyethanol		O					
510-15-6		Ethyl 4,4'-dichlorobenzilate		X	X	1			
141-78-6		Ethyl acetate			X	5000			
140-88-5		Ethyl acrylate		O	X	1000			
100-41-4		Ethyl benzene		X	X	1000			
51-79-6		Ethyl carbamate		X	X	1			
51-79-6		Ethyl carbamate (Urethane)		X	X	1			
75-00-3		Ethyl chloride		X	X	100			
541-41-3		Ethyl chloroformate		O					
107-12-0		Ethyl cyanide	X		X	10	500		
60-29-7		Ethyl ether			X	100			
97-63-2		Ethyl methacrylate			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
62-50-0		Ethyl methanesulfonate			X	1			
542-90-5		Ethyl thiocyanate	X			1	10000		
75-04-7		Ethylamine			X	100			
100-41-4		Ethylbenzene		O	X	1000			
538-07-8		Ethylbis(2-chloroethyl)amine	X			1	500		
74-85-1		Ethylene		O					
107-07-3		Ethylene chlorohydrin	X			1	500		
106-93-4		Ethylene dibromide		X	X	1000			
107-06-2		Ethylene dichloride		X	X	5000			
371-62-0		Ethylene fluorohydrin	X			1	10		
107-21-1		Ethylene glycol		O					
107-21-1		Ethylene glycol, vapor		X					
75-21-8		Ethylene oxide	X	O	X	1	1000		
96-45-7		Ethylene thiourea		O	X	1			
111-54-6		Ethylenebis (dithiocarbamic acid)			X	5000			
107-15-3		Ethylenediamine	X		X	5000	10000		
60-00-4		Ethylenediamine tetraacetic acid (EDTA)			X	5000			
151-56-4		Ethyleneimine (Aziridine)	X	O	X	1	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
96-45-7		Ethylenethiourea		X	X	1			
151-56-4		Ethylenimine	X	X	X	1	500		
75-34-3		Ethylidene dichloride			X	1000			
52-85-7		Famphur			X	1000			
22224-92-6		Fenamiphos	X			1	10/10000		
122-14-5		Fenitrothion	X			1	500		
115-90-2		Fensulfothion	X			1	500		
1185-57-5		Ferric ammonium citrate			X	1000			
2944-67-4		Ferric ammonium oxalate			X	1000			
55488-87-4		Ferric ammonium oxalate			X	1000			
7705-08-0		Ferric chloride			X	1000			
7783-50-8		Ferric fluoride			X	100			
10421-48-4		Ferric nitrate			X	1000			
10028-22-5		Ferric sulfate			X	1000			
10045-89-3		Ferrous ammonium sulfate			X	1000			
7758-94-3		Ferrous chloride			X	100			
7720-78-7		Ferrous sulfate			X	1000			
7782-63-0		Ferrous sulfate			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
4301-50-2		Fluenetil	X			1	100/10000		
2164-17-2		Fluometuron [Urea,N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl)-]		O					
206-44-0		Fluoranthene			X	100			
86-73-7		Fluorene			X	5000			
7782-41-4		Fluorine	X		X	10	500		
640-19-7		Fluoroacetamide	X		X	100	100/10000		
144-49-0		Fluoroacetic acid	X			1	10/10000		
62-74-8		Fluoroacetic acid, sodium salt	X		X	10	10/10000		
359-06-8		Fluoroacetyl chloride	X			1	10		
51-21-8		Fluorouracil	X			1	500/10000		
944-22-9		Fonofos	X			1	500		
50-00-0		Formaldehyde	X	O	X	1000	500		
50-00-0		Formaldehyde (gas)	X	X	X	1000	500		
107-16-4		Formaldehyde cyanohydrin	X			1	1000		
50-00-0		Formaldehyde, rosin core solder pyrolysis products as	X	X	X	1000	500		
23422-53-9		Formetanate Hydrochloride	X			1	500/10000		
64-18-6		Formic acid			X	5000			
2540-82-1		Formothion	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
17702-57-7		Formparanate	X			1	100/10000		
21548-32-3		Fosthietan	X			1	500		
3878-19-1		Fuberidazole	X			1	100/10000		
628-86-4		Fulminic acid, mercury (II) salt			X	10			
110-17-8		Fumaric acid			X	5000			
110-00-9		Furan	X		X	100	500		
109-99-9		Furan, tetrahydro-			X	1000			
98-01-1	2-	Furancarboxaldehyde			X	5000			
108-31-6	2,5-	Furandione		X	X	5000			
98-01-1		Furfural			X	5000			
110-00-9		Furfuran	X		X	100	500		
13450-90-3		Gallium trichloride	X			1	500/10000		
18883-66-4	D-	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-			X	1			
765-34-4		Glycidylaldehyde			X	1			
70-25-7		Guanidine, N-nitroso-N-methyl-N'-nitro-			X	1			
86-50-0		Guthion	X		X	1	10/10000		
1024-57-3		Heptachlor epoxide			X	1			
76-44-8		Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene]		O	X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
87-68-3		Hexachloro-1,3-butadiene		O	X	1			
465-73-6	1,2,3,4,10,10	Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8- endo- endo-dimethanonaphthalene	X		X	1	100/10000		
309-00-2	1,2,3,4,10-10	Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, exo- endo-dimethanonaphthalene	X	X	X	1	500/10000		
72-20-8	1,2,3,4,10,10	Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo, endo-1,4:5,8-dimethanonaphthalene	X		X	1	500/10000		
60-57-1	1,2,3,4,10,10	Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4:5,8-dimethanonaphthalene			X	1			
118-74-1		Hexachlorobenzene		O	X	1			
87-68-3		Hexachlorobutadiene		X	X	1			
608-73-1		Hexachlorocyclohexane (all isomers)			X				
58-89-9		Hexachlorocyclohexane (gamma isomer)	X	X	X	1	1000/10000		
77-47-4		Hexachlorocyclopentadiene	X	O	X	1	100		
67-72-1		Hexachloroethane		O	X	1			
465-73-6		Hexachlorohexahydro-endo, endo-dimethanonaphthalene	X		X	1	100/10000		
1335-87-1		Hexachloronaphthalene		O					
70-30-4		Hexachlorophene			X	100			
1888-71-7		Hexachloropropene			X	1000			
757-58-4		Hexaethyl tetraphosphate			X	100			
4835-11-4		Hexamethylenediamine, N,N'-dibutyl-	X			1	500		
680-31-9		Hexamethylphosphoramide		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
302-01-2		Hydrazine	X	O	X	1	1000		
10034-93-2		Hydrazine sulfate		O					
57-14-7		Hydrazine, 1,1-dimethyl-	X	X	X	1	1000		
1615-80-1		Hydrazine, 1,2-diethyl-			X	1			
540-73-8		Hydrazine, 1,2-dimethyl,			X	1			
122-66-7		Hydrazine, 1,2-diphenyl-		X	X	1			
60-34-4		Hydrazine, methyl-	X	X	X	10	500		
10034-93-2		Hydrazine, sulfate (1:1)		X					
79-19-6		Hydrazinecarbothioamide	X		X	100	100/10000		
7647-01-0		Hydrochloric acid		O	X	5000			
74-90-8		Hydrocyanic acid	X	X	X	10	100		
7664-39-3		Hydrofluoric acid	X	X	X	100	100		
7647-01-0		Hydrogen chloride (Gas Only)	X			1	500		
74-90-8		Hydrogen cyanide	X	O	X	10	100		
7664-39-3		Hydrogen fluoride	X	O	X	100	100		
7722-84-1		Hydrogen peroxide (Conc > 52%)	X			1	1000		
7803-51-2		Hydrogen phosphide	X		X	100	500		
7783-07-5		Hydrogen selenide	X			1	10		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7783-06-4		Hydrogen sulfide	X		X	100	500		
80-15-9		Hydroperoxide, 1-methyl-l-phenylethyl-		X	X	10			
123-31-9		Hydroquinone	X	O		1	500/10000		
7783-06-4		Hydrosulfuric acid	X		X	100	500		
75-60-5		Hydroxydimethylarsine oxide			X	1			
96-45-7	2-	Imidazolidinethione		X	X	1			
190-39-5		Indeno (1,2,3-cd) pyrene			X	1			
13463-40-6		Iron, Pentacarbonyl-	X			1	100		
123-92-2		Isoamyl acetate			X	5000			
297-78-9		Isobenzan	X			1	100/10000		
110-19-0		Isobutyl acetate			X	5000			
78-83-1		Isobutyl alcohol			X	5000			
78-84-2		Isobutyraldehyde		O					
78-82-0		Isobutyronitrile	X			1	1000		
102-36-3		Isocyanic acid, 3,4-dichlorophenyl ester	X			1	500/10000		
624-83-9		Isocyanic acid, methyl ester	X	X	X	1	500		
465-73-6		Isodrin	X		X	1	100/10000		
55-91-4		Isofluorphate	X		X	100	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
78-59-1		Isophorone			X	5000			
4098-71-9		Isophorone diisocyanate	X			1	100		
78-79-5		Isoprene			X	100			
42504-46-1		Isopropanolamine dodecylbenzensulfonate			X	1000			
67-63-0		Isopropyl alcohol (manufacture - strong acid processes)		O					
108-23-6		Isopropyl chloroformate	X			1	1000		
625-55-8		Isopropyl formate	X			1	500		
80-05-7	4,4-	Isopropylidenediphenol		O					
119-38-0		Isopropylmethylpyrazolyl dimethylcarbamate	X			1	500		
120-58-1		Isosafrole			X	1			
2763-96-4	3(2H)-	Isoxazolone, 5-(aminomethyl)-	X		X	1000	10000		
115-32-2		Kelthane		X	X	10			
143-50-0		Kepone			X	1			
115-02-6		L-Serine, diazoacetate (ester)			X	1			
78-97-7		Lactonitrile	X			1	1000		
303-34-4		Lasiocarpine			X	1			
7439-92-1		Lead		O	X	1			
301-04-2		Lead acetate			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7645-25-2		Lead arsenate			X	5000			
7784-40-9		Lead arsenate			X	5000			
10102-48-4		Lead arsenate			X	5000			
7758-95-4		Lead chloride			X	100			
13814-96-5		Lead fluoborate			X	100			
7783-46-2		Lead fluoride			X	100			
10101-63-0		Lead iodide			X	100			
10099-74-8		Lead nitrate			X	100			
7446-27-7		Lead phosphate			X	1			
1072-35-1		Lead stearate			X	5000			
7428-48-0		Lead stearate			X	5000			
52652-59-2		Lead stearate			X	5000			
56189-09-4		Lead stearate			X	5000			
1335-32-6		Lead subacetate			X	1			
7446-14-2		Lead sulfate			X	100			
15739-80-7		Lead sulfate			X	100			
1314-87-0		Lead sullide			X	5000			
592-87-0		Lead thiocyanate			X	100			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
21609-90-5		Leptophos	X			1	500/10000		
541-25-3		Lewisite	X			1	10		
58-89-9	gamma-	Lindane	X	X	X	1	1000/10000		
58-89-9		Lindane and other hexachlorocyclohexane isomers	X	X	X	1	1000/10000		
58-89-9		Lindane [Cyclohexane,1,2,3,4,5,6-hexachloro-(1 alpha,2 alpha,3 beta,4 alpha,5 alpha,6 beta)-]	X	O	X	1	1000/10000		
14307-35-8		Lithium chromate			X	1000			
7580-67-8		Lithium hydride	X			1	100		
121-75-5		Malathion			X	100			
110-16-7		Maleic acid			X	5000			
108-31-6		Maleic anhydride		O	X	5000			
123-33-1		Maleic hydrazide			X	5000			
109-77-3		Malononitrile	X		X	1000	500/10000		
12427-38-2		Maneb [Carbamodithioic acid,1,2-ethanediylbis-,manganese complex]		O					
7439-96-5		Manganese		O					
12108-13-3		Manganese, tricarbonyl methylcyclopentadienyl	X			1	100		
51-75-2		Mechlorethamine	X	X		1	10		
108-78-1		Melamine		O					
148-82-3		Melphalan			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
950-10-7		Mephosfolan	X			1	500		
2032-65-7		Mercaptodimethur	X		X	10	500/10000		
1600-27-7		Mercuric acetate	X			1	500/10000		
7487-94-7		Mercuric chloride	X			1	500/10000		
592-04-1		Mercuric cyanide			X	1			
10045-94-0		Mercuric nitrate			X	10			
21908-53-2		Mercuric oxide	X			1	500/10000		
7783-35-9		Mercuric sulfate			X	10			
592-85-8		Mercuric thiocyanate			X	10			
7782-86-7		Mercurous nitrate			X	10			
10415-75-5		Mercurous nitrate			X	10			
7439-97-6		Mercury		O	X	1			
628-86-4		Mercury fulminate			X	10			
62-38-4		Mercury, (acetato-O)phenyl-	X		X	100	500/10000		
10476-95-6		Methacrolein diacetate	X			1	1000		
760-93-0		Methacrylic anhydride	X			1	500		
126-98-7		Methacrylonitrile	X		X	1	500		
920-46-7		Methacryloyl chloride	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
30674-80-7		Methacryloyloxyethyl isocyanate	X			1	100		
10265-92-6		Methamidophos	X			1	100/10000		
124-40-3		Methanamine, N-methyl-			X	1000			
74-83-9		Methane, bromo-	X	X	X	1000	1000		
74-87-3		Methane, chloro-		X	X	1			
107-30-2		Methane, chloromethoxy-	X	X	X	1	100		
74-95-3		Methane, dibromo-		X	X	1000			
75-09-2		Methane, dichloro-		X	X	1000			
75-71-8		Methane, dichlorodifluoro-			X	5000			
74-88-4		Methane, iodo-		X	X	1			
542-88-1		Methane, oxybis(chloro-	X	X	X	1	100		
56-23-5		Methane, tetrachloro-		X	X	5000			
509-14-8		Methane, tetranitro-	X		X	10	500		
75-25-2		Methane, tribromo-		X	X	100			
67-66-3		Methane, trichloro-	X	X	X	5000	10000		
75-69-4		Methane, trichlorofluoro-			X	5000			
594-42-3		Methanesulfenyl chloride, trichloro-	X		X	100	500		
62-50-0		Methanesulfonic acid, ethyl ester			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
558-25-8		Methanesulfonyl fluoride	X			1	1000		
74-93-1		Methanethiol	X		X	100	500		
76-44-8	4,7-	Methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-		X	X	1			
64-18-6		Methanoic acid			X	5000			
57-74-9	4,7-	Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-	X	X	X	1	1000		
67-56-1		Methanol		O	X	5000			
91-80-5		Methapyrilene			X	5000			
950-37-8		Methidathion	X			1	500/10000		
2032-65-7		Methiocarb	X		X	10	500/10000		
16752-77-5		Methomyl	X		X	100	500/10000		
72-43-5		Methoxychlor]Benzene,1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy]		O	X	1			
109-86-4	2-	Methoxyethanol		O					
151-38-2		Methoxyethylmercuric acetate	X			1	500/10000		
80-63-7		Methyl 2-chloroacrylate	X			1	500		
96-33-3		Methyl acrylate		O					
67-56-1		Methyl alcohol		X	X	5000			
74-83-9		Methyl bromide	X	X	X	1000	1000		
74-87-3		Methyl chloride		X	X	1			

O = TOXIC CHEMICAL FOR SECTIONS 4 REPORTING PURPOSES

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-22-1	Methyl chlorocarbonate	X		X	1000	500		
71-55-6	Methyl chloroform		X	X	1000			
79-22-1	Methyl chloroformate	X		X	1000	500		
107-30-2	Methyl chloromethyl ether	X	X	X	1	100		
624-92-0	Methyl disulfide	X			1	100		
78-93-3	Methyl ethyl ketone		O	X	5000			
1338-23-4	Methyl ethyl ketone peroxide			X	10			
60-34-4	Methyl hydrazine	X	O	X	10	500		
74-88-4	Methyl iodide		O	X	1			
108-10-1	Methyl isobutyl ketone		O	X	5000			
624-83-9	Methyl isocyanate	X	O	X	1	500		
556-61-6	Methyl isothiocyanate	X			1	500		
74-93-1	Methyl mercaptan	X		X	100	500		
80-62-6	Methyl methacrylate		O	X	1000			
298-00-0	Methyl parathion	X		X	100	100/10000		
3735-23-7	Methyl phenkapton	X			1	500		
676-97-1	Methyl phosphonic dichloride	X			1	100		
1634-04-4	Methyl tert-butyl ether		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
556-64-9		Methyl thiocyanate	X			1	10000		
78-94-4		Methyl vinyl ketone	X			1	10		
108-10-1	4-	Methyl-2-pentanone		X	X	5000			
70-25-7	N-	Methyl-N'-nitro-N-nitrosoguanidine			X	1			
74-89-5		Methylamine			X	100			
75-55-8	2-	Methylaziridine	X	X	X	1	10000		
504-60-9	1-	Methylbutadiene			X	100			
56-49-5	3-	Methylcholanthrene			X	1			
74-95-3		Methylene bromide		O	X	1000			
75-09-2		Methylene chloride		X	X	1000			
50-00-0		Methylene oxide	X	X	X	1000	500		
101-68-8		Methylenebis (phenyliso cyanate) (MBI)		O					
101-14-4	4,4'-	Methylenebis(2-chloroaniline) (MBOCA)		O	X	1			
70-30-4	2,2'-	Methylenebis(3,4,6-trichlorophenol)			X	100			
101-61-1	4,4'-	Methylenebis(N, N-dimethyl) benzenamine		O					
101-68-8		Methylenebisphenyl isocyanate		X					
101-77-9	4,4-	Methylenedianiline		X					
101-77-9	4,4'-	Methylenedianiline		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
75-86-5	2-	Methyllactonitrile	X		X	10	1000		
74-93-1		Methylmercaptan	X		X	100	500		
502-39-6		Methylmercuric dicyanamide	X			1	500/10000		
56-04-2		Methylthiouracil			X	1			
75-79-6		Methyltrichlorosilane	X			1	500		
1129-41-5		Metolcarb	X			1	100/10000		
7786-34-7		Mevinphos	X		X	10	500		
315-18-4		Mexacarbate	X		X	1000	500/10000		
90-94-8		Michler's ketone		O					
50-07-7		Mitomycin C	X		X	1	500/10000		
1313-27-5		Molybdenum trioxide		O					
6923-22-4		Monocrotophos	X			1	10/10000		
75-04-7		Monoethylamine			X	100			
74-89-5		Monomethylamine			X	100			
2763-96-4		Muscimol	X		X	1000	10000		
505-60-2		Mustard gas [Ethane,1,1'-thiobis[2-chloro-]	X	O		1	500		
300-76-5		Naled			X	10			
20830-81-3	5,12-	Naphthacenedione(8S-cis)-8-acetyl-10-[3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
134-32-7	1-	Naphthalenamine		X	X	1			
91-20-3		Naphthalene		O	X	100			
91-58-7		Naphthalene, 2-chloro-			X	5000			
130-15-4	1,4-	Naphthalenedione			X	5000			
72-57-1	2,7-	Naphthalenedisulfonic acid 3,3'-[(3,3'-dimethyl-(l,1'-biphenyl)-4,4'-diyl)-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt			X	1			
1338-24-5		Naphthenic acid			X	100			
130-15-4	1,4-	Naphthoquinone			X	5000			
91-59-8	beta-	Naphthylamine		O	X	1			
91-59-8	2-	Naphthylamine		X	X	1			
134-32-7	alpha-	Naphthylamine		O	X	1			
134-32-7	1-	Naphthylamine		X	X	1			
494-03-1	2-	Naphthylamine, N,N-bis(2-chloroethyl)-			X	1			
86-88-4	alpha-	Naphthylthiourea	X		X	100	500/10000		
7440-02-0		Nickel		O	X	1			
557-19-7		Nickel (II) cyanide			X	1			
15699-18-0		Nickel ammonium sulfate			X	5000			
7440-02-0		Nickel and compounds	X	X	X	1	10000		
13463-39-3		Nickel carbonyl	X		X	1	1		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7718-54-9		Nickel chloride			X	5000			
37211-05-5		Nickel chloride			X	5000			
557-19-7		Nickel cyanide			X	1			
12054-48-7		Nickel hydroxide			X	1000			
14216-75-2		Nickel nitrate			X	5000			
7786-81-4		Nickel sulfate			X	5000			
13463-39-3		Nickel tetracarbonyl	X		X	1	1		
54-11-5		Nicotine	X		X	100	100		
54-11-5		Nicotine and salts	X		X	100	100		
65-30-5		Nicotine sulfate	X			1	100/10000		
7697-37-2		Nitric acid	X	O	X	1000	1000		
10102-43-9		Nitric oxide	X		X	10	100		
139-13-9		Nitrilotriacetic acid		O					
99-59-2	5-	Nitro-o-anisidine		O					
99-55-8	5-	Nitro-o-toluidine			X	1			
100-01-6	p-	Nitroaniline			X	5000			
98-95-3		Nitrobenzene	X	O	X	1000	10000		
92-93-3	4-	Nitrobiphenyl		O					

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1122-60-7		Nitrocyclohexane	X			1	500		
1836-75-5		Nitrofen (technical grade)		X					
1836-75-5		Nitrofen [Benzene,2,4-dichloro-1-(4-nitrophenoxy)-]		O					
10102-43-9		Nitrogen (II) oxide	X		X	10	100		
10102-44-0		Nitrogen (IV) oxide	X		X	10	100		
10544-72-6		Nitrogen (IV) oxide			X	10			
10102-44-0		Nitrogen dioxide	X		X	10	100		
10544-72-6		Nitrogen dioxide			X	10			
51-75-2		Nitrogen mustard [2-Chloro-N(2-chloroethyl)-N-methylethanamine]	X	O		1	10		
55-63-0		Nitroglycerine		O	X	10			
88-75-5	2-	Nitrophenol		X	X	100			
100-02-7	4-	Nitrophenol		O	X	100			
88-75-5	o-	Nitrophenol (mixed)		X	X	100			
100-02-7	p-	Nitrophenol (mixed)		X	X	100			
554-84-7	m-	Nitrophenol (mixed)			X	100			
25154-55-6		Nitrophenol (mixed)			X	100			
79-46-9	2-	Nitropropane		O	X	1			
759-73-9	N-	Nitroso-N-ethylurea		O	X	1			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
684-93-5	N-	Nitroso-N-methylurea		O	X	1			
615-53-2	N-	Nitroso-N-methylurethane			X	1			
924-16-3	N-	Nitrosodi-N-butylamine		O	X	1			
621-64-7	N-	Nitrosodi-n-propylamine		O	X	1			
1116-54-7	N-	Nitrosodiethanolamine			X	1			
55-18-5	N-	Nitrosodiethylamine		O	X	1			
62-75-9	N-	Nitrosodimethylamine	X	O	X	1	1000		
62-75-9		Nitrosodimethylamine	X	X	X	1	1000		
86-30-6	N-	Nitrosodiphenylamine		O	X	100			
156-10-5	p-	Nitrosodiphenylamine		O					
4549-40-0	N-	Nitrosomethylvinylamine		O	X	1			
59-89-2	N-	Nitrosomorpholine		O					
16543-55-8	N-	Nitrosonornicotine		O					
100-75-4	N-	Nitrosopiperidine		O	X	1			
930-55-2	N-	Nitrosopyrrolidine			X	1			
88-72-2	o-	Nitrotoluene			X	1000			
99-08-1	m-	Nitrotoluene			X	1000			
99-99-0	p-	Nitrotoluene			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1321-12-6		Nitrotoluene			X	1000			
991-42-4		Norbormide	X			1	100/10000		
115-29-7	5-	Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite	X		X	1	10/10000		
2234-13-1		Octachloronapthalene		O					
152-16-9		Octamethylpyrophosphoramide	X		X	100	100		
20816-12-0		Osmium oxide		X	X	1000			
20816-12-0		Osmium tetroxide		O	X	1000			
145-73-3	7-	Oxabicyclo [2, 2,1] heptane-2,3-dicarboxylic acid			X	1000			
23135-22-0		Oxamyl	X			1	100/10000		
1120-71-4	1,2-	Oxathiolane, 2,2-dioxide		X	X	1			
50-18-0	2H-1,3,2-	Oxazaphosphorine,2-[bis(2-chloroethyl)amino]tetrahydro-2-oxide			X	1			
78-71-7		Oxetane, 3,3-bis(chloromethyl)-	X			1	500		
75-21-8		Oxirane	X	X	X	1	1000		
106-89-8		Oxirane, 2-(chloromethyl)-	X	X	X	1000	1000		
2497-07-6		Oxydisulfoton	X			1	500		
10028-15-6		Ozone	X			1	100		
30525-89-4		Paraformaldehyde			X	1000			
123-63-7		Paraldehyde			X	1000			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
1910-42-5		Paraquat	X			1	10/10000		
2074-50-2		Paraquat methosulfate	X			1	10/10000		
56-38-2		Parathion [Phosphorothioic acid,O,O-diethyl-O-(4-nitrophenyl)ester]	X	O	X	1	100		
298-00-0		Parathion-methyl	X		X	100	100/10000		
12002-03-8		Paris green	X		X	100	500/10000		
19624-22-7		Pentaborane	X			1	500		
608-93-5		Pentachlorobenzene			X	10			
76-01-7		Pentachloroethane			X	1			
82-68-8		Pentachloronitrobenzene		X	X	1			
87-86-5		Pentachlorophenol (PCP)		O	X	10			
2570-26-5		Pentadecylamine	X			1	100/10000		
504-60-9	1,3-	Pentadiene			X	100			
79-21-0		Peracetic acid	X	O		1	500		
594-42-3		Perchloromethylmercaptan	X		X	100	500		
62-44-2		Phenacetin			X	1			
62-44-2		Phenacetin, analgesic mixtures containing			X	1			
85-01-8		Phenanthrene			X	5000			
108-95-2		Phenol	X	O	X	1000	500/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
97-18-7		Phenol, 2,2'-thiobis(4,6-dichloro-	X			1	100/10000		
4418-66-0		Phenol, 2,2'-thiobis(4-chloro-6-methyl-	X			1	100/10000		
58-90-2		Phenol, 2,3,4,6-tetrachloro-			X	10	-		
95-95-4		Phenol, 2,4,5-trichloro-		X	X	10			
88-06-2		Phenol, 2,4,6-trichloro-		X	X	10			
131-74-8		Phenol, 2,4,6-trinitro- ammonium salt			X	10			
120-83-2		Phenol, 2,4-dichloro-		X	X	100			
105-67-9		Phenol, 2,4-dimethyl-		X	X	100			
51-28-5		Phenol, 2,4-dinitro-		X	X	10			
88-85-7		Phenol, 2,4-dinitro-6-(1-methylpropyl)-	X		X	1000	100/10000		
534-52-1		Phenol, 2,4-dinitro-6-methyl- and salts	X	X	X	10	10/10000		
87-65-0		Phenol, 2,6-dichloro-			X	100			
95-57-8		Phenol, 2-chloro			X	100			
131-89-5		Phenol, 2-cyclohexyl-4,6-dinitro-			X	100			
64-00-6		Phenol, 3-(1-methylethyl)-, methylcarbamate	X			1	500/10000		
59-50-7		Phenol, 4-chloro-3-methyl-			X	5000			
100-02-7		Phenol, 4-nitro-		X	X	100			
87-86-5		Phenol, pentachloro-		X	X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
58-36-6		Phenoxarsine, 10, 10'-oxydi-	X			1	500/10000		
696-28-6		Phenyl dichloroarsine	X		X	1	500		
108-98-5		Phenyl mercaptan	X		X	100	500		
193-39-5	1,10-(1,2-	Phenylene)pyrene			X	1			
106-50-3	p-	Phenylenediamine		O					
59-88-1		Phenylhydrazine hydrochloride	X			1	1000/10000		
62-38-4		Phenylmercuric acetate	X		X	100	500/10000		
62-38-4		Phenylmercury acetate	X		X	100	500/10000		
90-43-7	2-	Phenylphenol		O					
2097-19-0		Phenylsilatrane	X			1	100/10000		
103-85-5		Phenylthiourea	X		X	100	100/10000		
103-85-5	N-	Phenylthiourea	X		X	100	100/10000		
298-02-2		Phorate	X		X	10	10		
4104-14-7		Phosacetim	X			1	100/10000		
947-02-4		Phosfolan	X			1	100/10000		
75-44-5		Phosgene	X	O	X	10	10		
732-11-6		Phosmet	X			1	10/10000		
13171-21-6		Phosphamidon	X			1	100		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7803-51-2		Phosphine	X		X	100	500		
2665-30-7		Phosphonothioic acid, methyl-, 0-(4-nitrophenyl) O-phenyl ester	X			1	500		
2703-13-1		Phosphonothioic acid, methyl-, 0-ethyl 0-(4-(methylthio)phenyl)ester	X			1	500		
50782-69-9		Phosphonothioic acid, methyl-, S- (2-(bis (1-methylethyl) amino)-ethyl) O-ethyl ester	X			1	100		
7664-38-2		Phosphoric acid		O	X	5000			
311-45-5		Phosphoric acid, diethyl p-nitrophenyl ester			X	100			
3254-63-5		Phosphoric acid, dimethyl 4-(methylthio)phenyl ester	X			1	500		
7446-27-7		Phosphoric acid, lead salt			X	1			
298-02-2		Phosphorodithioic acid,O,O-diethyl S-(ethylthio), methyl ester	X		X	10	10		
3288-58-2		Phosphorodithioic acid,O,O-diethyl S-methylester			X	5000			
60-51-5		Phosphorodithioic acid,O,O-dimethyl S-[2(methylamino)-2-oxoethyl]ester	X		X	10	500/10000		
55-91-4		Phosphorofluoridic acid, bis(1-methylethyl) ester	X		X	100	100		
56-38-2		Phosphorothioic acid,O,O-diethyl O-(4-nitrophenyl) ester	X	X	X	1	100		
297-97-2		Phosphorothioic acid,O,O-diethyl O-pyrazinyl ester	X		X	100	500		
52-85-7		Phosphorothioic acid,O,O-dimethyl-O-[p-[(dimethylamino)-sulfonyl]phenyl]ester			X	1000			
2587-90-8		Phosphorothioic acid,O,O-dimethyl-S-(2-Methylthio)Ethyl Ester	X			1	500		
7723-14-0		Phosphorus	X	X	X	1	100		
7723-14-0		Phosphorus (yellow or white)	X	O	X	1	100		

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
10025-87-3		Phosphorus oxychloride	X		X	1000	500		
10026-13-8		Phosphorus pentachloride	X			1	500		
1314-80-3		Phosphorus pentasulfide			X	100			
1314-56-3		Phosphorus pentoxide	X			1	10		
1314-80-3		Phosphorus sulfide			X	100			
7719-12-2		Phosphorus trichloride	X		X	1000	1000		
85-44-9		Phthalic anhydride		O	X	5000			
57-47-6		Physostigmine	X			1	100/10000		
57-64-7		Physostigmine, salicylate (1:1)	X			1	100/10000		
109-06-8	2-	Picoline			X	5000			
88-89-1		Picric acid		O					
124-87-8		Picrotoxin	X			1	500/10000		
110-89-4		Piperidine	X			1	1000		
5281-13-0		Piprotal	X			1	100/10000		
23505-41-1		Pirimifos-ethyl	X			1	1000		
78-00-2		Plumbane, tetraethyl-	X		X	10	100		
1336-36-3		Polychlorinated Biphenyls (PCBs)		O	X	10			
11096-82-5		Polychlorinated Biphenyls (PCBs)			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
11097-69-1		Polychlorinated Biphenyls (PCBs)			X	10			
11104-28-2		Polychlorinated Biphenyls (PCBs)			X	10			
11141-16-5		Polychlorinated Biphenyls (PCBs)			X	10			
12672-29-6		Polychlorinated Biphenyls (PCBs)			X	10			
12674-11-2		Polychlorinated Biphenyls (PCBs)			X	10			
53469-21-9		Polychlorinated Biphenyls (PCBs)			X	10			
3761-53-3		Ponceau MX		X					
7784-41-0		Potassium arsenate			X	1000			
10124-50-2		Potassium arsenite	X		X	1000	500/10000		
7778-50-9		Potassium bichromate			X	1000			
7789-00-6		Potassium chromate			X	1000			
151-50-8		Potassium cyanide	X		X	10	100		
1310-58-3		Potassium hydroxide			X	1000			
7722-64-7		Potassium permanganate			X	100			
506-61-6		Potassium silver cyanide	X		X	1	500		
2631-37-0		Promecarb	X			1	500/10000		
23950-58-5		Pronamide			X	5000			
765-34-4	1-	Propanal, 2,3-epoxy-			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
116-06-3		Propanal, 2-methyl-2-(methylthio)-,O-[(methylamino)carbonyl]oxime	X		X	1	100/10000		
107-10-8	1-	Propanamine			X	5000			
142-84-7	1-	Propanamine, N-propyl			X	5000			
1120-71-4		Propane sultone		O	X	1			
1120-71-4	1,3-	Propane sultone		X	X	1			
96-12-8		Propane, 1,2-dibromo-3-chloro-		X	X	1			
108-60-1		Propane, 2,2'-oxybis(2-chloro-		X	X	1000			
79-46-9		Propane, 2-nitro-		X	X	1			
109-77-3		Propanedinitrile	X		X	1000	500/10000		
107-12-0		Propanenitrile	X		X	10	500		
75-86-5		Propanenitrile, 2-hydroxy-2-methyl-	X		X	10	1000		
542-76-7		Propanenitrile, 3-chloro-	X		X	1000	1000		
55-63-0	1,2,3-	Propanetriol, trinitrate-		X	X	10			
126-72-7	1-	Propanol, 2,3-dibromo-, phosphate (3:1)		X	X	1			
78-83-1	1-	Propanol, 2-methyl-			X	5000			
67-64-1	2-	Propanone		X	X	5000			
598-31-2	2-	Propanone, 1-bromo-			X	1000			
2312-35-8		Propargite			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
107-19-7		Propargyl alcohol			X	1000			
106-96-7		Propargyl bromide	X			1	10		
107-18-6	2-	Propen-1-ol	X		X	100	1000		
107-02-8	2-	Propenal	X	X	X	1	500		
79-06-1	2-	Propenamide	X	X	X	5000	1000/10000		
1888-71-7	1-	Propene, 1,1,2,3,3,3-hexachloro-			X	1000			
542-75-6		Propene, 1,3-dichloro-		X	X	100			
107-13-1	2-	Propenenitrile	X	X	X	100	10000		
126-98-7	2-	Propenenitrile, 2-methyl-	X		X	1	500		
79-10-7	2-	Propenoic acid		X	X	5000			
97-63-2	2-	Propenoic acid, 2-methyl-, ethyl ester			X	1000			
80-62-6	2-	Propenoic acid, 2-methyl-, methyl ester		X	X	1000			
140-88-5	2-	Propenoic acid, ethyl ester		X	X	1000			
57-57-8	beta-	Propiolactone	X	O		1	500		
123-38-6		Propionaldehyde		O					
79-09-4		Propionic acid			X	5000			
93-72-1		Propionic acid, 2-(2,4,5-trichlorophenoxy)-			X	100			
123-62-6		Propionic anhydride			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
107-12-0		Propionitrile	X		X	10	500		
542-76-7		Propionitrile, 3-chloro-	X		X	1000	1000		
70-69-9		Propiophenone, 4'-amino	X			1	100/10000		
114-26-1		Propoxur [Phenol,2-(1-methylethoxy)-,methylcarbamate]		O					
109-61-5		Propyl chloroformate	X			1	500		
107-10-8	n-	Propylamine			X	5000			
115-07-1		Propylene		X					
115-07-1		Propylene (Propene)		O					
78-87-5		Propylene dichloride		X	X	1000			
75-56-9		Propylene oxide	X	O	X	100	10000		
75-55-8		Propyleneimine	X	O	X	1	10000		
75-55-8	1,2-	Propylenimine	X	X	X	1	10000		
621-64-7	Di-n-	propylnitrosamine		X	X	1			
107-19-7	2-	Propyn-1-ol			X	1000			
2275-18-5		Prothoate	X			1	100/10000		
95-63-6		Pseudocumene		X					
129-00-0		Pyrene	X		X	5000	1000/10000		
121-21-1		Pyrethrins			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
121-29-9		Pyrethrins			X	1			
8003-34-7		Pyrethrins			X	1			
504-24-5	4-	Pyridinamine	X		X	1000	500/10000		
110-86-1		Pyridine		O	X	1000			
54-11-5		Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts	X		X	100	100		
109-06-8		Pyridine, 2-methyl-			X	5000			
140-76-1		Pyridine, 2-methyl-5-vinyl-	X			1	500		
91-80-5		Pyridine, 2-[(2-(dimethylamino)ethyl)-2-thenylamino]-			X	5000			
504-24-5		Pyridine, 4-amino-	X		X	1000	500/10000		
1124-33-0		Pyridine, 4-nitro, 1-oxide	X			1	500/10000		
100-75-4		Pyridine, hexahydro-N-nitroso-		X	X	1			
56-04-2	4(1H)-	Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-			X	1			
53558-25-1		Pyriminil	X			1	100/10000		
107-49-3		Pyrophosphoric acid, tetraethyl ester	X		X	10	100		
930-55-2		Pyrrole, tetrahydro-N-nitroso-			X	1			
630-60-4		Quabain	X			1	100/10000		
91-22-5		Quinoline		O	X	5000			
106-51-4		Quinone		O	X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
82-68-8		Quintozene [Pentachloronitrobenzene]		O	X				
50-55-5		Reserpine			X	5000			
108-46-3		Resorcinol			X	5000			
81-07-2		Saccharin (manufacturing) [1,2-Benzisothiazol-3(2H)-one,1,1-dioxide]		O	X	1			
81-07-2		Saccharin (saccharine)		X	X	1			
81-07-2		Saccharin and salts		X	X	1			
94-59-7		Safrole		O	X	1			
14167-18-1		Salcomine	X			1	500/10000		
107-44-8		Sarin	X			1	10		
7783-00-8		Selenious acid	X		X	10	1000/10000		
7782-49-2		Selenium		O	X	100			
7446-03-4		Selenium dioxide (selenium oxide)			X	10			
7488-56-4		Selenium disulfide			X	1			
7446-08-4		Selenium oxide			X	10			
7791-23-3		Selenium oxychloride	X			1	500		
630-10-4		Selenourea			X	1000			
563-41-7		Semicarbazide hydrochloride	X			1	1000/10000		
3037-72-7		Silane, (4-aminobutyl)diethoxymethyl-	X			1	1000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7440-22-4		Silver		O	X	1000			
506-64-9		Silver cyanide			X	1			
7761-88-8		Silver nitrate			X	1			
93-72-1		Silvex			X	100			
7440-23-5		Sodium			X	10			
7631-89-2		Sodium arsenate	X		X	1000	1000/10000		
7784-46-5		Sodium arsenite	X		X	1000	500/10000		
26628-22-8		Sodium azide	X		X	1000	500		
26628-22-8		Sodium azide (Na(N3))	X		X	1000	500		
10588-01-9		Sodium bichromate			X	1000			
1333-83-1		Sodium bifluoride			X	100			
7631-90-5		Sodium bisulfite			X	5000			
124-65-2		Sodium cacodylate	X			1	100/10000		
7775-11-3		Sodium chromate			X	1000			
143-33-9		Sodium cyanide	X		X	10	100		
143-33-9		Sodium cyanide (Na(CN))	X		X	10	100		
25155-30-0		Sodium dodecybenzene sulfonate			X	1000			
7681-49-4		Sodium fluoride			X	1000			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
62-74-8		Sodium fluoroacetate	X		X	10	10/10000		
16721-80-5		Sodium hydrosulfide			X	5000			
1310-73-2		Sodium hydroxide			X	1000			
1310-73-2		Sodium hydroxide (solution)		O	X	1000			
7681-52-9		Sodium hypochlorite			X	100			
10022-70-5		Sodium hypochlorite			X	100			
124-41-4		Sodium methylate			X	1000			
7632-00-0		Sodium nitrite			X	100			
131-52-2		Sodium pentachlorophenate	X			1	100/10000		
7558-79-4		Sodium phosphate, dibasic			X	5000			
10039-32-4		Sodium phosphate, dibasic			X	5000			
10140-65-5		Sodium phosphate, dibasic			X	5000			
7601-54-9		Sodium phosphate, tribasic			X	5000			
7758-29-4		Sodium phosphate, tribasic			X	5000			
7785-84-4		Sodium phosphate, tribasic			X	5000			
10101-89-0		Sodium phosphate, tribasic			X	5000			
10124-56-8		Sodium phosphate, tribasic			X	5000			
10361-89-4		Sodium phosphate, tribasic			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
13410-01-0		Sodium selenate	X			1	100/10000		
7782-82-3		Sodium selenite			X	100			
10102-18-8		Sodium selenite	X		X	100	100/10000		
7757-82-6		Sodium sulfate (solution)		O					
10102-20-2		Sodium tellurite	X			1	500/10000		
900-95-8		Stannane, acetoxytriphenyl-	X			1	500/10000		
56-53-1	4,4-	Stilbenediol, alpha,alpha'-1-diethyl-			X	1			
18883-66-4		Streptozotocin			X	1			
7789-06-2		Strontium chromate			X	1000			
357-57-3		Strychnidin-10-one,2,3-dimethoxy-			X	100			
57-24-9		Strychnine	X		X	10	100/10000		
57-24-9		Strychnine and salts	X		X	10	100/10000		
60-41-3		Strychnine, sulfate	X			1	100/10000		
57-24-9		Strychnine-10-one, and salts	X		X	10	100/10000		
100-42-5		Styrene		O	X	1000			
100-42-5		Styrene (monomer)		X	X	1000			
96-09-3		Styrene oxide		O					
3689-24-5		Sulfotep	X		X	100	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
3569-57-1		Sulfoxide, 3-chloropropyl octyl	X			1	500		
7446-09-5		Sulfur dioxide	X			1	500		
7783-06-4		Sulfur hydride	X		X	100	500		
12771-08-3		Sulfur monochloride			X	1000			
1314-80-3		Sulfur phosphide			X	100			
7488-56-4		Sulfur selenide			X	1			
7783-60-0		Sulfur tetrafluoride	X			1	100		
7446-11-9		Sulfur trioxide	X			1	100		
7664-93-9		Sulfuric acid	X	O	X	1000	1000		
8014-95-7		Sulfuric acid (mixture with sulfa trioxide)			X	1000			
77-78-1		Sulfuric acid, dimethyl ester	X	X	X	1	500		
7446-18-6		Sulfuric acid, thallium (I) salt	X		X	100	100/10000		
10031-59-1		Sulfuric acid, thallium (I) salt	X		X	100	100/10000		
93-76-5	2,4,5-	T			X	1000			
93-76-5	2,4,5-	T acid			X	1000			
1319-72-8	2,4,5-	T amines			X	5000			
2008-46-0	2,4,5-	T amines			X	5000			
3813-14-7	2,4,5-	T amines			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
6369-96-6	2,4,5-	T amines			X	5000			
6369-97-7	2,4,5-	T amines			X	5000			
93-79-8	2,4,5-	T esters			X	1000			
1928-47-8	2,4,5-	T esters			X	1000			
2545-59-7	2,4,5-	T esters			X	1000			
25168-15-4	2,4,5-	T esters			X	1000			
61792-07-2	2,4,5-	T esters			X	1000			
13560-99-1	2,4,5-	T salts			X	1000			
77-81-6		Tabun	X			1	10		
72-54-8		TDE			X	1			
13494-80-9		Tellurium	X			1	500/10000		
7783-80-4		Tellurium hexafluoride	X			1	100		
107-49-3		TEPP	X		X	10	100		
13071-79-9		Terbufos	X			1	100		
100-21-0		Terephthalic acid		O					
95-94-3	1,2,4,5-	Tetrachlorobenzene			X	5000			
1746-01-6		Tetrachlorodibenzo-dioxin			X	1			
1746-01-6	2,3,7,8-	Tetrachlorodibenzo-p-dioxin (TCDD)			X	1			

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MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
79-34-5	1,1,2,2-	Tetrachloroethane		O	X	1			
630-20-6	1,1,1,2-	Tetrachloroethane			X	1			
127-18-4		Tetrachloroethylene (Perchloroethylene)		O	X	1			
58-90-2	2,3,4,6-	Tetrachlorophenol			X	10			
961-11-5		Tetrachlorvinphos [Phosphoric acid,2-chloro-1-(2,4,5-trichlorophenyl)ethenyl dimethyl ester]		O					
78-00-2		Tetraethyl lead	X		X	10	100		
107-49-3		Tetraethyl pyrophosphate	X		X	10	100		
3689-24-5		Tetraethyldithiopyrophosphate	X		X	100	500		
597-64-8		Tetraethyltin	X			1	100		
109-99-9		Tetrahydrofuran			X	1000			
75-74-1		Tetramethyl lead	X			1	100		
75-74-1		Tetramethyl lead, as Pb	X			1	100		
509-14-8		Tetranitromethane	X		X	10	500		
757-58-4		Tetraphosphoric acid, hexaethyl ester			X	100			
1314-32-5		Thallic oxide			X	100			
7440-28-0		Thallium		O	X	1000			
563-68-8		Thallium (I) acetate			X	100			
6533-73-9		Thallium (I) carbonate	X		X	100	100/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7791-12-0		Thallium (I) chloride	X		X	100	100/10000		
10102-45-1		Thallium (I) nitrate			X	100			
12039-52-0		Thallium (I) selenide			X	1000			
7446-18-6		Thallium (I) sulfate	X		X	100	100/10000		
10031-59-1		Thallium (I) sulfate	X		X	100	100/10000		
1314-32-5		Thallium (III) oxide			X	100			
6533-73-9		Thallous carbonate	X		X	100	100/10000		
7791-12-0		Thallous chloride	X		X	100	100/10000		
2757-18-8		Thallous malonate	X			1	100/10000		
7446-18-6		Thallous sulfate	X		X	100	100/10000		
10031-59-1		Thallous sulfate	X		X	100	100/10000		
62-55-5		Thioacetamide		O	X	1			
2231-57-4		Thiocarbazide	X			1	1000/10000		
139-65-1	4,4'-	Thiodianiline		O					
39196-18-4		Thiofanox	X		X	100	100/10000		
74-93-1		Thiomethanol	X		X	100	500		
541-53-7		Thiomidodicarbonic diamide	X		X	100	100/10000		
297-97-2		Thionazin	X		X	100	500		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
108-98-5		Thiophenol	X		X	100	500		
79-19-6		Thiosemicarbazide	X		X	100	100/10000		
62-56-6		Thiourea		O	X	1			
5344-82-1		Thiourea, (2-chlorophenyl)-	X		X	100	100/10000		
614-78-8		Thiourea, (2-methylphenyl)-	X			1	500/10000		
86-88-4		Thiourea, 1-naphthalenyl-	X		X	100	500/10000		
103-85-5		Thiourea, phenyl-	X		X	100	100/10000		
137-26-8		Thiram			X	10			
1314-20-1		Thorium dioxide		O					
7550-45-0		Titanium tetrachloride	X	O		1	100		
108-88-3		Toluene		O	X	1000			
91-08-7		Toluene 2,6-diisocyanate	X	O	X	100	100		
91-08-7		Toluene diisocyanate	X	X	X	100	100		
584-84-9		Toluene diisocyanate	X	X	X	100	500		
26471-62-5		Toluene diisocyanate			X	100			
584-84-9		Toluene- 2,4-diisocyanate	X	O	X	100	500		
95-80-7		Toluenediamine		X	X	1			
496-72-0		Toluenediamine			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
823-40-5		Toluenediamine			X	1			
25376-45-8		Toluenediamine		X	X	1			
95-53-4	o-	Toluidine		O	X	1			
106-49-0	p-	Toluidine			X	1			
636-21-5	o-	Toluidine hydrochloride		O	X	1			
8001-35-2		Toxaphene	X	O	X	1	500/10000		
8001-35-2	o-	Toxaphene	X	X	X	1	500/10000		
93-72-1	2,4,5-	TP acid			X	100			
32534-95-5	2,4,5-	TP acid esters			X	100			
110-57-6		trans-1,4 Dichlorobutene	X			1	500		
110-57-6		Trans-1,4-dichlorobutene	X			1	500		
156-60-5	1,2-	trans-Dichloroethylene			X	1000			
1031-47-6		Triamiphos	X			1	500/10000		
68-76-8		Triaziquone [2,5-Cyclohexadiene-1,4-dione,2,3,5-tris(1-azindinyl)-]		O					
24017-47-8		Triazofos	X			1	500		
61-82-5	1H-1,2,4-	Triazol-3-amine			X	1			
52-68-6		Trichlorfon [Phosphonic acid,(2,2,2-trichloro-1-hydroxyethyl),dimethyl ester]		O	X	100			
1558-25-4		Trichloro(chloromethyl)silane	X			1	100		

O - TOXIC CHEMICAL FOR SECTION 313 REPORTING PURPOSES

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
27137-85-5		Trichloro(dichlorophenyl)silane	X			1	500		
76-13-1	1,1,2-	Trichloro-1,2,2-trifluoroethane		X					
76-02-8		Trichloroacetyl chloride	X			1	500		
120-82-1	1,2,4-	Trichlorobenzene		O	X	100			
71-55-6	1,1,1-	Trichloroethane		X	X	1000			
79-00-5	1,1,2-	Trichloroethane		O	X	1			
71-55-6	1,1,1-	Trichloroethane (Methyl chloroform)		O	X	1000			
79-01-6		Trichloroethene		X	X	1000			
79-01-6		Trichloroethylene		O	X	1000			
115-21-9		Trichloroethylsilane	X			1	500		
75-69-4		Trichlorofluoromethane			X	5000			
594-42-3		Trichloromethanesulfenyl chloride	X		X	100	500		
75-69-4		Trichloromonofluoromethane			X	5000			
327-98-0		Trichloronate	X			1	500		
88-06-2	2,4,6-	Trichlorophenol		O	X	10			
95-95-4	2,4,5-	Trichlorophenol		O	X	10			
609-19-8	3,4,5-	Trichlorophenol			X	10			
933-75-5	2,3,6-	Trichlorophenol			X	10			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
933-78-8	2,3,5-	Trichlorophenol			X	10			
15950-66-0	2,3,4-	Trichlorophenol			X	10			
25167-82-2		Trichlorophenol			X	10			
93-76-5	2,4,5-	Trichlorophenoxyacetic acid			X	1000			
98-13-5		Trichlorophenylsilane	X			1	500		
52-68-6		Trichlorphon		X	X	100			
27323-41-7		Triethanolamine dodecylbenzenesulfonate			X	1000			
998-30-1		Triethoxysilane	X			1	500		
121-44-8		Triethylamine			X	5000			
1582-09-8		Trifluralin [Benzeneamine,2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-1]		O					
75-50-3		Trimethylamine			X	100			
95-63-6	1,2,4-	Trimethylbenzene		O					
75-77-4		Trimethylchlorosilane	X			1	1000		
824-11-3		Trimethylolpropane phosphite	X			1	100/10000		
1066-45-1		Trimethyltin chloride	X			1	500/10000		
99-35-4	sym-	Trinitrobenzene			X	10			
123-63-7	1,3,5-	Trioxane,2,4,6-trimethyl-			X	1000			
639-58-7		Triphenyltin chloride	X			1	500/10000		

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
126-72-7		Tris (2,3-dibromopropyl) phosphate		O	X	1			
555-77-1		Tris(2-chloroethyl)amine	X			1	100		
68-76-8		Tris(aziridinyl)-para-benzoquinone		X					
72-57-1		Trypan blue			X	1			
66-75-1		Uracil mustard			X	1			
66-75-1		Uracil, 5-[bis(2-chloroethyl)amino]-			X	1			
541-09-3		Uranyl acetate			X	100			
10102-06-4		Uranyl nitrate			X	100			
36478-76-9		Uranyl nitrate			X	100			
51-79-6		Urethane (Ethyl carbamate)		O	X	1			
2001-95-8		Valinomycin	X			1	1000/10000		
7803-55-6		Vanadic acid, ammonium salt			X	1000			
7440-62-2		Vanadium (fume or dust)		O					
1314-62-1		Vanadium (V) oxide	X		X	1000	100/10000		
1314-62-1		Vanadium (V_2O_5), fume	X		X	1000	100/10000		
1314-62-1		Vanadium (V_2O_5), respirable dust	X		X	1000	100/10000		
1314-62-1		Vanadium pentoxide	X		X	1000	100/10000		
27774-13-6		Vanadyl sulfate			X	1000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
108-05-4		Vinyl acetate	X	O	X	5000	1000		
108-05-4		Vinyl acetate monomer	X	X	X	5000	1000		
593-60-2		Vinyl bromide		O					
75-01-4		Vinyl chloride		O	X	1			
75-01-4		Vinyl chloride (monomer)		X	X	1			
75-35-4		Vinylidene chloride		O	X	5000			
81-81-2		Warfarin	X		X	100	500/10000		
129-06-6		Warfarin sodium	X			1	100/10000		
95-47-6	o-	Xylene		O	X	1000			
106-42-3	p-	Xylene		O	X	1000			
108-38-3	m-	Xylene		O	X	1000			
1330-20-7		Xylene		X	X	1000			
1330-20-7		Xylene (mixed isomers)		O	X	1000			
1330-20-7		Xylene (mixed)		X	X	1000			
1300-71-6		Xylenol			X	1000			
87-62-7	2,6-	Xylidine		O					
28347-13-9		Xylylene dichloride	X			1	100/10000		
50-55-5		Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxy benzoyl) oxy]-, methyl ester			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7440-66-6		Zinc		X	X	1000			
7440-66-6		Zinc (fume or dust)		O	X	1000			
557-34-6		Zinc acetate			X	1000			
14639-97-5		Zinc ammonium chloride			X	1000			
14639-98-6		Zinc ammonium chloride			X	1000			
52628-25-8		Zinc ammonium chloride			X	1000			
1332-07-6		Zinc borate			X	1000			
7699-45-8		Zinc bromide			X	1000			
3486-35-9		Zinc carbonate			X	1000			
7646-85-7		Zinc chloride			X	1000			
557-21-1		Zinc cyanide			X	10			
7783-49-5		Zinc fluoride			X	1000			
557-41-5		Zinc formate			X	1000			
7779-86-4		Zinc hydrosulfite			X	1000			
7779-88-6		Zinc nitrate			X	1000			
127-82-2		Zinc phenolsulfonate			X	5000			
1314-84-7		Zinc phosphide	X		X	100	500		
16871-71-9		Zinc silicofluoride			X	5000			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
7733-02-0		Zinc sulfate			X	1000			
58270-08-9		Zinc, dichloro(4,4-dimethyl-5-((((methylamino)carbonyl)oxy)lmino) pentanenitrile)-, (T-4)-	X			1	100/10000		
12122-67-7		Zineb [Carbamodithioic acid,1,2-ethanediylbis-,zinc complex]		O					
13746-89-9		Zirconium nitrate			X	5000			
16923-95-8		Zirconium potassium fluoride			X	1000			
14644-61-2		Zirconium sulfate			X	5000			
10026-11-6		Zirconium tetrachloride			X	5000			
--		Antimony compounds		O	X				
--		Arsenic compounds		O					
--		Barium compounds		O					
--		Beryllium compounds		O	X				
--		Cadmium compounds		O	X				
--		Chlordane (technical mixture and metabolites)			X				
--		Chlorinated Benzenes			X				
--		Chlorinated Ethanes			X				
--		Chlorinated Naphthalene			X				

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
- -	Chlorinated Phenols			X				
- -	Chloroalkyl ethers			X				
- -	Chlorophenols		O					
- -	Chromium compounds		O	X				
- -	Cobalt compounds		O					
- -	Copper compounds		O	X				
- -	Cyanide compounds		O	X				
- -	DDT and metabolites			X				
- -	Dichlorobenzidine			X				
- -	Diphenylhydrazine			X				
- -	Endosulfan and metabolites			X				
- -	Endrin and metabolites			X				
- -	Glycol ethers		O					
- -	Haloethers			X				
- -	Halomethanes			X				
- -	Heptachlor and metabolites			X				
- -	Lead compounds		O	X				
- -	Manganese compounds		O					

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CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
- -		Mercury compounds		O	X				
- -		Nickel compounds		O	X				
- -		Nitrophenols			X				
- -		Nitrosamines			X				
- -		Phthalate esters			X				
- -		Polybrominated Biphenyls (PBBs)		O					
- -		Polynuclear aromatic hydrocarbons			X				
- -		Radionuclides			X	1			
- -		Selenium compounds		O	X				
- -		Silver compounds		O	X				
- -		Thallium compounds		X	X				
- -		Zinc compounds		X	X				
D004		Unlisted haz. waste characteristic of EP toxicity - arsenic			X	1			
D005		Unlisted haz. waste characteristic of EP toxicity - barium			X	1000			
D006		Unlisted haz. waste characteristic of EP toxicity - cadmium			X	1			
D007		Unlisted haz. waste characteristic of EP toxicity - chromium			X	1			
D012		Unlisted haz. waste characteristic of EP toxicity - endrin			X	1			
D008		Unlisted haz. waste characteristic of EP toxicity - lead			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (Insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
D013	Unlisted haz. waste characteristic of EP toxicity - lindane			X	1			
D009	Unlisted haz. waste characteristic of EP toxicity - mercury			X	1			
D014	Unlisted haz. waste characteristic of EP toxicity - methoxychlor			X	1			
D010	Unlisted haz. waste characteristic of EP toxicity - selenium			X	1			
D011	Unlisted haz. waste characteristic of EP toxicity - silver			X	1			
D015	Unlisted haz. waste characteristic of EP toxicity - toxaphene			X	1			
D016	Unlisted haz. waste characteristic of EP toxicity-2,4,-D			X	100			
D017	Unlisted haz. waste characteristic of EP toxicity-2,4,5-TP			X	100			
D002	Unlisted hazardous wastes-characteristic of corrosivity			X	100			
D001	Unlisted hazardous wastes-characteristic of ignitability			X	100			
D003	Unlisted hazardous wastes-characteristic of reactivity			X	100			
F027	Discarded, unused formu. w/tri, tetra, pentachlorophenols or derivatives			X	1			
F008	Electroplating bath sludges from bottoms using cyanides with exceptions --except for precious metals electroplating bath sludges			X	10			
F010	Quenching bath sludge (oil bath) (metal heat treating) using cyanides --except for precious metals heat treating quenching bath sludges			X	10			
F012	Quenching wastewater treat sludges fr. metal heat treat using cyanides --except for precious metal heat treating quenching wastewater treatmnt sludges			X	10			
F028	Residue fr. incin./thermal treat. soil contaminated w/specified waste			X	1			
F002	Specified spent halogenated solvents and still bottoms fr. recovery includ. Tetrachloroethylene, Methylene Chloride, Trichloroethylene, 1,1,1-Trichloroethane, Chlorobenzene, 1,1,2- Trichloro-1, 2, 2-trifluorpethane, Dichlorobenzene, Trichlorofluoromethane			X	1			
F001	Specified spent halogenated solvents used degreasing and sludges fr. recovery including Tetrachloroethylene, Trichloroethylene, Methylene chloride, 1,1,1- Trichloroethane, Carbon Tetrachloride, Carbonated Fluorocarbons			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
F005		Specified spent non-halogenated solvents & still bottoms fr. recovery including Carbon disulfide, Isobutanol, Methyl ethyl ketone, Toluene, Pyridine			X	100			
F003		Specified spent non-halogenated solvents and still bottoms fr. recovery including Xylene, Acetone, Ethyl acetate, Ethylbenzene, Ethyl ether, Methyl isobutyl ketone, Butyl alcohol, Cyclohexanone, Methanol			X	100			
F004		Specified spent non-halogenated solvents and still bottoms from recovery including Nitrobenzene, Cresols/cresylic acid			X	1000			
F007		Spent cyanide electroplating bath solutions w/specified exceptions --except for precious metals electroplating spent CN plating bath solutions			X	10			
F011		Spent cyanide solutions fr. salt bath pot cleaning (metal heat treat) --except for precious metals heat tr. spent fr.salt bath pot cleaning			X	10			
F009		Spent stripping and cleaning solutions (electroplating) using cyanides with excpt. --except for precious metals electroplating spent stripping/cleaning bath sol.			X	10			
F022		Wastes fr. manu. use of tetra-, penta-, or hexachlorobenzene (alkaline)			X	1			
F026		Wastes fr. prod. materials on equip. for tetra-, penta-, hexachlorobenze			X	1			
F023		Wastes fr. prod. of materials on equip. for tri- and tetrachlorophenols			X	1			
F021		Wastes fr. prod. or use of pentachlorophenol/intermed. to prod. deriv			X	1			
F024		Wastes from production of chlorinated aliphatic hydrocarbons (C content 1-5)			X	1			
F020		Wastes in prod. or use of tri- or tetrachlorophenol, or pest. deriv			X	1			
F006		Wastewater treatment sludges (electroplating) w/specified exceptions 1) sulfuric acid anodizing Al, 2) Sn plating on carbon steel, 3) Zn plating on carbon steel, 4) Al or Zn-Al plating on carbon steel, 5) Cleaning/Stripping assoc w/Sn,Zn and Al plating on carbon steel 6) chemical etching of Al			X	1			
F019		Wastewater treatment sludges from chem. conversion coating of aluminum			X	1			
K064		Acid plant blowdown slurry/sludge resulting from thickening of blowdown slurry from primary copper production			X	1			
K060		Ammonia still lime sludge from coking operations			X	1			
K051		API separator sludge fr. petroleum refining industry			X	1			
K021		Aqueous spent antimony catalyst waste fr. fluoromethanes prod.			X	1			

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CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K013		Bottom stream from acetonitrile column in production of acrylonitrile			X	1			
K011		Bottom stream from wastewater stripper in production of acrylonitrile			X	1			
K014		Bottoms from acetonitrile purif. column in production of acrylonitrile			X	5000			
K071		Brine purif. muds. fr. mercury cell process in chlorine prod. except...			X	1			
K031		By-product salts generated in prod. of MSMA and cacodylic acid			X	1			
K027		Centrifuge and distillation residues fr. toluene diisocyanate prod.			X	1			
K073		Chlorinated hydrocarbon waste fr. purif. step of... in chlorine prod.			X	1			
K030		Column bottoms/heavy ends fr. combined prod. tri- and perchloroethylene			X	1			
K087		Decanter tank tar sludge from coking operations			X	100			
K043	2,6-	Dichlorophenol waste from 2,4-D prod.			X	1			
K048		Dissolved air flotation (DAF) float fr. petroleum refining industry			X	1			
K022		Distillation bottom tars fr. prod. of phenol/acetone fr. cumene			X	1			
K095		Distillation bottoms fr. prod. 1,1,1-trichloroethane			X	1			
K025		Distillation bottoms fr. prod. nitrobenzene by nitration of benzene			X	1			
K024		Distillation bottoms fr. prod. phthalic anhydride fr. naphthalene			X	5000			
K094		Distillation bottoms fr. prod. phthalic anhydride fr. ortho-xylene			X	5000			
K083		Distillation bottoms from aniline extraction			X	100			
K009		Distillation bottoms from production of acetaldehyde from ethylene			X	1			

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CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K023		Distillation light ends fr. prod. phthalic anhydride fr. naphthalene			X	5000			
K093		Distillation light ends fr. prod. phthalic anhydride fr. ortho-xylene			X	5000			
K085		Distillation or fractionation column bottoms from chlorobenzene prod.			X	1			
K010		Distillation side cuts from production of acetaldehyde from ethylene			X	1			
K091		Emission control dust or sludge from ferrochromium production			X	1			
K090		Emission control dust or sludge from ferrochromiumsilicon production			X	1			
K061		Emission control dust/sludge fr. prim. prod. steel in elec. furnaces			X	1			
K069		Emission control dust/sludge fr. secondary lead smelting			X	1			
K039		Filter cake fr. filtr. diethylphosphorodithioic acid in phorate prod.			X	10			
K034		Filter solids fr. filtr. hexachlorocyclopentadiene in chlordane prod.			X	1			
K050		Heat exchanger bundle cleaning sludge fr. petroleum refining industry			X	1			
K017		Heavy ends (still bottoms) from purif. column in prod. epichlorohydrin			X	1			
K096		Heavy ends fr. heavy ends column fr. prod. 1,1,1-trichloroethane			X	1			
K019		Heavy ends from distillation in production of ethylene dichloride			X	1			
K020		Heavy ends from distillation in production of vinyl chloride monomers			X	1			
K018		Heavy ends from fractionation column in production of ethyl chloride			X	1			
K016		Heavy ends or distillation residues from prod. of carbon tetrachloride			X	1			
K042		Heavy ends/dist. residues fr. dist. tetrachlorobenzene in 2,4,5-T pr.			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #	CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K008	Oven residue from the production of chrome oxide green pigments			X	1			
K047	Pink/red water from TNT operations			X	10			
K049	Slop oil emulsion solids from the petroleum refining industry			X	1			
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production			X	1			
K001	Sludge of wood preserving processes using creosote/pentachlorophenol			X	1			
K086	Solvent, water, caustic washes and sludge cleaning equip. for ink formu.			X	1			
K045	Spent carbon from treat. of wastewater containing explosives			X	10			
K028	Spent catalyst fr. hydrochlorinator reactor in prod. 1,1,1-trichloroethane			X	1			
K062	Spent pickle liquor fr. steel finishing operations			X	1			
K088	Spent potliners from primary aluminum reduction			X	1			
K036	Still bottoms fr. toluene reclamation distil. in disulfoton prod.			X	1			
K015	Still bottoms from the distillation of benzyl chloride			X	1			
K026	Stripping still tails fr. prod. methyl ethyl pyridines			X	1000			
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities			X	1			
K052	Tank bottoms (leaded) fr. petroleum refining industry			X	10			
K098	Untreated process wastewater fr. toxaphene prod.			X	1			
K099	Untreated wastewater fr. 2,4-D prod.			X	1			
K097	Vacuum stripper discharge fr. chlordane chlorinator in chlordane prod.			X	1			

MASTER CRTK CHEMICAL L..t--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K029		Waste fr. product steam stripper in 1,1,1-trichloroethane prod.			X	1			
K033		Waste- and scrubwater fr. chlorin. cyclopentadiene in chlordane prod.			X	1			
K038		Wastewater fr. washing and stripping of phorate prod.			X	1			
K006		Wastewater sludge fr. prod. chrome oxide green pigments (anhy. and hyd.)			X	1			
K002		Wastewater sludge from production of chrome yellow and orange pigments			X	1			
K003		Wastewater sludge from production of molybdate orange pigments			X	1			
K046		Wastewater tr. sludge from manu. formu. loading of lead-based initiating cmpd.			X	100			
K040		Wastewater treat. sludge from phorate prod.			X	1			
K032		Wastewater treat. sludge from prod. of chlordane			X	1			
K041		Wastewater treat. sludge from toxaphene prod.			X	1			
K037		Wastewater treat. sludges from disulfoton prod.			X	1			
K044		Wastewater treat. sludges from manu. and processing of explosives			X	10			
K035		Wastewater treat. sludges generated in creosote prod.			X	1			
K084		Wastewater treat. sludges in prod. of veterinary pharmaceut. (arsenic)			X	1			
K005		Wastewater treatment sludge from production of chrome green pigments			X	1			
K007		Wastewater treatment sludge from production of iron blue pigments			X	1			
K004		Wastewater treatment sludge from production of zinc yellow pigments			X	1			
K104		Combined wastewater streams gen. nitrobenzene/aniline chlorobenzenes			X	1			

MASTER CRTK CHEMICAL LIST--NOVEMBER 1988

CAS OR OTHER ID #		CHEMICAL NAME (insert all trade names)	EHS	TC	CERCLA HS	RQ (LBS)	TPQ (POUNDS)	ANNUAL USE (LBS)	MAX STORAGE (LBS)
K113		Condensed liquid light ends fr. purif. toluenediamine in prod. via...			X	1			
K101		Distillation tar residues fr. aniline-based compounds vet. pharmaceut			X	1			
K115		Heavy ends purif. toluenediamine in prod. via hydrog. dinitrotoluene			X	1			
K116		Organic condens. fr. solvent recovery column toluene diisocyanate via...			X	1			
K103		Process residues from aniline extraction from aniline prod.			X	100			
K111		Product washwaters from prod. dinitrotoluene via. nitration of toluene			X	1			
K112		React. by-prod. water fr. drying column prod. toluenediamine via...			X	1			
K102		Residue fr. activated carbon for decolorization prod. vet. pharmaceut.			X	1			
K105		Separated aqueous stream fr. reactor prod. washing step in chlorobenz.			X	1			
K118		Spent absorbent solids fr. purif. ethylene dibromide in prod. of it			X	1			
K136		Still bottoms fr. purif. ethylene dibromide in prod. via bromination of ethene			X	1			
K114		Vicinals fr. purif. toluenediamine in prod. via hydrog. dinitrotoluene			X	1			
K100		Waste leaching solution...(components identical with those of K069)			X	1			
K117		Wastewater fr. reaction vent gas scrubber prod. ethylene bromide via...			X	1			
K106		Wastewater treatment sludges fr. mercury cell process in chlorine prod.			X	1			
NA		Coke oven emissions			X	1			
PMN 82147		Organorhodium complex	X			1	10/10000		

SECTION 5

AIR EMISSIONS

Introduction

Overview: The Clean Air Act regulations are designed to "protect and enhance the quality of the nation's air resources." This is done by controlling emissions, i.e., any materials emitted into the air by any source, either mobile or stationary. As discussed below, only specific types of emissions are regulated.

The first "Clean Air Act" was passed in 1963. This was amended in 1963 to add Title II, The Motor Vehicle Air Pollution Control Act. In 1970, Congress determined that drastic changes were needed in the government response to air pollution, and a totally restructured federal/state scheme was passed. The 1970 Clean Air Act Amendments were substantially amended in 1977 to add new provisions to prevent significant deterioration of air quality, impose stringent standards in areas that failed to attain national standards, restrict the use of dispersion techniques, and strengthen enforcement.

Regulations promulgated under the Clean Air Act are somewhat different than other acts in that the federal regulations establish ambient air standards for "criteria" pollutants which the states (as opposed to industries) are required to achieve. States must then adopt regulations which will enable the state to meet the federal standards. The state regulations are subject to federal EPA approval. The state plan to meet federal standards is known as a State Implementation Plan or SIP. The mechanisms a state uses to meet the federal standards depend upon the state and although these mechanisms differ among states, they typically include emission standards, permitting, operating conditions, and operating and air pollution control equipment requirements.

In addition to the requirements for state programs, the federal EPA has directly established requlations for controlling the emission of hazardous air pollutants and several categories of new industrial sources. These regulations include testing and recordkeeping requirements.

National Ambient Air Quality Standards (NAAQS): The NAAQS establish allowable ambient air concentrations for criteria air pollutants. The pollutants for which NAAQS have been established are:

- Carbon Monoxide
- Lead
- Total Suspended Particulates
- Sulfur Dioxide
- Ozone (standard achieved by regulating hydrocarbons and volatile organic compounds)
- Nitrous Oxides

The federal government has established primary and secondary standards for these criteria pollutants. To determine if the standards for these pollutants are being met, each state is broken into several Air Quality Control Regions (AQCR) and the ambient air quality in these regions is monitored. If the air quality standards are met for a criteria pollutant, then the area is considered to be in "attainment" for that pollutant. If the air quality standards aren't being met, the area is in non-attainment. Each state uses this knowledge to establish emission and permitting standards.

It should be noted that a state may choose not to establish limits for a criteria pollutant if it is in attainment with the standards. Also, their definitions of exactly what constitutes that pollutant may vary. For example, Volatile Organic Compounds (VOCs) may be defined by different vapor pressures in different states.

New Source Performance Standards (NSPS): EPA has chosen to regulate certain categories of "new" sources under New Source Performance Standards (NSPS) which are found in 40 CFR Part 60. These standards are developed for specific industries (e.g., metal surface coating operations). The sources covered by these regulations are any sources for which construction or "major" modifications commenced after the regulations were promulgated. NSPS are considered to be "technology forcing" and are based upon "best demonstrated technology systems." The standards set forth under the NSPS are not only concentration limits for various pollutants, but also requirements for monitoring, reporting, and performance testing.

The EPA enforces this program until the state has been delegated the authority for its enforcement.

Categories of sources which are regulated under the NSPS regulations are:

- Fossil fuel fired steam generators (250 MBTU/hr)
- Electric utility steam generating units
- Industrial-commercial-institutional steam generating units
- Incinerators
- Portland cement plants
- Nitric Acid plants
- Sulfuric acid plants
- Asphalt concrete plants
- Petroleum refineries
- Storage vessels for petroleum liquids
- Volatile organic liquid storage vessels (40,000-gallon)
- Secondary lead smelters
- Secondary brass and bronze production plants
- Basic oxygen process furnaces
- Sewage treatment plants

- Primary copper smelters
- Primary zinc smelters
- Primary lead smelters
- Primary aluminum reduction plants
- Wet-process phosphoric acid plants
- Superphosphoric acid plants
- Diammonium phosphate plants
- Triple superphosphate plants
- Granular triple superphosphate storage facilities
- Coal preparation plants
- Ferroalloy production facilites
- Electric arc furnaces
- Kraft pulp mills
- Glass manufacturing plants
- Grain elevators
- Surface coating of metal furniture
- Stationary gas turbines
- Lime manufacturing plants
- Lead-acid battery manufacturing plants
- Metallic mineral processing plants
- Automobile and light-duty truck surface coating operations
- Phosphate rock plants
- Ammonium sulfate manufacturers
- Publication rotogravure printing
- Pressure sensitive tape and label surface coating operations
- Industrial surface coating - Large appliances
- Metal coil surface coating
- Asphalt processing and roofing manufacturers
- Volatile Organic Compound equipment leaks in the synthetic organic chemicals manufacturing industry
- Beverage can surface coating industry
- Bulk gasoline terminals
- Rubber tire manufacturing industry
- Flexible vinyl and urethane coating and printing
- Equipment leaks of VOC in petroleum refineries
- Synthetic fiber production facilities
- Petroleum dry cleaners
- Onshore natural gas processing plants
- Nonmetallic mineral processing plants
- Wool fiberglass insulation manufacturing plants

National Emission Standards for Hazardous Air Pollutants (NESHAP): EPA has also regulated several pollutants which they have determined to be "hazardous" air pollutants. These pollutants are regulated under NESHAP. The NESHAPs which have been established to date apply to both new and existing sources and are somewhat source-specific.

The following pollutants are currently covered under the NESHAP regulations:

- Asbestos
- Benzene
- Beryllium
- Radon
- Mercury
- Radionuclides
- Vinyl Chloride

A number of other substances are also being reviewed for inclusion under the NESHAP regulations; however, this list is fairly comprehensive and subject to change as new information is obtained on various substances.

The NESHAPs regulations cover not only emission standards but also cover source emission testing and reporting requirements. In addition, a standard which specifically applies to equipment leaks (fugitive emission sources) has also been established to check equipment utilized to control volatile hazardous air pollutants such as benzene (40 CFR 61.240-247). The following pieces of equipment are covered by this standard:

- Pumps
- Open-ended valves or lines
- Compressors
- Flanges and other connectors
- Pressure relief devices
- Product accumulator vessels

Monitoring: Monitoring of sources may be required under a number of different regulations including state-specific requirements, NSPS, and NESHAP. Source monitoring typically involves testing stack emissions to ensure that they comply with either opacity or concentration standards. Source monitoring may also be required for facilities under permit conditions or enforcement actions. Ambient air monitoring is sometimes required for new facilities, for facilities that are required to undertake ambient air monitoring as part of the permitting of a large source, or for sources emitting hazardous air pollutants.

In some cases, continuous emission monitors (CEMs) may be required to provide a continuous record of compliance. CEMs are required primarily on new sources, but may be required at older sources as a resolution to an enforcement action.

Record Keeping: Record keeping may be required under state or federal regulations or permits and used to:

- Monitor emissions
- Monitor ambient air
- Demonstrate performance of pollution control equipment
- Verify CEM calibration testing

State Role: The Clean Air Act, more so than any other environmental law, was designed to be implemented by each state. The NAAQS listed in the regulations are not directly enforceable and each state is responsible for setting the source standards which will allow the state to comply with the NAAQS. The state's establish their methods for attaining the NAAQS standards by enacting regulations in the State Implementation Plan (SIP) which is required to be developed by every state. These plans must be approved by EPA to assure that the measures contained in them are capable of allowing the state to meet the NAAQS.

Once a state's SIP has been approved by EPA, it becomes a part of federal law. At the same time, the SIP is an independent part of the state's air pollution control regulations. These regulations vary from state to state and are the primary factors governing air emissions. Like federal regulations, SIPs can be amended from time to time and it is important to be aware of any changes which may occur. Changes to SIPs are published in the Federal Register.

State regulations specify the types of sources which must be permitted, emission standards, reporting requirements, and air pollution control which must be achieved. While the federal regulations cover some sources, the majority of all air emission sources are regulated by state regulations only.

In order to control emissions from a source, states often require that an air permit be obtained for emission sources. Permits are typically required based upon amount or type of pollutant or air pollution control equipment and may be issued for an entire facility or for an individual source. Frequently permits are required not only to operate a source (Permit to Operate or PTO) but also before construction or installation (Permit to Install or PTI). If a PTI is required, it must be replaced with a PTO before operation begins. It is important to check state regulations to determine if a source needs an air permit(s) and what type of permit(s) are necessary.

States may also choose to regulate a greater number of pollutants as hazardous or toxic air pollutants. State regulations list those pollutants which are considered hazardous or toxic as well as the emission limits or other requirements associated with the hazardous pollutants.

SECTION 5

AIR EMISSIONS

Guidance

Regulatory Authority:	The Clean Air Act; Corresponding State Statutes
Regulatory Citation:	40 CFR 50-87
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State and County Agencies

1. - 2. Questions are self-explanatory.

3. Point sources are specific emissions points such as smoke stacks, while non-point sources are "fugitive" emission sources such as an unpaved road or valves or pump seals from which volatile organic compounds may be emitted. A listing of all air emission sources (including those which are not permitted) should be maintained by the site in order to provide a reference point for permitting requirements. A map or drawing indicating all of the emission points is also a good management practice

4. See introduction.

SECTION 5

AIR EMISSIONS

Survey Questions

If there are any air emission sources at the site, complete this section.

	Yes	No	Unk	N/A
A. Background				
1. If the facility has been subject to an inspection regarding air emissions issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that the facility has copies of reports or correspondence: Passivate room requires air scrubber	XX	___	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to air emissions? If so, describe and confirm that the facility has copies of all documents:	___	XX	___	
3. Does the facility have point sources of air emissions? If so, describe the location of each point source emission, the annual emission amount, the chemical identity of all emissions, and the number and type of air pollution control devices (i.e. baghouses, dust collectors, filters). Use Attachment D.	XX	___	___	
4. Identify the attainment status of the area in which the facility is located as respects the National Ambient Air Quality Standards under the Clean Air Act (i.e., ozone - non-attainment; carbon monoxide - attainment; sulfur dioxide - non-attainment secondary standard):				

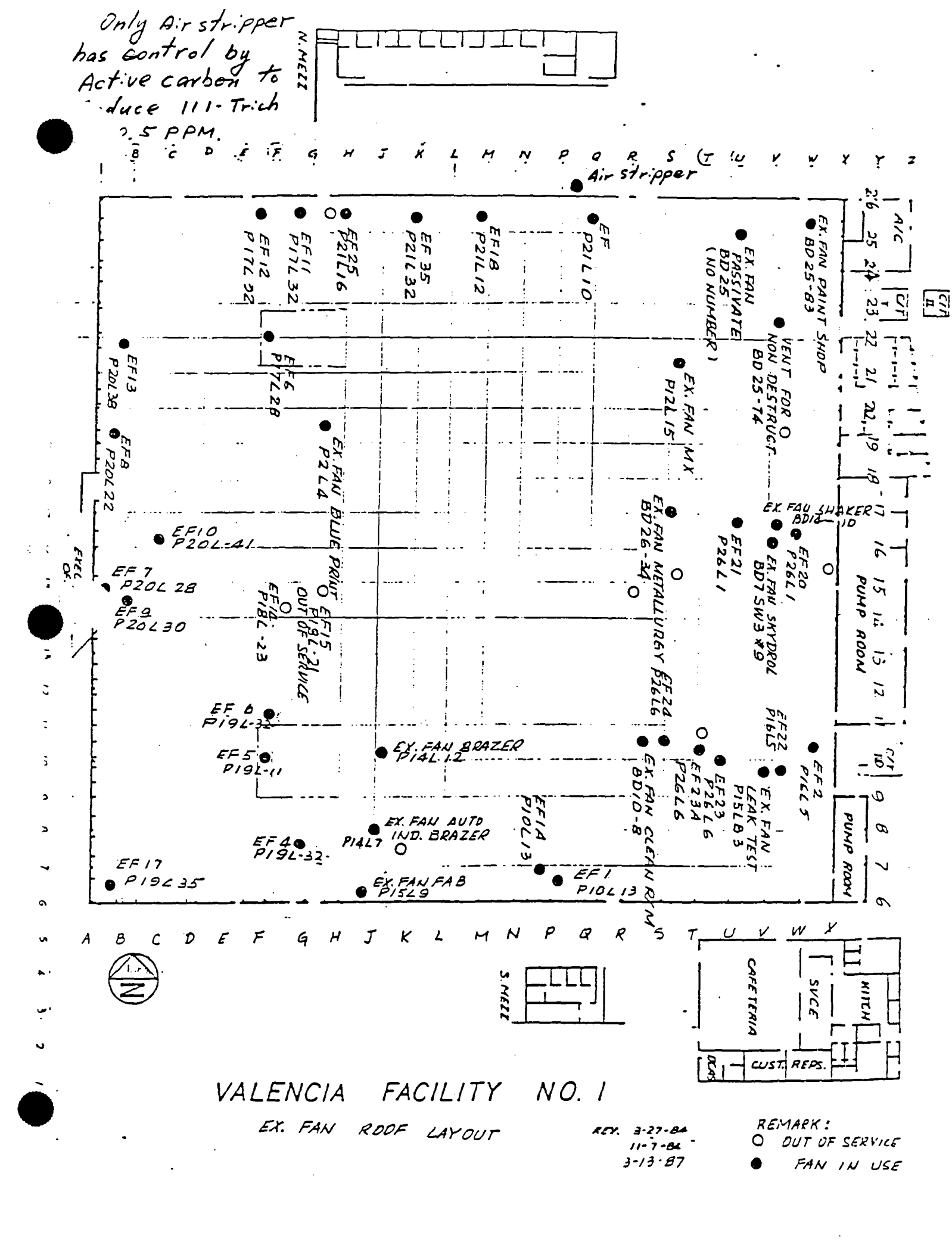
5. See Introduction.

7. Sources which do not require operating permits because they were in place or "grandfathered" prior to the adoption of permit regulations may need to be registered with the state. Check with your state to verify if sources which are not permitted need to be registered.

8. Operating permits may be required for emission sources (new, modified, and existing) if they emit pollutants in excess of set quantities. Check with state and local agencies to determine if an operating permit is required. In addition, sources which are regulated under NSPS must notify EPA or a delegated state agency thirty days prior to starting operations (40 CFR 60).

9. A stationary source is any building, structure, facility, or installation which emits or may emit any air pollutant. Facilities that plan to construct or make a major modification to any existing stationary source must often apply for a construction permit (Permit to Install to "PTI") from the state and/or EPA **prior to starting construction or making any changes which will affect the emission rate.** After construction is complete, a temporary operating permit (Permit to Operate or "PTO") must be obtained prior to receiving an operating permit (Permit to Operate or "PTO"). In addition, sources which are covered under NSPS (40 CFR 60) must notify EPA or the state agency (if the program has been delegated to the state) within thirty days after the commencement of construction.

Only Air stripper has control by Active carbon to reduce 111-Trich 2.5 PPM.

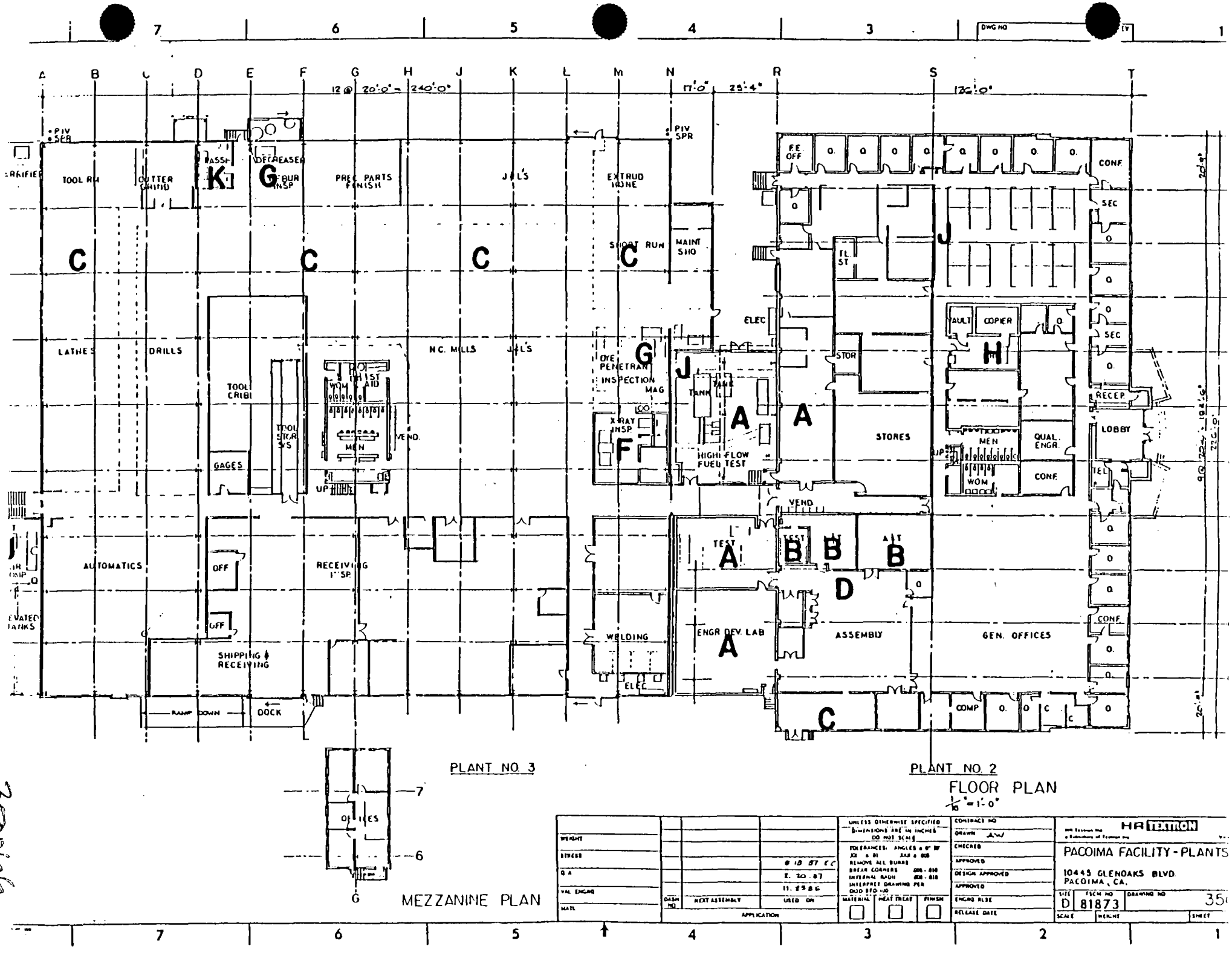


VALENCIA FACILITY NO. 1

EX. FAN ROOF LAYOUT

REV. 3-27-84
11-7-84
3-13-87

REMARK:
○ OUT OF SERVICE
● FAN IN USE



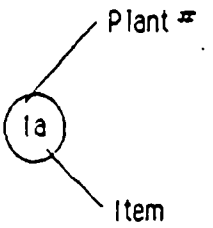
WEIGHT				UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE	CONTRACT NO	HR TEXTRON	
STRESS			8 18 87 EC	TOLERANCES: ANGLES ± 0° 30' .XX ± .01 .XXX ± .005 REMOVE ALL BURRS BREAK CORNERS .005 - .010 INTERNAL RADII .005 - .010 INTERPRET DRAWING PER DOD STD 100	DRAWN JAW	PACOIMA FACILITY - PLANTS	
Q A			2. 20. 87		CHECKED	10445 GLENOAKS BLVD. PACOIMA, CA.	
VAL ENGRG			11. 25 86		APPROVED		
MATL	DASH NO	NEXT ASSEMBLY	USED ON	MATERIAL / HEAT TREAT / FINISH	DESIGN APPROVED	SIZE D	FSCM NO 81873
		APPLICATION			APPROVED	DRAWING NO 35	
					ENGRG RLSE	SCALE	WEIGHT / SHEET
					RELEASE DATE		

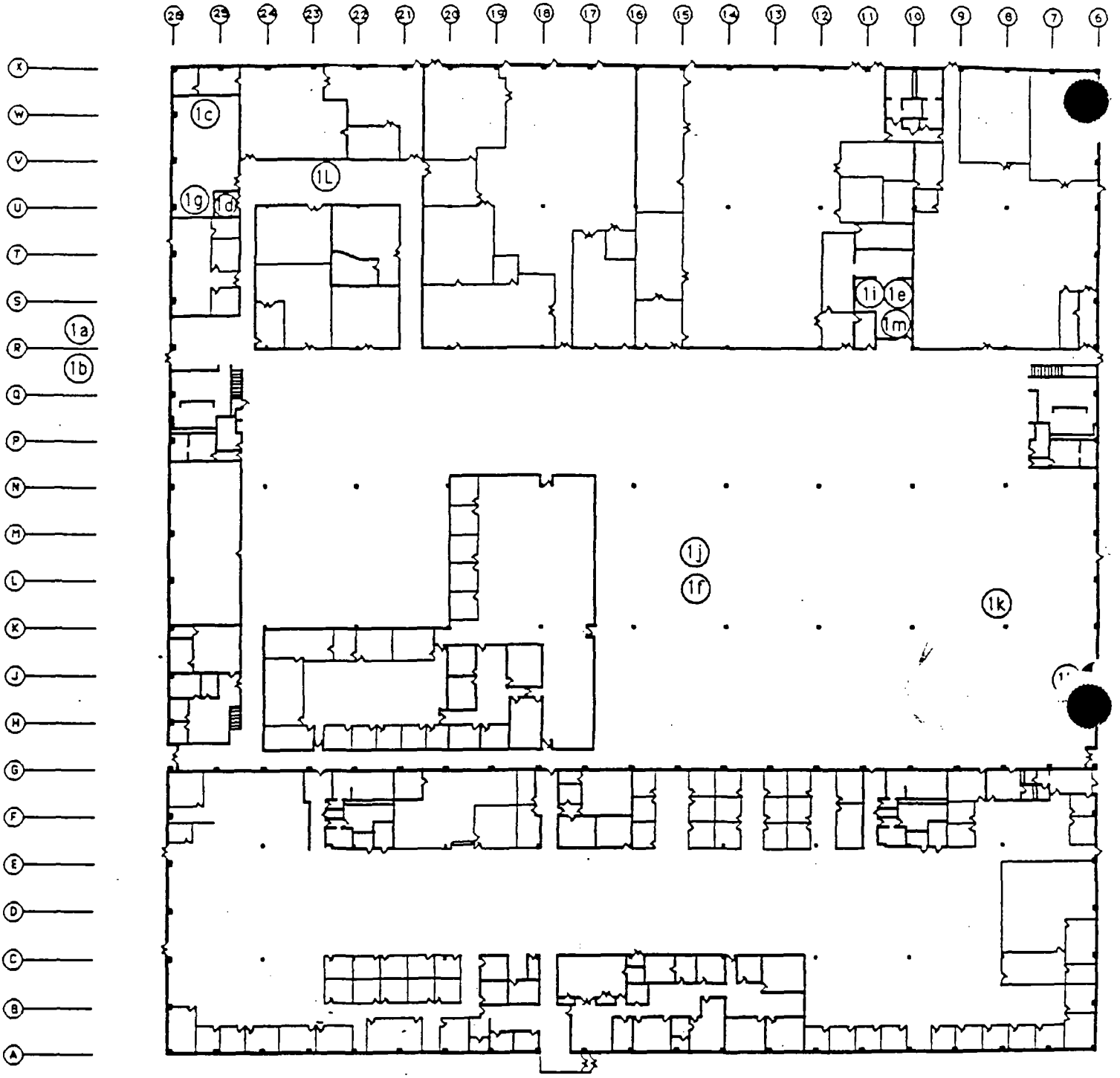
350066

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 1 VALENCIA

Item	Permit #	Description	Make/Model #
1a	M 28451	500 Gal. Storage Tank	N/A
1b	M 28450	1,000 Gal. Storage Tank	N/A
1c	M 28149	Spray Booth (Paint & Solvent)	DW 6530
1d	M 38175	Vapor Degreaser	Defluxer/402
1e	P 36402	Vapor Degreaser	Branson/AC100
1f	P 36403	Vapor Degreaser	Baron-Blakeslee/BH420
1g	P 36405	Bake Oven	Beattie/N/A
1h	M 02807	Vapor Degreaser	Degreastil/ 2010
1i	M 24354	Ultrasonic Degreaser	Baron-Blakeslee/MSR-480
1j	M 24355	Ultrasonic Degreaser	Baron-Blakeslee/MSR-120E
1k	M 24356	Ultrasonic Degreaser	Baron-Blakeslee/MSR-120
1L	M 24353	Vapor Degreaser	Baron-Blakeslee/DP4-2424
1m	D 01806	Delta Sonic Vapor Degreaser	Ministill/DSIOR-3



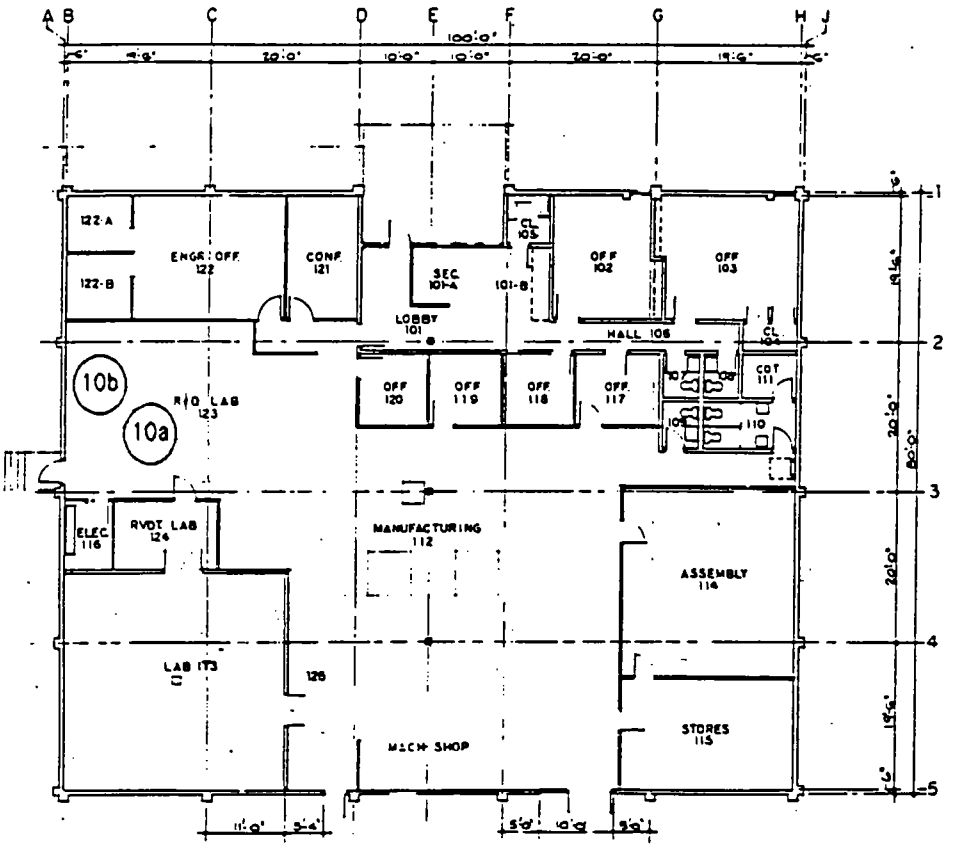


PLANT 1 LAYOUT
SCALE: 1/60"=1'-0"

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 10 VALENCIA

Item	Permit #	Description	Make/Model #
(10a)	M 44555	Vapor Degreaser	Loncostil/CF 300
(10b)	M 28449	Vapor Degreaser	Degreastil/2010

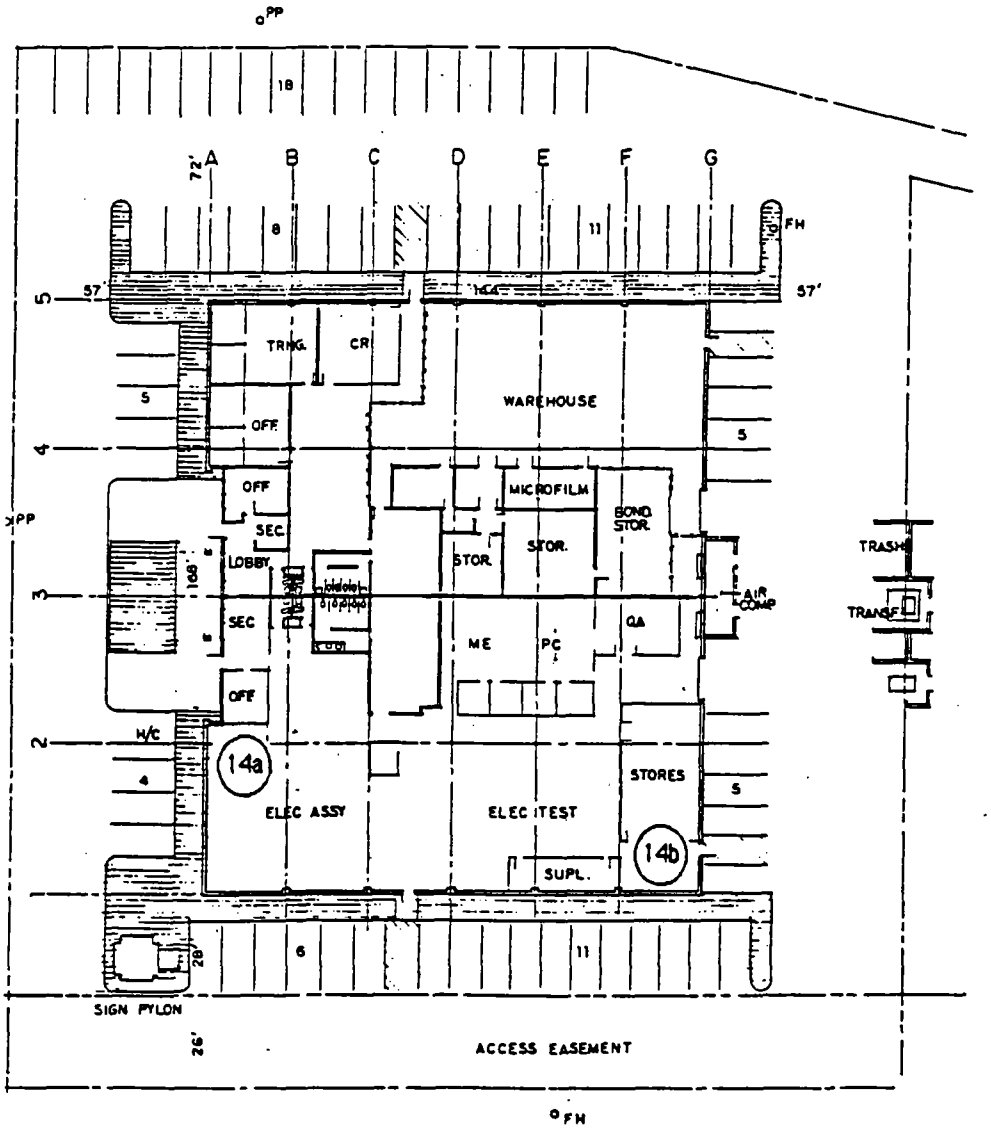


PLANT 10

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 14 VALENCIA

Item	Permit #	Description	Make/Model #
(14a)	R-M 47060	Vapor Degreaser	Unique Vapo Kleen
(14b)	M 45740	Paint Booth	Devilbiss/DF-578

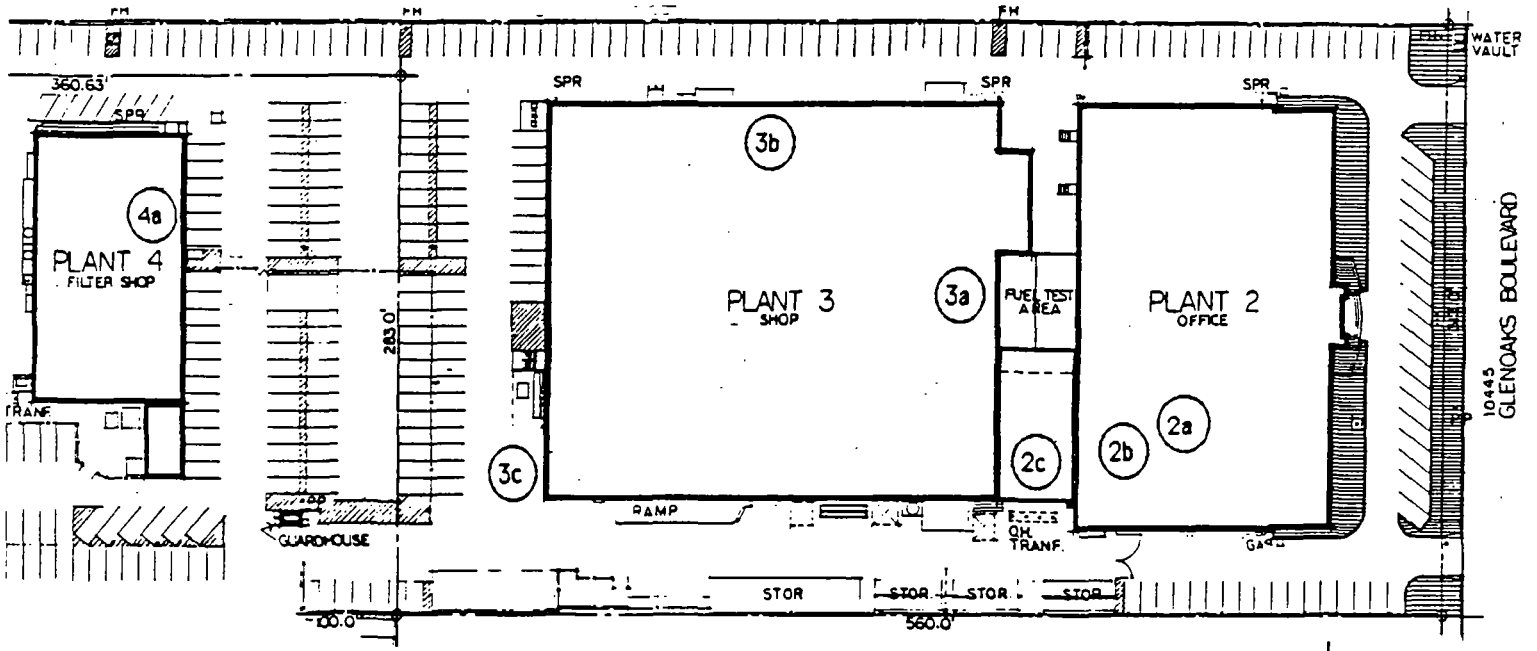


PLANT 14

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 2,3,& 4 PACOIMA

Item	Permit #	Description	Make/Model #
2a	M 34290	Solvent Recovery Still	Baron Blakeslee/MRR10
2b	M 61282	Spray Booth	Binks/BF-3 1/2-6-T-B
2c	M 28329	250 Gal. Freon Storage Tank	N/A
3a	M 03677	Vapor Degreaser	Baron Blakeslee/HD-425
3b	M 47059	Vapor Degreaser	Baron Blakeslee/DPH-2430
3c	M 28328	550 Gal. Bulk Storage Tank	N/A
4a	M 58594	Delta Sonic Degreaser	DS10-34



Plant #

.a

Item

	Yes	No	Unk	N/A
5. List any New Source Performance Standards under 40 CFR Section 60 that apply to the facility. _____ _____				
6. If the facility has boilers on site, describe their BTU rating, the fuel used, the percentage of sulfur, and how the fuel is stored. Use Attachment E.				
B. Air Permits and Registrations				
7. If state and/or local regulations require registration of emission sources (point and non-point) which operated prior to a specific date, have all such sources been registered? Confirm that facility has a copy.	XX	___	___	___
8. If state or local regulations require operating permits, are they acquired within the specified time limits? Confirm that facility has a copy.	XX	___	___	___
9. If the facility constructed and/or modified any stationary source of air emissions, was a permit obtained from the state air pollution control authority and/or EPA? Confirm that facility has a copy.	XX	___	___	___
10. Have facility operations during the last three years been in accordance with conditions of applicable air pollution control permits? If not, please explain. _____ _____	XX	___	___	
11. Does the facility intend to increase production, add any new process, or undertak any expansion which would increase or add air emissions?	XX	___	___	
a. If yes, does the facility need a new permit or modification to the existing permit?	XX	___	___	
b. If yes, can the facility obtain such a permit or modification by the appropriate date?	XX	___	___	
c. Has the facility analyzed the cost associated with the new permit or modification?	XX	___	___	

12. A copy of a permit or registration must be maintained on site for all pieces of equipment requiring them. The amount of time which a permit or registration must be maintained after the equipment has been shut down is dependent upon the specific state regulations or plant policy.

13. State or local agencies may require the reporting of excess emissions or the failure of air pollution control equipment under permits, air pollution regulations, or community or state emergency response acts. Check permits or contact state and local agencies.

14. Air pollution plans (e.g., air emission reduction plans and episode action plans) are required by some states and are dependent upon different factors including number of employees and types of sources. The plan includes the measures which will be taken by the facility to reduce or stop emmissions should the air quality deteriorate to a point where it is detrimental to human health. The plan should be updated when changes involving air emissions are made to the facility. Several states require that the plans be submitted for approval while others only require that they be available on site.

16. Facilities may be required to monitor emissions under permits, NSPS (40 CFR 60), NESHAP, and state regulatory requirements. Monitoring requirements differ significantly under each of these sets of requirements. They must be checked specifically to see if monitoring is required.

17. Source monitoring, including opacity monitoring, is required for facilities covered under NSPS regulations (40 CFR 60).

		Yes	No	Unk	N/A
12.	Are the following records maintained at the site for the period of time required by applicable state or local regulations:				
	a. Registration documents?	X			
	b. Permits issued and pending?	X			
	c. Exemptions and waivers of compliance?	X			
	d. Agency inspection reports?	X			
	Confirm that facility has a copy.				
C.	**Monitoring and Record Keeping for Air Emission and Pollution Control Systems**				
13.	Has the facility kept all emissions within permit limitations? If not, describe and state whether such exceedancs were required to be reported to the appropriate agency.	X			
	_____				
	_____				
	_____				
14.	a. If required by state law, does the facility have an Air Emission Reduction Plan, Episode Action Plan, or similar plan? Confirm that facility has a copy.		X		
	b. If required was the plan submitted to the state for for approval? Confirm that facility has a copy of cover letter.		X		
15.	If required, does the facility maintain emission inventory records?	X			
16.	If required, has the facility installed continuous emission monitoring devices?		X		
17.	If required, has the facility complied with opacity emission limitations?				X
18.	If required, does the facility conduct emission sampling/ testing or ambient monitoring? If so, please describe.				X
	_____				
	_____				
	_____				

19. Results of monitoring must be compared with the standards established under permits, NSPS, NESHAP, or state regulations. Exceedances of the standards must be reported to the appropriate agency.

20. All facilities subject to NSPS regulations requiring monitoring must submit a written report of emissions to EPA or the approved state every calendar quarter (40 CFR 60.7).

21. Continuous emission monitors (CEMs) and ambient air monitors must be checked to assure that they are working properly and must be calibrated periodically to assure that the information collected is accurate. The NSPS regulations contain specific regulations requiring routine calibration checks for CEMs (40 CFR 60.13). Calibration of ambient air monitors must be performed in accordance with any specification included under the permitting or the NESHAP regulations.

22. Facilities may be required to conduct performance tests (such as stack testing or opacity checks) to assure that air pollution control equipment is operating properly. Performance testing must be conducted within sixty days after achieving the maximum production rate at facilities governed by NSPS regulations (40 CFR 60.8). Periodic performance testing may be specified in the source permit or under any enforcement actions brought against the source. Procedures for testing sources are found in 40 CFR 60 Appendix A and/or state regulations.

23. Records may need to be maintained for air pollution sources and control equipment. Records required under NSPS include information on all required testing and monitoring. They must be maintained for a minimum of two years (40 CFR 60.7). Certain monitoring data obtained in connection with a construction permit must be maintained for a specific period of time (40 CFR 52.21(m) and (n)) and should be maintained for at least the life of the plant. Permits and specific state regulations should be checked to determine if records are required for other sources.

25. All complaints received should be investigated and corrective actions should be taken. A record of the problem and corrective actions should be maintained to document the response. A letter discussing the problem and any remedial action should be sent to the corporate legal staff. A decision will then be made relative to notifying the appropriate governmental agency.

	Yes	No	Unk	N/A
19. a. Does the site comply with all specific limitations established for those parameters being monitored?	XX			
b. If not, has this been reported to the regulatory agency?				
20. If required, are routine monitoring reports submitted to the control agency on a timely basis?				XX
21. If required, are calibration checks made of all monitoring equipment?	XX			
22. If required, has the site conducted any performance tests of air pollution control systems?				XX
23. Are the following records maintained on site for the required period of time:				
a. Emission monitoring?	XX			
b. Ambient air monitoring?		XX		
c. Pollution control equipment performance tests		XX		
d. Calibration and maintenance records?		XX		
e. Operating records?	XX			
Confirm that facility has a copy.				
24. Is the facility free of emissions that are likely to contribute to interstate or international air pollution control problems?		XX		

D. Public Air Quality Concerns

25. Does the facility have any emissions, odorous or otherwise, which have resulted in complaints from the general public? If so complete Attachment F.		XX		
a. Is an air emission control log kept on the nature, source, and resolution of the complaints?		XX		
b. Are complaints routinely investigated?	XX			

26. Facilities which emit hazardous air pollutants (see Introduction for a listing) must register their sources with the EPA (40 CFR 61.10 and Appendix A) or the state agency if the state has been delegated the NESHAP program. The state may require permits or source registration for additional substances which it has designated as hazardous air pollutants. Changes in any of the information supplied when the source was registered must be provided to the administering agency within thirty days after the change (40 CFR 61.10 and Appendix A). Check state regulations to determine if a different timetable is required by the state.

27. The emissions of hazardous air pollutants from a particular source should be compared to those set forth in 40 CFR 61 and applicable state regulations to determine whether the source is in compliance.

29.a. Stack testing must be conducted on every source which emits a hazardous air pollutant in accordance with the NESHAP or state standards, unless waived (40 CFR 61). NESHAP standards generally require stack testing within ninety days of the source start-up or ninety days after the effective date of the applicable standard. Stack testing under NESHAP must be conducted in accordance with 40 CFR 61.14 and the testing methods set forth in 40 CFR Appendix B.

29.b. Time limits have been established for the analysis of samples collected during stack sampling for hazardous air pollutants. These limitations under NESHAP are set forth in 40 CFR 61 and are specific to the particular hazardous pollutant. The time limit for receiving the analysis for most samples is thirty days.

29.c. Results of NESHAP testing must be retained at the facility for a minimum of two years (40 CFR 61). Check state regulations to determine if records must be kept for longer than two years and for the length of time results of testing for state-specified hazardous pollutants must be retained.

29.d. Sources of hazardous air pollutants are required to install sampling ports, access, platforms, and utilities adequate for any required sampling (40 CFR 61.12). Locations for sampling must be approved in accordance with 40 CFR 61.34.

E. NESHAP Emissions

	Yes	No	Unk	N/A
26. Does the facility emit any hazardous air pollutants? If so, please specify the amount(s) and whether a permit has been obtained.	___	___	xx	

Pollutant	Amount	Permit (Y/N)
III Trich		M28449, M44555

If the facility emits any hazardous air pollutants, then continue with the following questions; if not, then move to the next section.

27. Are all hazardous air pollutant emissions within the regulated limits?	xx	___	___	
28. If required, have all hazardous air pollutant emission sources been registered and/or permitted? Confirm that facility has a copy.	xx	___	___	___
29. a. If required, has stack sampling been conducted within the required time limitations?	___	xx	___	___
b. Have samples been analyzed and hazardous pollutant emissions determined within applicable time limitations?	___	xx	___	
c. Are the results of emission tests and other associated data used to determine emission retained on site? Confirm that facility has a copy.	___	xx	___	
d. Have the locations of air sampling stations been approved by the applicable agencies, and are the air samplers operated in accordance with application regulations? If not, please explain.	xx	___	___	

E. NESHAP Emissions

	Yes	No	Unk	N/A
26. Does the facility emit any hazardous air pollutants? If so, please specify the amount(s) and whether a permit has been obtained.	___	___	xx	

Pollutant	Amount	Permit (Y/N)
III Trich	_____	M34290, M61282, M28329, M58594
_____	_____	MO3677, M47059, M28328
_____	_____	_____
_____	_____	_____

If the facility emits any hazardous air pollutants, then continue with the following questions; if not, then move to the next section.

27. Are all hazardous air pollutant emissions within the regulated limits?	xx	___	___	
28. If required, have all hazardous air pollutant emission sources been registered and/or permitted? Confirm that facility has a copy.	xx	___	___	___
29. a. If required, has stack sampling been conducted within the required time limitations?	___	xx	___	___
b. Have samples been analyzed and hazardous pollutant emissions determined within applicable time limitations?	___	xx	___	
c. Are the results of emission tests and other associated data used to determine emission retained on site? Confirm that facility has a copy.	___	xx	___	
d. Have the locations of air sampling stations been approved by the applicable agencies, and are the air samplers operated in accordance with application regulations? If not, please explain.	xx	___	___	

_____

_____

_____

_____

E. NESHAP Emissions

	Yes	No	Unk	N/A
26. Does the facility emit any hazardous air pollutants? If so, please specify the amount(s) and whether a permit has been obtained.	___	___	xx	

Pollutant	Amount	Permit (Y/N)
III Trich		M34290, M61282, M28329, M58594 MO3677, M47059, M28328

If the facility emits any hazardous air pollutants, then continue with the following questions; if not, then move to the next section.

27. Are all hazardous air pollutant emissions within the regulated limits?	xx	___	___	
28. If required, have all hazardous air pollutant emission sources been registered and/or permitted? Confirm that facility has a copy.	xx	___	___	___
29. a. If required, has stack sampling been conducted within the required time limitations?	___	xx	___	___
b. Have samples been analyzed and hazardous pollutant emissions determined within applicable time limitations?	___	xx	___	
c. Are the results of emission tests and other associated data used to determine emission retained on site? Confirm that facility has a copy.	___	xx	___	
d. Have the locations of air sampling stations been approved by the applicable agencies, and are the air samplers operated in accordance with application regulations? If not, please explain.	xx	___	___	

29. Under NESHAP beryllium standards (40 CFR 61.34), air sampler filters must be analyzed and concentrations calculated within thirty days after filters are collected. Records from this analysis must be maintained for a minimum of two years.

30. Several of the NESHAPs require reporting to the EPA or designated state agency (40 CFR 61).

31. Operating requirements aimed at detecting and preventing releases of volatile hazardous air pollutants are found in 40 CFR 61.242

32. Periodic inspections must be performed on equipment which services volatile hazardous air pollutants in accordance with 40 CFR 61.242. Any problems noted during such an inspection must be corrected as soon as practicable, but not later than fifteen calendar days after it is detected. A first attempt to repair the problem must be made no later than five calendar days after a leak is detected.

33. Testing of equipment may be required as specified in 40 CFR 61.242. Methods for performing the testing are specified under 40 CFR 61.245. Record keeping requirements associated with these measures are specified under 40 CFR 61.246. Semi-annual reporting is required to notify the agency of any leaks which were detected, any process unit shutdowns, and any revisions made during the reporting period (40 CFR 61.247).

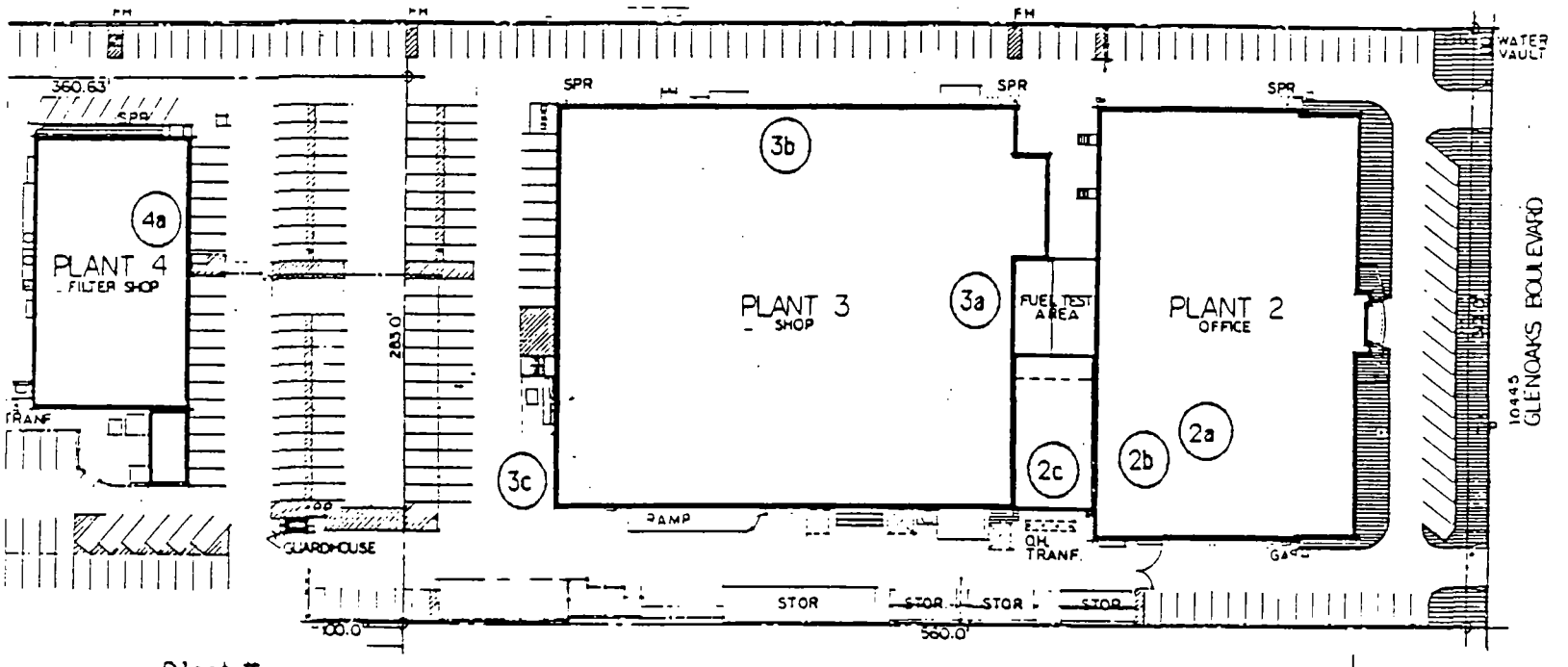
34. Notification for new sources of hazardous air pollutants is required to be submitted with the application for a construction permit. Notice of initial start-up must be made at least thirty days before start-up (40 CFR 61.07).

35. Substances collected from the control of the pollutants covered under NESHAP regulations (e.g., contaminated filters) must be disposed of in accordance with the requirements for hazardous wastes enacted under RCRA (40 CFR 261-265). Wastes generated from the control of hazardous air emissions (i.e. air filters and baghouse dust) are usually hazardous.

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 2,3,& 4 PACOIMA

Item	Permit #	Description	Make/Model #
2a	M 34290	Solvent Recovery Still	Baron Blakeslee/MRR10
2b	M 61282	Spray Booth	Binks/BF-3 1/2-6-T-8
2c	M 28329	250 Gal. Freon Storage Tank	N/A
3a	M 03677	Vapor Degreaser	Baron Blakeslee/HD-425
3b	M 47059	Vapor Degreaser	Baron Blakeslee/DPH-2430
3c	M 28328	550 Gal. Bulk Storage Tank	N/A
4a	M 58594	Delta Sonic Degreaser	DS10-34



Plant #

Item

	Yes	No	Unk	N/A
29. e. Are filters from the air samplers analyzed in accordance with the regulatory requirements?	___	___	XX	
f. Are the results retained on site? (only for Berrylium) Confirm that facility has a copy.	___	___	XX	
30. Are air monitoring results reported to the appropriate agencies as required?	XX	___	___	
31. a. Does the site monitor pumps, compressors, pressure relief devices in gas/vapor service, open-end valves or lines, sampling connecting systems, flanges and other connectors, product accumulators, vessels or control devices which contain volatile hazardous air pollutants?	___	___	XX	
b. Are each of these pieces of equipment operated to prevent the release of volatile hazardous air pollutants?	___	___	XX	
32. Are inspections and maintenance service conducted on equipment which services volatile hazardous air pollutants on a routine basis?	___	___	XX	
33. Is the equipment that contains volatile hazardous air pollutants tested and are reports filed as requested? Confirm that facility has a copy.	___	___	XX	
34. If required, does the site notify a regulatory agency prior to start-up or emissions testing of hazardous air pollutants? Confirm that facility has a copy.	___	___	XX	
35. Are procedures in place to ensure substances collected from the control of hazardous pollutants are properly disposed of in accordance with the RCRA requirements?	___	___	XX	

F. Miscellaneous

36. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

_____

_____

_____

E. NESHAP Emissions

	Yes	No	Unk	N/A
26. Does the facility emit any hazardous air pollutants? If so, please specify the amount(s) and whether a permit has been obtained.	___	___	xx	

Pollutant	Amount	Permit (Y/N)
III Trich	_____	M47060, M45740
_____	_____	_____
_____	_____	_____
_____	_____	_____

If the facility emits any hazardous air pollutants, then continue with the following questions; if not, then move to the next section.

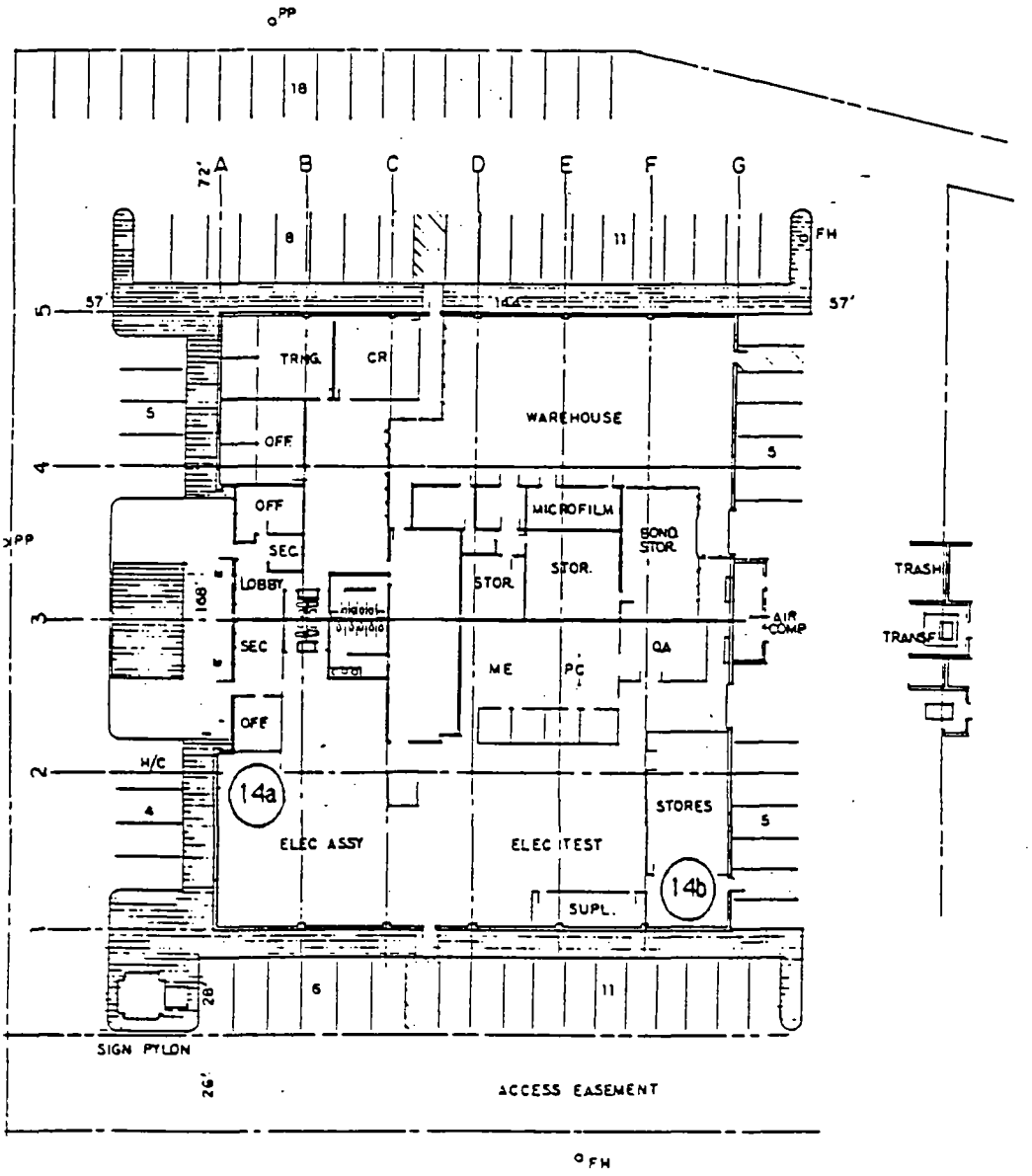
27. Are all hazardous air pollutant emissions within the regulated limits?	xx	___	___	
28. If required, have all hazardous air pollutant emission sources been registered and/or permitted? Confirm that facility has a copy.	xx	___	___	___
29. a. If required, has stack sampling been conducted within the required time limitations?	___	xx	___	___
b. Have samples been analyzed and hazardous pollutant emissions determined within applicable time limitations?	___	xx	___	
c. Are the results of emission tests and other associated data used to determine emission retained on site? Confirm that facility has a copy.	___	xx	___	
d. Have the locations of air sampling stations been approved by the applicable agencies, and are the air samplers operated in accordance with application regulations? If not, please explain.	xx	___	___	

_____
_____
_____
_____

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 14 VALENCIA

Item	Permit #	Description	Make/Model #
(14a)	R-M 47060	Vapor Degreaser	Unique Vapo Kleen
(14b)	M 45740	Paint Booth	Devilbiss/DF-578



E. NESHAP Emissions

	Yes	No	Unk	N/A
26. Does the facility emit any hazardous air pollutants? If so, please specify the amount(s) and whether a permit has been obtained.	___	___	xx	

Pollutant	Amount	Permit (Y/N)
III Trich	_____	M28449, M44555
_____	_____	_____
_____	_____	_____
_____	_____	_____

If the facility emits any hazardous air pollutants, then continue with the following questions; if not, then move to the next section.

27. Are all hazardous air pollutant emissions within the regulated limits?	xx	___	___	
28. If required, have all hazardous air pollutant emission sources been registered and/or permitted? Confirm that facility has a copy.	xx	___	___	___
29. a. If required, has stack sampling been conducted within the required time limitations?	___	xx	___	___
b. Have samples been analyzed and hazardous pollutant emissions determined within applicable time limitations?	___	xx	___	
c. Are the results of emission tests and other associated data used to determine emission retained on site? Confirm that facility has a copy.	___	xx	___	
d. Have the locations of air sampling stations been approved by the applicable agencies, and are the air samplers operated in accordance with application regulations? If not, please explain.	xx	___	___	___

_____

_____

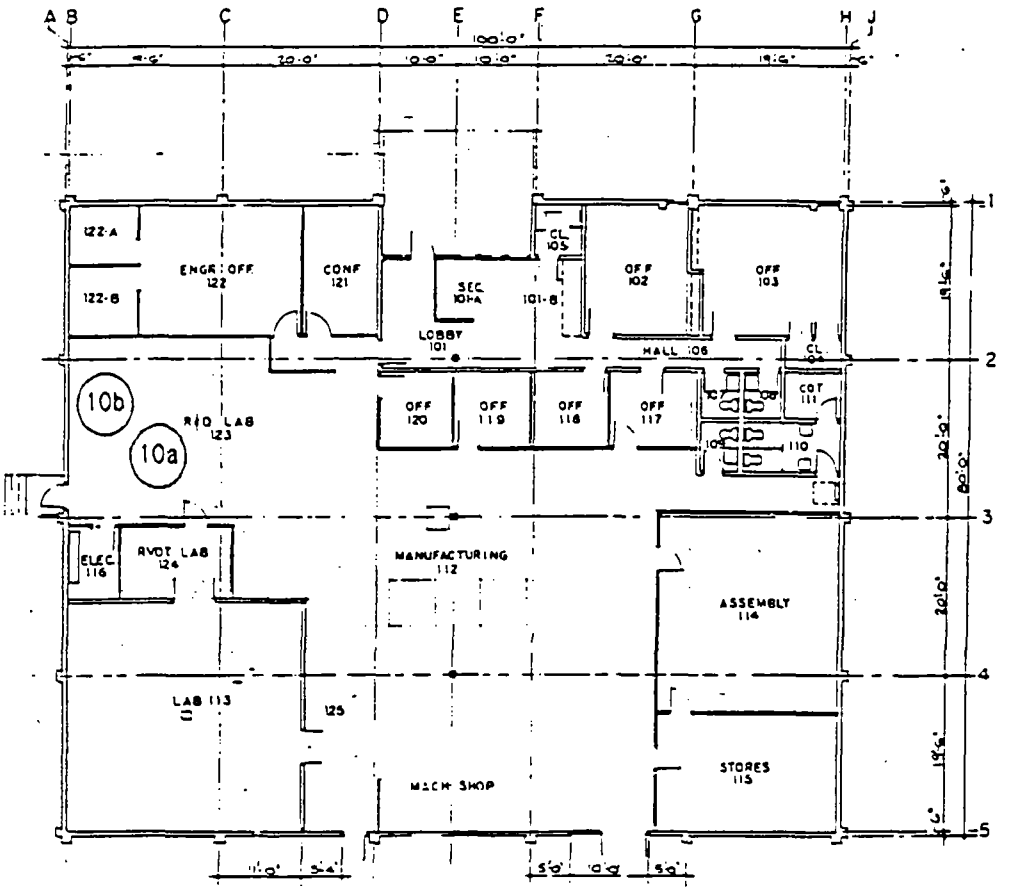
_____

_____

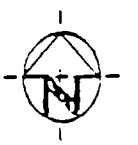
HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 10 VALENCIA

Item	Permit #	Description	Make/Model #
(10a)	M 44555	Vapor Degreaser	Loncostil/CF 300
(10b)	M 28449	Vapor Degreaser	Degreastil/2010



PLANT 10



E. NESHAP Emissions

	Yes	No	Unk	N/A
26. Does the facility emit any hazardous air pollutants? If so, please specify the amount(s) and whether a permit has been obtained.	___	X	___	

Pollutant	Amount	Permit (Y/N)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

If the facility emits any hazardous air pollutants, then continue with the following questions; if not, then move to the next section.

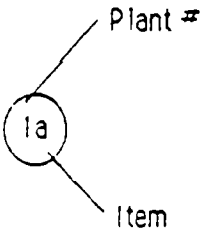
27. Are all hazardous air pollutant emissions within the regulated limits?	___	___	___	
28. If required, have all hazardous air pollutant emission sources been registered and/or permitted? Confirm that facility has a copy.	___	___	___	___
29. a. If required, has stack sampling been conducted within the required time limitations?	___	___	___	___
b. Have samples been analyzed and hazardous pollutant emissions determined within applicable time limitations?	___	___	___	
c. Are the results of emission tests and other associated data used to determine emission retained on site? Confirm that facility has a copy.	___	___	___	
d. Have the locations of air sampling stations been approved by the applicable agencies, and are the air samplers operated in accordance with application regulations? If not, please explain.	___	___	___	

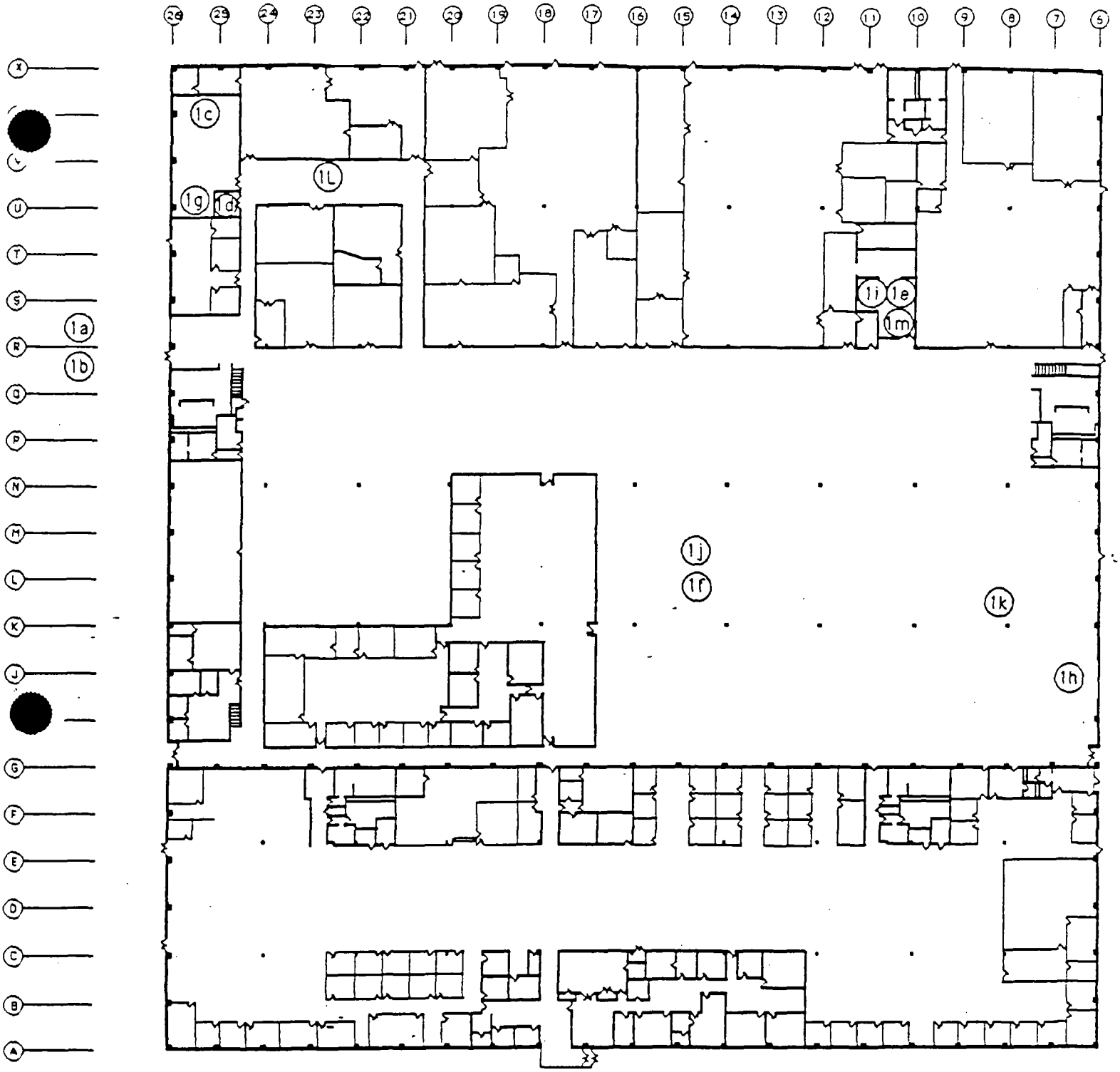
_____
_____
_____
_____

HR TEXTRON

S.C.A.Q.M.D. PERMITS PLANT 1- VALENCIA

Item	Permit #	Description	Make/Model #
1a	M 28451	500 Gal. Storage Tank	N/A
1b	M 28450	1,000 Gal. Storage Tank	N/A
1c	M 28149	Spray Booth (Paint & Solvent)	DW 6530
1d	M 38175	Vapor Degreaser	Defluxer/402
1e	P 36402	Vapor Degreaser	Branson/AC100
1f	P 36403	Vapor Degreaser	Baron-Blakeslee/BH420
1g	P 36405	Bake Oven	Beattie/N/A
1h	M 02807	Vapor Degreaser	Degreastil/ 2010
1i	M 24354	Ultrasonic Degreaser	Baron-Blakeslee/MSR-480
1j	M 24355	Ultrasonic Degreaser	Baron-Blakeslee/MSR-120E
1k	M 24356	Ultrasonic Degreaser	Baron-Blakeslee/MSR-120
1L	M 24353	Vapor Degreaser	Baron-Blakeslee/DP4-2424
1m	D 01806	Delta Sonic Vapor Degreaser	Ministill/DSIOR-3





PLANT 1 LAYOUT

SCALE: 1/60"=1'-0"

29. Under NESHAP beryllium standards (40 CFR 61.34), air sampler filters must be analyzed and concentrations calculated within thirty days after filters are collected. Records from this analysis must be maintained for a minimum of two years.

30. Several of the NESHAPs require reporting to the EPA or designated state agency (40 CFR 61).

31. Operating requirements aimed at detecting and preventing releases of volatile hazardous air pollutants are found in 40 CFR 61.242

32. Periodic inspections must be performed on equipment which services volatile hazardous air pollutants in accordance with 40 CFR 61.242. Any problems noted during such an inspection must be corrected as soon as practicable, but not later than fifteen calendar days after it is detected. A first attempt to repair the problem must be made no later than five calendar days after a leak is detected.

33. Testing of equipment may be required as specified in 40 CFR 61.242. Methods for performing the testing are specified under 40 CFR 61.245. Record keeping requirements associated with these measures are specified under 40 CFR 61.246. Semi-annual reporting is required to notify the agency of any leaks which were detected, any process unit shutdowns, and any revisions made during the reporting period (40 CFR 61.247).

34. Notification for new sources of hazardous air pollutants is required to be submitted with the application for a construction permit. Notice of initial start-up must be made at least thirty days before start-up (40 CFR 61.07).

35. Substances collected from the control of the pollutants covered under NESHAP regulations (e.g., contaminated filters) must be disposed of in accordance with the requirements for hazardous wastes enacted under RCRA (40 CFR 261-265). Wastes generated from the control of hazardous air emissions (i.e. air filters and baghouse dust) are usually hazardous.

SECTION 6

WATER AND WASTEWATER

Introduction

Legal Overview: The first act that regulated water pollution was the Refuse Act of 1899, which prohibited all discharges into navigable waters or tributaries unless a permit was obtained from the Army Corps of Engineers. Although hundreds of cases were prosecuted under this Act, it was not drafted as a comprehensive pollution control program and was insufficient in many significant ways.

Therefore, prior to 1970, the states generally set their own pollutant parameters for various water bodies based on the desired use of the water body. Although this water quality approach was effective in a few states, in most cases it worked poorly and did not effectively apply water quality standards to intrastate waters.

The Federal Water Pollution Control Act, passed by Congress in 1972, shifted the emphasis from a water quality approach to a technology-based approach. Commonly known as the Clean Water Act, this law established a comprehensive framework for water pollution control based on a nationwide permit program and technology-based effluent limitations. Other elements of the framework include water quality standards, special provisions for spills of oil or toxic substances, and a construction grant program for publicly-owned treatment works (POTWs).

The Clean Water Act was significantly modifed in 1977 to deal more effectively with toxic water pollutants. It was revised again in 1978 to deal with spills of hazardous substances and in 1980 and 1981 to change certain aspects of the construction grant program for POTWs. The Act allows states to take over administration of the permit program when state control programs meet rigorous federal standards.

Underground aquifers are one class of water bodies not covered under the Clean Water Act. In 1974, the Safe Drinking Water Act authorized a program to protect underground drinking water supplies by regulating the use of injection wells to dispose of liquid wastes.

Under the Clean Water Act and the Safe Drinking Water Act, the major regulatory programs designed to protect the quality of the nation's waters are the following:

- National Pollutant Discharge Elimination System (NPDES) Program
- National Pretreatment Standards
- Spill Prevention Control and Countermeasure (SPCC) Plan requirements
- The Underground Injection Control (UIC) Program

This section describes the various regulatory requirements applicable to facilities which discharge wastewater to a public or private treatment works, to surface water, or to ground water. Your facility may have a number of types of discharges (for example, to sewers and to surface waters), so it is likely that more than one part of this Section will apply.

The NPDES Program (40 CFR Part 122): The National Pollutant Discharge Elimination System (NPDES) permit program regulates the discharge of pollutants from any point source into the waters of the United States. Waters of the United States are defined to include navigable waters and their tributaries; interstate waters; and intrastate waters used by interstate travelers for travel or recreation, or used as a source of fish or shellfish sold in interstate commerce, or used by industries engaged in interstate commerce. Point sources are defined as any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, vessel, or other floating craft from which pollutants may be discharged. Pollutants are very broadly defined but include process wastewater, sanitary wastewater, and storm water discharges from industrial and commercial activities.

NPDES permits contain three major parts: effluent limitations, compliance schedules, and monitoring and reporting requirements. For industrial dischargers, effluent limits for specific pollutants are derived from technology-based standards for specific industrial categories or from more stringent water quality-based limits.

Permit applications for new discharges to surface water must be filed at least 180 days before the discharge is to commence. Facilities which have existing permits must submit a new application at least 180 days before the expiration date of the existing permit, unless an extension has been granted. Permits may be valid for up to five years. The EPA is the issuing authority for all NPDES permits until such time as the state elects to administer the program and obtains EPA approval to do so. About three-fourths of all the states have the authority to administer this program within the state.

The National Pretreatment Standards (40 CFR Parts 403-471): These standards were developed to prevent the introduction of pollutants into POTWs which would pass through or interfere with their operations. The general pretreatment standards prohibit discharges which, because of their viscosity, heat, concentration, or other properties, could pass through or cause interference with the operation of the POTW. The categorical pretreatment standards specify national discharge limits on priority pollutants for specific industrial categories. These standards are based on treatment technologies and are often incorporated into local pretreatment programs. Specific industrial categories for which there are categorical pretreatment standards are the following:

Aluminum Forming
Asbestos Manufacturing
Battery Manufacturing
Builder's Paper
Carbon Black
Cement Manufacturing
Coil Coating
Copper Forming
Dairy Products Processing
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Feedlots
Ferroalloy Manufacturing
Fertilizer Manufacturing
Fruits and Vegetables Processing
Glass Manufacturing
Grain Mills
Ink Formulating
Inorganic Chemicals
Iron and Steel Manufacturing
Leather Tanning and Finishing
Meat Processing
Metal Finishing
Metal Molding and Casting
Nonferrous Metals Forming
Nonferrous Metals Manufacturing
Paint Formulating
Paving and Roofing
Pesticides
Petroleum Refining
Pharmaceuticals
Phosphate Manufacturing
Plastics Molding and Forming
Porcelain Enameling
Pulp and Paper
Rubber Processing
Seafood Processing
Soaps and Detergents Manufacturing
Sugar Processing
Textile Mills
Timber Products Manufacturing

Spill Prevention Control and Countermeasure Plans (40 CFR Part 112): This requirement was established under the Clean Water Act to protect the navigable waters of the United States against discharges of oil. The owners or operators of onshore and offshore facilities that have discharged oil or could reasonably be expected to discharge oil in harmful quantities into or onto navigable waters of the United States must prepare an SPCC Plan to be maintained at the facility. Guidelines for preparation and implementation of the SPCC Plan are provided in 40 CFR Part 112.7.

The term "navigable waters" is broadly defined in the regulations to include all navigable waters and their tributaries; interstate waters; and intrastate waters used by interstate travelers for recreation or other purposes, or used as a source of fish or shellfish sold in interstate commerce, or used by industries engaged in interstate commerce. The term "harmful quantities" pertains to discharges of oil which violate applicable water quality standards or which cause a film or sheen upon the water surface or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

The Underground Injection Control Program (40 CFR Parts 144-147): This program was established under the federal Safe Drinking Water Act to protect ground water sources of drinking water. It regulates underground injection, defined as the underground disposal of liquid wastes by discharge into wells that are deeper than they are wide. EPA regulations establish five classes of injection wells, based on type of discharge and degree of threat to an underground source of drinking water (USDW). In general, the five classes cover any wells into which wastes or wastewater is injected or disposed of into, beneath, or above underground sources of drinking water.

Each class of injection well is subject to requirements for construction, operation, monitoring and reporting, plugging and abandonment, financial responsibility, and mechanical integrity. All injection wells must be authorized by permit or regulation. If a state does not have an approved Underground Injection Control (UIC) program, the EPA will carry out the program for the state. The permit applicant bears the burden of showing that the discharge will not endanger an USDW.

Monitoring, Reporting, and Record Keeping: The NPDES, pretreatment, and UIC programs all impose requirements for monitoring, reporting, and record keeping. Monitoring of wastewater streams is used to determine whether a facility is in compliance with applicable discharge limitations. The results of required monitoring must be reported to the permitting agency, and records of the results must be kept at the facility.

Facilities which are subject to these regulatory programs usually must monitor the following factors to assure compliance with discharge limitations:

- the volume of the effluent discharged from each point source;
- the type and quantity of pollutants discharged in the effluent; and
- the proper installation, maintenance, and use of monitoring equipment and methods.

Techniques for sample preservation and for the analysis of samples are detailed in 40 CFR 136. The following records are usually required to be maintained for all monitoring activities:

- the date, exact location, and time of sampling and measurement;
- the person who performed the sampling and measurement;
- the date of the analysis;
- specific techniques and methods used for preservation and analysis of samples; and
- the results of sample analysis.

All records and results of monitoring activities must be retained for three years. They must also be retained during the course of any litigation concerning the facility's compliance with effluent discharge limitations.

All facilities which hold NPDES permits are required to report the results of discharge monitoring using a Discharge Monitoring Report (DMR). Reporting requirements and frequency may differ from one permit to the next and generally depend on the nature and impact of the discharge. Reports are always required at least once per year, but certain types of discharges may require more frequent reporting: variable discharges, discharges which contribute significant amounts of pollutants to navigable waters, discharges which contain toxic or hazardous pollutants, and discharges which apply new treatment or control methods. Similar reporting requirements are imposed under local sewer permits, categorical pretreatment standards, and UIC permits.

SECTION 6

WATER AND WASTEWATER

Guidance

Regulatory Authority:	The Clean Water Act; Safe Drinking Water Act; Water Quality Act of 1987; Corresponding State and Local Statutes and Ordinances
Regulatory Citation:	40 CFR Parts 403-471; 40 CFR Part 122; 40 CFR Parts 144-147
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State and Local Agencies

1. & 2. Questions are self-explanatory.

3. The first step in developing a sound water management program is understanding where the water is coming from, how it is used by the facility, and where it goes. This is best achieved by completing a flow diagram and water balance for the facility. The flow diagram is a line drawing of the water flow through the facility, showing the approximate average flows at the intake and discharge points and between units of the facility, including process units and any treatment units.

The flow diagram should depict all incoming sources of water (e.g., potable, process, rainfall), each type of process or production area which contributes wastewater to the effluent (e.g., process wastewater, cooling water, domestic wastewater, storm water runoff), and the discharge points for all effluent flows. Taking into account evaporative losses and consumptive use within the facility, the incoming and outgoing water/wastewater flows should balance within ten percent.

SECTION 6

WATER AND WASTEWATER

Survey Questions

All facilities should complete this section.

	Yes	No	Unk	N/A
A. Background				
1. If the facility has been subject to an inspection regarding water or wastewater issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence. Underground water contamination due to leaking UST. Hexavalent chrome in passivate rinse water.	X			
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to water or wastewater? If so, describe and provide copies of all documents.		X		
3. Are you aware of any water or wastewater circumstances which you believe may give rise to possible liabilities or enforcement actions? Describe.	X			
4. Has the facility completed a water balance flow diagram which shows flow rates for incoming water, operations, treatment units, and wastewater discharges throughout the facility?		X		

If so, provide the water balance flow diagram as Attachment G (an example diagram is provided). If such a diagram is not available, provide this information to the best available knowledge of the facility.

4. The water balance flow diagram is not complete unless a similar balance is completed for pollutants. This should be documented, to the extent possible, with monitoring results and operating information.

6. Sewer use ordinances are designed to ensure the POTW's compliance with its NPDES permit by minimizing operating and maintenance problems at the POTW. They regulate the use of public and private sewers and drains, the installation and connection of building sewers and the discharge of water and wastes into the public sewer system. If the ordinance authorizes the POTW to enforce the federal pretreatment requirements and is sufficient to ensure that the terms of the POTW's own NPDES permit will be met, then the POTW may be delegated primary enforcement authority for discharges into the sewer system.

	Yes	No	Unk	N/A
4. Has the facility identified the sources of water pollutants and the average characteristics of each source?	XX	___	___	

If it is available, add information regarding sources and quantities of pollutants to the flow diagram provided as Attachment G.

B. Discharges to Publicly-Owned Treatment Works

Complete this subsection if the facility discharges any wastewater to a publicly-owned treatment works (POTW).

5. Does the facility have a permit to discharge to a POTW? If so, provide a copy.	XX	___	___	

Term and expiration date of permit: Renewable upon change in process.

Name of the control authority: County Sanitation Districts of Los Angeles

6. Has the facility determined that the POTW has a sewer use ordinance or discharge permit approved by the EPA or the state regulatory agency?	XX	___	___	
7. Does the facility have a current copy of the POTW sewer ordinance, discharge permit, or approved pretreatment program available on site?	XX	___	___	
8. Is there a system in place to identify all discharge points to the POTW?	XX	___	___	

Total number of discharge points: 8

Description of source discharges to the POTW:

1. Passivate Rinse (Hexavalent Chrome)
2. N.D.T. (Acid)
3. Compressor Condensed Water (Oil)
4. Bottle Washer (Oil)
5. Steam Cleaning (Case-Brite)
6. Induction Brazer (Flux)
7. Polishing (Phospate Acid)
8. Photo Rinse

9. The general pretreatment standards specifically prohibit the discharge into a POTW of pollutants which would cause operational interference or damage to the POTW system. These prohibitions are listed in 40 CFR 403.5 and include pollutants which will create a fire or explosion hazard at the POTW; pollutants that may cause corrosive or structural damage to the POTW (but in no case have a pH lower than 5.0 unless the POTW is specifically designed to accommodate this); solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference; any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rage which will cause interference with the POTW; heat in amounts which will inhibit biological activity at the POTW resulting in interference (but in no case heat in such quantities that the temperature at the POTW treatment Plant exceeds 40°C unless the Approval Authority, with the POTW, approves alternate limits).

10. In lieu of monitoring for Total Toxic Organics (TTO), the control authority may allow industrial dischargers to certify that no dumping of toxic organics to the waste stream has occurred (40 CFR 413.03(c)). This requires submission of a toxic organic management plan that specifies the toxic organic compounds used, the disposal method, and procedures for assuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW.

11. "Slug" discharges (usually defined as five times the permitted concentration of the pollutant) to a POTW are typically prohibited. Non-contact cooling water is also usually prohibited because of hydraulic loading. Any accidental slug loading or discharge of any pollutants which may interfere with the operations of the POTW must be immediately reported to the POTW (40 CFR Part 403.12 (f)).

12. & 13. Categorical pretreatment standards specify the amounts of pollutants which may be discharged into a POTW by specific, existing or new industrial dischargers (40 CFR Parts 405-471). These standards are in addition to the general pretreatment standards (above) and are usually supplemented by local ordinances. Categories for which there are categorical pretreatment standards include:

Adhesives and Sealants
Aluminum Forming
Auto and Other Laundries
Battery Manufacturing
Coal Mining
Coil Coating
Copper Forming
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Foundries
Gum and Wood Chemicals
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather and Tanning Finishing
Mechanical Products Manufacturing
Ore Mining
Organic Chemicals Manufacturing
Paint and Ink Formulation
Pesticides
Petroleum Refining
Pharmaceutical Preparations
Photographic Equipment and Supplies
Plastics Processing
Plastic and Synthetic Materials Mfg.
Porcelain Enameling
Printing and Publishing
Pulp and Paper Mills
Rubber Processing
Soap and Detergent Manufacturing
Steam Electric Power Plants
Timber Products Processing

For direct discharges not covered by categorical standards, the Clean Water Act establishes technology-based treatment requirements to be used in permits and sets time limits for implementation. Effluent limitations for conventional pollutant concentrations must be based on the best conventional pollutant control technology (BCT). For toxic pollutants specified in the Act, effluent limitations must be based on best available technology economically achievable (BAT). BAT is also required for those pollutants which are neither conventional nor toxic.

E 454 UC

Received
MAY 21 1974
°P+PC

SANITATION DISTRICTS OF LOS ANGELES COUNTY
2020 Beverly Blvd., Los Angeles, Calif. 90057
John D. Parkhurst, Chief Engineer and General Manager

3222

Valencia, Calif.* 3 / 18 / 74
MO. DAY YR.

APPLICATION IS HEREBY MADE BY* Hydraulic Research & Manuf. Co., A Division of Textron, Inc. A
PRINT (FIRM NAME)

(Mailing Address) 25200 W. Rye Canyon Road, cos Valencia Ca. 91355 E
(STREET) (CITY) (STATE) (ZIP)

Hydraulic Research & Manuf. Co., A Division of Textron, Inc. G of the property located at:
(OWNER, TENANT, ETC.)

(Street) 25200 W. Rye Canyon Road, (City) Valencia, Ca. (Zip) 91355
PRINT (ADDRESS OF PROPERTY PRODUCING WASTEWATER DISCHARGE)

Assessors Map Book No.* ~~3248~~ 2866 Page No.* ~~036~~ 007 Parcel No.* ~~030~~ 001 K
(LEGAL ADDRESS OF PROPERTY PRODUCING WASTEWATER DISCHARGE)

25200 W. Rye Canyon Road, Valencia, California.
PRINT (LOCATION OF POINT OF WASTEWATER DISCHARGE TO SEWERAGE SYSTEM)

for a Permit for Industrial Wastewater Discharge to the sewerage system.

Type of Industry* Aerospace Manufacturing M. 17 3722, 3729, 3694 (3728) O
(GENERAL DESCRIPTION) (FEDERAL SIC NOS.)

Number of Employees (Full Time)* 580 (Part Time)* N/A S

Raw Materials Used* Steel, Aluminum, Electrical Components U
(GENERAL DESCRIPTION – ADD ADDITIONAL SHEETS AS NEEDED)

Products Produced Hydraulic Controls, Electro-Hydraulic Servo Valves
(GENERAL DESCRIPTION – ADD ADDITIONAL SHEETS AS NEEDED)

Wastewater Producing Operations Toilets, Food Service Operations, Floor Drains,
Shop "Water Fall".
(FULL DESCRIPTION – ADD ADDITIONAL SHEETS AS NEEDED)

Time of Discharge – * 6:00 AM/~~PM~~ to 2:00 AM/~~PM~~ Days per Week* (M T W Th F Sa) Su
(WORKING DAY – CROSS OUT AM OR PM) (CIRCLE DAYS)

Wastewater Flow Rate* 10,900 AA (Gallons Per Day) (est.)

Constituents of Wastewater Discharge Toilet Wastes, (See Lab. report of Industrial Wastes - Attached)
(GENERAL DESCRIPTION – ATTACH CHEMICAL ANALYSES RESULTS TO THIS APPLICATION)

~~Report of County Engineer, Industrial Waste Div. Attached.~~

Person in company responsible for industrial wastewater discharge:

W. C. Moses Manager, Facilities (805) 259-4030, Ext. 601 BB
PRINT (NAME) (POSITION) (TELEPHONE NUMBER)

affirm that all information furnished is true and correct and that the applicant will comply with the conditions stated on the back of this permit form.

Date 3/18/, 19 74

Signature for Applicant [signature] Asst. Secretary
COMPANY ADMINISTRATIVE OFFICIAL (NAME) J. P. Jones (POSITION)

Approved by City or County Official

Date 11/13/74

County Engineers ..... ☒ I 372-7

Approved by Sanitation Districts of Los Angeles County

Date 1/21/75

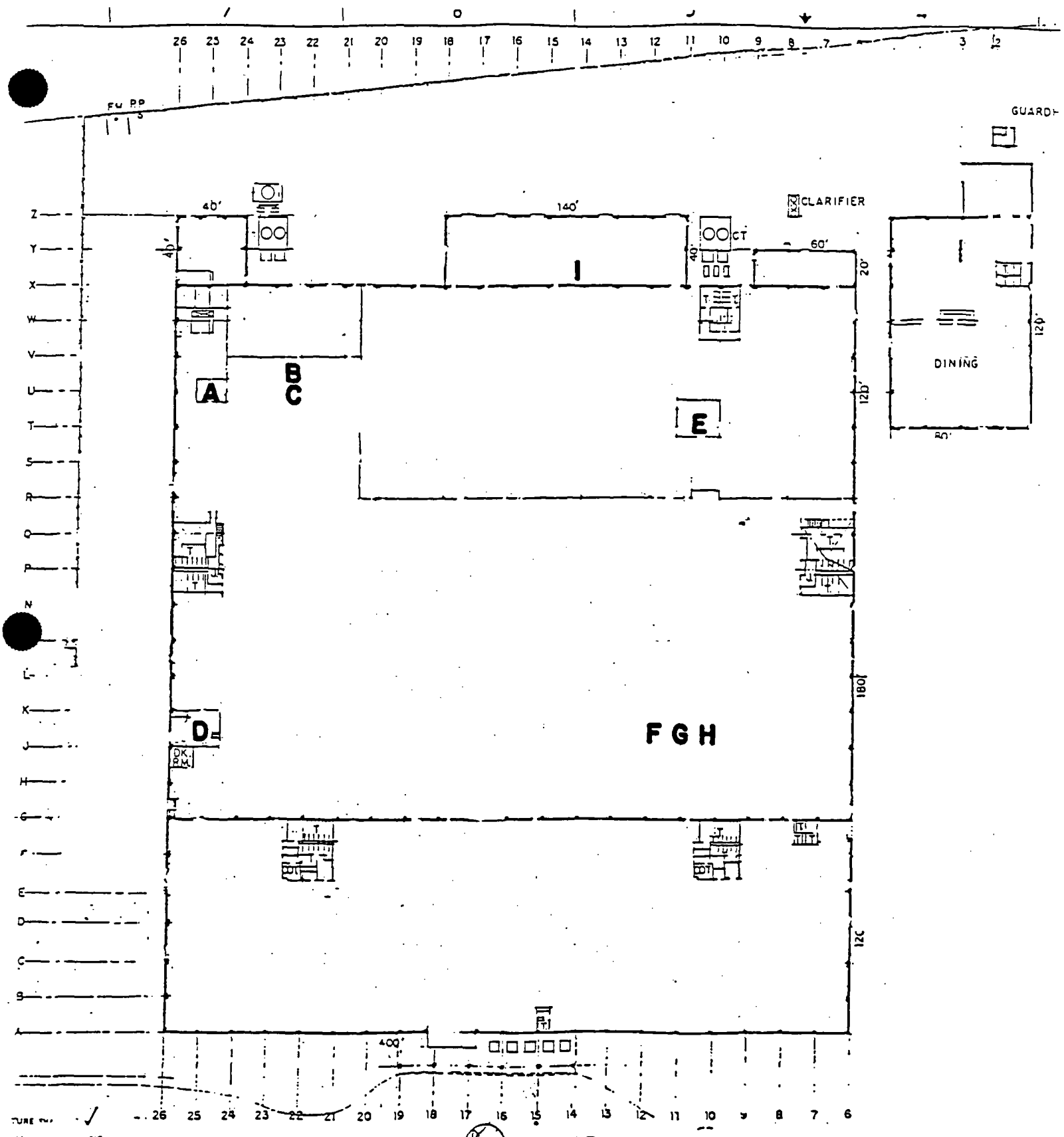
John D. Parkhurst, Chief Engineer and General Manager

by [signature]

Position ENGR. ASSOC

Note: A permit fee may be required by the local City or County Agency.

This form when properly signed shall be a valid permit unless suspended or revoked.



FLOOR PLAN
1/32" = 1'-0"

HR TEXTRON

A. PASSIVATE RINSE WATER

B. NDT RINSE WATER

C. NDT RINSE WATER

D. PHOTO SHOP

E. BOTTLE WASHER

F. POLISHER (PLATING)

G. STEAM WASHER (CASE-BRITE)

H. INDUCTION BRAZER (FLUX)

I. COMPRESSOR CONDENSED WATER (OIL)

	Yes	No	Unk	N/A
9. Does the facility have a system in place to prevent discharge of prohibited pollutants into the POTW?	___	___	___	
10. Does the facility have a written management plan for Total Toxic Organics (TTO) or perform a regular TTO analysis?	___	___	___	
11. Does the facility have a procedure to notify the POTW immediately of any discharge that may interfere with POTW operations or cause pass-through?	___	___	___	
12. Have the pretreatment category and subcategories which apply to the facility been determined?	___	___	___	

List category and subcategories:

_____

_____

_____

_____

13. Has the facility made an assessment of compliance with U.S. EPA categorical pretreatment standards?	___	___	___	

14. In accordance with 40 CFR 403.12 (b) (1-7), industrial dischargers must submit a pretreatment Baseline Monitoring Report describing operations, permits held, measurements of flow and of pollutants, and other required information to the POTW and the EPA Regional Administrator or state agency.

16. A POTW may provide an industrial user of its system with a removal credit, in the form of adjusted categorical pretreatment standards, for removal of pollutants by the POTW (40 CFR 403.7). Industries with such a credit may discharge greater quantities of regulated pollutants than otherwise permitted by applicable categorical standards.

19. For the protection of the user of a private treatment works, the contract should specify responsibilities for monitoring, conditions for discharge, and provisions for contract modification.

	Yes	No	Unk	N/A
14. If the facility is subject to categorical treatment standards, has a baseline monitoring report (BMR) been submitted to the control authority? If so, provide a copy.	XX	___	___	
15. a. Is the facility in compliance with applicable categorical standards?	___	XX	___	
b. If using the combined waste stream formula, is the facility in compliance with established standards?	___	XX	___	
c. If the facility is not in compliance with applicable standards, is a compliance plan in place and scheduled?	XX	___	___	
16. Has the facility ever utilized removal credits to achieve compliance with categorical standards?	XX	___	___	

If so, describe:

Freon condensing unit from exhaust hood.

C. Discharges to Private Treatment Works

Complete this section if the facility discharges wastewater to a private treatment works.

17. Does the facility have discharges which flow to a private treatment works? Describe.	___	XX	___	
18. Does the private treatment works have a permit and remain in compliance?	___	___	___	
19. If the facility has a contract with a private works, does the contract specify conditions for discharge, responsibility for monitoring, and provisions for contract modification?	___	___	___	

20. Essentially all point source discharges of pollutants to surface waters or their associated wetlands are required to have an NPDES permit. If the state rather than EPA is the approved permitting authority, the state will issue SPDES (State Pollution Discharge Elimination System) permits to dischargers under the state permit program. The long Form 2-C, submitted to the state or EPA as part of the permit application becomes incorporated into the permit.

22. Categorical Effluent Limitation Guidelines for specified industries can be found in 40 CFR 405-471. Industrial categories are listed in the guidance for Questions 12 and 13.

23. An NPDES or SPDES permit may specify a schedule of compliance when necessary to allow a reasonable opportunity to attain compliance with the Clean Water Act and regulatory requirements (40 CFR 122.47). If the final date for compliance is more than one year after issuance of the permit, the schedule must specify interim requirements and dates for their achievement. If the discharger fails to meet a final deadline established in the permit, the EPA or authorized state may issue a compliance order which specifies a reasonable time for compliance.

24. Certain discharges to navigable waters are also regulated by the U.S. Coast Guard (spills of oil - 33 CFR 153), the U.S. Army Corps of Engineers (dredging and filling - 33 CFR 323-324), and state regulatory agencies under state laws. Additional requirements may be imposed by water body commissions.

SANITATION DISTRICTS OF LOS ANGELES COUNTY
Charles W. Carry, Chief Engineer & General Manager
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

INDUSTRIAL WASTEWATER CRITICAL PARAMETER REPORT FORM

SURCHARGE ACCOUNT NO. _____

PERMIT NO. 3222

Textron
(Print) Name of Company Having Wastewater Discharge — SIC Number(s)

25200 W. Rye Canyon Road, Valencia CA 91355
(Print) Address of Wastewater Discharge

4/19-20/89 (Print) Sample Date — Loc: manhole by guard shack Sample Point Location — January to June 1989 Reporting Period

DAILY WATER USE FOR REPORTING PERIOD (GAL) AVG. 2240 MAX. 4000

WASTEWATER FLOW (A,B) DETERMINED BY: ☐ DIRECT MEASUREMENT ☐ METERED WATER SUPPLY ☒ ADJUSTED METERED WATER SUPPLY

TYPE OF SAMPLE: XXX GRAB XXX TIME COMPOSITE ☐ FLOW PROPORTIONED COMPOSITE

CRITICAL PARAMETER VALUES

IDENT. CODE	PARAMETER 1/	2/	QUANTITY VALUES		IDENT. CODE	PARAMETER 1/	2/	QUANTITY VALUES	
1/A	WASTEWATER FLOW (Total)	E	2240	gals/day	LL-370 371, 372	RADIOACTIVITY (Alpha, Beta, Gamma)			pci/l
1/B	WASTEWATER FLOW (Peak)			gals/mi.	MM-111	TEMPERATURE			Degrees F
C-403	COD	A	749	mg/l	NN-104	COLOR			Units
D-151	SS (Suspended Solids)	A	43	mg/l	OO-253	THIOSULFATE (S)			mg/l
E-101	pH	A	6.9	Units	PP-703	CALCIUM			mg/l
F-155	TOTAL DISSOLVED SOLIDS	A	380	mg/l	QQ-704	MAGNESIUM			mg/l
G-201	AMMONIA (N)			mg/l	RR-719	POTASSIUM			mg/l
H-252	SULFIDE – DISSOLVED	A	<0.10	mg/l	SS-706	BARIUM			mg/l
I-206	CYANIDE	A	<0.1	mg/l	TT-204	NITRATE			mg/l
J-317	FLUORIDE			mg/l	UU-301	CHLORIDE			mg/l
	ALUMINUM – Total			mg/l	VV-319	BROMIDE			mg/l
	ANTIMONY – Total			mg/l	WW-257	SULFATE			mg/l
M-705	ARSENIC – Total	A	0.026	mg/l	XX-311	PHOSPHATE – ORTHO			mg/l
N-726	BERYLLIUM – Total			mg/l	620	BENZENE			µg/l
O-314	BORON – Total			mg/l	604	CARBON TETRACHLORIDE			µg/l
P-708	CADMIUM – Total	A	<0.02	mg/l	611	CHLOROBENZENE			µg/l
Q-709	CHROMIUM – Total	A	6.33	mg/l	613	DICHLOROBENZENE			µg/l
R-711	COBALT – Total			mg/l	619	1, 2-DICHLOROETHANE			µg/l
S-712	COPPER – Total	A	0.08	mg/l	603	1, 1, 1-TRICHLOROETHANE	A	37	µg/l
T-713	IRON – Total			mg/l	657	2-CHLOROPHENOL			µg/l
U-714	LEAD – Total	A	<0.1	mg/l	658	2, 4-DICHLOROPHENOL			µg/l
V-716	MANGANESE – Total			mg/l	663	PENTACHLOROPHENOL			µg/l
W-717	MERCURY – Total			mg/l	664	2, 4, 6-TRICHOROPHENOL			µg/l
X-732	MOLYBDENUM – Total			mg/l	602	CHLOROFORM			µg/l
Y-718	NICKEL – Total	A	<0.1	mg/l	626	2, 4-DIMETHYLPHENOL			µg/l
Z-720	SELENIUM – Total			mg/l	624	ETHYL BENZENE			µg/l
AA-722	SILVER – Total	A	<0.03	mg/l	601	METHYLENE CHLORIDE			µg/l
BB-723	SODIUM – Total			mg/l	607	TETRACHLOROETHYLENE			µg/l
CC-734	THALLIUM – Total			mg/l	621	TOLUENE			µg/l
DD-735	TIN – Total			mg/l	606	TRICHLOROETHYLENE			µg/l
EE-736	TITANIUM – Total			mg/l	525	HCH (Total)			µg/l
FF-724	ZINC – Total	A	0.25	mg/l	530	CHLORDANE (Total)			µg/l
GG-408	OIL & GREASE	A	16.4	mg/l	507	DDT (Total)			µg/l
HH-312	PHENOLS			mg/l	521	PCBs (Total)			µg/l
31	SURFACTANTS (MBAS)			mg/l	512	ALDRIN			µg/l
	NONIONIC SURFACTANTS(NID)			mg/l	514	ENDRIN			µg/l

1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space. Test procedures must be in accordance with procedures contained in the current edition of STANDARD METHODS, if applicable. Test procedures for priority organics must be run in accordance with the appropriate EPA method.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined, using representative 24-hour composite samples (unless the parameter is identified by footnote 4/), by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

	Yes	No	Unk	N/A
D. Discharges to Surface Water				
Complete this section if the facility discharges pollutants or wastewater to surface water.				
20. Does the facility have an NPDES permit? If so, provide a copy.	X			
Term and expiration date of permit: 5-year, 1993				
21. Total number of discharge points: 3				
Identify discharge points and receiving water bodies: Flood control ditch to Santa Clara River to Pacific Ocean				
22. Are the facility's discharges subject to EPA effluent limitation guidelines (ELG) for a specific industrial category? If so, name the industrial category and subcategories which apply to the facility:	X			
23. Is the facility under a compliance schedule to satisfy conditions of its permit? If so, attach a copy.		X		
a. Is there a plan in place to comply with the schedule?				X
b. Has it been approved by the Control Authority?				X
c. Are written notices of compliance status submitted to the administrative agency within the required period of time?				X
d. Has a request for a variance been submitted each time the schedule has not been met?				X
24. Has the facility reviewed Coast Guard, Corps of Engineers, and state and federal requirements to determine applicability to site discharges?			X	

25. These activities are regulated by the Corps of Engineers under 33 CFR 323-324.

26. A wastewater treatment system is any device or system used in the treatment (including recycling and reclamation) of liquid wastes. This includes any treatment plant using physical, chemical, and/or biological processes to treat wastes, any surface impoundments used in the treatment of wastes, and any land application system used for waste treatment.

29. Operating records of treatment processes should be maintained in order to monitor performance and schedule preventive maintenance. In addition, operating logs establish a record of performance and compliance with NPDES permit requirements.

30. A bypass is the intentional diversion of waste streams from or around any unit of a treatment facility. A bypass would also include a wastewater treatment system which pumps when the sysem is turned off. A permitted facility may allow a bypass to occur if it is for essential maintenance to ensure efficient operation and if it does not exceed effluent limitations. Prior notice (at least ten days) must be given to the EPA or the state if the need for a bypass is known in advance.

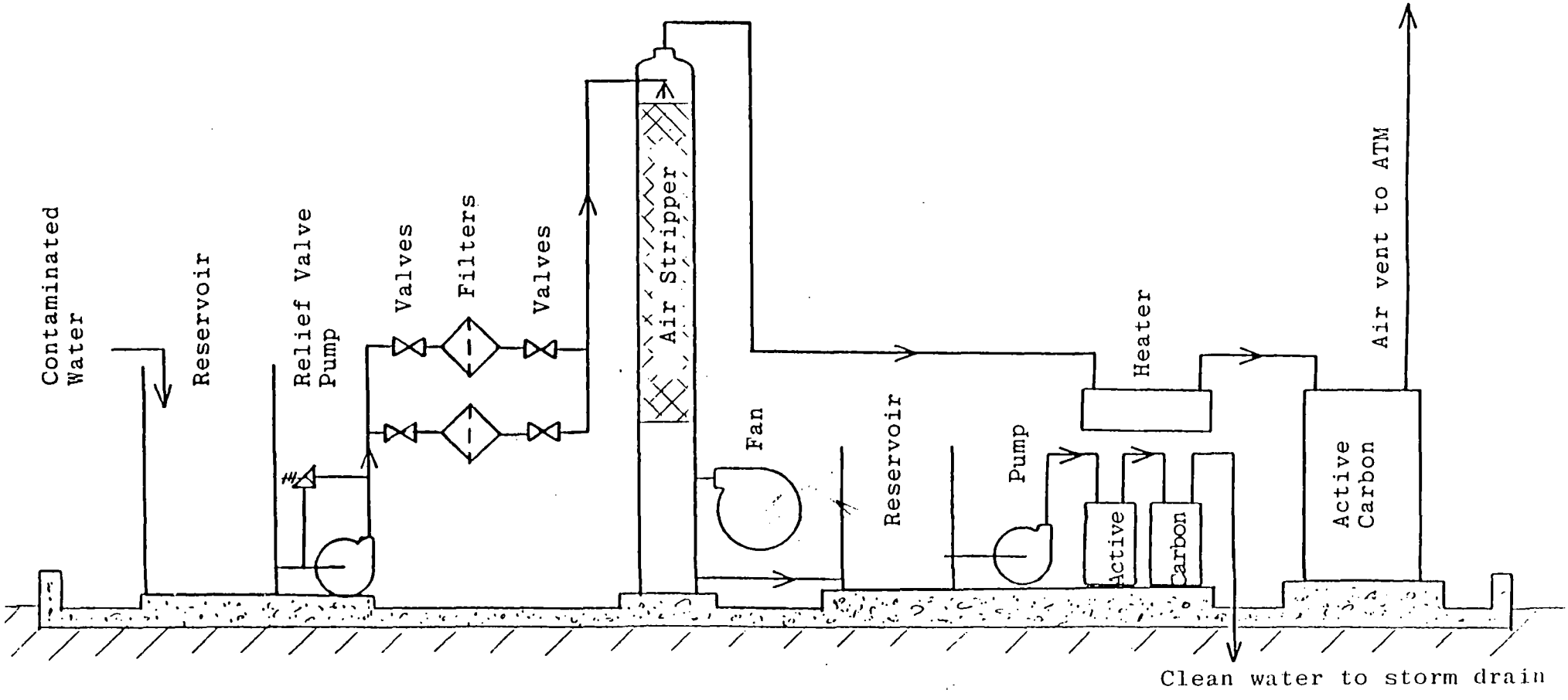
ATTACHM "H"

WASTEWATER TREATMENT SYSTEM

- Designed System Flow Rate (gpm): 50

- Current Maximum Flow Rate (gpm): 8

- Provide a diagram that shows the basic steps in treatment process eg., neutralization, cyanide oxidation, filter press, etc.



	Yes	No	Unk	N/A
25. If the facility has located structures or conducted work in or affecting navigable waters of the United States; or discharged dredged or fill material into United States waters; or transported dredged material for the purpose of dumping it in ocean waters, was a permit for these activities obtained from the U.S. Army Corps of Engineers?	___	___	___	

E. Wastewater Treatment

Complete this section if the facility operates any waste water treatment system, including a land application system or surface impoundment(s).

26. In Attachment H, describe the wastewater treatment system, providing a process flow diagram, description of process chemistry if applicable, and design capacity of the system.				
27. If the facility uses surface impoundments:				
a. Are they lined?	___	___	___	
b. Were they ever used to dispose of hazardous wastes?	___	___	___	
28. Were surface impoundments ever used in the past?	___	___	___	___

Describe use: _____

_____

29. Is an operating record maintained for each treatment unit?	___	___	___	___
30. Has the facility experienced any organic or hydraulic overloads of its treatment unit(s) which resulted in non-permitted discharges or bypassing within the last twelve months? If yes:	___	___	___	
a. Was the regulatory agency notified?	___	___	___	
b. Were corrective actions implemented promptly and documented?	___	___	___	

31. Treatment plant sludge is a solid waste under the Resource Conservation and Recovery Act (RCRA) and most state solid waste laws. It may also be regulated as a hazardous waste under RCRA if it meets certain criteria, e.g., metal hydroxide from a metal sludge from electroplating is a listed hazardous waste. A determination of the nature of the facility's treatment plant sludges is required by law.

32. Certain states require that treatment plant operators be certified as qualified to operate the treatment facility. Certifications should be kept on file at the facility.

33. All underground injection wells must have a permit unless the well was authorized by rule for the life of the well (40 CFR 144.31(a)). The permit is obtained from the EPA or an authorized state agency.

34.-37. Owners and operators of hazardous waste injection wells are required to demonstrate that they have the resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director (40 CFR 144 Subpact F). Such a demonstration can include the use of a trust fund, surety bond, letter of credit, insurance, or corporate guarantee.

	Yes	No	Unk	N/A
31. Has the facility characterized its wastewater treatment sludges and solids with respect to solid and hazardous waste requirements?	___	___	___	
32. a. Does the facility employ licensed operators if licensing is required by the state?	___	___	___	___
b. If so, are the certifications or licenses kept on file at the facility?	___	___	___	___
c. If required, are there backup operators?	___	___	___	___

F. Point Source Discharges to Ground Water

Complete this section if the facility discharges wastewater (treated or otherwise) by underground injection.

33. Does the facility have operating permits for all on-site injection wells?	___	___	___	
34. Do you have on file the financial assurances for the closure, plugging, and abandonment of the underground injection system?	___	___	___	
35. Are cost estimates for financial assurance up-to-date?	___	___	___	
36. Has documentation of financial assurance been submitted to the permitting agency?	___	___	___	
37. If any portions of the underground injection system have been abandoned, were closure and abandonment procedures carried out in accordance with the permit?	___	___	___	

38. & 39. In the December 7, 1988 Federal Register, the EPA issued proposed new regulations regarding storm water discharges. A facility with a storm water discharge "associated with industrial activity" would not be required to obtain a permit if the discharge goes to a municipal separate storm sewer serving a population of 100,000 or more. Permits for discharges to municipal sewers serving less than 100,000 will not be required prior to completion of studies mandated under the Clean Water Act amendments; EPA is required to issue regulations by October 1, 1992 specifying whether such discharges will require a permit.

In its December 7 notice, EPA proposes that facilities which discharge storm water associated with industrial activity to non-municipal storm sewers be required to obtain an individual permit or to be covered by a permit issued to the operator of the portion of the storm water system which discharges *directly to waters of the United States. Permit applications would have to be filed within one year of* the date of the final regulations.

The EPA has eliminated the terms "Group I" and "Group II" in identifying industrial storm water dischages. Instead, the term "associated with industrial activity" is defined to mean "directly related to manufacturing, processing, or raw materials storage at an industrial plant," and including plant yards, immediate access roads and rail lines, drainage ponds, material handling sites, sites used for application and disposal of process waters, sites used for storage and maintenance of material handling equipment, and sites used currently or in the past for residual treatment, storage, or disposal. The definition does not include discharges from parking lots and administrative buildings.

40. In its December 7 notice, the EPA proposed to reduce its requirements for quantitative data for permit applications for industrial storm water discharges. The proposed regulations would require quantitive data for any pollutant limited in an effluent guideline for an industrial subcategory, any pollutants in a facility's NPDES permit for process wastewater, and conventional pollutants such as oil and grease, TOC, TSS, COD, pH, BOD, total phosphorous, and total nitrogen.

41. The definition of storm water discharges "associated with industrial activity" does not include non-point source discharges, and permits for such discharges are not required at this time. The impact of non-point source discharges is still under study by the EPA.

	Yes	No	Unk	N/A

G. Storm Water Discharges

38. Does the facility discharge to:

a. a municipal separate storm water sewer system?	___	___	___	
b. a municipal combined process, wastewater and storm sewer?	___	___	___	
c. to the ground?	___	___	___	

Identify all storm water discharge points below (e.g., northwest corner of plant to unnamed brook) and on the facility map.

_____
_____
_____
_____

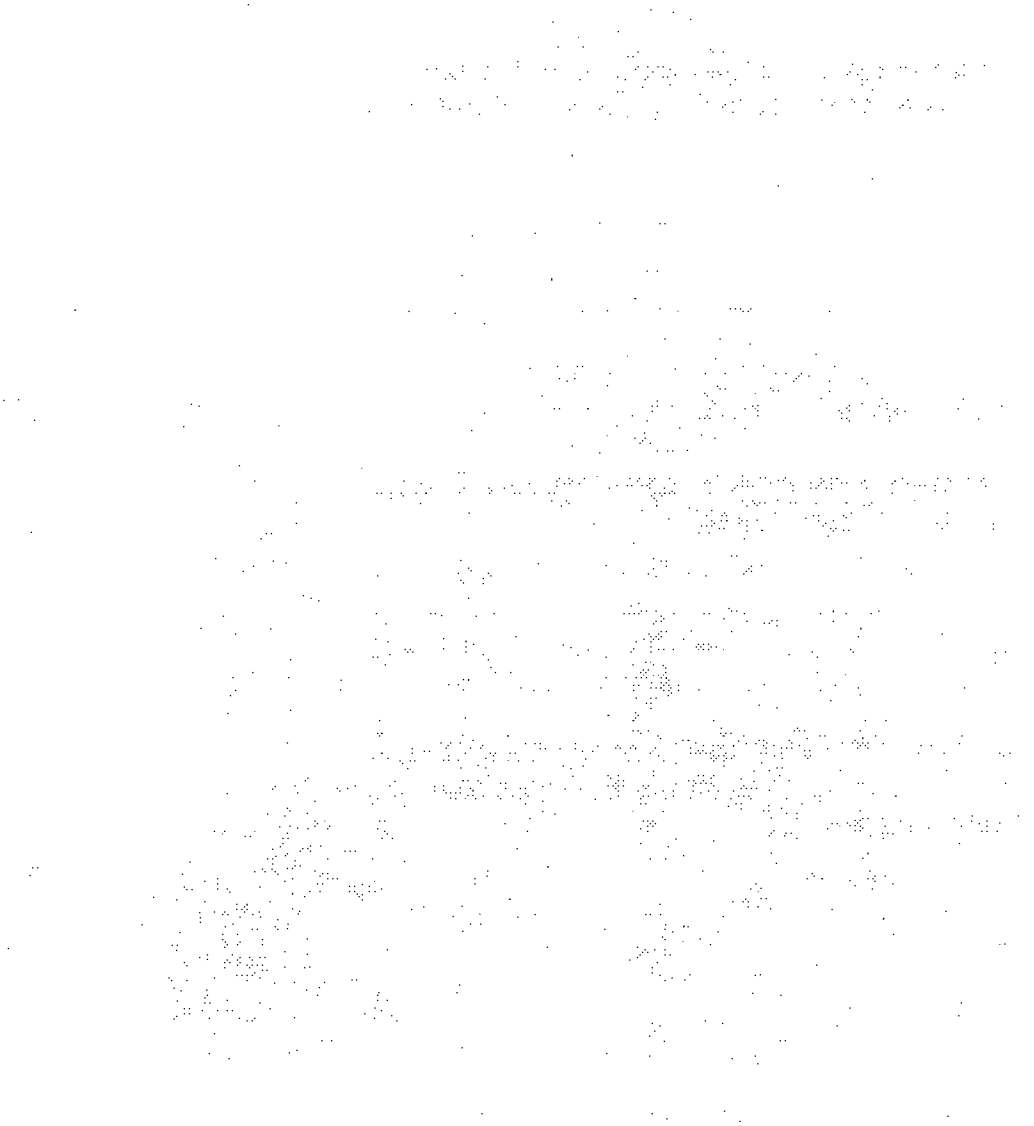
39. Does the facility have a permit for its storm water discharges? If so, attach a copy. ___ ___ ___

40. Have the facility's storm water been analyzed? If so, what constituents are present? ___ ___ ___

_____
_____
_____
_____

41. Use Attachment I-1 to describe non-point source discharges and any measures the facility has in place to control these discharges.

42. All facilities which hold an NPDES permit are required to report the results of discharge monitoring using a Discharge Monitoring Report (DMR). Reporting requirements and frequencies differ from permit to permit and depend on the nature and impact of the discharge. The frequency of reporting is always at least once per year.



47. It is a good management practice to obtain a portion of a sample taken by a regulatory agency and have it analyzed independently to check the accuracy of the agency's analysis.

	Yes	No	Unk	N/A

H. Monitoring, Reporting, and Record Keeping

All facilities should complete this subsection.

42. Have all Discharge Monitoring Reports (DMR) required under the NPDES permit program or by the POTW been completed and sent to the appropriate authority on time? ___ ___ ___

    If not, describe circumstances of late or absent reports during the last two years.

    _____
    _____
    _____
    _____

43. Are all Discharge Monitoring Reports available on site? Provide a copy. ___ ___ ___

44. Has the facility complied with its permitted discharge limits during the past twelve months? If not: ___ ___ ___

    a. Was the permitting agency notified? If yes, answer b through d below. ___ ___ ___

    b. Were the necessary corrective actions taken and documented? ___ ___ ___

    c. Did the facility notify Textron Corporate Environmental Affairs Department? ___ ___ ___

    d. Did the facility notify Textron Legal Department? ___ ___ ___

45. Prepare a list of parameters and limitations for which the facility must report, including the name of the control agency for each requirement and the frequency of reporting. Use Attachment I-2.

46. Is sampling performed by the facility? ___ ___ ___

47. If sampling is performed by the regulatory agency or control authority, does the facility split the samples with the agency and conduct comparative analyses? ___ ___ ___

48. A chain-of-custody form documents the movement of samples from receipt of sample bottles through acceptance at the laboratory for analysis. This documentation helps to ensure the acceptability of the facility's analytical results in compliance disputes. In addition, if samples are classified as hazardous, documentation is required.

50. Outside laboratories used for wastewater analysis are often required under state law to be certified to perform such analyses. At a minimum, the outside laboratory should demonstrate that it has procedures in place to ensure the accuracy of the test results.

51. Sampling methods and analytical procedures are specified in the permit and should be in accordance with 40 CFR 136. Use of these procedures helps to ensure the reliability of test results.

Samples of the facility's waste stream or streams should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in the facility's permit which is adequate for collection of a representative sample. In general, two types of sampling are required: grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform; and 24-hour composite samples must be used for all other pollutants. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not longer than 15 minutes.

A 24-hour composite sample is a combination of at least 8 sample aliquots of at least 100 milliliters collected at periodic intervals during the operating hours of the facility over a 24-hour period. The composite must be flow-proportional: either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. The aliquots may be collected manually or automatically. Sample preservation techniques and analysis methods for each pollutant vary and are specified in 40 CFR 136.

Biological monitoring is increasingly becoming a requirement of industrial discharge permits. In biological monitoring, also called a bioassay, organisms representative of the local aquatic ecosystem are subjected to a particular effluent to quantify the concentration of the effluent necessary to kill 50 percent of the organisms within a 96-hour period. Water quality standards are then set at a percentage of this lethal concentration, and effluent limitations are set for specific dischargers restricting the quantity, rate, and concentration of the permitted discharge.

52. Sampling and analysis of intake water samples are often required as a means of determining the "net" plant discharge.

54. Reporting and record keeping under the NPDES Program must be performed in accordance with 40 CFR 122.48; under the Pretreatment Program in accordance with 40 CFR 403.12; and under the Underground Injection Control Program in accordance with 40 CFR 144.54.

	Yes	No	Unk	N/A
48. Does the facility maintain chain-of-custody documentation on samples?	___	___	___	
49. Does the facility analyze its own effluent?	___	___	___	
50. If an outside laboratory analyzes effluent:				
a. Is the laboratory certified?	___	___	___	
b. If not certified, does the outside laboratory have a written quality assurance/quality control program? Provide a copy.	___	___	___	
c. Does the facility inform labs of special preservation and or analytical requirements, if applicable?	___	___	___	
51. Are sampling and analysis performed in accordance with procedures specified in 40 CFR 136?	___	___	___	
52. Are samples of intake water taken and analyzed on a regular basis?	___	___	___	
53. Has the facility been required to sample its effluent for the 129 priority pollutants? If so, provide a copy of the analysis.	___	___	___	
54. Is there a system in place to ensure that all reports are filed in accordance with applicable regulations and contract requirements?	___	___	___	
55. Has the facility been in compliance with all effluent imitations for the past two years? If not, list what parameters were exceeded and number of occasions:	___	___	___	

Parameter	Date(s) Exceeded	Permitting Authority
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

56. If non-compliance under an NPDES permit involves a pollutant which threatens human health or the environment, oral notification must be given to the permitting agency within 24 hours, followed by written confirmation within five days.

59. & 60. Any new or modified discharges by an NPDES-permitted facility must be reported to the permitting authority so that a determination can be made as to whether an amendment to the permit is required.

61. Section 208 of the Clean Water Act established a procedure whereby states or designated regional authorities were required to formulate and implement strategies to control both point and non-point source pollution. Regional water quality management plans devloped by designated authorities or the states were required to provide for the maintenance of effluent-limited stretches and set wasteload allocations on water-quality limited stretches. Section 208 requires that no discharge permits be issued that conflict with regional water quality management plans.

	Yes	No	Unk	N/A
56. Is there a system in place to ensure that all situations resulting in non-compliance with permit conditions are reported to the regulatory agency as required:				
a. Orally, within 24 hours?	___	XX	___	
b. Written report within five days?	XX	___	___	
57. Have any of the facility's existing permits been revoked, suspended, or modified by the issuing agency at any time? Explain. Modify permit to include passivate room rinse water and rinse water for polisher at plant 1.	XX	___	___	
58. When required, have all permit applications been signed by an authorized company official (such as a vice president)?	XX	___	___	
59. Have any and all physical alterations, additions, or process changes at the facility (i.e., changes which would affect quantity or quality of wastewater discharges) been noted in correspondence with the permitting agency?	___	___	XX	
Explain what changes have been made:				
60. Have any and all physical alterations been approved by the permitting agency?	___	___	XX	
61. Does the facility track and comply with any applicable regional water quality management plans under Section 208 of the Clean Water Act?	___	___	XX	
I. Miscellaneous				
62. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

SECTION 6

WATER AND WASTEWATER

Survey Questions

All facilities should complete this section.

	Yes	No	Unk	N/A
A. Background				
1. If the facility has been subject to an inspection regarding water or wastewater issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence. _____ _____ _____	___	X	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to water or wastewater? If so, describe and provide copies of all documents. _____ _____ _____	___	X	___	
3. Are you aware of any water or wastewater circumstances which you believe may give rise to possible liabilities or enforcement actions? Describe. _____ _____ _____	___	X	___	
4. Has the facility completed a water balance flow diagram which shows flow rates for incoming water, operations, treatment units, and wastewater discharges throughout the facility?	___	X	___	
If so, provide the water balance flow diagram as Attachment G (an example diagram is provided). If such a diagram is not available, provide this information to the best available knowledge of the facility.				

4. The water balance flow diagram is not complete unless a similar balance is completed for pollutants. This should be documented, to the extent possible, with monitoring results and operating information.

6. Sewer use ordinances are designed to ensure the POTW's compliance with its NPDES permit by minimizing operating and maintenance problems at the POTW. They regulate the use of public and private sewers and drains, the installation and connection of building sewers and the discharge of water and wastes into the public sewer system. If the ordinance authorizes the POTW to enforce the federal pretreatment requirements and is sufficient to ensure that the terms of the POTW's own NPDES permit will be met, then the POTW may be delegated primary enforcement authority for discharges into the sewer system.

	Yes	No	Unk	N/A
4. Has the facility identified the sources of water pollutants and the average characteristics of each source?	xx			

If it is available, add information regarding sources and quantities of pollutants to the flow diagram provided as Attachment G.

B. Discharges to Publicly-Owned Treatment Works

Complete this subsection if the facility discharges any wastewater to a publicly-owned treatment works (POTW).

	Yes	No	Unk	N/A
5. Does the facility have a permit to discharge to a POTW? If so, provide a copy.	xx			

Term and expiration date of permit: Renewable upon change in process

Name of the control authority: County Sanitation Districts of Los Angeles

	Yes	No	Unk	N/A
6. Has the facility determined that the POTW has a sewer use ordinance or discharge permit approved by the EPA or the state regulatory agency?	xx			
7. Does the facility have a current copy of the POTW sewer ordinance, discharge permit, or approved pretreatment program available on site?	xx			
8. Is there a system in place to identify all discharge points to the POTW?	xx			

Total number of discharge points: 1

Description of source discharges to the POTW:
Occasional water test of sink
Discharge clean potable water

9. The general pretreatment standards specifically prohibit the discharge into a POTW of pollutants which would cause operational interference or damage to the POTW system. These prohibitions are listed in 40 CFR 403.5 and include pollutants which will create a fire or explosion hazard at the POTW; pollutants that may cause corrosive or structural damage to the POTW (but in no case have a pH lower than 5.0 unless the POTW is specifically designed to accommodate this); solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference; any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rage which will cause Interference with the POTW; heat in amounts which will inhibit biological activity at the POTW resulting in interference (but in no case heat in such quantities that the temperature at the POTW treatment Plant exceeds 40°C unless the Approval Authority, with the POTW, approves alternate limits).

10. In lieu of monitoring for Total Toxic Organics (TTO), the control authority may allow industrial dischargers to certify that no dumping of toxic organics to the waste stream has occurred (40 CFR 413.03(c)). This requires submission of a toxic organic management plan that specifies the toxic organic compounds used, the disposal method, and procedures for assuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW.

11. "Slug" discharges (usually defined as five times the permitted concentration of the pollutant) to a POTW are typically prohibited. Non-contact cooling water is also usually prohibited because of hydraulic loading. Any accidental slug loading or discharge of any pollutants which may interfere with the operations of the POTW must be immediately reported to the POTW (40 CFR Part 403.12 (f)).

12. & 13. Categorical pretreatment standards specify the amounts of pollutants which may be discharged into a POTW by specific, existing or new industrial dischargers (40 CFR Parts 405-471). These standards are in addition to the general pretreatment standards (above) and are usually supplemented by local ordinances. Categories for which there are categorical pretreatment standards include:

Adhesives and Sealants
Aluminum Forming
Auto and Other Laundries
Battery Manufacturing
Coal Mining
Coil Coating
Copper Forming
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Foundries
Gum and Wood Chemicals
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather and Tanning Finishing
Mechanical Products Manufacturing
Ore Mining
Organic Chemicals Manufacturing
Paint and Ink Formulation
Pesticides
Petroleum Refining
Pharmaceutical Preparations
Photographic Equipment and Supplies
Plastics Processing
Plastic and Synthetic Materials Mfg.
Porcelain Enameling
Printing and Publishing
Pulp and Paper Mills
Rubber Processing
Soap and Detergent Manufacturing
Steam Electric Power Plants
Timber Products Processing

For direct discharges not covered by categorical standards, the Clean Water Act establishes technology-based treatment requirements to be used in permits and sets time limits for implementation. Effluent limitations for conventional pollutant concentrations must be based on the best conventional pollutant control technology (BCT). For toxic pollutants specified in the Act, effluent limitations must be based on best available technology economically achievable (BAT). BAT is also required for those pollutants which are neither conventional nor toxic.

APPLICATION NO. Z 02330

EXISTING INDUSTRY
PERMIT FOR INDUSTRIAL WASTEWATER DISCHARGE
SANITATION DISTRICTS OF LOS ANGELES COUNTY
1955 Workman Mill Road / Whittier, Ca.
Mailing Address: / P.O. Box 4998, Whittier, California 90607
John D. Parkhurst, Chief Engineer and General Manager

PERMIT NO. 6485

Valencia, Calif.* 10 / 3 / 78 (MO. / DAY / YR.)

APPLICATION IS HEREBY MADE BY* Hydraulics Research, a division of Textron, Inc. (PRINT) (FIRM NAME) A

(Mailing Address) 25200 W. Rye Canyon Road (STREET) cos Valencia (CITY) California (STATE) 91355 (ZIP) E

Edward and Minnie Pope are the owners of (OWNER, TENANT, ETC.) G of the property located at:

(Street) 25572 Stanford Avenue (PRINT) (City) Valencia (Zip) 91355

(ADDRESS OF PROPERTY PRODUCING WASTEWATER DISCHARGE)

Assessors Map Book No.* 2866 Page No.* 008 Parcel No.* 005 K

(LEGAL ADDRESS OF PROPERTY PRODUCING WASTEWATER DISCHARGE)

25572 Stanford Avenue, Valencia, California 91355 (PRINT)

(LOCATION OF POINT OF WASTEWATER DISCHARGE TO SEWERAGE SYSTEM)

for a Permit for Industrial Wastewater Discharge to the sewerage system.

Type of Industry* Metal Machining (GENERAL DESCRIPTION) M, 17 3694, 3728, 3722, 3729 (FEDERAL SIC NOS.) Q

Number of Employees (Full Time)* 14 employees total (Part Time)* S

Raw Materials Used* none (fabricated and pre-assembled components) U

(GENERAL DESCRIPTION - ADD ADDITIONAL SHEETS AS NEEDED)

Products Produced electro-hydraulic test stands

(GENERAL DESCRIPTION - ADD ADDITIONAL SHEETS AS NEEDED)

Producing Operations occasional water test of sink

(FULL DESCRIPTION - ADD ADDITIONAL SHEETS AS NEEDED)

Time of Discharge - * varies AM/PM to _____ AM/PM, (WORKING DAY - CROSS OUT AM OR PM) Days per Week* M T W Th F Sa Su varies (CIRCLE DAYS)

Wastewater Flow Rate* occasional AA (Gallons Per Day) approx. 1 gallon

Constituents of Wastewater Discharge clean, potable water

(GENERAL DESCRIPTION - ATTACH CHEMICAL ANALYSES RESULTS TO THIS APPLICATION)

Person in company responsible for industrial wastewater discharge:

Betty Seldner, Director, Performance Improvement Programs, 805/259-4030 ext. 205 BB
(PRINT) (NAME) (POSITION) (TELEPHONE NUMBER)

I affirm that all information furnished is true and correct and that the applicant will comply with the conditions stated on the back of this permit form.

Date October 3, 19 78

Signature for Applicant Shelley B. Kurtz (COMPANY ADMINISTRATIVE OFFICIAL) (NAME) Energy Coordinator (POSITION)

Approved by City or County Official

Date _____

County Engineers ..... ☐

City of _____ ☐

Title _____

Position _____

Approved by Sanitation Districts of Los Angeles County

Date _____

John D. Parkhurst, Chief Engineer and General Manager

by _____

Position _____

Note: A permit fee may be required by the local City or County Agency.

This form when properly signed shall be a valid permit unless suspended or revoked

	Yes	No	Unk	N/A
9. Does the facility have a system in place to prevent discharge of prohibited pollutants into the POTW?	XX			
10. Does the facility have a written management plan for Total Toxic Organics (TTO) or perform a regular TTO analysis?			XX	
11. Does the facility have a procedure to notify the POTW immediately of any discharge that may interfere with POTW operations or cause pass-through?			XX	
12. Have the pretreatment category and subcategories which apply to the facility been determined?			XX	

List category and subcategories:

_____

_____

_____

_____

13. Has the facility made an assessment of compliance with U.S. EPA categorical pretreatment standards?			XX	

	Yes	No	Unk	N/A

D. Discharges to Surface Water

Complete this section if the facility discharges pollutants or wastewater to surface water.

20. Does the facility have an NPDES permit? If so, provide a copy. ___ ___ ___

    Term and expiration date of permit: _____

21. Total number of discharge points: _____

    Identify discharge points and receiving water bodies:

    _____

    _____

    _____

22. Are the facility's discharges subject to EPA effluent limitation guidelines (ELG) for a specific industrial category? If so, name the industrial category and subcategories which apply to the facility: ___ ___ ___

    _____

    _____

    _____

23. Is the facility under a compliance schedule to satisfy conditions of its permit? If so, attach a copy. ___ ___ ___

    a. Is there a plan in place to comply with the schedule? ___ ___ ___

    b. Has it been approved by the Control Authority? ___ ___ ___

    c. Are written notices of compliance status submitted to the administrative agency within the required period of time? ___ ___ ___

    d. Has a request for a variance been submitted each time the schedule has not been met? ___ ___ ___

24. Has the facility reviewed Coast Guard, Corps of Engineers, and state and federal requirements to determine applicability to site discharges? ___ ___ ___

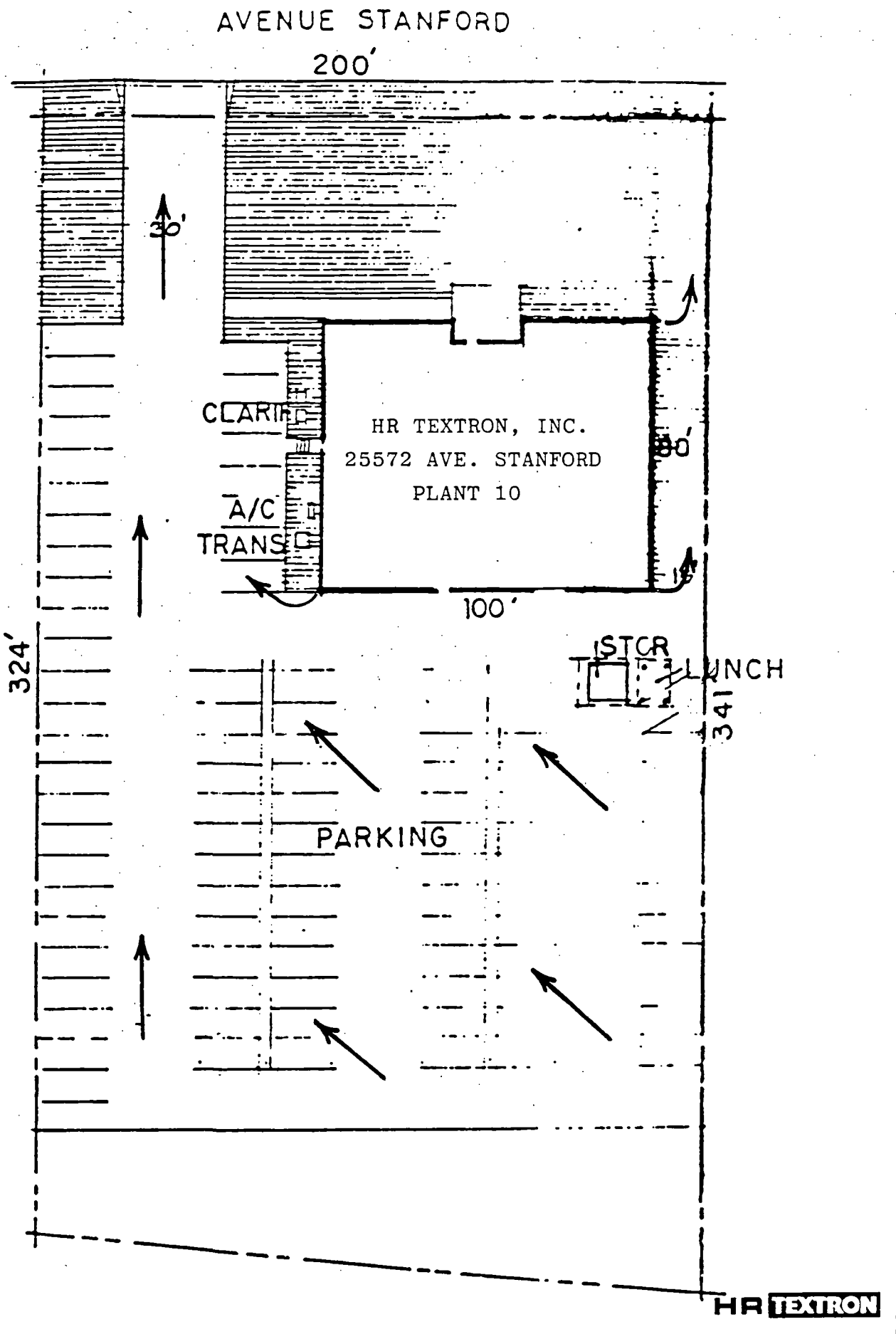
25. These activities are regulated by the Corps of Engineers under 33 CFR 323-324.

26. A wastewater treatment system is any device or system used in the treatment (including recycling and reclamation) of liquid wastes. This includes any treatment plant using physical, chemical, and/or biological processes to treat wastes, any surface impoundments used in the treatment of wastes, and any land application system used for waste treatment.

29. Operating records of treatment processes should be maintained in order to monitor performance and schedule preventive maintenance. In addition, operating logs establish a record of performance and compliance with NPDES permit requirements.

30. A bypass is the intentional diversion of waste streams from or around any unit of a treatment facility. A bypass would also include a wastewater treatment system which pumps when the sysem is turned off. A permitted facility may allow a bypass to occur if it is for essential maintenance to ensure efficient operation and if it does not exceed effluent limitations. Prior notice (at least ten days) must be given to the EPA or the state if the need for a bypass is known in advance.

	Yes	No	Unk	N/A
H. Monitoring, Reporting, and Record Keeping				
All facilities should complete this subsection.				
42. Have all Discharge Monitoring Reports (DMR) required under the NPDES permit program or by the POTW been completed and sent to the appropriate authority on time?	XX	___	___	
If not, describe circumstances of late or absent reports during the last two years.				
43. Are all Discharge Monitoring Reports available on site? Provide a copy.	___	___	XX	
44. Has the facility complied with its permitted discharge limits during the past twelve months? If not:	XX	___	___	
a. Was the permitting agency notified? If yes, answer b through d below.	___	___	___	
b. Were the necessary corrective actions taken and documented?	___	___	___	
c. Did the facility notify Textron Corporate Environmental Affairs Department?	___	___	___	
d. Did the facility notify Textron Legal Department?	___	___	___	
45. Prepare a list of parameters and limitations for which the facility must report, including the name of the control agency for each requirement and the frequency of reporting. Use Attachment I-2.				
46. Is sampling performed by the facility?	___	XX	___	
47. If sampling is performed by the regulatory agency or control authority, does the facility split the samples with the agency and conduct comparative analyses?	___	XX	___	



N

PLOT PLAN

1" = 40'

	Yes	No	Unk	N/A
48. Does the facility maintain chain-of-custody documentation on samples?	___	XX	___	
49. Does the facility analyze its own effluent?	___	XX	___	
50. If an outside laboratory analyzes effluent:				
a. Is the laboratory certified?	___	XX	___	
b. If not certified, does the outside laboratory have a written quality assurance/quality control program? Provide a copy.	___	___	___	
c. Does the facility inform labs of special preservation and or analytical requirements, if applicable?	___	XX	___	
51. Are sampling and analysis performed in accordance with procedures specified in 40 CFR 136?	___	___	XX	
52. Are samples of intake water taken and analyzed on a regular basis?	___	XX	___	
53. Has the facility been required to sample its effluent for the 129 priority pollutants? If so, provide a copy of the analysis.	___	XX	___	
54. Is there a system in place to ensure that all reports are filed in accordance with applicable regulations and contract requirements?	XX	___	___	
55. Has the facility been in compliance with all effluent limitations for the past two years? If not, list what parameters were exceeded and number of occasions:	XX	___	___	

Parameter	Date(s) Exceeded	Permitting Authority
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

	Yes	No	Unk	N/A
56. Is there a system in place to ensure that all situations resulting in non-compliance with permit conditions are reported to the regulatory agency as required:				
a. Orally, within 24 hours?	___	XX	___	
b. Written report within five days?	XX	___	___	
57. Have any of the facility's existing permits been revoked, suspended, or modified by the issuing agency at any time? Explain. _____ _____ _____	___	XX	___	
58. When required, have all permit applications been signed by an authorized company official (such as a vice president)?	XX	___	___	
59. Have any and all physical alterations, additions, or process changes at the facility (i.e., changes which would affect quantity or quality of wastewater discharges) been noted in correspondence with the permitting agency?	___	___	XX	
Explain what changes have been made: _____ _____ _____ _____				
60. Have any and all physical alterations been approved by the permitting agency?	___	___	XX	
61. Does the facility track and comply with any applicable regional water quality management plans under Section 208 of the Clean Water Act?	___	___	XX	

I. Miscellaneous

62. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

	Yes	No	Unk	N/A
9. Does the facility have a system in place to prevent discharge of prohibited pollutants into the POTW?	XX			
10. Does the facility have a written management plan for Total Toxic Organics (TTO) or perform a regular TTO analysis?			XX	
11. Does the facility have a procedure to notify the POTW immediately of any discharge that may interfere with POTW operations or cause pass-through?			XX	
12. Have the pretreatment category and subcategories which apply to the facility been determined?			XX	
List category and subcategories: _____ _____ _____ _____				
13. Has the facility made an assessment of compliance with U.S. EPA categorical pretreatment standards?			XX	

	Yes	No	Unk	N/A

D. Discharges to Surface Water

Complete this section if the facility discharges pollutants or wastewater to surface water.

20. Does the facility have an NPDES permit? If so, provide a copy. ___ ___ ___

    Term and expiration date of permit: _____

21. Total number of discharge points: _____

    Identify discharge points and receiving water bodies:

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22. Are the facility's discharges subject to EPA effluent limitation guidelines (ELG) for a specific industrial category? If so, name the industrial category and subcategories which apply to the facility: ___ ___ ___

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    a. Is there a plan in place to comply with the schedule? ___ ___ ___

    b. Has it been approved by the Control Authority? ___ ___ ___

    c. Are written notices of compliance status submitted to the administrative agency within the required period of time? ___ ___ ___

    d. Has a request for a variance been submitted each time the schedule has not been met? ___ ___ ___

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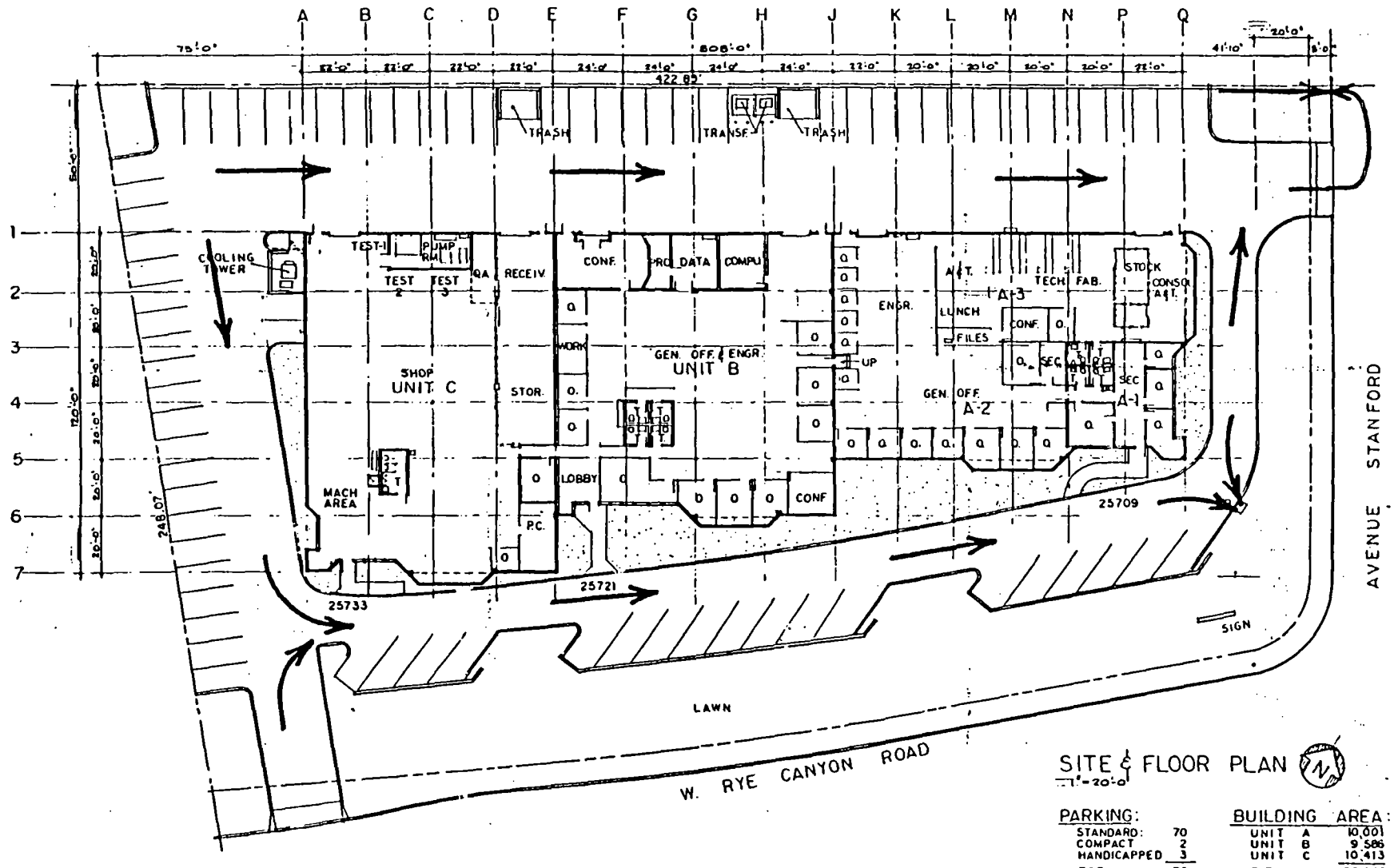

SITE & FLOOR PLAN

1"-20'-0"

PARKING:	
STANDARD:	70
COMPACT	2
HANDICAPPED	3
TOTAL	75

BUILDING AREA:		
UNIT	A	10,001 SF
UNIT	B	9,586
UNIT	C	10,413
TOTAL		30,000 SF

WEIGHT			
STRESS			
Q A			
VAL ENGRG			4.25.83
MATL	DASH NO	NEXT ASSEMBLY	USED ON
		APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DO NOT SCALE
TOLERANCES: ANGLES ± 0° 30'
.XX ± .01 .XXX ± .005
REMOVE ALL BURRS
BREAK CORNERS .005 - .010
INTERNAL RADII .005 - .010
INTERPRET DRAWING PER DOD-STD-100

MATERIAL | HEAT TREAT | FINISH

CONTRACT NO
DRAWN
CHECKED
APPROVED
DESIGN APPROVED
APPROVED
ENGRG RLSE
RELEASE DATE

HR TEXTRON

PLANT 11 FACILITY
25709-721-733 W. RYE CANYON RD.
VALENCIA, CA.

SIZE D | FSCM NO 81873 | DRAWING NO 91(
SCALE | WEIGHT | SHEET

	Yes	No	Unk	N/A
H. Monitoring, Reporting, and Record Keeping				
All facilities should complete this subsection.				
42. Have all Discharge Monitoring Reports (DMR) required under the NPDES permit program or by the POTW been completed and sent to the appropriate authority on time?	XX	___	___	
If not, describe circumstances of late or absent reports during the last two years.				
43. Are all Discharge Monitoring Reports available on site? Provide a copy.	___	___	XX	
44. Has the facility complied with its permitted discharge limits during the past twelve months? If not:	XX	___	___	
a. Was the permitting agency notified? If yes, answer b through d below.	___	___	___	
b. Were the necessary corrective actions taken and documented?	___	___	___	
c. Did the facility notify Textron Corporate Environmental Affairs Department?	___	___	___	
d. Did the facility notify Textron Legal Department?	___	___	___	
45. Prepare a list of parameters and limitations for which the facility must report, including the name of the control agency for each requirement and the frequency of reporting. Use Attachment I-2.				
46. Is sampling performed by the facility?	___	XX	___	
47. If sampling is performed by the regulatory agency or control authority, does the facility split the samples with the agency and conduct comparative analyses?	___	XX	___	

	Yes	No	Unk	N/A
48. Does the facility maintain chain-of-custody documentation on samples?	___	XX	___	
49. Does the facility analyze its own effluent?	___	XX	___	
50. If an outside laboratory analyzes effluent:				
a. Is the laboratory certified?	___	XX	___	
b. If not certified, does the outside laboratory have a written quality assurance/quality control program? Provide a copy.	___	___	___	
c. Does the facility inform labs of special preservation and or analytical requirements, if applicable?	___	XX	___	
51. Are sampling and analysis performed in accordance with procedures specified in 40 CFR 136?	___	___	XX	
52. Are samples of intake water taken and analyzed on a regular basis?	___	XX	___	
53. Has the facility been required to sample its effluent for the 129 priority pollutants? If so, provide a copy of the analysis.	___	XX	___	
54. Is there a system in place to ensure that all reports are filed in accordance with applicable regulations and contract requirements?	XX	___	___	
55. Has the facility been in compliance with all effluent limitations for the past two years? If not, list what parameters were exceeded and number of occasions:	XX	___	___	

Parameter	Date(s) Exceeded	Permitting Authority
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

	Yes	No	Unk	N/A
56. Is there a system in place to ensure that all situations resulting in non-compliance with permit conditions are reported to the regulatory agency as required:				
a. Orally, within 24 hours?	___	XX	___	
b. Written report within five days?	XX	___	___	
57. Have any of the facility's existing permits been revoked, suspended, or modified by the issuing agency at any time? Explain. _____ _____ _____	___	XX	___	
58. When required, have all permit applications been signed by an authorized company official (such as a vice president)?	XX	___	___	
59. Have any and all physical alterations, additions, or process changes at the facility (i.e., changes which would affect quantity or quality of wastewater discharges) been noted in correspondence with the permitting agency?	___	___	XX	
Explain what changes have been made: _____ _____ _____ _____				
60. Have any and all physical alterations been approved by the permitting agency?	___	___	XX	
61. Does the facility track and comply with any applicable regional water quality management plans under Section 208 of the Clean Water Act?	___	___	XX	
I. Miscellaneous				
62. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

SECTION 6

WATER AND WASTEWATER

Survey Questions

All facilities should complete this section.

	Yes	No	Unk	N/A
A. Background				
1. If the facility has been subject to an inspection regarding water or wastewater issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence. _____ _____ _____	___	X	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to water or wastewater? If so, describe and provide copies of all documents. _____ _____ _____	___	X	___	
3. Are you aware of any water or wastewater circumstances which you believe may give rise to possible liabilities or enforcement actions? Describe. _____ _____ _____	___	X	___	
4. Has the facility completed a water balance flow diagram which shows flow rates for incoming water, operations, treatment units, and wastewater discharges throughout the facility?	___	X	___	
If so, provide the water balance flow diagram as Attachment G (an example diagram is provided). If such a diagram is not available, provide this information to the best available knowledge of the facility.				

4. The water balance flow diagram is not complete unless a similar balance is completed for pollutants. This should be documented, to the extent possible, with monitoring results and operating information.

6. Sewer use ordinances are designed to ensure the POTW's compliance with its NPDES permit by minimizing operating and maintenance problems at the POTW. They regulate the use of public and private sewers and drains, the installation and connection of building sewers and the discharge of water and wastes into the public sewer system. If the ordinance authorizes the POTW to enforce the federal pretreatment requirements and is sufficient to ensure that the terms of the POTW's own NPDES permit will be met, then the POTW may be delegated primary enforcement authority for discharges into the sewer system.

	Yes	No	Unk	N/A
4. Has the facility identified the sources of water pollutants and the average characteristics of each source?	xx			

If it is available, add information regarding sources and quantities of pollutants to the flow diagram provided as Attachment G.

B. Discharges to Publicly-Owned Treatment Works

Complete this subsection if the facility discharges any wastewater to a publicly-owned treatment works (POTW).

5. Does the facility have a permit to discharge to a POTW? If so, provide a copy.	xx			

Term and expiration date of permit: Renewable upon change in process

Name of the control authority: County Sanitation Districts of Los Angeles

6. Has the facility determined that the POTW has a sewer use ordinance or discharge permit approved by the EPA or the state regulatory agency?	xx			
7. Does the facility have a current copy of the POTW sewer ordinance, discharge permit, or approved pretreatment program available on site?	xx			
8. Is there a system in place to identify all discharge points to the POTW?	xx			

Total number of discharge points: 1

Description of source discharges to the POTW:
Photo plate rinsate

9. The general pretreatment standards specifically prohibit the discharge into a POTW of pollutants which would cause operational interference or damage to the POTW system. These prohibitions are listed in 40 CFR 403.5 and include pollutants which will create a fire or explosion hazard at the POTW; pollutants that may cause corrosive or structural damage to the POTW (but in no case have a pH lower than 5.0 unless the POTW is specifically designed to accommodate this); solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference; any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rage which will cause Interference with the POTW; heat in amounts which will inhibit biological activity at the POTW resulting in interference (but in no case heat in such quantities that the temperature at the POTW treatment Plant exceeds 40°C unless the Approval Authority, with the POTW, approves alternate limits).

10. In lieu of monitoring for Total Toxic Organics (TTO), the control authority may allow industrial dischargers to certify that no dumping of toxic organics to the waste stream has occurred (40 CFR 413.03(c)). This requires submission of a toxic organic management plan that specifies the toxic organic compounds used, the disposal method, and procedures for assuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW.

11. "Slug" discharges (usually defined as five times the permitted concentration of the pollutant) to a POTW are typically prohibited. Non-contact cooling water is also usually prohibited because of hydraulic loading. Any accidental slug loading or discharge of any pollutants which may interfere with the operations of the POTW must be immediately reported to the POTW (40 CFR Part 403.12 (f)).

12. & 13. Categorical pretreatment standards specify the amounts of pollutants which may be discharged into a POTW by specific, existing or new industrial dischargers (40 CFR Parts 405-471). These standards are in addition to the general pretreatment standards (above) and are usually supplemented by local ordinances. Categories for which there are categorical pretreatment standards include:

Adhesives and Sealants
Aluminum Forming
Auto and Other Laundries
Battery Manufacturing
Coal Mining
Coil Coating
Copper Forming
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Foundries
Gum and Wood Chemicals
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather and Tanning Finishing
Mechanical Products Manufacturing
Ore Mining
Organic Chemicals Manufacturing
Paint and Ink Formulation
Pesticides
Petroleum Refining
Pharmaceutical Preparations
Photographic Equipment and Supplies
Plastics Processing
Plastic and Synthetic Materials Mfg.
Porcelain Enameling
Printing and Publishing
Pulp and Paper Mills
Rubber Processing
Soap and Detergent Manufacturing
Steam Electric Power Plants
Timber Products Processing

For direct discharges not covered by categorical standards, the Clean Water Act establishes technology-based treatment requirements to be used in permits and sets time limits for implementation. Effluent limitations for conventional pollutant concentrations must be based on the best conventional pollutant control technology (BCT). For toxic pollutants specified in the Act, effluent limitations must be based on best available technology economically achievable (BAT). BAT is also required for those pollutants which are neither conventional nor toxic.

INDUSTRIAL WASTE DISPOSAL PERMIT

PERMIT NO. 9389

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
WASTE MANAGEMENT DIVISION
BOX 4089
LOS ANGELES, CA 90051

EXPIRATION DATE None

PERMISSION IS HEREBY GRANTED TO:

006916-7

HR TEXTRON 25200 W RYE CANYON RD VALENCIA CA 91355	<<<<<<< FILE NUMBER <<<<<<< PERMITTEE
RE: ~~27116~~ AVE STANFORD 28105	<<<<<<< FACILITY ADDRESS

TO TREAT/STORE/DISPOSE INDUSTRIAL WASTE MATERIALS AT THE FACILITY ABOVE:

UNDER THE SANITARY SEWER AND INDUSTRIAL WASTE ORDINANCE OF:

[X] Los Angeles County Code Title 20, Division 2
[ ] City of [ ] Ordinance No.
[ ] Municipal Code Section

THE INDUSTRIAL WASTE OPERATIONS REGULATED BY THIS PERMIT CONSIST OF THE FOLLOWING:

Generating Operations: Photo plate rinsate

THIS PERMIT IS SUBJECT TO THE FOLLOWING REQUIREMENTS:

[X] PART A - ON-SITE DISPOSAL (PUBLIC SANITARY SEWER/PRIVATE DISPOSAL SYSTEM)
[X] PART B - WASTES NOT AUTHORIZED FOR DISCHARGE OR DEPOSIT IN PART A
[X] PART C - GENERAL CONDITIONS AND LIMITATIONS
[X] PART D - EFFLUENT QUALITY LIMITATIONS -
[ ] PART E - SELF-MONITORING AND REPORTING
[ ] PART F - OTHER:

The plans approved in conjunction with this permit and any plans referenced herein are made part of this permit. The Industrial Waste Engineering Inspector in your area will explain the permit conditions, and make periodic inspections of your operations. This permit is subject to annual industrial waste inspection fees.

Very truly yours,

T. A. TIDEMANSON
DIRECTOR OF PUBLIC WORKS

by _____
WASTE MANAGEMENT DIVISION

Issue Date 6-26-87

	Yes	No	Unk	N/A
9. Does the facility have a system in place to prevent discharge of prohibited pollutants into the POTW?	XX			
10. Does the facility have a written management plan for Total Toxic Organics (TTO) or perform a regular TTO analysis?			XX	
11. Does the facility have a procedure to notify the POTW immediately of any discharge that may interfere with POTW operations or cause pass-through?			XX	
12. Have the pretreatment category and subcategories which apply to the facility been determined?			XX	
List category and subcategories: _____ _____ _____ _____				
13. Has the facility made an assessment of compliance with U.S. EPA categorical pretreatment standards?			XX	

	Yes	No	Unk	N/A

D. Discharges to Surface Water

Complete this section if the facility discharges pollutants or wastewater to surface water.

20. Does the facility have an NPDES permit? If so, provide a copy. ___ ___ ___

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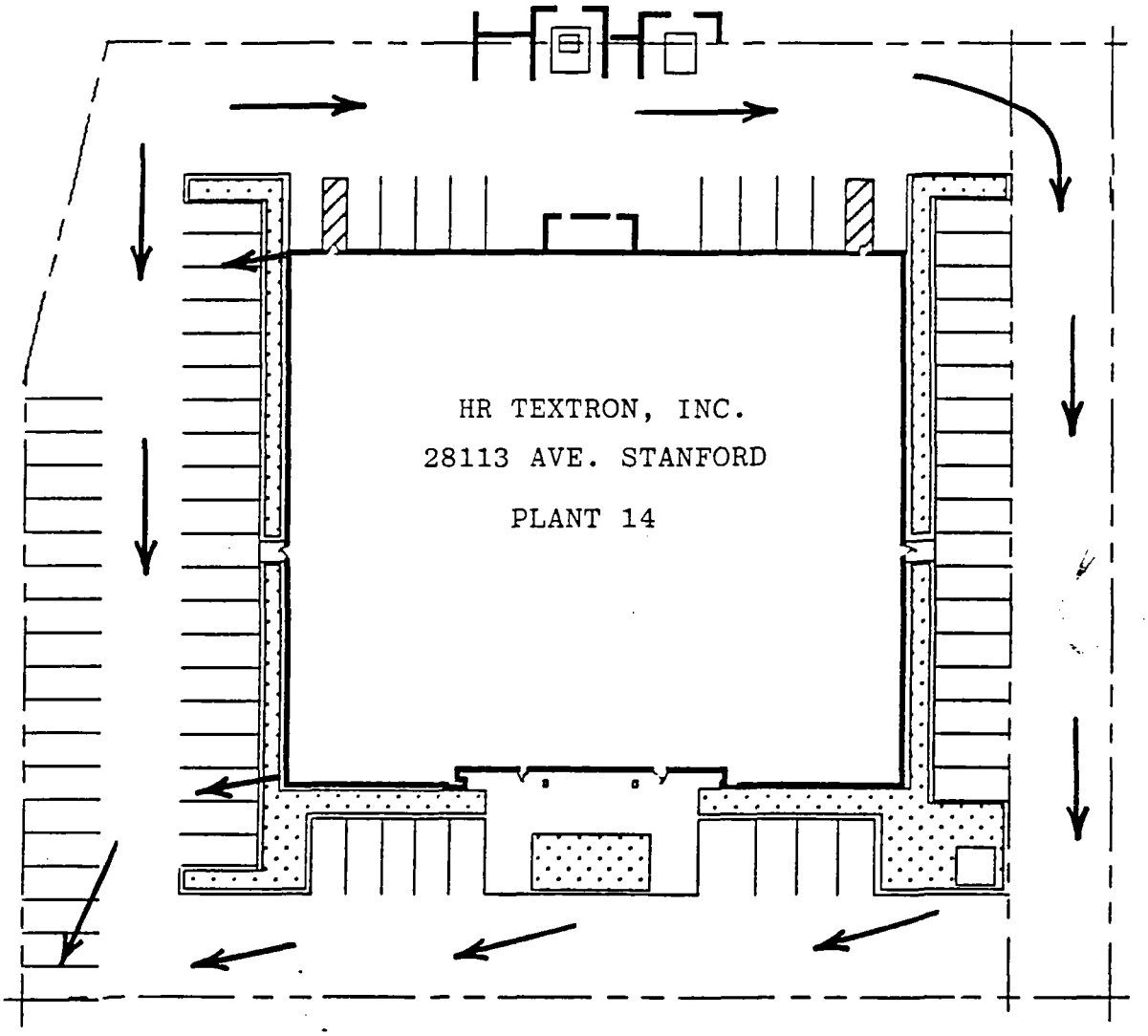

INTERSTATE 5

PLOT PLAN

SCALE: 1" = 100'

HR TEXTRON

	Yes	No	Unk	N/A
H. Monitoring, Reporting, and Record Keeping				
All facilities should complete this subsection.				
42. Have all Discharge Monitoring Reports (DMR) required under the NPDES permit program or by the POTW been completed and sent to the appropriate authority on time?	XX	___	___	
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b. If not certified, does the outside laboratory have a written quality assurance/quality control program? Provide a copy.	___	___	___	
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Parameter	Date(s) Exceeded	Permitting Authority
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Explain what changes have been made: _____ _____ _____ _____				
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I. Miscellaneous				
62. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

SECTION 6

WATER AND WASTEWATER

Survey Questions

All facilities should complete this section.

	Yes	No	Unk	N/A
A. Background				
1. If the facility has been subject to an inspection regarding water or wastewater issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence. Hexavalent Chrome in Passivate rinse water.	X			
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to water or wastewater? If so, describe and provide copies of all documents.		X		
3. Are you aware of any water or wastewater circumstances which you believe may give rise to possible liabilities or enforcement actions? Describe.	X			
4. Has the facility completed a water balance flow diagram which shows flow rates for incoming water, operations, treatment units, and wastewater discharges throughout the facility?		X		

If so, provide the water balance flow diagram as Attachment G (an example diagram is provided). If such a diagram is not available, provide this information to the best available knowledge of the facility.

4. The water balance flow diagram is not complete unless a similar balance is completed for pollutants. This should be documented, to the extent possible, with monitoring results and operating information.

6. Sewer use ordinances are designed to ensure the POTW's compliance with its NPDES permit by minimizing operating and maintenance problems at the POTW. They regulate the use of public and private sewers and drains, the installation and connection of building sewers and the discharge of water and wastes into the public sewer system. If the ordinance authorizes the POTW to enforce the federal pretreatment requirements and is sufficient to ensure that the terms of the POTW's own NPDES permit will be met, then the POTW may be delegated primary enforcement authority for discharges into the sewer system.

	Yes	No	Unk	N/A
4. Has the facility identified the sources of water pollutants and the average characteristics of each source?	xx	___	___	

If it is available, add information regarding sources and quantities of pollutants to the flow diagram provided as Attachment G.

B. Discharges to Publicly-Owned Treatment Works

Complete this subsection if the facility discharges any wastewater to a publicly-owned treatment works (POTW).

5. Does the facility have a permit to discharge to a POTW? If so, provide a copy. #306129	xx	___	___	

Term and expiration date of permit: Renewable upon change of process

Name of the control authority: City of L.A. Bureau of Sanitation

6. Has the facility determined that the POTW has a sewer use ordinance or discharge permit approved by the EPA or the state regulatory agency?	xx	___	___	
7. Does the facility have a current copy of the POTW sewer ordinance, discharge permit, or approved pretreatment program available on site?	___	___	xx	
8. Is there a system in place to identify all discharge points to the POTW?	___	___	xx	

Total number of discharge points: 5

Description of source discharges to the POTW:

N.D.T. (acid rinse water)
Compressor condensed water (oil)
Floor Drains (oil & water)
Cooling Tower bleed off
Passivate rinse water (chrome)

9. The general pretreatment standards specifically prohibit the discharge into a POTW of pollutants which would cause operational interference or damage to the POTW system. These prohibitions are listed in 40 CFR 403.5 and include pollutants which will create a fire or explosion hazard at the POTW; pollutants that may cause corrosive or structural damage to the POTW (but in no case have a pH lower than 5.0 unless the POTW is specifically designed to accommodate this); solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference; any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rage which will cause Interference with the POTW; heat in amounts which will inhibit biological activity at the POTW resulting in interference (but in no case heat in such quantities that the temperature at the POTW treatment Plant exceeds 40°C unless the Approval Authority, with the POTW, approves alternate limits).

10. In lieu of monitoring for Total Toxic Organics (TTO), the control authority may allow industrial dischargers to certify that no dumping of toxic organics to the waste stream has occurred (40 CFR 413.03(c)). This requires submission of a toxic organic management plan that specifies the toxic organic compounds used, the disposal method, and procedures for assuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW.

11. "Slug" discharges (usually defined as five times the permitted concentration of the pollutant) to a POTW are typically prohibited. Non-contact cooling water is also usually prohibited because of hydraulic loading. Any accidental slug loading or discharge of any pollutants which may interfere with the operations of the POTW must be immediately reported to the POTW (40 CFR Part 403.12 (f)).

12. & 13. Categorical pretreatment standards specify the amounts of pollutants which may be discharged into a POTW by specific, existing or new industrial dischargers (40 CFR Parts 405-471). These standards are in addition to the general pretreatment standards (above) and are usually supplemented by local ordinances. Categories for which there are categorical pretreatment standards include:

Adhesives and Sealants
Aluminum Forming
Auto and Other Laundries
Battery Manufacturing
Coal Mining
Coil Coating
Copper Forming
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Foundries
Gum and Wood Chemicals
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather and Tanning Finishing
Mechanical Products Manufacturing
Ore Mining
Organic Chemicals Manufacturing
Paint and Ink Formulation
Pesticides
Petroleum Refining
Pharmaceutical Preparations
Photographic Equipment and Supplies
Plastics Processing
Plastic and Synthetic Materials Mfg.
Porcelain Enameling
Printing and Publishing
Pulp and Paper Mills
Rubber Processing
Soap and Detergent Manufacturing
Steam Electric Power Plants
Timber Products Processing

For direct discharges not covered by categorical standards, the Clean Water Act establishes technology-based treatment requirements to be used in permits and sets time limits for implementation. Effluent limitations for conventional pollutant concentrations must be based on the best conventional pollutant control technology (BCT). For toxic pollutants specified in the Act, effluent limitations must be based on best available technology economically achievable (BAT). BAT is also required for those pollutants which are neither conventional nor toxic.

	Yes	No	Unk	N/A
14. If the facility is subject to categorical treatment standards, has a baseline monitoring report (BMR) been submitted to the control authority? If so, provide a copy.	xx			
15. a. Is the facility in compliance with applicable categorical standards?		xx		
b. If using the combined waste stream formula, is the facility in compliance with established standards?		xx		
c. If the facility is not in compliance with applicable standards, is a compliance plan in place and scheduled?	xx			
16. Has the facility ever utilized removal credits to achieve compliance with categorical standards?		x		

If so, describe:

_____

_____

_____

_____

C. Discharges to Private Treatment Works

Complete this section if the facility discharges wastewater to a private treatment works.

17. Does the facility have discharges which flow to a private treatment works? Describe.		xx		
18. Does the private treatment works have a permit and remain in compliance?				
19. If the facility has a contract with a private works, does the contract specify conditions for discharge, responsibility for monitoring, and provisions for contract modification?				

_____

_____

_____

_____

20. Essentially all point source discharges of pollutants to surface waters or their associated wetlands are required to have an NPDES permit. If the state rather than EPA is the approved permitting authority, the state will issue SPDES (State Pollution Discharge Elimination System) permits to dischargers under the state permit program. The long Form 2-C, submitted to the state or EPA as part of the permit application becomes incorporated into the permit.

22. Categorical Effluent Limitation Guidelines for specified industries can be found in 40 CFR 405-471. Industrial categories are listed in the guidance for Questions 12 and 13.

23. An NPDES or SPDES permit may specify a schedule of compliance when necessary to allow a reasonable opportunity to attain compliance with the Clean Water Act and regulatory requirements (40 CFR 122.47). If the final date for compliance is more than one year after issuance of the permit, the schedule must specify interim requirements and dates for their achievement. If the discharger fails to meet a final deadline established in the permit, the EPA or authorized state may issue a compliance order which specifies a reasonable time for compliance.

24. Certain discharges to navigable waters are also regulated by the U.S. Coast Guard (spills of oil - 33 CFR 153), the U.S. Army Corps of Engineers (dredging and filling - 33 CFR 323-324), and state regulatory agencies under state laws. Additional requirements may be imposed by water body commissions.

	Yes	No	Unk	N/A

D. Discharges to Surface Water

Complete this section if the facility discharges pollutants or wastewater to surface water.

20. Does the facility have an NPDES permit? If so, provide a copy. ___ ___ ___

    Term and expiration date of permit: _____

21. Total number of discharge points: _____

    Identify discharge points and receiving water bodies:

    _____

    _____

    _____

22. Are the facility's discharges subject to EPA effluent limitation guidelines (ELG) for a specific industrial category? If so, name the industrial category and subcategories which apply to the facility: ___ ___ ___

    _____

    _____

    _____

23. Is the facility under a compliance schedule to satisfy conditions of its permit? If so, attach a copy. ___ ___ ___

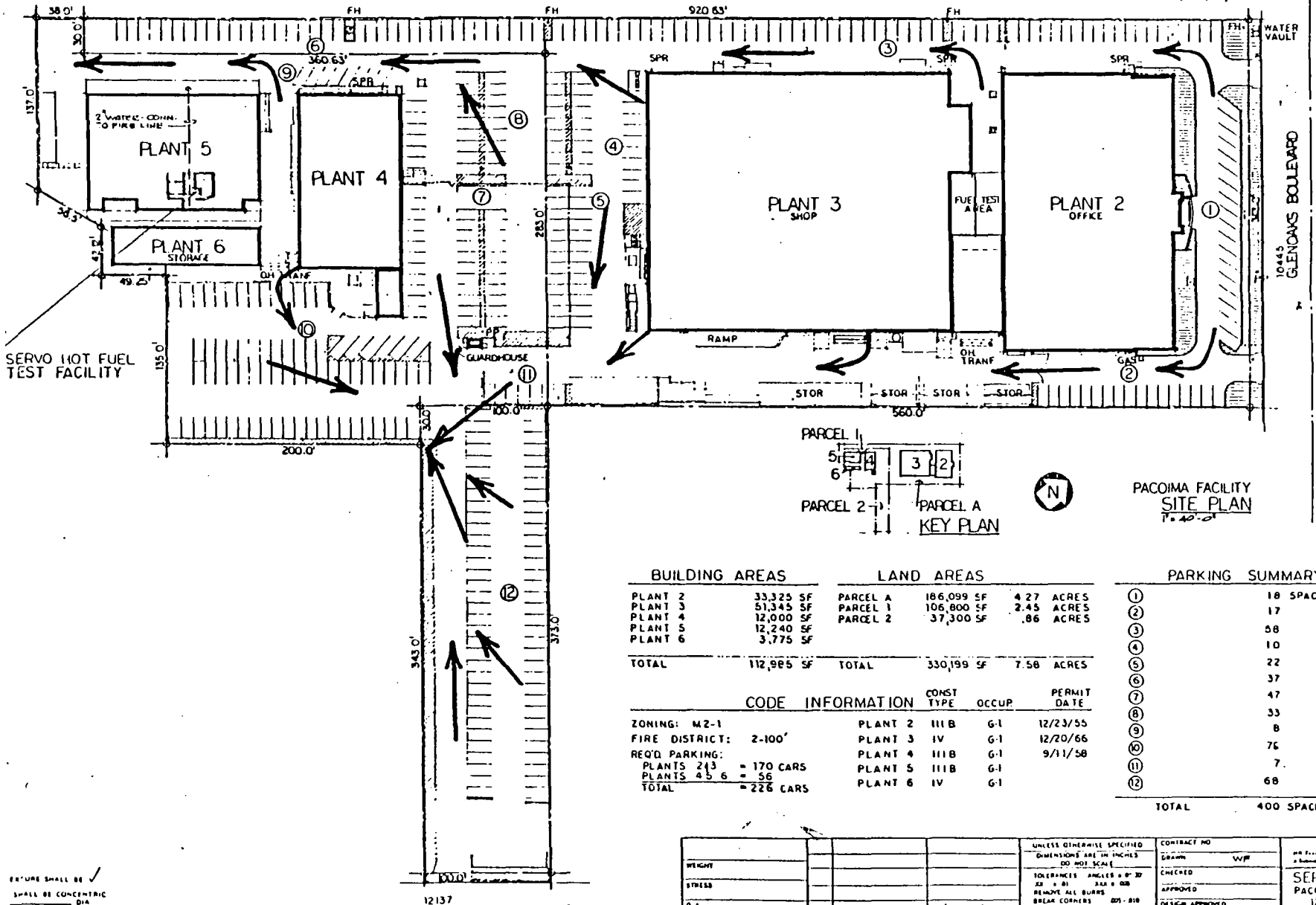
    a. Is there a plan in place to comply with the schedule? ___ ___ ___

    b. Has it been approved by the Control Authority? ___ ___ ___

    c. Are written notices of compliance status submitted to the administrative agency within the required period of time? ___ ___ ___

    d. Has a request for a variance been submitted each time the schedule has not been met? ___ ___ ___

24. Has the facility reviewed Coast Guard, Corps of Engineers, and state and federal requirements to determine applicability to site discharges? ___ ___ ___



PARCEL 1
PARCEL 2
PARCEL A
KEY PLAN

PACOIMA FACILITY
SITE PLAN
1" = 40'-0"

BUILDING AREAS

PLANT 2	33,325 SF
PLANT 3	51,345 SF
PLANT 4	12,000 SF
PLANT 5	12,240 SF
PLANT 6	3,775 SF
TOTAL	112,985 SF

LAND AREAS

PARCEL A	186,099 SF	4.27 ACRES
PARCEL 1	106,800 SF	2.45 ACRES
PARCEL 2	37,300 SF	.86 ACRES
TOTAL	330,199 SF	7.58 ACRES

PARKING SUMMARY

①	18 SPACES
②	17
③	58
④	10
⑤	22
⑥	37
⑦	47
⑧	33
⑨	8
⑩	76
⑪	7
⑫	68
TOTAL	400 SPACES

CODE INFORMATION

ZONING: M2-1
FIRE DISTRICT: 2-100'
REQ'D PARKING:
PLANTS 2&3 = 170 CARS
PLANTS 4 5 6 = 56
TOTAL = 226 CARS

	CONST TYPE	OCCUP	PERMIT DATE
PLANT 2	III B	G-1	12/23/55
PLANT 3	IV	G-1	12/20/66
PLANT 4	III B	G-1	9/11/58
PLANT 5	III B	G-1	
PLANT 6	IV	G-1	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DO NOT SCALE
TOLERANCES ANGLES ± 0° 30'
.XX ± .01 .XXX ± .005
REMOVE ALL BURRS
BREAK CORNERS .005 - .010
INTERNAL RADII .005 - .010
INTERPRET DRAWING PER
DOD STD 100

CONTRACT NO
DRAWN W/P
CHECKED
APPROVED
DESIGN APPROVED
APPROVED
ENGRG RLSE
RELEASE DATE

HR TEXTRON

SERVO HOT FUEL TEST FACILI
PACOIMA PLANT 5
12137 MONTAGUE ST
PACOIMA, CA.

SIZE D | FSCM NO 81873 | DRAWING NO 450
SCALE | WEIGHT | SHEET

WEIGHT
STRESS
Q A
VAL ENGRG
MATL

DASH NO | NEXT ASSEMBLY | USED ON
APPLICATION

MATERIAL | HEAT TREAT | FINISH

FEATURE SHALL BE ✓
SHALL BE CONCENTRIC
DIA
AND 81873 TO SPARES ONLY
WITH PART NO AND LATEST REV LTR
OTHERWISE SPECIFIED

	Yes	No	Unk	N/A
48. Does the facility maintain chain-of-custody documentation on samples?	xx			
49. Does the facility analyze its own effluent?		xx		
50. If an outside laboratory analyzes effluent:				
a. Is the laboratory certified?	xx			
b. If not certified, does the outside laboratory have a written quality assurance/quality control program? Provide a copy.				
c. Does the facility inform labs of special preservation and or analytical requirements, if applicable?	xx			
51. Are sampling and analysis performed in accordance with procedures specified in 40 CFR 136?	xx			
52. Are samples of intake water taken and analyzed on a regular basis?		xx		
53. Has the facility been required to sample its effluent for the 129 priority pollutants? If so, provide a copy of the analysis.		xx		
54. Is there a system in place to ensure that all reports are filed in accordance with applicable regulations and contract requirements?	xx			
55. Has the facility been in compliance with all effluent limitations for the past two years? If not, list what parameters were exceeded and number of occasions:		xx		

Parameter	Date(s) Exceeded	Permitting Authority
Chrome 59.4	November 1987	L.A.Bureau of Sanitation
Chrome 13.7	November 1988	L.A.Bureau of Sanitation

56. If non-compliance under an NPDES permit involves a pollutant which threatens human health or the environment, oral notification must be given to the permitting agency within 24 hours, followed by written confirmation within five days.

59. & 60. Any new or modified discharges by an NPDES-permitted facility must be reported to the permitting authority so that a determination can be made as to whether an amendment to the permit is required.

61. Section 208 of the Clean Water Act established a procedure whereby states or designated regional authorities were required to formulate and implement strategies to control both point and non-point source pollution. Regional water quality management plans devloped by designated authorities or the states were required to provide for the maintenance of effluent-limited stretches and set wasteload allocations on water-quality limited stretches. Section 208 requires that no discharge permits be issued that conflict with regional water quality management plans.

	Yes	No	Unk	N/A
56. Is there a system in place to ensure that all situations resulting in non-compliance with permit conditions are reported to the regulatory agency as required:				
a. Orally, within 24 hours?	___	XX	___	
b. Written report within five days?	XX	___	___	
57. Have any of the facility's existing permits been revoked, suspended, or modified by the issuing agency at any time? Explain. _____ _____ _____	___	XX	___	
58. When required, have all permit applications been signed by an authorized company official (such as a vice president)?	XX	___	___	
59. Have any and all physical alterations, additions, or process changes at the facility (i.e., changes which would affect quantity or quality of wastewater discharges) been noted in correspondence with the permitting agency?	___	___	XX	
Explain what changes have been made: _____ _____ _____ _____				
60. Have any and all physical alterations been approved by the permitting agency?	___	___	XX	
61. Does the facility track and comply with any applicable regional water quality management plans under Section 208 of the Clean Water Act?	___	___	XX	
I. Miscellaneous				
62. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

SELF-MONITORING REPORT

City of Los Angeles
Bureau of Sanitation
200 N. Main Street
City Hall East, Rm. 1400
Los Angeles, CA 90012
ATTN: EPA Pretreatment

EPA Pretreatment Category: [ ] Electroplating, 40CFR413
[X] Metal Finishing, 40CFR433

REPORT DUE:
I.W. Permit No. 306129

Name and Address of Company H.R. Textron
Facility Address 10445 Glenoaks Blvd., Pacoima, CA
Contact Person Bill Moses Telephone (805) 259-4030
Average Flow gpd 300 Sample Location Baseline EPA Pretreat
Lab Performing Analysis Certified Testing Laboratories, Inc.

- FAILURE TO PROVIDE ANY INFORMATION MAY CAUSE REJECTION OF THIS REPORT.
- FOR POLLUTANTS NOT USED IN YOUR WORK ACTIVITY, STATE "NOT USED".

Analytical Results: Complete form and attach a copy of lab analysis results.

Pollutant (1)	EPA/City Limits 1-day Maximum	Your Lab Results	Compliance Yes/No (4)	Pollutant (1)	EPA/City Limits 1-day Maximum	Your Lab Results	Compliance Yes/No (4)
Arsenic		0.032		Nickel		<0.1	
Cadmium		<0.02		pH range		7.5	
Copper		0.11		Silver (2)		<0.03	
Cyanide (Total)		<0.1		T. Chromium		<0.05	
Cyanide (Free)		<0.1		Zinc		0.28	
Diss. Sulfides		<0.10		T. Metals (3)			
Lead		<0.1		T. Toxic Organics (TTO)			
Oil and Grease		<10.0					
Temp. Range		80					

(1) All Pollutants measured in mg/l except pH which has no units. For pollutants not used in your work activity, state "not used".
(2) Applicable only to subcategory B-Electroplating of Precious Metals otherwise limit is 5.0 mg/l.
(3) Total Metals is the sum of concentration or mass of copper, nickel, chromium (total) and zinc.
(4) In a separate sheet, state reason/s for non-compliance and actions taken to correct violations. Submit schedule of compliance.

I certify that our company [ ] is [ ] is not consistently in compliance with EPA Pretreatment Standards for the Electroplating/Metal Finishing industries and the City of Los Angeles Effluent Limits.

I have personally examined and am familiar with the information submitted on this form and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information as directed by 40 CFR 403.12(m).

Signature of Official Print Name

Title Date

	Yes	No	Unk	N/A
9. Does the facility have a system in place to prevent discharge of prohibited pollutants into the POTW?	XX			
10. Does the facility have a written management plan for Total Toxic Organics (TTO) or perform a regular TTO analysis?			XX	
11. Does the facility have a procedure to notify the POTW immediately of any discharge that may interfere with POTW operations or cause pass-through?			XX	
12. Have the pretreatment category and subcategories which apply to the facility been determined?	XX			

List category and subcategories:

Metal finishing point source category

13. Has the facility made an assessment of compliance with U.S. EPA categorical pretreatment standards? | | | XX | |

	Yes	No	Unk	N/A
25. If the facility has located structures or conducted work in or affecting navigable waters of the United States; or discharged dredged or fill material into United States waters; or transported dredged material for the purpose of dumping it in ocean waters, was a permit for these activities obtained from the U.S. Army Corps of Engineers?	___	XX	___	

E. Wastewater Treatment

Complete this section if the facility operates any waste water treatment system, including a land application system or surface impoundment(s).

26. In Attachment H, describe the wastewater treatment system, providing a process flow diagram, description of process chemistry if applicable, and design capacity of the system.				
27. If the facility uses surface impoundments:				
a. Are they lined?	___	XX	___	
b. Were they ever used to dispose of hazardous wastes?	___	___	___	
28. Were surface impoundments ever used in the past?	___	XX	___	___
Describe use: _____				
_____				
29. Is an operating record maintained for each treatment unit?	___	XX	___	___
30. Has the facility experienced any organic or hydraulic overloads of its treatment unit(s) which resulted in non-permitted discharges or bypassing within the last twelve months? If yes:	___	XX	___	
a. Was the regulatory agency notified?	___	___	___	
b. Were corrective actions implemented promptly and documented?	___	___	___	

31. Treatment plant sludge is a solid waste under the Resource Conservation and Recovery Act (RCRA) and most state solid waste laws. It may also be regulated as a hazardous waste under RCRA if it meets certain criteria, e.g., metal hydroxide from a metal sludge from electroplating is a listed hazardous waste. A determination of the nature of the facility's treatment plant sludges is required by law.

32. Certain states require that treatment plant operators be certified as qualified to operate the treatment facility. Certifications should be kept on file at the facility.

33. All underground injection wells must have a permit unless the well was authorized by rule for the life of the well (40 CFR 144.31(a)). The permit is obtained from the EPA or an authorized state agency.

34.-37. Owners and operators of hazardous waste injection wells are required to demonstrate that they have the resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director (40 CFR 144 Subpact F). Such a demonstration can include the use of a trust fund, surety bond, letter of credit, insurance, or corporate guarantee.

	Yes	No	Unk	N/A
31. Has the facility characterized its wastewater treatment sludges and solids with respect to solid and hazardous waste requirements?	___	___	XX	
32. a. Does the facility employ licensed operators if licensing is required by the state?	___	XX	___	___
b. If so, are the certifications or licenses kept on file at the facility?	___	___	___	___
c. If required, are there backup operators?	___	___	___	___

F. Point Source Discharges to Ground Water

Complete this section if the facility discharges wastewater (treated or otherwise) by underground injection.

33. Does the facility have operating permits for all on-site injection wells?	___	___	/	
34. Do you have on file the financial assurances for the closure, plugging, and abandonment of the underground injection system?	___	___	___	
35. Are cost estimates for financial assurance up-to-date?	___	___	___	
36. Has documentation of financial assurance been submitted to the permitting agency?	___	___	___	
37. If any portions of the underground injection system have been abandoned, were closure and abandonment procedures carried out in accordance with the permit?	___	___	___	

	Yes	No	Unk	N/A

G. Storm Water Discharges

38. Does the facility discharge to:

a. a municipal separate storm water sewer system?	X			
b. a municipal combined process, wastewater and storm sewer?		X		
c. to the ground?		X		

Identify all storm water discharge points below (e.g., northwest corner of plant to unnamed brook) and on the facility map.

39. Does the facility have a permit for its storm water discharges? If so, attach a copy. | | X | | |

40. Have the facility's storm water been analyzed? If so, what constituents are present? | | X | | |

41. Use Attachment I-1 to describe non-point source discharges and any measures the facility has in place to control these discharges.

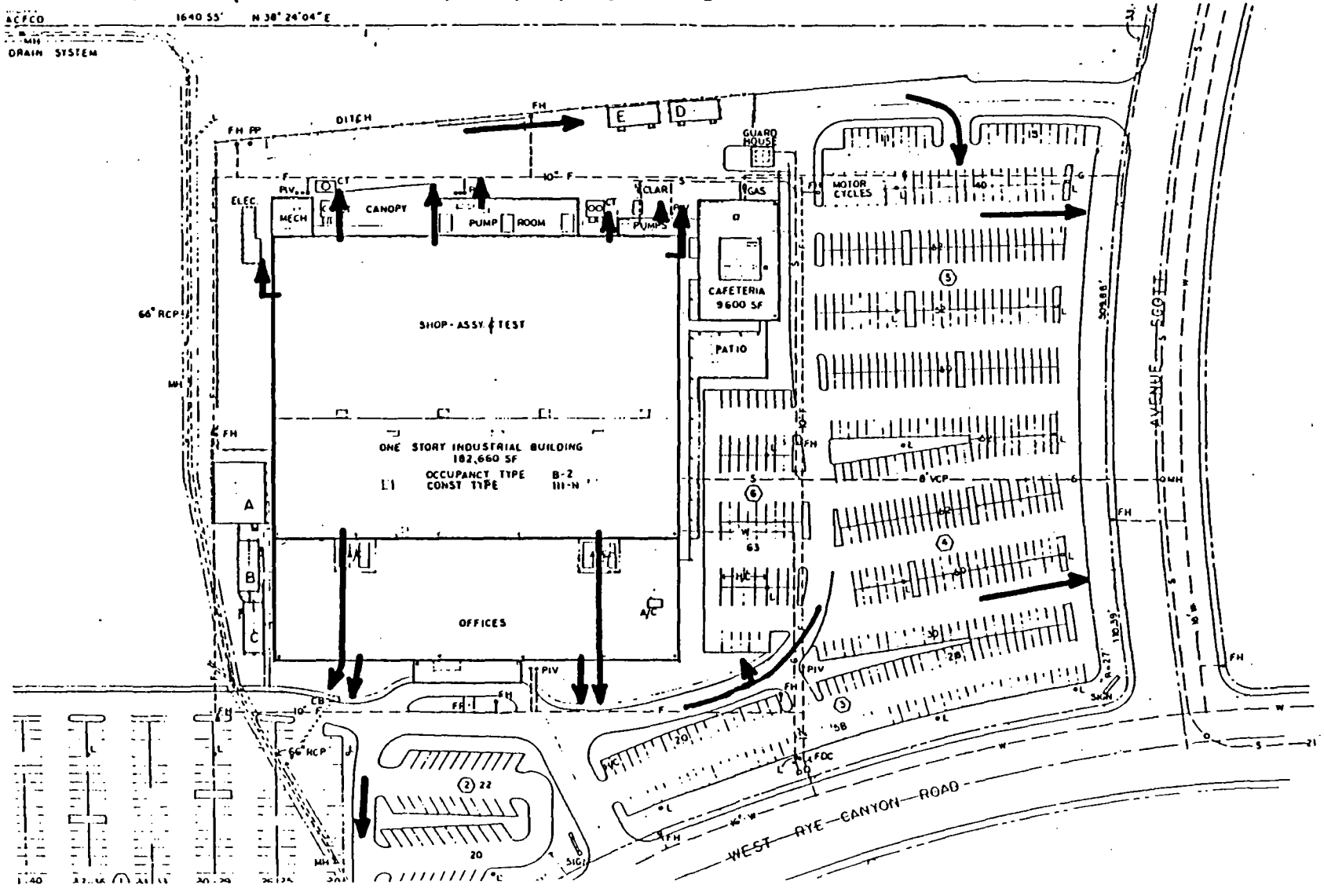
42. All facilities which hold an NPDES permit are required to report the results of discharge monitoring using a Discharge Monitoring Report (DMR). Reporting requirements and frequencies differ from permit to permit and depend on the nature and impact of the discharge. The frequency of reporting is always at least once per year.

47. It is a good management practice to obtain a portion of a sample taken by a regulatory agency and have it analyzed independently to check the accuracy of the agency's analysis.

ATTACHMENT I-1

NON-POINT SOURCE DISCHARGES

- **Description of Source (i.e. runoff from process area, parking, etc.)**
- **Control Measures (i.e. retention basin, lined, capacity 3.0 m.g. with sluice gate for discharge control)**



	Yes	No	Unk	N/A
H. Monitoring, Reporting, and Record Keeping				
All facilities should complete this subsection.				
42. Have all Discharge Monitoring Reports (DMR) required under the NPDES permit program or by the POTW been completed and sent to the appropriate authority on time?	XX	___	___	
If not, describe circumstances of late or absent reports during the last two years.				
43. Are all Discharge Monitoring Reports available on site? Provide a copy.	XX	___	___	
44. Has the facility complied with its permitted discharge limits during the past twelve months? If not:	XX	___	___	
a. Was the permitting agency notified? If yes, answer b through d below.	___	___	___	
b. Were the necessary corrective actions taken and documented?	___	___	___	
c. Did the facility notify Textron Corporate Environmental Affairs Department?	___	___	___	
d. Did the facility notify Textron Legal Department?	___	___	___	
45. Prepare a list of parameters and limitations for which the facility must report, including the name of the control agency for each requirement and the frequency of reporting. Use Attachment I-2.				
46. Is sampling performed by the facility?	___	XX	___	
47. If sampling is performed by the regulatory agency or control authority, does the facility split the samples with the agency and conduct comparative analyses?	___	XX	___	

KC Yes/FYI

HR TEXTRON

HR Textron Inc.
a Subsidiary of Textron Inc.

25200 West Rye Canyon Road
Valencia, Calif. 91355
805/259-4030
TWX 910/336/1438 TELEX 65/1492

May 31, 1989

SAMPLE

California Regional
Water Quality Control Board
Los Angeles Region
107 South Broadway, Room 4027
Los Angeles, CA 90012-4596

Attention: Mr. Albert E. Novak

Dear Mr. Novak:

In re: NPDES Permit No. CA 0003271 Compliance File #6024

Enclosed is the April, 1989, monthly monitoring data for outfalls 001, 002 and 003 of the referenced NPDES permit.

Outfall 001:	Temp = 70°F (100°F max)	Pass
	Flow = 2713 GPD (46,000 GPD max)	Pass
	pH = 8.3 (6.0 to 9.0)	Pass
Outfall 002:	Temp = 68°F (100°F max)	Pass
	Flow = 6983 GPD (46,000 GPD max)	Pass
	pH = 9.0 (6.0 to 9.0)	Pass
Outfall 003:	See attached monthly monitoring report for water treatment system (outfall 003) prepared by Leighton & Associates, dated 5/31/89.	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalities for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the Seventeenth day of May 31, 1989 at HR Textron, Inc.

Sincerely,

W.C. Moses
Director, Facilities Engineering

Attachment: Monthly Monitoring Report (Outfall 003)

	Yes	No	Unk	N/A
48. Does the facility maintain chain-of-custody documentation on samples?	X			
49. Does the facility analyze its own effluent?		X		
50. If an outside laboratory analyzes effluent:				
a. Is the laboratory certified?	X			
b. If not certified, does the outside laboratory have a written quality assurance/quality control program? Provide a copy.				
c. Does the facility inform labs of special preservation and or analytical requirements, if applicable?	X			
51. Are sampling and analysis performed in accordance with procedures specified in 40 CFR 136?	X			
52. Are samples of intake water taken and analyzed on a regular basis?		X		
53. Has the facility been required to sample its effluent for the 129 priority pollutants? If so, provide a copy of the analysis.		X		
54. Is there a system in place to ensure that all reports are filed in accordance with applicable regulations and contract requirements?	X			
55. Has the facility been in compliance with all effluent limitations for the past two years? If not, list what parameters were exceeded and number of occasions:	X			

Parameter	Date(s) Exceeded	Permitting Authority

HR TEXTRON

Controls Operation

Volume II of II

ENVIRONMENTAL SELF-SURVEY 1989

NOTE:
All responses in this survey apply to all non-contiguous buildings, unless specifically stated otherwise.

COMPANY PRIVATE

TEXTRON
ENVIRONMENTAL SURVEY

APRIL 1989

Prepared by:

Environmental Resources Management, Inc.
Exton, PA

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TEXTRON
ENVIRONMENTAL SURVEY

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SECTION 7

DRINKING WATER

Introduction

Legal Overview: The Safe Drinking Water Act of 1974, the 1986 amendments, and related regulations are designed to protect the quality of drinking water provided by public water systems. Public water systems are defined as systems for the provision of piped water for human consumption that have at least 15 service connections or regularly serve at least 25 people daily at least 60 days a year. A public water system is either a "community water system" or a "non-community water system" (40 CFR 141.2).

A "non-transient, non-community water system" or "NTNCWS," as defined by the 1986 amendments, refers to a public water system that is not a community water system and that regularly serves at least 25 persons for at least six months per year. Most industrial facility water supply systems would fall into this category.

The EPA regulations under this Act set maximum contaminant levels (MCLs) for certain contaminants in public water systems. The MCL is the maximum permissible level of a contaminant in water delivered to the user. The regulations specify maximum contaminant levels for turbidity, microbiological contamination (bacteria), inorganic chemicals, and certain volatile organic chemicals (VOCs). The levels for turbidity and bacteria are based on the sampling methods described in 40 CFR 141.22 and 40 CFR 141.21(a), respectively, and depend on the sampling procedures specified in the permit. For an NTNCWS, the maximum contaminant levels specified for VOCs and inorganics are as follows:

Volatile Organic (Chemicals (VOCs)	MCL
Trichloroethylene	0.005 mg/l
Carbon tetrachloride	0.005 mg/l
1,2-Dichloroethane	0.005 mg/l
Vinyl chloride	0.002 mg/l
Benzene	0.005 mg/l
para-Dichlorobenzene	0.075 mg/l
1,1-Dichloroethylene	0.007 mg/l
1,1,1-Trichloroethane	0.2 mg/l
Inorganic	
Nitrate (as N)*	20 mg/l

*(No other inorganics)

In addition to the VOCs specified above, an NTNCWS must test for the following unregulated contaminants, although no maximum concentration has been stipulated:

Bromobenzene	1,1-Dichloroethane
Bromodichloromethane	1,1-Dichloropropene
Bromoform	1,3-Dichloropropene
Bromomethane	1,3-Dichloropropane
Chlorobenzene	2,2-Dichloropropane
Chlorodibromomethane	Ethylbenzene
Chloroethane	Styrene
Chloroform	1,1,2-Trichloroethane
Chloromethane	1,1,1,2-Tetrachloroethane
o-Chlorotoluene	1,1,2,2-Tetrachloroethane
p-Chlorotoluene	Tetrachloroethylene
Dibromomethane	1,2,3-Trichloropropane
m-Dichlorobenzene	Toluene
o-Dichlorobenzene	m-Xylene
trans-1,2-Dichloroethylene	o-Xylene
cis-1,2-Dichloroethylene	p-Xylene
Dichloromethane	1,2-Dibromo-3-Chloropropane
Ethylene Dibromide	

The Safe Drinking Water Act imposes monitoring, reporting, and record keeping requirements upon the owners and operators of public water systems. In most cases, these requirements are enforced by the state in which the water system is located.

Violators of the Act, or a comparable state standard, are required to provide public notice of the violation. If an NTNCWS exceeds an applicable MCL, the system owner or operator must provide notice to the system users within fourteen days by hand delivery or by continuous posting in a conspicuous place. Posting must continue for as long as the violation exists. An NTNCWS which violates monitoring or testing requirements or receives a variance or exemption must give notice by the same methods within three months.

In addition to setting MCLs, the EPA is required under the Act to promulgate maximum contaminant level goals (MCLGs). An MCLG is defined as the maximum level of a contaminant in drinking water at which no known or anticipated adverse health effects would occur, and which allows for an adequate margin of safety. The MCGLs are non-enforceable health goals; however, they are important because the Act requires that the enforceable MCLs be set as close to MCLGs as feasible.

The 1986 amendments require that all pipes, solder, or flux used in the installation or repair of plumbing in public water systems as of June 19, 1986 must be lead-free. "Lead-free" solder and flux must not contain more than 0.2 percent lead. "Lead-free" pipes and pipe fittings must not contain more than 8.0 percent lead (40 CFR 141.43).

SECTION 7

DRINKING WATER

Guidance

Regulatory Authority:	Safe Drinking Water Act; 1986 Safe Drinking Water Act Amendments
Regulatory Citation:	40 CFR Parts 141-143; Corresponding State Regulations
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State Agencies

1.-2. Questions are self-explanatory.

3.-4. Owners and operators of public water systems are required to monitor the water to determine if it is in compliance with primary drinking water standards (40 CFR 141). Maximum contaminant levels have been set for certain inorganic chemicals, volatile organic chemicals (VOCs), turbidity, and microbiological contamination (bacteria).

SECTION 7

DRINKING WATER

Survey Questions

Complete this section if any portion of the facility's drinking water supply comes from on-site wells or surface water sources, or if the facility's water supply is classified as a Public Water Supply by the state.

	Yes	No	Unk	N/A
1. If the facility has been subject to an inspection regarding drinking water issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspec- reports or correspondence. _____ _____	___	XX	___	
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to drinking water? If so, describe and confirm that facility has copies of all documents. _____ _____	___	XX	___	
3. Does the facility monitor its drinking water source for the applicable primary drinking water standards?		XX	___	___
4. Does the facility monitor its drinking water for the following:				
a. Coliform bacteria?		XX	___	___
b. Nitrate?		XX	___	___
c. Turbidity?		XX	___	___
d. Other? Specify: _____		XX	___	___
Confirm that facility has copies of analyses.				

6. Specific sampling frequencies are set forth in 40 CFR 141, for each of the regulated contaminants. The requirements for the primary drinking water standards are as follows:

Microbiological Samples	Each calendar quarter that the system provided water to the public.
Turbidity Samples	One per day (the state may choose to reduce this sampling frequency).
Inorganic Samples	Analysis for nitrate must have been completed by December 1980. This analysis must be repeated at intervals determined by the state.
VOCs	Every three months in accordance with the schedule below (unless reduced monitoring is granted by the state). When VOCs are not detected in the first sample or in subsequent samples, monitoring is to be repeated every five years. If VOCs are detected in the first sample or in subsequent samples, monitoring must be repeated every three months (40 CFR 141.24).
36 Unregulated Contaminants	Ground water samples must be taken at ground water entry points only once per year, during the first quarter. Surface water samples must be taken quarterly for one year at surface water entry points, in accordane with the schedule below:

System Size	Begin Monitoring by This Date
10,000 or more	January 1, 1988
3,300 to 10,000	January 1, 1989
Less than 3,300	January 1, 1991

11. Some states require that operators of water supply treatment systems must be state-certified. Training and certification should be documented by the facility.

12. & 13. Samples to be used to demonstrate compliance with the Safe Drinking Water Act must be analyzed by state-approved laboratories, with the exception of samples for turbidity, free chlorine, temperature, and pH (40 CFR 141.28).

14. All required monitoring results must be reported to the state within ten days of the end of the month in which the results are received, or within ten days of the end of the monitoring period specified by the state, whichever is the shortest (40 CFR 141.31(a)).

	Yes	No	Unk	N/A
5. Does the facility have written procedures for its drinking water monitoring program? Confirm that facility has a copy.	___	XX	___	
6. Do sampling frequencies comply with regulatory requirements?	___	XX	___	
7. If monitoring and analysis are performed more frequently than required by the regulations, are all the results being submitted to the regulatory agency? Confirm that facility has copies.	___	XX	___	___
8. Are instances of non-compliance with the standards reported to the regulatory agency within 48 hours? Confirm that facility has copies.	___	XX	___	
9. Is monitoring equipment routinely calibrated and maintained?	___	XX	___	
10. Are maintenance records maintained? Confirm that facility has copies.	___	XX	___	
11. If the facility has a drinking water treatment system:				
a. Have certifications for operators been obtained where required? Confirm that faciility has copies.	___	___	___	XX
b. Are training programs for system operators in place and documented? Confirm that facility has copies.	___	___	___	XX
12. If the facility performs its own laboratory analyses of samples, is the laboratory certified by the state to conduct such analyses? Confirm that facility has a copy of certification.	___	___	___	XX
13. If the facility contracts with an outside laboratory for sample analysis, is the outside laboratory certified? Confirm that facility has a copy of certification.	___	___	___	XX
14. Are monitoring results reported to the control authority within the time period specified by the regulations? Confirm that facility has copies.	XX	___	___	

16. Required by 40 CFR 141.33.

17. Modifications to the drinking water system typically must be reviewed, approved and inspected by the responsible state agency.

18 The owner or operator of an NTNCWS is required to issue notice to persons served by the system as to the sources and health effects of lead contamination, even if the water supply is not in violation of the national drinking water regulation for lead. Such notice is not required if the owner or operator can demonstrate to the state that the drinking water system is "lead-free" (40 CFR 141.34).

	Yes	No	Unk	N/A
15. Are copies of all monitoring reports maintained on site? Confirm that facility has copies.	___	XX	___	
16. Are reports and records retained in accordance with the regulations, as follows:				
a. Bacteriological analyses (five years)?	___	XX	___	
b. Chemical analyses (ten years)?	___	XX	___	
c. Actions to correct violations (three years)?	___	XX	___	
d. Documents relating to sanitary surveys (ten years)?	___	XX	___	
e. Records concerning variances or exceptions (five years after expiration)?	___	XX	___	
Confirm that facility has copies.				
17. If the drinking water treatment system has been significantly modified or constructed after June 24, 1977, did the facility obtain written approval from the regulatory agency? Confirm that facility has a copy.	___	___	___	XX
Name of Regulatory Authority: _____ Date of Approval: _____				
18. a. Does the facility have documentation to show that all pipes, solder, and flux installed since June 19, 1986 meet the "lead-free" standards? Confirm that facility has a copy.	___	___	___	XX
b. Has the facility demonstrated to the state that its water supply system is "lead-free"?	___	___	___	XX
c. If not, were the proper notices posted no later June 19, 1988, for three months to notify employees of the sources, health effects, and mitigation of lead contamination in drinking water? Confirm that facility has a copy.	___	___	___	XX

19. Owners or operators of NTNCWS who are required to monitor for certain unregulated organic chemicals under 40 CFR 141.40 must send a copy of the sample analysis results to the state within thirty days. The owner or operator must notify persons served by the system by written notice within three months that monitoring results are available. The notice must identify a person and telephone number to contact for additional information (40 CFR 141.35).

	Yes	No	Unk	N/A
19. If the facility was required to monitor for unregulated contaminants by January 1, 1988:				
a. Were the results of such monitoring sent to the state within thirty days of receipt?	___	___	___	XX
b. Was the public notified?	___	___	___	XX
Confirm that facility has a copy.				
20. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

SECTION 8

NONHAZARDOUS WASTES

Introduction

Overview: Solid wastes are regulated under the Resource Conservation and Recovery Act or RCRA. RCRA was passed in 1976 and, although most solid waste provisions were enacted for the first time under RCRA, RCRA is an amendment of the Solid Waste Disposal Act.

Under RCRA, "solid waste" is defined as "any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment, or air pollution control facility, and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities" (RCRA Section 1004(27)). The RCRA regulations expand this definition to describe a solid waste as any discarded material that is not specifically exempted by 261.4 and is being:

- abandoned,
- recycled, or
- considered inherently waste-like.

"Abandoned" is defined as being disposed of, burned or incinerated, or accumulated, stored, or treated (but not recyled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

"Recycled" is defined as being used in a manner constituting disposal, burned for energy recovery, reclaimed, or accumulated speculatively if such use is identifed as regulated in Table 1 of 40 CFR 261.2.

"Considered inherently waste-like" is defined as a material that is a hazardous waste listed as F020, F021, F022, F023, F026, or F028.

A solid waste can be either hazardous or nonhazardous. Hazardous wastes, as described in Section 9, are subject to extensive control under Subtitle C or RCRA. Nonhazardous wastes are subject to fewer regulations under Subtitle D of RCRA. A waste cannot be a hazardous waste unless it first meets the definition of solid waste as defined above. It is extremely important to properly classify wastes as hazardous or nonhazardous. The penalites for incorrectly identifying a hazardous waste as nonhazardous include fines and/or imprisonment.

Please note that this Section of the Self-Survey pertains to nonhazardous solid wastes only; facility hazardous waste activities will be addressed in Section 9.

While the federal government has passed many regulations dealing with hazardous wastes, the regulation of nonhazardous waste is primarily the responsibility of the state. Federal involvement with nonhazardous wastes is currently limited to prescribing the best practicable operating procedures, controls, and monitoring requirements for solid waste disposal facilities (40 CFR 240-257). EPA has, however, proposed regulations for disposal of nonhazardous wastes in municipal landfills. These regulations are not expected to be finalized until late 1990 or early 1991. As proposed, these regulations are performance-based standards covering ground water monitoring and financial responsibility requirements.

The regulation of generators, transporters, and treatment facilities is completely left to the state and county governments. Be sure to check with the state and county solid waste agencies to determine the applicable nonhazardous waste requirements in your area. There is an increasing emphasis on reduction and minimization of hazardous and nonhazardous wastes at both the federal and state level.

SECTION 8

NONHAZARDOUS WASTES

Guidance

Regulatory Authority:	The Resource Conservation and Recovery Act; Corresponding State, County and Municipal Statutes
Regulatory Citation:	40 CFR 240-262; Corresponding State, County and Municipal Regulations
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State and Local Agencies

1 - 2. Questions are self-explanatory.

3. Although not required, it is a good management practice to identify the amount of nonhazardous waste generated each year to help your facility monitor waste minimization and recycling programs, evaluate the costs of disposal, and keep abreast of potential liabilities which might arise from off-site disposal.

SECTION 8

NONHAZARDOUS WASTES

Survey Questions

Complete this section if the facility generates nonhazardous wastes.

	Yes	No	Unk	N/A
A. Background Information				
1. If the facility has been subject to an inspection regarding solid waste issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that facility has copies of inspection reports or correspondence: _____	___	XX	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to solid waste? If so, describe and confirm that facility has copies of all documents: _____	___	XX	___	

3. How much nonhazardous waste is generated by the facility?

   Tons per year: UNK

4. Generators of solid waste are required to determine whether any of their wastes are hazardous wastes (40 CFR 262). This activity must be repeated whenever a new waste stream is introduced or a new process is used by the generator.

Separating nonhazardous wastes from hazardous wastes:

- lowers treatment, storage, and disposal costs;
- eases the management burden of handling hazardous wastes; and
- enhances your facility's compliance level.

5 - 6. There are currently no federal permitting procedures for nonhazardous waste disposal facilities, treatment facilities, transporters, or generators although performance-based standards covering disposal facilities have been proposed by EPA. You must check with the state and county agencies to determine what permits are required and when permits must be renewed.

7. Check your state and local requirements on the need to maintain non-hazardous solid waste records for wastes disposed of on site. It is a good management policy to maintain such records.

8. State or county agencies often require controlled access to a disposal area. Check the facility's permit and the permitting agency to determine if these areas are regulated. If not required by state or county regulation, it is a good management practice to limit access to a disposal site to assure that only permitted wastes are disposed of and to limit the facility's liability.

9. A ground water monitoring plan is a system of wells used to monitor ground water for possible contamination from the disposal site. Review your facility's permit and contact the state/county regulatory agency to determine if the site must develop and/or implement such a plan.

	Yes	No	Unk	N/A
4. Have all major nonhazardous waste streams been:				
a. identified?	XX	___	___	
b. documented?	___	XX	___	
c. separated from hazardous wastes?	XX	___	___	

B. On-Site Disposal SECTION N/A

Complete this subsection if the facility disposes of nonhazardous wastes on site.

5. Does the facility have all required permits for disposing of nonhazardous wastes? Identify permits and confirm that facility has a copy.	___	___	___	___
6. Are all permits current?	___	___	___	___
7. Are records maintained detailing the quantity and characteristics of the wastes disposed of at the facility? Confirm that facility has copies.	___	___	___	
8. Is there controlled access to the disposal area?	___	___	___	
9. If required, has a ground water monitoring program been established?	___	___	___	___

10. Check the facility's inspection and monitoring reports to determine if there is any evidence of contamination.

11. Check the facility permit and contact state/county agencies to determine the applicable operating procedures.

12. Good management practice and possible permit conditions.

13. Preventing storm water run-on onto the disposal site helps to reduce the amount of leachate generated. Runoff from the disposal site should be controlled to reduce erosion of the cover material and to minimize the spread of contaminants from the site. The facility's permit should be consulted to determine if such operating specifications are required.

14 - 16. It is Textron's policy for each location to know the status of off-site facilities used to handle any waste. Check state and county regulations for requirements concerning the use of permitted off-site disposal facilities. Ask agencies to describe the facility's operations and compliance history. It is a good management policy to visit and inspect off-site disposal facilities used to assure that they are using state-of-the-art techniques and maintaining a good compliance record.

18. Liners and leachate collection systems are currently required by some permits and are proposed in new federal regulations. Facilities limit their liabilities by using only landfills with liners and leachate collection systems.

	Yes	No	Unk	N/A
10. If ground water monitoring is required, have results shown the facility to be free of contaminants? If no, explain. _____ _____ _____ _____	___	___	___	___
11. Do operating procedures meet all applicable regulatory specifications?	___	___	___	
12. Is the disposal site located away from environmentally sensitive areas, e.g., floodplains, woodlands, etc.?	___	___	___	
13. Are storm water run-on and runoff controlled at the disposal area?	___	___	___	

C. Off-Site Treatment and Disposal

Complete this subsection if the facility ships nonhazardous waste off site for treatment or disposal.

14. Does the facility know the final destination of all wastes shipped off site? List on Attachment J.	___	XX	___	
15. Does each off-site treatment or disposal facility used by ~~our~~ facility have a valid state or county permit?	___	___	XX	
16. Do all off-site treatment or disposal facilities have a good compliance record? Record on Attachment J. No known violations.	XX	___	___	
17. Have environmental audits been conducted at the off-site disposal and treatment sites used by your facility? Record on Attachment J.	___	XX	___	
18. Do all landfills identified in Attachment J:				
a. have a liner?	___	___	XX	
b. have a leachate collection system?	___	___	XX	

19. A manifest is a shipping document required by EPA on hazardous waste shipments (see Section 9). Some states require manifests for special wastes. Check state and county regulations to determine if waste manifesting is required.

20. State or county agencies may require transporters to obtain permits or licenses or be bonded. Check to determine if these requirements apply and if each transporter's paperwork is up-to-date.

21. Screening of all outside contractors is a good management practice to help minimize costs and potential liabilities, as the generator of the waste has the ultimate responsibility for its disposal. Contact DOT or EPA officials to obtain transporter compliance information.

22. It is good management practice to recycle wastes whenever possible. Recycled wastes should be thoroughly tested to make sure that they comply with recycling regulations.

23. Some states may require that certain nonhazardous wastes be manifested when shipped off site. Tracking of the ultimate disposition of the recycled waste or residue is a good management practice to minimize the facility's liability.

24. It is a good management pracitce to reduce facility liability by screening all off-site recycling facilities used. State agencies can be contacted to determine if the recycling facility is in compliance with all applicable regulations.

25. Recycling or reuse of nonhazardous solid waste is a good management practice that reduces the overall costs of disposal.

	Yes	No	Unk	N/A
D. Transportation				
Complete this subsection if nonhazardous waste is transported off site for treatment or disposal.				
19. In states where manifesting of nonhazardous waste is required, is this practice being conducted?	___	___	___	XX
20. If required, are all commercial haulers used to transport nonhazardous wastes off site licensed and/or bonded?	XX	___	___	___
21. Has the compliance record of each transporter been investigated?	___	XX	___	
E. Recycling				
22. Has the facility tested all wastes to identify potentially recyclable materials?	___	XX	___	
23. If required, are recycled wastes manifested when shipped off site?	XX	___	___	
24. Have audits or investigations been completed on each recycling site used by your facility? Identify the off-site recycling facilities used and the wastes sent to each facility. List in Attachment J.	___	XX	___	
25. Are any wastes recycled on site? List all wastes recycled on site. Include the method of recycling and the reuse of the recycled material. Use Attachment K.	___	XX	___	

26-30. Empty containers should be carefully managed to prevent unsafe handling of chemical residues and potential liabilities at off-site facilities. Under RCRA, a container that held a RCRA hazardous waste is considered to be empty, and therefore not subject to hazardous waste regulations, if:

- all wastes have been removed that can be removed using the practices currently employed to remove materials from that type of container, and

- no more than one inch of residue remains on the bottom of the container or the liner, or no more than 3% by weight of the total capacity of the container remains in the container (if the container is 110 gallons or less) or 3% (if the container is over 110 gallons) (40 CFR 264.7 (b)(1).

If the container held a hazardous waste that is a compressed gas, it is considered to be empty when the pressure in the container reaches atmospheric (40 CFR 261.7(b)(2)).

However, if the container held an acutely hazardous waste (see list in 40 CFR 261.31-261.33), it is not considered to be empty unless it has been triple rinsed with an effective solvent, has been cleaned by another method shown to achieve equivalent removal, or has had the inner liner removed, if such liner prevented contact between the waste and the container (40 CFR 261.7(b)(3)).

	Yes	No	Unk	N/A
G. Empty Drum Management				
26. How many of the following types of empty containers does the facility generate? 55 gallon drums:_____ 5 gallon pails: _____ Other: UNK				
27. a. Does the facility recycle empty drums?	XX			
b. If drums are sent to a drum recycler, are all drums triple rinsed and are labels removed or painted over before recycling?		XX		
c. If drums are sent to a metal recycler, are all labels obliterated and are drums shredded before shipment?		XX		
28. If drums are sent to a landfill, are all labels removed or painted over before shipment?	XX			
29. Has the facility audited each facility that is used to recycle empty containers? Complete Attachment J.		XX		
30. Do all facilities used to recycle/dispose of drums have acceptable compliance records?			XX	
31. Are empty containers given to, or taken by, employees?		XX		
H. Miscellaneoaus				
32. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.		XX		

SECTION 9

HAZARDOUS WASTES

Introduction

Overview: The Resource Conservation and Recovery Act (RCRA) was passed by Congress to prevent the unsafe handling and disposal of potentially dangerous wastes. As discussed in Section 8, Subtitle D of RCRA regulates nonhazardous waste and Subtitle C regulates hazardous waste. Before a waste can be regulated as a hazardous waste, it must first meet the definition of solid waste as described in Section 8.

RCRA regulates all aspects of hazardous waste management, including hazardous waste generation, storage, transportation, treatment, recycling, and disposal. The Act sets standards for generators, transporters, and treatment, storage, and disposal (TSD) facilities.

In 1984, RCRA was reauthorized and amended by HSWA, the Hazardous and Solid Waste Amendments. HSWA included several major provisions including a ban of liquids in landfills and the ban of the land disposal of many wastes.

Identifying Hazardous Wastes: RCRA specifically identifies those wastes which are considered to be hazardous (40 CFR 261). Hazardous wastes are solid wastes that:

- are listed in the RCRA regulations as hazardous;
- exhibit a hazardous characteristic (the four characteristics are ignitability, corrosivity, reactivity, and EP toxicity (Extraction Procedure Toxicity*));
- are a mixture of a material and a characteristic hazardous waste and the mixture exhibits a hazardous characteristic;
- are a mixture of a listed hazardous waste and a material;
- are derived or produced from hazardous waste; or
- are declared to be a hazardous waste by the generator.

**The Extraction Procedure is proposed to be replaced with a more accurate procedure, the Toxic Characteristic Leaching Procedure (TCLP). Currently, the TCLP is only used to determine if a waste is subject to the land disposal bans.*

The EPA is required to request a Part B application of all TSDs. The Part B process requires the facility to develop and submit very detailed information about the facility's design and operation. After submittal, EPA reviews the information and if the facility meets the requirements of 40 CFR 264 (stricter standards than those found in 40 CFR 265), it is issued a "Final Permit." Because Final Status facilities are required to meet stricter standards and because obtaining Final Status requires a more in-depth EPA review, utilizing facilities with Final Status generally reduces liabilities.

Transporters: RCRA includes several requirements relating to hazardous waste transportation. Transporters must:

- obtain EPA Identification Numbers;
- comply with manifest requirements; and
- notify the NRC of releases.

States frequently have licensing or bonding requirements for hazardous waste transporters.

Generators and transporters must comply with Department of Transportation regulations.

State Authority: Many states have the authority to manage the hazardous waste system, and may impose more stringent requirements than the federal program.

SECTION 9

HAZARDOUS WASTES

Survey Questions

Complete this section if the facility generates treats, stores, and/or disposes of hazardous wastes on site.

	Yes	No	Unk	N/A
A. Background Information				
1. If the facility has been subject to an inspection regarding RCRA issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that facility has copies of inspection reports or correspondence. _____ _____ _____	___	xx	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to RCRA? If so, describe and confirm that facility has copies of all documents. _____ _____ _____	___	xx	___	
3. Has the facility identified and classified all hazardous waste? Record this information in Attachment L.	xx	___	___	
4. What is the average total volume of hazardous waste generated per month? 700 (pounds)				
5. Does the facility ship any waste out of the United States?	___	xx	___	
6. Is the facility complying with land disposal bans?	xx	___	___	

SECTION 9

HAZARDOUS WASTES

Survey Questions

Complete this section if the facility generates treats, stores, and/or disposes of hazardous wastes on site.

	Yes	No	Unk	N/A
A. Background Information				
1. If the facility has been subject to an inspection regarding RCRA issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that facility has copies of inspection reports or correspondence. _____ _____ _____	___	xx	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to RCRA? If so, describe and confirm that facility has copies of all documents. _____ _____ _____	___	xx	___	
3. Has the facility identified and classified all hazardous waste? Record this information in Attachment L.	xx	___	___	
4. What is the average total volume of hazardous waste generated per month? 135 (pounds)				
5. Does the facility ship any waste out of the United States?	___	xx	___	
6. Is the facility complying with land disposal bans?	xx	___	___	

7. Conditionally Exempt Small-Quantity Generators may store up to 1 kilogram (2.2 pounds) of acutely hazardous waste,100 kilograms (45.5 pounds) of acutely hazardous waste debris, or 1,000 kilograms (454.5 pounds) of hazardous waste. If this amount is exceeded, all quantities are subject to the regulations that apply to Large-Quantity Generators (40 CFR 261.5).

8. Even Conditionally Exempt Small-Quantity Generators are required to use only TSD facilities which are operating within the RCRA system, i.e., facilities which have received either interim status or a RCRA permit (40 CFR 261.1(f) (3) and (g) (3)) and therefore have an EPA Identification Number.

9. This is not required for Conditionally Exempt Small-Quantity Generators but is a good management practice (see Guidance to Question 22). As a practical matter, most reputable TSD facilities will not accept wastes which are not transported by an authorized transporter or are not manifested.

11. & 12. Small-Quantity Generators may store hazardous waste on site for up to 180 days without obtaining a RCRA storage permit if they limit on-site storage quantities to 6,000 kilograms (2,727.3 pounds) (40 CFR 262.34). If the waste must be shipped 200 miles or more to a TSD, this time limit is extended to 270 days.

13. If a Small-Quantity Generator does not receive a completed copy fo the manifest from the TSD within 45 days of initial shipment, he must file an Exception Report with the Regional Administrator (40 CFR 262.42(a)(2).

SECTION 9

HAZARDOUS WASTES

Survey Questions

Complete this section if the facility generates treats, stores, and/or disposes of hazardous wastes on site.

	Yes	No	Unk	N/A
A. Background Information				
1. If the facility has been subject to an inspection regarding RCRA issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that facility has copies of inspection reports or correspondence. _____ _____ _____	___	xx	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to RCRA? If so, describe and confirm that facility has copies of all documents. _____ _____ _____	___	xx	___	
3. Has the facility identified and classified all hazardous waste? Record this information in Attachment L.	xx	___	___	
4. What is the average total volume of hazardous waste generated per month? 700 (pounds)				
5. Does the facility ship any waste out of the United States?	___	xx	___	
6. Is the facility complying with land disposal bans?	xx	___	___	

SECTION 9

HAZARDOUS WASTES

Survey Questions

Complete this section if the facility generates treats, stores, and/or disposes of hazardous wastes on site.

	Yes	No	Unk	N/A
A. Background Information				
1. If the facility has been subject to an inspection regarding RCRA issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that facility has copies of inspection reports or correspondence. _____ _____ _____	___	XX	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to RCRA? If so, describe and confirm that facility has copies of all documents. _____ _____ _____	___	XX	___	
3. Has the facility identified and classified all hazardous waste? Record this information in Attachment L.	XX	___	___	
4. What is the average total volume of hazardous waste generated per month? 109,697 (pounds)				
5. Does the facility ship any waste out of the United States?	___	XX	___	
6. Is the facility complying with land disposal bans?	XX	___	___	

7. Conditionally Exempt Small-Quantity Generators may store up to 1 kilogram (2.2 pounds) of acutely hazardous waste,100 kilograms (45.5 pounds) of acutely hazardous waste debris, or 1,000 kilograms (454.5 pounds) of hazardous waste. If this amount is exceeded, all quantities are subject to the regulations that apply to Large-Quantity Generators (40 CFR 261.5).

8. Even Conditionally Exempt Small-Quantity Generators are required to use only TSD facilities which are operating within the RCRA system, i.e., facilities which have received either interim status or a RCRA permit (40 CFR 261.1(f) (3) and (g) (3)) and therefore have an EPA Identification Number.

9. This is not required for Conditionally Exempt Small-Quantity Generators but is a good management practice (see Guidance to Question 22). As a practical matter, most reputable TSD facilities will not accept wastes which are not transported by an authorized transporter or are not manifested.

11. & 12. Small-Quantity Generators may store hazardous waste on site for up to 180 days without obtaining a RCRA storage permit if they limit on-site storage quantities to 6,000 kilograms (2,727.3 pounds) (40 CFR 262.34). If the waste must be shipped 200 miles or more to a TSD, this time limit is extended to 270 days.

13. If a Small-Quantity Generator does not receive a completed copy fo the manifest from the TSD within 45 days of initial shipment, he must file an Exception Report with the Regional Administrator (40 CFR 262.42(a)(2).

	Yes	No	Unk	N/A
B. Conditionally-Exempt Small-Quantity Generator Requirements				
Complete this section if the facility generates no more than 100 kilograms (45.4 pounds) of hazardous waste per month, and no more than 1 kilogram (2.2 pounds) per month of acutely hazardous waste.				
7. Does the facility limit storage quantities to amounts allowed by the regulations?	___	___	___	XX
8. Does the facility send all waste to only TSDFs which are authorized to receive the waste? Complete Attachment M.	___	___	___	XX
9. Does the facility use only transporters that are authorized to haul hazardous wates?	___	___	___	XX
10. Does the facility manifest all hazardous waste shipments? Confirm that facility has copies.	___	___	___	XX
C. Small Quantity Generator Requirements				
Complete this section if the facility generates greater than 100 (45.4 pounds) but less than 1,000 kilograms (454.5 pounds) per month of hazardous waste.				
11. Is the waste ever stored for more than 180 days (270 if shipped more than 200 miles)?	___	___	___	XX
12. Does the quantity of waste on site ever exceed 6,000 kilograms (2,727.3 pounds)?	___	___	___	XX
13. Are exception reports filed for missing manifests? Confirm that facility has copies of the reports.	___	___	___	XX

14.-16. Required by 40 CFR 262.34(d).

17. Required by 40 CFR 262.34 (d)5 iii.

18. Large-Quantity Generators may store any quantity of hazardous waste on site for ninety days without obtaining a TSD permit (40 CFR 262.34(a)).

19. Large-Quantity Generators who do not receive completed manifest copies from TSDFs within 35 days of shipment, must file an Exception Report with the Regional Administrator within 35 days (40 CFR 262.42(a)(2)). Note: Some states have shorter periods.

20. Large-Quantity Generators are required to file a Biennial Report with the EPA every two years on March 1. The report details the types and quantities of wastes shippped from the facility and the TSDFs and transporters who handled that waste (40 CFR 262.41). Some states may require that this form be submitted on an annual basis.

	Yes	No	Unk	N/A
14. Is an employee assigned as the emergency coordinator?	XX			
Name: W.C. Moses Position: Director, Facilities Engineering				
15. Is the emergency coordinator available at all times?			XX	
16. Is the following posted near the telephone located in or near waste storage areas:				
a. Name and telephone number of emergency coordinator?		XX		
b. Telephone number of fire department?		XX		
c. Locations of fire extinguishers, spill control materials, and fire alarms?		XX		
17. Are employees familiar with proper waste handling and emergency procedures relevant to their positions?	XX			

D. Large-Quantity Generator Requirements

Complete this section if the facility generates over 1,000 kilograms (454.5 pounds) per month of hazardous waste.

18. Are hazardous wastes shipped off site within ninety days?	XX			
19. Are Exception Reports filed for missing manifests? Confirm that facility has copies of these reports.		XX		
20. Does the facility prepare and file a Biennial Generator Report? Confirm that facility has copies of these reports.	XX			

21. Generators may not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having filed a Notification of Hazardous Waste Activity (see copy in Appendix) with EPA and obtained an EPA identification number (40 CFR 262.12). Different series of numbers are assigned to TSDFs than to generators.

22. A manifest is a shipping document which must accompany each shipment of hazardous waste that leaves a facility (40 CFR 262.20 to 40 CFR 262.23). The manifest specifies the exact type and quantity of waste contained in each shipment and documents that the waste was handled by only facilities and transporters operating within the RCRA system.

23. Required by 40 CFR 262.40(a).

24. & 25. Required by 40 CFR 262.12(c).

26. Although only required of Large-Quantity Generators (40 CFR CFR 262 Appendix - Hazardous Waste Manifest and Instructions), all facilities should develop and implement a waste minimization program to reduce waste handling costs and liabilities.

27.-29. Requirements for the use and management of containers used to accumulate or store hazardous wastes are found in 40 CFR 262.30, 40 CFR 264.170-.178, and 40 CFR 265.170 to177.

30. TSDFs with final status permits must meet the container storage area requirements of 40 CFR 264.175.

	Yes	No	Unk	N/A

E. Generator Requirements

Complete this section if you are a Large-Quantity or a Small-Quantity Generator.

21. Did the facility prepare and file a Notification of Hazardous Waste Activity pursuant to RCRA, Section 3010? If so, confirm that facility has copy and provide the following number: XX

U.S. EPA generator identification number: CAT000624122, CAD041162330, CAD981391501, CAT000625251

22. Does the facility manifest all shipments of hazardous waste? XX

23. Does the facility maintain copies of all manifests for three years? Confirm this. XX

24. Does the facility use only TSDFs which are approved to use hazardous wastes? Complete Attachment M. XX

See individual plants.

25. Does the facility use only transporters that are approved to transport hazardous wastes? XX

26. Does the facility have a waste minimization program. Describe program results on Attachment L. XX

See individual plants.

F. Container Management

Complete this section if the facility is a Large- or Small-Quantity Generator or a TSDF and stores waste in containers.

27. Are the containers in good condition? XX

28. Are the wastes stored compatible with the containers? XX

29. Are containers closed during storage except to add or remove waste? XX

30. If the facility is a TSDF, does it comply with container storage area requirements? XX

31. The facility must develop and follow a written schedule to inspect monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that is important to preventing, detecting, or responding to releases of hazardous wastes. The schedule must identify the types of problems that will be looked for and the frequency with which specific items will be checked. Results of inspections must be maintained in a log that is to be maintained for three years (40 CFR 264.15 and 265.15).

32. The words "Hazardous Waste" and the accumulation date must appear on each container. When the container is ready for shipment, the proper DOT labels must also be added.

33. Required for TSDFs by 40 CFR 264.14 and 265.14.

34. A generator may accumulate 55 gallons of hazardous waste or 1 quart of acutely hazardous waste in containers at or near any point of generation where the wastes initially accumulate if the area is under the control of the operator of the process that is generating the waste and if the container is marked with the words "Hazardous Waste" or the name of the waste. If the generator generates an amount in excess of the limits, he/she must move the excess to the facility's waste storage area within three days (40 CFR 262.34(c)).

35. & 36. Tank requirements are found in 40 CFR 264.190 to 264.199 and 40 CFR 256.170 to 265.201. Reduced requirements for Small-Quantity Generators are found in 40 CFR 265.201.

37. Good management practices dictate that all tanks be properly labeled as to the contents. This will help preven any inadvertent mixing of incompatible wastes.

38. Secondary containment is required for new tank systems installed after July 14, 1986 (40 CFR 264.192). Existing tanks systems (those installed prior to July 14, 1986) must be provided with secondary containment according to the schedule set forth in 40 CFR 264.193(a) and 265.193(a).

39. Design requirements are found in 40 CFR 264.192 and 40 CFR 265.192.

	Yes	No	Unk	N/A
31. Are records of weekly inspections maintained?	___	XX	___	
32. Are all containers properly labeled?	XX	___	___	
33. Is the container storage area properly labeled?	XX	___	___	
34. Are satellite accumulation areas properly operated?	XX	___	___	___

G. Hazardous Waste Tanks

Complete this section if the facility is a Large- or Small-Quantity Generator or a TSDF and store wastes in aboveground or underground tanks.

35. Does the facility store waste in aboveground tanks? Identify the location, size, contents, and physical characteristics of each tank. Use Attachment N.	XX	___	___	
36. Does the facility store waste in underground tanks? Identify the location, size, contents, and physical characteristics of each tank. Use Attachment O.	___	XX	___	
37. Are all tanks properly labeled?	XX	___	___	
38. Do all tanks have secondary containment? Record on Attachments N and O.	XX	___	___	
39. Have secondary containment systems been designed, installed, and operated in accordance with the RCRA standards for secondary containment?	___	XX	___	

Compliance 1990

40.a. & b. Required by 40 CFR 264.191 and 265.191.

40.d. Any release to the environment, with the exception of a spill of less than or equal to one pound and immediately contained and cleaned up, must be reported to the Regional Administrator of EPA within 24 hours of detection. Within thirty days of detection of release, a report must be filed with the Regional Administrator containing the elements outlined in 40 CFR 296(d)(3). State, local, or corporate reporting requirements may be more stringent than federal requirements. You are responsible for keeping your plant is compliance.

41. These requirements are contained in 40 CFR 192 and 40 CFR 265.192.

42. & 43. Required by 40 CFR 264.194 and 265.195.

44. & 45. Tanks must be inspected at least once each operating day according to the requirements of 40 CFR 264.195(b). Documentation of inspections must be kept on site in the facility's operating record.

46. Owners or operators of hazardous waste storage or treatment tanks, except tanks used by generators to store hazardous waste for less than ninety days, must develop closure plans. Post-closure plans must be prepared by facilities which do not have a secondary containment system and store waste over ninety days.

	Yes	No	Unk	N/A
40. a. If the tank does not have secondary containment, has it been assessed by a certified independent, registered professional engineer? Record on Attachments N and O.	___	___	___	XX
b. Did assessment results indicate that the tank(s) was sound?	___	___	___	XX
c. If the assessment showed that the tank(s) was leaking or unfit for further use, were the proper procedures followed to remediate releases? Explain. _____ _____ _____	___	___	___	XX
d. If the tank was leaking, was notification of a release made to U.S. EPA and the state regulatory authority? Confirm that facility has copies.	___	___	___	XX
41. If the facility has installed a tank(s) since January 12, 1988 does it conform to the RCRA standards for new tanks? Above ground pilot operation. Completion in 1990.	___	XX	___	___
42. Do tanks have spill prevention controls?	XX	___	___	
43. Do tanks have overfill controls?	___	XX	___	
44. Are aboveground portions of tanks, monitoring data, construction materials and areas surrounding tanks inspected daily? Periodic visual inspection.	XX	___	___	
45. Are records of the inspections maintained? Confirm that that facility has copies. Compliance plan under study by ESC.	___	XX	___	
46. Does the facility have a closure or post-closure plan for the tank system?	___	___	___	XX

47.-49. Required by 40 CFR 264.16 and 265.16. Records must include the job title, description sufficient to identify the amount of hazardous waste handling and training involved, the name of person filling the job description during specific time frames, and documentation and training.

50. Preparedness and prevention requirements are found in 40 CFR 64.30 to 264.37 and 40 CFR 265.30 to 265.37. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste to the environment.

51. Required by 40 CFR 264.50 to 264.56 and 40 CFR 265.50 to 265.56.

	Yes	No	Unk	N/A
H. Personnel Training				
Complete this section if the facility is a Large-Quantity Generator or a TSDF.				
47. Are all personnel trained in procedures that enable them to safely handle hazardous waste? To be scheduled for first qtr. 1990	___	XX	___	
48. Are all personnel trained in procedures that enable them to respond to hazardous waste emergencies? Program being developed.	___	XX	___	
49. Are complete records maintained of all training for three years? Confirm that facility has copies.	XX	___	___	
I. Preparedness and Prevention Plans				
Complete this subsection if you are a Large-Quantity Generator or a TSDF.				
50. Is the facility in compliance with the preparedness and prevention standards relating to:				
a. Required equipment?	XX	___	___	
b. Testing and maintenance of equipment?	XX	___	___	
c. Alarm system?	___	XX	___	
d. Aisle space requirements?	XX	___	___	
e. Arrangements with local authorities?	___	___	XX	
51. Does the facility routinely inspect spill control equipment (quantities and proper operation)?	XX	___	___	
How often? Quarterly				

52. Required by 40 CFR 264.50 to 264.56 and 40 CFR 265.50 to 265.56.

53. Required by 40 CFR 264.37 to 40 CFR 265.37.

	Yes	No	Unk	N/A
J. Contingency Plan and Emergency Procedures				
Complete this subsection if you are a Large-Quantity Generator or a TSDF.				
52. Does the facility have an up-to-date Contingency Plan? Provide a copy of the plan. Does the plan address: In revision.	___	XX	___	
a. Response to fires, explosions, or unplanned releases?	XX	___	___	
b. Description of arrangements with local authorities?	XX	___	___	
c. List of emergency coordinators, including addresses and telephone numbers?	XX	___	___	
d. List of emergency equipment?	XX	___	___	
e. Evacuation plan?	XX	___	___	
53. Have the plan and all revisions been submitted to the police, fire department, hospital, and regulatory agency? In revision.	___	XX	___	
54. Has the plan ever been implemented during an emergency?	___	XX	___	
How often? _____ (number of times per year)				
55. a. Did the plan work successfully when implemented?	___	___	XX	
b. If not, were actions taken to correct the situation? Describe. _____ _____ _____	___	___	___	XX

56. Required by 40 CFR 264.11.

58. & 59. See Introduction to this Section.

60. TSD facilities are required to develop analytical plans designed to confirm information supplied by generators regarding the composition and properties of hazardous waste. The plan must be a formal document and meet the requirements of 40 CFR 264.13 and 264.13.

61. Authorized access to hazardous waste areas must be prevented as described in 40 CFR 264.15 and 265.15.

62. Required by 40 CFR 264.15 and 265.15.

63. Ground water monitoring requirements for interim status TSD facility applications are found in 40 CFR 264 Subpart F, and in 265 Subpart F for facilities operating under a final permit.

64. Owners and operators of hazardous waste management facilities are required to prepare a written closure plan (40 CFR 264.112). In addition, a post-closure plan is required for hazardous waste disposal facilities (40 CFR 264.118).

	Yes	No	Unk	N/A
K. TSD Facility Requirements				
Complete this subsection if the facility is a TSDF.				
56. Did the facility file an EPA Notice of Hazardous Waste Activity?	___	___	___	N/A
EPA Identification Number _____				
57. Is the facility involved in on-site waste management? Describe the type of waste management activity on Attachment L.	___	___	___	N/A
58. Did the facility file a Part A Application? If so, confirm that facility has a copy.	___	___	___	N/A
59. Did the facility file a Part B Application? If so, confirm that facility has a copy.	___	___	___	N/A
60. Has the facility prepared a Waste Analysis Plan? Confirm that facility has a copy.	___	___	___	N/A
61. Has the facility complied with security provisions?	___	___	___	N/A
62. Does the facility have an inspection plan? Confirm that facility has a copy of plan and inspection logs.	___	___	___	N/A
63. a. Has the facility installed a ground water monitoring system?	___	___	___	N/A
b. Is the facility going to install a ground water monitoring system in the future?	___	___	___	N/A
c. Describe the purpose, design, and operating parameters of the system.				
_____				
_____				
_____				
64. Has the facility prepared closure and post-closure plans?	___	___	___	N/A
65. Has the facility ever prepared or implemented a closure plan for a hazardous waste management unit?	___	___	___	N/A

67. & 68. Financial assurance requirements are found in 40 CFR 264 Subpart H. These requirements include cost estimates for closure (and post-closure for disposal facilities) and require facilities to have financial assurance for closure and post-closure.

	Yes	No	Unk	N/A
66. If implemented, was the closure certified by U.S. EPA or the state regulatory agency?	___	___	___	N/A
67. Has the facility satisfied the financial assurance requirements for closure and/or post-closure of hazardous waste management units?	___	___	___	N/A
68. Does the facility have on file the demonstration of financial assurance for liability requirements?	___	___	___	N/A

L. Miscellaneous

69. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	___	___	N/A

QUESTION S2 PG 9-19

HR Textron Policy & Procedure Manual

SUBJECT: EVACUATION PROCEDURE | PROCEDURE | NUMBER:

REVISION:

APPROVED: DATE: September 1, 1988 PAGE i OF i

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1.0 PURPOSE

1.1 The intent of this Policy is to provide instructions, guidelines, and procedures for evacuation due to unforeseen accidents, chemical releases or acts of nature occurring at the work place.

1.2 The procedures for Emergency Evacuation of personnel are delineated in this procedure.

2.0 COVERED FACILITIES

2.1 All facilities of HR Textron Inc. in Pacoima and Valencia are covered by this procedure.

3.0 EMERGENCY NUMBERS

3.1 Pacoima 24 hour emergency, extension 222.
Valencia 24 hour emergency, extension 5555

3.2 In the event of a transmission of one pound or more of a reportable quantity of hazardous substance into the air, land, subsurface strata or ground water, the following authorities must be notified by the hazardous waste director or a designee.

A. Local:

California Highway Patrol
Valencia, 259-1210

L.A. County Sheriff
Valencia, 255-1121 (911)

L.A. County Health Department
Pacoima, 213/744-3223

Henry Mayo Newhall Memorial Hospital
Valencia, 253-8000

Pacoima Memorial Hospital
Pacoima 818/896-1121

State:

California Department of Health Services
916/324-1809

Office of Emergency Services
800/324-7500

Federal:

Environmental Protection Agency (EPA)
1-800/974-8131

Federal: (Continued)

National Response Center
1-800/424-8802

EPA Hot Line (Information on Regulations)
1-800/424-9346

EPA Industry Assistance
415/974-7472

3.3 Public Emergency Telephone Numbers

Valencia

Fire Department/Paramedics 911
Sheriff's Department 911
Ambulance 911
Hospital - Henry Mayo Newhall Memorial Hospital (805) 255-8100
Telephone - Pacific Telephone Company (9) 611
Electricity - Southern California Edison Company (805) 626-6270
Gas - Southern California Gas Company (800) 626-7588
Water - Valencia Water Company (805) 757-3566

Pacoima

Fire Department/Paramedics 911
Sheriff's Department 911
Ambulance 911
Hospital - San Fernando Hospital (818) 361-7331
Telephone - General Telephone Company (9) 611
Electricity - Los Angeles City Department of Water & Power (800) 821-5279
Gas - Southern California Gas Company (800) 883-3130
Water - Los Angeles City Department of Water & Power (818) 909-3000

COMPANY CONFIDENTIAL

Emergency Telephone Contacts

Primary Contacts - All Locations

Title	Name	Ext.	Home Phone No.
President	R. Millman	5211	(213) 306-0602
Sr. VP Aero. Operations	D. Steward	5507	(818) 996-0605
VP Finance	A. Grillo	5890	(805) 298-2206
Dir., Facilities Engr.	W.C. Moses	5601	(818) 360-6237
Alternate - Valencia	T. Swiger	5336	(805) 255-6148
Alternate - Pacoima	B. Jette	344	(805) 524-0950
Dir., Human Resources	D. Pilling	5256	(805) 259-1018
Alternate	D. Themm	5251	(805)
Security Manager	D.E. Basey	5254	(805) 253-1685
Safety Engineer	R.E. Hanson	5338	(805)
Aetna Life & Casualty Injury - Disaster Building Damage Fire Damage - Factory Mutual	J.E. Haase		(213) 902-2170

Secondary Contacts - Individual Locations Affected

Building	Name	Ext.	Home Phone No.
Valencia, Bldg. 1 Controls	K. Bailie	5324	(805) 296-4322
	R. Pascoe	5668	(805) 296-2812
Valencia, Bldg. Servo	K. Bailie	5324	(805) 296-4322
Valencia, Bldg. 10	D. Ehlers	5624	(818) 705-1294
	J. Hedges	5461	(805) 254-6804
Valencia, Bldg. 11	N. Torrey	5757	(805) 492-5548
	W.G. Wood	5279	(805) 251-5255
Valencia, Bldg. 14	D. Cameron	5431	(805) 272-1938
	C. Arrington	5328	(805) 253-0580
Pacoima - Fuel and Pneumatics	R. Sumner	228	(805) 379-2488
	R. Rippe	229	(818) 363-9195
	H. Amundson	381	(805) 254-8861

4.0 DEFINITIONS

4.1 Emergency Coordinator

An emergency coordinator is the HR representative responsible to organize and ensure any necessary emergency action required.

4.2 Emergency Response Team (ERT)

A group of employees who have completed a course of instruction given by the Safety Department. Each individual has been certified as an Emergency Response Team member and responds to major emergencies.

4.3 Hazardous Production Material (HPM)

A solid, liquid, or gas that is classified as a National Fire Protection Class 1-4 hazard and is used in research, laboratory, or production process. Generally, all materials displaying characteristics of corrosivity, reactivity, ignitability, and toxicity, are considered HPM.

4.4 Spill Cleanup Team

A group of employees from the Maintenance Department who have been trained in chemical handling and the proper methods of neutralizing, controlling, and cleaning up spills.

4.5 Environment

Air, water, soil, or any device, construction, or drainage, etc., which provides a conduit to the public domain.

4.6 Incident

Any spill or release, either accidental or deliberate, of an HPM into the workplace or the environment. Three types of incidents may occur.

4.6.1 Major - Requires evacuation or personnel from a building.

4.6.2 Intermediate - Requires personnel evacuations on a limited scale.

4.6.3 Minor - No evacuation required.

5.0 RESPONSIBILITIES

5.1 General

The containment of any hazardous waste or hazardous constituents to soil, or surface water at HR Textron facilities due to fire, explosions, unplanned releases due to accidents or equipment failures will be the responsibility of the Emergency Response Coordinator or his/her alternate) and the Emergency Facilities Coordinators.

5.2 Discovery and Notification Procedures

A. Upon discovery of a spill or accidental discharge of a hazardous material spill or accidental discharge of hazardous waste, Facilities personnel must immediately notify the Emergency Response Coordinator, the Safety Coordinator and the Hazardous Materials Manager:

Emergency Response Coordinator:	Bill Moses	5601
Hazardous Materials/Waster Director:	Bill Moses	5601
Safety Coordinator:	Bob Hanson	5338
Emergency Facility Coordinator:		
Valencia	Tom Swiger	5602
Pacoima	Bob Jette	344
24-hour Valencia Emergency		5555
24-hour Pacoima Emergency		222

B. The person or persons making the discovery should proceed with preliminary containment or abatement activities only if he/she has knowledge of the physical or chemical characteristics of the waste and/or sufficient technical knowledge to take appropriate action.

5.3 Emergency Coordinator

A. Shall supervise the development of the Company's emergency plans and organization of the emergency personnel.

B. The Emergency Coordinator shall maintain constant liaison with the executive branch, in addition to reporting situation changes and events, as often as needed.

C. The Emergency Coordinator shall maintain liaison with indicated Civil Authorities, as required, to fully utilize Los Angeles County or City governmental services.

D. Set up, as required or desirable, cooperative disaster arrangements with other firms in the area.

E. The Emergency Coordinator, or his designee with proper clearance, shall be responsible for safeguarding any classified material, pursuant to the Industrial Security Manual and the Company Standard Practice and Procedure Manual.

F. The Emergency Coordinator will then notify either the President or the Senior Vice President if deemed necessary.

G. After authorization by the President or Senior Vice President, and in accordance with 40CFR on reportable quantities, the Hazardous Materials Director will notify the following external authorities:

1.	Neighbors	
2.	State Offices of Emergency Services	1-800/852-7550 1-916/427-4341
3.	California Highway Patrol	805/259-1210
4.	State Department of Health	1-800/852-7550
5.	LA County Department of Health Services - (911)	916/324-1809

5.4 Duties of Emergency Response Coordinator

A. Activate internal and emergency response personnel.

B. Notify the Hazardous Waste and Materials Director and the Security and Safety Manager.

C. Identify character, exact source, amount, and extent of any release materials.

D. Act immediately to determine if a portion of the entire plant should be evacuated (follow direction in Emergency Response Book).

E. Assess possible hazards to human health or environment that may result (both direct and indirect). If a hazard exists, call security in Valencia, 5555, in Pacoima, 222.

F. Take all reasonable measures necessary to ensure that fire, explosions and releases do not occur, recur, or spread to other hazardous waster at the facility (i.e., stopping processes, operations, collecting and containing release waste and removing or isolating containers).

G. Monitor for leaks, pressure build-up, gas generation of rupture of valves, pipes, or other equipment.

H. Provide for treating, storing, or disposing of recovered waste, contaminated soils or surface water in accordance with RCRA regulations.

I. Before operations are resumed in affected areas:

1. See that no more waste is generated until cleanup procedures are completed.

2. See that all emergency equipment listed in contingency plan is cleaned and fit for its intended use.

3. Notify Hazardous Waste Director that the facility is in compliance with I.1 and 2.

4. Follow these steps:

a) Keep people away from the scene.

b) Avoid contact with the spilled substance - don't touch it or walk in it.

c. Don't inhale any gases, fumes, or smoke.

d. Be on your guard against gases or vapors. Don't assume that they are harmless just because you cannot smell them.

e. Stop the source, if possible. Secure valves, close pumps, transfer materials, if feasible.

f. Contain the spill.

5.5 Emergency Response Teams

The Director of Facilities Engineering assumes the role of Fire/Rescue Marshal during the emergency. He shall train and acquire equipment necessary to accomplish this task. The teams, augmented by Company employees on a voluntary basis, previously named by the Director, shall consist of the following:

A. This team, to be trained in fire control, shall respond as indicated in the Appendix under "Fire."

1. The team will be selected by the Director, Fire/Rescue Marshal, and report directly to that position during emergencies. They will respond to the predetermined meeting area when instructions are announced over the public address system or any other method or when there is a general fire alarm.

ERT members will be issued red hard hats for their use during emergencies only. The company will provide specialized training in fire suppression techniques, and team members are expected to be knowledgeable of special suppression conditions in their area that could cause major problems if they became ignited: i.e., alcohol, magnesium, etc. ERT members are also charged with the responsibility of ensuring that all Company fire equipment is maintained in a ready-to-use state at all times. Spent extinguishers are refilled weekly, and the necessary type of fire extinguishers/equipment are available within a reasonable distance from sources of serious hazards. ERT members will suppress incipient stage fires. Structural fires will be handled by the Fire Department.

2. Alternate ERT members will be selected by the Fire/Rescue Marshal, and they will be equally trained in fire fighting techniques, as are the regular Brigade members; however, their function is to replace absent members or assist, as directed.

B. Rescue Team

1. This team shall be comprised of the same personnel as above, assigned as necessary by the Director, and reports to that person during emergencies. They will report to a predetermined meeting place upon being instructed. In emergencies, such as earthquake or explosion, where a public address system may be inoperable or non-existent, they will report immediately to the area of the Command Post and await instructions from the Director or his alternate. The Director will select from this team specially designated team members to accompany any handicapped employees out of the facility. These employees will be evacuated to an assembly area immediately, without need of direction by an authority.

2. The only other time this team will effect an evacuation without orders from the Director or the Emergency Coordinator is if the involved area is heavily damaged by the disaster and immediate evacuation is necessary to prevent serious injury or death.

3. Whenever possible, two or more evacuation routes leading in different directions have been designated on the Facility Maps of this Plan. Rescue Team members are to be knowledgeable of these routes and responsible for their being free from obstacles at all times. The Rescue Team will remain with their evacuation group during an evacuation and assemble in an area designated outside the plant. There they will separate the group into the original operating departments and note the names of any missing persons. The group will remain in the assembly area until instructed by the Emergency Coordinator or other competent authority. If the group is released to

return home, they will do so by the route determined by the Civil Authorities and be subject to their orders once off HR Textron property.

5.6 Security Manager

A. The Company Security Manager shall function in this capacity during any emergency.

B. It shall be his responsibility to assist key emergency personnel in liaison and communications with Civil Authorities, as needed. He shall immediately transmit emergency requests to appropriate agencies (fire, paramedic, police, etc.). He shall direct those authorities, responding quickly, to the location of the emergency.

C. Shall set up proper protective or security measures, in the event of an emergency to:

1. Prevent unauthorized persons from entering unsafe areas.

2. Prevent the unauthorized removal of property from the emergency area.

3. Provide traffic control so that all emergency equipment and materials can be quickly deployed and ambulances and relief vehicles rapidly dispatched from the scene.

D. Set up and train an auxiliary guard force for use in emegencies.

E. Provide an emergency communications network.

5.7 Occupation Health Nurse

A. **Shall** establish a "field hospital" area. The hospital shall be established at the **safest** convenient location.

B. **Shall be** responsible for summoning any outside medical assistance the situation demands. Maintains liaison with all local agencies where medical assistance could be obtained.

C. Shall instruct or arrange for first-aid training for certain plant personnel. These trained employees shall be used to assist with first aid at the accident location or in the "field hospital" area, under the direction of the Occupational Health Nurse or outside medical personnel.

D. In the event of a prolonged emergency, supervises sanitary conditions, including control of toilet facilities, garbage and trash disposal, and hygienic procedures. Inspects food supplies and other conditions for safe use.

E. First Aid Teams

1. These teams will be comprised of qualified first aiders and will report directly to the Occupational Health Nurse. The Occupational Health Nurse shall name a member of the First Aid Team as Coordinator of the team and will respond directly to the Field Hospital, pending the arrival of the Occupational Health Nurse.

2. First Aid Teams will report to the field hospital area indicated on the appropriate evacuation map.

3. The Occupational Health Nurse or Team Coordinator will decide if a field hospital is necessary. If so, the first aiders will carry medical supplies to that site, as directed to do so. The Nurse shall also maintain a portable medical supply case which can be transported to an emergency site with minimal time loss. All First Aid Team members will be issued green hard hats. The Nurse/Coordinator will direct the nearest available person to call the established emergency number and request the amount and type of outside help needed: i.e., paramedics, ambulances, hospital notification, etc.

4. In the event of a prolonged emergency, the First Aid Coordinator will supervise sanitary conditions such as toile facilities, garbage and trash disposal, as well as hygiene procedures. Water and food supplies will be supervised by this team, and they will determine the rationing of such items.

5.8 Safety Personnel

A. **Respond** to and evaluate the incident, and render emergency first aid of necessary.

B. **Take** necessary action to ensure employees' safety and health, and protect HR property from damage or loss.

C. Recommend proper methods for control and cleanup of the workplace affected.

D. Release the workplace area for use after the emergency or incident has been corrected.

E. Investigate all emergencies and incidents to determine corrective action, and make necessary reports to state and local agencies.

5.9 Area Supervisor

A. Supervise orderly evacuations when required, using evacuation procedures.

B. Assist with incident control by identifying the source and shutting down contributing equipment if possible.

C. Where necessary, designate a "power-out" team to shutdown or startup equipment when the need arises. The team should have written procedures for shutdown or startup in addition to other actions deemed necessary to minimize personnel hazards and product loss during the incident. Copies of these procedures must be sent to the Safety Engineer.

D. Cleanup of HPM spills of less than one gallon in quantity, assist Spill Cleanup Team with larger spills. It should be noted that spills greater than one gallon constitute a bonafide emergency.

6.0 EVACUATION GUIDELINES

6.1 Any employee witnessing an incident or emergency situation is required to notify Emergency Control on the telephone. If evacuation is deemed necessary, it should be requested.

6.2 Evacuation of a building or space is required when there is a severe threat to life and property such as a fire, explosion, toxic gas leak, major chemical spill, or complete power failure.

6.3 Normally, Emergency Control will initiate evacuation notices for specified areas or building. Depending on the nature of the emergency, evacuation may be accomplished by the public address system.

6.4 Evacuation Criteria - Three types of incidents may occur: Major, Intermediate, and Minor.

6.4.1 Major Incident. Requires evacuation of the entire building(s) if the person requesting the evacuation feels it is necessary to protect the health and safety of the employee.

6.4.1.1 Types of incidents which are classified as major:

A. Fire
B. Explosions
C. Flood
D. Earthquakes

E. Major chemical spills
F. Toxic gas leaks
G. Structural collapse.

6.4.1.2 Evacuation Procedures must be followed.

6.4.2 Intermediate Incident. Requires evacuation on a limited scale as in a production or process area within a building.

6.4.2.1 Types of incidents which are classified intermediate:

A. Strong irritant odor sufficient to cause coughing, gagging, or irritation of the yes, nose, and throat.

B. Chemical spills of less than one gallon when accompanied by symptoms above.

C. Toxic gas, carbon monoxide, or oxygen deficiency alarms.

D. A small fire may also qualify.

6.4.3 Minor Incidents. No evacuation is required, but incident should be reported to Emergency Control personnel.

6.4.3.1 Types of incidents classified as minor:

A. Unusual odors not previously described such as those from natural gas, burning rubber, etc.

B. Minor accidents.

C. Minor spills of nontoxic chemicals.

6.4.3.2 These types of incidents generally do not require evacuation. Area supervisors should try to determine the source of the odor and eliminate it. If the source cannot be found, Safety may be called for assistance.

6.4.3.3 When unusual odors reach a level that interferes with employees work, an evacuation may be ordered.

6.5 Not all situations which require an evacuation can be addressed in this policy. Any situation where a supervisor determines there is threat to the health and safety of employees can justify an evacuation or shutting down of an area. An example being a large

amount of water spilled where employees must stand or work adjacent to live electrical equipment.

USE COMMON SENSE

7.0 EVACUATION

A building evacuation should be ordered when the health and safety of personnel is endangered. It is not always possible for one individual to determine the extent of actual damage caused by an emergency/disaster or what physical hazards may exist in particular portions of a facility, its surroundings, or the vicinity in which it is located. Therefore, established procedures to accommodate the complete and efficient evacuation of personnel to safe locations are set forth below.

7.1 Types of Evacuations

A. Immediate Evacuation

Immediate evacuation is the swiftest removal possible of personnel from an imminent danger area. This type of evacuation occurs without waiting for orders; however, once outside the immediate danger area, personnel are to follow the direction of emergency team members and assemble in the designated areas.

B. Partial Evacuation

Partial evacuation is the evacuation of a particular portion of the facility, due to hazardous conditions caused by some unusual circumstances. A partial evacuation usually is limited to a small portion of the facility and only requires those employees which are exposed to the affected area to be evacuated. Those employees will be directed to a safe location; however, the area selected will be contingent on the number of people evacuated. Except for the immediate need to remove personnel from danger areas, the orders to evacuate these personnel to another location shall be given by the Emergency Coordinator, Safety Department, or the senior executive at the location. During non-standard work times, the senior management person available will take command.

C. Total Evacuation

Total evacuation is the systematic removal of all personnel from a facility because of hazards or damage to the facility or because of the extreme probability of a disaster occurring. This shall include disasters that affect the Company, its surrounding vicinity, or the greater Los Angeles area. Any time it is known that emergency conditions exist, or it is highly probable that the health and safety of all personnel will be affected, total evacuation is mandated.

7.2 Evacuation Procedures (General Information)

7.2.1 Call the emergency number as soon as possible, considering the situation. (Request evacuation assistance.)

7.2.2 NO SMOKING.

7.2.3 Have employees move at a safe pace and leave the space or building (NO RUNNING).

7.2.4 Do not stop to gather personal belongings.

7.2.5 There is to be NO loitering in the building or exit area.

7.2.6 Flashlights will be kept and maintained by area supervisors and managers.

7.2.7 Supervisors will keep their employees in the grouping area.

7.2.8 Supervisors will check rest rooms and remote areas for personnel.

7.2.9 Supervisors will know all emergency exit routes out of their area and all the grouping areas associated with the different routes.

7.2.10 Regardless of the exit used, all personnel must report to their assigned grouping area for counting.

7.2.11 Supervisors will count their employees in the grouping area. Employees that are missing will be reported to Emergency Control.

7.2.12 After evacuation, emergency personnel will prevent entrance to the building except for authorized individuals.

7.2.13 When it has been determined that the emergency no longer exists, the Emergency Coordinator will advise employees to return to the buildings.

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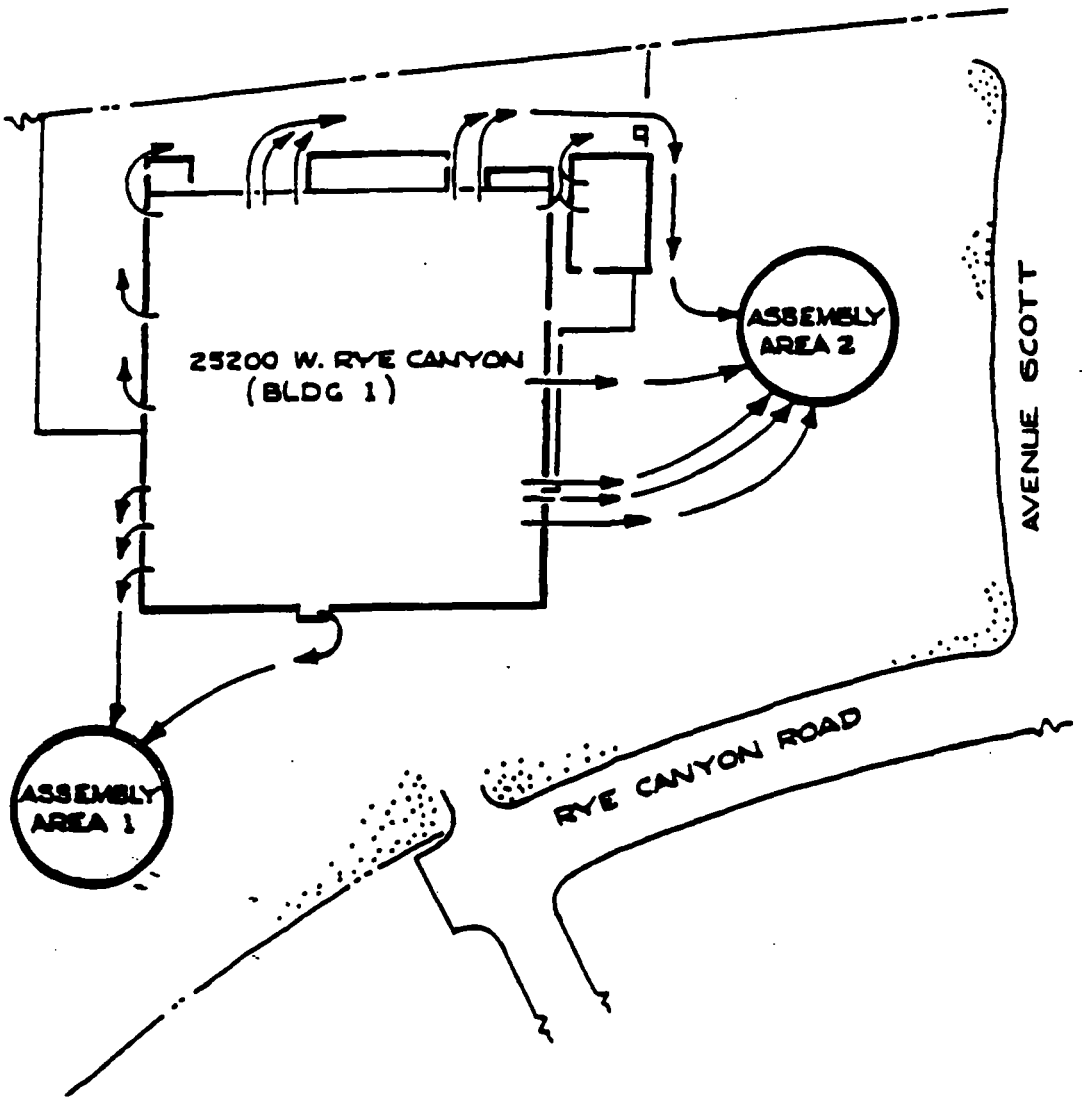
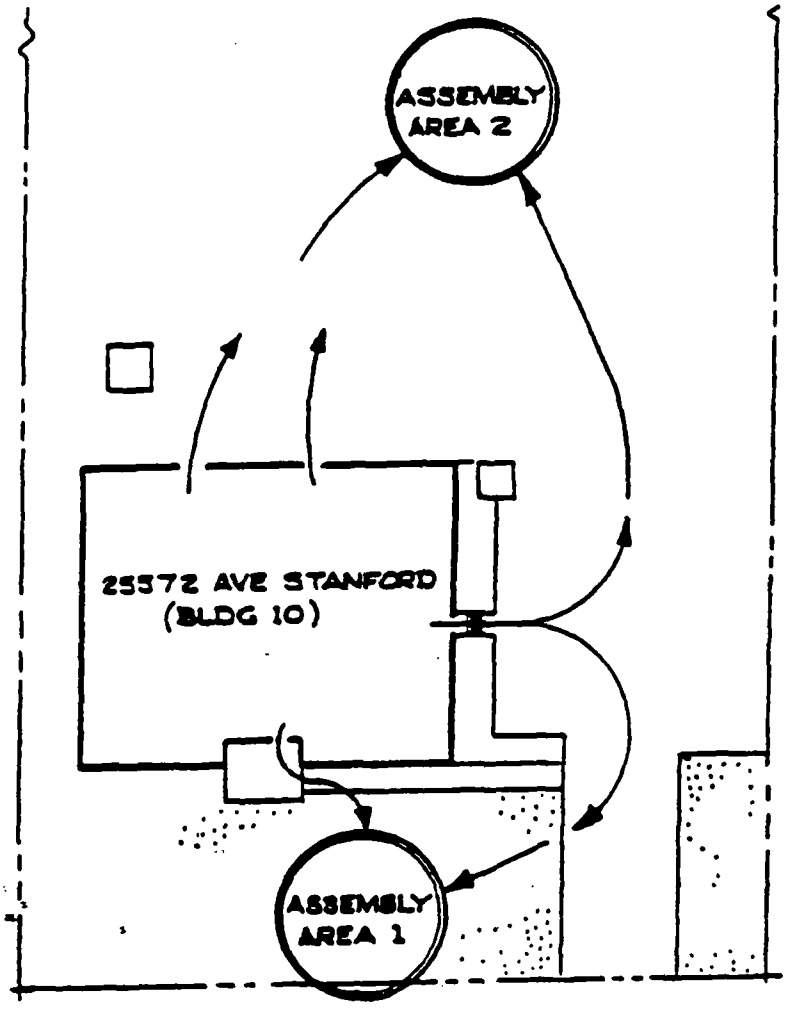
8.0 EVACUATION GROUPING AREAS

8.1 Valencia - 25200 W. Rye Canyon Road



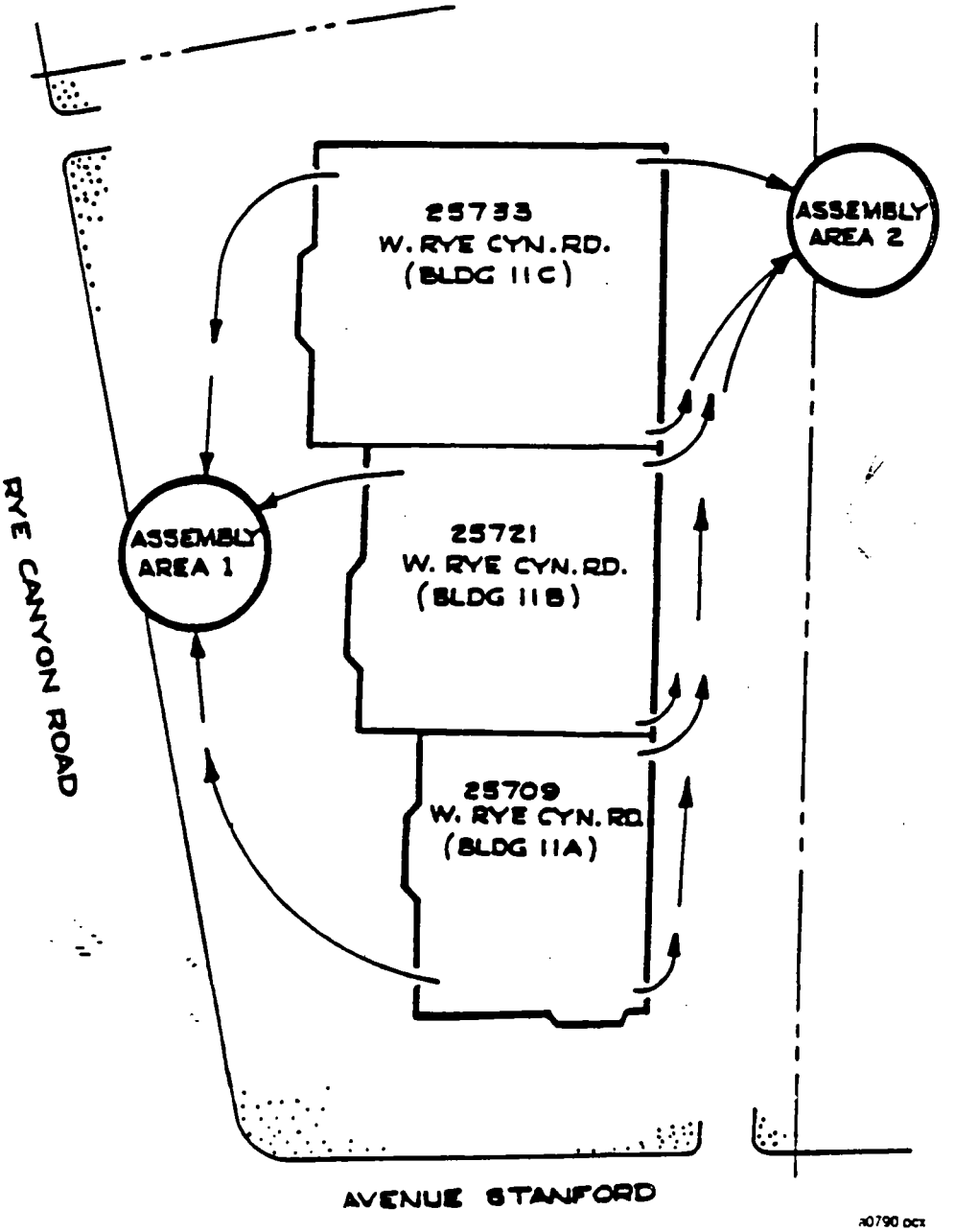
a0788.pcx

8.2 Building 10 - 25572 Avenue Stanford

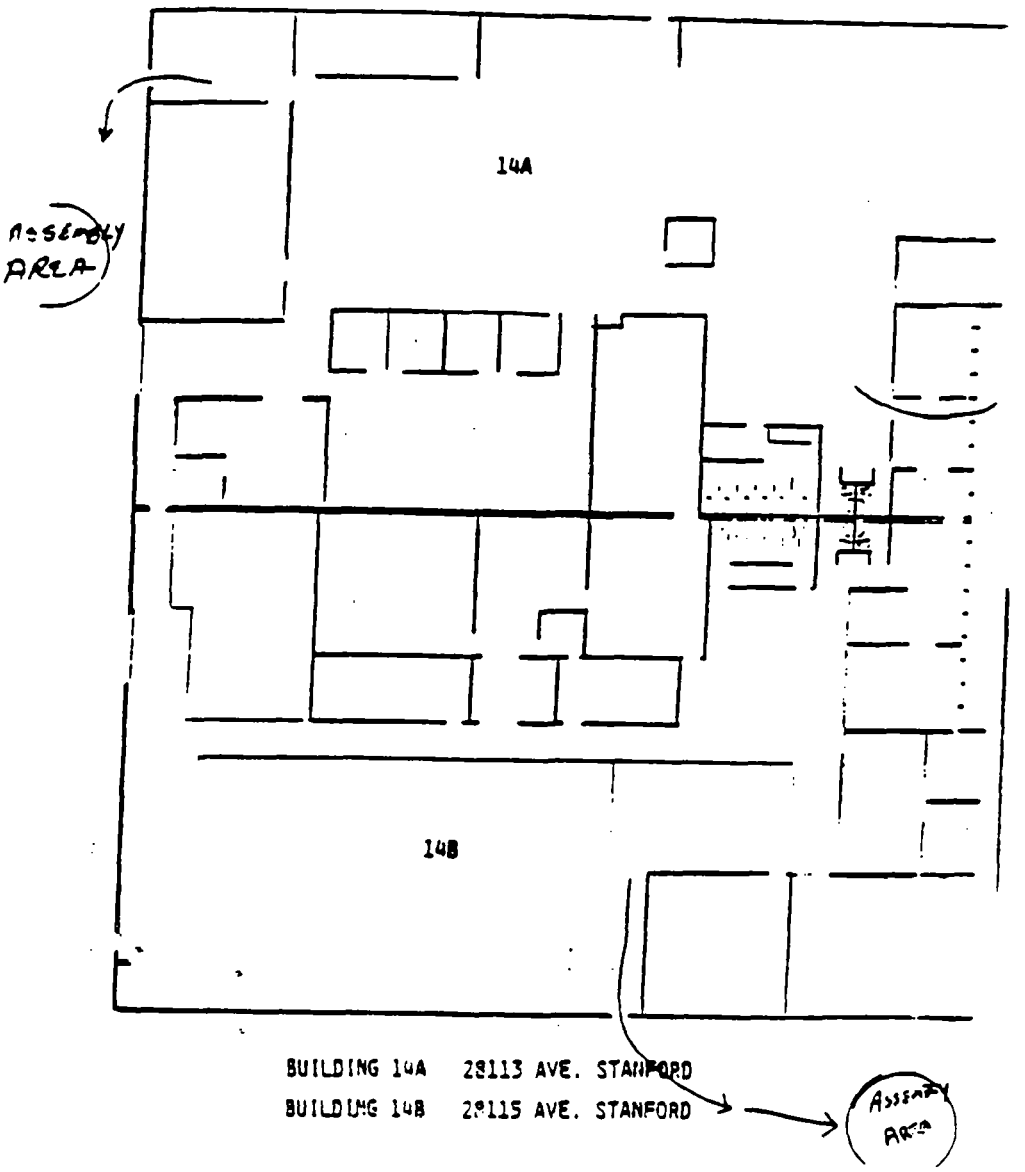


A0789.pcx

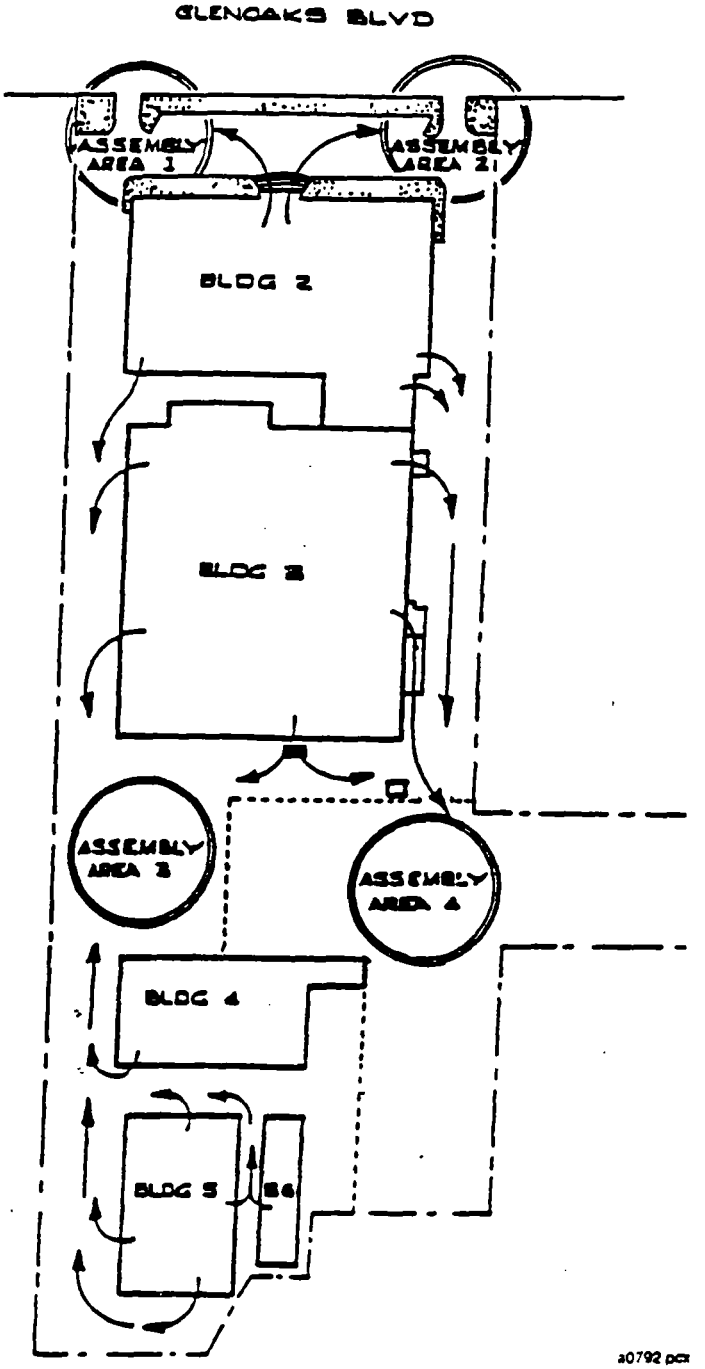
8.3 Building 11 - 25733/21/09 W. Rye Canyon Road



8.4 Building 14 - 28113/15 Avenue Stanford



8.5 Pacoima Facility - 10445 No. Glenoaks Blvd.



9.0 EMERGENCY SITUATIONS

9.1 Earthquake - General Procedures

9.1.1 THINK ... DON'T PANIC. The major hazard in any of our facilities is that of falling objects, such as light fixtures, ceiling panels, etc.

9.1.2 At the first shock, all personnel should immediately attempt to get under a strong table, bench, or design in their immediate area. They should stay under such protection as long as possible, even though they may slide around the room or building. Secondary safe locations would be to stand under doorway heads and arches, bracing yourself in position if necessary.

If at all possible, avoid these areas:

A. Under light fixtures

B. Near files, large shelves, and racks that could tumble

C. Concrete walls around periphery of building

D. Proximity to large pieces of machinery or equipment

9.1.3 Do not attempt to leave your area until the initial shock has subsided, then only if threatened by fire or serious overhead structural damage of the buildings. Emergency personnel will organize evacuation, especially in darkened areas by providing light, if possible, to assist in avoiding wreckage and dangerous overhead conditions.

9.1.4 Upon reaching outside of building, move away from walls and assemble in the designated assembly area as rapidly as possible.

9.1.5 If the quake is severe enough to cause serious damage with the possibility of personnel being trapped in wreckage, all supervision shall take an immediate head count, reporting all missing or unaccounted for personnel to the Emergency Coordinator so that Rescue Teams may be organized and search for missing persons begun. No person should leave the facility without notifying a member of supervision in his department, the Security Officer, or the area Evacuation Team Coordinator.

9.1.6 If indoors:

9.1.6.1 Do not leave the building or area unless ordered to.

9.1.6.2 Do not use matches, lighters, candles, or operate electrical equipment.

9.1.6.3 Watch for falling objects or furniture which could topple over.

9.1.6.4 Stay away from glass materials.

9.1.6.5 If in danger of falling objects, get under a table, desk or other protection from falling objects.

9.1.7 If outdoors:

9.1.7.1 Do not enter a building.

9.1.7.2 Avoid tall buildings, walls, power poles, or other tall items which could topple over.

9.1.7.3 If possible, get away from any object that may topple by at least 1 and 1/2 times the height of that object.

9.1.7.4 Do not use telephones except to apprise Emergency Control of conditions.

9.1.8 After the earthquake:

9.1.8.1 Do not use matches, lighter, candles; operate electrical switches.

9.1.8.2 Stay away from damaged structures.

9.1.8.3 Check for broken gas lines, chemical spills, and fires. If any are found, notify Emergency Control.

9.1.8.4 Check for damage to equipment or structures.

9.1.8.5 Do not touch broken and/or downed power lines.

9.1.8.6 Do not use the telephone except to report on conditions to Emergency Control.

9.1.8.7 Should an evacuation of the building be ordered, follow the normal evacuation procedure in Section 7.

9.2 Chemical Emergencies

A chemical emergency may be defined as a hazardous substance in the form of a solid, liquid, or gas that may be spilled or released, either accidentally or deliberately, into the workplace or the environment creating an exposure hazard.

The hazardous substance may be new or a waste material. Generally, all materials that display characteristics of corrosive, reactive, ignitable, or toxic, are considered a hazardous substance.

9.2.1 Spill Characteristics

A. A minor emergency is an incident which occurs in a relatively small area of the facility which does not seriously affect the overall production in the plant and does not pose a health or safety hazard to employees. Minor chemical emergencies will normally be controlled by an Emergency Facility Coordinator and Supervisory personnel.

B. A major chemical emergency is an incident which occurs within a building which poses a health and safety hazard to employees, and disrupts overall operation of an area of the plant.

9.2.2 Discovery and Notification Procedures

A. Upon discovery of a spill or accidental discharge or a hazardous substance, Emergency Control, the Emergency Response Coordinator, or Safety Manager must be immediately notified.

Valencia	Ext.
Emergency Response Coordinator: Bill Moses	5601
Alternate: Bob Hanson	5338
Environment, Health & Safety: Bob Hanson	5338
Emergency Control	5555
Pacoima	
Emergency Facility Coordinator: Bob Jette	344
Alternate: Paul Flores	332
Emergency Control	222

B. The person(s) making the discovery should proceed with preliminary containment activities., but only if he/she has knowledge of the physical or chemical characteristics of the hazardous substance involved.

The area supervisor should have the Material Safety Data sheet (MSDS) available for review when the Emergency Coordinator arrives at the spill scene.

NOTE: The Emergency Coordinator, Emergency Facility Coordinator, or Safety may, depending on the type and size of the spill, evacuate the area(s) to protect the health and safety of personnel.

C. The Facilities Emergency Response team, under the direction of the Facilities Director, is the responsible cleanup unit in all facilities.

9.2.3 Explosions - Chemical

A. Explosions or threat of explosions could occur due to leaking gas, faulty pressure valve, spillage of volatile chemical, or from the effects of flammable fluids atomized, due to a rupture under pressure.

In this event, employees should:

1. Notify the Security Station, extension 5555 (Valencia) or 222 (Pacoima), if there is time.

2. Take cover under tables, desks, or other objects which will give protection against flying objects or debris.

3. After effects of explosion have subsided, evacuate as instructed by emergency personnel according to Evacuation Plan.

B. Prompt action to recognize potentially explosive conditions may prevent them from occurring.

1. If unusual amounts of gas are detected or if dangerous spills occur, immediately notify emergency personnel. Reduce the hazard by having the source disconnected or the spill isolated and cleaned up before it reaches hazardous concentrations.

2. Open doors and ventilate area.

9.2.4 Handling Hazardous Spills

The following information is of a general nature and should only be used as a guideline. Material Safety Data Sheets (MSDS) for specific materials should be consulted or the Toxic and Hazardous Chemical Chart in Facilities or in the PIP Director's office.

A. Material Safety Data Sheets for hazardous materials in the plant have been compiled into books available to all personnel. Health hazard information; spill, leak, and disposal procedures; and special protection and precaution information are listed. MSDS books are located in the Safety Manager's office in Valencia and in facilities in Pacoima and throughout the manufacturing areas.

B. A list of emergency equipment and the areas in which it is located follows:

Valencia - Maintenance Shop

(2) Full acid and dust suits
(4) Acid resistant overalls
(4) Full face shield with over-the-shoulder hood
(6) Pairs of acid resistant knee-high boots
(6) Acid and organic vapor respirator
(1) 25 person first aid kit

Pacoima - Machine Center

(2) Full acid and dust suits
(4) Acid resistant overalls
(4) Full face shield with over-the-shoulder hood
(6) Pairs of acid resistant knee-high boots
(6) Acid and organic vapor respirator
(1) 25 person first aid kit

NOTE: Stretchers, blankets, and fire extinguishers are placed strategically throughout the building.

9.2.5 Emergency Personnel Action

A. All personnel who are assigned to emergency duties should assemble, as soon as possible, in an area adjacent to the Command Post with any emergency equipment (flashlights, tools, etc.) they are able to accumulate. If the damage is severe, there is danger of personnel being trapped

in wreckage. Rescue Teams shall be dispatched to critical areas or areas where known missing persons may have been at the time.

B. Such Rescue Teams shall be assigned from qualified members of the Emergency Response Teams, on a voluntary basis, by the Director of Facilities engineering, his assistant, or the Emergency coordinator. No individual or groups of individuals shall enter the building(s) for any purpose, unless directed by proper authority. A record shall be maintained indicating the names of any personnel entering the facility and the area involved.

C. The Emergency Coordinator, Emergency Facility Coordinator, or Environmental and Safety Coordinator may elect to obtain outside Emergency Services Personnel to control the incident.

9.2.6 Notification of Authorities

In the event of a transmission of a reportable quantity of a hazardous substance into the air, land, subsurface strata, or groundwater, the appropriate authorities must be notified by the Hazardous Waste Manager or a designee.

A. Local: California Highway Patrol, Valencia 259-1210

L.A. County Sheriff - Valencia 255-1121

L.A. Police Dept. - 911

Ventury Co. Sheriff - 911

Henry Mayo Newhall Memorial Hospital - Valencia 253-8000

Pacoima Memorial Hospital - Pacoima 818/896-1121

Ventura Hospital

State: California Dept. of Health Services - Office of Emergency Services 800/852-7500

Federal: U.S. Coast Guard National Response Center - 800/424-8802 -

EPA (Environmental Protection Agency) 800/974-8131

B. Person reporting the transmission must give:

1. Name and telephone number of reporter.
2. Name and address of facility.
3. Time and type of incident.
4. Name and quantity of materials involved, to the extent known.
5. The extent of injuries, if any.
6. The possible hazards to human health, or the environment, outside the facility.

NOTE: Federal calls are recorded. Person placing these calls should have full knowledge of incident.

9.2.7 General Precautions

9.2.7.1 Acids

1. Acids are oxidizing agents and will react with many substances such as oil, grease, paper, alcohol, etc., enough to ignite them. Inhalation of mists will irritate the respiratory tract. Skin contact will cause burns; eyes may be permanently damaged.
2. First Aid - Always get medical attention.
3. Ingestion - Dilute acid immediately with large amounts of milk or water, then give Milk of Magnesia to neutralize. Do not induce vomiting.
4. Eye contact - Immediately flush eyes with plenty of running water for at least 15 minutes.
5. Skin Contact - Immediately flush affected are with water, removing contaminated clothing under the safety shower.
6. Inhalation - Remove to fresh air. Restore breathing. Call a physician immediately.
7. In case of spills, provide adequate ventilation. Neutralize with soda ash. Clean up crew should wear chemical safety goggles or face shield, rubber gloves, rubber clothing and boots.

9.2.7.2 Caustic Soda

Caustic soda can react violently with strong acids and many organic chemicals (it will react with trichloroethylene to form flammable dicloroacetylene). It generates heat and splattering when it dissolves in water. Caustic soda is a strong alkali and is destructive to all human tissue it contacts, producing severe burns. Use general first aid procedures and spill cleanup as with acids, except neutralization should be done with diluted acid.

9.2.7.3 Solvents

These materials can be hydrolyzed by water to form acids. They react with strong alkali, such as caustic soda, to form flammable, explosive material. Emergency procedures and protective equipment should include a self-contained breathing apparatus and protective gloves and clothes. Chemical goggles or face shields should be used for eye protection.

9.3 Power Failure - General Procedures

9.3.1 There are two kinds of power failures:

A. Planned Blackouts - by the power companies - In the case of pre-warned blackouts, personnel in critical dark areas will be evacuated prior to the blackout.

B. Unplanned or Accidental Power Outages - In the case of an unwarned power failure, all personnel should remain in place for a few minutes. If no information is forthcoming, evacuation teams shall begin evacuation, providing lights in areas where emergency light is sufficient.

1. Supervisory personnel will ensure that auxiliary systems, such as supplied rinse water or gas systems are secured prior to evacuating an area.

2. Specific ventilated areas, such as metal passivation, will have a buildup of chemical fumes. These areas will be secured (close doors) to prevent fumes from spreading. when electrical service is restored, these type of areas will not be entered until fumes are removed by the ventilation system, generally three minutes.

3. If the blackout is of significant duration, all personnel (if the event occurs on day shift) shall assemble in areas noted on the

Facility Evacuation Maps. No personnel, other than Emergency Teams, shall enter the dark portions of buildings until service is restored. If the event occurs at night, all personnel shall assemble in the designated assembly areas to await instructions.

4. No personnel shall leave the premises without permission or instruction during power outage, regardless of duration. When the duration of power outage is determined, an executive decision shall be made as to whether personnel shall be sent home or not.

9.4 Floods

A. Flooding

The flood threat which could affect the Company generally would be from:

1. Catastrophic failure of man-made dams.
2. Massive rainfall or flash flooding in adjacent canyons.

B. Location Affected

1. All buildings.
2. Travel routes to and from HR property, including bridges.

C. Actions

1. Warnings and information regarding actual and forecast conditions will be announced as they are received.
2. Employees are not to leave or evacuate until instructed by senior management personnel, after a determination has been made of safe evacuation routes.
3. If a dam break occurred, move quickly to high ground, north of main facility.

9.5 Violent Weather

Result of heavy snowstorm, severe wind and rain storms, etc. Hazards include:

A. Downed power lines, trees, and signs.
B. Blocked or closed highways or freeways.
C. Hazardous highways from ice or snow.
D. Weakened bridges.

9.6 Bomb Threat and Search

A. Employees receiving or discovering a bomb or receiving a bomb threat should immediately notify the Guard House, extension 222.

If a bomb threat is received by phone, ask:

1. When is the bomb set to explode?
2. Where is the bomb right now?
3. What kind of bomb is it?
4. What does it look like?
5. Why did you place the bomb?

B. **KEEP THE CALLER ON THE LINE AS LONG AS POSSIBLE.**

Record the following information:

1. Time of call.
2. Date of call.
3. Exact words of person.
4. Age, sex, adult, child.
5. Background noises.
6. Speech pattern, accent.

C. **DO NOT LEAVE DETAILS TO MEMORY - RECORD IMMEDIATELY**

If a bomb threat is received by mail, employee should:

1. Not handle the letter, envelope, or package after the contents have been determined.
2. Notify Human Resources, extension 5254.
3. Preserve all evidence for law enforcement officials.

D. Evacuation

If there is reasonable evidence to suspect that there is a bomb on the Company property, the person acting as the Emergency Coordinator will order an evacuation of the facility:

1. Evacuate as instructed by emergency personnel and according to the Evacuation Plan.

2. Move to assembly areas and remain there until released or cleared by emergency authorities to return to the facility.

9.7 Air Pollution

A. Specific actions by the Company are governed by the approved Air Pollution Episode Emergency Plan.

B. Warnings

Notices of forecast smog alert conditions will be received by the Company by:

1. An alert monitor radio receiver, located in the Guard House at Valencia.

2. Local radio and television stations.

The notice of forecast alerts will be transmitted to designated Company locations.

Employees may be notified by:

1. Special sign notices at the plant exits.

2. Public address system bulletins or supervisory personnel.

C. Depending on the severity of the forecast conditions, alerts will be designated:

1. First Stage Alert.

2. Second Stage Alert.

3. Third Stage Alert.

D. Actions

First Stage Alert:

1. Employees will be requested to utilize carpools or public transportations for commuting.

2. Certain equipment which emits air contaminants will be prepared for shutdown if Second Stage Alert levels are reached.

Second Stage Alert:

1. Employees will be strongly urged to utilize carpools or public transportation, if they have not already done so.

2. Company vehicles will not be dispatched into areas where Second Stage Alert levels have been reached.

3. Shutdown designated equipment which emits air contaminants.

4. Prepare plans for shutdown of plant if Third Stage Alert levels are reached.

Third Stage Alert:

1. All Company vehicles still out will be recalled to the plant.

2. If ordered by the Air Pollution Control Officer, the plant will be shut down. This will be performed under full Company supervision.

3. In the event of a complete shutdown, employees will be released to return directly to their homes.

FIGURE A

EMERGENCY SITUATION RESPONSE CHART

Emergency	ERT Coordinators	Security Systems Sub-Leader	Safety Medical	Major Systems Sub-Leader	Manufacuting Sub-Leader	Specialty[2] Advisors
Bomb Threat	Required	Required				
Civil Disturbance	Required	Required				
Major Chemical Spill	Required	Required	Required	Required	Required	Required
Earthquake	Required	Required		Required	Required	
Fire/Explosion	Required	Required	Required	Required	Required	
Major Gas Release	Required	Required	Required	Required	Required	Required
Flood	Required	Required		Required	Required	
Structural Collapse	Required	Required	Required	Required	Required	Required
Major Power Failure	Required	Required		Required	Required	

NOTES: (1) All required responses are at the discretion of the Coordinator.

(2) Specialist will be required for an emergency which occurs that requires specialized knowledge not available from other Emergency Team members.

FIGURE B

EXAMPLES OF POTENTIALLY INCOMPATIBLE WASTE

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials to indicate the need for special precautions when managing these potentially incompatible waste materials or components

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequences as noted.

GROUP 1-A

Acetylene sludge
Alkaline caustic liquids
Alkaline cleaner
Alkaline corrosive liquids
Alkaline Corrosive Battery fluid
Caustic Wastewater
Lime sludge and other corrosive alkalies
Lime wastewater
Lime and water
Spent caustic

GROUP 1-B

Acid sludge
Acid and water
Battery acid
Chemical cleaners
Electrolyte acid
Etching acid liquid or solvent
Pickling liquor and other corrosive acids
Spent acid
Spent mixed acid
Spent sulfuric acid

Potential consequences: Heat generation, violent reaction

GROUP 2-A

Aluminum
Beryllium
Calcium
Lithium
Magnesium
Potassium
Sodium
Zinc powder
Other reactive metals and metal hydrides

GROUP 2-B

Any waste in Group 1-A or 1-B

Potential consequences: Fire or explosion, generation of flammable hydrogen gas.

GROUP 3-A

Alcohols
Water

GROUP 3-B

Any concentrated waste in Groups 1-A or 1-B
Calcium
Lithium
Metal hydrides
Potassium
$S_2O_3Cl_4$, $SOCl_4$, PCl_2, CH_2SICl_3
Other water-reactive waste

Potential consequences: Fire, explosion, or heat generation of flammable or toxic gases

GROUP 4-A

Alcohols
Aldehydes
Halogenated hydrocarbons
Nitrated hydrocarbons
Unsaturated hydrocarbons
Other reactive organic compounds and solvents

GROUP 4-B

Concentrated Group 1-A or 1-B wastes
Group 2-A wastes

Potential consequences: Fire, explosion, or violent reaction

GROUP 5-A

Spent cyanide and suitable solutions

GROUP 5-B

Group 1-B wastes

Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.

GROUP 6-A

Chlorates
Chlorine
Chlorites
Chromate acid
Hypochlorites
Nitrates
Nitric acid, fuming
Perchlorates
Permagenates
Peroxides
Other strong oxidizers

GROUP 6-B

Acetic acid and other organic acids
Concentrated mineral acids
Group 2-A wastes
Group 4-A wastes
Other flammable and combustible wastes

Potential consequences: Fire, explosion, or violent reaction

FIGURE C

CASTAIC DAM INUNDATION MAP

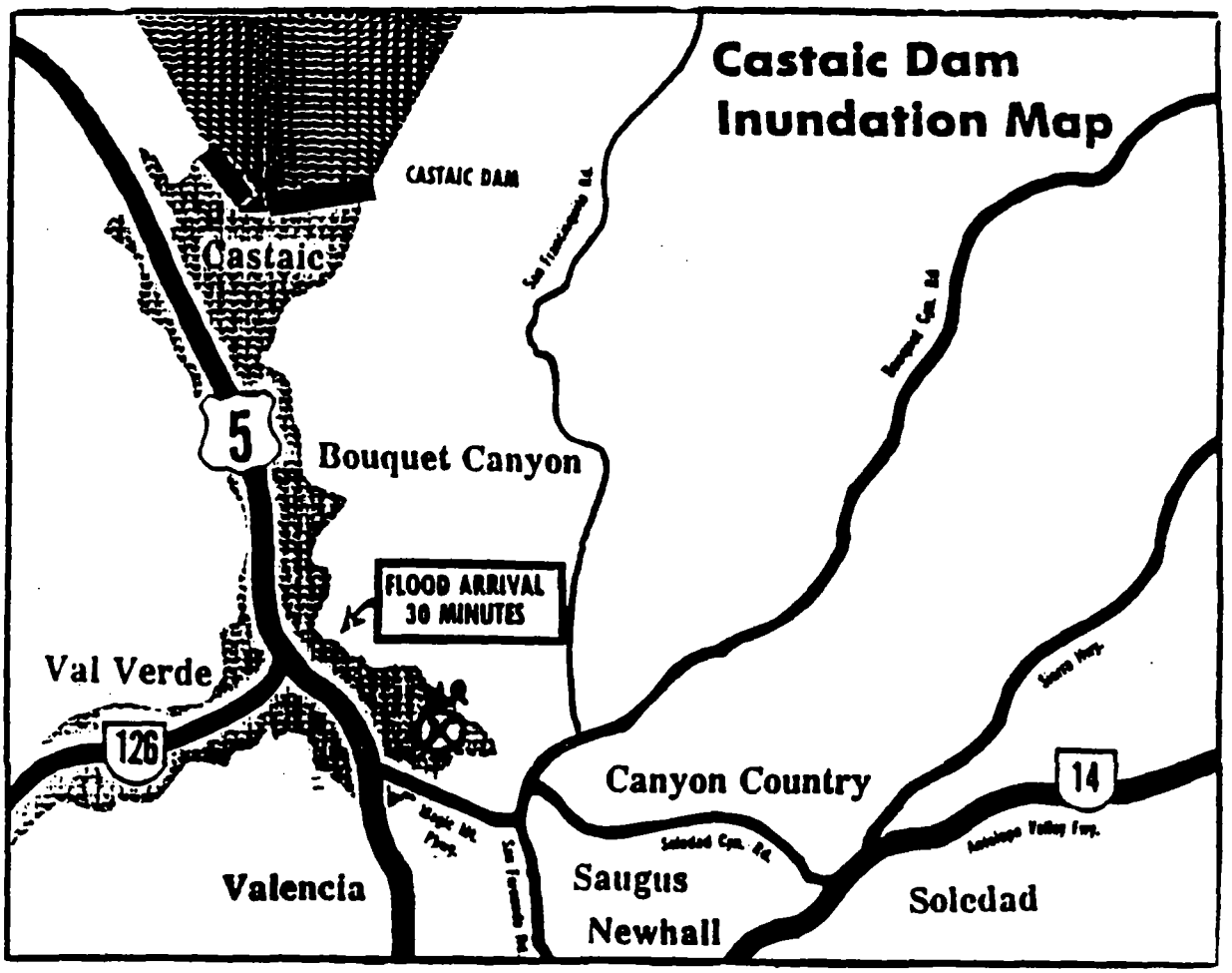
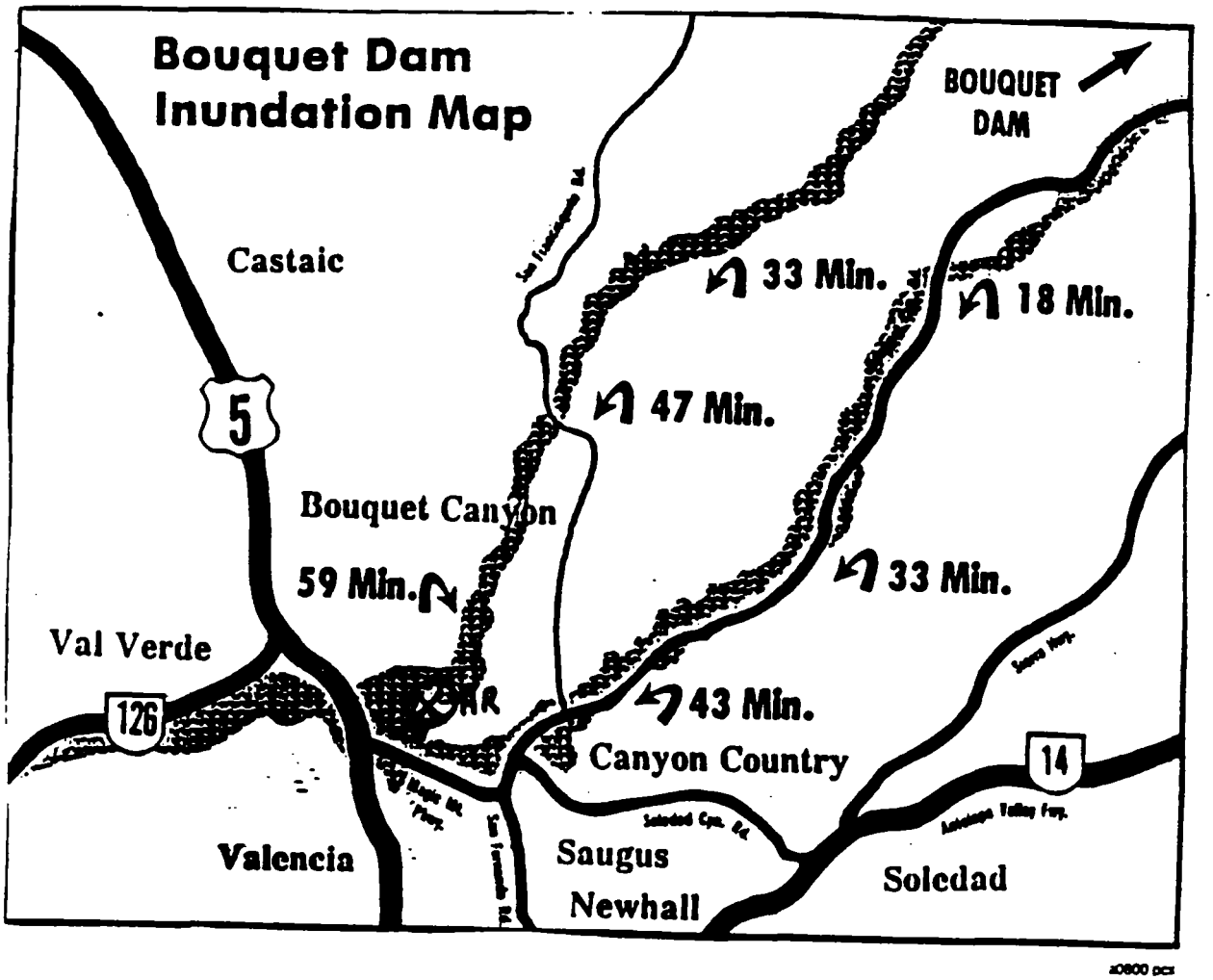


FIGURE D

BOUQUET DAM INUNDATION MAP



SECTION 9

HAZARDOUS WASTES

Survey Questions

Complete this section if the facility generates treats, stores, and/or disposes of hazardous wastes on site.

	Yes	No	Unk	N/A
A. Background Information				
1. If the facility has been subject to an inspection regarding RCRA issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and confirm that facility has copies of inspection reports or correspondence. _____ _____ _____	___	xx	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to RCRA? If so, describe and confirm that facility has copies of all documents. _____ _____ _____	___	xx	___	
3. Has the facility identified and classified all hazardous waste? Record this information in Attachment L.	xx	___	___	
4. What is the average total volume of hazardous waste generated per month? 13,000 (pounds)				
5. Does the facility ship any waste out of the United States?	___	xx	___	
6. Is the facility complying with land disposal bans?	xx	___	___	

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
COMMERCIAL OFF-SITE DISPOSAL FACILITY

HAZARDOUS WASTE STREAM DESCRIPTION	EPA WASTE CODE	HAZARDOUS CONSTITUENTS CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	PHYSICAL STATE	ANNUAL QUANTITY	NAME/ LOCATION OF TRANSPORTER	TREATMENT/ DISPOSAL METHOD	FINAL DISPOSITION OF ANY RESIDUE	FINAL DISPOSITION IF A BROKER IS USED NAME OF TSDF	FINAL DISPOSITION IF A BROKER IS USED LOCATION OF TSDF	ANNUAL COST OF TREATMENT/ DISPOSAL INCLUDING TRANSPORTATION ($)
Spent Degreaser Solvent (parts degreasing) 1,1,1 Trichloroethane	F002	85% Trichloroethane	15% Water		Liquid	4200 gallons	Rho-Chem 425 Isis Ave. Inglewood, Ca.91301 CAD008364432	Ø1 Recycled	Incinerated	N/A	N/A	Ø
Spent Freon Parts cleaning	F001	90% Freon	10% Oil		Liquid	625 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	Ø
Spent Stoddard Solvent Parts cleaning	D001	85% Stoddard Solvent	15% Oil		Liquid	1400 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$6,146
Spent Isopropanol Parts cleaning	D001	90% Isopropyl Alcohol	10% Oil		Liquid	365 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$1,697.25
Waste Lacquer Thinner and Paint Paint shop waste	D001	25% Paint 25% MEK	25% Lacquer Thinner	25% Isopropyl Alcohol	Liquid	105 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$504
Water Soluble Cutting Oil Coolant for Machines	Non RCRA	13% Soluble Cutting Oil	86% Water	1% Stoddard Solvent	Liquid	3540 gallons	Martin Industrial Pumping,P.O.BOX 1128 Canyon Country,Ca. CAD000628636	Ø1 Recycled	Incinerated	Gibson Oil and Refinery Pacific Treatment Chem Tech Systems	Bakersfield,Ca. CAD980883177 San Diego,Ca. CAD095894556 Los Angeles,Ca. CAT080033681	$3,186

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO COMMERCIAL OFF-SITE DISPOSAL FACILITY

HAZARDOUS WASTE STREAM DESCRIPTION	EPA WASTE CODE	HAZARDOUS CONSTITUENTS CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	PHYSICAL STATE	ANNUAL QUANTITY	NAME/ LOCATION OF TRANSPORTER	TREATMENT/ DISPOSAL METHOD	FINAL DISPOSITION OF ANY RESIDUE	FINAL DISPOSITION IF A BROKER IS USED NAME OF TSDF	FINAL DISPOSITION IF A BROKER IS USED LOCATION OF TSDF	ANNUAL COST OF TREATMENT/ DISPOSAL INCLUDING TRANSPORTATION
Waste Methyl Ethyl Ketone	F005	99% MEK	1% Ink		Liquid	50 gal.	Rho-Chem Corp. 425 Isis Ave. Inglewood, Ca. CAD008364432	Ø1 Recycled	Incinerated	N/A	N/A	$300.00
Lab Packs (exired epoxys, paints & potting compounds, etc.)	D002 D007	Misc.expired shelf life materials			Liquid Slurry, Paste Lab Packed	7320 pounds	Martin Industrial Pumping P.O.Box 1228 Canyon Country,Ca. CAD000628636	Ø3 Landfilled	Ø3 Landfilled	Casmalia Resource Managment CAD020748125	NTU Road Casmalia, Ca.	$13,176.00
Waste Nitric Acid from Passivate	D002 D007	35% Nitric acid	63% Water	2% Sodium Dichromate	Liquid	Ø	Same as above	Ø1 Treatment Recycled	Incinerated	Appropriate Tech.II CAT080010101 Americhem Inc. CAD044429835	1200 Maxwell Rd. Chula Vista,Ca. 1737 E. Denni St. Wilmington,Ca.90744	Ø
Waste Water from clarifier and rinse water from Passivate	D007	82% Water 12% Solids 5% Oil	Chromium 525 MS/L Toxic Organics 200 MS/L (Chloroform)	105mg/L Copper	Liquid	4050 gallons	Same as above	Ø1 Treatment Recycled	Incinerated	Chem-Tech CAT080033681 Pacific Treatment CAD095894556	3650 E. 26th St. Vernon, Ca. 90023 2190 Main St., San Diego, Ca.92113	$6,075.00
Spent Cutting Oil and Hydraulic Oil	Non RCRA	60% Cutting Oil	39% Hydraulic Oil	1% Water	Liquid	2550 gallons	Asbury Oil Co. 13419 Halldale Ave. Gardena,Ca.90249 CAD028277036	Ø1 Recycled	Incinerated	Demmeno/Kerdon CAT080013352	200 N. Alameda Compton,Ca.	Ø

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
COMMERCIAL OFF-SITE DISPOSAL FACILITY

HAZARDOUS WASTE STREAM DESCRIPTION	EPA WASTE CODE	HAZARDOUS CONSTITUENTS CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	PHYSICAL STATE	ANNUAL QUANTITY	NAME/ LOCATION OF TRANSPORTER	TREATMENT/ DISPOSAL METHOD	FINAL DISPOSITION OF ANY RESIDUE	FINAL DISPOSITION IF A BROKER IS USED NAME OF TSDF	LOCATION OF TSDF	ANNUAL COST OF TREATMENT/ DISPOSAL INCLUDING TRANSPORTATION ($)
Photo-Chemical Waste Stop Fix Developer	Non RCRA	Water 90%	Fixer 5%	Photo Developer	Liquid	330 Gallons	Martin Industrial Pumping P.O. Box 1128 Canyon Country, CA CAD000628636	Treatment/ Recycled	Incinerated	Appropriate Technologies CAT080010101	1200 Maxell Rd. Chula Vista, CA 90744	$1,113

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 3 years			
CONTENTS Soluble oil			
CAPACITY 700 gallons x 3 ea tanks			
MONTHLY THROUGHPUT 1600 gallons			
SHELL CONSTRUCTION MATERIAL Polyethylene			
LINING MATERIAL Polyethylene			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL None			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS 1,1,1 Trichloroethane			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 4 years			
CONTENTS Stoddard solvent			
CAPACITY 500 gallons			
MONTHLY THROUGHPUT 100 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT New			
DESCRIPTION OF CONTAINMENT SYSTEM Tank-in-a-Tub			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Tub has greater capacity than tank			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS 1,1,1 Trichloroethane			
CAPACITY 500 gallons			
MONTHLY THROUGHPUT 20 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

SECTION 10

UNDERGROUND STORAGE TANKS
Subtitle I

Survey Questions

A. Underground Storage Tanks Containing Hazardous Substances and/or Petroleum Products

Complete this subsection if the facility stores hazardous substances or petroleum products in underground storage tanks.

	Yes	No	Unk	N/A
1. If the facility has been subject to an inspection regarding tanks during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence: _____	___	___	XX	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to tanks? If so, describe and confirm that facility has copies of all documents._____	___	___	XX	
3. Does the facility store any hazardous substances or petroleum products in underground storage tanks?	___	XX	___	
4. Use Attachment 0 to list all underground storage tanks (UST) located at the facility. Include wastewater treatment tanks, sumps, underground storage tanks containing used oil, underground bulk storage tanks, electrical equipment, and hydraulic lift tanks. Complete all relevant information for each tank.				

	Yes	No	Unk	N/A
5. Did the facility report the following information on each tank to the designated state agency:				
a. Status of use?	___	___	XX	
b. Age?	___	___	XX	
c. Capacity in gallons?	___	___	XX	
d. Material of tank construction?	___	___	XX	
e. Material of piping construction?	___	___	XX	
f. Type(s) of internal/external protection?	___	___	XX	
g. Contents?	___	___	XX	
6. Does the facility have a map showing the location of each tank?	___	___	XX	
7. If any USTs at the site contain petroleum products or hazardous substances as defined in CERCLA Section 104(14), or contained these materials after January 1, 1974, and were still in the ground as of May 8, 1986; or were brought into use after May 8, 1986:				
a. Was a EPA Form 7530-1 ("Notification for UST in Use") or state form prepared and submitted to the designated agency?	___	___	___	XX
b. Are copies of this notification form kept at the site?	___	___	___	XX
c. Is the information on the form consistent with the tank inventory and documentation?	___	___	___	XX
8. Do you have procedures in place to ensure that unnecessary tanks at your facility are removed?	___	___	XX	___
9. Have all new USTs and piping installed after May 1985 been cathodically protected or designed to prevent any release?	___	___	___	XX

	Yes	No	Unk	N/A
10. Is secondary containment provided for all USTs containing hazardous substances?	___	___	___	XX
11. Are the material and construction of tanks and piping used for the storage of hazardous substances compatible with the material stored and conditions of storage (i.e., pressure and temperature)?	XX	___	___	
12. Are inventory control procedures in place and practiced to monitor contents of USTs?	___	XX	___	
13. Are the following inventory procedures used:				
a. Measure tank levels with gauging stick at least daily?	___	XX	___	
b. Obtain reading from meters at dispensers?	___	XX	___	
c. Determine mass balance by comparing quantity of material delivered to tank to quantity of material used?	___	XX	___	
d. Tank liquid measurements taken at the beginning and end of a 36 hour period during which no liquid is added to or removed from the tank?	___	XX	___	
14. Are inventory and use records maintained for all USTs?	___	XX	___	
15. Is there a procedure in place to address discrepancies and losses in inventory records?	___	XX	___	
16. Do you prevent spills and overfills of your tanks by assuring that the tank volume exceeds the volume of products to be transferred?	___	___	XX	
17. Are the pipes connected to USTs checked for signs of leakage?	___	___	XX	

	Yes	No	Unk	N/A
18. If the tank has a leak detection system in place:				
a. Is the system routinely calibrated in accordance with the manufacturer's instructions?	XX	—	—	—
b. Is there a means to prevent tampering with the system?	—	—	XX	—
19. Do you use at least one of the following monthly monitoring methods: automatic tank gauging; monitoring for vapors in the soil; interstitial monitoring; monitoring for liquids in the ground water; or other approved method?	—	XX	—	
20. Do you monitor developments in state and local regulations and have ways of assuring compliance with the administrative and technical requirements of these regulations?	—	XX	—	
21. Are all USTs shown not to have had any releases?	—	—	XX	
22. Are there formal procedures for investigating and reporting releases to the EPA and to state and local authorities?	XX	—	—	
23. Is there a way to ensure that corrective actions are taken immediately to address releases?	—	—	XX	

	Yes	No	Unk	N/A
24. Does the facility have a plan for obtaining a financial assurance mechanism which satisfies the financial responsibility requirements of USEPA's underground storage tank regulations?	___	___	XX	

If so, describe._____

_____

_____

_____

_____

_____

B. SPCC Requirements

Complete this section if the facility has oil storage capacity of:

- *42,000 gallons or more underground capacity, or*
- *1,320 gallons or more above ground capacity (including outdoor 55 gallon drum capacity) or any single container with a capacity over 660 gallons).*

	Yes	No	Unk	N/A
25. a. Does the site have a written Spill Prevention Control and Countermeasure (SPCC) Plan?	___	___	XX	
b. Is the Plan up-to-date?	___	___	XX	
c. Was the Plan reviewed by and certified by a Registered Professional Engineer?	___	___	XX	
26. Is secondary containment provided for all bulk oil storage tanks?	XX	___	___	
27. Is storm water retained in diked areas inspected for oil contamination before drainage to ensure compliance with applicable water quality standards?	XX	___	___	
28. Are the materials of tanks used for the storage of oil compatible with the material stored and conditions of storage (i.e. temperature and pressure)?	XX	___	___	

	Yes	No	Unk	N/A
29. Are the underground oil storage tanks subject to periodic leak testing?	___	XX	___	
Date of last testing _____.				
30. If any tanks failed leak testing, have they been taken out of service, repaired, or replaced?	XX	___	___	___
31. Are records maintained documenting testing and any corrective action?	XX	___	___	
32. Are tank supports and foundations subject to inspection?	___	XX	___	
33. Are underground oil tanks equipped with overfill prevention (e.g. high liquid level alarms, high liquid level cutoff devices, direct audible or code signal communication between the tank guage and pumping station, a fast response system for determining the liquid level of each bulk storage tank, or properly calibrated fill gauge)?	___	XX	___	
34. Are liquid level sensing devices tested regularly?	___	XX	___	
Frequency:_____				
Date last tested_____				
35. If the site has any buried piping installations:				
a. Is the terminal connection at the transfer point capped and locked when not in service?	___	XX	___	___
b. Has all piping not in service been emptied?	XX	___	___	___
36. Are any safeguards utilized to prevent oil delivery vehicle departure before complete disconnect of flexible or fixed transfer lines (e.g., interlocked warning light, physical barrier system, or warning signs)?	___	XX	___	

	Yes	No	Unk	N/A
37. Are the storage tank master flow and drain valves locked in the closed position when in non-operating or standby status?	___	XX	___	
38. List all aboveground oil storage tanks of greater that 200 gallons located at the facility and all bulk gas tanks (volume greater that 2 cubic feet) on Attachment N.				
39. Are the aboveground oil storage tanks subject to periodic integrity testing?	___	XX	___	
Date of last testing _____.				
40. Are aboveground oil tanks equipped with overfill prevention (e.g. high liquid level alarms, high liquid level cutoff devices, direct audible or code signal communication between the tank guage and pumping station, a fast response system for determining the liquid level of each bulk storage tank, properly calibrated fill gauge)?	___	XX	___	
41. Are all aboveground valves and pipelines subjected to regular inspection?	___	XX	___	
Frequency_____				
Date last inspected_____				
42. Is aboveground piping physically protected from vehicular traffic?	XX	___	___	
43. If the tanks utilize internal heating coils:				
a. Are discharges from such coils prevented from discharging into surface waters?	___	___	___	XX
b. Are all discharges monitored?	___	___	___	XX

C. Miscellaneous

44. Are there any other coments that you consider relevant and/or significant to this section of the survey? If yes, please state on an attached page.	___	XX	___	

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

Valencia

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 4 years			
CONTENTS Stoddard Solvent			
CAPACITY 500 gallons			
MONTHLY THROUGHPUT 100 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT New			
DESCRIPTION OF CONTAINMENT SYSTEM Tank-In-a-Tub			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Tub has greater capacity than tank			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Valencia

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS 1,1,1 Trichloroethane			
CAPACITY 500 gallons			
MONTHLY THROUGHPUT 20 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS 1,1,1 Trichloreothane			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 250 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL N/A			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT N/A			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Valencia

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 3 months			
CONTENTS			
CAPACITY 700 gallons x 3 ea tanks			
MONTHLY THROUGHPUT 1600 gallons			
SHELL CONSTRUCTION MATERIAL Polyethylene			
LINING MATERIAL Same			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL None			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

ATTACHMENT "M"

OFF-SITE COMMERCIAL HAZARDOUS TRANSPORTERS AND TSDF FACILITIES

TRANSPORTER/TSDF FACILITY			FACILITY CONTACT PERSON	TRANSPORT TYPE: BULK/DRUMS	SERVICES PROVIDED				PERMIT STATUS			FACILITY COMPLIANCE STATUS			
												TEXTRON AUDIT		AGENCY INSPECTION	
NAME	ADDRESS	TELEPHONE			TREATMENT METHOD	BROKER STORAGE METHOD	RECYCLE METHOD	DISPOSAL METHOD	TYPE	PERMIT NUMBER	PERMIT EXPIRATION DATE	YES/NO	DATE	YES/NO	DATE
Pacific Treatment TSDF	2190 Main St. San Diego, CA 92113	(619) 233-0424	Jackie McGue	Bulk & Drums	Neutralization Decanting Filtration Flocculation	N/A	Recover useable water & recoverable metals	N/A		Approved 10/84 Part B CAD095894556	UNK	NO		UNK	
Demmeno/Kerdon	2000 N. Alameda Compton, CA	(213) 537-7100	Kathie Demmeno	Bulk	Refinery	N/A	Recover used oil clean & use as new	N/A		CAT080013352	UNK	NO		UNK	
Gibson Oil & Refining Co.	Commercial Dr. Bakersfield, CA 93308	(805) 327-0413	Cynthia Jeffers	Bulk	Refinery		recover useable & salvage oil for reuse	N/A		CAD980883177	UNK	NO		UNK	
									—						

ATTACHMENT "M"

OFF-SITE COMMERCIAL HAZARDOUS TRANSPORTERS AND TSDF FACILITIES

TRANSPORTER/TSDF FACILITY			FACILITY CONTACT PERSON	TRANSPORT TYPE: BULK/DRUMS	SERVICES PROVIDED				PERMIT STATUS			FACILITY COMPLIANCE STATUS			
												TEXTRON AUDIT		AGENCY INSPECTION	
NAME	ADDRESS	TELEPHONE			TREATMENT METHOD	BROKER STORAGE METHOD	RECYCLE METHOD	DISPOSAL METHOD	TYPE	PERMIT NUMBER	PERMIT EXPIRATION DATE	YES/NO	DATE	YES/NO	DATE
Rho-Chem Corp. TSDF	425 Isis Ave. P.O. Box 6021 Inglewood, CA 90301	(213) 776-6233	Mark Johnson	Drums	N/A	N/A	Distillation or Fuel Blending	N/A		Issued 12/83 Part B CAD008364432	UNK	NO		UNK	
Martin Industrial Pumping Transporter	P.O. 1128 Canyon Country, CA 91355	(805) 251-3737	Darron Stankey	Bulk & Drums	N/A	N/A	N/A	N/A		N/A CAD000628636	UNK	NO		UNK	
Asbury Oil Co. Transporter	13419 Halldale Ave. Gardena, CA 90249	(213) 321-1392	Mel Harper	Bulk	N/A	N/A	N/A	N/A		N/A	UNK	NO		UNK	
Appropriate Technologies II TSDF	1200 Maxwell Rd. Chula Vista, CA 90744	(619) 421-1175	Mike Donnelly	N/A	Neutralization Decanting Filtration Flocculation	N/A	See treatment recovery water & Metals	N/A		CAT080010101	UNK	NO		UNK	
Casmalia Resource Mgt. TSDF	NTU Road Casmalia, CA	(805) 922-4006	Clifford Ivey	Drums	N/A	N/A	N/A	Landfill		Issued 7/83 Part B CAD020748125	UNK	NO		UNK	
Americhem Inc. TSDF	1737 E. Denni St. Wilmington, CA 90744	(213) 834-5131	Gina Ormsbee	Bulk	Neutralization Decanting Filtration Flocculation	N/A	recovery water & recoverable metals	N/A		CAD044429835	UNK	NO		UNK	
Chem-Tech TSDF	3650 E. 26th St. Vernon, CA 90023	(213) 268-5056	Bob Moss	Bulk	Neutralization Decanting Filtration Flocculation	N/A	recovery water & recoverable metals	N/A		Part B Submitted CAT080033681	UNK	NO		UNK	

SECTION 10

TANK STORAGE

Introduction

Overview: Tanks are regulated under the following federal laws:

- Subtitle C of the Resource Conservation and Recovery Act
- Subtitle I of the Resource Conservation and Recovery Act
- Clean Water Act

Tanks used to store **hazardous wastes** are regulated under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The Hazardous and Solid Waste Amendments of 1984 added Subtitle I to RCRA which regulates underground storage tanks (USTs) containing **petroleum** and **hazardous substances**.

RCRA requirements for tanks storing hazardous wastes cover the design of tank systems, general operating requirements, inspections, response to leaks and spills, closure/postclosure care and special requirements for ignitable/reactive and incompatible wastes (40 CFR 265.190-265-201). These regulations apply to aboveground, on-ground, and partially or totally underground tanks that are used to treat or store hazardous wastes. Requirements for tanks storing hazardous waste are discussed in Section 9. Requirements for tanks storing hazardous substances or petroleum are discussed in this section.

Underground Storage Tanks (USTs): Under RCRA Subtitle I, an underground storage tank is defined as any non-earthen stationary tank (including underground pipes connecting to the tanks) used to contain regulated substances which has 10 percent or more of its volume (including the volume of underground pipes) beneath the surface of the ground (40 CFR 280.1). Under this definition devices such as sumps, treatment units, equipment and machinery containing petroleum or other regulated substances, and swimming pools are included. A regulated substance is defined as any substance regulated as a "hazardous substance" under CERCLA (except RCRA hazardous wastes), and petroleum, including crude oil or any fraction of crude oil that is liquid at standard conditions of temperature and pressure (40 CFR 280.1), or mixtures of petroleum with deminimis quantities of other regulated substances. This includes systems such as those containing motor fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, or used oils.

The 1984 RCRA Amendments set forth many new requirements for owners and operators of underground storage tanks containing regulated substances. EPA has developed performance standards for new tanks and leak detection/corrective action standards for all underground tanks containing petroleum and hazardous substances. The effective date of these regulations was December 22, 1988.

The following tanks are excluded from the underground storage tank regulations:

- Farm or residential tanks of 1,100 gallons or less capacity used to store motor fuel for noncommercial purposes;
- Tanks used to store heating oil for consumptive use on the premises (some states require that these tanks be registered);
- Septic tanks
- Pipeline facilities regulated under other acts or laws;
- Surface impoundments, pits, ponds, or lagoons;
- Stormwater or wastewater collection systems;
- "Flow-through process tanks";
- "Liquid trap or associated gathering line related to oil or gas production and gathering operations;
- Storage tanks on or above the floor of an underground area.

Existing Requirements: The RCRA regulations establish responsibilities for persons who own underground storage tanks, deposit regulated substances into underground storage tanks, and/or sell underground storage tanks. Tank owners are responsible for registering the tanks with their state hazardous waste agency or other designated agency. All new tanks installed must meet certain release prevention requirements. People who deposit regulated substances in underground tanks and people who sell underground tanks must tell tank owners about their responsibilities under RCRA. Federal and state enforcement and inspection officials may request information from the tank owner; inspect and sample tanks; monitor and test tanks and the surrounding areas; and levy civil penalties of up to $10,000 per day per tank for failure to register the tank or providing false information.

Existing tanks, installed before December 1988, must be upgraded or closed within 10 years, or within one to five years if a release detection method is not available that can be applied during the required phase-in period for release detection. Upgrading of petroleum UST systems includes retrofitting of release detection, corrosion protection and spill/overfill controls. Upgrading of hazardous substance UST systems includes retrofitting corrosion protection, spill/overfill controls, and secondary containment and interstitial monitoring.

Existing systems must also comply with one of the following requirements by December 22, 1998:

- New UST performance standards under 40 CFR 280.20,
- The upgrading requirements stated in 40 CFR 280.21(b)-(d), or
- Closure requirements under 40 CFR 280.71 Subpart G.

The owner/operator of a tank brought into use after May 8, 1986 must submit a notification form to the designated state agency within 30 days. For existing tanks (and tanks that were out of service after January 1, 1974, but which remain in the ground), the owner/operator was required to submit a notification form by May 8, 1986. Tanks taken out of service prior to January 1, 1974 are not affected by these notification requirements.

New Requirements: The final standards for underground storage tanks holding hazardous substances and petroleum prouducts were promulgated by EPA on September 23,1988 (53 FR 37082-37212). The requirements will be phased in as described below. The new standards establish measures for both new and existing UST systems to prevent, detect and clean up releases of petroleum products and hazardous substances.

Certain underground storage tanks are excluded from the final regulations. These include (but are not limited to) systems with a capacity of 110 gallons or less, systems storing de minimis concentrations of regulated substances, and equipment that contains regulated substances for operational purposes.

In addition to the technical requirements discussed below, the new UST regulations include state program approval requirements as well as financial responsibility requirements for all owners/operators of underground storage tanks containing petroleum which became effective on January 24, 1989. Federal and state entities are excluded from these requirements. These requirements are being phased in over a 21 month period. Those firms with a tangible net worth of $20 million or more, with the exception of "petroleum marketing firms", must be in compliance as of the effective date of the regulations. Smaller firms must be in compliance by October 26, 1990.

The final rule governing USTs, while consisting of many specific federal requirements, allows the state agencies some flexibility. Therefore it is necessary to check with your state and local agencies to determine if your program varies from the federal regulations.

Under the final standards, a **new UST** must meet the following requirements:

- Certification that the tank and piping are properly installed;
- Provision of devices to prevent spills and overfills;
- Protection from corrosion;
- Provision of leak detection equipment on tank and piping.

When placing a new UST system into service, the owner/operator must follow national codes of practice and must certify that proper installation procedures were followed. New and upgraded hazardous substance USTs must have secondary containment with interstitial monitoring, or an alternative method approved by the implementing agency.

The following standards are applicable to **new and existing UST systems:**

- **Corrosion Protection** - the owner/operator must monitor and maintain cathodic protection to ensure that the UST system remains free of corrosion.

- **Spill/Overfill Protection** - the owner/operator must follow proper tank filling practices to prevent releases due to spills and overfills. New or upgraded tank systems must use deveces that prevent overfills and control or contain spills.

- **Release Detection** - release detection is required for all new and existing tanks. Owners and operators of new and existing UST systems must provide a method, or combination of methods, of release detection that can detect a release from any portion of the tank and the connected underground piping that contains the product, is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, and meets the performance requirements of 40 CFR 280.43 or 280.44. The schedule for the phase-in of release detection is described in 40 CFR 280.40(c).

- **Release Reporting and Response** - the tank owner/operator must report suspected releases to the implementing agency with 24 hours. If a release has been confirmed, the owner/operator must begin corrective action.

- **Tank Repairs** - tanks must be repaired in accordance with nationally-recognized in dustry standards, including tests that must be conducted to ensure the quality of repairs.

- **Tank Closure** - the owner/operator must notify the implementing agency 30 days in advance of closure. Permanent tank closures must follow industry codes. An assessment must be performed at the time of closure to ensure that a release has not occurred at the site.

Spill Prevention Control and Countermeasure Plans (SPCC): The Clean Water Act was enacted to prohibit the discharge of harmful quantities of oil into U.S. waters. Under the Act the definition of oil includes oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with waste other than dredged spoil.

The Act requires the preparation and implementation of Spill Prevention Control and Countermeasure (SPCC) Plans by owners and operators of onshore and offshore facilties that have discharged or have the potential to discharge oil in harmful quantities (40 CFR 112.3). SPCC Plans are designed to minimize the potential for oil spills and should be kept on file at the facility. An SPCC Plan must be certified by a Professional Engineer and reviewed every three years.

Facilities are exempt if they have a storage capacity of:

- less than 42,000 gallons of oil underground, and
- less than 1,320 gallons above ground (as long as no single container has a capacity above 660 gallons).

Facilities with permanent outdoor drum storage must include the drum storage capacity to determine if an SPCC Plan is required.

If your facility is required to have an SPCC Plan, that plan must address specific requirements for underground oil storage tanks, including, but not limited to, the following (40 CFR 112.7(e)(2)):

- Compatibility of the material and construction of the tank with the material stored and conditions of storage;
- Adequate secondary containment;
- Drainage of rainwater;
- Corrosion protection for new underground metallic storage tanks;
- Special measure to control leakage through internal heating coils;
- Fail-safe engineering for tank installations;
- Observation of plant effluent to detect possible system problems that could lead to an oil spill; and
- Prompt correction of visible oil leaks.

The SPCC Plan requirements for aboveground tanks include those stated above for underground with the addition of the following requirements:

- Avoidance of metallic storage tanks partially underground (unless provided with adequate corrosion protection);
- Periodic inspection and integrity testing of aboveground tanks.

SECTION 10

STORAGE TANKS

Guidance

Authority:	The Clean Water Act; The Resource Conservation and RecoveryAct; Subtitle C - Hazardous Wastes; Subtitle I - Underground Storage Tanks; Petroleum and Hazardous Substances; Corresponding State Statutes
Regulatory Citation:	40 CFR 112; 40 CFR 280 and 281; Corresponding State Regulations
Administering Agency:	U.S. Environmental Protection Agency; Designated State Agencies

1 - 2. Questions are self-explanatory.

3 - 4. See Introduction to this section.

SECTION 10

UNDERGROUND STORAGE TANKS
Subtitle I

Survey Questions

A. Underground Storage Tanks Containing Hazardous Substances and/or Petroleum Products

Complete this subsection if the facility stores hazardous substances or petroleum products in underground storage tanks.

	Yes	No	Unk	N/A
1. If the facility has been subject to an inspection regarding tanks during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence: _____	___	___	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to tanks? If so, describe and confirm that facility has copies of all documents._____	___	___	___	
3. Does the facility store any hazardous substances or petroleum products in underground storage tanks?	___	___	___	
4. Use Attachment 0 to list all underground storage tanks (UST) located at the facility. Include wastewater treatment tanks, sumps, underground storage tanks containing used oil, underground bulk storage tanks, electrical equipment, and hydraulic lift tanks. Complete all relevant information for each tank.				

5. Tank owners must report the information in items (a)-(g) to the state agency designated in 40 CFR 280.22 Appendix 1.

7. The owner of an UST must notify the state or local agency designated in 40 CFR 280.22 and 280.34 Appendix II of the tank's existence. If a tank was used to store a regulated substance and removed from service after January 1, 1974, but remains in the ground, the owner must also have submitted a notification form to the designated state agency by May 8, 1986. Owners and operators of newly installed tanks must submit a tank notification form within 30 days of bringing a new tank into operation certifying the specified method used to ensure proper installation (40CFR 280.22) A copy of EPA Form 7530-1 can be found in the Appendices.

The term "owner" is defined in 40 CFR 280.1 as follows:

- For tanks in service on or after November 8, 1984, the "owner" is the person (or commercial entity) who currently owns the UST;

- For tanks taken out of service before November 8, 1984, the "owner" is the person who owned the tank immediately before discontinuation of its use.

8. It is good management practice to remove non-essential tanks. The procedures for handling out of service tanks and closure are presented in 40 CFR 280.70 - .74 (Subpart G).

9. Performance standards under the new regulations for new UST systems are found in 40 CFR 280.20. Metal piping that contains regulated substances must be cathodically protected and meet the requirements of 40 CFR 280.20. State and local regulations for new tank installation may be more stringent. Be sure to check those requirements. Under 40 CFR 280.31 all UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester within six months of installation and at least every three years thereafter.

	Yes	No	Unk	N/A
5. Did the facility report the following information on each tank to the designated state agency:				
a. Status of use?	___	___	___	
b. Age?	___	___	___	
c. Capacity in gallons?	___	___	___	
d. Material of tank construction?	___	___	___	
e. Material of piping construction?	___	___	___	
f. Type(s) of internal/external protection?	___	___	___	
g. Contents?	___	___	___	
6. Does the facility have a map showing the location of each tank?	___	___	___	
7. If any USTs at the site contain petroleum products or hazardous substances as defined in CERCLA Section 104(14), or contained these materials after January 1, 1974, and were still in the ground as of May 8, 1986; or were brought into use after May 8, 1986:				
a. Was a EPA Form 7530-1 ("Notification for UST in Use") or state form prepared and submitted to the designated agency?	___	___	___	___
b. Are copies of this notification form kept at the site?	___	___	___	___
c. Is the information on the form consistent with the tank inventory and documentation?	___	___	___	___
8. Do you have procedures in place to ensure that unnecessary tanks at your facility are removed?	___	___	___	___
9. Have all new USTs and piping installed after May 1985 been cathodically protected or designed to prevent any release?	___	___	___	___

10. Under 40 CFR 280.42 new hazardous substance UST systems must have secondary containment systems to contain regulated substances released until they are detected and removed and must prevent the release of regulated substances to the environment throughout the operational life of the system.

11. Under CFR 280.32 of the new regulations owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

12. Inventory procedures are defined in CFR 280.43. Product inventory control must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis. Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded daily.

13. Manual and automatic tank guaging requirements are described in 40 CFR 280.43(b) and (d).

14. Recordkeeping is a key component of managing USTs. Retain all inventory and use data for use during federal or state inspections.

15. Inventory discrepancies should be investigated promptly to determine whether a release has occurred. The sooner you confirm a leak, the less likely it is to have grown to a point where it requires extensive reporting and remediation. A written procedure helps ensure a rapid response.

16. The owners and operators must ensure that releases due to spilling or overfilling do not occur and that transfer operatons are monitored constantly to prevent overfilling and spilling (40 CFR 280.30). Spills and overfills are a major source of contamination from an underground storage tank.

17. Most leaks stem from piping connected to the UST. Methods of release detection for piping are described in 40 CFR 280.44.

	Yes	No	Unk	N/A
10. Is secondary containment provided for all USTs containing hazardous substances?	___	___	___	___
11. Are the material and construction of tanks and piping used for the storage of hazardous substances compatible with the material stored and conditions of storage (i.e., pressure and temperature)?	___	___	___	
12. Are inventory control procedures in place and practiced to monitor contents of USTs?	___	___	___	
13. Are the following inventory procedures used:				
a. Measure tank levels with gauging stick at least daily?	___	___	___	
b. Obtain reading from meters at dispensers?	___	___	___	
c. Determine mass balance by comparing quantity of material delivered to tank to quantity of material used?	___	___	___	
d. Tank liquid measurements taken at the beginning and end of a 36 hour period during which no liquid is added to or removed from the tank?	___	___	___	
14. Are inventory and use records maintained for all USTs?	___	___	___	
15. Is there a procedure in place to address discrepancies and losses in inventory records?	___	___	___	
16. Do you prevent spills and overfills of your tanks by assuring that the tank volume exceeds the volume of products to be transferred?	___	___	___	
17. Are the pipes connected to USTs checked for signs of leakage?	___	___	___	

18. If the tank is equipped with a leak detection system, the system should be calibrated properly and secured against possible tampering (40 CFR 280.40).

19. All UST systems must comply with the release detection requirements of Subpart D within the Phase-In Release Detection Time period depicted in 40 CFR 280.40. Tanks must be checked at least once a month for signs of leakage using one of the release detection methods outlined in 40 CFR 280.42, .43, and .44.

20. The EPA has encouraged state and local authorities to administer their own underground tank programs. Many state and local requirements are more stringent than the new regulations. You are responsible for keeping your plant in compliance.

22. Under CERCLA, the person in charge of a facility that releases a "reportable quantity" of a hazardous substance must contact the NRC immediately (40 CFR 302.6). Refer to 40 CFR 302.4 for a list of hazardous substances and their reportable quantities. State and local reporting requirements may be more stringent and often do not include "reportable quantity" or de minimis levels.

Reports of all releases including suspected releases, spills and overfills must be reported to the implementing agency within 24 hours or another reasonable time period specified by the implementing agency (40 CFR 280.50 & .53).

23. Under 40 CFR 280.34 (3), owners and operators must submit to the implementating agency all corrective actions planned or taken. 40 CFR 280.60 Subpart F defines the release response and corrective actions to be followed.

	Yes	No	Unk	N/A
18. If the tank has a leak detection system in place:				
a. Is the system routinely calibrated in accordance with the manufacturer's instructions?	___	___	___	___
b. Is there a means to prevent tampering with the system?	___	___	___	___
19. Do you use at least one of the following monthly monitoring methods: automatic tank gauging; monitoring for vapors in the soil; interstitial monitoring; monitoring for liquids in the ground water; or other approved method?	___	___	___	
20. Do you monitor developments in state and local regulations and have ways of assuring compliance with the administrative and technical requirements of these regulations?	___	___	___	
21. Are all USTs shown not to have had any releases?	___	___	___	
22. Are there formal procedures for investigating and reporting releases to the EPA and to state and local authorities?	___	___	___	
23. Is there a way to ensure that corrective actions are taken immediately to address releases?	___	___	___	

24. The financial responsibilities of owners/operators of USTs containing petroleum have been promulgated by EPA and were effective as of January 24, 1989, These responsibilites are defined in 40 CFR 280.93. Owners or operators of underground storage tanks must demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage resulting from sudden and and non sudden accidental releases from underground storage tanks containing petroleum.

Several mechanisms can be used to satisfy federal and state requirements, including insurance, self-insurance, indemnification, security bonds, trust funds or state tank funds.

The regulations require one to have one of the following:

- At least $1 million to cover the costs of a leak or spill from underground storage tanks if you are a petroleum marketer (handle an average of 10,000 gallons of petroleum per month); or
- At least $500,000 if you are not a petroleum marketer.

These financial requirement must be met within timetables based on the number of underground storage tanks owned (40 CFR 280.91)

25. 40 CFR 112 establishes requirements for preventing the discharge of oil into or upon the navigable waters of the United States. "Navigable waters" has a very broad definition under the regulations and includes wetlands. These regulations include the preparation and implementation of a SPCC Plan. The requirements for preparing and implementing SPCC Plans are found in 40 CFR 112.32-112.7. The owner or operator of your facility must review and evaluate the SPCC Plan every three years. If applicable, the owner/operator must amend the plan within six months of this review to include more effective prevention and control technology. If the SPCC Plan is amended, the amendment(s) must be certified by a professional engineer (40 CFR 112.5(c)).

26. Under to 40 CFR 112.7(e)(2), all bulk oil storage tank installations should provide secondary containment. The capacity of the secondary containment should equal the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation.

40 CFR 112.7(c) requires the facility to provide appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable watercourse.

27. 40 CFR 112.(e)(1) requires that, before a diked area is emptied, the accumulated storm water must be examined to be sure that no oil will be discharged. It is a good management practice to maintain records of these examinations.

28. According to 40 CFR 112.7(e)(2), no tank should be used for oil storage unless its material and construction are compatible with the material stored and the conditions of storage.

	Yes	No	Unk	N/A
24. Does the facility have a plan for obtaining a financial assurance mechanism which satisfies the financial responsibility requirements of USEPA's underground storage tank regulations?	___	___	___	

If so, describe._____

_____

_____

_____

_____

_____

B. SPCC Requirements

Complete this section if the facility has oil storage capacity of:

- *42,000 gallons or more underground capacity, or*
- *1,320 gallons or more above ground capacity (including outdoor 55 gallon drum capacity) or any single container with a capacity over 660 gallons).*

25. a. Does the site have a written Spill Prevention Control and Countermeasure (SPCC) Plan?	___	___	___	
b. Is the Plan up-to-date?	___	___	___	
c. Was the Plan reviewed by and certified by a Registered Professional Engineer?	___	___	___	
26. Is secondary containment provided for all bulk oil storage tanks?	___	___	___	
27. Is storm water retained in diked areas inspected for oil contamination before drainage to ensure compliance with applicable water quality standards?	___	___	___	
28. Are the materials of tanks used for the storage of oil compatible with the material stored and conditions of storage (i.e., temperature and pressure)?	___	___	___	

29-30. Buried tanks must undergo regular leak testing (40 CFR 112.7(e)(2)(iv)). Leaking tanks should be taken out of service, repaired, or replaced.

31. As a good management practice, the inspection records for your facility should document:
- date of leak testing and name of the inspector;
- results of the test;
- corrective action needed, if any; and
- date corrective action was taken.

32. All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include all tank supports and foundations (40 CFR 112.7(e)).

33. New and existing tanks should be fail-safe engineered, as far as practical, to avoid spills. Consideration should be given to providing one or more of the overfill prevention devices listed in this Question (40 CFR 112.7(e)(2)(vii)).

34. According to 40 CFR 112.7(e)(2)(vii)(E), liquid level sensing devices should be tested regularly to ensure proper operation.

35. Underground piping installations whould include protective wrapping and coating of the piping and cathodic protection if soil conditions warrant. When a pipeline is not in service, or is in stand-by service for an extended period of time, the terminal connection at the transfer point must be capped or blankflanged and marked as to origin (40 CFR 112.7(e)(3)).

36. 40 CFR 112.7(e)(4) requires onshore tank car and tank truck loading/unloading facilities to have containment, measures to prevent premature vehicular departure, and valve examination procedures.

	Yes	No	Unk	N/A
29. Are the underground oil storage tanks subject to periodic leak testing?	___	___	___	
Date of last testing _____.				
30. If any tanks failed leak testing, have they been taken out of service, repaired, or replaced?	___	___	___	___
31. Are records maintained documenting testing and any corrective action?	___	___	___	
32. Are tank supports and foundations subject to inspection?	___	___	___	
33. Are underground oil tanks equipped with overfill prevention (e.g. high liquid level alarms, high liquid level cutoff devices, direct audible or code signal communication between the tank guage and pumping station, a fast response system for determining the liquid level of each bulk storage tank, or properly calibrated fill gauge)?	___	___	___	
34. Are liquid level sensing devices tested regularly?	___	___	___	
Frequency:_____				
Date last tested_____				
35. If the site has any buried piping installations:				
a. Is the terminal connection at the transfer point capped and locked when not in service?	___	___	___	___
b. Has all piping not in service been emptied?	___	___	___	___
36. Are any safeguards utilized to prevent oil delivery vehicle departure before complete disconnect of flexible or fixed transfer lines (e.g., interlocked warning light, physical barrier system, or warning signs)?	___	___	___	

37. The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status (40 CFR 112.7(e)(9)).

39. Aboveground tanks must be tested periodically to insure integrity (40 CFR 112.7(e)(2)(vi)). As a good management practice, the inspection records for your facility should document:

- date of leak testing and name of the inspector;
- results of the test;
- corrective action needed, if any; and
- date corrective action was taken.

40. New and existing tanks should be fail-safe engineered, as far as practical, to avoid spills. Consideration should be given to providing one or more of the overfill prevention devices listed in this Question (40 CFR 112.7(e)(2)(vii)).

41. Aboveground valves and pipelines must undergo regular examinations by operating personnel. It may be appropriate to periodically leak-test piping in areas where facility drainage is such that a failure in the piping may lead to a spill (40 CFR 112.7(e)(3)).

42. 40 CFR 112.7(e)(3) requires that drivers of vehicles be warned to be sure that they do not endanger aboveground piping because of the size of their vehicles.

43. Drainage systems from storage areas or undiked areas should not flow directly into watercourses (40 CFR 112.7 (e) (1)). When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected before drainage occurs.

	Yes	No	Unk	N/A
37. Are the storage tank master flow and drain valves locked in the closed position when in non-operating or standby status?	___	___	___	
38. List all aboveground oil storage tanks of greater that 200 gallons located at the facility and all bulk gas tanks (volume greater that 2 cubic feet) on Attachment N.				
39. Are the aboveground oil storage tanks subject to periodic integrity testing?	___	___	___	
Date of last testing _____.				
40. Are aboveground oil tanks equipped with overfill prevention (e.g., high liquid level alarms, high liquid level cutoff devices, direct audible or code signal communication between the tank gauge and pumping station, a fast response system for determining the liquid level of each bulk storage tank, properly calibrated fill gauge)?	___	___	___	
41. Are all aboveground valves and pipelines subjected to regular inspection?	___	___	___	
Frequency_____				
Date last inspected_____				
42. Is aboveground piping physically protected from vehicular traffic?	___	___	___	
43. If the tanks utilize internal heating coils:				
a. Are all discharges from such coils prevented from discharging into surface waters?	___	___	___	___
b. Are all discharges monitored?	___	___	___	___

C. Miscellaneous

44. Are there any other coments that you consider relevant and/or significant to this section of the survey? If yes, please state on an attached page.	___	___	___	

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS 1,1,1 Trichloroethane			
CAPACITY 500 gallons			
MONTHLY THROUGHPUT 200 gals			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL N/A			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "O"

UNDERGROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE Approximately 16 years			
CONTENTS Empty (spill containment tank)			
CAPACITY 5000 gallons			
MONTHLY THROUGHPUT Ø			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL N/A			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM It is part of a containment system			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Leak alert monitor			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF INSTALLED PRIOR TO 5/7/85, WAS "UST" NOTIFICATION FORM SENT TO USEPA (YES/NO) UNK			
IF INSTALLED AFTER 5/7/85, WAS "UST" NOTIFICATION FORM SENT TO USEPA (YES/NO)			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 19 years			
CONTENTS Stoddard solvent			
CAPACITY 2000 gallons			
MONTHLY THROUGHPUT			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel piping and valves			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Trenched concrete bermed pad plumbed to 6500 gallon spill containment tank, cap. of bermed area & spill containment tank 13,320			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Same as above			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER S/N 30375			
AGE 18 years			
CONTENTS Stoddard solvent			
CAPACITY 4000 gallons			
MONTHLY THROUGHPUT			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel piping & valves			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Trenched concrete bermed pad plumbed to 6500 gallon spill containment tank, cap. of berm & spill containment tank 13,320.			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Same as above			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS Waste soluble oil & water			
CAPACITY 700 gallons			
MONTHLY THROUGHPUT 700 gal x 3 tanks			
SHELL CONSTRUCTION MATERIAL Polyethylene			
LINING MATERIAL Polyethylene			
INSTALLATION TYPE: NEW OR RETROFIT Baker tank 3 ea			
PIPING MATERIAL N/A			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 24 years approximately			
CONTENTS aluminum cutting oil			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 267 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete berm			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 24 years approximately			
CONTENTS Steel cutting oil			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 138 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete berm			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 24 years approximately			
CONTENTS Stoddard solvent			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 150 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Tank in concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER	325		
AGE UNK			
CONTENTS Freon, Trichloro 1,2,2 Trifluoroethane			
CAPACITY 235 gallons			
MONTHLY THROUGHPUT 100 gallons			
SHELL CONSTRUCTION MATERIAL Stainless steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM None			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

SECTION 11

USED OIL

Introduction

Overview: Under RCRA, "used oil" means any oil that has been refined from crude oil, used, and, as a result of such use, is contaminated by physical or chemical impurities. Examples of used oil include: car and truck crankcase oil; transmission fluid; brake fluid; compressor, turbine, and bearing oils, hydraulic oils, metalworking oils; gear oils; electrical oils; and spent industrial process oils.

To date, EPA has not declared used oil to be a hazardous waste, although this issue is currently under consideration. However, many states have declared used oil to be a hazardous waste and in those states used oil must be handled in accordance with the hazardous waste management requirements discussed in Section 10. Be sure to check state regulations for specific state requirements.

EPA has, however, banned the use of waste or used oil which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment (40 CFR 266.23(b)).

EPA has not imposed regulations regarding the recycling of used oil but does regulate the burning of used oil for energy recovery. The requirements that apply to used oil burned for energy recovery depend upon the constituents of the oil as explained below.

On-Specification Used Oil: Used oil that meets the following quality specifications is known as "on-specification used oil":

Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100° F minimum
Total halogens	4,000 ppm maximum

"On-specification used oil" may be sold to, and burned in both non-industrial boiler and industrial furnaces if the generator complies with record keeping requirements (40 CFR 266.43(b)(1) and (6)).

Off-Specification Used Oil: Used oil that does not meet the quality specifications described above cannot be burned in residential, commercial, or institutional boilers (i.e., non-industrial boilers) unless the boiler complies with RCRA standards for hazardous waste incinerators. (40 CFR 264 Subpart O). However, off-specification used oil may be blended with other oil to meet the specifications. Hazardous waste fuels may only be burned in hazardous waste incinerators (40 CFR 264 Subpart)).

Oil with over 1,000 ppm halogens is considered hazardous because it is assumed that the halogens entered the oil by addition of one or more of the halogenated hazardous wastes listed in 40 CFR 261 Subpart D. (Note: This is known as a "rebuttable presumption" because the oil will not be considered hazardous if the facility can prove that such mixing did not occur.)

Hazardous Waste Fuels: Used oil is considered to be a hazardous waste fuel if:

- it has been mixed with hazardous waste, or
- the total halogen concentration is 1,000 ppm or more.

Requirements for Marketers and Burners: Marketers and burners of hazardous waste fuel and off-specification used oil must (40 CFR 266 Subpart D and Subpart E):

- notify EPA of their marketing activities;
- obtain an EPA identification number;
- use manifests (for hazardous waste fuels) or invoices (for off-specification used oil);
- meet record keeping requirements, and
- comply with RCRA storage standards for facilities storing hazardous waste fuels (does not apply to storage of off-specification used oil).

SECTION 11

USED OIL

Guidance

Regulatory Authority:	The Resource Conservation and Recovery Act; Corresponding State Statutes
Regulatory Citation:	40 CFR 266
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State Agencies

3. Generators of solid waste are required to determine whether any of their wastes are hazardous wastes (40 CFR 262). Used oil may contain hazardous waste constituents and therefore should be analyzed and carefully handled on site.

SECTION 11

USED OIL

Survey Questions

Complete this section if used oil is generated at the facility or burned for energy recovery at the facility.

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding waste oil issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence.	___	XX	___	___
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to waste oil? If so, describe and provide copies of all documents.	___	XX	___	___
3.	Does the facility test used oils to determine if they are hazardous? How much used oil does the facility generate annually? 2550 gallons	XX	___	___	___
4.	Does the facility store used oil on site? Describe how the used oil is stored. Stored in 55-gallon metal drums	XX	___	___	___
5.	Does the facility recycle or dispose of used oil on site? Describe used oil recycling or disposal activities. (Attachment K)	___	XX	___	

6-7. All off-site treatment and disposal facilities, including facilities that handle waste oils, pose potential liabilities for the company that ships waste to the facility. Many waste oil handlers are now listed as Superfund sites. The facility should be very careful when choosing off-site oil recycling facilities.

8. 40 CFR 266.40 specifies that used oil burned for energy recovery must meet the specifications described in the Introduction to this section. 40 CFR 266.43(b)(1) and (6) require generators to maintain copies of each analysis (or other information used to make the determination) for three years. They must also maintain the following information on each shipment:

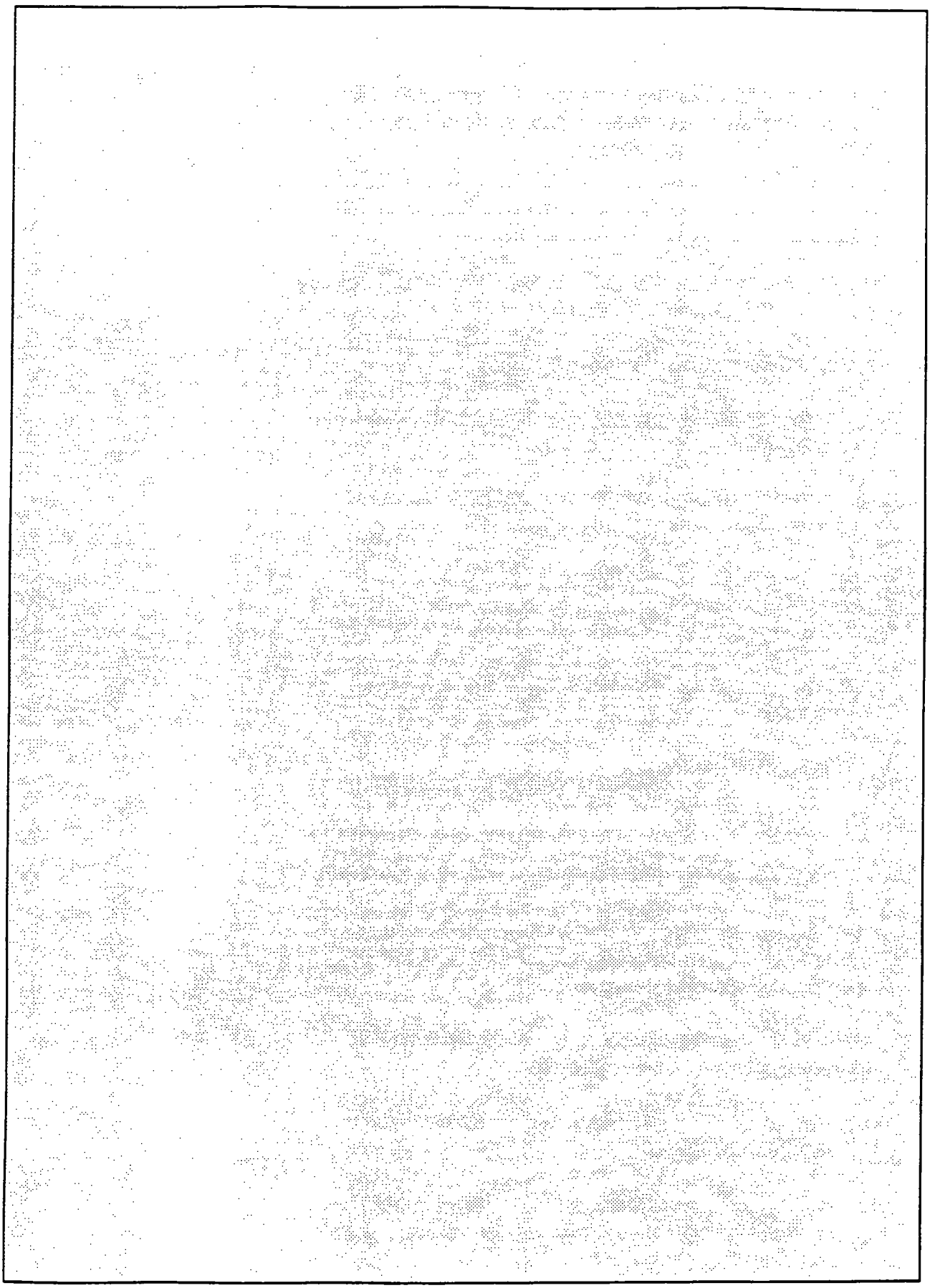
- name and address of the facility receiving the shipment;
- quantity of used fuel oil delivered;
- date of shipment or delivery; and
- a cross-reference to the record of the used oil analysis.

9. Off-specification used oil can be marketed for energy recovery only to burners or other marketers who have notified EPA of their used oil management activities and to burners who burn the used oil in an industrial furnace or boiler identified in 40 CFR 260.10 (40 CFR 266.41(b)). Notification to EPA on the location and general description of used oil management activities must be made (40 CFR 266.43(b)(3)).

10. Oil with a halogen content of over 1,000 ppm is considered a hazardous waste unless the generator proves that the oil has not been mixed with a hazardous waste.

11. Required by 40 CFR 266 Subparts D and E.

	Yes	No	Unk	N/A
6. Does the facility recycle or dispose of used oil off site? Describe off-site recycling or disposal procedures. List off-site facilities on Attachment K.	___	___	___	
7. Has the facility audited the off-site facilities used to handle used oil? Record on Attachment K.	___	___	___	
8. If used oil is burned for energy recovery:				
a. Does the facility test the oil to determine if it meets specifications?	___	___	___	___
b. If the used oil recovery meets specifications, does the facility maintain required records?	___	___	___	___
9. If the used oil burned for energy recovery does not meet specifications:				
a. Does the facility prohibit its use in non-industrial boilers?	___	___	___	___
Describe procedures: _____				
b. Does the facility meet record keeping requirements?	___	___	___	___
10. If the used oil has been mixed with hazardous wastes or has a halogen level above 1,000 ppm, is the used oil treated as a hazardous waste?	___	___	___	___
11. If the facility markets used oil directly to a burner, have the following requirements been fulfilled:				
a. Does the fuel meet specifications under 40 CFR 266.40(e)?	___	___	___	___
b. Have the proper notifications been made to EPA stating the location and general description of used oil activities?	___	___	___	___



SECTION 11

USED OIL

Survey Questions

Complete this section if used oil is generated at the facility or burned for energy recovery at the facility.

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding waste oil issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence.	___	XX	___	___
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to waste oil? If so, describe and provide copies of all documents.	___	XX	___	___
3.	Does the facility test used oils to determine if they are hazardous? How much used oil does the facility generate annually? 3625 gallons	XX	___	___	___
4.	Does the facility store used oil on site? Describe how the used oil is stored. Stored in 55-gallon metal drums	XX	___	___	___
5.	Does the facility recycle or dispose of used oil on site? Describe used oil recycling or disposal activities. (Attachment K)	___	XX	___	

ATTACHMENT "K"

NON HAZARDOUS WASTES (USED OIL, METAL SCRAPS, ETC.)
RECYCLED ON-SITE AND OFF-SITE

WASTE NAME	WASTE RECYCLED		MATERIAL REUSED AS	DISPOSITION OF ANY RESIDUE	RECYCLING PERMIT REQUIRED (Y/N)
	ON-SITE	OFF-SITE (GIVE COMMERCIAL FACILTIY NAME)			
Waste oil Cutting and Hydraulic		Asbury Oil Company CAD028277036 Demenno/Kerdon CAT080013352	Fuel and rerefined for use in new oil	Incinerated	
Waste oil Contaminated with halogenated solvents in excess 1000 ppm		Rho-Chem Corp. CAD008364432	Blended and used as fuel	Incinerated	
Steel and aluminum turnings		Abbey metals	Metals are reused in new materials	Incinerated	

SECTION 11

USED OIL

Survey Questions

Complete this section if used oil is generated at the facility or burned for energy recovery at the facility.

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding waste oil issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence.	___	XX	___	___
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to waste oil? If so, describe and provide copies of all documents.	___	XX	___	___
3.	Does the facility test used oils to determine if they are hazardous? How much used oil does the facility generate annually? 3625 gallons	XX	___	___	___
4.	Does the facility store used oil on site? Describe how the used oil is stored. Stored in 55-gallon metal drums	XX	___	___	___
5.	Does the facility recycle or dispose of used oil on site? Describe used oil recycling or disposal activities. (Attachment K)	___	XX	___	

6-7. All off-site treatment and disposal facilities, including facilities that handle waste oils, pose potential liabilities for the company that ships waste to the facility. Many waste oil handlers are now listed as Superfund sites. The facility should be very careful when choosing off-site oil recycling facilities.

8. 40 CFR 266.40 specifies that used oil burned for energy recovery must meet the specifications described in the Introduction to this section. 40 CFR 266.43(b)(1) and (6) require generators to maintain copies of each analysis (or other information used to make the determination) for three years. They must also maintain the following information on each shipment:

- name and address of the facility receiving the shipment;
- quantity of used fuel oil delivered;
- date of shipment or delivery; and
- a cross-reference to the record of the used oil analysis.

9. Off-specification used oil can be marketed for energy recovery only to burners or other marketers who have notified EPA of their used oil management activities and to burners who burn the used oil in an industrial furnace or boiler identified in 40 CFR 260.10 (40 CFR 266.41(b)). Notification to EPA on the location and general description of used oil management activities must be made (40 CFR 266.43(b)(3)).

10. Oil with a halogen content of over 1,000 ppm is considered a hazardous waste unless the generator proves that the oil has not been mixed with a hazardous waste.

11. Required by 40 CFR 266 Subparts D and E.

6-7. All off-site treatment and disposal facilities, including facilities that handle waste oils, pose potential liabilities for the company that ships waste to the facility. Many waste oil handlers are now listed as Superfund sites. The facility should be very careful when choosing off-site oil recycling facilities.

8. 40 CFR 266.40 specifies that used oil burned for energy recovery must meet the specifications described in the introduction to this section. 40 CFR 266.43(b)(1) and (6) require generators to maintain copies of each analysis (or other information used to make the determination) for three years. They must also maintain the following information on each shipment:

- name and address of the facility receiving the shipment;
- quantity of used fuel oil delivered;
- date of shipment or delivery; and
- a cross-reference to the record of the used oil analysis.

9. Off-specification used oil can be marketed for energy recovery only to burners or other marketers who have notified EPA of their used oil management activities and to burners who burn the used oil in an industrial furnace or boiler identified in 40 CFR 260.10 (40 CFR 266.41(b)). Notification to EPA on the location and general description of used oil management acitivities must be made (40 CFR 266.43(b)(3)).

10. Oil with a halogen content of over 1,000 ppm is considered a hazardous waste unless the generator proves that the oil has not been mixed with a hazardous waste.

11. Required by 40 CFR 266 Subparts D and E.

	Yes	No	Unk	N/A
6. Does the facility recycle or dispose of used oil off site? Describe off-site recycling or disposal procedures. List off-site facilities on Attachment K. TSDF is a refinery. They re-refine used oil, blend it for use in new product.	XX	___	___	
7. Has the facility audited the off-site facilities used to handle used oil? Record on Attachment K.	XX	___	___	
8. If used oil is burned for energy recovery:				
a. Does the facility test the oil to determine if it meets specifications?	XX	___	___	___
b. If the used oil recovery meets specifications, does the facility maintain required records?	___	XX	___	___
9. If the used oil burned for energy recovery does not meet specifications:				
a. Does the facility prohibit its use in non-industrial boilers?	___	___	___	XX
Describe procedures: _____				
b. Does the facility meet record keeping requirements?	XX	___	___	___
10. If the used oil has been mixed with hazardous wastes or has a halogen level above 1,000 ppm, is the used oil treated as a hazardous waste?	XX	___	___	___
11. If the facility markets used oil directly to a burner, have the following requirements been fulfilled:				
a. Does the fuel meet specifications under 40 CFR 266.40(e)?	___	___	___	XX
b. Have the proper notifications been made to EPA stating the location and general description of used oil activities?	___	___	___	XX

	Yes	No	Unk	N/A
6. Does the facility recycle or dispose of used oil off site? Describe off-site recycling or disposal procedures. List off-site facilities on Attachment K. TSDF is a refinery. They re-refine used oil, blend it for use in new product.	XX	___	___	
7. Has the facility audited the off-site facilities used to handle used oil? Record on Attachment K.	XX	___	___	
8. If used oil is burned for energy recovery:				
a. Does the facility test the oil to determine if it meets specifications?	XX	___	___	___
b. If the used oil recovery meets specifications, does the facility maintain required records?	___	XX	___	___
9. If the used oil burned for energy recovery does not meet specifications:				
a. Does the facility prohibit its use in non-industrial boilers?	___	___	___	XX
Describe procedures: ___				
b. Does the facility meet record keeping requirements?	XX	___	___	___
10. If the used oil has been mixed with hazardous wastes or has a halogen level above 1,000 ppm, is the used oil treated as a hazardous waste?	XX	___	___	___
11. If the facility markets used oil directly to a burner, have the following requirements been fulfilled:				
a. Does the fuel meet specifications under 40 CFR 266.40(e)?	___	___	___	XX
b. Have the proper notifications been made to EPA stating the location and general description of used oil activities?	___	___	___	XX

ATTACHMENT "K"

NON HAZARDOUS WASTES (USED OIL, METAL SCRAPS, ETC.)
RECYCLED ON-SITE AND OFF-SITE

WASTE NAME	WASTE RECYCLED		MATERIAL REUSED AS	DISPOSITION OF ANY RESIDUE	RECYCLING PERMIT REQUIRED (Y/N)
	ON-SITE	OFF-SITE (GIVE COMMERCIAL FACILTIY NAME)			
Waste oil Cutting and Hydraulic		Asbury Oil Company CAD028277036 Demenno/Kerdon CAT080013352	Fuel and rerefined for use in new oil	Incinerated	
Waste oil Contaminated with halogenated solvents in excess 1000 ppm		Rho-Chem Corp. CAD008364432	Blended and used as fuel	Incinerated	
Steel and aluminum turnings		Abbey metals	Metals are reused in new materials	Incinerated	

	Yes	No	Unk	N/A
12. Are there any other comments that you consider relevant and/or significant to this section of the survey? If so, please state. _____	___	XX	___	___

	Yes	No	Unk	N/A
12. Are there any other comments that you consider relevant and/or significant to this section of the survey? If so, please state. _____	___	XX	___	___

SECTION 11

USED OIL

Survey Questions

Complete this section if used oil is generated at the facility or burned for energy recovery at the facility.

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding waste oil issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence.	___	XX	___	___
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to waste oil? If so, describe and provide copies of all documents.	___	XX	___	___
3.	Does the facility test used oils to determine if they are hazardous? How much used oil does the facility generate annually? 3625 gallons	XX	___	___	___
4.	Does the facility store used oil on site? Describe how the used oil is stored. Stored in 55-gallon metal drums	XX	___	___	___
5.	Does the facility recycle or dispose of used oil on site? Describe used oil recycling or disposal activities. (Attachment K)	___	XX	___	

6-7. All off-site treatment and disposal facilities, including facilities that handle waste oils, pose potential liabilities for the company that ships waste to the facility. Many waste oil handlers are now listed as Superfund sites. The facility should be very careful when choosing off-site oil recycling facilities.

8. 40 CFR 266.40 specifies that used oil burned for energy recovery must meet the specifications described in the Introduction to this section. 40 CFR 266.43(b)(1) and (6) require generators to maintain copies of each analysis (or other information used to make the determination) for three years. They must also maintain the following information on each shipment:

- name and address of the facility receiving the shipment;
- quantity of used fuel oil delivered;
- date of shipment or delivery; and
- a cross-reference to the record of the used oil analysis.

9. Off-specification used oil can be marketed for energy recovery only to burners or other marketers who have notified EPA of their used oil management activities and to burners who burn the used oil in an industrial furnace or boiler identified in 40 CFR 260.10 (40 CFR 266.41(b)). Notification to EPA on the location and general description of used oil management acitivities must be made (40 CFR 266.43(b)(3)).

10. Oil with a halogen content of over 1,000 ppm is considered a hazardous waste unless the generator proves that the oil has not been mixed with a hazardous waste.

11. Required by 40 CFR 266 Subparts D and E.

SECTION 11

USED OIL

Survey Questions

Complete this section if used oil is generated at the facility or burned for energy recovery at the facility.

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding waste oil issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence.	___	XX	___	___
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to waste oil? If so, describe and provide copies of all documents.	___	XX	___	___
3.	Does the facility test used oils to determine if they are hazardous? How much used oil does the facility generate annually? 3625 gallons	XX	___	___	___
4.	Does the facility store used oil on site? Describe how the used oil is stored. Stored in 55-gallon metal drums	XX	___	___	___
5.	Does the facility recycle or dispose of used oil on site? Describe used oil recycling or disposal activities. (Attachment K)	___	XX	___	

6-7. All off-site treatment and disposal facilities, including facilities that handle waste oils, pose potential liabilities for the company that ships waste to the facility. Many waste oil handlers are now listed as Superfund sites. The facility should be very careful when choosing off-site oil recycling facilities.

8. 40 CFR 266.40 specifies that used oil burned for energy recovery must meet the specifications described in the Introduction to this section. 40 CFR 266.43(b)(1) and (6) require generators to maintain copies of each analysis (or other information used to make the determination) for three years. They must also maintain the following information on each shipment:

- name and address of the facility receiving the shipment;
- quantiy of used fuel oil delivered;
- date of shipment or delivery; and
- a cross-reference to the record of the used oil analysis.

9. Off-specification used oil can be marketed for energy recovery only to burners or other marketers who have notified EPA of their used oil management activities and to burners who burn the used oil in an industrial furnace or boiler identified in 40 CFR 260.10 (40 CFR 266.41(b)). Notification to EPA on the location and general description of used oil management acitivities must be made (40 CFR 266.43(b)(3)).

10. Oil with a halogen content of over 1,000 ppm is considered a hazardous waste unless the generator proves that the oil has not been mixed with a hazardous waste.

11. Required by 40 CFR 266 Subparts D and E.

	Yes	No	Unk	N/A
6. Does the facility recycle or dispose of used oil off site? Describe off-site recycling or disposal procedures. List off-site facilities on Attachment K. TSDF is a refinery. They re-refine used oil, blend it for use in new product.	XX	___	___	
7. Has the facility audited the off-site facilities used to handle used oil? Record on Attachment K.	XX	___	___	
8. If used oil is burned for energy recovery:				
a. Does the facility test the oil to determine if it meets specifications?	XX	___	___	___
b. If the used oil recovery meets specifications, does the facility maintain required records?	___	XX	___	___
9. If the used oil burned for energy recovery does not meet specifications:				
a. Does the facility prohibit its use in non-industrial boilers?	___	___	___	XX
Describe procedures: ___				
b. Does the facility meet record keeping requirements?	XX	___	___	___
10. If the used oil has been mixed with hazardous wastes or has a halogen level above 1,000 ppm, is the used oil treated as a hazardous waste?	XX	___	___	___
11. If the facility markets used oil directly to a burner, have the following requirements been fulfilled:				
a. Does the fuel meet specifications under 40 CFR 266.40(e)?	___	___	___	XX
b. Have the proper notifications been made to EPA stating the location and general description of used oil activities?	___	___	___	XX

ATTACHMENT "K"

NON HAZARDOUS WASTES (USED OIL, METAL SCRAPS, ETC.) RECYCLED ON-SITE AND OFF-SITE

WASTE NAME	WASTE RECYCLED		MATERIAL REUSED AS	DISPOSITION OF ANY RESIDUE	RECYCLING PERMIT REQUIRED (Y/N)
	ON-SITE	OFF-SITE (GIVE COMMERCIAL FACILTIY NAME)			
Waste oil Cutting and Hydraulic		Asbury Oil Company CAD028277036 Demenno/Kerdon CAT080013352	Fuel and rerefined for use in new oil	Incinerated	
Waste oil Contaminated with halogenated solvents in excess 1000 ppm		Rho-Chem Corp. CAD008364432	Blended and used as fuel	Incinerated	
Steel and aluminum turnings		Abbey metals	Metals are reused in new materials	Incinerated	

	Yes	No	Unk	N/A
12. Are there any other comments that you consider relevant and/or significant to this section of the survey? If so, please state. _____	___	XX	___	___

ATTACHMENT "K"

NON HAZARDOUS WASTES (USED OIL, METAL SCRAPS, ETC.) RECYCLED ON-SITE AND OFF-SITE

WASTE NAME	WASTE RECYCLED		MATERIAL REUSED AS	DISPOSITION OF ANY RESIDUE	RECYCLING PERMIT REQUIRED (Y/N)
	ON-SITE	OFF-SITE (GIVE COMMERCIAL FACILTIY NAME)			
Waste oil Cutting and Hydraulic		Asbury Oil Company CAD028277036 Demenno/Kerdon CAT080013352	Fuel and rerefined for use in new oil	Incinerated	
Waste oil Contaminated with halogenated solvents in excess 1000 ppm		Rho-Chem Corp. CAD008364432	Blended and used as fuel	Incinerated	
Steel and aluminum turnings		Abbey metals	Metals are reused in new materials	Incinerated	

	Yes	No	Unk	N/A
12. Are there any other comments that you consider relevant and/or significant to this section of the survey? If so, please state. _____	___	XX	___	___

	Yes	No	Unk	N/A
6. Does the facility recycle or dispose of used oil off site? Describe off-site recycling or disposal procedures. List off-site facilities on Attachment K. TSDF is a refinery. They re-refine used oil, blend it for use in new product.	XX			
7. Has the facility audited the off-site facilities used to handle used oil? Record on Attachment K.	XX			
8. If used oil is burned for energy recovery:				
a. Does the facility test the oil to determine if it meets specifications?	XX			
b. If the used oil recovery meets specifications, does the facility maintain required records?		XX		
9. If the used oil burned for energy recovery does not meet specifications:				
a. Does the facility prohibit its use in non-industrial boilers?				XX
Describe procedures:				
b. Does the facility meet record keeping requirements?	XX			
10. If the used oil has been mixed with hazardous wastes or has a halogen level above 1,000 ppm, is the used oil treated as a hazardous waste?	XX			
11. If the facility markets used oil directly to a burner, have the following requirements been fulfilled:				
a. Does the fuel meet specifications under 40 CFR 266.40(e)?				XX
b. Have the proper notifications been made to EPA stating the location and general description of used oil activities?				XX

	Yes	No	Unk	N/A
12. Are there any other comments that you consider relevant and/or significant to this section of the survey? If so, please state. _____	___	___	___	___

SECTION 12

POLYCHLORINATED BIPHENYLS

Introduction

Overview: Polychlorinated biphenyls (PCBs) are a family of chemical compounds that have been extensively used for several purposes, most commonly as a fire retardant in the oils of electrical equipment. PCBs may currently be found in, among other things, transformers, capacitors and light ballasts. It is believed that PCBs pose unique health and environmental hazards because they are very persistent chemicals.

Regulatory Authority: Although in some states PCB wastes are regulated as hazardous wastes under the Resource Conservation and Recovery Act (RCRA), the major authority for regulation of PCBs is the Toxic Substances Control Act (TSCA). TSCA regulates all phases of PCB management, including:

- Manufacturing
- Use
- Distribution in commerce
- Processing
- Releases
- Storage, and
- Disposal.

CERCLA and the Clean Water Act contains requirements relating to notification of PCB spills.

Definitions:

- PCB large high voltage capacitors - capacitors that contain 1.36 kg (3 lbs.) or more of dielectric fluid and which operate at or above 2,000 volts (a.c. or d.c.)

- PCB large low voltage capacitors - capacitors which contain 1.36 kg (3 lbs.) or more of dielectric fluid and operate below 2,000 volts (a.c. or d.c.)

- PCB transformer - transformer that contains over 500 ppm PCB

- PCB-contaminated transformer - transformer that contains 50 to 500 ppm PCB

SECTION 12

POLYCHLORINATED BIPHENYLS

Guidance

Authority:	The Toxic Substances Control Act; The Resource Conservation And Recovery Act; Corresponding State Statutes
Regulatory Citation:	40 CFR 761
Administering Agency:	U.S. Environmental Protection Agency; Corresponding State Agencies

1 - 2. Questions are self-explanatory.

SECTION 12

POLYCHLORINATED BIPHENYLS

Survey Questions

The facility should complete this section if it uses or stores PCBs or PCB- containing equipment.

	Yes	No	Unk	N/A
A. Background				
1. If the facility has been subject to an inspection regarding PCB issues during the last two years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence: _____	___	___	___	___
2. Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to PCB? If so, describe and provide copies of all documents: _____	___	___	___	

NO PCB KNOWN.

3 - 4. Questions are self-explanatory.

5. Waste oils may unknowingly be contaminated with PCBs. TSCA prohibits the use of oils with any detectable amount of PCBs to be used as a sealant, dust suppresent or coating (40 CFR 761.20 (d)).

		Yes	No	Unk	N/A
3.	Do any of the following facility items contain PCBs:				
	a. Transformers?	___	___	___	
	b. Capacitors?	___	___	___	
	c. Light Ballasts?	___	___	___	
	d. Hydraulic systems?	___	___	___	
	e. Process/lubricating oils or systems?	___	___	___	
	f. Surface soils or impoundments?	___	___	___	
	g. Heat transfer media (i.e., dowtherm etc.	___	___	___	
	h. Other: _____	___	___	___	
4.	Are all PCBs or PCB items at the facility totally enclosed in a manner that will ensure that any exposure to human beings or the environment is insignificant, i.e., not measurable or detectable by any scientifically acceptable analytical method? Describe facility procedures to prevent the contamination of other materials: _____ _____ _____ _____	___	___	___	
5.	Does the facility prohibit the use of waste oil as a sealant, coating or dust control agent?	___	___	___	
6.	Does the facility prohibit repair of electromagnets, switches, and voltage regulators with a PCB concentration over 500 ppm?	___	___	___	
7.	Is proper protective equipment provided to personnel involved with PCBs?	___	___	___	

8. Effective October 1, 1988, the use and storage for reuse of PCB large high voltage capacitors and PCB large low voltage capacitors which pose an exposure risk to food or feed is prohibited (40 CRF 761.30 (l)(i)).

9. Effective October 1, 1988 all PCB large voltage capacitors must be removed from use (40 CFR 761.30 (l)(ii)). An exception is made for those located within electrical substations or within contained and restricted access indoor installations.

11. a. Effective October 1, 1985, the use and storage for reuse of PCB transformers that pose an exposure risk to food or feed was prohibited (40 CFR 760.61 (a)(1)). It is the owner's responsibility to determine if the transformer poses a risk.

11.b. Restrictions to PCB transformer servicing are found in 40 CFR 761.30 (a)(2).

11.c. Repairs which involve removal and reworking of internal components are prohibited by 40 CFR 761.30 (h)(2).

12. a. All PCB transformers that contain over 500 ppm PCB must be marked must be marked with the M_L; marking is not required for PCB-contaminated transformers, i.e., those that contain 50 to 500 ppm PCB (40 CFR 761.40 (a)(2) and (c)(1)). The M_L mark is described in 40 CFR 761.40 and 761.45.

12. b. Required by 40 CFR 761.40 (j).

12. c. Required byRequired by 40 CFR 761.30 (a)(1)(vi).

12.d. PCB transformers that are in use or stored for re-use must be inspected every three months during the periods of January-March, April-June, July-Spetember and October-December with a minimum of 30 days between inspections. Inspections must check for leaks on or around the transformer but should not require shut down of the unit (40 CFR 761.40 (a)(1)(ix)). Inspections are required only yearly for transformers that have been tested and shown to have a PCB concentration under 60,000 ppm if these transformers are located upon an impervious base with an undrained secondary containment capacity for 100% of the liquid.

	Yes	No	Unk	N/A
B. Capacitors				
Complete this subsection, if the facility uses or stores PCB capacitor.				
8. Have all PCB large voltage capacitors (high and low voltage) which pose an exposure risk to food or feed been removed?	___	___	___	
9. If required, have all PCB large capacitors (high and low voltage) been removed?	___	___	___	
10. Are all PCB large capacitors marked?	___	___	___	
C. Transformers				
Complete this subsection if the facility uses or stores PCB transformers.				
11. Has the facility implemented procedures to prohibit the following:				
a. Use of PCB transformers that pose a risk to food or feed?	___	___	___	
b. PCB transformer servicing?	___	___	___	
c. Storage of combustibles near PCB transformers?	___	___	___	
12. Have the following procedures been implemented with regard to in-use transformers:				
a. Marking of transformers?	___	___	___	
b. Marking of access ways?	___	___	___	
c. Registration with the local fire department?	___	___	___	
d. Inspections?	___	___	___	

13. a. Containers must be marked during storage, transportation and disposal.

13. b. Electrical motors with a PCB concentration over 50 ppm PCB must be marked during storage, transportation, and disposal.

13. c. PCB article containers must be labeled at all times.

13. d. Each transport vehicle loaded with PCB containers that contain more than 45 kg (99.4 lbs.) of PCB liquids or one or more PCB transformers must bear a PCB mark on each side and the end. This marking is required in addition to placarding requirements imposed by DOT.

15. Container storage requirements are found in 40 CFR 761.65 (c)(6) and (c)(7).

	Yes	No	Unk	N/A
D. Marking				
13. Are the following PCB items also marked:				
a. PCB containers?	___	___	___	___
b. Electric motors using PCB coolants?	___	___	___	___
c. PCB article containers?	___	___	___	___
d. Transport vehicles?	___	___	___	___
E. Storage				
14. Is the facility currently storing any PCBs or PCB items for disposal or re-use? Specify:	___	___	___	___
_____				
_____				
_____				
_____				
15. Are all PCBs stored in approved containers?	___	___	___	
16. Does the facility have procedures to assure the disposal of PCB articles and containers within one year of placement into storage?	___	___	___	___

17. Areas used to store PCBs for more than 30 days must meet the following requirements:

- Adequate roof and walls to prevent rainwater from reaching stored items.
- An adequate floor with continuous curbing at least six inches high.
- Floor and curbing that provide containment volume equal to at least two times the internal volume of the largest article or 25% the total stored volume, whichever is greater.
- No internal valves, floor drains, expansion joints, sewer lines, or other openings.
- Floor and curbing constructed of continuous smooth and imprevious materials.
- A location outside a 100 year flood plain.

The storage initiation date must be placed upon all articles and containers when they are placed into storage. Records must be maintained to provide an inventory and enable the location of stored items by date (40 CFR 761.65 (c)(8) and 40 CFR 761.180 (a)). Inspections must be conducted at least once a month and records of inspections must be maintained (40 CFR 761.65 (c)(5)).

The regulations also allow storage of undrained, non-leaking, structurally undamaged PCB large high voltage capacitors and undrained PCB-contaminated electrical equipment on pallets next to a permanent storage facility (40 CFR 761.65 (c)(2)). This areas must be inspected weekly.

18. Non-leaking PCB articles and equipment, leaking PCB articles and PCB equipment placed in non-leaking containers with sufficient sorbent materials, PCB containers holding non-liquid PCBs, and PCB containers containing liquid PCBs at a concentration between 50 and 500 ppm, may be placed in temporary storage for a maximum of 30 days if the following requirements are fulfilled (40 CFR 761.65 (c)(1) and (5)):

- Items are marked with the date storage began.
- An SPCC Plan is prepared for containers in the area.
- The area is inspected weekly and documentation of inspections is retained (40 CFR 761.65 (c)(2)).
- Records are maintained to provide an inventory and enable the location of stored items by date (40 CFR 761.65 (c)(8) and 40 CFR 761.180 (a)).

	Yes	No	Unk	N/A
17. If the site has a permanent PCB storage facility, does it meet all applicable requirements?	___	___	___	___
18. If the site stores PCBs temporarily, does it meet all applicable requirements?	___	___	___	___

19. The TSCA regulations state that unless a person can demonstrate an alternative, equally effective method of destroying PCBs and receives approval for that method, all PCBs (50 ppm or greater) must be incinerated. The following exemptions apply:

- Mineral oil dielectric fluids with PCB concentrations between 50 and 500 ppm PCB may also disposed of in high efficiency boilers and PCB landfills (40 CFR 761.60(a)(2)).
- Non-mineral oil dielectric fluids with a PCB concentration between 50 and 500 ppm may be disposed of in high efficiency boilers and PCB landfills (40 CFR 761.60(a)(3)).
- Non-liquid PCBs at concentrations of 50 ppm or greater in the form of contaminated rags, soil or other debris may be disposed of in a PCB landfill (40 CFR 761.60 (a)(4)).
- Dredged materials and municipal sewage sludges may be disposed of in a PCB landfill (40 CFR 761.60 (a)(5)).
- Drained and flushed PCB transformers may be disposed of in a PCB landfill (40 CFR 761.60 (b)(1)).
- PCB small capacitors not owned by a PCB capacitor manufacturer may be disposed of as municipal solid waste (40 CFR 761.60 (b)(2)(iv)).
- PCB contaminated capacitors may be disposed of in a PCB landfill (40 CFR 760.61 (b)(4)).
- Drained and/or flushed PCB hydraulic machines may be disposed of as municipal solid waste or salvaged (40 CFR 761.60 (b)(3)).
- Drained PCB-contaminated electrical equipment, excluding capacitors, may be disposed of as municipal solid waste (40 CFR 760.61 (b)(4)).
- Drained PCB articles may also be disposed of in a PCB landfill (40 CFR 761.60 (b)(5)).
- The disposal of drained PCB articles which contain between 50 and 500 ppm PCB is not cov ered by the TSCA regulations (40 CFR 761.60 (b)(5)(ii)).

24. Spill material must be incinerated or disposed of in a PCB landfill (40 CFR 761.60 (a)(4), (d) and 761.65 (c)(5)).

25. On April 2, 1987 EPA published a TSCA policy for the clean-up of spilled PCBs. The policy describes different procedures for different spills, depending upon size, concentration, and location. The regulations provide more stringent requirements at locations that pose a greater risk of human exposure.

26. Before a PCB container or piece of contaminated equipment can be re-used, the item must be triple rinsed with a solvent. The solubility of PCBs in the solvent must be 5% or more by weight. Each rinse must use a volume of the normal diluent equal to approximately 10% of the PCB container capacity (40 CFR 761.79). Disposal of the container is not regulated under TSCA; all other solids and rinsates generated by the process must be disposed of per TSCA requirements.

	Yes	No	Unk	N/A
F. Disposal				
19. Does the facility comply with EPA disposal method requirements	___	___	___	
20. Has the facility conducted audits of PCB disposal facilities or contacted regulatory authorities to indentify potential non-compliance or liability issues? List facilities used: _____ _____ _____ _____	___	___	___	___
21. Has the facility received notices of destruction from incineration facilities for each shipment of PCBs sent to the facility?	___	___	___	
G. Releases				
Complete this subsection; if the facility has ever had a PCB spill.				
22. Has the facility ever experienced a PCB release? Describe spill(s) and clean up procedures: _____ _____ _____ _____	___	___	___	
23. If required, was this release reported?	___	___	___	
24. Was all spill debris properly disposed of?	___	___	___	
25. Is the facility familiar with PCB spill clean-up requirements?	___	___	___	
H. Decontamination				
26. Are all PCB containers and contaminated equipment properly decontaminated before re-use or disposal as municipal waste?	___	___	___	

27. Facilities that use or store more than 45 kg (99.4 lbs) of PCBs in containers or one or more PCB transformers must compile an annual report and submit it to the regional EPA (40 CFR 761.180 (a)).

	Yes	No	Unk	N/A
I. Recordkeeping and Reporting				
27. If required, has the facility prepared and submitted an Annual Report to the EPA?	___	___	___	___
J. Miscellaneous				
28. *Are there any other comments that you consider* relevant and/or significant to this section of the survey? If yes, please state.	___	___	___	

SECTION 13

ASBESTOS

Introduction

Asbestos is a general term used to describe a number of naturally occurring, fibrous, hydrated mineral silicates which have been recognized as a very serious human health hazard. Asbestos is regulated by several different regulatory programs, specifically the Clean Air Act, the Toxic Substances Control Act and the Occupational Safety and Health Act.

Under the Clean Air Act, the US. EPA regulates asbestos through the National Emission Standards for Hazardous Air Pollutants (NESHAPs). Standards have been set for various activities involving asbestos, including demolition or renovation actions and waste disposal. The applicability of certain requirements depends upon the amount of asbestos involved in the demolition or removal activity. The requirements include:

- notification to the U.S. EPA or a state agency,
- wetting during removal, and
- disposal of asbestos in sealed, leak-tight containers which are properly labeled.

There are two sets of regulations under the Toxic Substances Control Act. The Asbestos Hazard Emergency Response Act addresses the problem of asbestos in public and private elementary and secondary schools.TSCA has also established worker protection standards for state and local government employees not covered by OSHA.

The Occupational Safety and Health Administration sets exposure limits and standards for worker protection in fixed site workplaces under the General Industry Standards and Construction Standards.

SECTION 13

ASBESTOS

Guidance

Regulatory Authority:	Occupational Safety and Health Act; Clean Air Act; Toxic Substances Control Act
Regulatory Citation:	29 CFR 1910.1001, 29 CFR 1926.58, 40 CFR 61, Subpart M
Adminstering Agency:	Occupational Safety and Health Administration; U.S. Environmental Protection Agency

1.-4. Questions are self-explanatory.

SECTION 13

ASBESTOS

Survey Questions

Complete this section if the facility is known to have asbestos or is undergoing or planning renovations.

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding asbestos during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondance. Landlord inspected Bldg. 11 and no asbestos found. Physical inspection of all bldgs. scheduled for 1990.	XX	___	___	___
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc. with respect to asbestos? If so, describe and provide copies of all documents.	___	XX	___	
3.	Is asbestos used and/or stored on site? If so, describe: No manufacturing uses.	___	XX	___	
4.	Have any studies been conducted to determine whether asbestos is present in the facility? If yes, what were the results? See question 1 above.	XX	___	___	

5. Thermal asbestos is that used for its insulating properties, e.g., pipe, air duct, boiler, or blown-in insulation. Surface insulation is that used for decorative, fireproofing, or noise attenuating properties, decorative plaster and spray-on materials.

6. Under NESHAPS, friable asbestos is defined as any material containing more than 1 % asbestos by weight that hand pressure can crumble, pulverize, or reduce when dry.

7. NESHAPS restricts the use of asbestos-containing materials which are spray applied (40 CFR 61.148) and bans the installation of insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying (40 CFR 61.150). In addition, EPA is proposing a ban on all asbestos.

8. The U.S. EPA has set requirements under the Clean Air Act for demolition and renovation activities under 40 CFR 61. Asbestos must be adequately wetted during its removal and must be adequately wet to ensure that it will remain wet until collected for disposal (40 CFR 61.147).

10. Notification of asbestos demolition must be postmarked at least ten days prior to the demolition of more than 260 linear feet of piping insulation or 160 square feet of asbestos on other components (40 CFR 61.146). Notification must be made to the agency having authority for the NESHAP program (see Air section).

11. NESHAPA sets requirements for disposal of asbestos-containing waste material for manufacturing, demolition, renovation, spraying and fabricating operations (40 CFR 61.152). Asbestos which is to be disposed of must be sealed while it is still wet in a leak-tight container (minimum 6 mil plastic) labeled with the following (40 CFR 151):

Caution
Contains Asbestos - Avoid Opening or Breaking Container
Breathing Asbestos is Hazardous to Your Health

12. In most states, asbestos is a nonhazardous waste and may be disposed of in a solid waste landfill provided the facility meets certain operating requirements including the prevention of visible emissions, controlled or marked access and use of an approved disposal method. Standards for disposal sites which may accept asbestos are found in 40 CFR 61.156.

13. Good management practice.

14. OSHA requires training for all employees who are exposed to airborne concentrations of asbestos (29 CFR 1001 (j) (s)). It is a good management practice to ensure that all maintenance personnel receive training.

	Yes	No	Unk	N/A
5. Approximately how much asbestos is on site:				
Thermal 50 in linear feet				
Surface UNK in square feet				
6. What percent of on-site asbestos is friable: UNK				
7. Is there a site procedure restricting the installation of asbestos as an insulating material? Standard practice prohibits use of asbestos.	___	XX	___	
8. Have procedures been established, which are consistent with regulations, for the proper handling of asbestos during demolition operations, renovation, or routine maintenance? To be developed	___	XX	___	
9. a. Are renovations or demolitions done by in-house personnel? If so, are the renovations large scale or small scale: Small	XX	___	___	___
b. If renovations are large scale, are personnel trained as abtement workers? Would contract with trained personnel.	___	XX	___	
10. Is there a procedure in place to assure that the appropriate agencies are notified prior to asbestos demolition and renovation projects?	___	XX	___	
11. Are the proper procedures followed for disposal of asbestos?	XX	___	___	
12. Does the disposal site used for asbestos meet with applicable requirements for such activities? Record on Attachment J.	___	___	___	
13. Does the facility have a written asbestos abatement plan? To be developed by ESC.	___	XX	___	
14. Are maintenance personnel aware and trained in the location of asbestos and procedures to affect repairs?	___	XX	___	
15. Are there any other comments that you consider relevant and/or significant to this section of the survey? If yes, please state.	___	XX	___	

SECTION 14

GROUND WATER

Introduction

Chemical Releases to ground water are extremely serious, especially if the release involves a potential drinking water source.

Ground water clean-ups are extremely difficult and expensive.

This section is intended to help identify current ground water problems and potential for future serious incidents.

SECTION 14

GROUND WATER

Guidance

1.-13. This section is designed to:

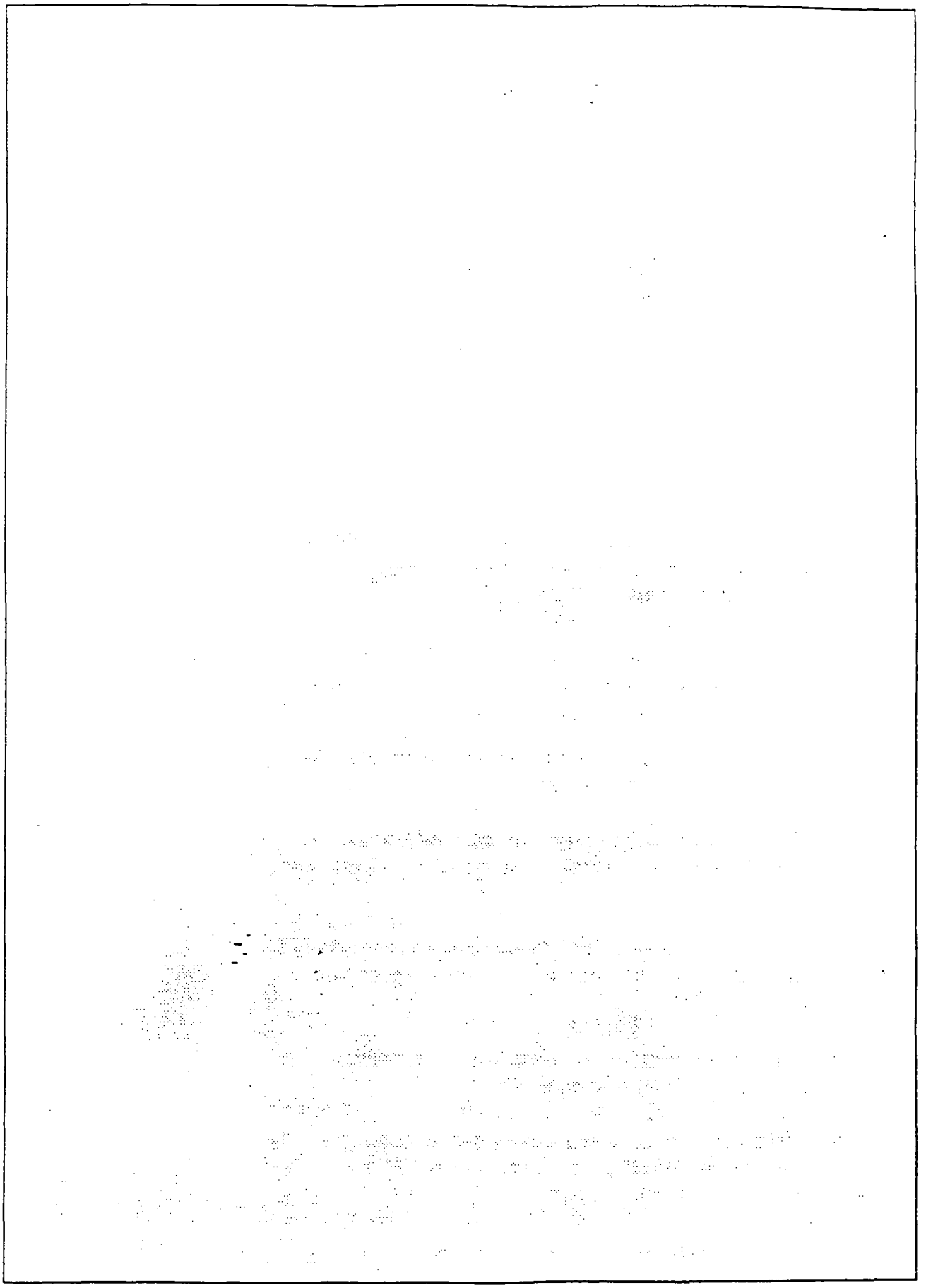
- identify current ground water issues;
- identify potential ground water issues; and
- evaluate the level of concern associated with current or potential ground water issues.

SECTION 14

GROUND WATER

Survey Questions

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding ground water issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence: Textron Environmental has applicable documents in its possession and is on distribution for environmental-related correspondence and reports.	X			
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to ground water? If so, describe and provide copies of all documents.		X		
3.	a. Is the facility located so that useable ground water is not found beneath the facility?			X	
	b. If there is useable ground water located beneath the facility, is the water used as a source of drinking water by the facility?		X		
	c. If there is useable ground water located beneath the facility, is the water used as a source of drinking water by others?			X	
4.	a. Does the facility obtain all its drinking water from sources other than ground water?	X			
	b. If the facility does use ground water as a source of drinking water, has the water been tested and shown to be safe?				X



	Yes	No	Unk	N/A
5. Does the facility obtain all non-potable water from sources other than ground water? If the facility uses ground water for as a source for non-potable water, specify the use:	X			
6. Are there any water supply wells located on site?		X		
7. Is the facility located in a recharge zone for an underground source of drinking water? Valencia - No Pacoima - UNK		X	X	
8. Is the facility located near a public water supply? Distance from nearest public supply:			X	
9. Are there any wells (public or private) within 1,000 feet utilized for potable water supplies?			X	
10. Does the facility have a ground water monitoring program in place? If so, provide analyses for two years. Valencia site only.	X			
11. Does the facility utilize leaching or septic fields to treat domestic waste from the facility? If so, describe:		X		
12. Did the facility previously utilize leaching or septic fields? If so, describe: Circa 1950, Pacoima site may have had a leaching field.	X			
13. Are there any other comments that you consider to be relevant and/or significant to this section of the survey? If yes, please state:		X		

SECTION 15

COMMUNITY RELATIONS

Introduction

The Comprehensive Environmental Response, Compensation and Liability Act , or "Superfund," and Title III of the Superfund Amendments and Reauthorization Act, or "SARA," have recently given the public access to facility chemical information that was previously unavailable. This includes information about the types and quantites of chemicals used and the types and quantities of toxic chemicals released via accidents or routine emissions.

The public may find this new facility chemical information confusing or alarming. It is possible, therefore, that communities and environmentally-minded citizens will take a more active role in trying to obtain additional facility data or seeking new safeguards, e.g., new regulations, for their community.

To both provide community members with the assurances they deserve and prevent unnecessary restrictions upon your business, it is important that the facility adopt an active community relations program. Diligently monitoring community opinion, carefully considering the community impacts of facility operations, and respecting public opinion are key components of a good plan.

SECTION 15

COMMUNITY RELATIONS

Guidance

1-4. Questions are self-explanatory.

5. The SARA Toxic Chemical Release reports may cause concern in your community if emission quantities in your report:

- were never previously released to the public;
- are likely to be considered high by the public (e.g. over 1,000 pounds);
- are the highest in your area;
- are related to common chemicals considered by the local public to be particularly harmful (e.g., carcinogens); or
- conflict with permit restrictions.

If the emissions are at a level of concern, the facility should organize a proactive program to deal with possible community concerns. This program can include:

- a study of ways to reduce the emission levels;
- substitution of less toxic chemicals;
- waste reduction programs, and
- organization of responses to potential public or media questions regarding chemical emissions.

SECTION 15

COMMUNITY RELATIONS

Survey Questions

		Yes	No	Unk	N/A
1.	To date, has the facility avoided negative publicity? If not, describe incident and type of publicity. Provide copies of coverage.	X			
2.	Is the facility confident that current operations are unlikely to generate negative publicity, e.g., noncompliance problems, public complaints, alarming chemical releases or recent accidents? If not, please describe the nature of the facility's concern.	X			
3.	Has the facility confirmed that there are no environmental activist groups in the area? We are not aware of any.			X	
4.	Does the facility monitor the activities of state and local groups that are involved in public opinion issues, e.g., the LEPC, state trade associations, environmental groups, and the press? On the mailing list of CA Mfg. Assn. We monitor the press.	X			
5.	If the facility submitted a SARA Toxic Chemical Emissions report in October, 1988, were all emissions under levels that would be anticipated to be of concern by the public? If not, please describe potential public concerns.	X			

6. Participation of plant personnel in community and civic activities creates a sense of goodwill and helps the community to understand the functions of the facility. It is a helpful way to establish trust.

		Yes	No	Unk	N/A
6.	Do facility personnel participate in community and civic activities?	X			
7.	Does the facility have a plan to maintain and to improve community relations? Describe.	X			
8.	Does the facility have a plan for community notification/ explanation of environmental mishaps? Describe. Emergency Response Plan	X			
9.	Has a single spokesperson for community contact been designated? If so, provide name, title and phone number. John DiMatteo, Director of Communications 805-253-5516	X			
10.	Have sample press releases, answers to anticipated questions, etc., been reviewed and coordinated with Corporate Environmental Affairs and/or Corporate Legal Department? All public comments are cleared by Textron in advance.	X			

SECTION 14

GROUND WATER

Introduction

Chemical Releases to ground water are extremely serious, especially if the release involves a potential drinking water source.

Ground water clean-ups are extremely difficult and expensive.

This section is intended to help identify current ground water problems and potential for future serious incidents.

SECTION 14

GROUND WATER

Guidance

1.-13. This section is designed to:

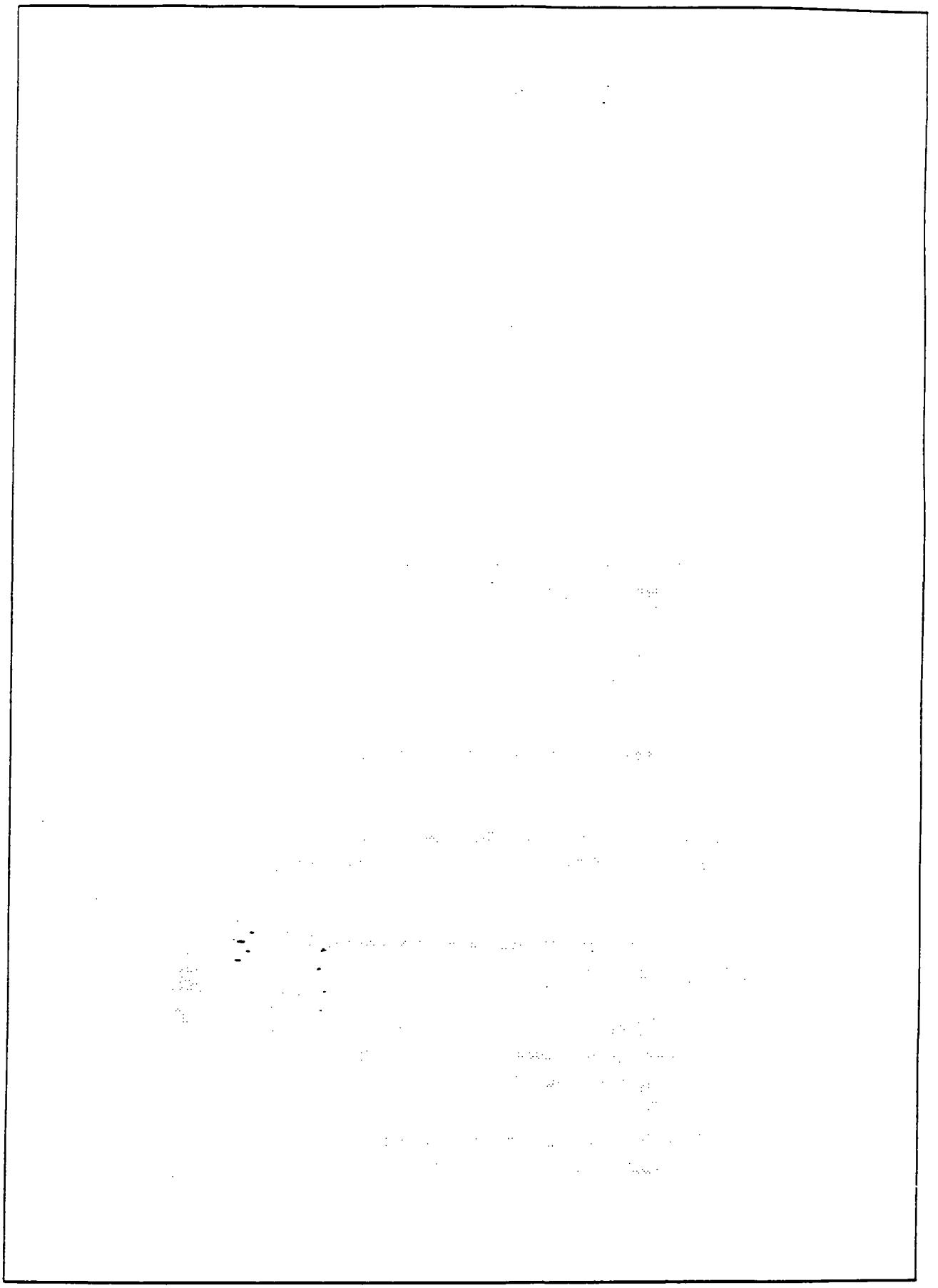
- identify current ground water issues;
- identify potential ground water issues; and
- evaluate the level of concern associated with current or potential ground water issues.

SECTION 14

GROUND WATER

Survey Questions

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding ground water issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence: Textron Environmental has applicable documents in its possession and is on distribution for environmental-related correspondence and reports.	X			
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to ground water? If so, describe and provide copies of all documents.		X		
3.	a. Is the facility located so that useable ground water is not found beneath the facility?			X	
	b. If there is useable ground water located beneath the facility, is the water used as a source of drinking water by the facility?		X		
	c. If there is useable ground water located beneath the facility, is the water used as a source of drinking water by others?			X	
4.	a. Does the facility obtain all its drinking water from sources other than ground water?	X			
	b. If the facility does use ground water as a source of drinking water, has the water been tested and shown to be safe?				X



	Yes	No	Unk	N/A
5. Does the facility obtain all non-potable water from sources other than ground water? If the facility uses ground water for as a source for non-potable water, specify the use:	X			
6. Are there any water supply wells located on site?		X		
7. Is the facility located in a recharge zone for an underground source of drinking water? Valencia - No Pacoima - UNK		X	X	
8. Is the facility located near a public water supply? Distance from nearest public supply:			X	
9. Are there any wells (public or private) within 1,000 feet utilized for potable water supplies?			X	
10. Does the facility have a ground water monitoring program in place? If so, provide analyses for two years. Valencia site only.	X			
11. Does the facility utilize leaching or septic fields to treat domestic waste from the facility? If so, describe:		X		
12. Did the facility previously utilize leaching or septic fields? If so, describe: Circa 1950, Pacoima site may have had a leaching field.	X			
13. Are there any other comments that you consider to be relevant and/or significant to this section of the survey? If yes, please state:		X		

SECTION 14

GROUND WATER

Introduction

Chemical Releases to ground water are extremely serious, especially if the release involves a potential drinking water source.

Ground water clean-ups are extremely difficult and expensive.

This section is intended to help identify current ground water problems and potential for future serious incidents.

SECTION 14

GROUND WATER

Guidance

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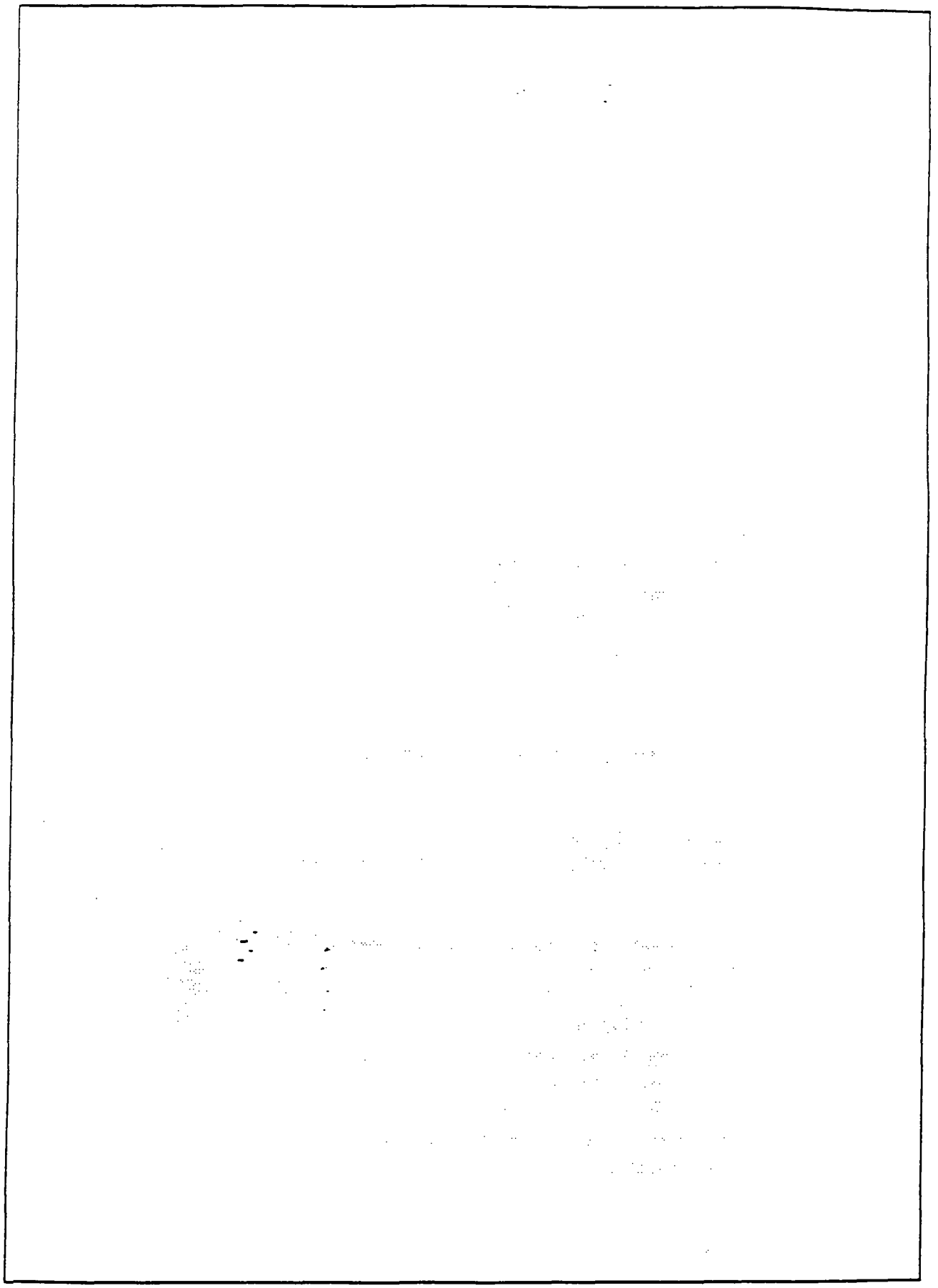
- identify current ground water issues;
- identify potential ground water issues; and
- evaluate the level of concern associated with current or potential ground water issues.

SECTION 14

GROUND WATER

Survey Questions

		Yes	No	Unk	N/A
1.	If the facility has been subject to an inspection regarding ground water issues during the last three years, were any concerns or potential concerns uncovered? If so, describe circumstances and provide copies of inspection reports or correspondence: Textron Environmental has applicable documents in its possession and is on distribution for environmental-related correspondence and reports.	X			
2.	Has the facility entered into any Consent Order, Settlement Agreement, Delayed Compliance Order, etc., with respect to ground water? If so, describe and provide copies of all documents.		X		
3.	a. Is the facility located so that useable ground water is not found beneath the facility?			X	
	b. If there is useable ground water located beneath the facility, is the water used as a source of drinking water by the facility?		X		
	c. If there is useable ground water located beneath the facility, is the water used as a source of drinking water by others?			X	
4.	a. Does the facility obtain all its drinking water from sources other than ground water?	X			
	b. If the facility does use ground water as a source of drinking water, has the water been tested and shown to be safe?				X



	Yes	No	Unk	N/A
5. Does the facility obtain all non-potable water from sources other than ground water? If the facility uses ground water for as a source for non-potable water, specify the use:	X			
6. Are there any water supply wells located on site?		X		
7. Is the facility located in a recharge zone for an underground source of drinking water? Valencia - No Pacoima - UNK		X	X	
8. Is the facility located near a public water supply? Distance from nearest public supply:			X	
9. Are there any wells (public or private) within 1,000 feet utilized for potable water supplies?			X	
10. Does the facility have a ground water monitoring program in place? If so, provide analyses for two years. Valencia site only.	X			
11. Does the facility utilize leaching or septic fields to treat domestic waste from the facility? If so, describe:		X		
12. Did the facility previously utilize leaching or septic fields? If so, describe: Circa 1950, Pacoima site may have had a leaching field.	X			
13. Are there any other comments that you consider to be relevant and/or significant to this section of the survey? If yes, please state:		X		

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
COMMERCIAL OFF-SITE DISPOSAL FACILITY

HAZARDOUS WASTE STREAM DESCRIPTION	EPA WASTE CODE	HAZARDOUS CONSTITUENTS CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	PHYSICAL STATE	ANNUAL QUANTITY	NAME/ LOCATION OF TRANSPORTER	TREATMENT/ DISPOSAL METHOD	FINAL DISPOSITION OF ANY RESIDUE	FINAL DISPOSITION IF A BROKER IS USED NAME OF TSDF	LOCATION OF TSDF	ANNUAL COST OF TREATMENT/ DISPOSAL INCLUDING TRANSPORTATION
Lab Packs (expired epoxys, paints & potting compounds, etc.)	D002 D007	Misc. expired shelf life materials			Liquid Slurry, Paste Lab Packed	500 lbs	Martin Industrial Pumping P.O. Box 1228 Canyon Country,Ca. CAD000628636	Ø3 Landfilled	Ø3 Landfilled	Casmalia Resource Mgt. CAD020748125	NTU Road Casmalia, Ca.	$25,000
Waste Nitric Acid from Passivate	D002 D007	35% Nitric Acid	63% Water	2% Sodium Dichromate	Liquid	165 gal.	Martin Industrial Pumping P.O. Box 1228 Canyon Country,Ca. CAD000628636	Ø1 Treatment Recycled	Incinerated	Appropriate Technologies, II CAT080010101	2100 Maxwell Rd. Chula Vista, Ca.	$1,122
Waste Nitric Acid from Passivate	D002 D007	35% Nitric Acid	63% Water	2% Sodium Dichromate	Liquid	755 gal.	Martin Industrial Pumping P.O. Box 1228 Canyon Country, Ca CAD000628636	Ø1 Treatment Recycled	Incinerated	Americhem Inc. CAD044429835	1737 E. Denni St. Wilmington, Ca. 90744	$5,128
.ste Water from clarifier and rinse water from passivate	D007	82% Water 12% Solids 5% Oil	Chromium 525 MS/L Toxic Organics 200 MS/L (Chloroform)	105 mg/L Copper	Liquid	8,865 gallons	Martin Industrial Pumping P.O. Box 1228 Canyon Country,Ca. CAD000628636	Ø1 Treatment Recycled	Incinerated	Chem-Tech CAT080033681 Pacific Treatment CAD095894556	3650 E. 26th St. Vernon, Ca. 90023 2190 Main St. San Diego, Ca. 92113	$28,452
Q-Tips & Kimwpies contaminated with alodine from rework parts touch up	D007	Q-Tips	Kimwipe	Alodine	Solid	2400 lbs.	Martin Industrial Pumping P.O. Box 1228 Canyon Country, Ca. CAD000628636	Ø3 Landfilled	Ø3 Landfilled	Casmalia Resource Mgt. CAD010748125	NTU Road Casmalia, Ca.	$332
Spent cutting oil and hydraulic oil	Non RCRA	60% Cutting Oil	39% Hydraulic Oil	1% Water	Liquid	3265	Ashbury Oil Co. 13419 Halldale Ave. Gardena, Ca. 90249 CAD028277036	Ø1 Recycled	Incinerated	Demmeno/Kerdon CAT080013352	2000 N. Alameda Compton, Ca.	Ø

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
COMMERCIAL OFF-SITE DISPOSAL FACILITY

HAZARDOUS WASTE STREAM DESCRIPTION	EPA WASTE CODE	HAZARDOUS CONSTITUENTS CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	PHYSICAL STATE	ANNUAL QUANTITY	NAME/ LOCATION OF TRANSPORTER	TREATMENT/ DISPOSAL METHOD	FINAL DISPOSITION OF ANY RESIDUE	FINAL DISPOSITION IF A BROKER IS USED NAME OF TSDF	FINAL DISPOSITION IF A BROKER IS USED LOCATION OF TSDF	ANNUAL COST OF TREATMENT/ DISPOSAL INCLUDING TRANSPORTATION $$
Vapor Degreaser Solvent (parts degreasing) III Trichloroethane	F002	85% Trichloroethane	15% Oil		Liquid	850 gallons	Rho-Chem Corp. 425 Isis Ave. Inglewood, Ca.90301 CAD008364432	Ø1 Recycled	Incinerated	N/A	N/A	Ø
Spent Freon parts cleaning	F001	90% Freon	10% Oil		Liquid	1600 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	Ø
Spent Stoddard Solvent parts cleaning	D001	85% Stoddard Solvent	15% Oil		Liquid	3000 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$13,170
Spent Isopropanol parts cleaning	D001	90% Isopropyl Alcohol	10% Oil		Liquid	100 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$465
Waste JP-5 Hot Fuel Test	D001	97% Kerosene Type Material	3% Water		Liquid	350 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$1,680
Water Soluble Cutting Oil coolant for machines	Non RCRA	13% Soluble Cutting Oil	86% Water	1% Stoddard Solvent	Liquid	23,425 gallons	Martin Industrial Pumping P.O. Box 1128 Canyon Country,CA. CAD000628636	Ø1 Recycled	Incinerated	Gibson Oil & Refinery Pacific Treatment Chem Tech Systems	Bakersfield Ca. CAD980883177 San Diego, Ca. CAD095894556 Los Angeles Ca. CAT080033681	$21,082.50

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
COMMERCIAL OFF-SITE DISPOSAL FACILITY

HAZARDOUS WASTE STREAM DESCRIPTION	EPA WASTE CODE	HAZARDOUS CONSTITUENTS CHEMICAL (%)	CHEMICAL (%)	CHEMICAL (%)	PHYSICAL STATE	ANNUAL QUANTITY	NAME/ LOCATION OF TRANSPORTER	TREATMENT/ DISPOSAL METHOD	FINAL DISPOSITION OF ANY RESIDUE	FINAL DISPOSITION IF A BROKER IS USED NAME OF TSDF	LOCATION OF TSDF	ANNUAL COST OF TREATMENT/ DISPOSAL INCLUDING TRANSPORTATION ($)
Waste Water from clarifier Plant 10	D008	Lead-20ppm 415ppm - III Trichloroethane	Oil & Grease 1.72 %	Free Liquids 99.90%	Liquid	1050 gal	Martin Industrial Pumping, P.O. Box 1228 Canyon Country,Ca. CAD000628636	Ø1 Recycled	Incinerated	N/A	N/A	1575

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
COMMERCIAL OFF-SITE DISPOSAL FACILITY

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Lab Packs (Expired Epoxies Paints & Potting Compounds	D002 D007	Misc. Expired Shelf Life Materials			Liquid Slurry, Paste Lab packed	1620 pounds	Martin Industrial Pumping P.O. Box 1228 Canyon Country,Ca. CAD000628636	Ø3 Landfilled	Ø3 Landfilled	Casmalia Resource Mgt. CAD020748125	NTU Road Casmalia, Ca.	$2916.00

ATTACHMENT "L"

HAZARDOUS WASTE SENT TO
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Spent Freon parts cleaning	F001	90% Freon	10% Oil		Liquid	1600 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	Ø
Spent Stoddard Solvent parts cleaning	D001	85% Stoddard Solvent	15% Oil		Liquid	3000 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$13,170
Spent Isopropanol parts cleaning	D001	90% Isopropyl Alcohol	10% Oil		Liquid	100 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$465
Waste JP-5 Hot Fuel Test	D001	97% Kerosene Type Material	3% Water		Liquid	350 gallons	Same as above	Ø1 Recycled	Incinerated	N/A	N/A	$1,680
Water Soluble Cutting Oil coolant for machines	Non RCRA	13% Soluble Cutting Oil	86% Water	1% Stoddard Solvent	Liquid	23,425 gallons	Martin Industrial Pumping P.O. Box 1128 Canyon Country,CA. CAD000628636	Ø1 Recycled	Incinerated	Gibson Oil & Refinery Pacific Treatment Chem Tech Systems	Bakersfield Ca. CAD980883177 San Diego, Ca. CAD095894556 Los Angeles Ca. CAT080033681	$21,082.50

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.ste Water from clarifier and rinse water from passivate	D007	82% Water 12% Solids 5% Oil	Chromium 525 MS/L Toxic Organics 200 MS/L (Chloroform)	105 mg/L Copper	Liquid	8,865 gallons	Martin Industrial Pumping P.O. Box 1228 Canyon Country,Ca. CAD000628636	Ø1 Treatment Recycled	Incinerated	Chem-Tech CAT080033681 Pacific Treatment CAD095894556	3650 E. 26th St. Vernon, Ca. 90023 2190 Main St. San Diego, Ca. 92113	$28,452
Q-Tips & Kimwpies contaminated with alodine from rework parts touch up	D007	Q-Tips	Kimwipe	Alodine	Solid	2400 lbs.	Martin Industrial Pumping P.O. Box 1228 Canyon Country, Ca. CAD000628636	Ø3 Landfilled	Ø3 Landfilled	Casmalia Resource Mgt. CAD010748125	NTU Road Casmalia, Ca.	$332
Spent cutting oil and hydraulic oil	Non RCRA	60% Cutting Oil	39% Hydraulic Oil	1% Water	Liquid	3265	Ashbury Oil Co. 13419 Halldale Ave. Gardena, Ca. 90249 CAD028277036	Ø1 Recycled	Incinerated	Demmeno/Kerdon CAT080013352	2000 N. Alameda Compton, Ca.	Ø

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS 1,1,1 Trichloroethane			
CAPACITY 500 gallons			
MONTHLY THROUGHPUT 200 gals			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL N/A			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 19 years			
CONTENTS Stoddard solvent			
CAPACITY 2000 gallons			
MONTHLY THROUGHPUT			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel piping and valves			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Trenched concrete bermed pad plumbed to 6500 gallon spill containment tank, cap. of bermed area & spill containment tank 13,320			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Same as above			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER S/N 30375			
AGE 18 years			
CONTENTS Stoddard solvent			
CAPACITY 4000 gallons			
MONTHLY THROUGHPUT			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel piping & valves			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Trenched concrete bermed pad plumbed to 6500 gallon spill containment tank, cap. of berm & spill containment tank 13,320.			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Same as above			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE UNK			
CONTENTS Waste soluble oil & water			
CAPACITY 700 gallons			
MONTHLY THROUGHPUT 700 gal x 3 tanks			
SHELL CONSTRUCTION MATERIAL Polyethylene			
LINING MATERIAL Polyethylene			
INSTALLATION TYPE: NEW OR RETROFIT Baker tank 3 ea			
PIPING MATERIAL N/A			
INSTALLATION TYPE: *NEW OR RETROFIT*			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 24 years approximately			
CONTENTS aluminum cutting oil			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 267 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete berm			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 24 years approximately			
CONTENTS Steel cutting oil			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 138 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Concrete berm			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE 24 years approximately			
CONTENTS Stoddard solvent			
CAPACITY 1000 gallons			
MONTHLY THROUGHPUT 150 gallons			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM Tank in concrete bermed area			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "N"

ABOVE GROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER	325		
AGE UNK			
CONTENTS Freon, Trichloro 1,2,2 Trifluoroethane			
CAPACITY 235 gallons			
MONTHLY THROUGHPUT 100 gallons			
SHELL CONSTRUCTION MATERIAL Stainless steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL Steel			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM None			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT None			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

Pacoima

ATTACHMENT "O"

UNDERGROUND STORAGE TANKS (PRESENT AND FORMER)

QUESTIONS	TANK ID NO.	TANK ID NO.	TANK ID NO.
I. D. NUMBER UNK			
AGE Approximately 16 years			
CONTENTS Empty (spill containment tank)			
CAPACITY 5000 gallons			
MONTHLY THROUGHPUT 0			
SHELL CONSTRUCTION MATERIAL Steel			
LINING MATERIAL UNK			
INSTALLATION TYPE: NEW OR RETROFIT			
PIPING MATERIAL N/A			
INSTALLATION TYPE: NEW OR RETROFIT			
DESCRIPTION OF CONTAINMENT SYSTEM It is part of a containment system			
DESCRIPTION OF OVERFILL/SPILL CONTROL EQUIPMENT Leak alert monitor			
REMOTE LEVEL INDICATOR (Y/N) N			
DATE OF INTEGRITY TESTING UNK			
IF INSTALLED PRIOR TO 5/7/86, WAS "UST" NOTIFICATION FORM SENT TO USEPA (YES/NO) UNK			
IF INSTALLED AFTER 5/7/86, WAS "UST" NOTIFICATION FORM SENT TO USEPA (YES/NO)			
IF REMOVED FROM SERVICE • REMOVAL DATE			
• DESCRIPTION OF REMOVAL PROCEDURES			
• WAS CONTAMINATION ASSESSMENT PERFORMED?			
• DESCRIBE RESULTS OF CONTAMINATION ASSESSMENT			
• WAS CONTAMINATED SOIL REMOVED (QUANTITY)			
TYPE OF SURROUNDING SOIL			

2166-04743

PACOIMA REMEDIATION 1989

RESPONSE TO QUESTION 7 PAGE 9

PARTIALLY SCANNED
OVERSIZE ITEM(S)

See document # 2165025
for partially scanned image(s).

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

2/66-04743

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION

107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012–4596
(213) 620-4460

FACILITIES
APR 24 1989
ENGINEERING

April 5, 1989

Mr. William Moss
Director of Facilities
HR Textron Inc.
25200 West Rye Canyon Road
Valencia, CA 91355

UNDERGROUND TANK LEAK INVESTIGATION - HR TEXTRON INC. 10445 GLENOAKS BLVD., PACOIMA (ID#913310270).

This is in reference to Leighton & Associates' soil remedial report dated February 15, 1989 for the subject site.

Based on our review of the report, we are unable to determine if groundwater underlying the above site has been degraded due to leaking underground tanks or due to previous landfill use at the site. Because significant contaminants were found more than a hundred feet below ground surface, it is important that a groundwater investigation be conducted.

Therefore, the Regional Board directs you to submit a workplan for the investigation of groundwater quality at the above site.

Your workplan is due by May 19, 1989.

If you have any questions, please call me at (213) 620-5662 or call Mr. E. G. Solomon at (213) 620-5647.

Joshua M. Workman

JOSHUA M. WORKMAN
Senior Water Resource
Control Engineer

EGS/egs

cc: Mr. Bruce Hilton, Leighton & Associates
Mr. Sam Unger, Leighton & Associates
Captain Roy Kozaki, Los Angeles City Fire Department

350076

HR TEXTRON

HR Textron Inc.
a Subsidiary of Textron Inc.

25200 West Rye Canyon Road
Valencia, Calif. 91355
805/259-4030
TWX 910/336/1438 TELEX 65/1492

FACILITIES
JUN 20 1989
ENGINEERING

JWH-89-028

bc: A. Spacone
P. Duff

R. Millman
M. Bell
R. Lang
W. Moses
R. Powers
D. Stewart
W. Tolson

June 15, 1989

Mr. E. G. Solomon
California Regional Water
Quality Control Board
Los Angeles Region
107 South Broadway
Suite 4027
Los Angeles, CA 90012-4596

Reference: HR Textron Ltr. JWH-89-027 to Mr. E. G. Solomon
Dated June 15, 1989

Dear Mr. Solomon:

Thank you for this opportunity to again express our commitment to site remediation and to express our concern over the need for groundwater sampling at our Pacoima site. As you are aware the Regional Water Quality Control Board and HR Textron are presently working together to profile and remediate two sites in Los Angeles County. At our Valencia facility, we have removed underground storage tanks, profiled the extent of in-ground release, taken extensive groundwater samples, installed interceptor wells, installed a water stripping tower to volatilize organic solvents and are in the process of increasing the number of interceptor wells and performing off-site profiling. We have received an operating permit, and we are in full remediation including soil and groundwater. Our commitment to remediation is proven.

At our Pacoima facility, HR Textron removed two underground tanks which contained petroleum hydrocarbons and volatile organics. Upon removal of the tanks, it was noted that an inadvertent release had occurred from the tanks due to a certain amount of corrosion and overfill. HR Textron set about to profile the extent of the release plume and in doing so, has installed 13 bore holes reaching as deep as 120 feet below the surface. The findings of our consultants are:

1. The base of the volatile organic plume is at 58 feet and is contained by an underlying clay layer at that depth.

350077

2. There exists below the volatile organic plume, and elsewhere under the site, a low background level of petroleum hydrocarbons of unknown sources not associated with the in-ground tanks. Geochemical studies performed on these hydrocarbons suggest that they may be, for the most part, naturally occurring, and that they are older than are the shallower hydrocarbons. The levels of these total hydrocarbons are below the remediation levels.

3. Two bore holes were installed on the adjacent property to the east of the HR site extending to a depth of approximately 120 feet. At this depth, a higher concentration of petroleum hydrocarbons was noted in one of the two borings.

4. The site occupied by HR Textron was once classified as a Class II landfill, and there is aerial photographic evidence of an excavation at a point on the site upon which presently stands a manufacturing building. No evidence has been found which identifies the materials which may have been deposited in the landfill. The 13 bore holes installed by HR Textron did not reveal the presence of the landfill, and no solid waste has been found in any of these borings. Also, it should be noted that the background hydrocarbons are naturally occurring; the source of these hydrocarbons is not the old Class II landfill.

The Water Board letter of April 5 directed HR Textron to submit a work plan for investigation of groundwater quality at the site, citing as authority the Water Board's inability to determine if groundwater at the site has been degraded be it due to the release from leaking underground tanks, the existence of the previous landfill at the site, or the existence of petroleum hydrocarbon contaminants found more than 100 feet below the ground surface. I believe that this direction is inconsistent with the findings of our consultants. Given the findings of our consultants, HR has concern with the proposed direction of the Board in that; by means of the 13 bore holes and the opinions of numerous highly qualified consultants, it has been established that the volatile organic plume related to the tank release does not extend below a depth of 58 feet and therefore has not affected groundwater which in this area is believed to be between 250 and 300 feet below ground surface. Also the only evidence of contamination found more than 100 feet below ground surface is located on the property to the east and is on the site of the old Ledger landfill not under HR's control. I believe it

unreasonable to direct HR to take groundwater samples due to contamination existing at a site other than one occupied by HR or due to releases which are not the responsibility of HR.

Also, given that there is no evidence of a release on the site from the Class II landfill and that there is no approved plan to investigate the site as a landfill, I question any direction to perform groundwater sampling based on a hypothetical release from the landfill. Throughout the discussions with the Water Board, the Class II landfill was not mentioned as a concern. Certain other hypotheses have have been put forward by the Board which HR has willingly addressed. These include notion that a phantom plume of volatile organics had passed below the 58 foot limit of containment and that fingers of volatile organics may have migrated below the 58 foot limit which were not detected by our numerous bore holes. We believe that the hypothesis of the phantom plume has been disproven by the absence of evidence for a mechanism that would permit a phantom plume to operate. In this regard, some residue would be in evidence if a phantom plume had passed through the region, but it is established that the low level of hydrocarbons existing below the 58 feet containment level are not associated with the tanks and therefore are not evidence for a phantom plume originating with the tanks. As to the hypothesis of the presence of fingers, the clay layer at 58 feet has not been saturated. Laboratory analysis demonstrates that for finger theory to operate, layer saturation is a prerequisite. Since saturation has not occurred, the presence of volatile organic fingers below the 58 foot level are not supported.

In discussions between our consultants and the staff of the Regional Water Quality Control Board, we have been greatly encouraged that the staff had been satisfied with our investigations, analysis and performance. We believed that the results of our efforts were considered satisfactory, and we had been informally advised that drilling to the groundwater would not be necessary. Given the foregoing, we are surprised at the suggestion that groundwater investigation might now be necessary. While circumstances are always subject to change as new evidence is uncovered, it is my desire that direction to investigate groundwater at the site be withheld until evidence is forthcoming to support a finding that the groundwater at the site has been degraded.

If concern arises over groundwater quality due to causes

originating at the Ledger landfill, I would expect that the Water Board would pursue its recourse with the owners of, and responsible parties connected with, that site and exclude HR from further consideration.

Finally, I am concerned over the Water Board's position that it is unable to determine if the groundwater underlying the site has been degraded. I believe that this uncertainty is not the test to be applied in determining the need to sample groundwater. I am hopeful that you will agree that the test is a more positive one, such as, "under all the circumstances" could groundwater reasonably have been affected by the release. I believe that it is unreasonable to conclude from the data developed to date that groundwater could have been impacted by the release from underground tanks. I also believe that the Water Board should not engage HR with respect to the presence of hydrocarbons located offsite 100 feet below the Ledger landfill; HR is not a responsible party.

We believe that early approval of a remedial plan is the most efficient means of protecting the groundwater from organics released from underground tanks and that is where our resources should be committed. Further, we are concerned with the great expense that would arise from installation of groundwater sampling and monitoring wells at the site, believing as we do, that the more realistic approach is to remediate the release rather than undertake general probing for unspecified reasons.

We have recommended to the Water Board in our work plan of May 19 that site profiling be completed and that full site investigation (SWAT) be completed at the Ledger landfill site before a final determination is made as to the realistic need for groundwater sampling at the Pacoima site. We believe this approach to be more realistic both in terms of assessment of the threat to the groundwater from releases from the Ledger landfill and in terms of the information to be gained from final steps to profile the volatile organic plume. In this regard, I wish to emphasize that we have kept the Regional Water Quality Control Board fully informed of our plans and progress, and we have demonstrated a readiness to undertake sampling and remediation efforts where there is reasonable cause for this to be done.

We request your kind approval of our work plan submitted on May

19, 1989 and that the SWAT for the Ledger landfill be conducted prior to any Board decision directing groundwater sampling and monitoring at the Pacoima site.

Before the Board issues its directive for HR Textron to sample the groundwater under the site, we request a meeting with the Board to clarify the aforementioned technical and administrative issues.

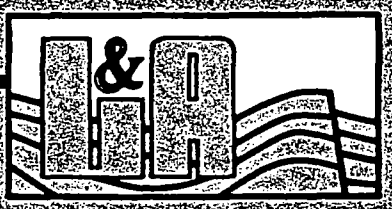
Thank you for your courtesy and consideration.

Very truly yours,

J. W. Hedges
Vice President Contracts and
Production Programs

JWH:rb

2166-04743



LEIGHTON AND ASSOCIATES

Geotechnical and Environmental Engineering Consultants

350078

LEIGHTON AND ASSOCIATES, INC.
Geotechnical and Environmental Engineering Consultants

SEARCH OF CITY AND COUNTY RECORDS FOR GEOTECHNICAL FOUNDATION AND GRADING REPORTS FOR 10445 GLENOAKS BOULEVARD, PACOIMA, CALIFORNIA

July 6, 1989

Project No. 40890958-08

Privileged and Company Private Attorney Client Communication and Work Product

Prepared For:

HR Textron, Inc.
25200 West Rye Canyon Road
Valencia, California 91355

3050 DAIMLER STREET, SUITE A, SANTA ANA, CALIFORNIA 92705

(714) 752-8088
FAX (714) 756-1224

LEIGHTON AND ASSOCIATES, INC.
Geotechnical and Environmental Engineering Consultants

July 5, 1989

Project No. 40890958-08

Privileged and Company Private Attorney Client Communication and Work Product

To: HR Textron, Inc.
25200 West Rye Canyon Road
Valencia, California 91355

Attention: Messrs. J. Hedges, M. Bell, B. Moses

Subject: Search of City and County Records for Geotechnical Foundation and Grading Reports for 10445 Glenoaks Boulevard, Pacoima, California

Introduction

At your verbal request on June 5, 1989, we have undertaken a search of the geotechnical files (foundation and grading reports) at the Los Angeles County Department of Public Works and the Los Angeles Department of Buildings and Safety LADBS (city) for reports related to the Pacoima site at 10445 Glenoaks Boulevard. The purpose of this task was to review available geotechnical reports in order to assess the character and distribution of any landfill material that may underlie the subject site. A review of adjoining sites was not undertaken as a part of this task.

In recent months, the landfill issue has become an increasingly important factor in the Regional Water Quality Control Board's thinking at Pacoima, especially in terms as a possible source of alleged anomalous Total Petroleum Hydrocarbon (TPH) values found in selected borings around the former site of Tank No. 2.

3050 DAIMLER STREET, SUITE A, SANTA ANA, CALIFORNIA 92705
(714) 752-8088
FAX (714) 756-1224

Accompanying Illustrations and Appendices

Figure 1 - Location of Borings - HR Textron Pacoima Facility
Figure 2 - Logs of Donald R. Warren Borings
Figure 3 - Fill Distribution for AMF Building

Appendix A - References
Appendix B - Pacoima Documents on file at L.A. Department of Building and Safety

Background and Scope

The possibility of landfills underlying the Pacoima site was initially mentioned in a 1984 Earth Technology Corporation (TETC) report to HR Textron (Reference 3). In the report, a Class II landfill (by 1972 standards) was shown to underlie most of the subject site and was identified as landfill 753. TETC and L&A had not found any public records for this landfill and thus no records were available as to the types of materials placed in this alleged landfill. The TETC report also discussed the 751 landfill which adjoins the site on the west and was tentatively identified as the Ledger Landfill.

Further discussions of the landfills 751 and 753 are contained in a Leighton and Associates, Inc. report issued in March 1988 (Reference 4). This study focused upon the review of aerial photographs which showed the development and eventual in-filling of sand and gravel sites since 1928.

For the past few decades, the City and County of Los Angeles have required builders and developers of commercial and residential tracts to submit foundation investigation and rough grading reports to the appropriate local agency. These reports are available to the public and usually contain geologic and engineering information for the shallow subsurface under the site being considered for development. The reports are on microfilm and are filed by street address. The data often include borehole logs, geologic cross sections, and a description of the materials and conditions encountered during grading. It therefore seemed worthwhile to search the appropriate city and county agency files for any reports of this type which might exist for 10445 Glenoaks Boulevard, and which might produce some borehole data that would provide useful information concerning the distribution and type of materials that are in landfill 753. Such a file search was verbally authorized by HR Textron.

On June 14, Mr. Razmik Gozalians a staff geologist for L&A, visited the Los Angeles Department of Public Works seeking foundation and grading reports for the subject site. The County referred Mr. Gozalians to the Los Angeles Department of Buildings and Safety (city) where several documents for 10445 Glenoaks Boulevard are available in a microfilm file (see Appendix A), including a foundation report (Reference 1) and a rough grading report (Reference 2). Mr. Gozalians reviewed the two reports and made copies of the boring location map (Figure 1), boring logs (Figure 2), and the grading plan map (Figure 3). He did not copy the text of either report, nor did he search for reports for properties adjacent to Textron's Pacoima facility, although either task could be done at a later date, if needed.

Findings

Following are the findings from the records search:

1. The files of the Los Angeles Department of Buildings and Safety contain 14 documents relating to the subject site; these are listed in Appendix A, a LADBS computer-generated list.

2. In September 1955 and later in January 1956, the Donald R. Warren Company undertook a foundation and rough grading study of the subject site for the American Machine and Foundry Company (References 1 and 2).

3. The foundation investigation (Reference 1) included six hollow stem auger borings; five borings were drilled and logged to a depth of 30 feet, while the sixth boring was drilled and logged to a depth of 12.5 feet where it was stopped by boulders. Figure 1 is a map of these borings taken from the foundation report and replotted on a present day map of the Pacoima site. Figure 2 presents the geologic logs of the six auger borings as they appear in the foundation report.

4. Three borings encountered uncompacted earthen fill. Two borings (Nos. 2, 6) penetrated the fill and one (No. 3) was terminated in fill at a depth of 12.5 feet due to boulders. The thickness of fill encountered by the borings is:

Boring	Thickness of Fill Encountered (ft)
DW-1	0
DW-2	10.8
DW-3	+12.5
DW-4	0
DW-5	0
DW-6	2.2

5. Neither the boring logs or the text of the foundation report mention the presence of solid, oily, or chemical wastes in the fill. Rather, it is characterized as a silty, gravelly, sometimes clean, fine to coarse sand.

6. The text of the foundation report mentioned that "metal" was found in Boring 2 at a depth of 10 feet. The occurrence, type, amount, and origin of the "metal" (e.g., tin can, bolt, bulldozer cable) were not noted in the report. This was, however, the only reference to a non-soil type of fill material in any of the six borings.

7. The dry density values shown for borings 4, 5, and 6 are 92 lbs/ft^3 or greater, and are too high for artificial uncontrolled fill such as would be found in a landfill and are thus representative of naturally occurring soils and alluvial materials rather than landfill or fill materials. The high dry density values thus confirm the absence of fill in the portions of the borings where these values were obtained.

8. The foundation report describes the site as a dry wash area brought up to grade with uncontrolled (uncompacted) fill material similar to the adjacent naturally occurring soils and alluvium. Again, there is no mention of solid, oily, or chemical wastes in the fill.

9. The source(s) of the fill are unknown, but it has probably been imported from offsite.

10. The rough grading report (Reference 2) indicates that much of the building sits upon a pad of compacted fill (not to be confused with the landfill) that was cut from natural soils onsite to fill in low lying areas. A small area was excavated to a depth of eight feet, the uncompacted landfill was removed and then placed back in the cavity as compacted fill. The relationship of the fill pad and compacted landfill are shown in Figure 3.

11. There is no mention in the grading report of solid, oily, or chemical wastes being found in the landfill by onsite grading technicians.

Conclusions

Earthen landfill was found in three of the six foundation borings drilled in 1955 in the northern portion of the subject site. In each of these borings, the fill and naturally occurring sediments were described as being of silty, gravelly, sandy material.

There is no mention of solid, oily, or chemical waste being seen in the fill during either the foundation drilling or later when some of the fill was overexcavated and placed back in the ground as compacted fill. Given the fact that "metal" was noted in one boring, we believe that the field personnel were cognizant of things such as solid or oily waste and would have recorded them if they had been seen.

The data generated by the geotechnical investigations indicate that the material in landfill 753 is composed of sands, silts, and gravels imported from unknown sources. In the absence of a solid, oily, or chemical waste component, it is highly unlikely that these observed fill materials are the source of the TPH in the subsurface which are of concern to the RWQCB.

If you have any questions regarding this report, please do not hesitate to contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

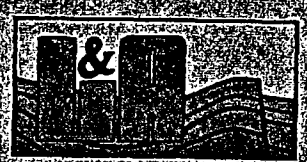
LEIGHTON AND ASSOCIATES, INC.

Russell Powers, RG 4549
Project Manager

RSP/TM/kd

Distribution: (3) Addressee

APPENDIX A



LEGATION AND ASSOCIATES, INC.

APPENDIX A

REFERENCES

1. Donald R. Warren, Company, 1955, Foundation Investigation for American Machine and Foundry Company - 10445 Glenoaks Boulevard, Pacoima, California, Job F55-1450, September 28, 1955.

2. ———, 1956, Rough Grading Report for American Machine and Foundry Company - 10445 Glenoaks Boulevard, Pacoima, California, Job F56-1450, January 24, 1956.

3. Earth Technology Corporation, 1984, Results of Underground Leak Detection; Prepared for HR Textron, 10445 Glenoaks Boulevard, Pacoima, California 91331, dated 1984.

4. Leighton and Associates, Inc., 1988, Progress Report Number 2 for Phase II Subsurface Contamination Investigation at HR Textron's Pacoima Facility located at 10445 Glenoaks Boulevard, Pacoima, California, V.I., Prepared for HR Textron, Inc., Project 40841189-05, dated March 14, 1988.

APPENDIX B

LEIGHTON AND ASSOCIATES, INC.

APPENDIX B

DOCUMENTS ON FILE FOR 10445 GLENOAKS BOULEVARD, PACOIMA
LOS ANGELES DEPARTMENT OF BUILDING AND SAFETY

JB0102(00) DOCUMENT LISTING June 14, 1989 15:15 Page 1

Documents found: 14 ADD-KEY: 10445 GLENOAKS BL

	Document Type	Date	Reel:Batch:Doc	User Number
1.	BOARD FILE	00/00/78	B0105:001:0839	BF 780954
2.	BUILDING PERMITS (& SIGNS)	07/13/82	P0001:009:0277	82VN43462
3.	BUILDING PERMITS (& SIGNS)	07/13/82	00000:000:0000	82VN43462
4.	BUILDING PERMITS (& SIGNS)	12/14/77	00000:000:0000	77VN68674
5.	BUILDING PERMITS (& SIGNS)	01/23/73	00000:000:0000	73ST09350
6.	BUILDING PERMITS (& SIGNS)	01/22/73	00000:000:0000	73ST09349
7.	COMPACTION LETTER	03/12/57	G0041:012:0206	
8.	COMPACTION REPORT	01/24/56	G0041:012:0207	
9.	COMPACTION REPORT	01/24/56	G0041:012:0215	
10.	COMPACTION REPORT	01/18/56	G0041:012:0210	
11.	DEPARTMENT LETTER	12/19/55	G0028:006:0196	
12.	FOUNDATION INVESTIGATION RPT	09/30/55	G0028:006:0197	
13.	PERMIT(I)-ELECTRICAL	02/28/89	T0165:004:0433	0289S8258
14.	PERMIT(I)-PLUMBING	12/07/88	T0158:005:0110	1288N9617

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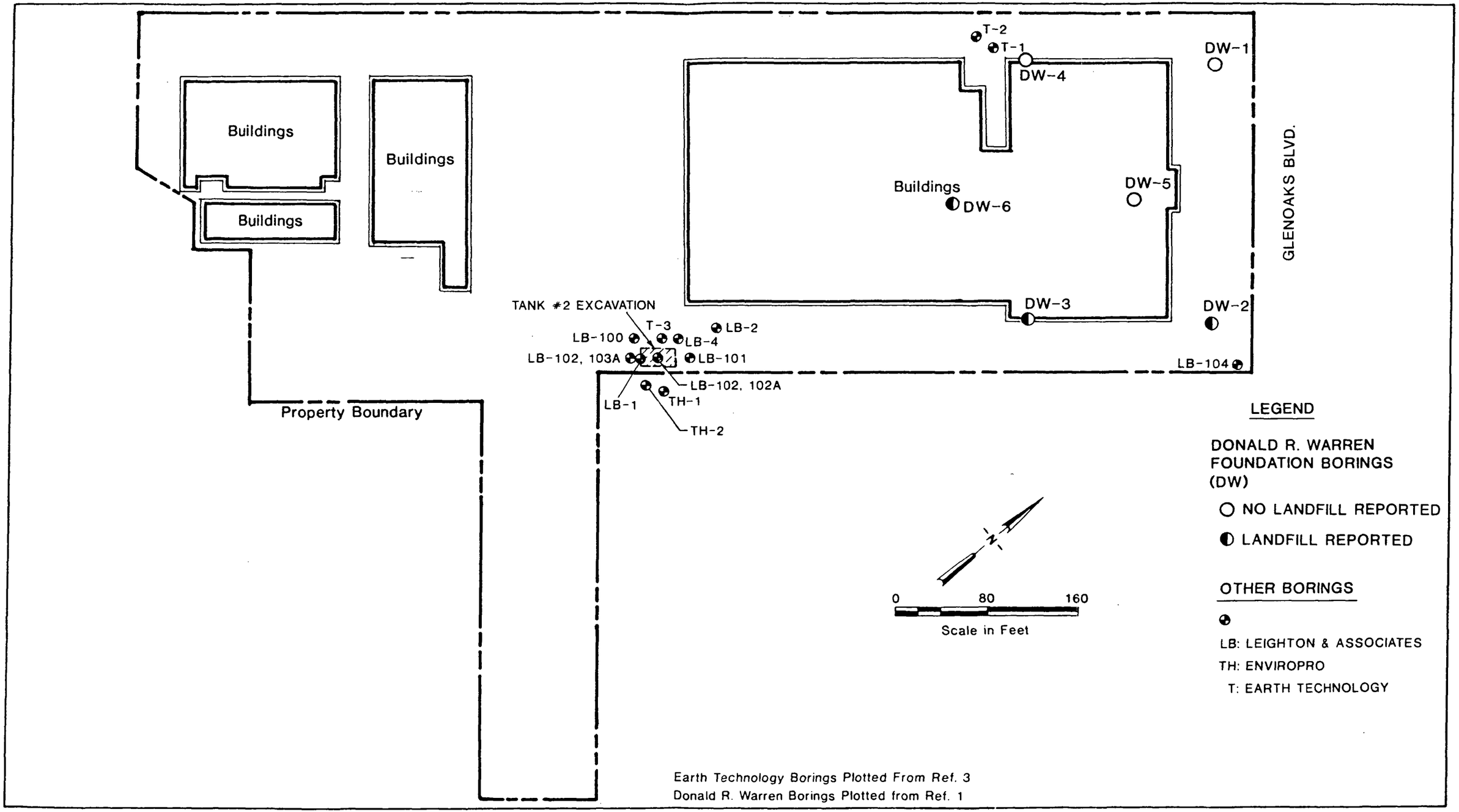
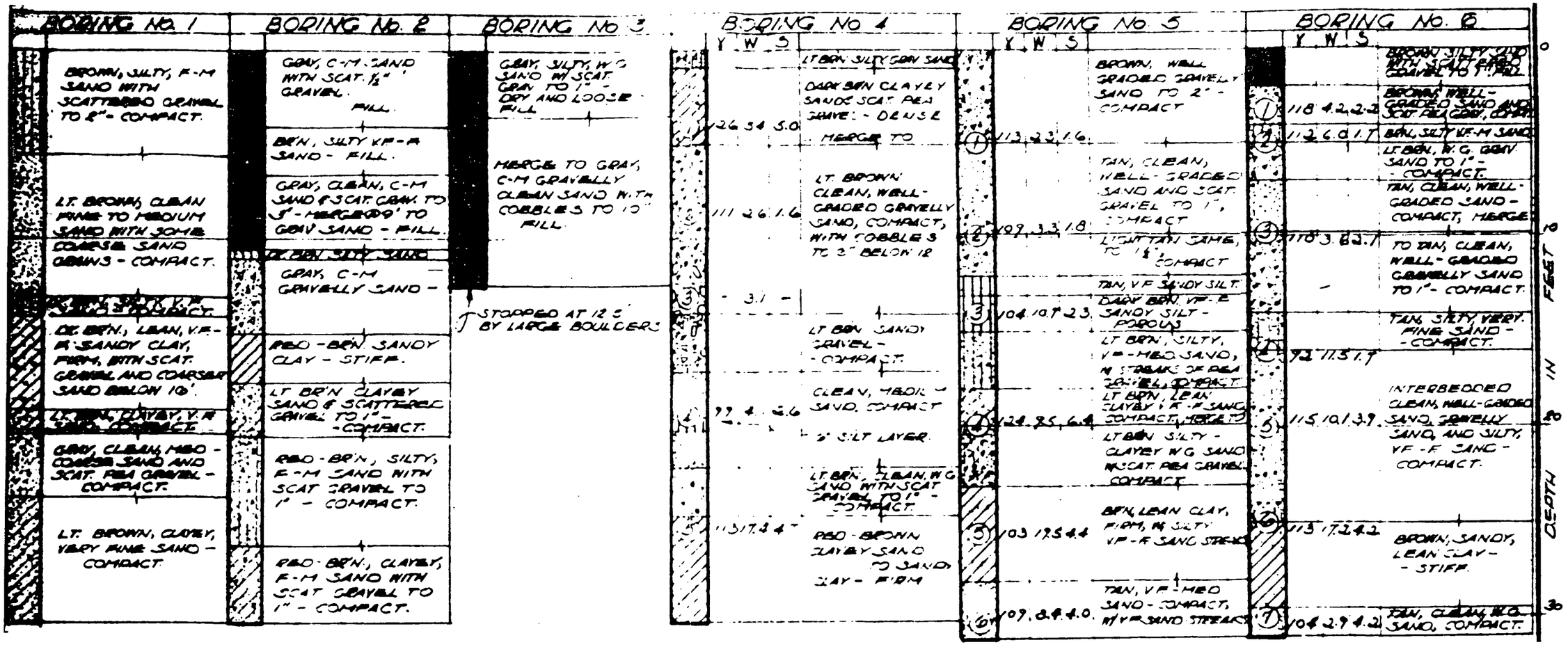


Earth Technology Borings Plotted From Ref. 3
Donald R. Warren Borings Plotted from Ref. 1

Project Name: HR TEXTRON
Project Number: 40890958-08
Drafted By: JOHN SISKER (6/30/89)
Reviewed By: RUSS POWERS (6/30/89)
Report Date: 7/5/89

LOCATION OF BORINGS HR TEXTRON PACOIMA PLANT
10445 GLENOAKS BLVD.
PACOIMA, CALIFORNIA

Figure No. 1



· LEGEND ·

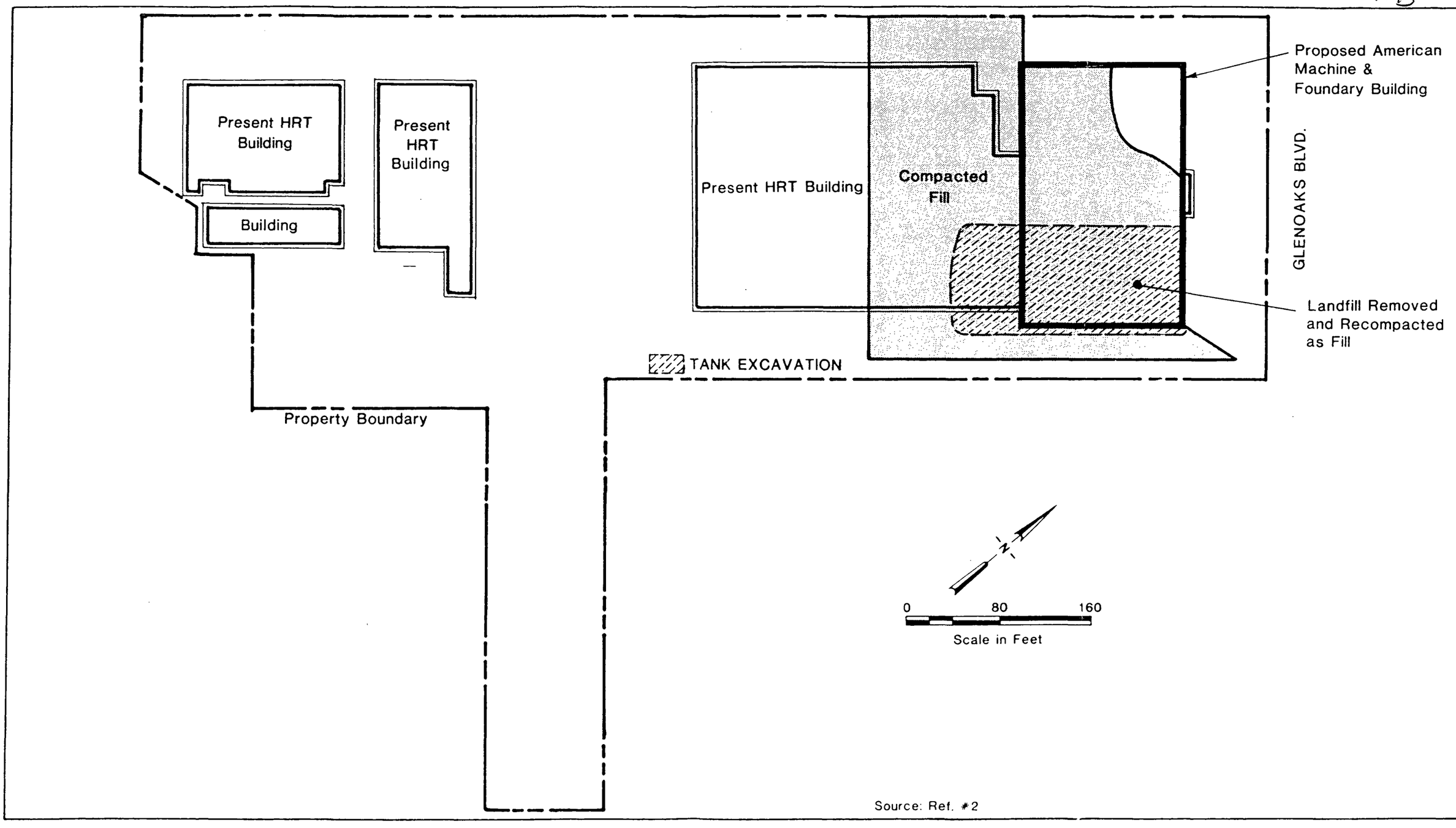
S - UNDISTURBED SOIL SAMPLE NO 9
γ - DRY DENSITY - LBS PER CUBIC FOOT
W - MOISTURE CONTENT - PER CENT
S - SHEAR STRENGTH - KIPS PER SQ FOOT
: DEPTH OF FILL ENCOUNTERED.

Source: Ref. 1

Project Name: HR TEXTRON Project Number: 40890958-08 Drafted By: JOHN SISKER (7/3/89) Reviewed By: RUSS POWERS (7/3/89) Report Date: 7/5/89	LOG OF BORINGS AMERICAN MACHINE & FOUNDARY COMPANY 10445 GLENOAKS BLVD. PACOIMA, CALIFORNIA

Figure No. 2

2166-04743



Source: Ref. #2

Project Name: HR TEXTRON Project Number: 40890959-08 Drafted By: JOHN SISKER (6/30/89) Reviewed By: RUSS POWERS (6/30/89) Report Date: 7/5/89	1952 FILL DISTRIBUTION FOR AMF BUILDING 10445 GLENOAKS BLVD. PACOIMA, CALIFORNIA

Figure No. 3

B Mades

STATE OF CALIFORNIA — GEORGE DEUKMEJIAN, Governor

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

2166-04743

August 16, 1989

RECEIVED
AUG 18 1989
VP Legal and Contracts

Mr. John W. Hedges
HR Textron Inc.
25200 West Rye Canyon Road
Valencia, CA 91355

UNDERGROUND TANK LEAK INVESTIGATION - HR TEXTRON INC., 10445 GLENOAKS BLVD., PACOIMA. (ID#913310270).

This is in reference to your letter dated June 15, 1989 discussing several issues and expressing concern over the need for groundwater investigation at your Pacoima site. The issues discussed in your letter are rather confusing and at times contradictory. Most of them are recitations of arguments debated in the past.

As you are aware, the Regional Board staff has been asking you to investigate possible groundwater contamination originating from your site. As of this date, you have not complied with this request.

In your letter of June 15, 1989, you are requesting Board staff to approve a workplan submitted by you on May 19, 1989. Although the transmittal letter for that workplan specifically commits for a Phase III groundwater investigation to satisfy the Regional Board request, the workplan itself does not address any groundwater investigation program. If your workplan had provisions for groundwater investigation as stated in your transmittal letter, Board staff would have certainly considered approving the workplan.

You have requested to meet with Board staff to clarify several technical and administrative issues related to this case. A meeting is tentatively scheduled for August 29, 1989 at 10:00 a.m. at the Board's new office at 101 Centre Plaza Drive in Monterey Park. Please confirm if this date and time is convenient for you.

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AUG 17 1989
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ENGINEERING

350079

If you have any questions, please call Mr. E. Solomon at (213) 266-7574.

HANK YACOUB
Supervising Water Resources
Control Engineer

EGS/egs

cc: Mr. William Moss, HR Textron
Mr. Russel Powers, Leighton & Associates
Mr. William Tolson, 999 Green St. #1001, San Francisco, CA 94133
Captain Roy Kozaki, Los Angeles City Fire Department

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

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

W. C. Mueller
865-1 2166-04743

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November 17, 1989

Mr. John Hedges
HR Textron, Inc.
25200 West Rye Canyon Rd.
Valencia, CA 91355

SUBSURFACE INVESTIGATION DUE TO AN UNAUTHORIZED RELEASE FROM LEAKING UNDERGROUND TANKS(ID# 913310270) HR TEXTRON, 10445 GLENOAKS, PACOIMA.

This is in reference to the subsurface investigation that has been proceeding at the subject site since 1984.

As you are well aware, the various consultants retained by HR Textron(HRT) since the start of the investigation, have done soil investigation by drilling a total of 13 soil borings. The chemical analyses done on selected soil samples from these borings have indicated significant concentrations of Volatile Organic Compounds (VOCs) including trichloroethylene, 1,1, 1- trichloroethane, methylene chloride, petroleum hydrocarbons and oil and grease. Some of these contaminants were detected as deep as 120 feet offsite and up to 108 feet onsite.

Based on the hydrogeology of the site and the results of soil analyses, Regional Board staff have directed you in three separate letters to present a workplan for the investigation of groundwater contamination. The requested workplan has not been received. Several meetings, the latest of which was held on September 26, 1989, were held to reach an understanding on this matter.

In your letter of October 16, 1989, although you propose a soils remedial plan, you have concluded that the release from the underground tanks does not pose a present threat. In addition a letter from your attorneys, dated October 17, 1989 indicates that HRT does not intend to submit a groundwater investigation workplan.

The Regional Board staff have no objection to using vapor extraction system to treat VOCs in contaminated soil provided that groundwater monitoring wells are installed. The primary purposes of groundwater monitoring wells are to: 1. determine if groundwater underlying your site has been impacted by the confirmed chemical releases 2. monitor the effectiveness of a cleanup system including the proposed soil remediation.

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Because you have refused to submit a groundwater monitoring plan, a Cleanup and Abatement Order will be issued to obtain the necessary groundwater information regarding the HRT facility in Pacoima.

If you have any questions, please call me at (213) 266-7522 or call Mr. E. Solomon at (213) 266-7574.

HANK H. YACOUB
Supervising Water Resource
Control Engineer

EGS/egs

cc: please see attached mailing list

Ms. Bonnie Wolstoncroft, State Water Resources Control Board, Office of Staff Counsel
Ms. Marianne Macki, Harding Lawson Associates, 2804 Camino Dos Rios, Suite 207, Newbury Park, CA 91320
Mr. Russel Powers, Leighton & Associates, 3050 Daimler Street, Suite A, Santa Ana, CA 92705
Mr. Thomas Mills, Leighton & Associates, 3934 Murphy Canyon Rd, Suite B-205, San Diego, CA 92123
Mr. Michael Hickok, Petit & Martin, 355 S. Grand Avenue, 33rd Floor, Los Angeles, CA 90071
Mr. David Dunbar, 18552 McArthur Blvd., Suite 310, Irvine CA 92715-1211
Mr. Donn Marrin, 8950 Villa La Jolla Dr., Suite 1200, La Jolla CA 92037
Mr. William Tolson, 999 Green St. #1001, San Francisco, CA 94133

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
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2166-04743

Copy R J Millman
OT Stewart
Jo Ste (for GSC)
file
12/22 - G. Blomberg

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December 18, 1989

Mr. John Hedges
HR Textron, Inc.
25200 West Rye Canyon Rd.
Valencia, CA 91355

CLEANUP AND ABATEMENT ORDER NUMBER 89 -104, FOR HR TEXTRON FACILITY LOCATED AT 10445 GLENOAKS BOULEVARD, PACOIMA.
(ID # 913310270).

Reference is made to your letter dated December 4, 1989 that outlined the conditions for groundwater investigation. Board staff have evaluated the letter and find that the issues raised in the letter have already been discussed at all the meetings held. As a result, Board staff firmly believe the necessity of groundwater monitoring wells at the subject site.

Enclosed is a Cleanup & Abatement Order directing you to submit to this Regional Board a groundwater investigation workplan for the subject facility.

This Order is issued under Section 13304 of the California Water Code.

If you fail to comply with the terms and conditions of this Order, the Board may impose civil penalities or seek injunctive relief in accordance with Section 13350 of the California Water Code.

Board staff will be happy to arrange a meeting where issues pertaining to the enclosed Order can be discussed.

If you have any questions, please call Mr. Joshua M. Workman at (213) 266-7561.

Robert P. Ghirelli

Robert P. Ghirelli, D. Env.
Executive Officer

EGS/egs

cc: please see attached mailing list

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Regional Board Members
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Mr. Russel Powers, Leighton & Associates, 3050 Daimler Street, Suite A, Santa Ana, CA 92705
Mr. Thomas Mills, Leighton & Associates, 3934 Murphy Canyon Rd, Suite B-205, San Diego, CA 92123
Mr. Michael Hickok, Pettit & Martin, 355 S. Grand Avenue, 33rd Floor, Los Angeles, CA 90071
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Mr. Donn Marrin, 8950 Villa La Jolla Dr., Suite 1200, La Jolla CA 92037
Mr. William Tolson, 999 Green St. #1001, San Francisco, CA 94133

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

CLEANUP AND ABATEMENT ORDER NO. 89-104

Requiring HR Textron to cleanup and abate the effects of wastes discharged to soil and/or groundwater at its Pacoima facility.

The California Regional Water Quality Board, Los Angeles Region, finds:

1. HR Textron, Inc.; herein after called HRT, is located at 10445 Glenoaks Blvd. in the city of Pacoima, county of Los Angeles, California.

2. The property is owned by Mr. William Tolson, 999 Green Street, # 1001, San Francisco, California. HRT has been the lease holder and the operator of this facility since 1966.

3. The site is located in the San Fernando Subunit of the Los Angeles River Basin. The San Fernando Subunit contains well fields which provide domestic drinking water to the residents of the San Fernando Valley and the Great Los Angeles area.

4. HRT manufactures various components used in the aerospace industry. The company uses both chlorinated and unchlorinated solvents, cutting oils and other chemicals in its manufacturing operations. According to information provided by HRT, both above ground and underground storage tanks have been and continue to be utilized by HRT for chemical, gasoline and waste storage purposes. A workplan for underground tank leak detection was requested by this Board's staff in 1984.

5. Between 1966 and January 1985, HRT utilized two underground tanks, 1,000 -gallon capacity for waste storage purposes. As part of HRT's leak detection and site assessment program, these two tanks were removed in January, 1985.

6. Various soil assessment studies have been conducted at the site by consultants for HRT. Reviews by Board staff of the analytical data in the subject site assessment reports resulted in the following findings:

   a. The subsurface stratigraphy at the site is generally silty sands interspersed with discontinuous clay lenses and poorly -sorted sands and gravel.

b. Volatile Organic Compounds,(VOCs)including trichloroethylene (TCE) methylene chloride, 1, 1, 1- trichloroethane(TCA), petroleum hydrocarbons and oil and grease were analytically confirmed in soil samples obtained from the soil borings. These chemicals have been used and/or stored at HRT facility.

c. Clay lenses occur at around 50-55 feet below ground surface, but are not considered a permanent barrier to contaminants migration. VOC contamination was found in soil samples at a depth of 78 feet and petroleum hydrocarbons were detected at a depth of 110 feet onsite.

d. During tank removal, an undisclosed amount of soil was excavated for offsite disposal. Questions remain regarding the final extent of cleanup achieved and the potential impact of the contamination on groundwater quality.

7. The chlorinated solvents confirmed in samples obtained at the site, including methylene chloride and 1, 1, 1- TCA, are highly mobile and have densities greater than that of water. Thus, these compounds behave as "sinkers" with respect to the movement of water in the permeable sediments underlying the facility.

8. In accordance with this, Regional Board staff directed HRT in three letters dated August 27, 1987, May 12, 1988 and April 5, 1989 to submit a groundwater investigation workplan.

9. The required technical reports were not received by their respective due dates. Several meetings were held to try to reach an understanding regarding HRT's activities. During the latest meeting, held on September 26, 1989, HRT was directed again by Board staff to submit the required workplan for groundwater investigation.

10. On October 16, 1989 the Board received a letter from HRT stating that HRT has" tentatively" concluded that the release from the underground storage tanks does not pose a present threat to groundwater and thus HRT does not intend to submit a groundwater investigation workplan.

11. HRT, however, has indicated its willingness to clean up the soil and has proposed to this Board a soils remediation plan. In a letter dated November 17, 1989 , Board staff responded to the HRT proposal and indicated no objection to its implementation on condition that groundwater monitoring wells are installed. Board staff emphasized the primary purposes of

the groundwater monitoring wells to be as follows:

1. Determine if groundwater underlying the site has been impacted by the confirmed chemical releases.

2. Monitor the effectiveness of any cleanup system including the proposed soil remediation.

12. This discharge of unauthorized wastes onsite is a violation of Section 13260 of the California Water Code, which requires that any person proposing to discharge waste to land must file a report of waste discharge and receive requirements from the Board.

13. The dischargers have not submitted a report of waste discharge. The Regional Board has not considered nor adopted waste discharge requirements for this facility.

14. The discharge of wastes at HRT threatens to cause a condition of pollution and nuisance. This discharge has contaminated the underlying soils and potentially the groundwater underlying the facility. Board staff has concluded that further investigation of this site is necessary to determine if VOCs and fuel hydrocarbons had migrated to the underlying groundwater.

15. On November 27, 1978, the Regional Board adopted a revised water quality plan for the Los Angeles River Basin. This plan lists the beneficial uses of the San Fernando Subunit which underlies the facility. The beneficial uses, as described in the Basin Plan, include municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

16. Section 13304 of the California Water Code states, in part, that:
"Any person .... who has caused or permitted..... any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create a condition of pollution or nuisance, shall upon order of the Regional Board cleanup such waste or abate the effects thereof or, in the case of threatened pollution or nuisance, take other necessary remedial action."

17. This enforcement action is being taken for the protection of the environment and as such is exempt from the provisions of the California Environmental Quality Act (Public Resource Code, Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations).

Order

IT IS HEREBY ORDERED that pursuant to the California Water Code, Section 13304, the discharger shall:

1. By January 15, 1990, submit a comprehensive site characterization workplan to the Regional Board's Executive Officer for review and approval, describing in detail a groundwater investigation proposal capable of determining the full extent of any groundwater contamination originating from the facility.

2. By January 15, 1990, submit a facility audit to supplement information already provided to the Board. This audit must consist of, at a minimum, a written chronology and site plan showing all past and present use, storage and disposal of chemicals, including accidental spills, and a history of past pracitices and activities with respect to waste storage and offsite disposal. An appropriately scaled map with clear labelling of facility details including location, size and contents of all above and underground tanks and associated piping system shall be included with this audit report.

3. Implementation of the approved site characterization workplan shall begin no later than one month after its approval by the Executive Officer. The final report describing the analytical results and conclusions must be submitted to the Board no later than 90 days after workplan approval.

4. In order to insure that all work at the facility is conducted in a timely manner, monthly reports of progress are required. The first progress report under this schedule is due to this Board by February 18, 1990. The reports must include, but not be limited to, the following information.

   a. a discussion of all completed and ongoing activities during the reporting period;

   b. a discussion of proposed work activities for the next reporting period;

   c. an updated time schedule for completion of all additional work needed, and

   d. the results of any soil and/ or groundwater monitoring or testing completed.

This Order in no way limits the authority of the Regional Board, as contained in the California Water Code, to require additional investigation and cleanup pertinent to this project.

This Order may be revised by the Executive Officer as additional information from the project becomes available.

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

Robert P. Ghirelli

Robert P. Ghirelli, D. Env.
Executive Officer

12/18/89
Date

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
101 CENTRE PLAZA DRIVE
MONTEREY PARK, CALIFORNIA 91754-2156
(213) 266-7500

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JAN 26 1990
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January 25, 1990

Mr. John Hedges
HR Textron, Inc.
25200 West Rye Canyon Rd.
Valencia, CA 91355

INFORMATION REQUEST REGARDING HR TEXTRON FACILITY LOCATED AT 10445 GLENOAKS BOULEVARD, PACOIMA. (ID# 913310270).

To help us evaluate the petition you filed on January 19, 1990, we are asking you to submit the following information by February 16, 1990.

1. An appropriately scaled drawing with clear labelling of facility details including location, size and contents of all above and underground tanks. Please include the location and the chemical or waste contents of all underground storage tanks that were removed, replaced or retrofitted since 1967.

2. Is this site subject to any Resource Conservation and Recovery Act (RCRA) regulations? If yes, please specify the waste management unit(s) covered by RCRA permit(s).

This technical information is requested under Section 13267 of the California Water Code.

If you have any questions, please call me at (213) 266-7522.

HANK H. YACOUB
Supervising Water Resource
Control Engineer

EGS/egs

cc: please see attached mailing list

Copy: S. Hart

350081

Mr. Jorge Leon, State Water Resources Control Board, Office of Chief Counsel
Ms. Marianne Macki, Harding Lawson Associates, 2804 Camino Dos Rios, Suite 207, Newbury Park, CA 91320
Mr. Russel Powers, Leighton & Associates, 3050 Daimler Street, Suite A, Santa Ana, CA 92705
Mr. Thomas Mills, Leighton & Associates, 3934 Murphy Canyon Rd, Suite B-205, San Diego, CA 92123
Mr. Michael L. Hickok, Pettit & Martin, 355 S. Grand Avenue, 33rd Floor, Los Angeles, CA 90071
Mr. Bruce Stearns, ERM-WEST, Inc. 1920 Main Street, suite 600 Irvine, CA 92714-7210
Mr. Donn Marrin, 8950 Villa La Jolla Dr., Suite 1200, La Jolla CA 92037
Mr. William Tolson, 999 Green St. #1001, San Francisco, CA 94133

2166-04743

HR TEXTRON

HR Textron Inc.
a Subsidiary of Textron Inc.

25200 West Rye Canyon Road
Valencia, Calif. 91355-1265
805/259-4030
TWX 910/336/1438 TELEX 65/1492

February 2, 1990

JWH-90-11

Mr. Hank H. Yacoub
Supervising Water Resource
Control Engineer
California Regional Water
Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

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Re: HR Textron, Pacoima Facility (I.D. #913310270)

Please find enclosed the detailed facilities drawing you requested in your letter of January 25, 1990.

Please be advised that HR Textron is subject to any RCRA regulations regarding hazardous waste generators operating under the 90-day rule. HR Textron stores hazardous waste for no longer than 90 days. Prior to the 90-day limit, all hazardous waste is removed by licensed haulers, accompanied by a Uniform Hazardous Waste Manifest. The EPA identification number for the Pacoima facility is CAD041162330.

I hope this information helps us resolve the matter before us.

Sincerely,

J. W. Hedges
Vice President Contracts
and Production Programs

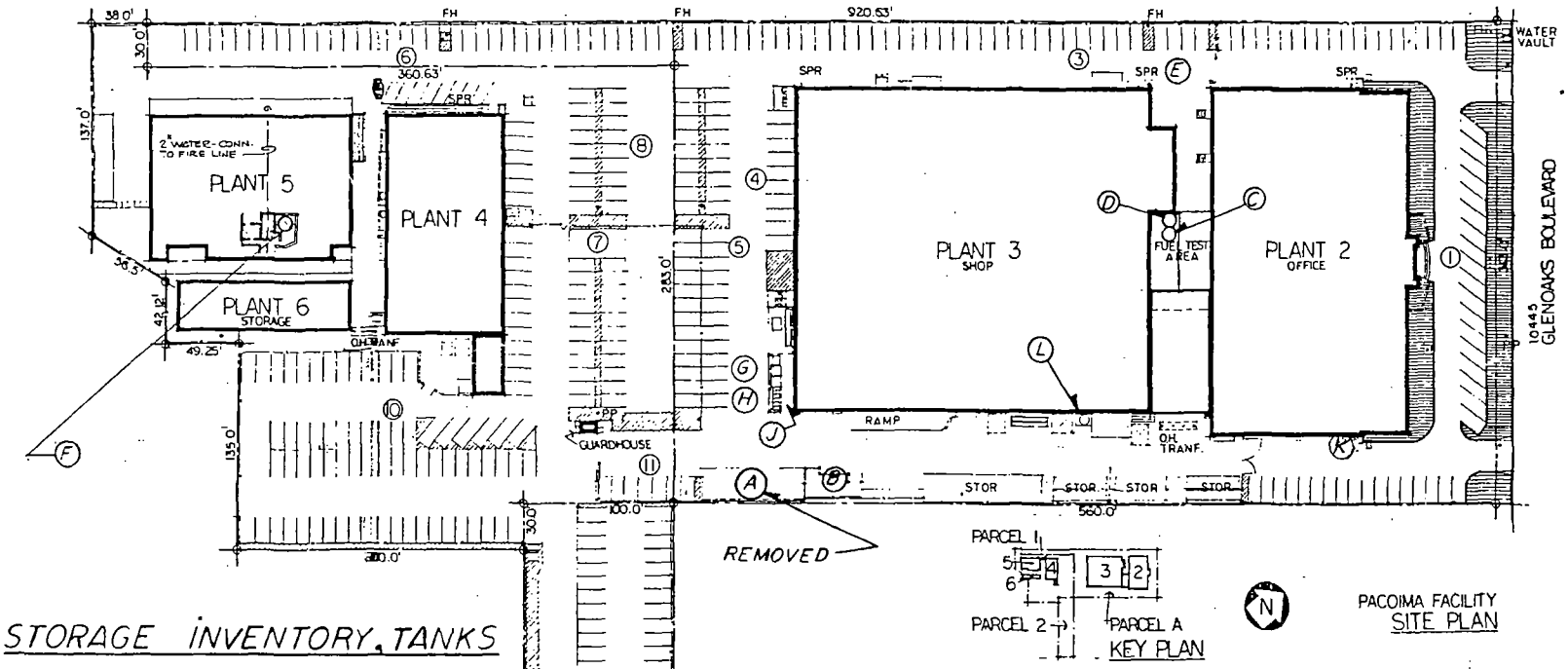
JWH:rb

Enclosure

bcc w/encl: J. Wheeler

bcc wo/encl: W. Moses

350082



SCALE: 1" = 125'

STORAGE INVENTORY, TANKS

TANK NO.	DESCRIPTION	SIZE*	CONTENTS
A	UNDERGROUND	2-1000	WASTE OIL
B	ABOVEGROUND	3-600	WASTE OIL
C	"	1-3500	STODDARD SOL.
D	"	1-3000	"
E	UNDERGROUND	1-5000	EMPTY SPILL CONTAIN. TANK
F	ABOVEGROUND	1-120	DOWTHERM OIL
G	"	1-1000	STODDARD SOL.
H	"	2-1000	CUTTING OIL
J	"	1-500	1,1,1 TRICHLOROETHANE
K	"	1-200	FREON
L	"	1-535	ARGON

*GALLONS

4. SURFACE TEXTURE SHALL BE √
3. DIAMETERS SHALL BE CONCENTRIC WITHIN _____ DIA
2. APPLY FSCM NO 81873 TO SPARES ONLY.
1. IDENTIFY WITH PART NO AND LATEST REV LTR

NOTE: UNLESS OTHERWISE SPECIFIED

BUILDING AREAS

PLANT 2	33,325 SF
PLANT 3	51,345 SF
PLANT 4	12,000 SF
PLANT 5	12,240 SF
PLANT 6	3,775 SF
TOTAL	112,985 SF

LAND AREAS

PARCEL A	186,099 SF	4.27 ACRES
PARCEL 1	106,800 SF	2.45 ACRES
PARCEL 2	37,300 SF	.86 ACRES
TOTAL	330,199 SF	7.58 ACRES

CODE INFORMATION

ZONING: M2-1
FIRE DISTRICT: 2-100'
REQ'D PARKING:
PLANTS 2 & 3 = 170 CARS
PLANTS 4 5 6 = 56
TOTAL = 226 CARS

	CONST TYPE	OCCUP	PERMIT DATE
PLANT 2	III B	G-1	12/23/55
PLANT 3	IV	G-1	12/20/66
PLANT 4	III B	G-1	9/11/58
PLANT 5	III B	G-1	
PLANT 6	IV	G-1	

PARKING SUMMARY

1	18 SPACES
2	17
3	58
4	10
5	22
6	37
7	47
8	33
9	8
10	75
11	7
12	68
TOTAL	400 SPACES

WEIGHT			
STRESS			
Q A			1. 30. 56
VAL ENGRG			1. 22. 56
MATL	DASH NO	NEXT ASSEMBLY	USED ON
	APPLICATION		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE
TOLERANCES ANGLES ± 0° 30' .XX ± .01 .XXX ± .005
REMOVE ALL BURRS
BREAK CORNERS .005 - .010
INTERNAL RADII .005 - .010
INTERPRET DRAWING PER DOD-STD-100
MATERIAL | HEAT TREAT | FINISH

CONTRACT NO
DRAWN WF
CHECKED
APPROVED
DESIGN APPROVED
APPROVED
ENGRG RLSE
RELEASE DATE

HR TEXTRON
HR Textron Inc. a Subsidiary of Textron Inc. Valencia Calif.

SITE PLAN

SIZE D | FSCM NO 81873 | DRAWING NO FE-P-G-01
SCALE | WEIGHT | SHEET

350083

216-04743

PROGRESS REPORT NUMBER 3 FOR PHASE II SUBSURFACE INVESTIGATIONS AT HR TEXTRON'S PACOIMA FACILITY 10445 GLENOAKS BOULEVARD PACOIMA, CALIFORNIA

February 15, 1989

Project No. 7841189-16

Prepared for:

HR TEXTRON, INC.
25200 West Rye Canyon Road
Valencia, California 91355

Attention: Messrs. John Hedges and William Moses

350385

Privileged and Company Private Attorney Client Communication and Work Product

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Appendix B - Boring Logs
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EXECUTIVE SUMMARY

Leighton and Associates, Inc. (L&A), has completed the Phase II subsurface contamination investigation at HR Textron's Pacoima facility located at 10445 Glenoaks Boulevard in Pacoima, California.

Removal of two 1,000-gallon tanks at the Tank 2 site revealed that leakage had occurred. Our earlier findings (References 7 through 10, Appendix A) concluded that a high concentration zone consisting of both volatile organic compounds (VOC) as well as Total Petroleum Hydrocarbons (TPH) exists in a semi-cylindrical shaped zone beneath the former Tank 2 locality, to a depth of approximately 50 to 53 feet. Our recommendations were to refine the defined limits of this zone to the east and west via soil borings.

In response to our earlier reports (References 7 through 10, Appendix A), the Regional Water Quality Control Board (RWQCB) indicated that low level TPH below this zone suggests that:

Finger Theory

A. A plume exists at depth as vertical "fingers" of contaminants and was not encountered by the exploratory boreholes, and could adversely effect the ground water beneath the site,

Deep Migration

B. The contaminants from the former Tank 2 have migrated beyond the base of the 110±-foot borings, and/or

Contamination Below Detection Limits

C. The contaminants exist in the soil at levels below the detection limits of laboratory equipment and could increase in concentration with depth. This could adversely affect the ground water table which is expected to be at approximately 150 to 250± feet below the ground surface.

The RWQCB has therefore required that HR Textron install a ground water monitoring well in order to evaluate whether HR Textron's Pacoima facility is contaminating the ground water beneath the former tank area. The RWQCB's comments regarding this matter are contained in their letter dated May 12, 1988.

The questions raised by the RWQCB were considered by L&A and through discussions with Messrs. John Hedges, Martin Bell, and William Moses of HR Textron. As a result of those internal meetings, a meeting was then arranged with the RWQCB in which these issues and, in particular, the content of their May 12, 1988, letter were reviewed. The scope of L&A's Phase II investigation was to further evaluate the subject contamination zone beneath the former Tank 2 locality.

The issues of concern identified by the RWQCB in our June 15, 1988, meeting and thus the focus of the Phase II scope are outlined as follows:

Finger Theory

1. Does contamination exist beneath the lower continuous, fine-grained layer which is localized at a depth of 46± to 52.5± feet and between the borings as vertical "fingers"?

Deep Migration

2. What is the source(s) of the low levels of hydrocarbons (<<50 parts per million) which exists not only in the vicinity of the Tank 2 site but at a depth beneath former Tank 2?

Contamination Below Detection Limits

3. What is the quality of the ground water downgradient of the subject site?

4. What are the lateral and vertical limits of the high concentration contamination zone beneath former Tank 2?

5. Does 1,1,1-Trichloroethane (1,1,1-TCA) exist below the fine-grained layer, located at a depth of 46± to 52.5± feet, as reported by Chemical Research Laboratories (CRL) in two soil samples collected in Boring LB-3?

Scope of Investigation

The issues of concern were addressed through a detailed literature review, a subsurface field exploration program, and a detailed chemical testing program. The field program consisted of the collection of soil samples at various depths in seven additional borings to assess the lateral and vertical extent of the soil contamination zone above and below the fine-grained layer located at a depth of 46± to 52.5± feet (see Plates 1 and 2). The laboratory program consisted of testing selected soil samples by EPA Test Methods 418.1 for TPH and 8240 for VOC's. In addition, two soil samples were used for detailed chemical analysis to identify the nature and characteristics of hydrocarbons present in the high concentration zone identified beneath the former Tank 2 location and of those hydrocarbons encountered at considerable depth at the same location. A ground water sample was also collected from a water well in the Hansen Spreading Grounds located approximately 1.5 miles downgradient from the Pacoima facility to evaluate ground water quality. All collected data were assimilated, presented graphically in Plates 2 and 3, and tabulated in Tables 1 and 2. The results of our Phase II study were communicated to HR Textron in numerous meetings and are summarized in this Executive Summary. The following "Discussion" section provides a specific response to the issues outlined previously.

Discussion

1. "Finger" Theory - It is our professional opinion that the existence of contaminants as vertical "fingers" below the fine-grained layer at a depth of 46± to 52.5± feet which could adversely effect the ground water beneath the former Tank 2 site is not evident.

   A total of 13 borings have been drilled in and adjacent to the former Tank 2 area. These borings extend up to 65± feet beneath the limits of the high concentration contamination zone and such "fingers" were not encountered. One of these borings, Boring LB-1 (see Plate 1), was drilled at an angle of 23 degrees from vertical and through the center of and below the tank excavation along with vertical Borings LB-102/LB-102A. Data collected during this investigation have indicated that the elevated zone of contamination is limited to the general area below the tank excavation. Both Analytical Technologies Inc. (ATI) and Chemical Research Laboratories (CRL) reported the presence of 1,1,1-TCA in the split soil samples from the upper portion of this fine-grained layer (i.e., at 50± feet). However, contradictory chemical data between the laboratories exist for the split samples below this fine-grained layer. This contradictory chemical is due to differences in testing protocol and detection limits of analysis between the laboratories. The other 10 vertical borings were drilled within 2 and 25 feet from the edge of the Tank 2 excavation.

   Whereas the "finger" theory of contaminant migration is plausible in a relatively permeable, homogenous medium, it is well documented in laboratory models that the influence of even the most subtle stratification (layers) within these materials interrupts such migration and causes lateral spreading of contaminants either through adsorption or perching (References 2, 3, 6, 13, 15, and 16, Appendix A). This evidence is observable in the soil of the 46± to 52.5± feet fine-grained layer and above where the high concentration plume exists. Although silty sand layers exist at depths beneath the deeper fine-grained layer, the evidence of such "fingers" being laterally distributed was not encountered in the borings. Therefore, it is highly unlikely that such "fingers" exist between our borings, especially with the high density of borings, samples, and the stratification that is present, which would allow the detection of such fingers if they existed below the deeper fine-grained layer at 46± to 52.5± feet below ground surface (personal communication, Dr. John Cherry).

2. Source(s) of TPH at Depth - Low level hydrocarbons reported as TPH (<<50 ppm) have been encountered below the deeper fine-grained layer to 120 feet beneath the Tank 2 site as well as in Boring LB-104 located approximately 400 feet northeast of the tank site. The RWQCB also informs us that another site in the general area, but still a considerable distance from the HR Textron Pacoima facility, also encountered a widespread low level TPH condition. Further, trends in TPH concentration level either increasing toward or decreasing away from the Tank 2 site has not been recognized. We know of no mechanisms of migration of TPH which could be attributed to the Tank 2 contamination as source of this widespread contamination. We have not observed a decrease of TPH concentration with distance from the source nor increases in TPH concentrations in coarser material at distances away from

the source. Other sources in the general vicinity include: two major landfills immediately adjacent to the subject site and to the east; widespread industrial usage in the area; and naturally occurring organics within the alluvium (valley fill) indigenous to this general area. Samples collected in Boring LB-102 at 30.5 feet below the former tank area (within the high TPH concentration zone) and in a composite sample from 70 to 85.5± feet (considerably below the high concentration zone) were analyzed by Global Geochemistry Corporation laboratory in order to identify the specific signature (or species) of TPH.

Based upon their evaluation, they reported that the hydrocarbons detected in low concentrations (10 mg/kg), from 70 to 85 feet below ground surface, are generated from organic material, similar to the hydrocarbons found in high concentration (approximately 10,000 mg/kg) below the tank location (at 30.5 feet below ground surface). The organic source for these types of hydrocarbons is predominantly associated with a marine depositional environment, along with some contribution of terrestrial derived plant debris. Marine and non-marine sedimentary rocks have been mapped in the surrounding hillsides up gradient of the subject site.

We are currently performing a similar laboratory test on samples collected in Boring LB-104 from 70 to 105 feet below ground surface in order to substantiate the source of organic matter at that location. It is unlikely that organic matter in Boring LB-104 originated from the Tank 2 source. Findings from that laboratory testing will be provided in a future letter.

We therefore conclude that numerous sources (contamination or naturally occurring) could exist in the vicinity of the HR Textron Pacoima facility which could have caused the widespread, low level TPH at depth onsite. The least likely source of such widespread presence of TPH could be related to the leak which occurred at the former Tank 2 site.

3. Volatile Organics in Soil Samples from Boring LB-3 - Volatile organics were previously reported in soil samples from Boring LB-3 at 43, 48, and 68 feet below grade. The halogenated organic compounds which were detected were 1,1,1-trichloroethane (1,1,1-TCA) and methylene chloride. As required by California Department of Health Services protocol, a split sample at 43 feet from Boring LB-3 was tested at ATI and there was no 1,1,1-TCA reported. CRL did not test any duplicate samples. It was our conclusion then that the CRL findings were not confirmable thus invalid. Methylene chloride is a common solvent used in analytical laboratories and a common source of laboratory impurifications.

   Two borings (LB-103 and LB-103A) were drilled and sampled in the vicinity of Boring LB-3 to verify previously reported data by CRL. The chemical data are summarized in Tables 1 and 2. Soil samples were collected at 50 to 68 feet and 43, 48, and 68 feet from Borings LB-103 and LB-103A, respectively. These soil borings were located laterally about 2± feet from the soil samples which were suspect in Boring LB-3. The results from the second confirmation samples indicated the following:

a. In the verification samples collected at 43± feet in Boring LB-103A, the following organic compounds were detected: 1,1,1-TCA and toluene, reported by CRL and no halogenated volatile organics detected by ATI. (It should be noted that the detection limit for EPA Test Method 8240 by CRL was 0.005 milligrams per kilogram and 0.05 milligrams per kilogram by ATI.)

b. CRL reported in the verification samples at 48± feet from Boring LB-103A the presence of 1,1,1-TCA, 1,1,2-TCA, toluene, 1,1-Dichloroethene, and 1,2-Dichloroethane. ATI did not detect halogenated volatile organics in this sample.

c. In the verification samples at 50± feet from Boring LB-103, ATI reported 1,1,1-TCA, while CRL reported the presence of 1,1,1-TCA, 1,1,2-TCA, toluene, 1,1-Dichloroethene, 1,2-Dichloroethane and 1,1-Dichloroethane. (It should be noted that 1,1-Dichloroethene, 1,1-Dichloroethane, and 1,2-Dichloroethane could be from external sources-contaminants released into the soil, or result of the biodegration process of 1,1,1-TCA.)

d. No 1,1,1-TCA was detected by ATI (October 10, 1988) in the verification samples at 68± feet from Boring LB-103A; while CRL reported the presence of toluene, acetone, ethylbenzene, and total xylenes in their sample for Boring LB-103A.

Comparing the data from Boring LB-3 at 43, 48, and 68 feet to the data from Borings LB-103 and LB-103A, the confirmation data from both laboratories indicates the presence of 1,1,1-TCA in the sample at 50 feet in Boring LB-103 and confirms the absence of methylene chloride as previously reported by CRL. The report of acetone and total xylenes in only one sample may be attributed to laboratory handling of the samples, as these were detected in reagent blanks, at trace level. The presence of toluene is at trace levels (0.009 to .027 mg/kg); these levels are well below the 1,000 mg/kg level which is the acceptable cumulative soil contamination level for protection of ground water for Pacoima site specific conditions (DHS Luft Manual, page 35, 1988).

4. Ground Water Quality - Low levels of chlorinated hydrocarbons (<10 ug/l) were detected in the water sample collected from a well located 1.5 miles from the Pacoima facility. The water level in this well was recorded at a depth of 237 feet below ground surface. The only volatile organic compounds present in the water well were toluene and 1,1,1-Trichloroethane at concentrations of 9 and 7 micrograms per liter (ug/l). These concentration levels are well below the Department of Health Services (DHS) recommended action levels of 100 and 200 ug/l for these two components, respectively. Tetrachloroethene (PCE) and trichoroloethene (TCE) were not detected in this water sample. This well is located in the general downgradient direction from the site. Major industrial development exists between the Pacoima facility and this downgradient well, therefore the source of the VOC in the well is not known.

5. Lateral and Vertical Limits of the Vadose Soil Contamination Zone - Six of the additional soil borings (LB-100, LB-101, LB-102/102A, and LB-103/103A) were drilled in and adjacent to the Tank 2 site to further evaluate the lateral and vertical extent of the vadose contamination zone (see Plate 3).

The subsurface geology is presented in Cross-Section DG-DG' (Plate 1) and the results of the soil vadose contamination is presented in Plate 2. Selected soil samples were chemically analyzed for their content of TPH and VOCs by EPA Test Methods 418.1 and 8240, respectively. High levels of TPH and low levels of halogenated volatile organics were reported in Boring LB-102 to a depth of 52.5± feet below ground surface. This contamination zone was not encountered in Borings LB-100 and LB-101. Trace levels of TPH and VOCs were reported in soil samples from Borings LB-103/103A to a depth of 50 feet below ground surface (this location is in the upper portion of fine-grained soil layer). Low level TPH concentration is encountered in all borings drilled, even Boring LB-104 located 400 feet northeast of the Tank 2 excavation. The vadose contamination zone associated with the former underground tank has been defined to the west, to the north, and to the east and to a depth of 46± to 52.5± feet below ground surface, apparently it extends vertically to the fine-grained silty clay layer.

Conclusions

The following conclusions are presented in order of the issues presented previously and based upon the findings developed during both this and the previous phase of investigation:

1. The presence of contamination "fingers" in the vicinity of Tank 2 beneath the fine-grained layer located at a depth of 46± to 52.5± feet is unlikely in that such contamination was not confirmed by the split samples submitted to ATI and CRL.

2. Widespread, presence of low level TPH appears to have originated from a regional source rather than a localized source. A means of migration to allow movement of the TPH contamination from the Tank 2 site at least 400 feet laterally to the northeast at Boring LB-104 location where low levels of TPH were encountered is unknown. Further, similar offsite conditions of TPH contamination several miles from the site have been recognized.

3. It is apparent that the presence of the fine-grained layer at approximately 46± to 52.5± feet below the ground surface has served as an effective barrier to the vertical migration of contaminants originating from the former tanks. VOCs previously identified in Boring LB-3 at 68 feet below grade and suspected as erroneous due to laboratory impurification were confirmed as invalid by additional Borings LB-103 and LB-103A located less than 4 feet from the Boring LB-3.

4. A water sample from a well 1.5 miles south of the subject facility did not contain TCE or PCE as suspected by the RWQCB nor did it contain TPH. Toluene and 1,1,1-TCA were encountered at concentrations slightly above the detection limit of laboratory equipment in the water table represented by the water sample downgradient, but the source of such contaminants is unknown. There is industrialization between the Pacoima facility and the downgradient water well.

5. The lateral and vertical limits of the high concentration zone above the fine-grained layer located at a depth of approximately 46± to 52.5± feet has been clearly defined by the Phase II subsurface borings. The limits of this contamination are identified on Plate 3.

General Conclusion

It is our opinion that the data collected to date at the HR Textron Pacoima facility identifies a high concentration TPH and VOC zone currently contained by a fine grained layer within the alluvium to approximately 52.5± feet beneath the ground surface. We also conclude that the data substantiates that widespread, low-level presence of TPH exists and that this is the result of a broader source, rather than from the leak at the Tank 2 area. The most likely source of low level hydrocarbons identified as TPH appears to be either naturally occurring organics and/or the adjacent landfills. We therefore recommend that future efforts be directed toward mitigation of the VOC/TPH zone in and above the fine-grained layer located approximately 46 to 52.5± feet. Remediation of chlorinated hydrocarbons in the vadose zone can be effectively addressed by a soil vent system. Based on locations and depths of chlorinated hydrocarbon concentration, borings will be placed and cased with 3-inch PVC slotted pipe. The vent pipe(s) will be joined at a manifold which is pumped to a vacuum pump. The pump will draw a vacuum on the vent pipes to extract the chlorinated hydrocarbons and direct the vapors to a carbon adsorption system to recover the chlorinated hydrocarbons. It is anticipated that the vent system will also remove the light fractions of the TPH in the vadose.

The soil vent system will be fabricated on a concrete pad that will cover the former tank area. This cover will serve to further reduce potential degradation of ground water by reducing water infiltration into the subsurface.

1.0 INTRODUCTION

1.1 Background

Since 1966, the HR Textron, Pacoima facility, has been located at 10445 Glenoaks Boulevard in Pacoima, California (see Index Map, Figure 1). Three underground tanks were installed at two locations at the facility in 1966. As part of the 1984 Los Angeles County Leak Detection Program (LDP) HR Textron evaluated the integrity of these underground tanks. Soil contamination was detected in several soil borings associated with the Tank 2 site. No soil contamination was detected in the boring drilled adjacent to the Tank 1 site. Beginning in January, 1985, subsurface investigations have been focused on evaluating the extent of soil contamination associated with the two former 1,000-gallon underground storage tanks at the Tank 2 site. These studies are summarized in earlier reports (References 7 through 10, Appendix A). The two underground tanks at the Tank 2 site were removed on January 29, 1985.

The scope of L&A current study is based on the results of previous investigations and discussions at three meetings with HR Textron and the RWQCB between June 15 and July 7, 1988.

1.2 Scope of Investigation

This investigation is divided into several discrete tasks:

- Literature review of reported occurrence of contaminant "fingers".
- Subsurface field exploration program in the vicinity of the Tank 2 excavation to define the high level soil contaminant zone boundary.
- Resampling and verification of the chemical analyses of soil samples adjacent to Boring LB-3.
- Collection and analysis of ground water sample from the nearest available downgradient well to the site.
- Evaluation of the presence of low level TPH below the deeper fine-grained layer (a depth of 46± to 52.5± feet) below the tank excavation.
- Data analysis and report preparation.

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INDEX MAP

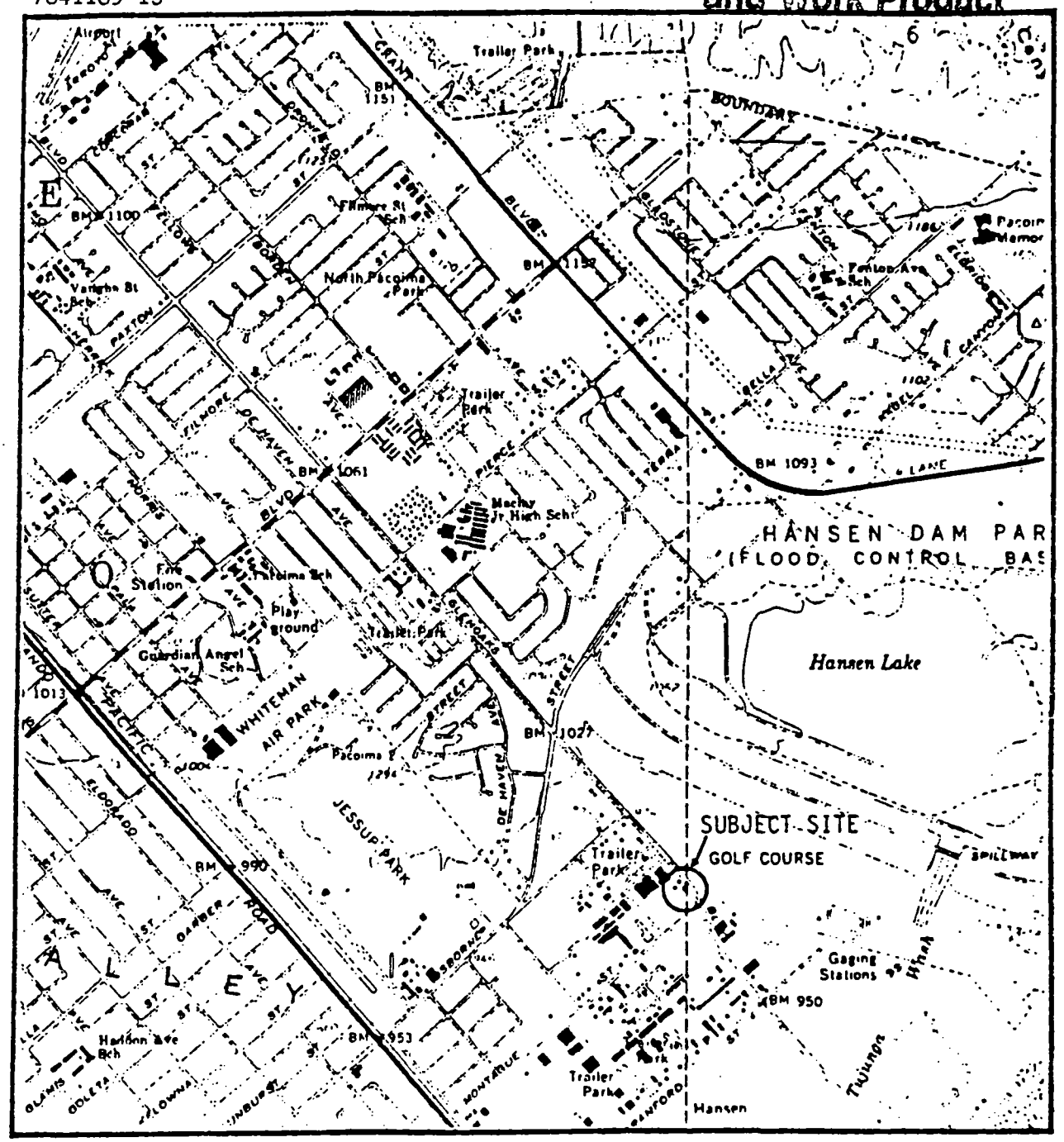

FIGURE 1

H. R. TEXTRON

10445 GLENOAKS BOULEVARD

CITY OF PACOIMA

(Subject Site Shown in Yellow)

Base Map: USGS San Fernando Quadrangle (1966)
Photo revised 1972

2.0 FIELD PROGRAM

2.1 Soil Boring Program

On September 13, 1988, HR Drilling, Inc., of Anaheim, California began drilling the Boring LB-103. A total of seven borings (LB-100, LB-101, LB-102/102S, LB-103/103A, and LB-104) were drilled and the locations of these and previous borings are shown on Plate 1. Copies of the borings logs are presented in Appendix B.

A detailed description of field procedures is presented in Appendix C. Boring LB-103A was drilled and sampled at depths approximately 43, 48, and 68 feet below ground surface to reevaluate the occurrence of halogenated volatile organics which were present in the soil samples at these depths in Boring LB-3 as analyzed by Chemical Research Laboratories, Inc. (CRL). Boring LB-103 was drilled for the same reason and samples were collected from 38 to 68 feet below grade. Borings LB-100 and LB-101 were drilled northwest and northeast of the excavation to evaluate the lateral extent of the contaminant plume. A natural obstruction was encountered at depths of 116, 120, 121, and 115 feet in Borings LB-100, LB-101, LB-102A, and LB-104, respectively.

Prior to drilling Borings LB-102/LB-102A, the tank excavation walls and bottom were lined with a polyethylene liner and then backfilled with clean fill-sand. These borings were drilled in the center of the excavation to evaluate the vertical extent of the soil contamination plume beneath the former tanks. A 20-foot piece of steel casing was grouted in-place prior to deep drilling of both borings (LB-102/LB-102A) to minimize migration of down hole contamination with the overlying clean fill sand. At approximately 90 feet below the surface, a section of the drilling auger was twisted off in Boring LB-102 and the boring was terminated and backfilled with a cement/bentonite grout by the tremie method. Boring LB-102A was drilled to a depth of 90 feet below surface, continuously sampled to 121 feet, and terminated at this depth due to refusal.

Boring LB-104 was drilled approximately 400 feet northeast of the Tank 2 excavation near Glenoaks Boulevard and sampled at 10-foot intervals. This boring was located at the same approximate distance away from the Ledger landfill as Boring LB-102, in order to evaluate the presence of the low level TPH previously documented in earlier borings found to occur at depth below the lower fine-grained layer (46± to 52.5± feet) and laterally away from the tank excavation.

Selected soil samples from Borings LB-100, LB-101, LB-102/102A, and LB-104 were chemically analyzed by Analytical Technologies Laboratory (a DHS certified laboratory) in San Diego, California. In addition, selected soil samples from Borings LB-103 and LB-103A were sent to CRL for chemical analysis in order to evaluate the previous discrepancies between ATI and CRL analysis of the samples from Boring LB-3. Soil samples were analyzed for TPH by EPA Test Method 418.1 and Volatile Organics by EPA Test Method 8240. The results of laboratory analyses are presented in Table 1. Previous laboratory analyses are presented in Table 2. It should be noted that the two laboratories utilized different procedures for extraction of the soil samples and the results might not be comparable.

2.2 Local Subsurface Conditions

A total of 13 borings have been drilled at the site adjacent to and within the Tank 2 excavation (Plate 3). These borings range in depth from 38 to 120 feet.

The stratigraphic sequence underlying the subject site is a thick sequence of unsaturated stream deposits. These deposits consist mostly of loose and unconsolidated, poorly sorted, alternating layers of coarse sands, silty sands, and clays as illustrated in Plate 2. The source of this material is the surrounding hill sides and mountains which consist of Tertiary marine and non-marine sedimentary rocks and older crystalline bedrock.

Three sand layers have been identified and were encountered at depths of 12 to 20 feet, 30 to 35 feet, and 45 to 50 feet below grade (see Plates 2 and 3). The thickness of these sands range from 9 to 20 feet, 11 to 19 feet, and greater than 52.5 feet thick, respectively. These sands range from very fine- to coarse-grained with the finer silty sands being encountered in the upper portions of each sand layer. The deeper coarse sand layer (greater than 52.5 feet below grade) becomes progressively coarser with depth and appears to grade into the underlying cobble/boulder bed. The top of this continuous cobble/boulder bed begins at 110± feet below grade. Drilling rates and sample recovery dropped considerably in this very coarse zone.

Interbedded in these sands are two fine-grained clay layers, except for Boring LB-100 which encountered a clay localized layer of 2± feet in thickness at a depth of 10 to 15 feet below grade. The first continuous clay layer was encountered at a depth of 20 to 23 feet below grade and has a thickness of 3 to 9 feet. The second fine-grained layer consisting of a fine sandy, silty clay was found at depths of 46.5± to 52.5± feet below grade. Thickness of this fine-grained layer ranges from 2 to 4 feet. These clays were observed to be reddish-brown, scattered, thin, discontinuous lenses of course sands and granules.

No indication of refuse fill material was encountered in the borings drilled during this phase of our investigation. On the adjacent property to the southeast, indications of the presence of an fill materials have been observed. This evidence included brick and asphalt debris present in the southeast wall of the tank excavation, brick, and wire cable present from 5 to 8 feet below grade in Boring TH-1 located southeast of the excavation on the adjacent property. Other evidence for a landfill located on the adjacent property in the lack of a complete stratigraphic sequence in Borings TH-1 and TH-2 as observed in the L&A boring.

2.3 Ground Water Sampling Program

A review of water well information in the subject area (3-mile radius of the subject site) revealed that the majority of the wells had been abandoned or were too shallow to collect a ground water sample which would be representative of conditions anticipated beneath the Pacoima facility. Upgradient wells were also found to be too shallow (<40 feet in depth) or

located at distances of at least 5 miles away from the Pacoima facility and therefore not acceptable to use. The available downgradient well to sample was Los Angeles County Flood Control District (LACFCD), Well Number 4905K.

On September 22, 1988, a ground water sample was collected from this well (4905K). The monitoring well is located within the Hansen Spreading Grounds and is currently used by the County to monitor water levels within the spreading grounds. This well has a total depth of 352 feet below grade and is screened from 290 to 330 feet below grade. A water level of approximately 240 feet was measured using the wetted rope method. Approximately 40 gallons of water were purged from the well by hand bailing with a stainless steel bailer. This purged ground water is stored in a 55-gallon Department of Transportation (DOT) approved drum on the LACFCD's property for proper disposal.

A ground water sample was collected using a stainless steel hand bailer. The samples were placed in 40 ml VOA glass viles and then stored in an ice-chilled cooler and transported by courier to a California Department of Health Services approved laboratory (ATI - Lab Certification #129). The ground water sample was analyzed by EPA Test Methods 418.1, 624, and 8015 (modified). These methods test for TPH, VOC, and petroleum hydrocarbons, respectively. A more detailed description of our field procedures is presented in Appendix C. Copies of the chain-of-custody form and laboratory results are presented in Appendices D and E.

3.0 THE FINGER "TENTACLE" THEORY

In a meeting with the RWQCB on June 17, 1988, it was postulated by the RWQCB that during the downward percolation of the contaminants, contaminant fingers may have been formed. These fingers may have preceded the bulk of the contaminant plume and reached the ground water. It was questioned by the RWQCB whether these fingers exist and were undetected by our previous investigations. In this section, a brief literature review on formation and finger movement characteristics is given. The literature review is followed by our analysis of the data obtained during this investigation and our conclusion regarding the existence of contaminant fingers at the Pacoima site.

3.1 Fingering Effects

Fingers (or tentacles) are preferential migration pathways which exist when a nonwetting fluid (nonaqueous phase liquids, organic solvents, hydrocarbons, etc.) displaces a wetting fluid (e.g., water) (Reference 13, Appendix A) or vice versa (Reference 6, Appendix A). At the Pacoima site, the invading fluids are organic solvents which displace air and moisture in the soil. The "tentacles" are referred to as "fingers" in most technical references, and therefore the word "fingers" will be consistently used throughout this report.

3.1.1 Formation of Fingers

According to information available in literature, the formation of fingers is due to viscosity contrast between invading and resident fluids, and heterogeneities in soils.

In essence, viscosity contrast between fluids causes the interface of fluids to be distorted, leading to subsequent formation of fingers (References 3 and 11, Appendix A). Local heterogeneities in soils (e.g., variation of hydraulic conductivity) have also been experimentally demonstrated to be a cause of finger formation (Reference 6, Appendix A).

3.1.2 Movement of Fingers

It has been shown by several investigators, based on laboratory evidence, that several movement characteristics exist. These characteristics are summarized below:

- Longitudinal Movement - This movement corresponds to the movement direction of the bulk of the contaminant, as shown in Figure 2 (Reference 2, Appendix A).

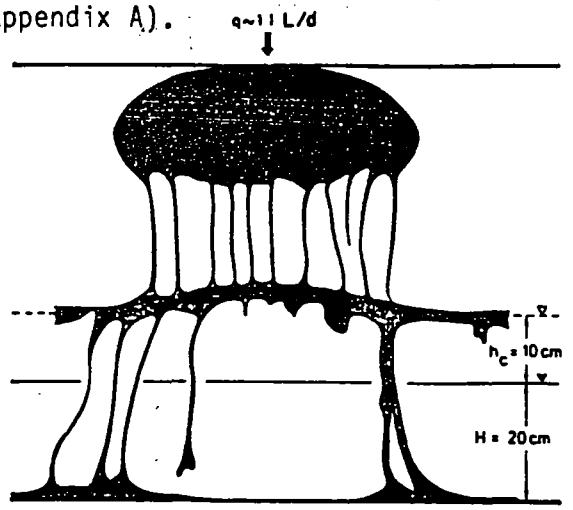

FIGURE 2: Fracture model experiment with PCE during infiltration. Hydraulically smooth condition and c=0.1 mm (Schwille,1988)

- Lateral Movement - Fingers can also move laterally due to local pressure field as shown in Figure 2 (Reference 2, Appendix A).

- Finger Degeneration - Several neighboring fingers tend to merge into one finger as they travel (Reference 6, Appendix A). An example of this observations are shown in Figure 3.

3.2 Existence of Fingers at the Pacoima Site

At the Pacoima site, the conditions that could lead to the formation of fingers exist, viscosity contrast, and soil heterogeneity. A total of 13 borings have been drilled in and adjacent to the former Tank 2 area. Soil heterogenities in the subsurface were encountered in the soil borings drilled at the Pacoima site. These heterogeneities would be expected to cause localized lateral spreading of the contaminants, especially in the fine-grained layer encountered between 46 to 52.5 feet. Contaminant fingers would form beneath this fine-grained layer and would have been encountered in the borings which extend 65± feet beneath this layer. These borings extend up to 65± feet beneath the high concentration contamination zone and such "fingers" were not encountered. One of these borings, Boring LB-1 (see Plate 1), was drilled at an angle of 23 degrees from vertical and through the center of the tank excavation along with vertical Borings LB-102/LB-102A. Data collected during this investigation have indicated that the elevated zone of contamination is limited to the general area below the tank excavation. Both ATI and CRL reported the presence of 1,1,1-TCA in the split soil samples from the upper portion of this fine-grained layer (i.e., at 50± feet). The other 10 vertical borings were drilled within 2 and 25 feet from the edge of the Tank 2 excavation.

Based on the data collected to date from the close spacing of the borings, our knowledge of the subsurface stratigraphy and the results of the chemical analysis, we believe that the existence of contaminant "fingers" below the fine-grained layer at a depth of 46± to 52.5± feet is improbable.

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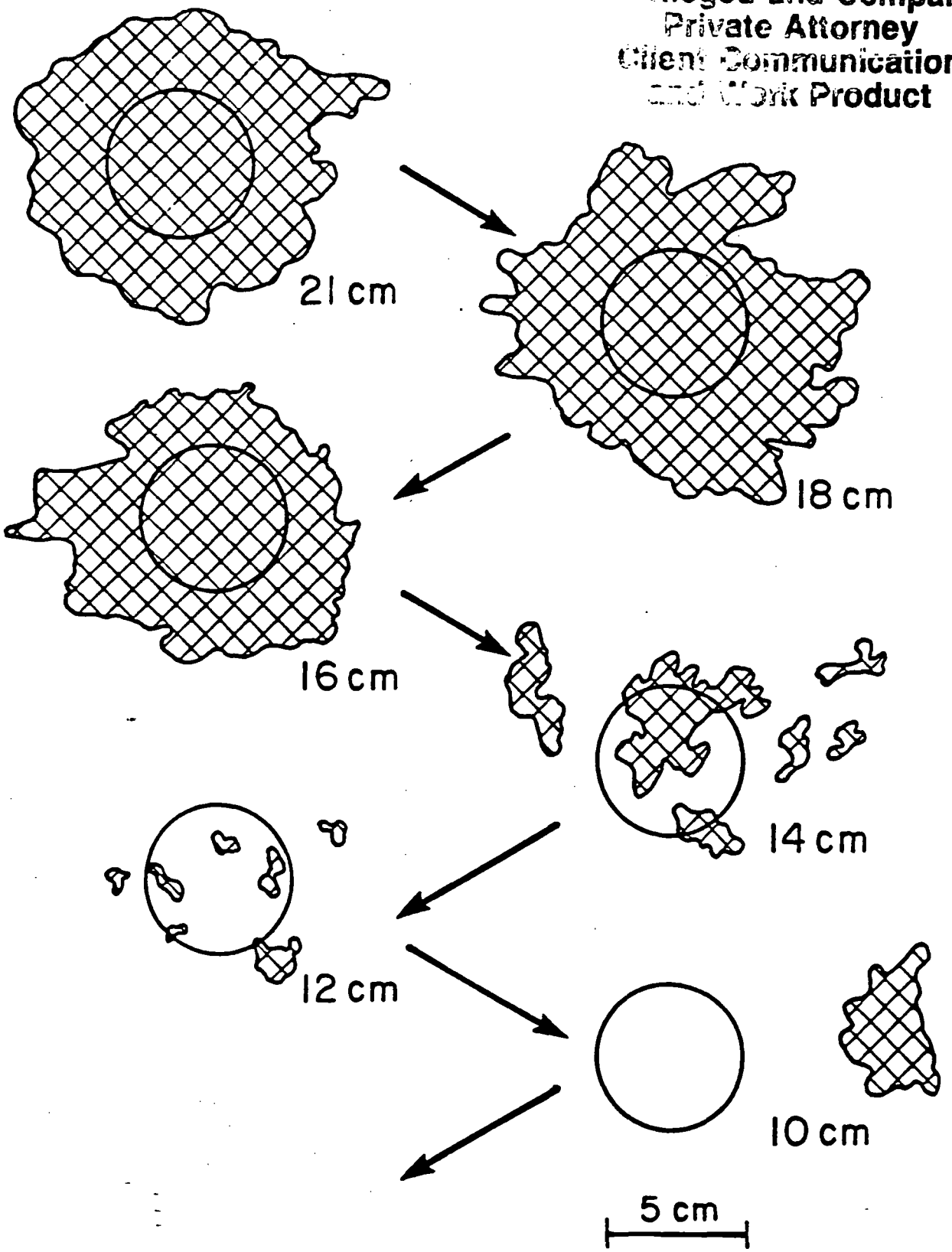

FIGURE 3: Infiltration of PCE into a tank of medium sand($K=8\times10^{-4}$m/s) under drainage conditions. The circles represent the area of the spill at the surface. The numbers indicate the distance above the water table. (Taken from Anderson,1986, Experiment 10)

4.0 SUMMARY OF CHEMICAL ANALYSIS

Selected soil samples collected from the seven borings drilled during this investigation were analyzed for their TPH and volatile organic concentrations by EPA Test Methods 418.1 and 8240, respectively. These data are summarized in Table 1. The chain-of-custody forms and laboratory results are found in Appendices D and E, respectively. The results of the laboratory analyses are discussed below.

4.1 Volatile Organics in Soil Samples from Boring LB-3 Location

Borings LB-103 and LB-103A were drilled to verify the accuracy of analytical data reported on samples collected from Boring LB-3 in January 1988. The concern was for halogenated hydrocarbons present in samples taken at 43, 48, and 68 feet below grade. Split samples from Borings LB-103 and LB-103A and samples from various levels in Boring LB-3 (collected in January, 1988) were analyzed by CRL and ATI. These samples collected for this phase of the investigation were analyzed by EPA Test Method 8240. In January 1988, CRL used EPA Test Method 8010 (for Volatile Halogenated Organics) while ATI used EPA Test Method 8240 (for Volatile Organics). EPA Test Method 8240 overlaps Method 8010. In the samples collected from Boring LB-3, analyzed by CRL, they reported the presence of 1,1,1-TCA at depths of 43, 48, and 68 feet below grade at concentrations of 0.1, 0.1, and 0.7 mg/kg, respectively. Methylene chloride with concentrations ranging from .10 to 0.15 mg/kg was also reported at different depths. CRL attributed the methylene chloride to be the result of laboratory impurification. ATI reported from samples collected from Boring LB-3 (i.e., at 43, 53, and 73 feet) that methylene chloride and 1,1,1-TCA were "not detected". The presence of toluene only in samples at 23 and 93 feet below grade, at 0.13 and 0.05 mg/kg, respectively was considered "laboratory anomaly".

In September, 1988, CRL and ATI received split samples from depths of 35, 50, 53, 54.5, 56, 68 feet collected in Boring LB-103. CRL reports using EPA Test Method 8240 without the methanol extraction step while ATI reported using the same method but with methanol extraction. CRL stated their procedures, which are within the EPA Test Method 8240, resulted in a lower detection limit than the method (EPA Test Method 8010) they previously used in January, 1988. ATI reported a detection limit of 0.05 mg/kg for halocarbons of interest in this investigation while CRL's report for the same compounds of detection limit of 0.005 mg/kg.

CRL reported the presence of 1,1,1-TCA only at depths of 35, 50, and 56 feet below grade at .016, .150 and .020 mg/kg (ppm) in Boring LB-103, while ATI reported this chemical only at 50 feet in concentration of .100 mg/kg (ppm). The difference could be related to differences in procedures and limit of detection. The presence of 1,1-dichloroethane, 1,1,2-trichloroethane, and 1,1-dichloroethene was reported by CRL in the 50 feet sample at .038, .013, and .009 ppm. ATI reported "not detected" for all these compounds in this sample. Additional, anomalies in the analytical data include: CRL reported presence of toluene at 50, 54.5, and 56 feet all in the .020 to .027 ppm range, while ATI reported not detected (in January ATI reported toluene and

CRL - "not detected"). ATI reported trichloroethene at 54.5 feet at 0.05 ppm (detection limit) and both trichloroethene and tetrachloroethene at 56 feet at 0.10 ppm. In these sample CRL (claiming better detection limit) reported not detected any of these.

Both laboratories received samples from 43, 48, and 68 feet below grade from Boring LB-103A. The discrepancy in results is similar to those from Boring LB-103. CRL reported at 43 feet depth the presence of 1,1,1-TCA .007 ppm and toluene .015 ppm; at 48 feet they reported carbon disulfide .019 ppm, 1,1-dichloroethene .040 ppm, 1,2-dichloroethane .014 ppm, 1,1,1-TCA .240 ppm, 1-1-2-TCA .014 ppm, toluene .024 ppm; at 68 feet below grade they reported acetone .012 ppm, toluene .009 ppm, ethylbenzene .009 ppm, and total xylenes .034 ppm. ATI reported in all samples "not detected" for these components and other volatile organics. The carbon disulfide and acetone used in the extraction procedures of many test methods are most likely laboratory impurifications.

Leighton and Associates, Inc., requested a reanalysis by ATI for samples with reported TCE and PCE. The result of the confirming test performed on October 10, 1988, reported no TCE or PCE present.

4.2 Vertical and Lateral Extent of Soil Contamination Associated with Tank 2 Site

The Borings LB-100 and LB-101 were drilled to define the horizontal and vertical limits of the major TPH and VOC zone of soil contamination. Both were sampled to a depth of 110 and 111 feet below grade. All samples collected were analyzed by EPA Test Method 418.1 for TPH and EPA Test Method 8240 for volatile organics by ATI. Both these borings appear to be located beyond the elevated soil contamination zone limits as all the samples show a very low concentration of TPH (in the range of 2 to 5 ppm) which is considered at background level; volatile organics were not detected (detection limit by ATI 0.05 mg/kg).

The Borings LB-102 and LB-102A were drilled within the limits of excavation (see Plate 2). Boring LB-102 was sampled from 20 to 85 feet below grade, while Boring LB-102A was sampled at 95 and 100 feet below grade. The samples were analyzed by EPA Test Method 418.1 for TPH and EPA Test Method 8240 for volatile organics by ATI. The concentration of TPH ranges from 8,000 to 17,000 mg/kg at depths from 20 to 52.5 feet below grade; below the depth of 52.5 feet the concentration of TPH decreased significantly and ranges from 4 to 7 mg/kg. Concentrations of 1,1,1-TCA ranged from 2 to 180 mg/kg below the base of excavation to 52.5 feet and was not detected at deeper depths. Tetrachloroethene (0.1 to 8 mg/kg) and toluene (0.07 to 4 mg/kg) were detected in samples collected from 20 to 52.5 below grade but no volatile organics were detected below 52.5 feet. This sharp decrease can be related to the assumption that the presence of the fine-grained layer at that depth (46± to 52.5± feet) may act as a barrier to contaminants vertical movement, at this point in time.

Soil samples collected at 10-foot intervals from Boring LB-104 were analyzed for their TPH content by EPA Test Method 418.1. This boring is located 400 feet northeast of the former underground tanks and is located approximately 40 feet north of the Ledger landfill. TPH concentrations ranged from 1 to 10 mg/kg in all samples from 10 to 120 feet below ground surface.

4.3 Nature of TPH Contaminants

Soil sample collected from Boring LB-102, from 30.5 feet below grade and a composite sample of soil collected from 70 to 85.5 feet below grade were sent to Global Geochemistry Corp. (GCC), a laboratory specialized in determining the nature of hydrocarbons in soil. The low concentration of hydrocarbons in the samples at 70, 80, and 85 feet required a "combined sample of the three" to obtain sufficient "extract" similar to the TPH concentrations as reported by EPA Test Method 418.1. The "extract" from the 30 feet sample was sufficient for the test due to high level of hydrocarbons in this sample. The "extracts" were studied by mass spectroscopy and by carbon isotope techniques in order to define the nature of the hydrocarbons in each extract, the functional groups and structure (the detailed report is presented in Appendix F). Based upon GCC evaluation, they reported that the source of organic matter for hydrocarbons detected in low concentration (10 mg/kg), from 70 to 85.5 feet below ground surface, is similar to the starting organic matter from which they are generated to the hydrocarbons found in high concentration (approximately 10,000 mg/kg) below the tank location (at 30.5 feet below ground surface). The type of organic source is predominantly associated with a marine environment, along with some contribution of terrestrial derived plant material. The hydrocarbons in the analyzed samples are typical of severely biodegraded crude oils. Although the "general pattern" is very similar for the 30 feet and the 70 to 85.5 feet below grade samples, and the high proportion of diasteranes in both samples supports the GCC conclusion that both samples suffered a severe biodegradation effect, there are some data in this report (referring to specific constituents), suggesting there are differences between the 30 feet and the 70 to 85.5 feet samples.

The chromatogram for the 30 feet sample shows visible peaks starting with C_{12} while the deeper sample chromatogram shows the first peak for i-C_{16}; the lack of hydrocarbons in this interval C_{12}-C_{16} for the 70 to 85.5 feet sample supports the conclusion that the deeper sample (70 to 85.5 feet) suffered a more severe biodegration than the sample closer to surface (30 feet sample), assuming the origin of organic matter is the same in both samples.

The analytical data show the saturated hydrocarbons represent 75.0 percent in the 30 feet sample and only 61.0 percent in the 70 to 85.5 feet sample. As the saturated hydrocarbons are the "sensitive" ones to the biodegradation process, their concentration decreases with the extended biodegradation. In this case the higher concentration of saturates supports the assumption the sample at 30 feet below grade was less severely biodegraded than the deeper sample at 70 to 85.5 feet. Assuming the geological and climatic conditions are identical at these two depths at the Boring LB-102 location, these

analytical data suggests the organic matter closer to surface has been in the subsurface for a shorter period of time than the deeper sample. At the Pacoima site, the geological and climatic conditions are identical for both samples.

The Alkane Parameters are used as an indicator to estimate the length of time the petroleum distillates have been in the subsurface. In this case we have to compare a "heavy-end petroleum distillate" in the 30 feet sample versus "organic matter of unknown source" in the 70 to 85.5 feet sample: in both samples the hydrocarbons are of similar organic origin. The Alkane Parameters include the following data:

- The peak ratio Phytane: Pristane; the value is 2.17 in the 30 feet sample versus 1.38 in the 70 to 85.5 feet sample.
- The peak ratio C_{17}: Pristane; this value is 2.42 in the 30 feet sample versus .92 in the 70 to 85.5 feet sample.
- The peak ratio C_{18}: Phytane; the value is 1.84 in the 30 feet sample versus 1.06 in the 70 to 85.5 feet sample.

The larger peak ratios of these constituents indicate less biodegradation of the product in the subsurface; as the aliphatics C_{17} and C_{18} biodegrade much faster than the alicyclic pristane and phytane. The higher values of Alkane Parameters for the 30 feet sample compared to the values of the 70 to 85.5 feet sample suggest the oil in the 30 feet sample has not been in the subsurface for an extended period of time as the deeper sample at 70 to 85.5 feet. This conclusion is in good agreement with the peaks of lighter hydrocarbons C_{12}-C_{16}, present in the 30 feet sample only.

4.4 Chemical Results of Downgradient Water Sample

A ground water sample was collected from water well 4905-K located approximately 1.5 miles southeast of the Pacoima facility. Well 4905-K is the closest well available for sampling. It is located in the Hansen Spreading Grounds which are maintained by the Los Angeles County Flood Control District. A water level was recorded at 237 feet below ground surface on September 22, 1988. The ground water sample was analyzed for TPH by EPA Test Methods 418.1 and Modified 8015 and for volatile organics by EPA Test Method 8240. TPH was not detected (0.05 mg/L detection limit; 1,1,1-trichloroethane was detected at 7 parts per billion (ppb) and toluene was detected at 9 ppb. TCE and PCE are not detected in this water sample. No other volatile organics were detected. Recommended state drinking water action levels for toluene is 100 ppb and for 1,1,1-trichloroethane is 200 ppb; thus the toluene and 1,1,1-trichloroethane concentrations are below action levels.

5.0 RECOMMENDATIONS

Based upon Leighton and Associates, Inc., findings and conclusions relative to the results of the investigations performed to date, Leighton and Associates recommends the following:

1. Develop and implement a remediation plan to treat the chlorinated hydrocarbon zone by installing an in situ soil venting treatment system. Capping the existing surface with a concrete pad to inhibit downward migration of rainwater which could cause the TPH zone to migrate downward. As part of the remediation program, additional borings may be necessary to asses the best locations for the soil treatment system.

2. Install three to four soil moisture units beneath the elevated oil and grease zone to detect migration below the depth of 52.5 feet.

3. Quarterly sampling of the downgradient Well No. 4905-K for TPH and volatile organics on a quaterly basis.

Should you have any questions or comments about this report, please do not hesitate to contact our office. We appreciate this opportunity to be of continued service.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

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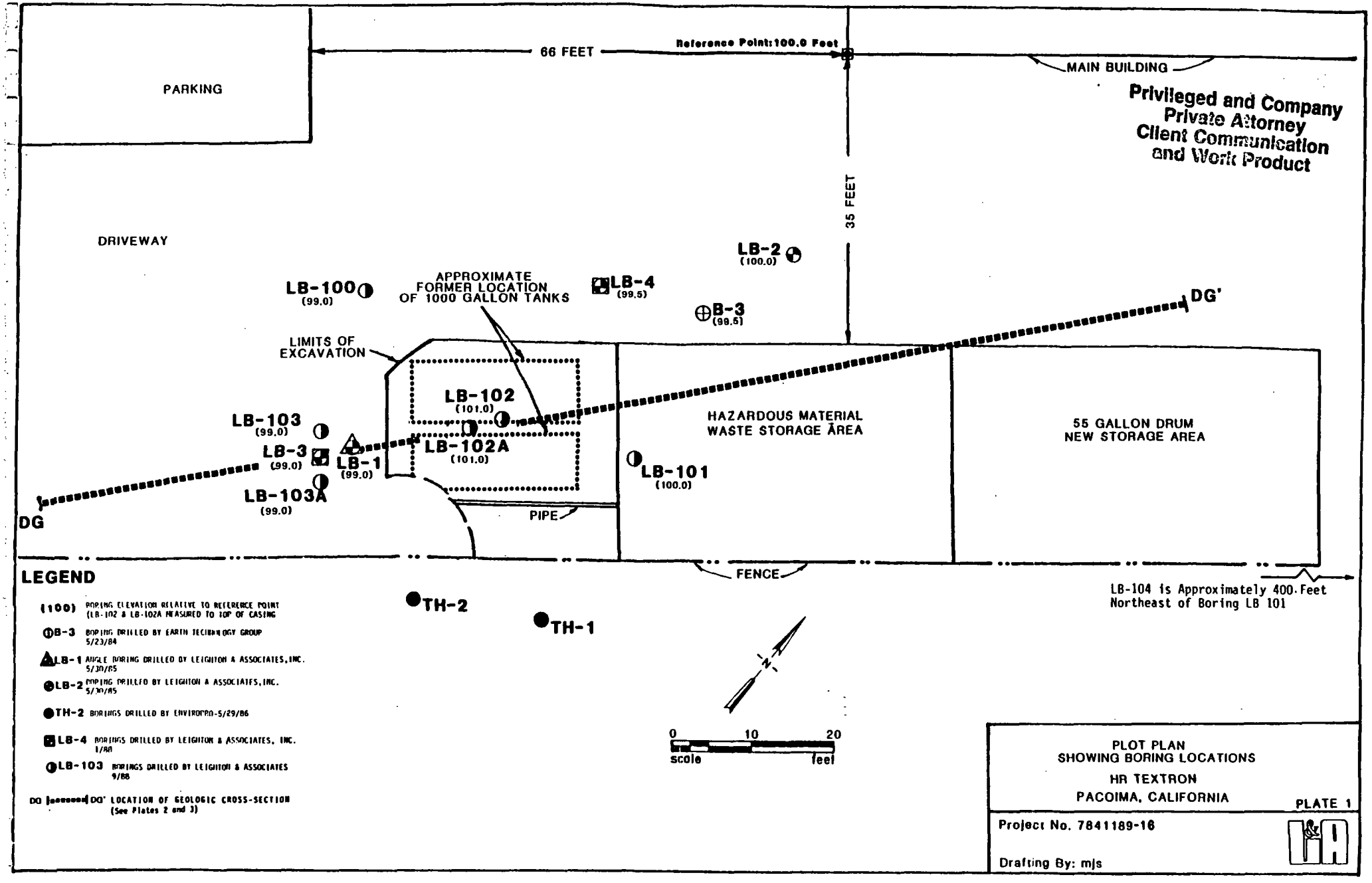
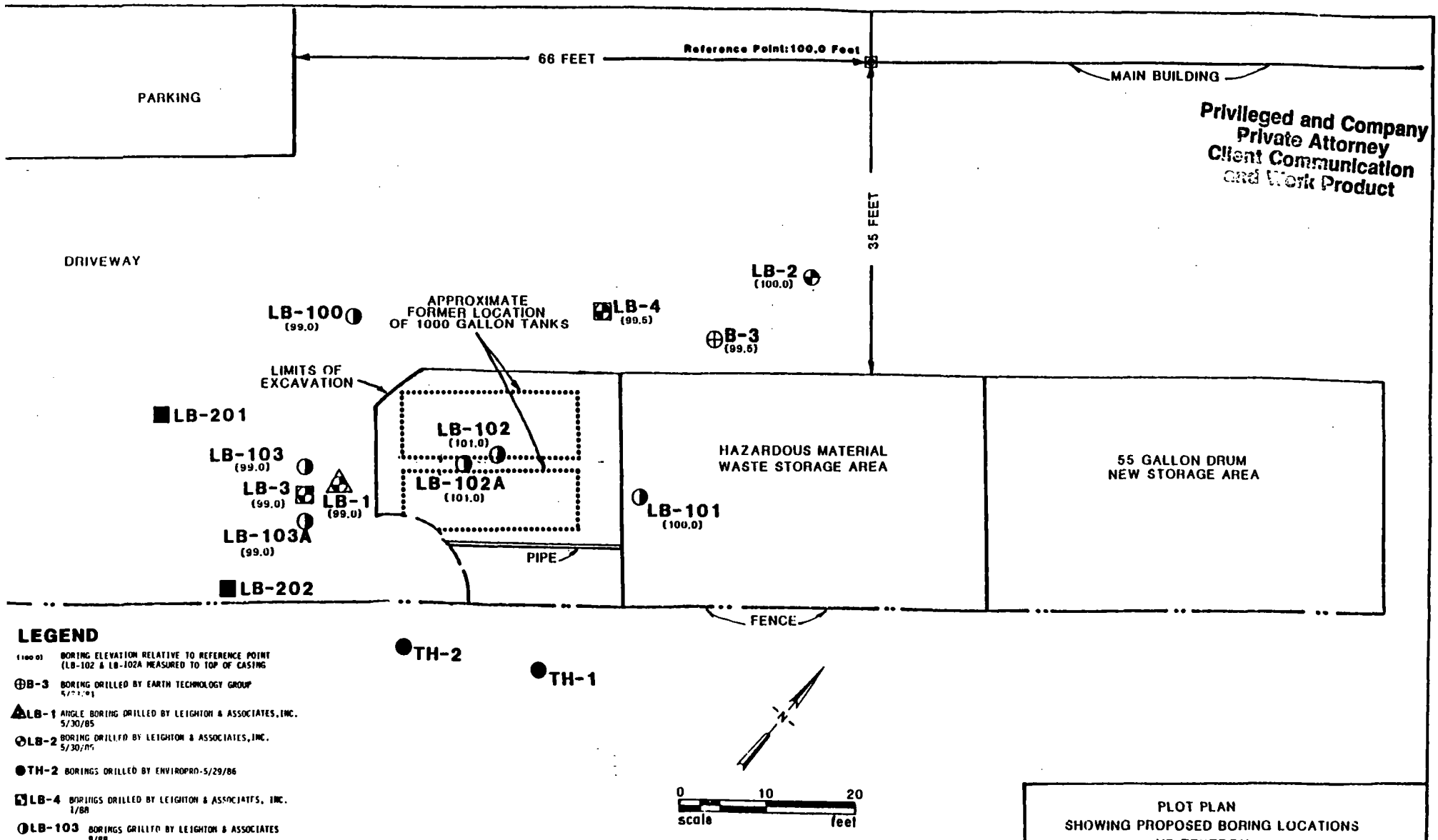


PLOT PLAN
SHOWING BORING LOCATIONS
HR TEXTRON
PACOIMA, CALIFORNIA

PLATE 1

Project No. 7841189-16

Drafting By: mjs



LEGEND

(100.0) BORING ELEVATION RELATIVE TO REFERENCE POINT (LB-102 & LB-102A MEASURED TO TOP OF CASING

⊕B-3 BORING DRILLED BY EARTH TECHNOLOGY GROUP 5/21/85

▲LB-1 ANGLE BORING DRILLED BY LEIGHTON & ASSOCIATES, INC. 5/30/85

◔LB-2 BORING DRILLED BY LEIGHTON & ASSOCIATES, INC. 5/30/85

●TH-2 BORINGS DRILLED BY ENVIROPRO-5/29/86

◪LB-4 BORINGS DRILLED BY LEIGHTON & ASSOCIATES, INC. 1/88

◑LB-103 BORINGS DRILLED BY LEIGHTON & ASSOCIATES 9/88

■LB-202 PROPOSED BORING LOCATIONS

PLOT PLAN
SHOWING PROPOSED BORING LOCATIONS
HR TEXTRON
PACOIMA, CALIFORNIA

PLATE 4

Project No. 7041188-10

Drafting By: mjs

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TABLE 1

SUMMARY OF CHEMICAL ANALYSIS
OF SOIL SAMPLES FROM BORINGS

HR Textron
Pacoima, California

				EPA METHOD 8240*										
Sample #	Depth (Feet)	Date of Sample	EPA Method 481.1 (TPH)*	1,1,1, Tri-Chloro-Ethane	1,1,2-Tri Chloro-Ethane	Tri-Chloro-Ethene	Tetra-Chloro-Ethene	Toluene	Acetone	Xylene Issomers	1,1 Di-Chloro Ethene	Ethyl-benzene	1,2-Di-Chloro Ethane	1,1 Di-Chloro Ethane
LB-100.9.5	9.5	9-13-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-20	20	9-13-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-31	31	9-13-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-40	40	9-13-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-51	51	9-14-88	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-60	60	9-14-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-69	69	9-14-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-81.5	81.5	9-14-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-90.5	90.5	9-14-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-100-101.5	101.5	9-14-88	3	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND
LB-100-111.5	111.5	9-14-88	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-5	5	9-15-88	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-15	15	9-15-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-25	25	9-15-88	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-35	35.5	9-15-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-40	40	9-15-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-45	44.5	9-15-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-46	46	9-15-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-48	47.5	9-15-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-49	49	9-15-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-51	51	9-15-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-57	57	9-15-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-60	60	9-16-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-70	70.5	9-16-88	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-80	81	9-16-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-90	90	9-16-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-100	100.5	9-16-88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-101-110	110.5	9-16-88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Milligrams per kilogram
NT = Not Tested

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TABLE 1

SUMMARY OF CHEMICAL ANALYSIS
OF SOIL SAMPLES FROM BORINGS (CONT.)

HR Textron
Pacoima, California

				EPA METHOD 8240*										
Sample #	Depth (Feet)	Date of Sample	EPA Method 481.1 (TPH)*	1,1,1, Tri-Chloro-Ethane	1,1,2-Tri Chloro-Ethane	Tri-Chloro-Ethene	Tetra-Chloro-Ethene	Toluene	Acetone	Xylene Issomers	1,1 Di-Chloro Ethene	Ethyl-benzene	1,2-Di-Chloro Ethane	1,1 Di-Chloro Ethane
LB-102-20	20	9-15-88	9,800	180	ND	ND	8	4	ND	4	4	ND	ND	ND
LB-102-26	26	9-19-88	8,300	110	ND	ND	6	3	ND	ND	0.6	ND	ND	ND
LB-102-35	35	9-19-88	9,100	60	ND	ND	4	1	ND	ND	ND	ND	ND	ND
LB-102-45	45	9-19-88	14,000	5	ND	ND	0.1	0.07	ND	ND	ND	ND	ND	ND
LB-102-46.5	46.5	9-19-88	17,000	100	ND	ND	3	2	ND	ND	ND	ND	ND	ND
LB-102-49	49	9-19-88	3,800	64	ND	ND	2.4	1	ND	ND	ND	ND	ND	ND
LB-102-50	50.5	9-19-88	1,200	2	ND	ND	0.1	0.08	ND	ND	ND	ND	ND	ND
LB-102-53	52.5	9-19-88	11,000	120	ND	ND	4	ND	ND	ND	ND	ND	ND	ND
LB-102-54	54	9-19-88	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102-65	65	9-19-88	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102-75	75	9-19-88	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102-85	85.5	9-19-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102A-95	95	9-23-88	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102A-100	100	9-23-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102A-110	110	10-04-88	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102A-115	115	10-04-88	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-102A-120	120	10-04-88	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-35A	35	9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-50A	50	9-13-88	NT	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-53A	53	9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-54.5A	54.5	9-13-88	NT	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-56A	56	9-13-88	NT	ND	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-68A	68	9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-35C	35	9-13-88	NT	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-50C	50	9-13-88	NT	0.150	0.013	ND	ND	0.027	ND	ND	0.009	ND	0.013	0.038
LB-103-53C	53	9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103-54.5C	54.5	9-13-88	NT	ND	ND	ND	ND	0.024	ND	ND	ND	ND	ND	ND
LB-103-56C	56	9-13-88	NT	0.020	ND	ND	ND	0.020	ND	ND	ND	ND	ND	ND
LB-103-68C	68	9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Milligrams per kilogram
NT = Not Tested

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TABLE 1

SUMMARY OF CHEMICAL ANALYSIS
OF SOIL SAMPLES FROM BORINGS (CONT.)

HR Textron
Pacoima, California

Sample #	Depth (Feet)	Date of Sample	EPA Method 481.1 (TPH)*	1,1,1, Tri-Chloro-Ethane	1,1,2-Tri Chloro-Ethane	Tri-Chloro-Ethene	Tetra-Chloro-Ethene	Toluene	Acetone	Xylene Issomers	1,1 Di-Chloro Ethene	Ethyl-benzene	1,2-Di-Chloro Ethane	1,1 Di-Chloro Ethane
				EPA METHOD 8240*										
LB-103A-43C	43	9-21-88	NT	0.007	ND	ND	ND	0.015	ND	ND	ND	ND	ND	ND
LB-103A-48C	48	9-21-88	NT	0.240	0.014	ND	ND	0.024	ND	ND	0.040	ND	0.014	ND
LB-103A-68C	68	9-21-88	NT	ND	ND	ND	ND	0.009	0.012	0.034	ND	ND	ND	ND
LB-103A-43A	43	9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103A-48A	48	9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-103A-68A	68	9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	.009	ND	ND
LB-104-10	10	10-3-88	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LB-104-20	20	10-3-88	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-104-30	30	10-3-88	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LB-104-40	40	10-3-88	9	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LB-104-50	50	10-3-88	4	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LB-104-60	60	10-3-88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-104-70	70	10-3-88	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LB-104-80	80	10-3-88	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LB-104-105	105	10-3-88	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-104-110	110	10-3-88	9	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
				EPA METHOD 624 (MICROGRAMS/LITER)										
MW-13AA		9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13BA		9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13AA		9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13AA		9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21AC		9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21BC		9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-14A		9-14-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-1B		9-14-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-100A		9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-100B		9-13-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15A		9-15-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15B		9-16-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-16A		9-16-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-16A		9-16-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-19A		9-19-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-19B		9-19-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Milligrams per kilogram
NT = Not Tested

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TABLE 1

SUMMARY OF CHEMICAL ANALYSIS
OF SOIL SAMPLES FROM BORINGS (CONT.)

HR Textron
Pacoima, California

				EPA METHOD 624 (MICROGRAMS PER LITER)										
Sample #	Depth (Feet)	Date of Sample	EPA Method 481.1 (TPH)*	1,1,1, Tri-Chloro-Ethane	1,1,2-Tri Chloro-Ethane	Tri-Chloro-Ethene	Tetra-Chloro-Ethene	Toluene	Acetone	Xylene Issomers	1,1 Di-Chloro Ethene	Ethyl-benzene	1,2-Di-Chloro Ethane	1,1 Di-Chloro Ethane
MW-21AA		9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21BA		9-21-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-23A		9-23-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-23B		9-23-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2A		10-3-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2B		10-3-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4A		10-4-88	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4B		10-4-88	NT	ND	ND	ND	ND	TR	ND	ND	ND	ND	ND	ND

*Milligrams per kilogram
NT = Not Tested

NOTE: All the MW samples are blanks analyzed by EPA Test Method 624.

TABLE 2

SUMMARY OF CHEMICAL ANALYSIS
OF SOIL SAMPLES FROM BORINGS

IIR Textron
Pacoima, California

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SAMPLE #	DEPTH (FT)	DATE OF SAMPLE	EPA-418.1 TPH mg/kg	EPA-413.2 OIL & GREASE mg/kg	CHROMIUM	LEAD	EPA METHOD 8240 (mg/kg) 1,1,1-TRICHLORO-ETHANE	TRICHLORO-ETHENE	TETRA-CHLORO-ETHYLENE	TOLUENE	METHYLENE CHLORIDE	BEN-ZENE	ACE-TONE	XYLENE ISOMERS	ETHYL CYCLO-HEXANE	ETHYL METHYL CYCLO-HEXANE	1,2 DI-CHLORO-ETHANE
LB-1	10	05/30/85	27	27	NT	NT		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-1	20	05/30/85	14,000	15,000	NT	NT	55	ND	3	3	ND	ND	ND	4	20	300	ND
LB-1	30	05/30/85	9,800	10,000	NT	NT	87	ND	4	3	ND	ND	ND	3	10	300	ND
LB-1	40	05/30/85	20,000	20,000	NT	NT	100	ND	2	1	ND	ND	ND	3	20	300	ND
LB-1	50	05/30/85	30	30	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-2	10	05/30/85	41	45	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-2	20	05/30/85	ND	ND	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-2	30	05/30/35	ND	ND	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-2	40	05/30/85	ND	ND	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB-2	50	05/30/85	ND	ND	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-3A**	13	01/06/88	6	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-5A**	23	01/06/88	3	1	ND	ND	ND	ND	ND	0.13	ND	ND	ND	ND	ND	ND	ND
LB3-7A**	33	01/06/88	4	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-9A**	43	01/06/88	3	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-11A	53	01/06/88	3	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRIP BLANK**		01/06/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FIELD BLANK**		01/07/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QA SAMPLE**		01/07/88	ND	ND	ND	ND	ND	ND	ND	9 (ug/kg)	ND	ND	ND	ND	ND	ND	ND

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Table 2 (Continued)

SAMPLE #	DEPTH (FT)	DATE OF SAMPLE	EPA-418.1 TPH mg/kg	EPA-413.2 OIL & GREASE mg/kg	CHROMIUM	LEAD	EPA METHOD 8240 (mg/kg) 1,1,1-TRICHLORO-ETHANE	TRICHLORO-ETHENE	TETRA-CHLORO-ETHYLENE	TOLUENE	METHYLENE CHLORIDE	BEN-ZENE	ACE-TONE	XYLENE ISOMERS	ETHYL CYCLO-HEXANE	ETHYL METHYL CYCLO-HEXANE	1,2 DI-CHLORO-ETHANE
LB3-13A**	63	01/06/88	4	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-15A**	73	01/07/88	7	9	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-17A**	83	01/07/88	23	19	0.2	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-19A**	93	01/07/88	9	25	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND
LB3-S21A**	103	01/07/88	3	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S23(3)**	110	01/08/88	5	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S1B*	.5	01/06/88	---		NT	NT	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S2B*	3	01/06/88	---	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S3B*	13	01/06/88	ND	NT	NT	NT	ND	ND	ND	ND	150	ND	ND	ND	ND	ND	ND
LB3-S4B*	18	01/06/88	---	NT	NT	NT	ND	ND	ND	ND	150	ND	ND	ND	ND	ND	ND
LB3-S5B*	23	01/06/88	---	NT	NT	NT	ND	ND	ND	ND	80	ND	ND	ND	ND	ND	ND
LB3-S6B*	28	01/06/88	---	NT	NT	NT	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND
LB3-S7B*	33	01/06/88	---	NT	NT	NT	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND
LB3-S8B*	38	01/06/88	---	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S9B*	43	01/06/88	ND	NT	NT	NT	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S10B*	48	01/06/88	ND	NT	NT	NT	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S11B*	53	01/06/88	2	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S12B*	58	01/06/88	2	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S13B*	63	01/06/88	2	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S14B*	68	01/07/88	14	NT	NT	NT	700	ND	ND	ND	150	ND	ND	ND	ND	ND	ND
LB3-S15B*	73	01/07/88	2	NT	NT	NT	ND	ND	ND	ND	150	ND	ND	ND	ND	ND	ND
LB3-S16B*	78	01/07/88	15	NT	NT	NT	ND	ND	ND	ND	150	ND	ND	ND	ND	ND	ND

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Table 2 (Continued)

SAMPLE #	DEPTH (FT)	DATE OF SAMPLE	EPA-418.1 TPH mg/kg	EPA-413.2 OIL & GREASE mg/kg	CHROMIUM	LEAD	EPA METHOD 8240 (mg/kg) 1,1,1-TRICHLORO-ETHANE	TRICHLORO-ETHENE	TETRA-CHLORO-ETHYLENE	TOLUENE	METHYLENE CHLORIDE	BEN-ZENE	ACE-TONE	XYLENE ISOMERS	ETHYL CYCLO-HEXANE	ETHYL METHYL CYCLO-HEXANE	1,2 DI-CHLORO-ETHANE
LB3-S17B*	83	01/07/88	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S18B*	88	01/07/88	15	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S19B*	93	01/07/88	9	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S20B*	98	01/07/88	16	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S21B*	103	01/07/88	6	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB3-S23B*	110	01/08/88	2	NT	NT	NT	ND	ND	ND	NT	NT	ND	ND	ND	ND	ND	ND
LB4-S2A**	3	01/08/88	4	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S4A**	13	01/08/88	3	3	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S6A**	23	01/08/88	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S8A**	33	01/11/88	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S10A**	43	01/11/88	3	4	ND	ND	ND	ND	ND	ND	TR	ND	ND	ND	ND	ND	ND
LB4-S12A**	53	01/11/88	3	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S14A**	63	01/11/88	3	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S16A**	73	01/11/88	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank**	-	01/08/88			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field Blank**	-	01/11/88	.08	.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S18A**	83	01/11/88	6	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S20A**	93	01/12/88	3	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S22A**	103	01/12/88	3	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S23A**	108	01/12/88	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank**	-	01/12/88			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field Blank**	-	01/12/88	.05	.05	ND	ND	ND	ND	ND	ND	TR	ND	TR	ND	ND	ND	TR

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Table 2 (Continued)

SAMPLE #	DEPTH (FT)	DATE OF SAMPLE	EPA-418.1 TPH mg/kg	EPA-413.2 OIL & GREASE mg/kg	CHROMIUM	LEAD	EPA METHOD 8240 (mg/kg) 1,1,1-TRICHLORO-ETHANE	TRICHLORO-ETHENE	TETRA-CHLORO-ETHYLENE	TOLUENE	METHYLENE CHLORIDE	BEN-ZENE	ACE-TONE	XYLENE ISOMERS	ETHYL CYCLO-HEXANE	ETHYL METHYL CYCLO-HEXANE	1,2 DI-CHLORO-ETHANE
BIN-S1**	--	01/13/88	210	260	ND	ND	ND	ND	ND	0.37	ND	ND	ND	ND	ND	ND	ND
BIN-S2**	--	01/13/88	130	130	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND
SCF*	--	01/13/88	.16	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S1B*	.5	01/08/88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S2B*	3	01/08/88	ND?	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S3B*	8	01/08/88	ND?	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S4B*	13	01/08/88	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S5B*	18	01/08/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S6B*	23	01/08/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S7B*	28	01/11/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S8B*	33	01/11/88	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S9B*	38	01/11/88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S10B*	43	01/11/88	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S11B*	48	01/11/88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S12B*	53	01/11/88	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S13B*	58	01/11/88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S14B*	63	01/11/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S15B*	68	01/11/88	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S16B*	73	01/11/88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S17B*	78	01/11/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S18B*	83	01/11/88	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S19B*	88	01/11/88	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Table 2 (Continued)

SAMPLE #	DEPTH (FT)	DATE OF SAMPLE	EPA-418.1 TPH mg/kg	EPA-413.2 OIL & GREASE mg/kg	CHROMIUM	LEAD	EPA METHOD 8240 (mg/kg) 1,1,1-TRICHLORO-ETHANE	TRICHLORO-ETHENE	TETRA-CHLORO-ETHYLENE	TOLUENE	METHYLENE CHLORIDE	BEN-ZENE	ACE-TONE	XYLENE ISOMERS	ETHYL CYCLO-HEXANE	ETHYL METHYL CYCLO-HEXANE	1,2 DI-CHLORO-ETHANE
LB4-S20B*	93	01/12/88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S21B*	98	01/12/88	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LB4-S22B*	103	01/12/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TH-1	6.5	05/16/86	37	37	NT	NT	ND	ND	ND	ND	ND	12 (ppb)	79 (ppb)	ND	ND	ND	ND
TH-1	11	05/16/86	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-1	12.5	05/16/86	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-1	15.5	05/16/86	14	14	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-1	20	05/16/86	30	30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-1	30	05/16/86	TR<10	TR<10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-1	40	05/16/86	23	23	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	10	05/16/86	21	21	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	15	05/16/86	26	26	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	20	05/16/86	15	15	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	30	05/16/86	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	40	05/16/86	26	26	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	45	05/16/86	29	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	55	05/16/86	26	26	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	65	05/16/86	21	21	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	75	05/16/86	23	23	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	85	05/16/86	18	18	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	95	05/16/86	120	120	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	105	05/16/86	37	37	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TH-2	115	05/16/86	33	33	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table 2 (Continued)

SAMPLE #	DEPTH (FT)	DATE OF SAMPLE	EPA-418.1 TPH mg/kg	EPA-413.2 OIL & GREASE mg/kg	CHROMIUM	LEAD	EPA METHOD 8240 (mg/kg) 1,1,1-TRICHLORO-ETHANE	TRICHLORO-ETHENE	TETRA-CHLORO-ETHYLENE	TOLUENE	METHYLENE CHLORIDE	BEN-ZENE	ACE-TONE	XYLENE ISOMERS	ETHYL CYCLO-HEXANE	ETHYL METHYL CYCLO-HEXANE	1,2 DI-CHLORO-ETHANE
TH-2	120	05/16/86	56	56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
B-3	composite 0-43	05/23/84		23,400	Stoddard Solvent 2400 mg/kg												

Note:
LB = Leighton and Associates, Inc. borings
TH = Enviropro, Inc. borings
ND = Not Detected
NT = Not Tested
TR = Detected at an unquantifiable trace level
* = Mobile Lab Results are not certified by the Department of Health Services, EPA Method 8010, the only detected compounds are shown in (mg/kg). All other compounds volatile chlorinated hydrocarbons and volatile aromatic hydrocarbons (EPA Method 8020) were not detected.
** = Analytical Technology, Inc. has a Department of Health Services certification.

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APPENDIX A

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APPENDIX B

MAJOR DIVISIONS		SYMBOLS		TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil < no. 200 sieve)	GRAVELS (More than 1/2 of coarse fraction > no. 4 sieve size)	GW		Well-graded gravels or gravel-sand mixtures, little or no fines
		GP		Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM		Silty gravels, gravel-sand-silt mixtures
		GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction < no. 4 sieve size)	SW		Well-graded sands or gravelly sands, little or no fines
		SP		Poorly graded sands or gravelly sands, little or no fines
		SM		Silty sands, sand-silt mixtures
		SC		Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil < no. 200 sieve)	SILTS & CLAYS LL < 50	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL		Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS LL > 50	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH		Inorganic clays of high plasticity, fat clays
		OH		Organic clays of medium to high plasticity, organic silty clays, organic silts
	HIGHLY ORGANIC SOILS	Pt		Peat and other highly organic soils

CLASSIFICATION CHART

(UNIFIED SOIL CLASSIFICATION SYSTEM)

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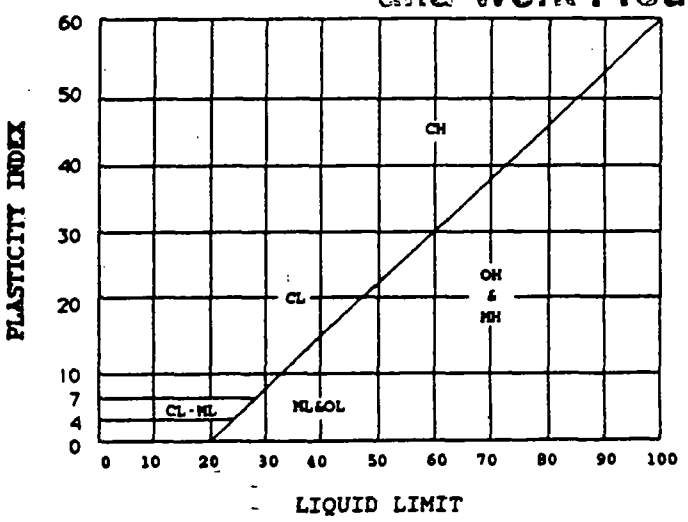
CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	ABOVE 12"	ABOVE 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
COARSE	3" to 3/4"	76.2 to 19.1
FINE	3/4" to No. 4	19.1 to 4.76
SAND	No. 4 to 200	4.76 to 0.074
COARSE	No. 4 to 10	4.76 to 2.00
MEDIUM	No. 10 to 40	2.00 to 0.420
FINE	No. 40 to 200	0.420 to 0.074
SILT & CLAY	BELOW No. 200	BELOW 0.074

GRAIN SIZE CHART



PLASTICITY CHART

METHOD OF SOIL CLASSIFICATION

Project No. 7841189-08

Project Name HRT-Pacoima

Date

L&A 2080 788

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-100

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PROJECT HR Textron - Pacoima 7811189-08 SURFACE ELEV. ~960 ft DATUM MSL

LOCATION Los Angeles (COUNTY) Pacoima (CITY OR TWP.) — (SECTION) 10445 Glenoaks (STREET)

DRILLER HF Drilling Roy Quintero John TYPE OF RIG Failing F10

SAMPLER(S) 1.5 x 18 & 2.5 x 18 split spoon DRIVE WT. 130 lbs DROP 30 IN. HOLE DIA. 1 IN.

INSPECTOR [illegible] DRILLING DATE 4/13-9/- 1988 DRILLING METHOD

WATER AND WELL DATA

DEPTH OF WATER-Encountered None Encountered, None installed Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

Boring ~~WELL~~ DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
3:30 p Start drilling								0	0-0.5: Sub-grade
@2 ft: 0.2				12, 22, 22	BG		SP		0.5-2: Brn Pbly Sand, tr. of Cobbles, poorly sorted, Sl. Damp
				10, 17, 20	BG				2-3.5: Brn Med & Crse Sand, tr. of Fresh pble & Cbls that are sub-rounded. Sl. Damp
		5		15, 15, 15	BG				3.5-5: Brn Pbly Sand, dom. Med. gr.
				12, 3, R				5	5-6.5: Med. Sand, tr. pbls, sl. Damp
				15, 15, 15			GP		6.5-8: Med. Sand, tr. pbls, Sl. Damp, ; Cobble zone @ 7 ft
		9.5		7, 17, 17	BG		ML		8-9: Brn Crse Sand, with pble & Cbls
				5, 10, 10			SC	10	@9: Dk Brn Clay
				7, 10, 7			SM		9.5-11: Dk Brn Clayey Sand, tr of Pbls, Sl. Damp; becomes liter colored & sandier @ 11 ft.
				8, 10, 17			SP		11-12.5: Brn Silty Med. to V. Crse Sand, tr. of pbls & granules, weathered mafic pble, prly consolidated, Damp
		15.5		4, 5, 10	0.3		SM		12.5-13: Brn Med & F. Sand, tr. granules, @13 ft grades into a pbl layer
							ML		13-14: Brn, Silty F. Sand, Sl. moist, V. Dense
							SM		@14: Clayey Silt
									14-14.5: Brn Med Silty Sand, tr. granules
								15	14.5-15.5: Brn Silty F. Sand
									15.5-16: Tan F. Sand, well sorted, Damp
				6, 6, 6			ML		16-17: Brn Silty Clay, tr pble, Damp, grades into below
							SM		17-18: Brn Silty F. Sand, loose, Damp
				3, 4, 6			ML		18-18.5: Dk Brn Silty Clay, tr. Crse Sand, dense & Firm, Damp
		20		4, 4, 6	BG		SM		18.5-20: Dk Brn Silty F. & Med Sand, dense & Cohesive, Damp
				7, 11, 15			GC	20	20-21.5: Dk Brn Clay, tr. of Pbls, Sand & Black Organics Dense & compact, Damp
				9, 21, 25					21.5-22: above grades into a crser pbly clay, Dense & cohesive
									22-23.5 above grades into a Sandy Silty Clay, tr of granules
		24.5		4, 7, 21	BG		CL		23.5-25: Dk Brn, Sandy Silty Clay, Dense & cohesive, Damp
@25 ft: BG	Overdrill							25	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAIL

Privileged and Company
Private Attorney
Client Communication
and Work Product

LB-100 (CONT'D)

PROJECT HRT estron, Pacoima 7841189-08 SURFACE ELEV. ~980 DATUM

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth Feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
							SM/ML	25	25-26.5: DK Brn Silty Clay, tr sand, dense, tr Blk organics Sl. Damp, micaceous
				7, 13, 16					26.5-27: Same as 25-26.5
				7, 7, 11					27-28: Above grades into a silty, F. Sand, calcite filled vein friable, Sl. Damp
				8, 10, 15					28-29.5: Brn, Silty V.F. Sand, tr Crse Sand, Dense/compact, Damp, grades into the below
									29.5-30: ltBrn Silty F. Sand, tr Crse sand, loose, V. Damp
@ 30ft: BG		31		3, 15 20	BG		SW	30	30-31: Brn F.& Med Sand, well sorted, V. Damp
				9, 11 11			SM		31-32.5: lt Brn Silty F. Sand, tr granules in lower portion, loose Sl. Damp
				10, 10 10					32.5-34: lt Brn, F & Med Sand, tr. granules, loose
							SP		34-34.5: Brn Crse Sand, with granitic pebbles & Cobbles, poorly sorted
		35.5		20, 23 26	0.5			35	34.5-35: Brn Med & Crs Sand
				9, 20 30					35-35.5: Med & Crse Sand & granules, some fines, poorly sorted
				10, 30 30					35.5-36: lt Brn Med Sand, tr. pbls, Sl. Damp
		40, MGT							36-37: Arkosic Sand, Crse gr. lots of biotite
									37-38.5: Grey Tan Arkosic Sand, Clasts are granitic & mafic, weathered, angular to sub-rounded,
				50 F/ 5"					38.5-39: Brn Silty Med. Sand
					BG		GP		39-40: Sandy Gravel, sub-rounded clasts
				28, 37 40				40	40-41.5: Grey-lt Arkosic Med. Sand, poorly sorted, Cobbles to 1½", weathered in places, Sl. Damp
				40, 43 45					41.5-43: lt Brn Conglomerate, poorly sorted sand matrix, Weathered granitic clasts to 2½", Some Rust staining on mafic minerals Sl. Damp
				50, 50 50					43-44: Same as from 41.5-43
	Overdrill						SP		44-45: lt Brn, Med Sand, Some Crs Sand, tr cobbles & granules, loose, Sl. Damp.
		46.5		48, 50 F/1"	BG			45	45-46.5: lt Brn gravelly Med & Crs Sand, granitic & Mafic sub-rounded granules & pbls, loose, Damp
				7, 12 26			CL		46.5-48: DK Reddish Brown Clay, tr. Crse Sand & granules, Massive texture, Cohesive, dense. Sl. Damp
Stop drilling @ 51ft: BG				11, 15 25					48-49: DK Brn Clay, tr. Crse sand, Massive, Cohesive, Dense, Sl. Damp
Resume drilling		51, MGT					SM		49-49.5: Above grades into DK Brn Sandy Clay, Sl. damp. 1 cobble
				50, 50 F/1"	BG			50	49.5-51: DK Brn Crse Sandy Clay, tr granules, Sl. Damp
				20, 30 30					51-52.5: Brn Med Sand, Some fines, tr granules & pbls, some Rust Stains, loose, Sl. Damp, poorly sorted
				19, 27 30					52.5-54: lt Brn/Tan Med Sand, poorly sorted, loose, Sl. Damp
		55.5		45, 70 R	BG		SP	55	54-55.5: Gravelly Med & Crs Sand, poorly sorted, sub-rounded pbls, Damp

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAIL

LB-100 (CONT'D)

Privileged and Company Private Attorney Client Communication and Work Product

PROJECT HR Textron - Pacoima 7841189-08 SURFACE ELEV. 960 DATUM MSL

Boring ~~WELL~~ DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) — Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%)
							SP	55	55.5-57: Gravely Med & Crs Sand, poorly sorted, sub-rounded, pbls, loose, damp
				18, 50 f/2"					
				35,35 35					57-58.5: lt Brn Gravely Sand, poorly sorted, gravel ranges from granules to Crs gravel, Fresh to weathered, sub-angular, Sl. Damp Sl. Cohesive
@59 ft: BG		60		50,70 R	BG / 0.2				58.5-60: lt Brn Gravely Arkosic Sand, tr mafics, Fresh & weathered pbls, Damp
				30,43 45				60	60-61.5: Same as 58.5-60.
				30,35 50			GP		61.5-63: above grades into same with larger clasts, more mafics, Some Rust staining
@63 ft: BG									63-64.5: Same as 61.5-63, only Sl Damp
		64.5		70,100, R	0.3 / 3.8	BG=0.2 BG=2.2			64.5-66: Same as 63-64.5, but Damp
				40,50 f/5"				65	
				20,45 50 f/5"			SP		66-67.5: lt Brn Gravely Med & Crse Sand, tr. of Mafics & Fines, Fresh & weathered clasts, loose, Damp
									67.5-69: Same as 66-67.5, some pbls, 1 Br Orange clay ball
@69 ft: BG		69		Missed Blow Counts	BG / BG				69-70.5: lt Brn Med & Crs Sand, Some granules, tr of Fresh & Weathered pbls, poorly sorted, Sl. Cohesive, Damp
				45,50 50				70	70.5-72: Brn gravely Sand, tr F. Sand, Fresh & Weathered pbls, loose Damp
@72 ft: BG				45,50 f/5"					
	over-drill								
		75.5		37,73 R	0.5 / 9.6	BG=0.2 BG=2.4			74-75.5: Brn Crs & Med Sand, tr granules & pbls, loose, Damp
				44,50 f/5"				75	75.5-77: lt Brn gravely, Arkosic Med & Crs Sand, gravel is granule size, Sl. Cohesive, Sl. Damp
				40,50 f/5"					77-78.5: Brn gravely Sand - Same as 75.5-77
				40,50 R			GP		78.5-80: Same as 77-78.5, with 1" fresh pbls
@81.5 ft: BG		81.5		30,70 R	BG		SP	80	80-81.5: Brn pbly Med & F. Sand, pbls granule size, well rounded loose, Sl. Damp.
				40,50 f/2"					81.5-83: Brn Med & Crse Sand, but a 4½" weathered cobble ? Conglomerate ?
				40,50 f/5"					83-84.5: Brn gravely Med & Crs Sand, loose, Sl. Damp
@85 ft: 0.4-0.6								85	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Privileged and Company Attorney Client Communication Work Product

LB-100 (CONT'D)

PROJECT HR Textron - Pacoima 7941189-02 SURFACE ELEV. DATUM SL

Boring WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth Feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
				50, 100 R	BG		SP	85	84.5-86: Lt Brn gravelly Med & Cra Sand, poorly sorted, Orange clay balls present, distinct gravelly zones, loose, Damp
		86		45, 50 F/0"					86-87.5: Brn Med Sand, tr. granules, Fresh & weathered cobbles Rust Staining, loose, Sl. Damp
87ft: LD				40, 40 40			SW		87.5-88: Lt Brn gravelly Fine Sand, Rust Stain, tr granules, loose, Damp
									88-89: Brn F Sand, well sorted, Sl. Cohesive, Sl Damp, tr of Med & Cra sand in distinct zones
		90.5, poor GT		65, 65 F/1"	BG			90	89-90.5: Same as 88 to 89
90.5 ft: 1.0				R			SP		90.5-95: drilled thru this zone - from the little recovery gotten appears to be broken fresh granitic rock in a Brn Med & Cra Sand matrix
	overdrill			108 F/5" R					
									@ 94: lots of rig chatter
	overdrill	96, poor GT		100, 100 F/5"	BG			95	94.5-96: Brn gravelly Sand, poorly sorted, F. Clasts of metamorphics. Rust Staining, loose, Sl. Damp
96 ft: 0.4				100 F/5"					96-97.5: Grey-wht gravelly Med Sand, pbls & granules, Fresh & weathered Clasts, Sl. Damp to Dry
99ft: 8.0				100, R					97.5-99: Yellow Brn Med Sand, Some granules, tr. pbls, Fresh-hard Clasts, V. Sl. Damp
	over drill								
		101.5		30, 150 R	—		SM	100	100-101: Brn Sandy Silt, Sand is Cra & well rounded, loose, Dry
101 ft: 2.0				35, 90 R			SP		101-101.5: Lt Brn Cra Sand & granules, large Fresh pbls, Sl. Damp
									101.5-103: Greish-wht pbly Cra & Med Sand, poorly sorted with large pbls, loose, Sl Damp
				40, 60 R					103-104.5: Brn Med Sand, Some granules, Damp, grades into grey-wht pbly Cra Sand
		101, MGT		200 F/4"	0.4			105	104.5-106: Brn Med & Cra Sand, tr granules, no large pbls, loose Damp
105 ft: 2.5									
	over drill								
				50 F/3"					@ 109: Brn Sand, poorly sorted, Some granules, tr pbls, Sl Damp - Rig Chatter
		111.5		80, 80 R	BG			110	110-111.5: Brn F & Med Sand, tr granules & pbls in distinct pbl zones Damp
	over drill						GP		112.5-114: Grey White Conglomerate, Cra Sand matrix, Clasts are Fresh & weathered granitic & Metamorphics, Rust staining, Sl. Damp
13ft: BG				30, 40 40					
		NR						115	114-115.5 - no recovery - attempted to drill thru - rig chatter,
15ft: 1.5									

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Privileged and Company Private Attorney Client Communication Attorney Product

LB-100 (CONT'D)

PROJECT HRTextron, Pacoima 7841189-08 SURFACE ELEV. 960 ft DATUM MSL

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth Feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) — Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
								115	
@116 ft: 1.8, inside augers	Sampled Interval, Cross-hatched area denotes % recovered	all samples collected in 2.5"x3" Brass Ringe, all other intervals collected in 1.5" pin Samplers, GT = Geotechnical Sample		R = Refusal, 60+ blows for 0"	Sample headspace, PID in PID units, OVA in PPM, OVA only used from 58 to 75 feet.				TD of 116 ft, hit refusal, broke auger keys, lots of Rig chatter 2 15 p material coming out of hole: 1½"+ cobbles of hard igneous rocks, one part of a 4½" cobble. Continued to drill under protest untill 3 30 p where drilling was stopped due to lack of progress.
PID readings taken 3" above boring BG = Background - Ranged from 0.2 to 0.4, mostly 0.2 units									
Headspace OVA Zeroed before each reading due to instrument drift									

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAIL

LB-101

Privileged and Company
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PROJECT HRTextron Pacoima 7841189-05 SURFACE ELEV. 960 DATUM MSL

LOCATION Los Angeles (COUNTY) Pacoima (CITY OR TWP.) - (SECTION) 10445 (Glenoaks) (STREET)

DRILLER H.F. Ray Quintero John Sampson TYPE OF RIG Failing F-10

SAMPLER(S) 18" 18" & 2½" Split Spoon DRIVE WT. 130 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR MR DL DRILLING DATE 9/15 - 9/16 DRILLING METHOD Auger

WATER AND WELL DATA

DEPTH OF WATER-Encountered None encountered, none installed Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

Boring ~~WELL~~ DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM) OVA	Laboratory Tests	Unified Soils Graphic Log	Depth feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification)
50 A Start Drilling								0	0-1: Concrete & subgrade
55 A @ 1 ft: B.G.				6, 6, 6	BG —		SM		1-2.5: Dk. Brn pbly silty Sand, granules well rounded, Sl. Damp
				5, 9, 9	BG —				2.5-4: Brn silty Sand, mostly F & Med grain, trace of granules, loose, Damp
		5.5		10, 12, 16	BG 0.0				4-5.5: Brn silty Sand, tr. pbls, loose, moist
				10, 17, 17			SP	5	5.5-7: Greyish wht arkosic Sand, Med gr, tr. of granules, F. Sand/Silt abundant mafics, loose, Sl. Damp
				15, 20, 20					7-8.5: Greyish wht arkosic Sand, Crse & Med gr, Some granules & Pbls loose, Sl. Damp, Rust Stains
45 A @ 10 ft: BG		10		22, 25, 30	BG 0.0				8.5-9: Brn Sand, F. & Med gr, tr granules, loose, damp 9-10: lt. Brn gravely sand, arkosic, poorly sorted, loose, damp
				50 f/2"			GP SP	10	10-11.5: Hit a rock, had to drill thru - stem deflected ~3-4° due West appears to be a lt. Brn. pbly sand Crse gr.
05 A @ 12 ft: BG		16, No Geotech Sample		12, 25, 25					11.5-13: lt. Brn pbly sand, Crs gr, tr. pbls & Fines, poorly sorted loose, Damp.
				15, 30, 30					13-14: Same as 11.5-13
				5, 6, 11	BG —		ML	15	14-14.5: Dk Reddish Brn Clayey Silt, Some Sand, dense, Sl. Damp 14.5-16: Dk Reddish Brn Clayey Silt, Mottled w/some Brn silty Clay tr. granules, dense, damp
				7, 11, 15					16-17.5: Dk Brn Silty Sand F. gr., tr of Med Sand w/ varying amounts of silt, micaceous, dense, moist
2 30 P: BG				6, 8, 18					17.5-19: Dk Brn sandy Silt, cohesive but not compact, Moist
		20.5		10, 35, 40	BG 4.5			20	19-20.5: Dk Brn Sandy Silt, cohesive, tough, Damp 20.5-22: Dk Brn Sandy Silt, tr Crs Sand & granules, tr Black organics (Rootlets?) V. tough, Sl. Damp
				10, 20, 24					22-22.5: Same as 20.5-22 but lacks Crse Sand & pbls
				18, 21, 25			SM ML		22.5-23: Brn Silty Sand, Med gr, tr Crs Sand, Moist 23-23.5: Brn Silty Clay, tr. Sand, tr Black organics, Mottled color, Sl. Damp
5 @ 24 ft: BG		25		6, 16, 25	BG 2.0			25	23.5-25: Dk Brn Silty Clay, tr Sand, dense but breakable, Rust Stains w/ mafics, Sl. Damp

HYDROGEOLOGIC LOG OF BORING AND MONITOR WELL CONSTRUCTION DETAILS

Prior Land Company
Private Attorney
Client Communication
and Management

LB-101 (CONT'D)

PROJECT HRTestron Pacoima 7841189-08 SURFACE ELEV. ~910 DATUM MSL

Boring ~~WELL~~ DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth (feet)	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification)
				9, 14, 15			ML	25	25-26.5: DR Brn Silty Clay, trace Sand, Firm-Sl. Fractured Fresh Mafics, Sl. Damp
				10, 10, 10			SM		26.5-27: Same as 25-26.5 27-28: DR Brn Silty F. Sand, tr. granules & pbls, Mod Dense, Damp 28-29.5: Overdrill
	over drill								
		31		20, 25, 29	BG 3.0		SP	30	29.5-31: Brn gravely Sand, dom. Med gr. with pbls & granules loose, Sl. Damp 31-32: Same as 29.5-31 but becoming Sl. finer grained
				15, 15, 15			SM		32-32.5: Brn Silty Sand, F. gr., micaceous, loose, Damp
1 50 P @34ft: BG				10, 10, 10					32.5-34: Orngish Brn Silty Sand, F. gr. with varying amounts of silt, micaceous, total lack of crse materials, Mod. Dense, Damp
		35.5		12, 17, 18	BG 18.		SP	35	34-34.5: Same as 32.5-34 34.5-35.5: lt Brn pbly Sand, Med and Crse gr., Damp
				15, 60 f/5"					35.5-37; Brn Sand, Med gr, tr Crs Sand, granules & pebbles, poorly sorted, Fresh Clasts of Mafic comp., loose, Sl. Damp
				20, 60, R					37-38.5: Same matrix as 35.5-37, except with a tr. of Silt, Fresh & weathered clasts & has distinct granule zones
		40		60, 100 f/3"	BG 4.2		GP		38.5-40: Brn Sandy Conglomerate, Matrix a Med gr. Sand, granules & pebbles to 1½", Fresh rounded Granitic & Meta. clasts, loose, Damp
				40, 60 f/2"				40	40-41.5: lt Brn Sandy Cong., Same as 38.5-40 with Cobbles & Rust Stain
				53, 60 f/2"			SP		41.5-43: Orngish Brn pbly Sand, poorly sorted, pbls are weathered & mostly Mafics, loose, damp
2 20 P @44ft: BG		44.5		50, 100, R	0.6 42.				43-44.5: Brn Sand, Med & Crse gr, tr granules & pbls, poorly sorted, Sl. Compact, Moist
		46, No GT		50, 70, 90	BG 7.6			45	44.5-46: Cobble plugged sampler; V. little recovery, re-packed a 3" Brass ring for chem sample, appears to be the same as 43-44.5
		47.5		19, 30, 30	0.4 22.		CL		46-47.5: Reddish Brn Silty Clay, tr crse sand & granules, dense, Massive, Sl. Damp to Dry
3 00 P : BG		49		15, 35, 50	0.6 34.				47.5-49: Reddish Brn Sandy Clay, tr. granules & pbls, dense but only Mod. cohesive, Damp, pble zone at base
		50.5		50, 70 —	0.3 8.0		SM	50	49-50.5: Brn Silty Sand, Med gr., tr granules & pbls of Meta. comp., Sl. Compact
		52		34, 50, 50	BG 7.8		SP		50.5-52: Brn pbly sand, Med & Crs gr, tr of granules & pbls, Fresh & up to 2½", loose, Moist
3 30 P : BG				20, 34, 35					52-53.5: lt Brn Sand, Med. gr., tr granules & pbls, loose, Damp 53.5-55: lt Brn Sand, Med & Crse gr., Some granules & pbls of feldspar & Mafics, loose, Sl. Damp
				—, —, —					
	over Drill							55	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Prepared for Company

LB-101 (CONT'D)

PROJECT HR Textron, Pacoima 7841189-08 SURFACE ELEV. ~960 DATUM MSL

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
							SP	55	55-55.5: overdrill
	Over Drill	57		33, 57, 60	0.8 / 50.				55.5-57: lt Brn to Brn Sand, Med & Crse gr, some granules & pbls, poorly sorted becoming firm @ base, Sl. Moist
@ 58.5 ft, Stop Drilling 58.5 ft; BG PID BG = 0.2 @ Rate = BG start drilling				30, 40, 40					57-58.5: lt Brn Sand, Med gr, some granules in distinct zones, tr. of weathered pbls & crse sand, Sl. Dense, Sl. Damp
	Over drill								58.5-60: over drill
		61.5		35, 60, R	BG / 0.2			60	60-61.5: lt Brn Sand, Med & Crse gr, tr granules, poorly sorted, loose, Damp
				13, 24, 30					61.5-63: Brn Sand, Med gr., poorly sorted, tr of granules & Fresh pbls @ Bottom, Loose, Sl. Damp.
				50, 50 4/5"					63-64.5: lt Brn Sand, Med to Crse gr, tr granules & Fresh & weathered pbls, loose, Sl. Damp
		66		60, 90, R	0.4 / 5.2		GP	65	64.5-66: Brn gravelly Sand, tr F. Sand & mafics & orthoclase pbls, pbls are Fresh, Loose, Damp
				30, 45, 50			SP		66-67.5: Brn Sand, Med gr, Some pbls in distinct zones, pbls are Fresh & weathered, loose, Damp
				20, 30, 50					67.5-69: Brn Sand, Med gr, Similar to 66-67.5, can clearly see that weathered pbls have been pounded thru
		70.5, M6T		35, 60 R	BG / 0.2				69-70.5: Brn Sand, F & Med gr, tr crse sand and granules, no pbls ~1" loose, damp
BG				17, 50, 50				70	70.5-72: lt Brn Sand, Crse gr, poorly sorted, tr of weathered clasts that have been pounded thru, tr Rust Staining, Loose, Damp
				75, 80, R					72-73.5: Brn Sand, Med & Crse gr, tr Clay balls & Rust Staining, weathered pbls, Loose, Sl. Damp
BG				20, 50, 50					73.5-75: lt Brn Sand, poorly sorted F to Crse gr, Some weathered pbls, mafics, Rust stained, Damp
		76.5		50/100, R	– / –		GP	75	75-76.5: lt Brn Crse gravelly Sand, Fresh & weathered pbls loose, Sl. Moist
				35, 100, 4/1"			SP		76.5-78: Brn Sand, Med gr, some Fresh & weathered pbls & F. Sand, Rust staining, Loose, sl. Damp
				110, R					78-79.5: Brn Sand, F. to Crse gr, poorly sorted, Loose, Sl. Damp
		81. M6T		100, 100, 4/3"	BG / 0.0			80	79.5-81: lt Brn Sand, F to Crse gr, poorly sorted, larger pbls up to 2", clasts are fresh
				100, 4/5"					81: hit a gneiss pbl
			N.R.	19, 53, 70					82.5-84: Greyish wht Pbly Sand, Crse gr, tr. F. sand, pbls are Fresh, Sl. Cohesive, Sl. Damp
BG				130, 250, R	BG / 0.0			85	84-85.5: Brn Sand, Med gr, poorly sorted, tr granules & pbls, weathered mafics, Loose, sl. Damp

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Privileged and Company Private Attorney

LB-101 (CONT'D)

PROJECT H R Textron Pacoima 7841189-08 SURFACE ELEV. ~960 DATUM MSL

Boring ~~WELL~~ DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) — Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
10:00 A: 0.6							SP	85	85.5-87: Whitish Grey pebbly Sand, Crse gr, some Biotite, pbls Fresh
				200, R					87-88.5: lt Brn pbly Sand, Med gr, distinct color & pbls zones - color ranges from Brn to greyish white over 2-3", Sl Compact, Damp
				60,65, F/5"					88.5-90: Brn Sand, Med & Crse gr, tr granules, loose, damp
		90 NoGT		200 F/4"	BG —				
				97, R				90	90-91.5 Brn Sand, Med & F gr, with Fresh pbls, loose, Sl Damp
				45,100 F/0"					91.5-93: Brn Sand, Crse & Med gr, with pbls of Quartz & feldspar, loose, Sl. Damp
		94.5		85, 250, R	BG 1.4				93-94.5: Br Sand, Med & F gr, with pbls of Quartz & feldspar, & Granite, loose, Sl. Damp
11:05 A: BG				65,100 R				95	94.5-96: Brn Sand, F to Crse gr, poorly sorted with Fresh & Weathered pbls, Rust Staining & Calcite vein stringers, loose, Sl. Damp pounded thru one 3" weathered clast
		NR		150, R			SM		96-97.5: Had a little Brn Silty Sand, poorly sorted & pbly, loose, Damp
	over drill						GP		99-100: Rocks & Boulders - can't drive a sampler - drilled to 102.5 ft
11:40 A: 0.6								100	
		102.5, NoGT		200, R	— —		SP		102.5-104: Brn Pbly Sand, F to Crse gr, poorly sorted, large pbles & granules No headspace sample, No Geotech sample, repacked what was present into 1 brass ring for chemical analysis
									104-109: rough drilling, cuttings coming up are Fresh, angular Clasts of Igneous & Metamorphic composition
								105	
12:46 P: OVA Reading. Faultful - hard to keep Calibrated				100, 150, R	BG 96.		SW	110	109-110.5: Whitish Grey Sand, Med gr, well sorted, tr of granules. Biotite present, Moist
12:48 P: 0.4				62, 125, R			SM		110.5-112: lt Brn pbly Sand, F to Med gr, with sub-rounded fresh pbls, Damp
				— —					112-113.5: Brn sandy pbly Silt; Sand dom. crse gr & poorly sorted, pbls are large & fresh, unit as a whole is Sl. Indurated with silts & Crse Sand sticking to pbles indicating cementing
0.4 @ 115 ft								115	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Friedland and Company
Private Attorney

LB-101 (CONT'D)

PROJECT HRTextron Pacoima 7841189-08 SURFACE ELEV. ~460 DATUM MSL

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM) OVA	Laboratory Tests	Graphic Log	Depth Feet	DESCRIPTION OF MATERIALS (color, texture, density moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
								115	115-122: slow, rough, noisy drilling, cobble & boulder bed
								120	TD @ 122 ft @ 13:30

Sampled Interval, Cross-hatched area Depicts % recovered

All samples collected in 2½" x 3" Brass Rings, all other intervals collected in 1¾" pin Samplers, CT= Geotech Sample

R = Refusal, 60" Blows for 0"

Sample headspace, PID in PID units, OVA in PPM, "-" indicate a missed reading.

ID readings from 3" above ring. BG = background ranged from 0.0 to 0.3, mostly 0.2

adspace OVA read before ch reading e to instrument ift.

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-102

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PROJECT 7841189-08 SURFACE ELEV. ~960 DATUM MSL

LOCATION LA (COUNTY) Pacoima (CITY OR TWP.) (SECTION) 10445 Glenoaks Blvd (STREET)

DRILLER HF Drilling TYPE OF RIG F-10 WT

SAMPLER(S) DK & MAR DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR — DRILLING DATE 9-15-88 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered None encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Fld Reading (PPM)	Laboratory Tests	Graphic Log	Depth (Ft)	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) — Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
Conductor casing set 9/15/88								0	0-5 Fill-Sand backfill
								5	5-8 Fill-Sand backfill
							20' casing	10	8-19 Native Soil - no samples
								15	
		20	BM	NA	100/1000+			20	LB-102-20 collected 9-15-88 Sandy Silt - dk gray, scattered rk frag, friable, strong odor.
Start Drilling at 7:00 AM									20-21.5 overdrill
ID - BG = 0.2 6:50 AM			CL	6 9 12		Photo 1			21.5-23.0 Silty Clay - dk bwn to bwn, tr sd & rk fragments, dense, friable, streaks of cont. (olive green to gray), strong odor.
ID = 0.5 @23' 7:06A			CL	15 15 15		Photo 2			23.0-24.5 Silty Clay - bwn, rk frag, streaks & mottled zones of cont. (olive green to gray), strong odor
		26		4 9	88			25	24.5-26.0 Silty Clay - dk bwn to bwn, tr rk frag, streaks

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Trinity Sand Company
Private Attorney

LB-102

PROJECT 7841189-08 SURFACE ELEV. 960 DATUM MSL

LOCATION LA (COUNTY) Pacoima (CITY OR TWP) 10445 Glen Oaks Blvd (SECTION) (STREET)

DRILLER H F Drilling Inc TYPE OF RIG F-10WT

SAMPLER(S) DK & MAR DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR — DRILLING DATE 9-19-88 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered None encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	Pid Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification)
								25	26-27.5 Silty Clay - dk brwn-brwn, trace sd & rk frag, dense, friable, streaks of cont (olive green/gray) strong odor.
			CL	7 10 15					27.5-29.0 Silty Clay - dk brwn-brwn, tr sd & rk frag, dense, friable, near 29' grades into a fine to med grain sand. Cont. zone at this contact (olive green/gray), strong odor.
			CL	8 8 13					
		30.5	SP	6 8 8	90/1000+			30	29.0-30.5 Fine-Med. grain Sand - Tan-lgt brwn granules & pebbles of rk frag, qtz & feld. strong odor, Olive green/gray zones of cont.
			SP	4 6 8					30.5-32.0 Med-Coarse Sand - Tan-brwn, granules of rk frag, quartz, feld., strong odor, near 32' olive green/gray zone of cont. moist.
			SP	9 13 20					32.0-33.5 Fine-Med Sand - Tan-lgt brwn, granules of rk frag, quartz, feld. strong odor, mottled zones of cont. (olive green/gray) moist.
		35	SP SM	12 15 28	80/1000+				
			SW	10 15 18				35	33.5-35.0 Med-Coarse Sand - Tan-lgt brwn, granules of rk frag, quartz, feld. Grades to a fine silty sd at the base (35'). Cont. lense in the finer silty material (olive gr/gray). strong odor.
			SW	11 24 24					35.0-36.5 Fine-Coarse Sand - Tan-olive gr/gray, well graded, granules of rk frag, qtz, feld in the coarser material, coarser near base. odor
		37.5	SP	21 25 32	98/1000+				
2-BG=0.4 rig=3.8 11' 8:25A			SP	NA				40	36.5-38.0 Fine-Coarse Sand - Tan-olive gr/gray, granules of rk frag, quartz & feld, Cont. lenses (dk gray) strong odor.
2-BG=1.0 rig=1.8 3' 8:39A									38-39.5 Fine-Coarse Sand - Tan-brwn, pebbles of rk fragments, qtz, feldspar, lenses of contaminants (olive green/gray) moist, strong odor.
									39.5-41.0 Fine-Coarse Sand - Olive grn/gray-brwn, pebbles of rk fragments, qtz, feldspar, strong odor
2-BG=0.8 rig=1.8 3' 9:15A		45	SP	25 42 70	80/1000+			45	41.0-42.5 No Sample
		46.5	SP	75 75					42.5-44.0 No Sample
									44.0-45.0 Med-Coarse Sand - Tan-brwn, pebble & gravel of rk frag, qtz, feld, Cont. lenses (olive grn/gray) moist, strong odor.
...en drill									
		49	SP CL	25 22 25	62/1000+				45-46.5 Med-Coarse Sand - Tan-brwn, pebble & gravel of rk frag, qtz, feld, moist, strong odor.
2-BG=0.6 rig=0.6 5' 9:45A		50.5	CL	12 30 50	86/1000+			50	47.5-49.0 Med-Coarse Sand - Tan-brwn, pebble & gravel of rk frag, qtz, feld, moist, odor, grades into a dense clay - red/brown, sm rk frag, friable.
									49-50.5 Clay - red/brwn, dense, sm rk frag, qtz, feld

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-102

PROJECT 784119-08 SURFACE ELEV. ~960 DATUM MSL

LOCATION LA (COUNTY) Pacoima (CITY OR TWP) 10445 Glen Oak Blvd (SECTION / STREET)

DRILLER HF Drilling TYPE OF RIG F-10WT

SAMPLER(S) DE-MAR DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 8 IN.

INSPECTOR — DRILLING DATE 9-19-88 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered None Encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
								50	51-52.5 Clay - red-brwn, dense, sm. rk frag, qtz, feld, friable, moist. Grades into a lgt brwn to brwn - pebbles of rk frag, moist, odor
D-BG-1.0 rig-1.8		52.5	CL SM	10 15 30					52.5-54.0 Silty Sand - Silt - lgt brwn, fine grain with rk frag, qtz, feld, slight odor
53' 10:22A		54	SM	11 27 40	3/200				54-55.5 Coarse-Med Sand - lgt brwn, gravel & pebbles of rk frag, qtz, feld, poorly sorted, sl damp, No odor
			SP	NA				55	55.5-57.0 Coarse-Med Sand - lgt brwn, rk frag, qtz, feld, gravel & pebbles, poorly sorted, moist, No odor
			SP	10 25 45					57.0-58.5 Fine-Med. Sand - lgt brwn, gravel & pebble rk frag, qtz, feld, poorly sorted, sl. damp, No odor
			SP	10 28 30					58.5-60.0 Fine-Med. Sand - lgt brwn, gravel & pebble rk frag, qtz, feld, poorly sorted, sl. damp, No odor
		60	SP	30 42 50	1.4/240				60.0-61.5 Fine-Med. Sand - lgt brwn, gravel & pebble rk frag, qtz, feld, poorly sorted, sl. damp, sl. odor
			SP	20 30 35				60	61.5-62.5 Med-Coarse Sand - lgt brown, gravel & pebble rk frag, qtz, feld, sed. structures - sorted lenses of fine sand, sl. damp, sl. odor
			SW	10 30 40					62.5-64.0 Fine-Med. Sand - lgt brown, gravel & pebble rk frag, qtz, feld, moderate sorting, sl. damp, sl. odor.
			SM SP	27 30 30					64.0-65.5 Fine-Med. Sand - lgt brwn, granules, rk frag, qtz, feld, poorly sorted, sl. damp, sl. odor.
PID-BG-0.2 rig-1.0		65	SP	22 50 65	0.8/120				65-66.5 Fine-Med. Sand - lgt brwn-brwn, gravel rk frag, qtz, feld, poorly sorted, sl. damp, sl. odor.
65' 11:15A			SP	15 55				65	66.5-68.0 Fine-Med. Sand - lgt brwn-brwn, gravel rk frag, Qtz, feld, poorly sorted, sl. damp, sl. odor
			SP	45 25 37					68-70 Fine-Med Sand - lgt brwn-brwn, gravel & pebbles rk frag, Qtz, feld, poorly sorted sl damp, No odor.
		70	SP	44 100	NA				70-71.5 Fine-Med Sand - lgt brwn-brwn, gravel & pebbles, rk frag, Qtz, feld, poorly sorted, sl. damp, No odor
PID-BG-0.2 rig-0.2			SP	NA				70	71.5-73 Fine-Med Sand - lgt brwn-brwn, gravel & pebbles, rk frag, qtz, feld, poorly sorted sl. damp. No odor
72' 11:50A			SP	40 120					73-74.5 Med-Coarse Sand - lgt brwn-brwn, gravel & pebbles rk frag, qtz, feld, poorly sorted
		74.5	SP	26 80	.4/32			75	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

Ed and Company
Attorney

LB-102

PROJECT 841189-08 SURFACE ELEV. ~960 DATUM MSL

LOCATION LA COUNTY K. Coins CITY OR TWP. 10445 Glen Oaks Blvd. STREET

DRILLER HF Drilling TYPE OF RIG F-10UT

SAMPLER(S) DR & MAR DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR DRILLING DATE 9-19-08 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
								75	74.5 - 76.0 Med-Coarse Sand - lgt brwn-brwn, gravel & pebbles, rk frag, qtz, feld, poorly sorted, sl. damp, no odor.
									76 - 77.5 Med-Coarse Sand - lgt brwn-brwn, gravel & pebbles, rk frag, qtz, feld, poorly sorted, sl. damp, no odor.
D-BG=0.3 rig=1.2			SP	25 100					
8' 12:45 PM		80	SP SM	55 / 80	.4 / 18				77.5 - 80.0 Fine - Silty Sand - brwn, gravel & pebbles, rk frag, qtz feld, unconsolidated, poorly sorted, no odor, sl. damp
			SP	40 70				80	80 - 81.5 Fine - med Sand - lgt brwn-brwn, gravel & pebbles, some cobbles, rk frag, qtz, feld, poorly sorted, unconsolidated, no odor, sl. damp.
			SP	35 100 f 1"					81.5 - 83 Med-Coarse Sand - lgt brwn-brwn, gravel & cobbles, rk frag, qtz, feld, poorly sorted, unconsolidated, no odor, sl. damp
			SP	35 50					83 - 84 Med-Coarse Sand - tan-lgt brwn, gravel & pebbles, rk frag, qtz, feld, poorly sorted unconsolidated, no odor, sl. damp
		85.5	SP	95 100	.2 / 62			85	84 - 85.5 Med-Coarse Sand - lgt brwn, pebbles & gravel, rk frag, qtz, feld, poorly sorted unconsolidated, no odor, sl. damp.
				40 100					85.5 - 87 Med-Coarse Sand - tan-lgt brwn, pebbles & gravel rk frag, qtz, feld, poorly sorted, unconsolidated, no odor, sl. damp.
7								90	87 - 88.5 No Sample
D-BG=0.2 rig=0.8 10' 1:55 PM									88.5 - 90 No Sample - auger twisted off while drilling - unable to retrieve from boring

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-102A

PAGE 1 OF 1

PROJECT HR Textron - Pacoima SURFACE ELEV. - DATUM MSL

LOCATION LA (COUNTY) Pacoima (CITY OR TWP.) 10445 Glenoaks Blvd (STREET)

DRILLER HF Drilling TYPE OF RIG F-10 LST

SAMPLER(S) DK & MMR DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR - DRILLING DATE 9/30/88 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered None Encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
PID - BG = 0.7 @ 7:30A									
PID = BG 8:35A @ 90'		90		100 F 1"				90	0-90 No sampling was done refer to LB-102 90 - No sample - very slow drilling not much in sample recovery - alot of rig chatter. Will try to drill through this zone to 95'
		95		150 F 6" 200 F 2" 100 70 F 1"	.9/170			95	95-96.5 Med-Coarse Sand - lgt brwn, gravel & pebbles rk frag, qtz fld, poorly sorted, unconsolidated no odor. 96.5-98.0 No sample - continuous sampling was abdn. will sample every 5'.
		100		120 120	.8/106			100	100 - 101.5 Med-Coarse Sand - lgt brwn gravel & pebbles rk frag, qtz, fld, poorly sorted, unconsolidated, no odor.
PID = BG 8:35A @ 105'		105						105	105 - No Sample - (Med-Coarse Sand) not enough sample retrieved
		110						110	110 - No Sample - Lost the hammer

AND
MONITOR WELL CONSTRUCTION DETAILS

LB-102A

PAGE 1 OF 1

PROJECT 7841189-08 SURFACE ELEV. ~960 DATUM MSL

LOCATION LA (COUNTY) Tacoma (CITY OR TWP.) 10445 Glencoe Blvd (SECTION STREET)

DRILLER HF Drilling, Inc TYPE OF RIG F-10WT

SAMPLER(S) DK & MAR DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR — DRILLING DATE 10-4-88 DRILLING METHOD Hollow-Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered None encountered Completion —

WELL CASING-Type — I.D. —

WELL SCREEN-Type — Slot Size —

SCREEN PACKING-Type — Size —

ANNULAR SPACE SEAL — Method —

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
PID - BG 1.2 Sample 7.2 rig 1.8 @ 10:25 AM		110	SP	285 f 7"	7.2			110'	fine-med sand, tan-lgt brwn, granules/pebbles of rk frag, feld, qtz, poorly sorted, unconsolidated, no odor * Cont. sampling scrapped - poor recovery and slow drilling rate.
PID - BG 1.2 Sample 8.8 rig 1.8 @ 10:40AM		115	SP	150 f 6"	8.8			115'	med-coarse sand, tan-lgt brown, pebbles/gravel of rk frag, feld, qtz, poorly sorted, unconsolidated, no odor.
PID - BG .6 Sample 11.2 rig 3.4 @ 11:10AM		120	SP	NA	11.2			120'	med-coarse sand, tan-lgt brown, pebbles/gravel/cobbles of rk frag, feld, qtz, poorly sorted unconsolidated, no odor.
									TD 121' - Hit Refusal

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HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-103

PROJECT HR Textron Pacoima 7841189-08 SURFACE ELEV. ~960' DATUM MSL

LOCATION Los Angeles (COUNTY) Pacoima (CITY OR TWP.) 10445 Glenoaks (SECTION) (STREET)

DRILLER H.F. Drilling Guy & John TYPE OF RIG Failing F-10

SAMPLER(S) 15" Co Mod. Split Spoon, 18"/4" Split Spoon DRIVE WT. 130 lbs DROP 30 IN. HOLE DIA. 8 IN.

INSPECTOR MR. DK. BAL DRILLING DATE 9/13/88 DRILLING METHOD Hollow Stem Auger

WATER AND WELL DATA

DEPTH OF WATER-Encountered NONE Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

Boring ~~WELL~~ DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
Start Drilling @ 1115								0	Asphalt & subgrade
PID background Reading = 0.2 units									
OVA background Reading = 1.8 ppm							SP	5	Lt Brn, F. to Crse, loose Sand
OVA & PID Readings 3" above hole unless noted otherwise								10	Lt Brn gravely Sand, Sand poorly sorted, F. to Crse
								15	Same as at 10'
							GM	20	St Brn gravely sand, poorly sorted, F. to Crse, trace of silts
							ML	25	Firm, massive Brn Silty Clay, trace of Sand

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HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-103 (CONT'D)

PROJECT HR Textron Pacoima 7841189-08 SURFACE ELEV. _____ DATUM _____

Boring ~~WELL~~ DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth Feet	DESCRIPTION OF MATERIALS: color, texture, density moisture, classification; Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
							ML	25	Firm, massive, Brn Silty Clay trace of Sand
							CL	30	Firm, massive, Reddish Brn Clay, trace of Sand
		35,A,C,E		8,15 15			SP	35	Lt Brn Sand, poorly sorted, F. to Crse
								40	Lt Brn pebbly Sand, poorly sorted, F. to Crse.
		N.R.		50 6"/5"					?Hit a cobble or it was a loose, uncohesive sand that fell out on the way up.
							SM	45	Brn Silty Sand
		N.R.		40,40 40					Sample fell out as sampler was being unlooked.
		50,A,C		5,25 35			CL	50	Dense, cohesive Clay
		53,A,E		35,40 50			SP		@52: Brn, DK Brn arkosic Sand, poorly sorted, F. to Crse, tr. gravel & pbls, Some silt, Loose & unconsolidated
		55,A,E		35,53 53					
		57,A,E		40,50 60				55	@ 55; Same as @52

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HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-103 (CONT'D)

PROJECT HRTextron Pacamo 784189-08 SURFACE ELEV. _____ DATUM _____

Boring ~~WELL~~ DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth Feet	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
		SI, A, C, E		40, 50, 60			SP	55	Brn, Dk Brn Arkosic Sand, poorly sorted, F. to Crse, tr. granuls & pbls, Some silt, Loose & unconsolidated
							CL	60	Brn Sandy Clay, tr. Crs Sand, St. damp
PID = B.G. OVA = B.G.		G8, A, C		30, 60 60 F/1.5"	OVA = BG PID = BG		SP	65	@68: Brn Med. Sand, poorly sorted, F. to V. Crse, tr. granuls Crse fraction is sub-rounded, Damp, contains mafics & Biotite
B.G. = Background								70	TD of 70 ft @ 2 30 P
		N.R. = Not Recovered			Sample Headspace Reading				A sample sent to ATI C sample sent to CRL E sample for geotechnical analysis

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HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-103A

Company
Attorney
Client Communication

PROJECT 7841189-08 SURFACE ELEV. [illegible] DATUM MSL

LOCATION LA (COUNTY) Kacoima (CITY OR TWP) 10445 (SECTION) [illegible] Blvd (STREET)

DRILLER HF Drilling TYPE OF RIG F-10WT

SAMPLER(S) DK DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR — DRILLING DATE 9-21-88 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered None encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
								40	
D-BG .2 Sample .6 8:30 AM		43A/C	SP	50 100 50	.6			45	Med-coarse sand, tan-lgt brwn, gravel & pebbles of rk fragments, qtz, feldspar, sl. damp, no odor, poorly sorted, unconsolidated
D-BG .8 Sample .4 9:05 AM		48A/C	CL	15 34 25	.4			50	Clay, red-brwn, dense, minor amounts of sm rk frag, qtz, feld, silt, sl. damp, no odor.
								55	
								60	
								65	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-103A (CONT'D)

PROJECT 784189-08 SURFACE ELEV. 2960' DATUM MSL

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification)
PID - BG .4 Sample .4 @ 9:30AM		68A1C	SP	30 55 75				65 70	Med-Coarse Sand, tan-light brown, pebbles & rk frag, qtz, feld, sl. damp, no odor poorly sorted, unconsolidated. TD 70'

Texture Proportions: And (50-40%) | With (40-25%) | Some (25-10%) | Trace (10-0%)

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HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-104

JECT 7841189-05 SURFACE ELEV. ~960' DATUM MSL

ATION LA (COUNTY) Pacoima (CITY OR TWP.) 10445 Glenoaks Blvd (SECTION / STREET)

LER HF Drilling TYPE OF RIG F-10 WT

PLER(S) DK DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN

'ECTOR DRILLING DATE 10/3/02 DRILLING METHOD Hollow Stem

TER AND WELL DATA

TH OF WATER-Encountered Ground water not encountered Completion

.L CASING-Type I.D.

.L SCREEN-Type Slot Size

EEN PACKING-Type Size

ULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	PID Reading (PPM)	Laboratory Tests	Graphic Log	Depth (Ft)	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification)
alibrated span 9.8 span 8.8								0	Sample interval - 10'
								5	
	10	10	SP	8 17 28	.0			10	med-coarse sand, tan-lgt brown, granules & pebbles of rk frag, fld, qtz, unconsolidated poorly sorted, no odor.
								15	
	20	20	SM/ML	14 26 30	.0			20	Fine sandy silt, tan-lgt brown, rk frag, fld, qtz, unconsolidated, well sorted, no odor.
								25	

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HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

B-10

PROJECT 784112.9 - CE SURFACE ELEV. ~960' DATUM MSL

LOCATION LA COUNTY Facoima CITY OR TWP. --5 Glen Oaks Blvd SECTION STREET

DRILLER H E Drilling TYPE OF RIG [illegible] DIT

SAMPLER(S) DK DRIVE WT. [illegible] DROP [illegible] IN. HOLE DIA. 6 IN.

INSPECTOR DRILLING DATE 12-3-86 DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered Ground water not encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	Interval	Sample No.	Type (USCS)	Std. Pene. Rte 6" Intervals	Pid Reading (PPM)	Laboratory Tests	Graphic Log	Depth (ft)	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification; Texture Proportions: And (50-40%), With (40-25%), Some (25-10%), Trace (10-0%))
ID - BG = .04 rig = .04		30	CL	18 40 60	5.0			30	Silty Clay, reddish brown, dense consolidated, friable, tr. amounts of rk frag, feld, qtz, no odor
									Privileged and Company Private Attorney Client Communication and Work Product
- BG = .06 rig = .06		40	SP/SM	25 80	7.0			40	Fine silty sand, tan - lgt brwn, pebbles of rk frag, feld, qtz unconsolidated mod. sorted, no odor.
- BG = .06 rig = .06		50	SP	70 80	11.0			50	Med - coarse sand, tan - lgt brwn, pebbles cobbles of rk frag, feld, qtz. unconsolidated, poorly sorted, no odor.
								55	

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-104

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PAGE 5 OF

JECT 7841189-08 SURFACE ELEV. ~960 DATUM

CATION LA (COUNTY) Pacoima (CITY OR TWP.) (SECTION) 10445 Glen Oaks Blvd (STREET)

LLER HF Drilling TYPE OF RIG F-10WT

MPLER(S) DK DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

PECTOR DRILLING DATE 10/3/88 DRILLING METHOD Hollow Stem

ATER AND WELL DATA

TH OF WATER-Encountered Groundwater not encountered Completion

LL CASING-Type I.D.

LL SCREEN-Type Slot Size

EEN PACKING-Type Size

ULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
-BG=.06 rig=.06		60	SP	30 60	8 8			60	Fine-Medium sand, tan-lght brwn, granules & pebbles of rk frag, feld, qtz unconsolidated, poorly sorted, no odor
								65	
BG=.06 rig=.06		70	SP	20 90	6.4			70	Fine-Med. sand, tan-lght brwn, granules & pebbles of rk frag, feld, qtz. unconsolidated, poorly sorted, no odor
								75	
BG=.06 rig=.06		80	SP	35 120	6.8			80	Fine-Med sand tan-lght brwn, pebbles & granules of rk frag, feld, qtz. unconsolidated, poorly sorted, no odor
								85	* Drilling rates are starting to drop with alot of rig chatter.

HYDROGEOLOGIC LOG OF BOREHOLE AND MONITOR WELL CONSTRUCTION DETAILS

LB-104

Privileged and Company Private Attorney Communication Product

PROJECT 7841189-08 SURFACE ELEV. [illegible] DATUM [illegible]

LOCATION LA (COUNTY) [illegible] (CITY OR TWP) SECTION 10445 [illegible] Blvd (STREET)

DRILLER HF Drilling TYPE OF RIG F-10 CT

SAMPLER(S) OK DRIVE WT. 140 lbs DROP 30 IN. HOLE DIA. 6 IN.

INSPECTOR DRILLING DATE 10-3-[illegible] DRILLING METHOD Hollow Stem

WATER AND WELL DATA

DEPTH OF WATER-Encountered Completion

WELL CASING-Type I.D.

WELL SCREEN-Type Slot Size

SCREEN PACKING-Type Size

ANNULAR SPACE SEAL Method

WELL DETAIL	SOIL OR ROCK SAMPLE: Interval	Sample No.	Type (USCS)	Std. Pene. Rte. 6" Intervals	Pid Reading (PPM)	Laboratory Tests	Graphic Log	Depth	DESCRIPTION OF MATERIALS (color, texture, density, moisture, classification) Texture Proportions: And (50-40%) / With (40-25%) / Some (25-10%) / Trace (10-0%)
		90		200 f5"				90	No recovery
								95	
		100		300 f2"				100	No recovery Bent the split-spoon sampler
PID - BG = .06 rig = .06		105	SM/ML	100 100 f6"	9.6			105	Sandy silt brwn, granules & pebbles of rk frag, feld, qtz, unconsolidated poorly sorted, no odor.
PID - BG = .06 rig = .06		110	SP	150 f6"	7.4			110	fine silty sand, lght brwn, granules & pebbles of rk frag, feld, qtz, unconsolidated poorly sorted, no odor.
								115	Hit Refusal

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and Work Product

APPENDIX C

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APPENDIX C

FIELD METHODS

Soil Sampling

This investigation used a Failing F-10 drill rig set up with 6-inch hollow stem auger to drill and sample six borings. Three of the borings were continuously sampled using 1.5- by 18-inch pin samplers for visual classification of the geology. At 5-foot intervals a California modified split spoon sampler was used to collect one 2.5- by 3-inch, and six 2.5- by 1-inch brass ring samples. The sampler was driven by a 130 pound weight dropped successively from a height of 30 inches with the number of blows per 6 inches of movement recorded.

An onsite safety meeting was conducted in which the location of evacuation routes, safety equipment, expected hazards, and levels of protection were discussed. Before each boring, exclusion, decontamination, and wash zones were set up. Borings were drilled in order from areas of least suspected contamination to areas of most suspected contamination.

Before each boring all augers and the bit were steam cleaned, containing all wash fluids in a seven-foot steel trough. Before each use, the samplers were washed in a mild degreasing solution (Trisodium Phosphate), rinsed in a bucket of tap water and then rinsed with distilled water using a spray bottle. All brass rings used in the California modified split spoon sampler were also cleaned and decontaminated in the same manner. The degreasing solution and tap water were changed as they became muddied.

Samples collected in the 3-inch brass rings were analyzed for indications of hydrocarbon contamination using EPA Test Methods 418.1 and 8240 by ATI, a California Department of Health Services certified laboratory. These samples were pulled from the sampler upon its opening, lined with teflon tape, capped with plastic, sealed with black plastic tape, labeled, and placed in an ice chilled cooler. Quality control and assurance samples were made in the form of trip and field blanks. The trip blank was made near the beginning of each sampling group and consisted of two, 40 ml VOA vials filled with distilled water. The field blank was made near the end of each sampling group and consisted of two, 40 ml VOA vials filled with distilled water that had been poured through a cleansed and decontaminated sampler. These blanks were labeled as being samples from a monitoring well with the trip blank the "A" sample and the field blank the "B" sample. Blanks were kept in the same chilled cooler as the boring samples and were analyzed by ATI for hydrocarbon contamination using EPA Test Method 624. All samples and blanks were manifested on the chain-of-custody form prior to their transport to ATI via Redi-express couriers. Samples collected after the courier pick up each afternoon were manifested on a separate chain-of-custody along with a separate set of blanks and were stored in a refrigerator at the office for courier pick up the next day.

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For quality control and assurance, three of the 3-inch brass rings were tested for residual hydrocarbons. One ring was washed and decontaminated in the field while the other two were only cleansed at the office. The rings were sealed, stored, manifested, and sent to ATI in the same manner as the other samples. ATI was given instructions to swab and test the inside of the rings using EPA Test Methods 418.1 and 413.2.

Samples collected in the 1-inch brass rings were placed in PVC containers, capped, and labeled. These samples were stored at the office while ATI determined which of the adjacent 3-inch samples were contaminated or clean. Soil moisture for the clean sample intervals were calculated by Leighton and Associates while ERTEC calculated soil moisture in the contaminated intervals.

Field measurements were made using photoionization detecting (PID) and organic vapor analysis (OVA) equipment. Each instrument was properly calibrated at the start of each day. The PID was used to monitor ambient, drillers breathing zone, an sample headspace air quality. The OVA was only used to measure sample headspace air quality. The OVA could not be used to monitor ambient air quality because of its high internal instrument drift. Because of this drift, the instrument was electronically rezeroed before each reading. OVA monitoring at the hole was limited by a faulty battery pack which required the continued use of the charger to remain operational.

The drillers breathing zone was monitored for air contamination using the PID. It was attempted to monitor this zone every half-hour by taking a reading 3 inches above the top of the drill hole in the downwind direction.

Field measurements of the sample headspace were conducted every five feet using a portion of the California modified split spoon sample. Upon opening the sampler, one 3-inch brass ring was emptied into a mason jar, sealed with a clean sandwich baggie and rubber band, and set aside to allow the volatiles a chance to vaporize. After setting several minutes, readings were taken by inserting the instrument probes through the baggie and recording the peak reading.

Boring LB-103 was drilled adjacent to LB-3 in an attempt to resample at 43, 48, and 68 feet. After initial poor recovery in LB-103, sample catchers were used to increase the percentage recovery in the remainder of this hole and in all later borings. Due to poor sample recovery at 43 and 48 feet in LB-103, LB-103A was drilled adjacent to LB-3 and opposite of LB-103. From LB-103 and LB-103A two consecutive 3-inch brass ring samples were collected from a single California modified split spoon sampler. An "A" sample was sent to ATI and a "C" sample was sent to CRL, both California Department of Health Services certified laboratories. Both samples were analyzed by EPA Test Method 8240.

Boring LB-100 was drilled to a depth of 116 feet where refusal was encountered. This refusal appears to be a tough, possibly cemented cobble and boulder zone. The driller attempted to grind through it for approximately 30 minutes before stopping due to a lack of progress and because of damage to the augers. Because

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of poor sample recovery, the amount of time required to pound the samplers and the lack of elevated PID readings, samples were only collected every 5 feet using the California modified split spoon sampler starting at 105 feet. The last fully recovered sample was at 110 feet.

Boring LB-101 was drilled to a depth of 122 feet where refusal was encountered. The sampling interval in this boring was also increased to 5 feet starting at 95 feet. At 115 feet a 15-foot section of drill pipe dropped into the auger stem. The drillers were unable to retrieve it. Because the hole was already encountering resistance in the form of cobbles, it was decided to drill to refusal or 120 feet without collecting samples. At 120 feet drilling progress was very slow due to abundant cobbles. Because sample recovery in this type of zone is very poor, it was decided to continue drilling without sampling until this zone was passed or until refusal was encountered. At 122 feet the drilling advancement essentially stopped and it was decided to terminate the boring. The drillers attempt to recover the drill pipe using plaster-of-paris in the augers failed and the pipe was left in the hole. The last fully recovered sample was at 110 feet.

In the field, the locations of Borings LB-100 and LB-101 were reversed from what was shown on the work plan location map. Because samples from these borings had already been sent to the lab, it was decided to change the work plan location maps labeling to match the field labeling.

Boring LB-102 was located near the center of the tank excavation. For drilling access, this excavation was lined with two layers of plastic sheeting and backfilled with clean fill. A 16-inch hole was drilled to 20 feet and 20 feet of clean 12-inch conductor casing was cemented in-place for LB-102. The boring was drilled to 90 feet at which point the auger twisted off. The drillers were unable to recover the lowermost 15 feet of auger, the bit, a sampler and a sampler hammer. The hole was abandoned and LB-102A was begun adjacent to LB-102. LB-102A was to be drilled without sampling to 90 feet and then sampled continuously from 90 feet to total depth. The conductor casing for Boring LB-102A broke loose when the boring was at 40 feet. The casing was pulled, the hole was reamed to 20 inches and the casing was reinstalled. At 110 feet a sample hammer dropped down the auger and drilling was postponed for one week.

All borings except LB-102A have been filled with a bentonite cement grout. All cuttings from the borings were placed in an onsite storage bin for disposal by HR Textron. All wash fluids were contained in labeled 55-gallon drums and stored onsite awaiting proper disposal by HR Textron.

Water Quality Sampling

Well 4905A in a 2-inch monitoring well equipped with a continuous water level recording device. Before purging and sampling began the recorder was turned off, the probe were carefully removed and the static water level was measured using wetted tape method. The well size and depth to water required that all purging and sampling be done using a clean one quart stainless steel bailer. Approximately, three well volumes (40 gallons) of very turbid water was removed prior to sampling. While purging, the time required for the turbidity to

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decrease by settlement of the larger suspended particles was recorded. While waiting for the turbidity to decrease in the well, the bailer and sample petcock were cleaned in a mild degreasing solution and rinsed with tap and distilled water. After cleaning, a field blank consisting of four 1 pint mason jars and two 40 ml VOA vials filled with distilled water that had been poured through the clean bailer were collected in the same manner as the samples. Two 1 quart mason jars and four 40 ml VOA vials were collected as samples from near the top of the water column in the well. All mason jar lids were lined with teflon tape. The VOA vials were collected from a single bailer using a sample petcock to prevent the loss of any volatile present. All samples and blanks were properly documented on the chain-of-custody, stored in chilled cooler and sent to the ATI San Diego laboratory via courier on the day of collection. All purged water was containerized in a 55-gallon drum that was labelled and left onsite awaiting proper disposal once chemical results were available. The area surrounding the well was cleaned and the monitoring probes were left beside the well covered in plastic awaiting their replacement in the well by a Los Angeles County Flood Control Agent.

[illegible] and Company
[illegible] Attorney
Client Communication
and Work Product

APPENDIX D

Project No.: 7841189-08 | Project Name and Site Location: HR Textron - Pacoima

Samplers (Signature): Dyl E. Ik

Leighton & Associates, Inc.
25020 W Avenue Stanford #190
Valencia, Cal. 91355
Attention: Ms. Maki
Phone No. (805) 257-0150

Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 8240	624	REMARKS
LB-103A-43C	9/21		43'	Soil	TPH, O&G, VOH	1	X		
" - 48C	"		48'	Soil	"	1	X		
" - 68C	"		68'	Soil	"	1	X		
MW-21AC	"	1130	80'	Water	"	2		X	
MW-21BC	"	1100	80'	Water	"	2		X	

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Sample Integrity: Good

Samples Intact: Yes ✓ No ____

Samples Properly Cooled: Yes ✓ No ____

Samples Accepted: Yes ✓ No ____

If not, why: ____

Samples Placed in Lab Refrigerator
Yes ✓ No ____ LCA Rep. Initials DK

Relinquished by:	Date / Time	Received by:
Dyl E. Ik	9/21/88	Cindy Hockwood
C. Shelton	9-21-88 9:05	
	9/21/88 6:15	9/21/88 6:15 PM

Leighton and Associates, Inc.

Laboratory Name: CRL 3 Hrs. T.T.

Certification No.: ____

80 Tw 39

Project No.	Client and Site Location
1841189-08	HR Textron - Pacoima

Samplers (Signature): [signature]

Call & Send Results to:
Leighton & Associates, Inc.
25020 W. Ave Stanford #150
Valencia, Cal. 91355
Attention: Ms. Maki
Phone No. (805) 257-0150

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 8240	624							REMARKS
01	LB-103A-43A	9/21		43'	Soil	TPH & OG VOA	1	X								
02	" - 48A	"		48'	Soil	"	1	X								
03	" - 68A	"		68'	Soil	"	1	X								
04	MW-21AA	"	11:30	80'	Water	"	2		X							
05	MW-21	"	11:00	80'	Water	"	2		X							

Privileged and Company Private Attorney Client Communication and Work Product

Sample Integrity: Good
Samples Intact: Yes ✓ No ____
Samples Properly Cooled: Yes ✓ No ____
Samples Accepted: Yes ✓ No ____
If not, why: ____

Samples Placed in Lab Refrigerator
Yes ✓ No ____ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
[signature]	9/21/88	Cindy M Lockwood
C. Shelton	9-21-88 2:55 pm	[signature]
[signature]	9/21/88 6:55 pm	Received for Lab by: Maria L. Bernardo

Leighton and Associates, Inc.

Laboratory Name: ATI
Certification No.: ____

Project No.	Client and Site Location
7841189-08	H R Textron - Pacoima

Samplers (Signature): D. L. E. Kl

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	8015 (mod.)	8240	624
14	LB-102-30	9/19	7:35	30.5	Soil	O&G, TPH, VOA	1	X	X	X	
15	LB-102-40	"	8:20	39.5	Soil	"	1	X	X	X	
16	LB-102-60	"	11:40	60.0	"	"	1	X	X	X	
17	" - 70	"	12:30	70.0	"	"	1	X	X	X	
18	" - 80	"	1:30	80.0	"	"	1	X	X	X	

Call & Send Results to:
Leighton & Associates, Inc.
25020 W. Ave Stanford #190
Valencia, Cal. 91355
Attention: Mimi Maki
Phone No. (805) 257-0150

REMARKS

Hold these samples until further notice

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Attorney Client Communication
Attorney Work Product

Sample Integrity: Good
Samples Intact: Yes ✓ No ____
Samples Properly Cooled: Yes ✓ No ____
Samples Accepted: Yes ✓ No ____
If not, why: ____

Samples Placed in Lab Refrigerator
Yes ✓ No ____ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
D. L. E. Kl	9/19/88 3:40 pm	Ken Yamane
Ken Yamane	9/19/88 8:40	Maria L. Bernardo
Maureen VanDerhoef	9/20/88 6:00 pm	Received for Lab by:

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

D - 10

8471

Project No.	Client and Site Location
784189-08	MR Textron, Pacoima

Samplers (Signature): D. L. E. V.

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	Mod 8015	8240	624	REMARKS
01	LB-102-26	9/19	7:05	26'	Soil	HC★	1	X	X	X		
02	" - 35	9/19	8:00	35'	"	"	1	X	X	X		
03	" - 45	9/19	8:50	45'	"	"	1	X	X	X		
04	" - 46.5	9/19	9:20	46.5	"	"	1	X	X	X		
05	" - 49.0	9/19	10:00	49.0	"	"	1	X	X	X		
06	" - 50	9/19	10:40	50.5	"	"	1	X	X	X		
07	" - 53	9/19	11:00	52.5	"	"	1	X	X	X		
08	" - 54	9/19	11:35	54.0	"	"	1	X	X	X		
09	" - 65	9/19	12:00	65.0	"	"	1	X	X	X		
10	" - 75*	9/19	1:00	75.0	"	"	1	X	X	X		* per Mimi Maki sample should be LB-102-74.5 as labeled. 9/29/88 per phone conversation with Gordon (ATI)
12	MW-19A	9/19	3:00	80'	Water	"	1				X	
	MW-19A	9/19	3:00	80'	"	"	1				X	
13	MW-19B	9/19	3:20	85'	"	"	1				X	
	MW-19B	9/19	3:20	85'	"	"	1				X	
11	LB-102-85	9/19	1:30	85.5'	Soil	"	1	X	X	X		

Call & Send Results to: Leighton & Associates, Inc.

Attention:

Phone No.

Sample Integrity: Good

Samples Intact: Yes ✓ No

Samples Properly Cooled: Yes ✓ No

Samples Accepted: Yes ✓ No

If not, why:

Samples Placed in Lab Refrigerator: Yes ___ No ✓ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
D. L. E. V.	9/19/88 3:40 pm	Ken Navarro
Ken Navarro	9/19/88 8:40 pm	Maria L Bernardo
Relinquished by:	Date / Time	Received for Lab by:

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.:

★HC = Hydrocarbons, solvents, oil & grease

Project Control Communication Log Attached

7841189-08 | H R Textron – Pacoima

Samplers (Signature): DyL EK

Leighton & Associates, Inc.
25020 W. Ave Stanford, #190
Valencia, Cal. 91355
Attention: Mimi Maki
Phone No. (805) 257-0151

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	Mod. 8015	8240	624	REMARKS
12	LB-101-60	9/16		60	Soil	TPH, VOA, O&G	1	X	X	X		
13	" -70	"		70.5	"	"	1	X	X	X		
14	" -80	"		81	"	"	1	X	X	X		
15	" -90	"		90	"	"	1	X	X	X		Analyze with normal turn around time
16	" -100	"		100.5	"	"	1	X	X	X		
17	" -110	"		110.5	"	"	1	X	X	X		
24	MW-16A	"	3:00	130	Water	"	1				X	
	MW-16A	"	3:00	130	Water	"	1				X	
26	LB-101-61.5	"		61.5	Soil	"	1					? Need to check to see if this is mislabelled
27	LB-101-75	"		76.5	"	"	1					
28	LB-101-85	"		85.5	"	"	1					Hold these samples until further notice
	[redacted]											
29	LB-101-95	"		94.5	"	"	1					
25	MW-16B	"	3:05	135	Water	"	1				X	
	MW-16B	"	3:05	135	Water	"	1				X	Analyze with normal turn around time

Sample Integrity: Good

Samples Intact: Yes ✓ No ____

Samples Properly Cooled: Yes ✓ No ____

Samples Accepted: Yes ✓ No ____

If not, why: ____

Samples Placed in Lab Refrigerator
Yes ✓ No ____ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
DyL E. Kuhl	9/16/98 3:25 pm	Ken Nunez
Ken Nunez	9/16/98 8:10	Maria L. Bunales
Relinquished by:	Date / Time	Received for Lab by:

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

Filed Under Contamination Case Attorney Client Privileged Communication

Project No.	Client and Site Location
7841189-08	HR Textron - Pacoima

Samplers (Signature): [signature]

Call & Send Results to:
Leighton & Associates, Inc. 25020 W. Ave Stanford Ste 90
Valencia, Cal. 91355
Attention: Ms. Maki
Phone No. (805) 257-0152

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	8015 (modified)	8240	624						REMARKS
01	LB-101-S	9/15		5.5	Soil	TPH, O&G VOA	1	X	X	X							Analyze with Normal
02	" - 15	"	11:00	16	"	"	1	X	X	X							turn around time
03	" - 25	"	1:05	25	"	"	1	X	X	X							
04	" - 35	"	1:00	35.5	"	"	1	X	X	X							
05	" - 40	"	2:25	40	"	"	1	X	X	X							
06	" - 45	"	2:45	44.5	"	"	1	X	X	X							
07	" - 46	"	3:00	46	"	"	1	X	X	X							
08	" - 48	"	3:10	47.5	"	"	1	X	X	X							
09	" - 49	"	3:25	49	"	"	1	X	X	X							
10	" - 51	"	3:43	50.5	"	"	1	X	X	X							
11	" - 57	"	4:00	57	"	"	1	X	X	X							
22	MW-15A		4:30	180'	Water	VOA	1				X						
	MW-15A		4:30	180'	"	"	1				X						
23	MW-15B	"	4:35	180'	"	"	1				X						
	MW-15B	"	4:35	180'	"	"	1				X						

Privileged and Company Private Attorney Client Communication [illegible]

Sample Integrity: Good

Samples Intact: Yes X No ____

Samples Properly Cooled: Yes X No ____

Samples Accepted: Yes X No ____

If not, why: ____

Samples Placed in Lab Refrigerator
Yes X No ____ L&A Rep. Initials DK

Relinquished by:	Date	Time	Received by:
[signature]	9/15/88	9/16/88	Cindy Lockwood
Cindy Lockwood	9/16/88	2:50 pm	[signature]
[signature]	9/16/88	8:10	Maria L. Bernardo

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

D-7

1841189-08 | HR Textron - Pacoima

Samplers (Signature) D.L E.K

Leighton & Associates, Inc
25020 W. Ave Stanford #190
Valencia, Cal. 91355
Attention: Ms. Maki
Phone No. (805) 257-0151

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	8015 (modified)	8240	413.2	418.1	REMARKS
30	LB-101-10	9/15	10:45	10	Soil	TPH O:G	1						Hold til further notice
31	" -20	"	12:15	20.5	"	"	1						
32	" -30	"	1:30	31	"	"	1						
33	" -52	"	3:30	52	"	"	1						
18	LB-102-20	9/15	5:30	20	Soil	"	1	X	X	X			
													Please analyze the work
19	RT-1A	9/15	10:00	—	—	TPH O:G	1				X	X	through our Purge and see
20	RT-2B	"	12:00	—	—	"	1				X	X	if any TPH or O:G is being
21	RT-3C	"	4:15	—	—	"	1				X	X	removed.

Pursuant to the Confidentiality Provisions of the Contract and Attorney Work Product and Attorney Client Communication

Sample Integrity: Good

Samples Intact: Yes X No ____

Samples Properly Cooled: Yes X No ____

Samples Accepted: Yes X No ____

If not, why: ____

Samples Placed in Lab Refrigerator

Yes ✓ No ____ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
D.L E.K	9/15/88 9/16/88	Cindy Jackwood
Cindy Jackwood	9/16/88 2:50 pm	Ron Jarvis
Ron Jarvis	9/16/88 5:10 pm	Maria L. Bernardo

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

D - 6

[redacted] 78[redacted] [redacted] Te[redacted] Pa[redacted] [redacted]

Samplers (Signature): Mark Richertson

EP[redacted] Test Method No.

[redacted]ton [redacted]oci[redacted], In[redacted]
25020 W. Ave Stanford, St 190
Valencia, Cal. 91355
Attention: Mimi Maki
Phone No. (805) 257-0150

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	REMARKS
21	LB-100-55.5	9/14	7:51	55.5	Soil	TPH, O&G, VOC	1	Hold these samples
22	-100-64.5	9/14/93	8:30	64.5	"	"	1	until further notice.
23	-100-75.5	"	10:00	75.5	"	"	1	
24	-100-86	"	11:15	86	"	"	1	
25	-100-96	"	12:30	96	"	"	1	
26	-100-106	"	1:15	106	"	"	1	

Privileged and Company Private Attorney Client Communication and Work Product

Sample Integrity: Good

Samples Intact: Yes ✓ No ____

Samples Properly Cooled: Yes ✓ No ____

Samples Accepted: Yes ✓ No ____

If not, why: ____

Samples Placed in Lab Refrigerator
Yes ✓ No ____ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
Mark Richertson	9/14 / 4:30 pm	[signature]
[signature]	9/14 / 7:50 pm	Marian Van Deckoff

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

Project No.	Client and Site Location
7841189-08	HR Textron - Pacoima

Samplers (Signature): Mark Richertson

Call & Send Results to:
Leighton & Associates, Inc.
25020 W. Ave Stanford, Ste 1
Valencia, Cal. 91355
Attention: Mimi Maki
Phone No. (805) 257-0157

	Sample Number	Date	Time (7:00 AM)	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	8015 Mod	8240	624						REMARKS
01	LB100-51	9/14	[illegible]	51	Soil	TPH, O&G, VOC	1	X	X	X							Analyze with normal
02	" - 60	"	8:15	60	↓	↓	1	X	X	X							turn around time
03	" - 69	"	8:45	69	↓	↓	1	X	X	X							↓
04	" - 81.5	"	10:15	81.5	↓	↓	1	X	X	X							↓
05	" - 90.5	"	11:30	90.5	↓	↓	1	X	X	X							↓
06	" - 101.5	"	12:45	101.5	↓	↓	1	X	X	X							↓
07	" - 111.5	"	1:45	111.5	Soil	↓	1	X	X	X							↓
14	MW-14-A	"	3:00 p	110	Water	↓	2				X						↓
15	MW-14-B	"	3:10 p	110	Water	↓	2				X						↓

Sample Integrity: Good

Samples Intact: Yes ✓ No ____

Samples Properly Cooled: Yes ✓ No ____

Samples Accepted: Yes ✓ No ____

If not, why: ____

Samples Placed in Lab Refrigerator
Yes X No ____ L&A Rep. Initials DK

Relinquished by:	Date / Time	Received by:
Mark Richertson	9/14 / 4:30 p	[signature]
[signature]	9-14 / 7:50 p	Marian Van Derberg

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

Privileged and Company Private Attorney Client Communication and Work Product

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Project No.	Client and Site Location
7841189-08	HRTextron Pacoima

Samplers (Signature): Mark Richertsen

Call & Send Results to:
Leighton & Associates, Inc.
25020 W. Ave. Stanford #140
Valencia CA 91355
Attention: Mimi Meli
Phone No. 805) 257-0150

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 418.1	Mod 8015	8240	624						REMARKS
08	LB-100-9.5	9/13	4:00 p	9.5	Soil	H.C. ☆	1	X	X	X							Analyze with Normal turn around time
09	20		4:30 p	20			1										
10	31		5:15 p	31			1										
11	40		6:08 p	40			1										
12	MW-100-A		7:30	50	Water		2				X						
13	MW-100-B		7:35	50			2				X						
14	LB-100-5																Hold these untill further notice
17	15.5																
18	24.5																
19	35.5																
20	46.5																

Privileged and Company Private Attorney Client Communication and Work Product

Sample Integrity: Good
Samples Intact: Yes X No ____
Samples Properly Cooled: Yes X No ____
Samples Accepted: Yes X No ____
If not, why: ____

Samples Placed in Lab Refrigerator
Yes X No ____ L&A Rep. Initials MR

Relinquished by:	Date / Time	Received by:
Mark Richertsen	9/13/88 9:00 p	Cindy Lockwood
Cindy Lockwood	9/14/88 4:00 pm	[signature]
[signature]	9-14 7:50 pm	Marian Van Derhoof

Leighton and Associates, Inc.

☆HC = hydrocarbon

Laboratory Name: ATI

Certification No.: ____

Samplers (Signature) Mark Richertson / [illegible]

25020 W. Ave. Stanford #190 Valencia CA 91355

Attention: Mimi Mabi

Phone No. 805) 257-0150

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	Test Method No.	8240 (Volatile)	624 (Volatile)							REMARKS
01	LB-103-35A	9/13	12:30	35	Soil	HC *	1		X								SOIL SAMPLES COLLECTED IN
02	50A		1:00	50													BRASS RINGS. WATER SAMPLES
03	53A		1:15	53													COLLECTED IN 2 40 mL VOA'S.
04	54.5A		1:30	54.5													
05	56A		1:45	56													HOLDING TIME FOR SAMPLES
06	68A		2:15	68													IS 14 DAYS.
07	MW 13 AA	9/13/88	3:15	70	Water		2			X							
08	MW 13 BA	9/13/88	3:30	70			2			X							

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Sample Integrity:

Samples Intact: Yes X No ____

Samples Properly Cooled: Yes X No ____

Samples Accepted: Yes X No ____

If not, why: ____

Samples Placed in Lab Refrigerator

Yes X No ____ L&A Rep. Initials [illegible]

Relinquished by:	Date / Time	Received by:
Mark Richertson	9/13/88 4:34p	[illegible]
[illegible]	9/13/88 8:05	Maria L. Burardo

Leighton and Associates, Inc.

Laboratory Name: ATI

Certification No.: ____

* = HC = hydrocarbons

Project No.	Client and Site Location
7841189-08	HR TEXTRON/PACOIMA

Samplers (Signature): DK, MAR & BAL — Bruce A. Lewis, Mark Richardson

Call & Send Results to:
Leighton & Associates, Inc.
25020 W. AVE STANFORD, NO
VALENCIA, CA 91355
Attention: MIMI MAK
Phone No. (805) 257-0150

Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 8240 (VOLATILE ORG)	EPA Test Method No. 624 (VOLATILE ORG)	REMARKS
LB-103-35C	9/13/88	12:30	35	SOIL	VOLATILES	1	X		ALL SAMPLES COLLECTED IN 3" LONG
LB-103-50C		1:00	50			1	X		BRASS RINGS. WATER SAMPLES
LB-103-53C		1:15	53			1	X		COLLECTED IN 2 40mL VOA'S.
LB-103-54.5C		1:30	54.5			1	X		
LB-103-56C		1:45	56			1	X		HOLDING TIME FOR SAMPLES IS
LB-103-68C		2:15	68			1	X		14 DAYS.
MW-13AC		3:15	70	WATER		2		X	PLEASE SEND COPY OF CHAIN OF-
MW-13BC		3:20	70			2		X	CUSTODY TO ADDRESS ABOVE.

2 HRS. 1/2

MW-13AC - VOA VIALS RECEIVED W/ SAMPLES FROZEN, ONE VIAL BROKEN BECAUSE OF FREEZING SAMPLE. BD

Sample Integrity:
Samples Intact: Yes X No
Samples Properly Cooled: Yes X No
Samples Accepted: Yes X No
If not, why:

Samples Placed in Lab Refrigerator
Yes X No L&A Rep. Initials BAL/DK

Relinquished by:	Date / Time	Received by:
DK & BAL	9/13/88 4:10	
Relinquished by:	Date / Time	Received by:
	9/13/88 7:15P	
Relinquished by:	Date / Time	Received for Lab by:
		9/13 7:20P

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Leighton and Associates, Inc.

Laboratory Name: CERTIFIED RESEARCH LABS (CRL)

Certification No.:

8[illegible]

Project No.	Client and Site Location
7841189-09	HR Textron - Pacoima

Samplers (Signature): Mark Rickertsen

Call & Send Results to: Leighton & Associates, Inc.

Attention: Mimi Maki
Phone No. 805) 250-0150

	Sample Number	Date	Time	Depth Below Grade (ft)	Sample Type	Suspect Contamination	No. of Containers	EPA Test Method No. 624	8015	418.1							REMARKS
1	4905-K	9/22/88	4:15 p	300	Water	HC*	6	X	X	X							Please add preservatives
2	MW-22	9/22/88	3:45 p	50	"	"	8	X	X	X							to 4905-K 418.1 sample &
																	to MW-122, 624 & 418.1
																	samples upon delivery
																	to lab.

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Sample Integrity: good - turbid for 4905 K

Samples Intact: Yes X No ____

Samples Properly Cooled: Yes X No ____

Samples Accepted: Yes X No ____

If not, why: ____

Samples Placed in Lab Refrigerator
Yes ____ No X Not Stored Overnite L&A Rep. Initials ____

Relinquished by:	Date / Time	Received by:
Mark Rickertsen Mark Rickertsen	9/22/88 4:35 p	[signature]
Relinquished by:	Date / Time	Received by:
[signature]	7-22-88 8:00	Maria L. Bernardo
Relinquished by:	Date / Time	Received for Lab by:

Leighton and Associates, Inc.

*HC = hydrocarbons - oil, grease, chlorinated solvents

Laboratory Name: ATI

Certification No.: ____

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APPENDIX E

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

Privileged and Company
Private Attorney I.D. 809118
Client Communication
and Work Product

September 27, 1988

RECEIVED
Sep 2 6 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Leighton & Associates
25020 W. Ave. Stanford, Ste. 190
Valencia, California 91355

Project Name: HR Textron-Pacoima

Project No.: 7841189-08

Attention: Mimi Maki

On September 13, 1988, Analytical Technologies, Inc. received two water samples and six soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

for Richard M. Amano
Laboratory Manager

CAS:bc

Analytical Technologies, Inc.

ATI I.D. 809118

ANALYTICAL SCHEDULE

CLIENT: LEIGHTON & ASSOCIATES
PROJECT NAME: HR TEXTRON-PACOIMA

PROJECT NO.: 7841189-08

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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Analytical Technologies, Inc.

CLIENT : [illegible] ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
ATI I.D. : 809118

DATE RECEIVED : 09/13/88
REPORT DATE : 09/26/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-103-35A	SOIL	09/13/88
02	LB-103-50A	SOIL	09/13/88
03	LB-103-53A	SOIL	09/13/88
04	LB-103-54.5A	SOIL	09/13/88
05	LB-103-56A	SOIL	09/13/88
06	LB-103-68A	SOIL	09/13/88
07	MW-13-AA	WATER	09/13/88
08	MW-13-BA	WATER	09/13/88

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----- TOTALS -----

MATRIX	# SAMPLES
WATER	2
SOIL	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80911807

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-13-AA	DATE ANALYZED	: 09/21/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	98
TOLUENE-D8 (%)	100

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ATI I.D. : 80911807

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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and Work Product

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80911808

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-13-BA	DATE ANALYZED	: 09/21/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	86
BFB (%)	98
TOLUENE-D8 (%)	102

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Private Attorney
Client Communicatio
and Work Product

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80911808

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
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Client Communication
and Work Product

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809118
PROJECT #	: 7841189-08	DATE EXTRACTED	: N/A
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/21/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	100
TOLUENE-D8 (%)	97

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809118

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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QUALITY CONTROL DATA

ATI I.D. : 809118

ST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80908008

DATE ANALYZED : 09/14/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1.0	50	49	98	49	98	0
TRICHLOROETHENE	<1.0	50	42	84	43	86	2
CHLOROBENZENE	<1.0	50	47	94	48	96	2
TOLUENE	<1.0	50	47	94	48	96	2
BENZENE	<1.0	75	61	81	64	85	5

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80911801

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/14/88
CLIENT I.D.	: LB-103-35A	DATE ANALYZED	: 09/17/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	98
BFB (%)	92
TOLUENE-D8 (%)	104

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ATI I.D. : 80911801

ADDITIONAL MAJOR COMPOUNDS	RESULTS
201 DIMETHOXYMETHANE	0.4

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AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80911802

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/14/88
CLIENT I.D.	: LB-103-50A	DATE ANALYZED	: 09/17/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	0.1
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	109
BFB (%)	112
TOLUENE-D8 (%)	112

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ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80911803

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/14/88
CLIENT I.D.	: LB-103-53A	DATE ANALYZED	: 09/17/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	117
BFB (%)	117
TOLUENE-D8 (%)	118

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ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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ATI I.D. : 80911804

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/14/88
CLIENT I.D.	: LB-103-54.5A	DATE ANALYZED	: 09/17/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	113
BFB (%)	115
TOLUENE-D8 (%)	114

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ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80911805

EST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
ROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
ROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/14/88
CLIENT I.D.	: LB-103-56A	DATE ANALYZED	: 09/17/88
AMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
HLOROMETHANE	<0.50
BROMOMETHANE	<0.50
INYL CHLORIDE	<0.05
HLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
ARBON DISULFIDE	<0.05
,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
RANS-1,2-DICHLOROETHENE	<0.05
HLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
-BUTANONE (MEK)	<0.50
,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
ROMODICHLOROMETHANE	<0.05
,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
RANS-1,3-DICHLOROPROPENE	<0.05
RICHLOROETHENE	0.1
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
ENZENE	<0.05
IS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
ROMOFORM	<0.3
-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
ETRACHLOROETHENE	0.1
OLUENE	<0.05
CHLOROBENZENE	<0.05
THYL BENZENE	<0.05
TYRENE	<0.05
OTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
2-DICHLOROETHANE-D4 (%)	121
FB (%)	117
OLUENE-D8 (%)	119

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80911805

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80911806

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/13/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/14/88
CLIENT I.D.	: LB-103-68A	DATE ANALYZED	: 09/17/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	118
BFB (%)	114
TOLUENE-D8 (%)	116

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Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809118

ST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT SOIL

DATE ANALYZED : 09/17/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.7	108	2.9	116	7
TRICHLOROETHENE	<0.05	2.5	2.4	96	2.5	100	4
CHLOROBENZENE	<0.05	2.5	2.8	112	2.9	116	4
TOLUENE	0.08	2.5	2.8	108	2.8	108	0
BENZENE	<0.05	3.75	3.29	88	3.36	90	2

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 809143

October 6, 1988

RECEIVED
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OCT 6, 1988
OCT 7 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Leighton & Associates, Inc.
25020 W. Avenue Stanford, Suite 190
Valencia, California 91355

Project No.: 7841189-08

Project Name: HR Textron-Pacoima

Attention: Mimi Maki

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On September 14, 1988, Analytical Technologies, Inc. received twenty-two soils and four water samples. Eleven of the soil samples and four waters were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marilyn Lindsey for

Carolyn A. Sites
GC/MS Supervisor

Richard M. Amano
Laboratory Manager

CAS:mag

Analytical Technologies, Inc.

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
ATI I.D. : 809143

DATE RECEIVED : 09/14/88
REPORT DATE : 10/06/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-100-51	SOIL	09/14/88
02	LB-100-60	SOIL	09/14/88
03	LB-100-69	SOIL	09/14/88
04	LB-100-81.5	SOIL	09/14/88
05	LB-100-90.5	SOIL	09/14/88
06	LB-100-101.5	SOIL	09/14/88
07	LB-100-111.5	SOIL	09/14/88
08	LB-100-9.5	SOIL	09/13/88
09	LB-100-20	SOIL	09/13/88
10	LB-100-31	SOIL	09/13/88
11	LB-100-40	SOIL	09/13/88
12	MW-100-A	WATER	09/13/88
13	MW-100-B	WATER	09/13/88
14	MW-14-A	WATER	09/14/88
15	MW-14-B	WATER	09/14/88
16	LB-100-5	SOIL	09/13/88
17	LB-100-15.5	SOIL	09/13/88
18	LB-100-24.5	SOIL	09/13/88
19	LB-100-35.5	SOIL	09/13/88
20	LB-100-46.5	SOIL	09/13/88
21	LB-100-55.5	SOIL	09/14/88
22	LB-100-64.5	SOIL	09/14/88
23	LB-100-75.5	SOIL	09/14/88
24	LB-100-86	SOIL	09/14/88
25	LB-100-96	SOIL	09/14/88
26	LB-100-106	SOIL	09/14/88

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----- TOTALS -----

MATRIX	# SAMPLES
WATER	4
SOIL	22

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ATI I.D. 809143

ANALYTICAL SCHEDULE

CLIENT: LEIGHTON & ASSOC.-VALENCIA
PROJECT NAME: HR TEXTRON-PACOIMA

PROJECT NO.: 7841189-08

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HDYROCARBONS	IR	EPA 418.1 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 809143

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/14/88
REPORT DATE : 10/06/88

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, IR	MG/KG	6	3	4	3	4

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AnalyticalTechnologies,Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 809143

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/14/88
REPORT DATE : 10/06/88

PARAMETER	UNITS	06	07	08	09	10
PETROLEUM HYDROCARBONS, IR	MG/KG	3	8	2	3	2

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Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 809143

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/14/88
REPORT DATE : 10/06/88

PARAMETER	UNITS	11
PETROLEUM HYDROCARBONS, IR	MG/KG	3

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Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA ATI I.D. : 809143

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	80914303	4	3	28	100	97	99
PETROLEUM HYDROCARBONS	MG/KG	80914311	3	3	0	100	97	103

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914312

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-100-A	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	99
BFB (%)	89
TOLUENE-D8 (%)	92

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and Work Product

Analytical Technologies, Inc. ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914312

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914313

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-100-B	DATE ANALYZED	: 09/21/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	100
TOLUENE-D8 (%)	96

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Private Attorney
Client Communication
and Work Product

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914313

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914314

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-14-A	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	104
BFB (%)	106
TOLUENE-D8 (%)	107

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Attorney Product

ATI I.D. : 80914314

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Private Attorney
Communication
Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914315

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-14-B	DATE ANALYZED	: 09/21/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	83
BFB (%)	101
TOLUENE-D8 (%)	96

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914315

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809143
PROJECT #	: 7841189-08	DATE EXTRACTED	: N/A
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/20/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	TR
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	94
TOLUENE-D8 (%)	95

TR - Compound detected at an unquantifiable trace level

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Analytical Technologies, Inc.

GCMS - RESULTS

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ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809143

COMPOUNDS	RESULTS
515 METHYL BUTANOATE	6

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Analytical Technologies, Inc. GCMS - RESULTS

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TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809143
PROJECT #	: 7841189-08	DATE EXTRACTED	: N/A
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/21/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	100
TOLUENE-D8 (%)	97

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809143

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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QUALITY CONTROL DATA

ATI I.D. : 809143

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80910903

DATE ANALYZED : 09/22/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	37	50	82	90	82	92	2
TRICHLOROETHENE	32	50	69	74	70	76	3
CHLOROBENZENE	11	50	54	86	56	90	4
TOLUENE	<1	50	43	86	44	88	2
BENZENE	1	50	58	114	56	110	4

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80911806

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809118
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/17/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.4
ACETONE	0.6
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.08
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	115
BFB (%)	109
TOLUENE-D8 (%)	115

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GCMS - RESULTS

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ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809118

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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and Work Product

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80914301

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-51	DATE ANALYZED	: 09/19/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.0
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	91
TOLUENE-D8 (%)	89

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914301

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914302

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-60	DATE ANALYZED	: 09/19/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.5
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	112
BFB (%)	107
TOLUENE-D8 (%)	105

Privileged and Company
Private Attorney
Client Communication
Work Product

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914302

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
Work Product

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80914303

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-69	DATE ANALYZED	: 09/19/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	88
TOLUENE-D8 (%)	86

Privileged and Company
Private Attorney

Analytical Technologies

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914303

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
Attorney Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914304

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-81.5	DATE ANALYZED	: 09/19/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	88
BFB (%)	87
TOLUENE-D8 (%)	85

Privileged and Compan
Private Attorney
Client Communication
and Work Product

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914305

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-90.5	DATE ANALYZED	: 09/19/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	91
TOLUENE-D8 (%)	89

Privileged and Company
Private Attorney
Client Communication
and Work Product

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication

AnalyticalTechnologies, Inc. GCMS - RESULTS

ATI I.D. : 80914306

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-101.5	DATE ANALYZED	: 09/19/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	2.4
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	96
BFB (%)	92
TOLUENE-D8 (%)	90

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Analytical Technologies, Inc.

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914306

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914307

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/14/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-111.5	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	89
BFB (%)	95
TOLUENE-D8 (%)	95

Privileged and Company
Private Attorney
Client Communication
Product

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80914308

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-9.5	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	89
BFB (%)	92
TOLUENE-D8 (%)	92

Privileged and Company
Private Attorney
Client Communication
and Work Product

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914308

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914309

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-20	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	86
TOLUENE-D8 (%)	89

Privileged and Compan
Private
Client

Analytical Technologies, Inc.

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914309

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 80914310

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-31	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	93
TOLUENE-D8 (%)	97

Privileged and Compar
Private Attorney
Client
and

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914310

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80914311

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/13/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/16/88
CLIENT I.D.	: LB-100-40	DATE ANALYZED	: 09/20/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	93
TOLUENE-D8 (%)	97

Privileged and Company
Private Attorney
Client Communication

Analytical Technologies, Inc.

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80914311

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809143
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/19/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.4
ACETONE	0.8
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.06
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	87
TOLUENE-D8 (%)	85

Privileged and Company Private Attorney Client Communication and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809143

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809143
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/20/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	TR
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.1
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	94
TOLUENE-D8 (%)	95

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809143

COMPOUNDS	RESULTS
515 METHYL BUTANOATE	0.3

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QUALITY CONTROL DATA

ATI I.D. : 809143

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80914218

DATE ANALYZED : 09/26/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	1.8	72	1.9	76	5
TRICHLOROETHENE	<0.05	2.5	1.7	68	1.8	72	6
CHLOROBENZENE	<0.05	2.5	1.8	72	1.9	76	5
TOLUENE	<0.05	2.5	1.8	72	1.8	72	0
BENZENE	<0.05	2.5	2.3	92	2.3	92	0

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809143

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT SOIL

DATE ANALYZED : 09/15/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.0	80	2.2	88	9
TRICHLOROETHENE	<0.05	2.5	1.9	76	2.0	80	5
CHLOROBENZENE	<0.05	2.5	2.0	80	2.2	88	9
TOLUENE	<0.05	2.5	1.9	76	2.1	84	10
BENZENE	<0.05	2.5	2.5	100	2.6	104	4

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

CMM

Analytical Technologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

[illegible] and Company
Private Attorney
[illegible] Communication

ATI I.D. 809184

October 7, 1988

RECEIVED
OCT 10 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Leighton & Associates, Inc.
25020 W. Avenue Stanford, Suite 190
Valencia, California 91355

Project No.: 7841189-08

Project Name: HR Textron-Pacoima

Attention: Mimi Maki

On September 16, 1988, Analytical Technologies, Inc. received twenty-six soils, three liquids, and four water samples. Twenty-four samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

Richard M. Amano
Laboratory Manager

CAS:mag

Analytical Technologies, Inc.

ATI I.D. 809184

ANALYTICAL SCHEDULE

CLIENT: LEIGHTON & ASSOC.-VALENCIA
PROJECT NAME: HR TEXTRON-PACOIMA

PROJECT NO.: 7841189-08

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
OIL & GREASE	IR	EPA 413.2
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
ATI I.D. : 809184

DATE RECEIVED : 09/16/88
REPORT DATE : 10/07/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-101-S	SOIL	09/15/88
02	LB-101-15	SOIL	09/15/88
03	LB-101-25	SOIL	09/15/88
04	LB-101-35	SOIL	09/15/88
05	LB-101-40	SOIL	09/15/88
06	LB-101-45	SOIL	09/15/88
07	LB-101-46	SOIL	09/15/88
08	LB-101-48	SOIL	09/15/88
09	LB-101-49	SOIL	09/15/88
10	LB-101-51	SOIL	09/15/88
11	LB-101-57	SOIL	09/15/88
12	LB-101-60	SOIL	09/16/88
13	LB-101-70	SOIL	09/16/88
14	LB-101-80	SOIL	09/16/88
15	LB-101-90	SOIL	09/16/88
16	LB-101-100	SOIL	09/16/88
17	LB-101-110	SOIL	09/16/88
18	LB-102-20	SOIL	09/15/88
19	RT-1A	LIQUID	09/15/88
20	RT-2B	LIQUID	09/15/88
21	RT-3C	LIQUID	09/15/88
22	MW-15A	WATER	09/15/88
23	MW-15B	WATER	09/15/88
24	MW-16A	WATER	09/16/88
25	MW-16B	WATER	09/16/88
26	LB-101-61.5	SOIL	09/16/88
27	LB-101-75	SOIL	09/16/88
28	LB-101-85	SOIL	09/16/88
29	LB-101-95	SOIL	09/16/88
30	LB-101-10	SOIL	09/15/88
31	LB-101-20	SOIL	09/15/88
32	LB-101-30	SOIL	09/15/88
33	LB-101-52	SOIL	09/15/88

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----- TOTALS -----

MATRIX	# SAMPLES
WATER	4
SOIL	26
LIQUID	3

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 809184

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/16/88
REPORT DATE : 10/07/88

PARAMETER	UNITS	19	20
OIL AND GREASE, IR	UG	350	-
PETROLEUM HYDROCARBONS, IR	UG	-	200

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GENERAL CHEMISTRY RESULTS

ATI I.D. : 809184

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/16/88
REPORT DATE : 10/07/88

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, IR	MG/KG	5	3	17	3	2

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GENERAL CHEMISTRY RESULTS

ATI I.D. : 809184

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/16/88
REPORT DATE : 10/07/88

PARAMETER	UNITS	06	07	08	09	10
PETROLEUM HYDROCARBONS, IR	MG/KG	2	4	3	2	3

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GENERAL CHEMISTRY RESULTS

ATI I.D. : 809184

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/16/88
REPORT DATE : 10/07/88

PARAMETER	UNITS	11	12	13	14	15
PETROLEUM HYDROCARBONS, IR	MG/KG	2	2	5	3	4

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GENERAL CHEMISTRY RESULTS

ATI I.D. : 809184

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/16/88
REPORT DATE : 10/07/88

PARAMETER	UNITS	16	17	18
PETROLEUM HYDROCARBONS, IR	MG/KG	3	2	9800

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GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA ATI I.D. : 809184

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
OIL AND GREASE, IR	MG/L	80927203	0.18	0.19	5	3.7	3.9	90
PETROLEUM HYDROCARBONS	MG/L	80927203	0.18	0.19	5	3.7	3.9	90
PETROLEUM HYDROCARBONS	MG/KG	80918401	5	7	33	110	96	108
PETROLEUM HYDROCARBONS	MG/KG	80918411	2	2	0	110	96	115

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80918422

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-15A	DATE ANALYZED	: 09/28/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	83
BFB (%)	93
TOLUENE-D8 (%)	94

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ATI I.D. : 80918422

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918423

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-15B	DATE ANALYZED	: 09/28/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	94
TOLUENE-D8 (%)	93

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Analytical Technologies, Inc.

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918423

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80918424

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-16A	DATE ANALYZED	: 09/28/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	100
TOLUENE-D8 (%)	100

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918424

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80918425

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-16B	DATE ANALYZED	: 09/28/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	108
TOLUENE-D8 (%)	112

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918425

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809184
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/28/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/28/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	13
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	92
TOLUENE-D8 (%)	93

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809184

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809184
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/28/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/28/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	107
TOLUENE-D8 (%)	107

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809184

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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QUALITY CONTROL DATA

ATI I.D. : 809184

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80922901

DATE ANALYZED : 09/29/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	42	84	41	82	2
TRICHLOROETHENE	<1	50	39	78	44	88	12
CHLOROBENZENE	<1	50	40	80	43	86	7
TOLUENE	<1	50	38	76	40	80	5
BENZENE	<1	50	50	100	51	102	2

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

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GCMS - RESULTS

ATI I.D. : 80918401

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-S	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	100
BFB (%)	111
TOLUENE-D8 (%)	113

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918401

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918402

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-15	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	82
BFB (%)	93
TOLUENE-D8 (%)	91

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918402

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918403

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-25	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	89
BFB (%)	88
TOLUENE-D8 (%)	91

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918403

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918404

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-35	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	83
BFB (%)	93
TOLUENE-D8 (%)	97

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918404

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918405

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-40	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	86
BFB (%)	94
TOLUENE-D8 (%)	93

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ATI I.D. : 80918405

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918406

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-45	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	96
BFB (%)	103
TOLUENE-D8 (%)	111

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918406

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918407

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-46	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	95
TOLUENE-D8 (%)	94

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Analytical Technologies, Inc.

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918407

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918408

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-48	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	88
BFB (%)	100
TOLUENE-D8 (%)	96

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918408

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80918409

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-49	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	76
BFB (%)	91
TOLUENE-D8 (%)	90

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918409

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918410

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-51	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	89
BFB (%)	93
TOLUENE-D8 (%)	93

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918410

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918411

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-57	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	109
BFB (%)	96
TOLUENE-D8 (%)	100

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918411

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918412

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-60	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	89
TOLUENE-D8 (%)	93

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918412

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918413

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-70	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.5
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	91
TOLUENE-D8 (%)	94

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918413

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80918414

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-80	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.5
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	94
BFB (%)	95
TOLUENE-D8 (%)	98

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918414

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80918415

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-90	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	82
BFB (%)	84
TOLUENE-D8 (%)	85

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918415

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80918416

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-100	DATE ANALYZED	: 09/23/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	88
BFB (%)	90
TOLUENE-D8 (%)	96

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918416

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80918417

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/16/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-101-110	DATE ANALYZED	: 09/26/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	79
TOLUENE-D8 (%)	84

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80918417

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80918418

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/15/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/16/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/20/88
CLIENT I.D.	: LB-102-20	DATE ANALYZED	: 09/26/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1.0
CHLOROETHANE	<1.0
METHYLENE CHLORIDE	<6.0
ACETONE	<10
CARBON DISULFIDE	<1.0
1,1-DICHLOROETHENE	4.0
1,1-DICHLOROETHANE	<1.0
TRANS-1,2-DICHLOROETHENE	<1.0
CHLOROFORM	<1.0
1,2-DICHLOROETHANE	<1.0
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	180
CARBON TETRACHLORIDE	<1.0
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1.0
1,1,2,2-TETRACHLOROETHANE	<1.0
1,2-DICHLOROPROPANE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
TRICHLOROETHENE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,1,2 TRICHLOROETHANE	<1.0
BENZENE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<6.0
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	8
TOLUENE	4
CHLOROBENZENE	<1.0
ETHYL BENZENE	<1.0
STYRENE	<1.0
TOTAL XYLENES	4
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	60
TOLUENE-D8 (%)	89

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ATI I.D. : 80918418

ADDITIONAL MAJOR COMPOUNDS	RESULTS
741 BRANCHED HYDROCARBON C9	30
776 BRANCHED CYCLIC HYDROCARBON C9	30
796 BRANCHED HYDROCARBON C9	30
846 BRANCHED HYDROCARBON C9	50
909 CYCLIC HYDROCARBON C10	30

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and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809184
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/20/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/23/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.06
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	100
TOLUENE-D8 (%)	101

TR - Compound detected at an unquantifiable trace level

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809184

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809184
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/20/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/23/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.08
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.07
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	83
BFB (%)	89
TOLUENE-D8 (%)	90

TR - Compound detected at an unquantifiable trace level

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809184

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

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ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809184

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809184
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/20/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/23/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	TR
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.08
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	104
BFB (%)	98
TOLUENE-D8 (%)	102

TR - Compound detected at an unquantifiable trace level

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Analytical Technologies, Inc. GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809184
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/20/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/26/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.4
ACETONE	0.7
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	88
TOLUENE-D8 (%)	87

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Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809184

COMPOUNDS	RESULTS
71 ACETONITRILE	1

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QUALITY CONTROL DATA

ATI I.D. : 809184

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT SOIL

DATE ANALYZED : 09/23/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.6	104	2.6	104	0
TRICHLOROETHENE	<0.05	2.5	2.3	92	2.4	96	4
CHLOROBENZENE	<0.05	2.5	2.3	92	2.5	100	8
TOLUENE	<0.05	2.5	2.3	92	2.4	96	4
BENZENE	<0.05	3.75	3.1	83	3.1	83	0

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 809184

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT SOIL

DATE ANALYZED : 09/26/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	3.3	132	2.8	112	16
TRICHLOROETHENE	<0.05	2.5	2.5	100	2.7	108	8
CHLOROBENZENE	<0.05	2.5	2.6	104	3.0	120	14
TOLUENE	<0.05	2.5	2.5	100	2.9	116	15
BENZENE	<0.05	3.75	3.43	91	3.6	96	5

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 809191

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October 20, 1988

Leighton & Associates, Inc.
25020 W. Avenue Stanford, Suite 190
Valencia, California 91355

RECEIVED
OCT 21 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Project No.: 7841189-08

Project Name: HR Textron-Pacoima

Attention: Mimi Maki

On September 19, 1988, Analytical Technologies, Inc. received sixteen soils and two water samples. Eleven of the soil samples and two waters were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

All soil samples were first analyzed on 10/3/88. Due to necessary dilutions, samples with ATI I.D. 809191-01 thru -07 were re-analyzed on 10/4/88 and 10/5/88.

The results of these analyses and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

Richard M. Amano
Laboratory Manager

CAS:mag

Analytical Technologies, Inc.

ATI I.D. 809191

ANALYTICAL SCHEDULE

CLIENT: LEIGHTON & ASSOC.-VALENCIA PROJECT NO.: 7841189-08
PROJECT NAME: HR TEXTRON-PACOIMA

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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and Work Product

Analytical Technologies, Inc.

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
ATI I.D. : 809191

DATE RECEIVED : 09/19/88
REPORT DATE : 10/20/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-102-26	SOIL	09/19/88
02	LB-102-35	SOIL	09/19/88
03	LB-102-45	SOIL	09/19/88
04	LB-102-46.5	SOIL	09/19/88
05	LB-102-49.0	SOIL	09/19/88
06	LB-102-50	SOIL	09/19/88
07	LB-102-53	SOIL	09/19/88
08	LB-102-54	SOIL	09/19/88
09	LB-102-65	SOIL	09/19/88
10	LB-102-74.5	SOIL	09/19/88
11	LB-102-85	SOIL	09/19/88
12	MW-19A	WATER	09/19/88
13	MW-19B	WATER	09/19/88
14	LB-102-30	SOIL	09/19/88
15	LB-102-40	SOIL	09/19/88
16	LB-102-60	SOIL	09/19/88
17	LB-102-70	SOIL	09/19/88
18	LB-102-80	SOIL	09/19/88

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----- TOTALS -----

MATRIX	# SAMPLES
WATER	2
SOIL	16

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 809191

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/19/88
REPORT DATE : 10/20/88

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, IR	MG/KG	8300	9100	14000	17000	3800

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Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 809191

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/19/88
REPORT DATE : 10/20/88

PARAMETER	UNITS	06	07	08	09	10
PETROLEUM HYDROCARBONS, IR	MG/KG	1200	11000	6	7	7

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Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 809191

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/19/88
REPORT DATE : 10/20/88

PARAMETER	UNITS	11
PETROLEUM HYDROCARBONS, IR	MG/KG	4

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CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA ATI I.D. : 809191

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	80927106	2	3	40	110	96	112
PETROLEUM HYDROCARBONS	MG/KG	80919108	6	4	40	110	97	108

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80919112

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-19A	DATE ANALYZED	: 09/29/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	90
BFB (%)	96
TOLUENE-D8 (%)	93

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and Work Product

ADDITIONAL MAJOR COMPOUNDS	RESULTS
138 ALKENE C4	20

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and Work Product

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GCMS - RESULTS

ATI I.D. : 80919113

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-19B	DATE ANALYZED	: 09/28/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	93
TOLUENE-D8 (%)	97

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919113

ADDITIONAL MAJOR COMPOUNDS	RESULTS
137 ALKENE C4	20

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809191
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/28/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/28/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	13
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	92
TOLUENE-D8 (%)	93

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Work Product

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809191

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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QUALITY CONTROL DATA

ATI I.D. : 809191

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80922901

DATE ANALYZED : 09/29/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	42	84	41	82	2
TRICHLOROETHENE	<1	50	39	78	44	88	12
CHLOROBENZENE	<1	50	40	80	43	86	7
TOLUENE	<1	50	38	76	40	80	5
BENZENE	<1	50	50	100	51	102	2

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

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GCMS - RESULTS

ATI I.D. : 80919101

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-26	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<5.0
BROMOMETHANE	<5.0
VINYL CHLORIDE	<0.5
CHLOROETHANE	<0.5
METHYLENE CHLORIDE	<3.0
ACETONE	<5.0
CARBON DISULFIDE	<0.5
1,1-DICHLOROETHENE	0.6
1,1-DICHLOROETHANE	<0.5
TRANS-1,2-DICHLOROETHENE	<0.5
CHLOROFORM	<0.5
1,2-DICHLOROETHANE	<0.5
2-BUTANONE (MEK)	<5.0
1,1,1-TRICHLOROETHANE	110
CARBON TETRACHLORIDE	<0.5
VINYL ACETATE	<5.0
BROMODICHLOROMETHANE	<0.5
1,1,2,2-TETRACHLOROETHANE	<0.5
1,2-DICHLOROPROPANE	<0.5
TRANS-1,3-DICHLOROPROPENE	<0.5
TRICHLOROETHENE	<0.5
DIBROMOCHLOROMETHANE	<0.5
1,1,2 TRICHLOROETHANE	<0.5
BENZENE	<0.5
CIS-1,3-DICHLOROPROPENE	<0.5
2-CHLOROETHYLVINYLETHER	<5.0
BROMOFORM	<3.0
2-HEXANONE (MBK)	<5.0
4-METHYL-2-PENTANONE (MIBK)	<5.0
TETRACHLOROETHENE	6
TOLUENE	3
CHLOROBENZENE	<0.5
ETHYL BENZENE	<0.5
STYRENE	<0.5
TOTAL XYLENES	<0.5
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	74
BFB (%)	89
TOLUENE-D8 (%)	96

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919101

ADDITIONAL MAJOR COMPOUNDS	RESULTS
760 BRANCHED HYDROCARBON C9	20
801 BRANCHED CYCLOHEXANE C9	20
828 BRANCHED HYDROCARBON C9	20
887 BRANCHED HYDROCARBON C9	30
938 BRANCHED CYCLOHEXANE C9	60

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919102

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-35	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<5.0
BROMOMETHANE	<5.0
VINYL CHLORIDE	<0.5
CHLOROETHANE	<0.5
METHYLENE CHLORIDE	<3.0
ACETONE	<5.0
CARBON DISULFIDE	<0.5
1,1-DICHLOROETHENE	<0.5
1,1-DICHLOROETHANE	<0.5
TRANS-1,2-DICHLOROETHENE	<0.5
CHLOROFORM	<0.5
1,2-DICHLOROETHANE	<0.5
2-BUTANONE (MEK)	<5.0
1,1,1-TRICHLOROETHANE	60
CARBON TETRACHLORIDE	<0.5
VINYL ACETATE	<5.0
BROMODICHLOROMETHANE	<0.5
1,1,2,2-TETRACHLOROETHANE	<0.5
1,2-DICHLOROPROPANE	<0.5
TRANS-1,3-DICHLOROPROPENE	<0.5
TRICHLOROETHENE	<0.5
DIBROMOCHLOROMETHANE	<0.5
1,1,2 TRICHLOROETHANE	<0.5
BENZENE	<0.5
CIS-1,3-DICHLOROPROPENE	<0.5
2-CHLOROETHYLVINYLETHER	<5.0
BROMOFORM	<3.0
2-HEXANONE (MBK)	<5.0
4-METHYL-2-PENTANONE (MIBK)	<5.0
TETRACHLOROETHENE	4
TOLUENE	1
CHLOROBENZENE	<0.5
ETHYL BENZENE	<0.5
STYRENE	<0.5
TOTAL XYLENES	<0.5

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	81
BFB (%)	103
TOLUENE-D8 (%)	105

ATI I.D. : 80919102

ADDITIONAL MAJOR COMPOUNDS	RESULTS
762 BRANCHED HYDROCARBON C9	20
803 BRANCHED HYDROCARBON C9	30
829 BRANCHED CYCLOHYDROCARBON C9	10
889 BRANCHED CYCLOHYDROCARBON C9	40
940 BRANCHED HYDROCARBON C9	70

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and Work Product

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919103

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-45	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	5
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.10
TOLUENE	0.07
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	56
BFB (%)	109
TOLUENE-D8 (%)	103

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Analytical Technologies, ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919103

ADDITIONAL MAJOR COMPOUNDS	RESULTS
762 BRANCHED HYDROCARBON C9	1
803 BRANCHED HYDROCARBON C9	1
831 BRANCHED HYDROCARBON C9	3
886 BRANCHED CYCLOHEXANE C9	5
942 BRANCHED CYCLOHEXANE C9	6

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Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80919104

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-46.5	DATE ANALYZED	: 10/05/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1.0
CHLOROETHANE	<1.0
METHYLENE CHLORIDE	<6.0
ACETONE	<10
CARBON DISULFIDE	<1.0
1,1-DICHLOROETHENE	<1.0
1,1-DICHLOROETHANE	<1.0
TRANS-1,2-DICHLOROETHENE	<1.0
CHLOROFORM	<1.0
1,2-DICHLOROETHANE	<1.0
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	100
CARBON TETRACHLORIDE	<1.0
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1.0
1,1,2,2-TETRACHLOROETHANE	<1.0
1,2-DICHLOROPROPANE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
TRICHLOROETHENE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,1,2 TRICHLOROETHANE	<1.0
BENZENE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<6.0
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	3
TOLUENE	2
CHLOROBENZENE	<1.0
ETHYL BENZENE	<1.0
STYRENE	<1.0
TOTAL XYLENES	<1.0

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	56*
BFB (%)	144*
TOLUENE-D8 (%)	105

* Result out of limits due to sample matrix interference

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919104

ADDITIONAL MAJOR COMPOUNDS	RESULTS
761 BRANCHED HYDROCARBON C9	20
830 CYCLIC HYDROCARBON C9	20
863 BRANCHED HYDROCARBON	10
888 BRANCHED HYDROCARBON C9	40
938 CYCLIC HYDROCARBON	80

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Client Communication
and Work Product

Analytica Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919105

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-49.0	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<5.0
BROMOMETHANE	<5.0
VINYL CHLORIDE	<0.5
CHLOROETHANE	<0.5
METHYLENE CHLORIDE	<3.0
ACETONE	<5.0
CARBON DISULFIDE	<0.5
1,1-DICHLOROETHENE	<0.5
1,1-DICHLOROETHANE	<0.5
TRANS-1,2-DICHLOROETHENE	<0.5
CHLOROFORM	<0.5
1,2-DICHLOROETHANE	<0.5
2-BUTANONE (MEK)	<5.0
1,1,1-TRICHLOROETHANE	64
CARBON TETRACHLORIDE	<0.5
VINYL ACETATE	<5.0
BROMODICHLOROMETHANE	<0.5
1,1,2,2-TETRACHLOROETHANE	<0.5
1,2-DICHLOROPROPANE	<0.5
TRANS-1,3-DICHLOROPROPENE	<0.5
TRICHLOROETHENE	<0.5
DIBROMOCHLOROMETHANE	<0.5
1,1,2 TRICHLOROETHANE	<0.5
BENZENE	<0.5
CIS-1,3-DICHLOROPROPENE	<0.5
2-CHLOROETHYLVINYLETHER	<5.0
BROMOFORM	<3.0
2-HEXANONE (MBK)	<5.0
4-METHYL-2-PENTANONE (MIBK)	<5.0
TETRACHLOROETHENE	2.4
TOLUENE	1
CHLOROBENZENE	<0.5
ETHYL BENZENE	<0.5
STYRENE	<0.5
TOTAL XYLENES	<0.5
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	74
BFB (%)	129
TOLUENE-D8 (%)	91

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919105

ADDITIONAL MAJOR COMPOUNDS	RESULTS
762 BRANCHED HYDROCARBON C9	20
804 BRANCHED HYDROCARBON C9	20
867 BRANCHED CYCLOHEXANE C9	50
888 BRANCHED CYCLOHYDROCARBON C9	100
940 BRANCHED HYDROCARBON C9	60

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Private Attorney
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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919106

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-50	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	2
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.1
TOLUENE	0.08
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	81
BFB (%)	86
TOLUENE-D8 (%)	86

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919106

ADDITIONAL MAJOR COMPOUNDS	RESULTS
804 BRANCHED HYDROCARBON C9	2
826 ETHYLMETHYLCYCLOHEXANE	1
863 BRANCHED HYDROCARBON C9	4
888 BRANCHED CYCLOHEXANE C9	1
940 BRANCHED CYCLOHEXANE C9	5

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919107

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-53	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1.0
CHLOROETHANE	<1.0
METHYLENE CHLORIDE	<6.0
ACETONE	<10
CARBON DISULFIDE	<1.0
1,1-DICHLOROETHENE	<1.0
1,1-DICHLOROETHANE	<1.0
TRANS-1,2-DICHLOROETHENE	<1.0
CHLOROFORM	<1.0
1,2-DICHLOROETHANE	<1.0
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	120
CARBON TETRACHLORIDE	<1.0
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1.0
1,1,2,2-TETRACHLOROETHANE	<1.0
1,2-DICHLOROPROPANE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
TRICHLOROETHENE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,1,2 TRICHLOROETHANE	<1.0
BENZENE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<6.0
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	4
TOLUENE	<1.0
CHLOROBENZENE	<1.0
ETHYL BENZENE	<1.0
STYRENE	<1.0
TOTAL XYLENES	<1.0

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	71
BFB (%)	60*
TOLUENE-D8 (%)	104

* Result out of limits due to sample matrix interference

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919108

ADDITIONAL MAJOR COMPOUNDS	RESULTS
747 BRANCHED HYDROCARBON	9
819 BRANCHED CYCLOHEXANE	30
863 BRANCHED HYDROCARBON	90
934 BRANCHED HYDROCARBON	30
985 BRANCHED ALKANE	20

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ADDITIONAL MAJOR COMPOUNDS	RESULTS
804 BRANCHED HYDROCARBON C9	40
828 BRANCHED HYDROCARBON C9	30
862 TRIMETHYLCYCLOHEXANE	60
890 BRANCHED HYDROCARBON C9	30
941 ETHYLDIMETHYLCYCLOHEXANE	200

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919108

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-54	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	121
BFB (%)	78
TOLUENE-D8 (%)	104

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80919109

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-65	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	139
BFB (%)	121
TOLUENE-D8 (%)	106

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ADDITIONAL MAJOR COMPOUNDS	RESULTS
952 BRANCHED ALKANE	10

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ATI I.D. : 80919110

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-74.5	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	116
BFB (%)	89
TOLUENE-D8 (%)	89

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919110

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 80919111

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/19/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/19/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: LB-102-85	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	110
BFB (%)	91
TOLUENE-D8 (%)	86

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Analytical Technologies, ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80919111

ADDITIONAL MAJOR COMPOUNDS	RESULTS
803 BRANCHED ALKANE	2
942 BRANCHED HYDROCARBON	8
887 ETHYLMETHYLCYCLOHEXANE	3
914 BRANCHED HYDROCARBON	0.7

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809191
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/23/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/03/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	1.4
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	80
TOLUENE-D8 (%)	85

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809191

COMPOUNDS	RESULTS
108 ACETONITRILE	0.3

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GCMS - RESULTS

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TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809191
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/23/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/04/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	88
TOLUENE-D8 (%)	97

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809191

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809191
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/23/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/05/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	0.5
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	110
BFB (%)	107
TOLUENE-D8 (%)	110

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809191

COMPOUNDS	RESULTS
104 ACETONITRILE	0.3
802 ALKYL CYCLOHEXANE	0.6
888 ALKYL CYCLOHEXANE	0.9
941 BRANCHED HYDROCARBON	2

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QUALITY CONTROL DATA

ATI I.D. : 809191

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT SOIL

DATE ANALYZED : 09/30/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.5	2.5	2.4	96	2.4	96	0
TRICHLOROETHENE	<0.5	2.5	2.2	88	2.2	88	0
CHLOROBENZENE	<0.5	2.5	2.1	84	2.2	88	5
TOLUENE	<0.5	2.5	2.1	84	2.2	88	5
BENZENE	<0.5	2.5	2.9	116	3.0	120	3

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809191

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80919110

DATE ANALYZED : 10/03/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.7	108	2.8	112	4
TRICHLOROETHENE	<0.05	2.5	2.1	84	2.2	88	5
CHLOROBENZENE	<0.05	2.5	2.2	88	2.3	92	4
TOLUENE	<0.05	2.5	2.3	92	2.4	96	4
BENZENE	<0.05	3.75	3.0	80	3.0	80	0

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Private Attorney
Client Communication
and Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

ATI I.D. 809239

Client Communication and Work Product

October 14, 1988

Leighton & Associates
25020 Ave. Stanford, Ste. 190
Valencia, California 91355

RECEIVED
OCT 17 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Project Name: HR Textron-Pacoima

Project No.: 7841189-08

Attention: Mimi Maki

On September 21, 1988, Analytical Technologies, Inc. received two water samples and three soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

CAS:bc

Richard M. Amano
Laboratory Manager

Analytical Technologies, Inc

ATI I.D. 809239

ANALYTICAL SCHEDULE

CLIENT: LEIGHTON & ASSOCIATES
PROJECT NAME: HR TEXTRON-PACOIMA

PROJECT NO.: 7841189-08

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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Atomics Technologies

CLIENT : [illegible] & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
ATI I.D. : 809239

DATE RECEIVED : 09/21/88
REPORT DATE : 10/14/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-103A-43A	SOIL	09/21/88
02	LB-103A-48A	SOIL	09/21/88
03	LB-103A-68A	SOIL	09/21/88
04	MW-21AA	WATER	09/21/88
05	MW-21BA	WATER	09/21/88

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----- TOTALS -----

MATRIX	# SAMPLES
WATER	2
SOIL	3

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 80923904

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/21/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/21/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-21AA	DATE ANALYZED	: 10/02/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

Privileged and Company Private Attorney Client Communication and Work Product

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	104
TOLUENE-D8 (%)	99

Analytico Technologies ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80923904

.DDITIONAL MAJOR COMPOUNDS	RESULTS
:ONE DETECTED	N/A

Privileged and Company
Private [illegible]
Client [illegible]
and [illegible]

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80923905

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/21/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/21/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-21BA	DATE ANALYZED	: 09/30/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	79
BFB (%)	99
TOLUENE-D8 (%)	101

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ATI I.D. : 80923905

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc. GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809239
PROJECT #	: 7841189-08	DATE EXTRACTED	: N/A
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/30/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	TR
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	104
TOLUENE-D8 (%)	100

TR - Compound detected at an unquantifiable trace level

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and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809239

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809239
PROJECT #	: 7841189-08	DATE EXTRACTED	: N/A
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/02/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	83
BFB (%)	108
TOLUENE-D8 (%)	99

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Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809239

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Product

Anamtica Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809239

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80929301

DATE ANALYZED : 10/06/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	79	50	115	72	133	108	40
TRICHLOROETHENE	<1	50	51	102	54	108	6
CHLOROBENZENE	<1	50	49	98	44	88	11
TOLUENE	<1	50	49	98	40	80	20
BENZENE	<1	75	64	85	53	71	18

Privileged and Company Private Attorney Client Communication and Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80923901

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/21/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/21/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/22/88
CLIENT I.D.	: LB-103A-43A	DATE ANALYZED	: 09/30/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	123
BFB (%)	101
TOLUENE-D8 (%)	106

Privileged and Company
Private Attorney
Client Communication
and Work Product

Anamica Technologies ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80923901

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80923902

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/21/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/21/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/22/88
CLIENT I.D.	: LB-103A-48A	DATE ANALYZED	: 09/30/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	123
BFB (%)	96
TOLUENE-D8 (%)	102

Privileged and Company
Private Attorney
Client Communication
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Anavitico Technologies

ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80923902

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Company
Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80923903

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/21/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/21/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/22/88
CLIENT I.D.	: LB-103A-68A	DATE ANALYZED	: 09/30/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	130
BFB (%)	96
TOLUENE-D8 (%)	101

Privileged and Company
Privileged Attorney
Client Communication
and Work Product

ATI I.D. : 80923903

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809239
PROJECT =	: 7841189-08	DATE EXTRACTED	: 09/22/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/30/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	TR
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	100
TOLUENE-D8 (%)	108

TR - Compound detected at an unquantifiable trace level

Privileged and Company Private Attorney Client Communication and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809239

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809239

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80923311

DATE ANALYZED : 10/02/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.2	88	2.6	104	17
TRICHLOROETHENE	<0.05	2.5	1.7	68	1.8	72	6
CHLOROBENZENE	<0.05	2.5	2.0	80	2.1	84	5
TOLUENE	<0.05	2.5	2.1	84	2.2	88	5
BENZENE	<0.05	2.5	2.8	112	3.0	120	7

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Client Communication
and Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

ATI I.D. 809268

October 7, 1988

Privileged and Company
Private Attorney
Client Communication
and Work Product

Leighton & Associates
25020 Avenue Stanford Suite 190
Valencia, California 91355

Project No.: 7841189-09

Project Name: HR Textron-Pacoima

Attention: Mimi Maki

On September 22, 1988, Analytical Technologies, Inc. received two water samples for analyses. The samples were analyzed with EPA methology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results, sample cross reference, and the quality contol data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

Richard M. Amano
Laboratory Manager

CAS:tka

Analytical Technologies, Inc.

ATI I.D. 809268

ANALYTICAL SCHEDULE

CLIENT : LEIGHTON & ASSOC. PROJECT NO.: 7841189-09
PROJECT NAME : HR TEXTRON-PACOIMA

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1
FUEL HYDROCARBONS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 624

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Private Attorney
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and Work Product

Analytical Technologies, Inc.

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-09
PROJECT NAME : HR TEXTRON-PACOIMA
ATI I.D. : 809268

DATE RECEIVED : 09/22/88
REPORT DATE : 10/07/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	4905-K	WATER	09/22/88
02	MW-22	WATER	09/22/88

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Client
and

----- TOTALS -----

MATRIX	# SAMPLES
WATER	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 809268

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-09
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 09/22/88
REPORT DATE : 10/10/88

PARAMETER	UNITS	01	02
PETROLEUM HYDROCARBONS, IR	MG/L	0.09	0.06

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Analytical Technologies, GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-09
PROJECT NAME : HR TEXTRON-PACOIMA ATI I.D. : 809268

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/L	80927203	0.18	0.19	5	3.7	3.9	90

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Private Attorney
Client Communication
and Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 80926801

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/22/88
PROJECT #	: 7841189-09	DATE RECEIVED	: 09/22/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: 4905-K	DATE ANALYZED	: 10/01/88
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<0.5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	

Privileged and Company
Privileged and Company
Client Confidential

Analytical Technologies GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 80926802

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/22/88
PROJECT #	: 7841189-09	DATE RECEIVED	: 09/22/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 09/23/88
CLIENT I.D.	: MW-22	DATE ANALYZED	: 10/01/88
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<0.5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	-

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[illegible]
Client [illegible]tion
and [illegible]duct

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809268

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-09
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT WATER

DATE ANALYZED : 09/26/88
SAMPLE MATRIX : WATER
UNITS : MG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
FUEL HYDROCARBONS	<0.5	50	30	60	29	58	3

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Private Property
Client Communication
and Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 809280

Client Confidential
and Work Product

October 12, 1988

Leighton & Associates
25020 Avenue Stanford, Suite 190
Valencia, California 91355

RECEIVED
OCT 14 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Project No.: 7841189-08

Project Name: H.R. Textron-Pacoima

Attention: Mimi Maki

On September 23, 1988, Analytical Technologies, Inc. received two soil samples and two water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

Richard M. Amano
Laboratory Manager

CAS:tka

AnalyticalTechnologies,Inc.

ATI I.D. 809280

ANALYTICAL SCHEDULE

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT NAME : H.R. TEXTRON-PACOIMA

PROJECT NO.: 7841189-08

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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Analytical Technologies, Inc.

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : H.R.TEXTRON-PACOIMA
ATI I.D. : 809280

DATE RECEIVED : 09/23/88
REPORT DATE : 10/12/88

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-102A-95	SOIL	09/23/88
02	LB-102A-100	SOIL	09/23/88
03	MW-23A	WATER	09/23/88
04	MW-23B	WATER	09/23/88

Privileged and Company Private Attorney Client Communication and Work Product

----- TOTALS -----

MATRIX	# SAMPLES
WATER	2
SOIL	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 809280

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : H.R.TEXTRON-PACOIMA

DATE RECEIVED : 09/23/88
REPORT DATE : 10/12/88

PARAMETER	UNITS	01	02
PETROLEUM HYDROCARBONS, IR	MG/KG	7	4

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Analytical Technologies

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : H.R.TEXTRON-PACOIMA ATI I.D. : 809280

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	80928001	7	4	55	110	97	108

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Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80928003

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/23/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/23/88
PROJECT NAME	: H.R.TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-23A	DATE ANALYZED	: 10/05/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	78
BFB (%)	103
TOLUENE-D8 (%)	99

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Analytical Technologies, ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80928003

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Anametrix Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80928004

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/23/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/23/88
PROJECT NAME	: H.R.TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-23B	DATE ANALYZED	: 10/05/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	75
BFB (%)	104
TOLUENE-D8 (%)	97

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80928004

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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and Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809280
PROJECT #	: 7841189-08	DATE EXTRACTED	: 10/05/88
PROJECT NAME	: H.R.TEXTRON-PACOIMA	DATE ANALYZED	: 10/05/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	5
ACETONE	10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	82
BFB (%)	104
TOLUENE-D8 (%)	101

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and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809280

COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 8C9280

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : H.R.TEXTRON-PACOIMA
REF I.D. : 80928003

DATE ANALYZED : 10/05/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	48	96	45	90	6
TRICHLOROETHENE	<1	50	49	98	50	100	2
CHLOROBENZENE	<1	50	47	94	49	98	4
TOLUENE	<1	50	44	88	46	92	5
BENZENE	<1	75	57	76	57	76	0

Privileged and Company
Private Attorney
Client Communication
and Work Product

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80928001

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/23/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/23/88
PROJECT NAME	: H.R.TEXTRON-PACOIMA	DATE EXTRACTED	: 09/26/88
CLIENT I.D.	: LB-102A-95	DATE ANALYZED	: 10/06/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	88
BFB (%)	99
TOLUENE-D8 (%)	97

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Private Attorney
Client Comm
and Work Pro

ATI I.D. : 80928001

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80928002

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/23/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 09/23/88
PROJECT NAME	: H.R.TEXTRON-PACOIMA	DATE EXTRACTED	: 09/26/88
CLIENT I.D.	: LB-102A-100	DATE ANALYZED	: 10/06/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	100
TOLUENE-D8 (%)	97

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Analytical Technologies, ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80928002

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Client Communication
and Work Product

Analytico Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809280
PROJECT #	: 7841189-08	DATE EXTRACTED	: 09/26/88
PROJECT NAME	: H.R.TEXTRON-PACOIMA	DATE ANALYZED	: 10/05/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

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Client Communication
Work Product

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	110
TOLUENE-D8 (%)	106

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809280

COMPOUNDS	RESULTS
NONE DETECTED	N/A

Company

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809280

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : H.R.TEXTRON-PACOIMA
REF I.D. : 80923318

DATE ANALYZED : 10/02/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.3	92	2.5	100	8
TRICHLOROETHENE	<0.05	2.5	1.9	76	1.9	76	0
CHLOROBENZENE	<0.05	2.5	2.1	84	2.0	80	5
TOLUENE	<0.05	2.5	2.0	80	2.0	80	0
BENZENE	<0.05	2.5	2.7	108	3.0	120	10

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc GCMS - RESULTS

ATI I.D. : 80926801

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/22/88
PROJECT #	: 7841189-09	DATE RECEIVED	: 09/22/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: 4905-K	DATE ANALYZED	: 09/30/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	7
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	9
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	75
BFB (%)	103
TOLUENE-D8 (%)	99

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Analytico Technologies ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80926801

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 80926802

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 09/22/88
PROJECT #	: 7841189-09	DATE RECEIVED	: 09/22/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-22	DATE ANALYZED	: 09/30/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	100
TOLUENE-D8 (%)	102

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Analytical Technologies, ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 80926802

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

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TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 809268
PROJECT #	: 7841189-09	DATE EXTRACTED	: 09/30/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 09/30/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	TR
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	104
TOLUENE-D8 (%)	100

TR - Compound detected at an unquantifiable trace level

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 809268

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 809268

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-09
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80925201

DATE ANALYZED : 09/29/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	50	100	51	102	2
TRICHLOROETHENE	<1	50	52	101	50	100	4
CHLOROBENZENE	<1	50	47	94	48	96	2
TOLUENE	<1	50	44	88	44	88	0
BENZENE	<1	75	55	73	55	73	0

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

ATI I.D. 810029

October 21, 1988

RECEIVED
OCT 24 1988
LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

Leighton & Associates
25020 Ave. Stanford, Ste. 190
Valencia, California 91355

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Project Name: HR Textron-Pacoima

Project No.: 7841189-08

Attention: Mimi Maki

On October 4, 1988, Analytical Technologies, Inc. received four water samples and thirteen soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marcilen Lindsey
Inorganics Supervisor

ML:bc

Richard M. Amano
Laboratory Manager

Analytical Technologies, Inc.

ATI I.D. 810029

ANALYTICAL SCHEDULE

CLIENT: LEIGHTON & ASSOCIATES
PROJECT NAME: HR TEXTRON-PACOIMA

PROJECT NO.: 7841189-08

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 624, 8240

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Analytical Technologies, Inc.

CLIENT : LEIGHTON & ASSOC.-VALENCIA DATE RECEIVED : 10/04/88
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA REPORT DATE : 10/20/88
ATI I.D. : 810029

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	LB-104-10	SOIL	10/03/88
02	LB-104-20	SOIL	10/03/88
03	LB-104-30	SOIL	10/03/88
04	LB-104-40	SOIL	10/03/88
05	LB-104-50	SOIL	10/03/88
06	LB-104-60	SOIL	10/03/88
07	LB-104-70	SOIL	10/03/88
08	LB-104-80	SOIL	10/03/88
09	LB-104-105	SOIL	10/03/88
10	LB-104-110	SOIL	10/03/88
11	LB-102A-110	SOIL	10/04/88
12	LB-102A-115	SOIL	10/04/88
13	LB-102A-120	SOIL	10/04/88
14	MW-2A	WATER	10/03/88
15	MW-2B	WATER	10/03/88
16	MW-4A	WATER	10/04/88
17	MW-4B	WATER	10/04/88

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----- TOTALS -----

MATRIX	# SAMPLES
WATER	4
SOIL	13

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 810029

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 10/04/88
REPORT DATE : 10/20/88

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, IR	MG/KG	5	5	5	9	4

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AnalyticalTechnologies,Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 810029

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 10/04/88
REPORT DATE : 10/20/88

PARAMETER	UNITS	06	07	08	09	10
PETROLEUM HYDROCARBONS, IR	MG/KG	4	5	5	8	9

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Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 810029

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA

DATE RECEIVED : 10/04/88
REPORT DATE : 10/20/88

PARAMETER	UNITS	11	12	13
PETROLEUM HYDROCARBONS, IR	MG/KG	9	11	32

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Analytical Technologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA ATI I.D. : 810029

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	81002906	4	5	22	140	95	143
PETROLEUM HYDROCARBONS	MG/KG	81006501	6	6	0	130	95	131

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 81002916

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/04/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-4A	DATE ANALYZED	: 10/06/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	TR
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	74
BFB (%)	97
TOLUENE-D8 (%)	92

TR - Compound detected at an unquantifiable trace level

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ATI I.D. : 81002916

ADDITIONAL MAJOR COMPOUNDS	RESULTS
600 KETONE C5-6	6

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 81002917

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/04/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-4B	DATE ANALYZED	: 10/06/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	81
BFB (%)	94
TOLUENE-D8 (%)	91

Privileged and Company Private Attorney Client Communication and Work Product

Analytical Technologies ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 81002917

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 810029
PROJECT #	: 7841189-08	DATE EXTRACTED	: N/A
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/06/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR
ACETONE	<10
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
TRANS-1,2-DICHLOROETHENE	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<10
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
2-CHLOROETHYLVINYLETHER	<10
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<1
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

Privileged and Company Private Attorney Client Communication and Work Product

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	97
BFB (%)	97
TOLUENE-D8 (%)	100

TR - Compound detected at an unquantifiable trace level

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 810029

COMPOUNDS	RESULTS
NONE DETECTED	N/A

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QUALITY CONTROL DATA

ATI I.D. : 810029

TEST : VOLATILE ORGANICS (EPA 624)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 80934228

DATE ANALYZED : 10/07/88
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	50	42	84	46	92	9
TRICHLOROETHENE	<1	50	40	80	44	88	10
CHLOROBENZENE	<1	50	46	92	47	94	2
TOLUENE	<1	50	49	98	50	100	2
BENZENE	<1	75	66	88	63	84	5

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 81002902

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/03/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 10/14/88
CLIENT I.D.	: LB-104-20	DATE ANALYZED	: 10/17/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	78
BFB (%)	95
TOLUENE-D8 (%)	77

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ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 81002906

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/03/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 10/14/88
CLIENT I.D.	: LB-104-60	DATE ANALYZED	: 10/14/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	122
BFB (%)	119
TOLUENE-D8 (%)	122

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ATI I.D. : 81002906

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc.

GCMS - RESULTS

ATI I.D. : 81002909

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/03/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 10/14/88
CLIENT I.D.	: LB-104-105	DATE ANALYZED	: 10/14/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	114
BFB (%)	112
TOLUENE-D8 (%)	116

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Analytical Technologies, ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 81002909

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 81002911

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/04/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 10/05/88
CLIENT I.D.	: LB-102A-110	DATE ANALYZED	: 10/12/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	89
BFB (%)	88
TOLUENE-D8 (%)	92

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ADDITIONAL MAJOR COMPOUNDS

ATI I.D. : 81002911

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

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GCMS - RESULTS

ATI I.D. : 81002912

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/04/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 10/05/88
CLIENT I.D.	: LB-102A-115	DATE ANALYZED	: 10/12/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05
SURROGATE PERCENT RECOVERIES	
1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	83
TOLUENE-D8 (%)	92

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ATI I.D. : 81002912

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Confidential
Private Attorney
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Analytical Technologies, Inc. GCMS - RESULTS

ATI I.D. : 81002913

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	DATE SAMPLED	: 10/04/88
PROJECT #	: 7841189-08	DATE RECEIVED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE EXTRACTED	: 10/05/88
CLIENT I.D.	: LB-102A-120	DATE ANALYZED	: 10/12/88
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	121
BFB (%)	109
TOLUENE-D8 (%)	110

Privileged and Company Private Attorney Client Communication and Work Product

ATI I.D. : 81002913

ADDITIONAL MAJOR COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 810029
PROJECT #	: 7841189-08	DATE EXTRACTED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/17/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.7
ACETONE	TR
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	81
TOLUENE-D8 (%)	99

TR - Compound detected at an unquantifiable trace level

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 810029

COMPOUNDS	RESULTS
NONE DETECTED	N/A

Privileged and Company
Private Attorney
Client Communication
and Work Product

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 810029
PROJECT #	: 7841189-08	DATE EXTRACTED	: 10/14/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/14/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.5
METHYLENE CHLORIDE	<0.3
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	100
BFB (%)	107
TOLUENE-D8 (%)	107

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 810029

COMPOUNDS	RESULTS
569 METHYL BUTYRATE	0.3

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 810029
PROJECT #	: 7841189-08	DATE EXTRACTED	: 10/04/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/11/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	0.6
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

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SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	90
TOLUENE-D8 (%)	88

TR - Compound detected at an unquantifiable trace level

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 810029

COMPOUNDS	RESULTS
100 ACETONITRILE	5
553 PENTANE	0.3
557 METHYL BUTANOATE	0.3

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GCMS - RESULTS

REAGENT BLANK

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT	: LEIGHTON & ASSOC.-VALENCIA	ATI I.D.	: 810029
PROJECT #	: 7841189-08	DATE EXTRACTED	: 10/05/88
PROJECT NAME	: HR TEXTRON-PACOIMA	DATE ANALYZED	: 10/12/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR
ACETONE	<0.50
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
TRANS-1,2-DICHLOROETHENE	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<0.50
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
2-CHLOROETHYLVINYLETHER	<0.50
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.05
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	136
BFB (%)	106
TOLUENE-D8 (%)	105

TR - Compound detected at an unquantifiable trace level

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...Communication
...Product

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GCMS - RESULTS

REAGENT BLANK

ADDITIONAL MAJOR COMPOUNDS

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA ATI I.D : 810029

COMPOUNDS	RESULTS
556 METHYL ACETATE	0.3

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Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 810029

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : REAGENT SOIL

DATE ANALYZED : 10/13/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.50	3.2	128	3.4	136	6
TRICHLOROETHENE	<0.05	2.50	2.4	96	2.6	104	8
CHLOROBENZENE	<0.05	2.50	2.7	108	2.9	116	7
TOLUENE	<0.05	2.50	2.8	112	2.9	116	3
BENZENE	<0.05	3.85	3.7	97	3.9	103	6

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$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Advanced Technologies, Inc.

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QUALITY CONTROL DATA : 810029

TEST : VOLATILE ORGANICS (EPA 8240)

CLIENT : LEIGHTON & ASSOC.-VALENCIA
PROJECT # : 7841189-08
PROJECT NAME : HR TEXTRON-PACOIMA
REF I.D. : 81000403

DATE ANALYZED : 10/10/88
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<0.05	2.5	2.6	104	2.6	104	0
TRICHLOROETHENE	<0.05	2.5	1.8	72	1.8	72	0
CHLOROBENZENE	<0.05	2.5	2.4	96	2.5	100	4
TOLUENE	<0.05	2.5	2.4	96	2.6	104	8
BENZENE	<0.05	3.75	3.2	85	3.35	89	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

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September 27, 1988

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 825724-001/008
ANALYSES: EPA Methods 8240 & 624
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
PROJECT: #7841189-08
HR Textron/Pacoima

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 825724-001/008 shown above.

The samples were received by CRL in a chilled state and with the chain-of-custody record attached. Samples MW-BAC and MW-BBC were received by CRL frozen, but were intact.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

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Joseph D. Kovalcik
REVIEWED

Geral Kimble
APPROVED

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: LB-103-35C

ANALYSIS NO.: 825724-001
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/16/88
SAMPLE TYPE: Solid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	16.	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: LB-103-53C

ANALYSIS NO.: 825724-003
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/19/88
SAMPLE TYPE: Solid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: LB-103-50C

ANALYSIS NO.: 825724-002
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/16/88
SAMPLE TYPE: Solid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	13.
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	9.	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	38.	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	13.	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	150.	Toluene	27.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: LB-103-54.5C

ANALYSIS NO.: 825724-004
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/16/88
SAMPLE TYPE: Solid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	24.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: LB-103-56C

ANALYSIS NO.: 825724-005
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/16/88
SAMPLE TYPE: Solid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	20.	Toluene	20.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: LB-103-68C

ANALYSIS NO.: 825724-006
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/19/88
SAMPLE TYPE: Solid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: MW-13AC

ANALYSIS NO.: 825724-007
ANALYSES: EPA Method 624
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/14/88
SAMPLE TYPE: Liquid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/L)		(ug/L)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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FAX: (714) 891-5917

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Private Attorney
Client Communication

LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

SAMPLE ID.: MW-13BC

ANALYSIS NO.: 825724-008
ANALYSES: EPA Method 624
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
DATE ANALYZED: 09/14/88
SAMPLE TYPE: Liquid
PROJECT: #7841189-08
HR Textron/Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/L)		(ug/L)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 W. Avenue Stanford, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 825724-001/008
ANALYSES: EPA Methods 8240 & 624
DATE SAMPLED: 09/13/88
DATE SAMPLE REC'D: 09/13/88
SAMPLE TYPE: Solid/Liquid
PROJECT: #7841189-08
HR Textron/Pacoima

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/16/88	1,1-Dichloroethene (EPA 8240)	65	59-172	12	22
09/16/88	Chlorobenzene (EPA 8240)	101	60-131	9	21
09/19/88	1,1-Dichloroethene (EPA 8240)	73	59-172	0	22
09/19/88	Chlorobenzene (EPA 8240)	102	60-131	3	21
09/14/88	1,1-Dichloroethene (EPA 624)	88	61-145	0	14
09/14/88	Chlorobenzene (EPA 624)	103	75-130	3	13

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-48C

ANALYSIS NO.: 826526-002
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	14.
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	19.	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	40.	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	14.	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	240.	Toluene	24.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-68C

ANALYSIS NO.: 826526-003
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	12.	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	9.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	9.
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	34.

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SANTA CLARITA VALLEY

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October 5, 1988

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 826526-001/005
ANALYSES: EPA Methods 8240 & 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
PROJECT: 7841189-08
Hr Textron-Pacoima

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 826526-001/005 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

The Report Cover Letter is an integral part of this report.
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(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Privileged and Company
Attorney

LABORATORY REPORT

LEIGHTON AND ASSOCIATES	ANALYSIS NO.: 826526-001
25020 West Avestan, #190	ANALYSES: EPA Method 8240
Valencia, CA 91355	DATE SAMPLED: 09/21/88
ATTN: Ms. Mimi Maki	DATE SAMPLE REC'D: 09/21/88
	DATE ANALYZED: 09/26/88
Sample ID: LB-103A-43C	SAMPLE TYPE: Solid
	PROJECT: 7841189-08
	Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	7.	Toluene	15.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: MW-21AC

ANALYSIS NO.: 826526-004
ANALYSES: EPA Method 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/L)		(ug/L)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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FAX: (714) 891-5917

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: MW-21BC

ANALYSIS NO.: 826526-005
ANALYSES: EPA Method 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/L)		(ug/L)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 826526-001/005
ANALYSES: EPA Methods 8240 & 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
SAMPLE TYPE: Solid/Liquid
PROJECT: 7841189-08
Hr Textron-Pacoima

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/26/88	1,1-Dichloroethene (EPA 624)	106	61-145	7	14
09/26/88	Chlorobenzene (EPA 624)	105	75-130	1	13
09/26/88	1,1-Dichloroethene (EPA 8240)	66	59-172	2	22
09/26/88	Chlorobenzene (EPA 8240)	121	60-131	1	21

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Private Attorney
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October 5, 1988

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 826526-001/005
ANALYSES: EPA Methods 8240 & 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
PROJECT: 7841189-08
Hr Textron-Pacoima

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 826526-001/005 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: MW-21BC

ANALYSIS NO.: 826526-005
ANALYSES: EPA Method 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/L)		(ug/L)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-43C

ANALYSIS NO.: 826526-001
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	7.	Toluene	15.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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CRL Environmental - South Coast
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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-48C

ANALYSIS NO.: 826526-002
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	14.
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	19.	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	40.	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	14.	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	240.	Toluene	24.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-68C

ANALYSIS NO.: 826526-003
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	12.	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	9.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	9.
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	34.

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: MW-21AC

ANALYSIS NO.: 826526-004
ANALYSES: EPA Method 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/L)		(ug/L)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	ND(5.)
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 826526-001/005
ANALYSES: EPA Methods 8240 & 624
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
SAMPLE TYPE: Solid/Liquid
PROJECT: 7841189-08
Hr Textron-Pacoima

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/26/88	1,1-Dichloroethene (EPA 624)	106	61-145	7	14
09/26/88	Chlorobenzene (EPA 624)	105	75-130	1	13
09/26/88	1,1-Dichloroethene (EPA 8240)	66	59-172	2	22
09/26/88	Chlorobenzene (EPA 8240)	121	60-131	1	21

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LEIGHTON & ASSOC. INC.
SANTA CLARITA VALLEY

October 14, 1988

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 826526-002/003
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
PROJECT: 7841189-08
Hr Textron-Pacoima

Enclosed with this letter is the amended report on the chemical and physical analyses on the samples from ANALYSIS NO: 826526-002/003 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

JK
REVIEWED

Feral Kimble
APPROVED

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FAX: (714) 891-5917

LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-48C

ANALYSIS NO.: 826526-002
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	14.
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	19.	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	40.	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	14.	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	240.	Toluene	24.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-68C

ANALYSIS NO.: 826526-003
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	ND(5.)
Acetone	12.*	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	ND(5.)	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	ND(5.)	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	ND(5.)	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	ND(5.)	Toluene	9.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	9.
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	34.

*Concentration may be due laboratory contamination.

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FAX: (714) 891-5917

Enseco

October 14, 1988

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

ANALYSIS NO.: 826526-002/003
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
PROJECT: 7841189-08
Hr Textron-Pacoima

Enclosed with this letter is the amended report on the chemical and physical analyses on the samples from ANALYSIS NO: 826526-002/003 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

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LABORATORY REPORT

LEIGHTON AND ASSOCIATES
25020 West Avestan, #190
Valencia, CA 91355
ATTN: Ms. Mimi Maki

Sample ID: LB-103A-48C

ANALYSIS NO.: 826526-002
ANALYSES: EPA Method 8240
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Solid
PROJECT: 7841189-08
Hr Textron-Pacoima

EPA METHODS 624/8240 VOLATILE ORGANICS

	(ug/kg)		(ug/kg)
Chloromethane	ND(10.)	1,2-Dichloropropane	ND(5.)
Bromomethane	ND(10.)	Trans-1,3-Dichloropropene	ND(5.)
Vinyl Chloride	ND(10.)	Trichloroethene	ND(5.)
Chloroethane	ND(10.)	Dibromochloromethane	ND(5.)
Methylene Chloride	ND(5.)	1,1,2-Trichloroethane	14.
Acetone	ND(10.)	Benzene	ND(5.)
Carbon Disulfide	ND(5.)	cis-1,3-Dichloropropene	ND(5.)
1,1-Dichloroethene	19.	2-Chloroethylvinyl ether	ND(10.)
1,1-Dichloroethane	40.	Bromoform	ND(5.)
Trans-1,2-Dichloroethene	ND(5.)	4-Methyl-2-Pentanone	ND(10.)
Chloroform	ND(5.)	2-Hexanone	ND(10.)
1,2-Dichloroethane	14.	Tetrachloroethene	ND(5.)
2-Butanone	ND(10.)	1,1,2,2-Tetrachloroethane	ND(5.)
1,1,1-Trichloroethane	240.	Toluene	24.
Carbon Tetrachloride	ND(5.)	Chlorobenzene	ND(5.)
Vinyl Acetate	ND(10.)	Ethylbenzene	ND(5.)
Bromodichloromethane	ND(5.)	Styrene	ND(5.)
		Total Xylenes	ND(5.)

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APPENDIX F

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DETAILED CHEMICAL ANALYSES PERFORMED ON SOIL SAMPLES FROM THE 30.5 - 85.5 FEET INTERVAL OF THE LB-102 WELL DRILLED IN PACOIMA, CALIFORNIA

prepared for

LEIGHTON AND ASSOCIATES

November 1988

prepared by

GLOBAL GEOCHEMISTRY CORPORATION
6919 Eton Avenue
Canoga Park, CA 91303

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3. ANALYTICAL PROCEDURES

The following paragraphs summarize the main steps in analyses performed in the Global Geochemistry Corporation laboratories.

Bitumen Extraction

The soil samples were extracted with dichloromethane (DCM) as solvent using a blending technique. The solvent and the more volatile components were removed by evaporation in a rotary evaporator. The resulting total extract was weighed, and the bitumen concentration was determined.

Liquid Chromatography (LC)

The soil bitumens were separated in a glass column (30cm L. - 1cm i.d) packed with silica gel (2/3) and alumina (1/3). The bitumen samples were dissolved in DCM and mixed with alumina. After stripping the solvent, the dried alumina with adsorbed bitumen were added to the column. The bitumen samples eluted with n-hexane (25 ml to give the saturate fraction), 3:2 n-hexane: DCM mixture (25 ml to give the aromatic fraction) and 3:2 DCM: methanol (25 ml to give the polar components). The solvents were stripped off on a rotary evaporator, and the weights of the fractions were recorded. For GC-MS analysis of polycyclic saturated hydrocarbons (aliphatic biomarkers), the iso/cyclic alkanes were separated from the normal alkanes using a molecular sieve technique.

Capillary Gas Chromatography of C_{15+}-Alkane Fraction

The alkane fractions of the bitumens were taken up in hexane and introduced into a capillary column (DB-1 fused silica, 30 m x 0.25 mm i.d.) mounted in a Carlo Erba 4130 gas chromatograph connected to a spectra physics 4200 integrator interfaced to a DEC ISI 11/23 computer. The column oven was programmed from 40°C (1 min iso) to 280°C at 4°C/min. Helium (30 ml/min) was used as carrier gas.

Gas Chromatography-Mass Spectrometry (GC-MS) of Biological Markers

The aliphatic biomarker of the soil bitumens have been analyzed using Multiple Ion Detection Mode (MID). The GC-MS analysis is based on the distribution patterns of characteristic fragments (key ions) formed by steranes and triterpanes ("Biological Markers"). The isomer distribution patterns of these

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alkane distributions suggests a common source rock for these two bitumens.

To confirm the relationship between the two soil bitumen, their polycyclic saturated hydrocarbons, i.e. triterpanes and steranes ("biological markers") were investigated by gas chromatography-mass spectrometry (GC-MS). A number of biomarker ratios were calculated for each bitumen and are presented in Table 2 and 3 and shown in Figure 12.

The triterpane (m/z 191) distribution patterns of both bitumens are very similar to each other (Figure 3-6), showing an abundance of 17α(H)-hopanes in the C_{27} to C_{35} range, and a fair proportion of tricyclic compounds. Relatively high abundances of 18α(H)-C_{27}-hopane (trisnorhopane), (22S) 17α,21β-C_{31} and C_{32}-hopanes (i.e. biomarker ratios 5, 1 and 2 respectively in Table 2), and very low abundance of C_{29} and C_{30}-moretanes (compound L and O in Figures 3 & 4, biomarker ratios 3 and 4 in Table 2) indicate that the hydrocarbons present in the soil samples were similarly generated from a starting organic matter common to both.

The sterane (m/z 217) distribution patterns of the soil bitumens analyzed (Figures 7-10) are also very similar to each other suggesting a generic relationship. They are dominated by a C_{27}-C_{29} series of regular steranes and rearranged steranes (diasteranes). A relatively high proportion of diasteranes present in both soil bitumens further supports the severe biodegradation effect already observed in their alkane distributions. The sterane carbon number distribution in both soil bitumens (parameters N, O, P Table 2, and Figure 11) are very similar, with C_{27} and C_{29} steranes in roughly equal abundances. This is characteristic of hydrocarbons generated from a very similar organic source dominantly deposited in a marine environment, with some contribution of terrestrially derived plant material.

The similarity between the two soil bitumens is further supported by a comparison of selected biomarker parameters calculated for these bitumens (Figure 12). As shown in this figure, the values for each of the selected ratios are very similar in soil samples from the two depth intervals indicating that hydrocarbons present in both shallow and deeper soil samples are derived from the same oil.

Carbon isotope values obtained for saturate and aromatic fractions of soil bitumens are very similar to each other (Tables 1 and Figure 13) and support the conclusions reached from GC and GC-MS results that hydrocarbons present in the soil samples are derived from the same organic source. The discrepancy observed

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Table 1: Analytical results obtained for soil samples submitted by Leighton and Associates

GGC #	Sample #	Extract Yield (ppm)	Extract Composition (Rel.%) Saturates	Aromatics	Polar	Rel% alkanes of Total hydrocarbons	Alkane Parameters Pr/Ph	Pr/n-C17	Ph/n-C18	Carbon Isotope Composition Saturates	Aromatics	Hydrogen Isotope Composition Saturates	Aromatics
4118-1	LB-102(30')	7080	75.0	20.0	5.0	78.9	0.46	0.41	0.54	-27.42(27.30)*	-26.63	-84(-90)	-88
4118-(2+3+4)	LB-102(70'-80'-85.5')	40	61.0	16.0	23.0	79.0	0.72	1.09	0.94	-27.55	-26.68	-102	-94

* duplicated value
Pr/Ph = Pristane/phytane

Table 2: Triterpane biomarker parameters calculated for soil bitumens analysed

GGC #	Sample #	1	2	3	4	5	6	7	8	9	10	11	12	13
4118-1	LB-102-30.5'	1.33	1.35	0.09	0.11	0.63	0.55	0.03	1.13	5.42	0.05	0.06	0.05	1.69
4118-(2,3,4)	LB-102-(70'+80'+85.5')	1.24	1.35	0.1	0.13	0.65	0.49	0.03	1.00	5.48	0.04	0.06	0.07	2.18

Table 3: Sterane biomarker parameters calculated for soil bitumens analysed

GGC #	Sample #	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
4118-1	LB-102-30.5'	1.26	1.34	0.99	1.6	56.5	55.9	0.92	0.83	1.07	62.6	0.51	1.73	1.36	37.9	24.4	37.7	0.64
4118-(2,3,4)	LB-102-(70'+80'+85.5')	1.23	1.26	1.08	1.43	54.6	55.2	1.1	0.82	1.02	62.1	0.54	1.79	1.27	35.1	26.7	38.2	0.66

Table 5

Tricyclic, Tetracyclic, and Pentacyclic Terpanes
Identification (m/z 191 Fragmentograms)
Refer to Figures 3 & 4

Code	Identity	Carbon No.
0	C_{20}-Tricyclic terpane	20
1	C_{21}-Tricyclic terpane	21
2	C_{22}-Tricyclic terpane	22
3	C_{23}-Tricyclic terpane	23
4	C_{24}-Tricyclic terpane	24
5	C_{25}-Tricyclic terpane	25
Z4	C_{24}-Tetracyclic terpane	24
6	C_{26}-Tricyclic terpane	26
7	C_{27}-Tricyclic terpane	27
A	C_{28}-Tricyclic terpane #1	28
B	C_{28}-Tricyclic terpane #2	28
C	C_{29}-Tricyclic terpane #1	29
D	C_{29}-Tricyclic terpane #2	29
E	18α-22,29,30-Trisnorneohopane (Ts)	27
F	17α-22,29,30-Trisnorhopane (Tm)	27
G	17β-22,29,30-Trisnorhopane	27
H	17α-23,28-Bisnorhopane	28
10a	C_{30}-Tricyclic terpane #1	30
10b	C_{30}-Tricyclic terpane #2	30
I	17α-28,30-Bisnorhopane	28
11a	C_{31}-Tricyclic terpane #1	31
J	17α-25-Norhopane	29
11b	C_{31}-Tricyclic terpane #2	31
K	17α,21β-30-Norhopane	29
L	17β,21α-30-Normoretane	29
M	18α-Oleanane	30
N	17α,21β-Hopane	30
O	17β,21α-Moretane	30
13a	C_{33}-Tricyclic terpane #1	33
13b	C_{33}-Tricyclic terpane #2	33
P	22S-17α,21β-30-Homohopane	31
Q	22R-17α,21β030-Homohopane	31
R	Gammacerane	30
14a	C_{34}-Tricyclic terpane #1	34
S	17β,21α-Homomoretane	31
14b	C_{34}-Tricyclic terpane #2	34
T	22S-17α,21β-30,31-Bishomohopane	32
U	22R-17α,21β-30,31-Bishomohopane	32
15a	C_{35}-Tricyclic terpane #1	35
15b	C_{35}-Tricyclic terpane #2	35
V	17β,21α-C_{32}-Bishomomoretane	32
WS	22S-17α,21β-30,31,32-Trishomohopane	33
WR	22R-17α,21β-30,31,32-Trishomohopane	33
16a	C_{36}-Tricyclic terpane #1	36
16b	C_{36}-Tricyclic terpane #2	36
XS	22S-17α,21β-30,31,32,33-Tetrahomohopane	34
XR	22R-17α,21β-30,31,32,33-Tetrahomohopane	34
YS	22S-17α,21β-30,31,32,33,34-Pentahomohopane	35
YR	22R-17α,21β-30,31,32,33,34-Pentahomohopane	35

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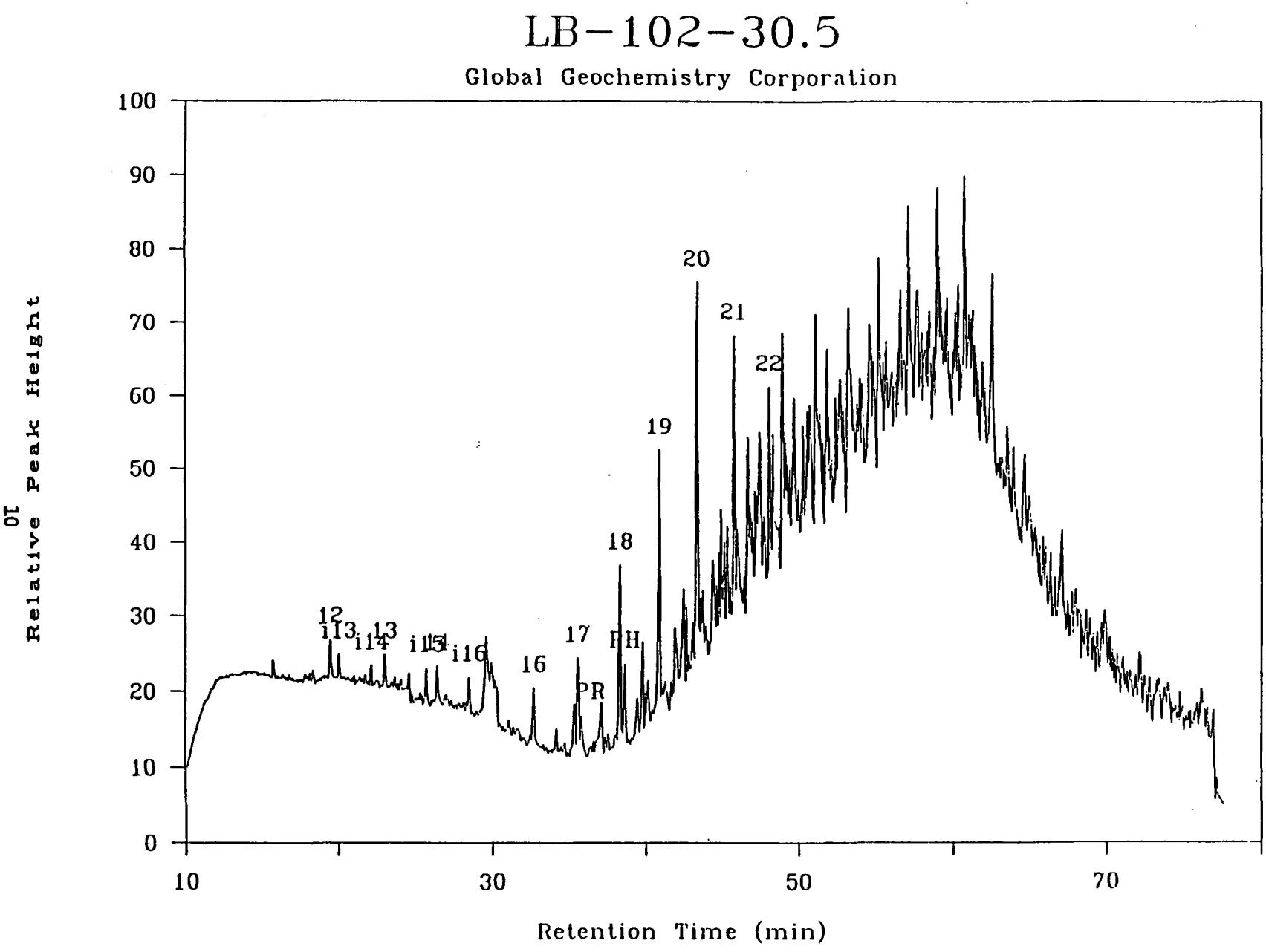

Figure 1

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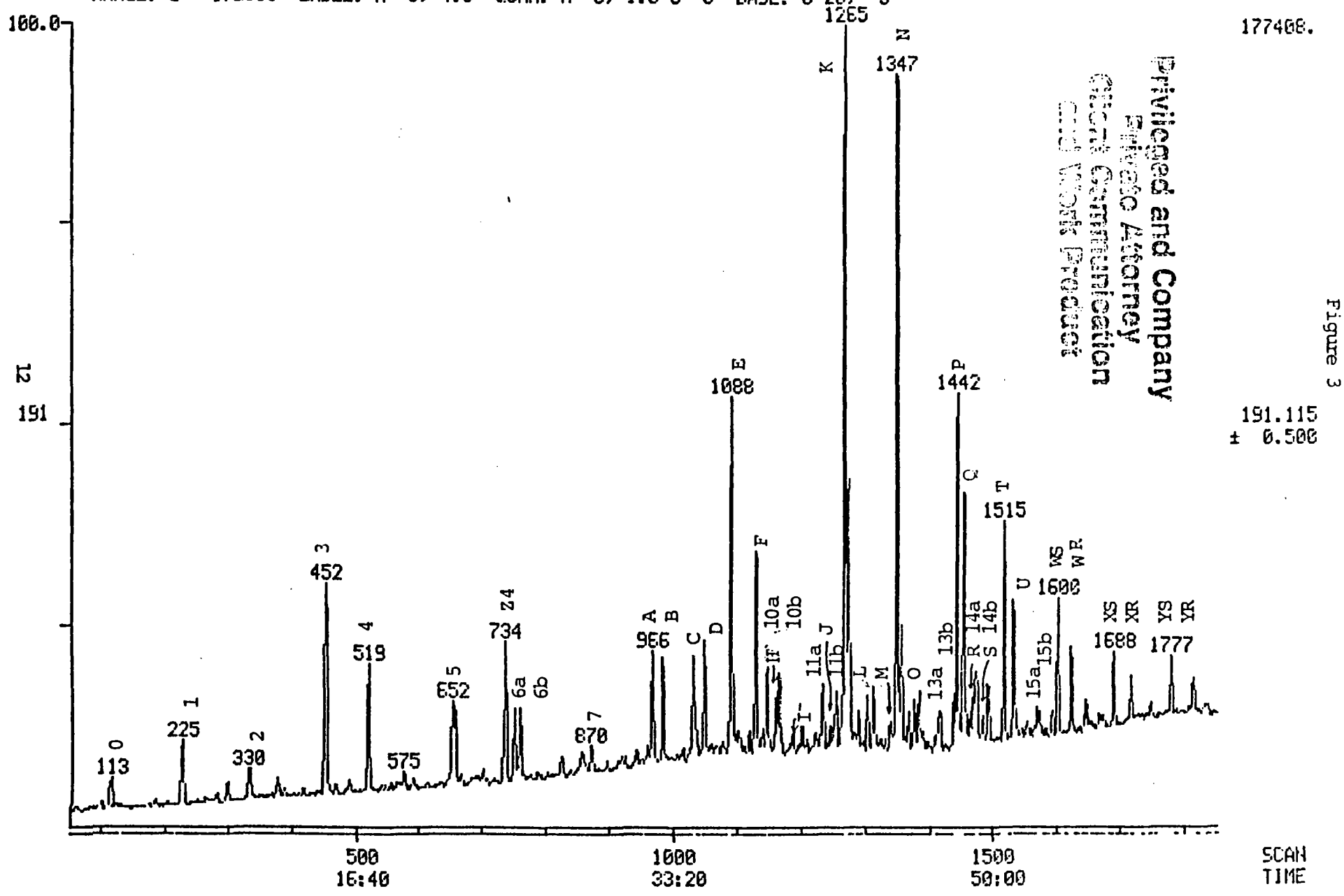

Figure 3

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Confidential Communication

Figure 5

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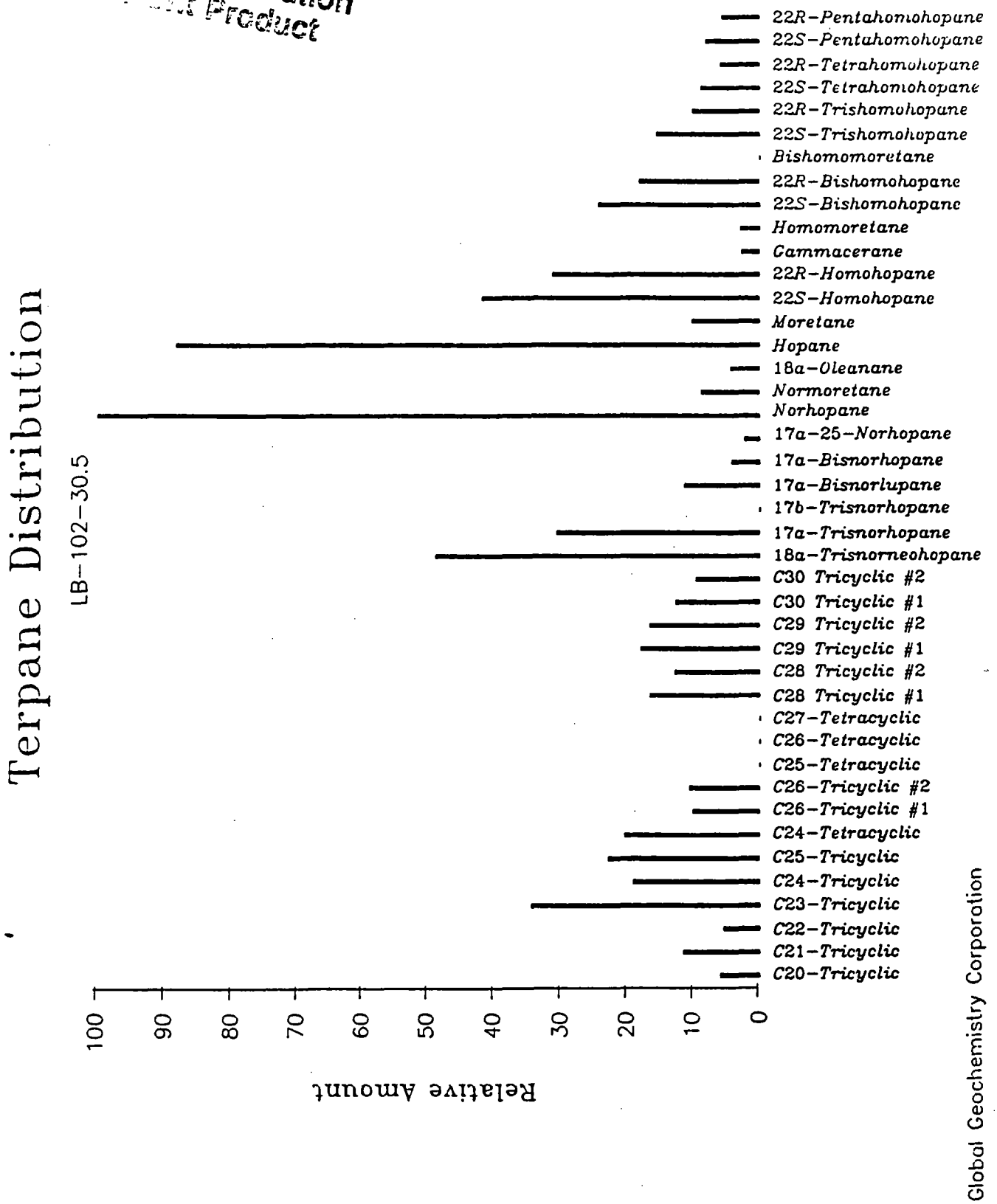
Patents Attorney
Work Communication
Work Product



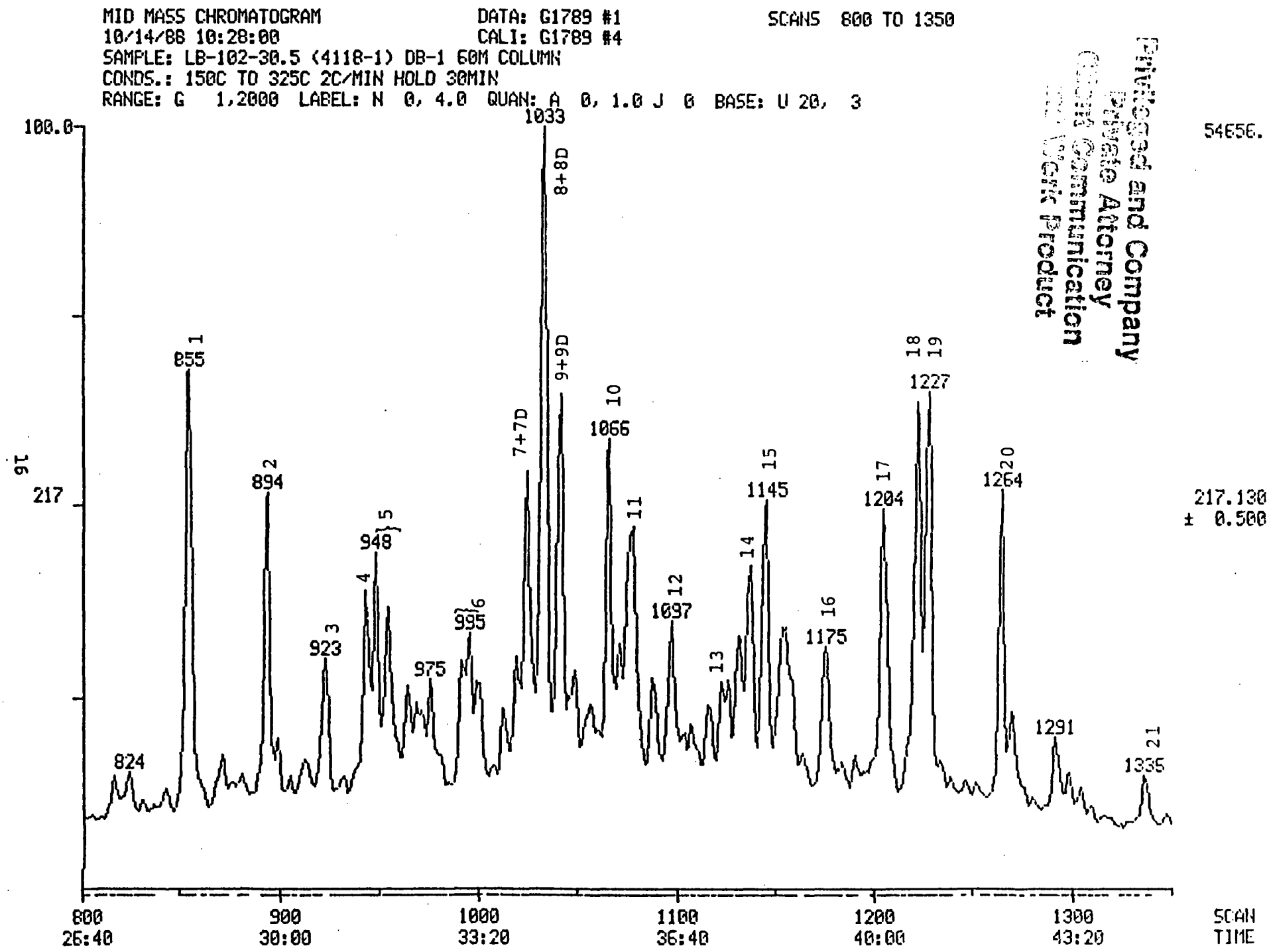


Figure 7

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Figure 9

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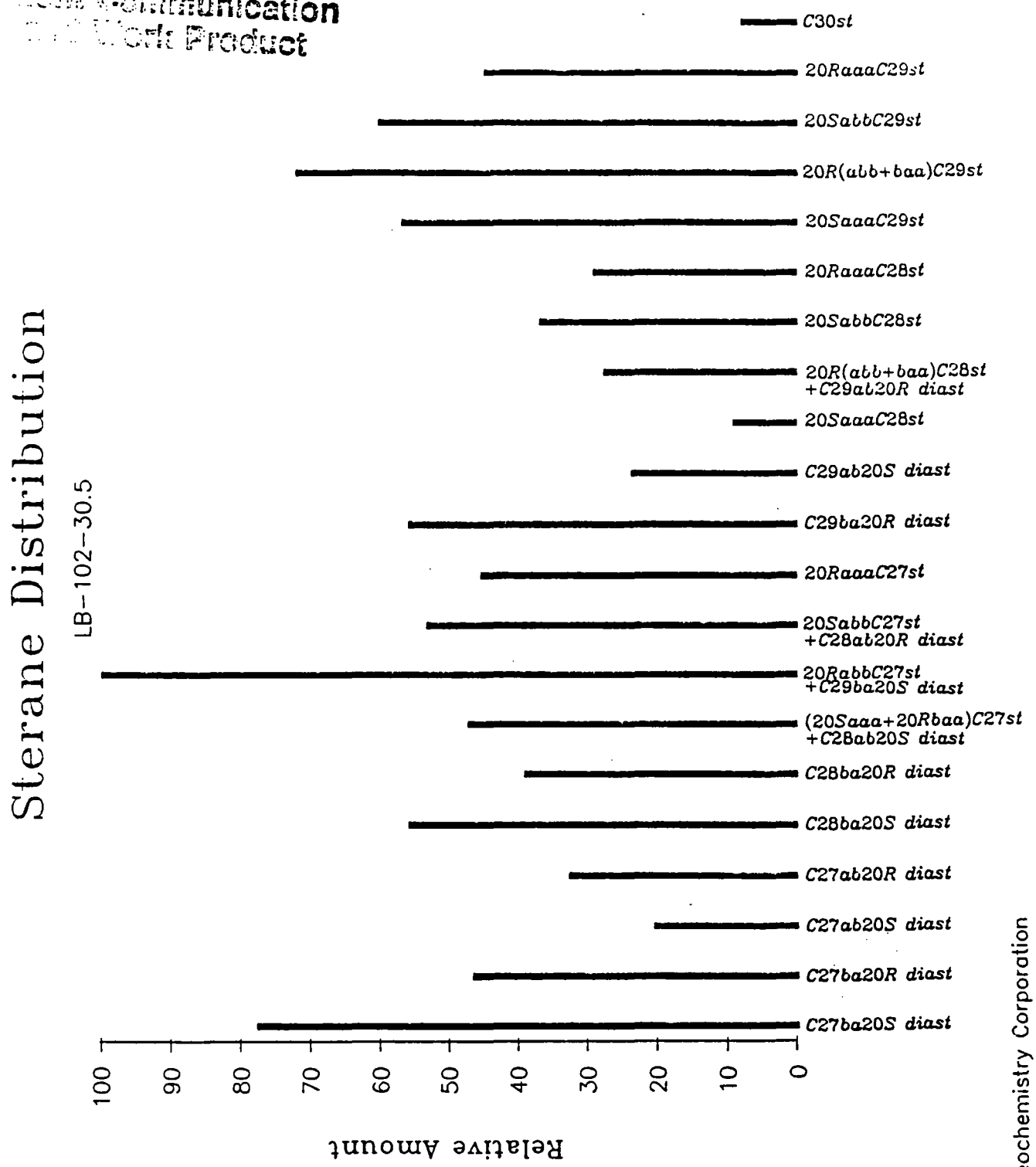
Work Communication
Work Product



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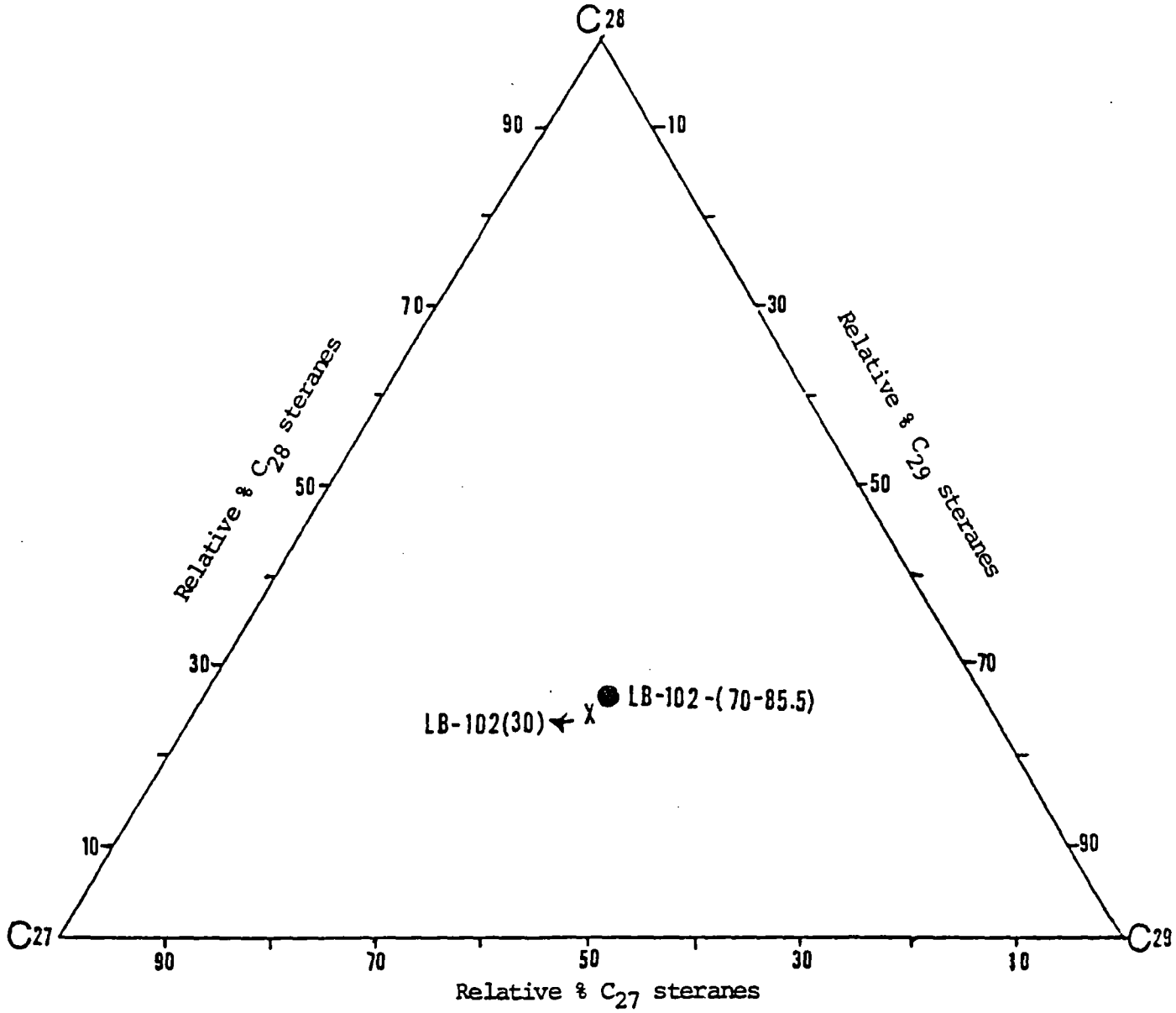

Figure 11. Ternary diagram showing sterane carbon number distribution of two bitumens extracted from the soil samples.

DELTA C13 OF SATURATES VS AROMATICS

LEIGHTON & ASSO. SOIL SAMPLES

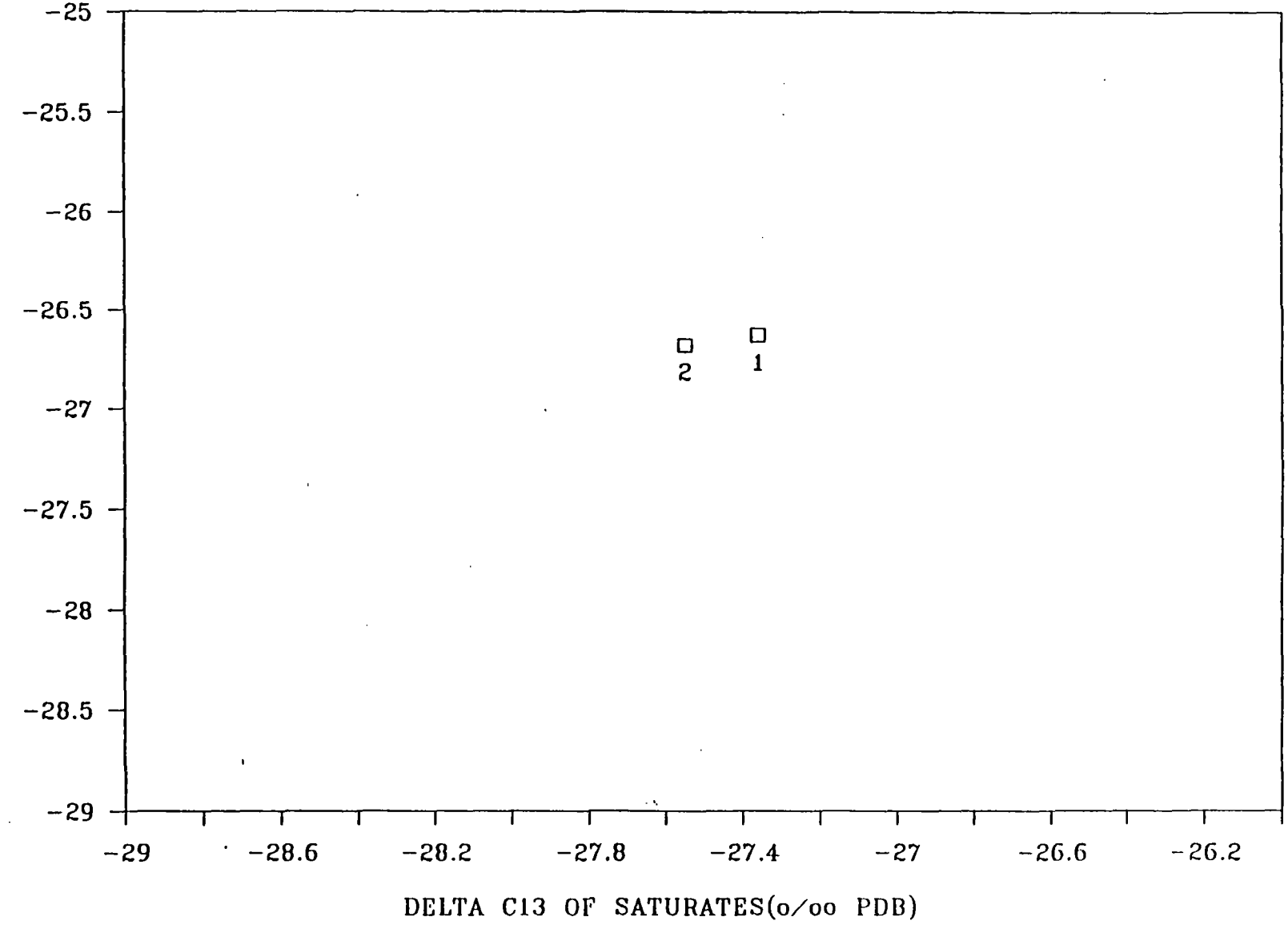

Figure 13

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Private Attorney
Client Communication
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LABTECH CHROM V1.40

Analysis Start Date: OCT 13, 1988 Time: 00:56:13.08

********** GGC Data Header **********
Global Geochemistry Corporation
LB-102-30.5
File: C28603

********** END GGC Header **********

PEAK AREAS:

index	time(min)	area	area(%)	baseline(V)	height(V)	
1	15.770	0.063	0.057	0.690	0.013	""
2	19.470	0.128	0.115	0.691	0.028	"12"
3	20.020	0.077	0.069	0.688	0.018	"i13"
4	22.130	0.047	0.042	0.684	0.014	"i14"
5	23.020	0.088	0.079	0.684	0.022	"13"
6	25.680	0.125	0.112	0.668	0.027	"i15"
7	26.380	0.133	0.120	0.670	0.027	"14"
8	28.450	0.115	0.104	0.664	0.024	"i16"
9	29.580	0.419	0.378	0.677	0.044	""
10	32.620	0.190	0.172	0.639	0.041	"16"
11	35.320	0.387	0.350	0.630	0.037	""
12	35.500	0.405	0.365	0.630	0.074	"17"
13	35.750	0.167	0.151	0.630	0.027	" PR"
14	38.250	0.668	0.603	0.644	0.136	"18"
15	38.580	0.363	0.327	0.639	0.060	"PH"
16	39.400	0.105	0.094	0.653	0.019	""
17	39.750	0.431	0.389	0.648	0.069	""
18	39.930	0.129	0.116	0.650	0.026	""
19	40.130	0.198	0.179	0.653	0.033	""
20	40.870	1.228	1.108	0.674	0.201	"19"
21	41.920	0.699	0.631	0.676	0.052	""
22	42.350	0.323	0.292	0.682	0.049	""
23	42.470	0.450	0.407	0.684	0.075	""
24	42.670	0.317	0.286	0.688	0.057	""
25	43.370	1.788	1.614	0.706	0.308	"20"
26	43.620	0.271	0.244	0.712	0.040	""
27	43.720	0.204	0.184	0.715	0.043	""
28	44.370	0.806	0.728	0.721	0.063	""
29	44.770	0.266	0.240	0.728	0.062	""
30	44.900	0.544	0.491	0.731	0.095	""
31	45.100	0.317	0.286	0.734	0.064	""
32	45.280	0.420	0.379	0.738	0.074	""
33	45.500	0.090	0.081	0.742	0.020	""
34	45.750	0.957	0.864	0.748	0.222	"21"
35	45.930	0.539	0.487	0.753	0.058	""
36	46.420	0.118	0.107	0.747	0.023	""
37	46.670	1.017	0.918	0.743	0.142	""
38	46.800	1.226	1.107	0.745	0.085	""
39	47.120	0.449	0.405	0.749	0.091	""
40	47.230	0.666	0.601	0.751	0.086	""

101	70.670	0.249	0.225	0.678	0.029	""
102	71.030	0.274	0.247	0.680	0.025	""
103	71.500	0.132	0.119	0.676	0.017	""
104	72.100	0.279	0.251	0.681	0.027	""
105	72.430	0.131	0.118	0.667	0.022	""
106	73.350	0.654	0.591	0.653	0.034	""
107	74.720	0.071	0.064	0.655	0.022	""
108	76.130	0.816	0.737	0.642	0.037	""

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40	53.900	0.080	0.279	0.753	0.020	""
41	54.620	1.181	4.090	0.741	0.074	""
42	54.980	0.057	0.198	0.740	0.017	""
43	55.120	0.946	3.278	0.742	0.107	""
44	55.600	0.353	1.223	0.756	0.045	""
45	56.370	0.188	0.653	0.759	0.034	""
46	56.530	0.324	1.125	0.756	0.056	""
47	56.780	0.106	0.368	0.753	0.020	""
48	57.030	0.785	2.718	0.755	0.079	""
49	57.280	0.292	1.013	0.756	0.054	""
50	58.100	1.058	3.662	0.761	0.037	""
51	58.930	1.520	5.264	0.766	0.060	""
52	59.600	0.272	0.942	0.766	0.028	""
53	60.280	0.966	3.346	0.750	0.055	""
54	60.700	0.860	2.979	0.752	0.075	""
55	61.300	0.694	2.403	0.755	0.035	""
56	61.950	0.183	0.634	0.759	0.049	""
57	62.130	0.260	0.901	0.737	0.024	""
58	62.550	0.875	3.031	0.729	0.074	""
59	65.250	0.223	0.773	0.690	0.013	""
60	65.820	0.292	1.014	0.683	0.018	""

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DATA: G1789.TI
SAMPLE: LB-102-30.5 (4118-1) DB-1 60M COLUMN

NO	M/E	SCAN	AREA(HGHT)	
1	191	62	3738.	
2	191	99	6176.	
3	191	113	34320.	0
4	191	183	4532.	
5	191	225	67320.	1
6	191	279	5960.	
7	191	296	19224.	
8	191	330	31440.	2
9	191	374	18316.	
10	191	386	3912.	
11	191	452	201312.	3
12	191	468	7316.	
13	191	489	9688.	
14	191	519	111760.	4
15	191	568	8556.	
16	191	575	13140.	
17	191	590	9032.	
18	191	652	133361.	5
19	191	665	10038.	
20	191	681	4579.	
21	191	685	6841.	
22	191	691	5057.	
23	191	700	19171.	
24	191	734	119008.	Z4
25	191	749	58392.	6a
26	191	758	61672.	6b
27	191	784	6792.	
28	191	824	34224.	
29	191	854	35968.	
30	191	870	21920.	
31	191	917	14055.	
32	191	922	7577.	
33	191	941	19841.	
34	191	949	4829.	
35	191	957	17816.	
36	191	966	96522.	A
37	191	981	74768.	B
38	191	1013	11632.	
39	191	1029	104358.	C
40	191	1047	97388.	D
41	191	1056	6414.	
42	191	1062	4786.	
43	191	1066	4910.	
44	191	1074	8576.	
45	191	1088	284704.	E
46	191	1098	22560.	
47	191	1116	10528.	
48	191	1127	178804.	F
49	191	1137	20810.	
50	191	1145	74417.	0a
51	191	1159	66281.	H
52	191	1164	56135.	0b
53	191	1185	24480.	I
54	191	1193	4531.	
55	191	1198	21120.	
56	191	1207	8589.	
57	191	1219	19536.	
58	191	1231	51248.	
59	191	1242	13374.	J
60	191	1247	14174.	

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DATA: G1788.TI
SAMPLE: LB-102-70+80+85.5 ALI (4118-2,3,4) DB-1 60M COLUMN

NO	M/E	SCAN	AREA(HGHT)	
1	191	93	5464.	
2	191	108	32292.	0
3	191	220	68456.	1
4	191	258	4216.	
5	191	274	8080.	
6	191	291	14024.	
7	191	325	30912.	2
8	191	368	20344.	
9	191	380	6656.	
10	191	411	6244.	
11	191	446	198080.	3
12	191	462	8852.	
13	191	484	7776.	
14	191	513	114288.	4
15	191	561	10750.	
16	191	569	12722.	
17	191	583	11232.	
18	191	645	74477.	
19	191	649	132045.	5
20	191	659	9875.	
21	191	679	9199.	
22	191	684	6805.	
23	191	693	10652.	
24	191	728	90800.	Z4
25	191	742	56105.	6a
26	191	751	57831.	6b
27	191	780	8192.	
28	191	817	20952.	
29	191	847	33705.	
30	191	863	21015.	
31	191	905	4432.	
32	191	910	9056.	
33	191	915	6352.	
34	191	934	13408.	
35	191	942	3744.	
36	191	951	11888.	
37	191	959	84096.	A
38	191	974	71168.	B
39	191	995	4272.	
40	191	1006	8976.	
41	191	1022	91464.	C
42	191	1040	82325.	D
43	191	1049	7995.	
44	191	1059	8416.	
45	191	1067	10112.	
46	191	1081	219534.	E
47	191	1091	16370.	
48	191	1109	11680.	
49	191	1120	144192.	F
50	191	1130	15392.	
51	191	1138	66592.	0a
52	191	1152	52240.	H
53	191	1157	53408.	0b
54	191	1170	4738.	
55	191	1178	18190.	I
56	191	1191	25183.	
57	191	1200	9217.	
58	191	1212	24936.	
59	191	1224	46792.	
60	191	1235	18128.	

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DATA: G1789.TI
SAMPLE: LB-102-30.5 (4118-1) DB-1 60M COLUMN

NO	M/E	SCAN	AREA(HGHT)	
1	217	816	10990.	
2	217	824	10146.	
3	217	831	808.	
4	217	842	3736.	
5	217	855	125864.	1
6	217	871	13525.	
7	217	876	2230.	
8	217	881	4165.	
9	217	894	75301.	2
10	217	899	8658.	
11	217	905	2060.	
12	217	912	8812.	
13	217	923	33320.	3
14	217	932	2624.	
15	217	943	52852.	4
16	217	948	90440.	5
17	217	954	45260.	
18	217	964	17904.	
19	217	968	11376.	
20	217	971	14544.	
21	217	975	25032.	
22	217	980	5000.	
23	217	991	32645.	
24	217	995	63287.	6
25	217	999	23521.	
26	217	1007	296.	
27	217	1012	9536.	
28	217	1019	23168.	
29	217	1024	76288.	7
30	217	1033	161696.	8
31	217	1041	86000.	9
32	217	1045	7280.	
33	217	1048	15200.	
34	217	1056	11178.	
35	217	1061	486.	
36	217	1066	73312.	10
37	217	1071	25088.	
38	217	1078	90432.	11
39	217	1088	16744.	
40	217	1097	38464.	12
41	217	1104	4880.	
42	217	1107	9744.	
43	217	1116	12840.	
44	217	1123	14768.	13
45	217	1126	14896.	
46	217	1131	32768.	
47	217	1137	44784.	14
48	217	1145	59754.	15
49	217	1155	73061.	
50	217	1164	5329.	
51	217	1175	47275.	16
52	217	1181	2027.	
53	217	1183	3490.	
54	217	1190	7569.	
55	217	1194	3267.	
56	217	1196	2253.	
57	217	1204	92235.	17
58	217	1221	116808.	18
59	217	1227	97696.	19
60	217	1233	4120.	

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DATA: G1788.TI
SAMPLE: LB-102-70+80+85.5 ALI (4118-2,3,4) DB-1 60M COLUMN

NO	M/E	SCAN	AREA(HGHT)	
1	217	809	11213.	
2	217	817	10067.	
3	217	824	1040.	
4	217	829	480.	
5	217	836	4144.	
6	217	848	127464.	1
7	217	864	14908.	
8	217	868	3487.	
9	217	872	3773.	
10	217	887	77952.	2
11	217	892	11608.	
12	217	898	3384.	
13	217	906	11736.	
14	217	916	36736.	3
15	217	925	3496.	
16	217	931	2320.	
17	217	936	49487.	4
18	217	941	99561.	5
19	217	947	100.	
20	217	957	17152.	
21	217	962	14864.	
22	217	964	10408.	
23	217	968	24344.	
24	217	973	4032.	
25	217	984	67881.	6
26	217	988	33632.	
27	217	992	27887.	
28	217	999	832.	
29	217	1005	13464.	
30	217	1012	27984.	
31	217	1017	72288.	7
32	217	1026	159680.	8
33	217	1034	77248.	9
34	217	1038	9088.	
35	217	1041	16656.	
36	217	1050	13677.	
37	217	1053	1907.	
38	217	1059	65264.	10
39	217	1064	31246.	
40	217	1071	95410.	11
41	217	1081	16736.	
42	217	1090	41680.	12
43	217	1097	5344.	
44	217	1101	9184.	
45	217	1109	11312.	
46	217	1116	15376.	13
47	217	1119	14768.	
48	217	1125	34400.	
49	217	1130	46032.	14
50	217	1138	62126.	15
51	217	1148	69839.	
52	217	1157	5920.	
53	217	1168	49549.	16
54	217	1176	5523.	
55	217	1183	8027.	
56	217	1186	2409.	
57	217	1197	87408.	17
58	217	1215	101456.	18
59	217	1220	89072.	19
60	217	1226	5576.	

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LEIGHTON AND ASSOCIATES, INC.
Geotechnical and Environmental Engineering Consultants

2166-04743

WORK PLAN FOR THE PHASE III SUBSURFACE CONTAMINATION INVESTIGATION OF THE H.R. TEXTRON FACILITY, PACOIMA, CALIFORNIA

May 19, 1989

Project No. 7841189-21

Prepared For:

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1.0 INTRODUCTION

Leighton and Associates, Inc., has been requested by H.R. Textron, Inc., to develop and implement a work plan to assess:

1) the local ground water quality upgradient from the site;

2) the extent of the chlorinated hydrocarbons previously identified beneath former Tank #2; and

3) the nature and source of the petroleum hydrocarbons identified at depth below the primary zone of chlorinated petroleum hydrocarbon soil contamination.

This work plan is in response to the Regional Water Quality Control Board, Los Angeles Region's (RWQCB - LA) letter of April 5, 1989.

2.0 BACKGROUND

2.1 Site Conditions

The H.R. Textron, Inc. Pacoima facility is situated on approximately 7.5 acres of leased land at an elevation of approximately 960 feet in the San Fernando Valley (Figure 1). Current site usage is for the manufacture of various components used in the aerospace industry. During the period of 1966 - January 1985, H.R. Textron utilized underground storage tanks for waste oil storage. The tanks were removed in January 1985. Adjacent to the site, is the closed Ledger #2 landfill, now covered, and occupied by a fence company. The landfill site is owned by persons other than the owners of the site occupied by H.R. Textron. Landfill material has not been encountered in any of the 16 exploratory borings drilled on the subject site or in the two borings drilled on the adjacent property near the subject site boundary.

Since 1984, various soil contamination assessment studies have been conducted at the subject site. Plate 1 is a plot plan showing the location of the previous 13 borings drilled around former Tank #2. As of this date, these investigations have identified a zone of soils containing chlorinated hydrocarbons and petroleum hydrocarbons. A deeper zone of soils containing low levels of petroleum hydrocarbons has also been identified. Plates 2, 3, 4, 5 and 10 are generalized cross sections showing the distribution of chlorinated hydrocarbons and petroleum hydrocarbons. Plates 6, 7, 8 and 9 are concentration contour maps of chlorinated hydrocarbons and petroleum hydrocarbons in the soil at 20 feet, 30 feet, 50 feet, and 55-60 feet below grade. The shallow contamination is believed to be related to a leak in Tank #2 while the deeper zone of petroleum hydrocarbons is thought to have originated from another source.

The data gathered by previous studies has revealed the presence of chlorinated hydrocarbons to a depth of 56 feet, but not below this depth. In boring LB-3, 1,1,1 TCA was reported at a depth of 68 feet. However, verification samples from adjacent borings LB-103 and LB-103A did not detect 1,1,1 TCA at 68 feet or at other depths below 56 feet. Therefore, we believe that the report of 1,1,1 TCA in boring LB-3 at a depth of 68 feet is invalid. Seven borings have been drilled to depths greater than 56 feet. A total of 52 samples taken from these borings below the 56 foot depth have shown 1,1,1 TCA to be "not detected". 1,1,1 TCA is a refractory compound and thus would persist in the soils through which it has passed. We believe this data, which is portrayed in the attached plates, indicate that there is no reliable evidence to support a conclusion that these chlorinated hydrocarbons have migrated below the 56 foot level. The purpose of the Phase III borings is to confirm the validity of this conclusion south and southwest of Tank #2.

2.2 Geology

The H.R. Textron plant site is surrounded by gently southerly to southeasterly sloping alluvial valley fill from the San Gabriel Mountains. Directly northeast of the site are Hansen Dam and Lake operated by the U.S. Army Corps of Engineers for storm runoff regulation. Site drainage is toward the southeast, in the direction of the Tujunga Wash.

The Textron property is underlain by Quaternary alluvial deposits to a depth of several hundred feet. These deposits are comprised mainly of heterogeneous, locally clay to silt-rich sands and gravels which may contain boulders up to 3 feet in diameter. Lenses of interbedded clays and silts are common.

2.3 Ground Water

Regional ground water flows southeast, following the general configuration of surface topography and drainage, toward the Los Angeles River Narrows, through which the water eventually exits the San Fernando Basin.

The Verdugo Fault, lying approximately 4,000 feet southwest of the subject site, has a significant influence over both the movement of ground water and depth to water in the area. Because of the barrier effect caused by displaced beds along the Verdugo Fault zone, differences in water table elevations as great as 250 feet exist across the fault zone. Ground water gradients may be as great as 150 feet per mile, as compared to normal ground water gradients of 16 feet per mile elsewhere in the valley. Ground water depths beneath the subject site are believed to be on the order of 250-300 feet.

Local ground water flow conditions are related to impacts of the Hansen Spreading Grounds and fluctuate from season and year to year depending upon seasonal precipitation and runoff.

3.0 PURPOSE

The purpose of the Phase III investigation is to:

1) examine the local ground water quality upgradient from the site;

2) assess the lateral and vertical extent of the chlorinated hydrocarbons zone of contamination in the area between previous drilled borings LB-102A and TH-2, (i.e., at the property line), and in the area southwest of borings LB-103 and LB-103A; the lateral and vertical extent of the chlorinated hydrocarbons zone in the other directions around former Tank #2 were defined during the Phase I and II investigation;

3) assess the nature and possible source of the low level petroleum hydrocarbons previously identified at depth;

4) develop a Remedial Action Plan to mitigate the chlorinated hydrocarbon contamination associated with the former Tank #2; and

5) request the RWQCB to move forward the time table for conducting the SWAT (Solid Waste Assessment Test) for the Ledger #2 landfill; and

6) develop a technical criteria to support a decision to drill to ground water.

4.0 SCOPE OF WORK

The scope of work for this work plan includes the following tasks:

Task 1: Local Ground Water Quality

To examine the local ground water quality in the area of the subject site, L&A has previously reviewed local records to identify the nearest downgradient well available for sampling and chemical analysis. A well was located approximately 1.5 miles south of the subject site, sampled and chemically tested for chlorinated hydrocarbons. Toluene and 1,1,1- Trichloroethane (TCA) was detected at .09 and .35 of their respective Applied Action Levels.

It has recently come to L&A's attention that piezometers associated with Hansen Dam and monitoring wells in the spreading grounds may be available for sampling. Therefore a further review of public records will be conducted to identify nearby wells which may be available for sampling and analysis. We will also canvas the immediate area of the site for possible wells which may exist and which are not part of the public record. Should such a well(s) be identified, a representative ground water sample will be collected and chemically tested for those compounds previously identified in the soil below former Tank #2. Those compounds are:

Compound	EPA Test Method	Detection Limit
• Total Recoverable Petroleum Hydrocarbon	418.1/8015	50 ug/l
• 1,1,1-Trichloroethane (TCA)	624	1 ug/l
• 1,1,2-Trichloroethane	624	1 ug/l
• Trichloroethene (TCE)	624	1 ug/l
• Tetrachloroethene (PCE)	624	1 ug/l
• 1,1, Dichloroethene	624	1 ug/l
• Toluene	602	0.5 ug/l
• Total Xylenes	602	0.5 ug/l

Task 2: Assess Limits of Chlorinated Hydrocarbons in the Primary Zone of Soil Contamination Associated with Former Tank #2

As previously stated, the purpose of this task is to assess the extent of the chlorinated hydrocarbons zone of contamination in the areas not fully developed by our previous chemical testing effort.

The sub tasks for this task are as follows:

a) Update previous Site Safety Plan in accordance with OSHA regulation prior to beginning the field work.

b) Drill two borings, LB-105 and LB-106, at the locations shown approximately on Figure 3. Should chlorinated hydrocarbons be identified in the samples from boring LB-106, an additional boring(s) will be located an additional 10 feet southwest of boring LB-106 to further assess the limit of the chlorinated hydrocarbon zone of contamination. The maximum depth of each boring will be 120 feet.

"Undisturbed" soil samples will be taken in brass rings in accordance with the procedures presented in Appendix A. The samples will be taken at 10 foot intervals between depths of 10-40 feet. Continuous sampling will be undertaken over the interval 40-60 feet in order to locate the position of a clay bed; samples will be collected immediately above the clay, within the clay, and immediately below the clay. Sampling intervals below the clay will be at 10 foot intervals to the bottom of the boring. The Site Safety Plan will be implemented during all field activities.

Field sampling equipment will be properly cleaned between each sampling to minimize the potential of cross contamination. All drilling equipment will be steam cleaned between borings. The containers will be stored onsite for H.R. Textron to dispose. All transport and disposal documents will be signed by H.R. Textron.

Upon completion of the two borings, vapor extraction piping will be installed in each to facilitate the RAP. The piping will be 4 inch diameter, Schedule 40 PVC pipe with a 0.02 inch slotted screen. The screened interval will extend from a depth of five feet to the clay bed at 55-60 feet. The surface exposure of the borings will be protected by a Christy box.

c) Chemical tests will be performed on each soil sample as described in Appendix B using the recommended laboratory tests shown.

Four engineering tests will be performed on selected soil samples from borings LB-105 and LB-106 as part of the design of the chlorinated hydrocarbons vapor extraction system. The four engineering tests are: bulk density, moisture content, grain size distribution and specific gravity (to calculate total porosity). Selected soil samples will also be analyzed for their total organic content.

Task 3: Fate and Transport Analysis and Detailed Geochemistry Analysis

To examine the transport mechanisms of the chlorinated hydrocarbons and petroleum hydrocarbons in the primary zone of contamination and to identify possible sources of petroleum hydrocarbon below the clay layer at 50-53 feet, a fate and transport analysis and a detailed geochemistry analysis will be performed.

Fate and Transport Estimates

The vertical distribution of petroleum hydrocarbons and chlorinated solvents does not appear to be consistent with a single source from Tank #2. We need to understand more thoroughly the probable mechanisms of subsurface transport. Specifically, the estimated transport of organic chemicals in gaseous and aqueous phases will be compared to observed vertical distributions in soil beneath the former Tank site. Estimates of contaminant migration will be based on published methods for calculating the following:

- Infiltration rates for recharging water;
- Sorption and desorption processes;
- Retardation of dissolved contaminants;
- Partitioning among aqueous, organic and gaseous phases of the soil;
- Diffusive flux of vapor-phase compounds; and
- Chemical concentration gradients.

Estimates of contaminant transport require the input of site-specific soil parameters (e.g., soil moisture content, total porosity, bulk density), which will be measured for the major stratigraphic units present beneath the former Tank site.

Transport estimates will be used to assess the relative time that various compounds have been present in the subsurface. A comparison of the vertical distribution and migration rates of petroleum and chlorinated hydrocarbons should indicate the sequence with which the chemicals were introduced to the soil. In addition, transport estimates can be used to assess the potential for migration of chemicals below the 52-foot deep clay layer.

Qualitative estimates for the chemical and biochemical degradation of the various organic compounds will be made in an effort to compare their relative environmental persistence. Such estimates may provide an explanation for residual compound concentrations observed in the vadose zone and for the relative residence time of various chemicals.

Detailed Geochemistry Analysis

As previously reported, Global Geochemistry Corp. stated that the alkane distribution patterns are similar in the soil samples of 30 feet and 70-85.5 feet in boring LB-102. However, by comparing the bitumen composition data a

difference is noted. The 70-85.5 foot sample shows lower hydrocarbons and higher polar compound contents than the 30 foot sample. The difference may indicate that the organic matter of the 70-85.5 foot sample is more severely biodegraded and has been in the subsurface for a longer period of time than the 30 foot sample which may indicate that the lower zone of TPH is from a source other than Tank #2.

Therefore, soil samples from 30 feet and 120 feet below grade from boring LB-105 and LB-106 will be sampled and subsequently tested by Global Geochemistry Corp (GGC) of Canoga Park, California. The purpose of this analysis is to fingerprint the petroleum hydrocarbons in these four samples in an attempt to compare petroleum hydrocarbons at depth below the second clay layer with those at shallower depths related to the Tank #2 leaks. The analyses consist of:

a) Solvent extraction to remove extractable organic compounds (bitumen), by weight;

b) Column chromatography to separate bitumen into saturate (alkane), aromatic and polar fractions (3 fractions);

c) Capillary has chromatography (GC) of alkane fraction to show the distribution of n-alkanes present in the soil extracts;

d) Detailed gas chromatography-mass spectrometry (GC-MS) of aliphatic biomarkers for fingerprint study; and

e) Carbon and hydrogen isotope analyses of alkane and aromatic fractures.

If the bitumen content of the samples is low, solvent extraction on the samples can be repeated many times until sufficient amount of extracts for further analyses is obtained.

Task 4: Development of Remedial Action Plan (RAP) for the Mitigation of the Chlorinated Hydrocarbons

As part of this phase of the investigation, a RAP will be developed for the mitigation of the chlorinated hydrocarbons associated with the former Tank #2. To properly design the vapor extraction system (VES), site specific soil parameters will be measured for the major lithologic units present. The soil parameter, soil moisture content, total porosity, bulk density, will be determined on several soil samples collected from LB-105 and LB-106. The RAP will include discussions on the background of the site, the design of the VES the ongoing monitoring of the VES, permit requirement to operate the VES, a contingency plan should VES require modification following installation, and a schedule for the design installation of the VES.

Task 5: Data Analysis and Report Preparation

The data collected from Tasks 1, 2 and 3 will be evaluated and a Phase III report will be prepared with appropriate figures, plates and tables presenting our findings and conclusions. This report will also include the technical criteria needed to support a decision to drill to ground water. The RAP will be issued under a separate cover.

Recommendation for RWQCB Action as a Precondition to Ground Water Sampling

It is our understanding that a SWAT for the Ledger #2 landfill is scheduled to be completed by July 1, 1991. Based on background information on the landfill, and the results from boring TH-2, we believe that there is a significant potential that this landfill has previously or is currently impacting the subsurface soil quality in the area adjacent to the H.R. Textron facility. Therefore, prior to H.R. Textron examining the ground water quality beneath former Tank #2, which could be impaired from the Ledger landfill, we are formally requesting that RWQCB move forward the schedule of initiating the SWAT from 1990 to 1989.

5.0 PROPOSED SCHEDULE

The proposed time schedule is presented below. It should be noted that the duration of the schedule action items may vary depending upon the site condition and review processes. The duration times are approximate.

	Action Item	Time Duration
1.	Submittal of Work Plan to RWQCB-LA approval	on or before May 19, 1989
2.	Review and approval by RWQCB-LA	2 to 4 weeks
3.	Task 1 - Local ground water quality	4 to 5 weeks
4.	Task 2 - Boring program and chemical analysis	5 to 6 weeks
5.	Task 3 - Fate and transport analysis	3 to 4 weeks
	Detailed geochemical analysis	3 to 4 weeks
6.	Task 4 - Prepare RAP	6 to 8 weeks
7.	Task 5 - Data Analysis and report preparation	4 to 6 weeks

Action items 3, 4, 5 and 6 can be performed concurrently and will be initiated upon receipt of written notice from the RWQCB-LA that this work plan has been approved. Tasks 1 through 5 are estimated to be completed in approximately 8 weeks following written authorization to proceed from H.R. Textron.

APPENDIX A

APPENDIX A

A. Soil Sampling Procedures

1. Soil encountered during drilling operations will be visually classified by a geologist and recorded on hydrogeological boring logs.

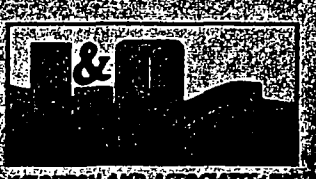
2. Soil samples will be collected at 10-foot intervals between depths of 10-40 feet and at intervals below a depth of 60 feet. The interval from 40 to 60 feet will be continuously sampled and logged with samples collected for chemical testing immediately above an expected clay bed, within the clay bed, and immediately below the clay bed. Undisturbed soils will be collected utilizing a California-modified split-spoon sampler equipped with 2.5-inch O.D. and 3-inch long brass rings. The sampler will be cleaned before each sampling with a mild TSP solution, rinsed with tap water and final rinsed with distilled water. The sampler will be driven into the soil by a 140-pound weight dropped a distance of about 30 inches.

3. Samples will be tested at the time of sampling in the field for the presence of volatile organic vapors using an HNU-Photoionization Detector (PID) and a Century Organic Vapor Analyzer (OVA). The results will be recorded on drilling log forms.

4. Soil samples will be sealed in the brass rings with Teflon tape, PVC caps, and plastic tape. Also, samples will be labeled, placed in zip-lock bags and then placed on ice, and manifested on a Chain-of-Custody record form prior to transport to Analytical Technologies, Inc., a DHS-certified laboratory. L&A will maintain the Chain-of-Custody documentation and interface with the laboratory relative to quality and adequacy of the data generated.

5. All soil removed during the drilling operations, rinsate, and steam/hot pressure wash water will be containerized on site in labeled 55-gallon drums or bins. All filled containers will remain the sole property of H.R. Textron, Inc. After chemical analysis of the soil and water, H.R. Textron, Inc., will be responsible for properly disposing of any contaminated rinsate or soil.

APPENDIX B



APPENDIX B

Laboratory Testing Program for Soil Samples

Soil samples will be collected from the boring in accordance with the sampling procedures described in Appendix A. The soil samples collected for geochemical analyses along with an attached Chain-of-Custody record will be delivered to a California DHS-certified laboratory for pertinent chemical analyses. We propose to use Analytical Technologies, Inc., of San Diego, California to perform the analyses.

Sampled intervals will be identified on the boring logs.

The following tests will be run on the specified samples:

Medium	No. of Tests	EPA Test	Substance Tested For	Limit of Detection
Soil	28+ (b)	418.1	Total Recoverable Petroleum Hydrocarbons	1 mg/kg
	(a)	Modified 8015	Total Petroleum Hydrocarbons	5 mg/kg
	28 (b)	8240	1,1,1-Trichloroethane (TCA)	0.5 mg/kg
		8240	1,1,2-Trichloroethane	0.5 mg/kg
		8240	Trichloroethene (TCE)	0.5 mg/kg
		8240	Tetrachloroethene (PCE)	0.5 mg/kg
		8240	1,1, Dichloroethene	0.5 mg/kg
		8020	Toluene	< 0.025 mg/kg
		8020	Total Xylenes	< 0.025 mg/kg

(a) To be run if EPA 418.1 > 10 ppm.

(b) Will increase if OVA or PID values for cuttings are anomalous and additional samples are collected from an additional boring(s).

7841189-21

INDEX MAP

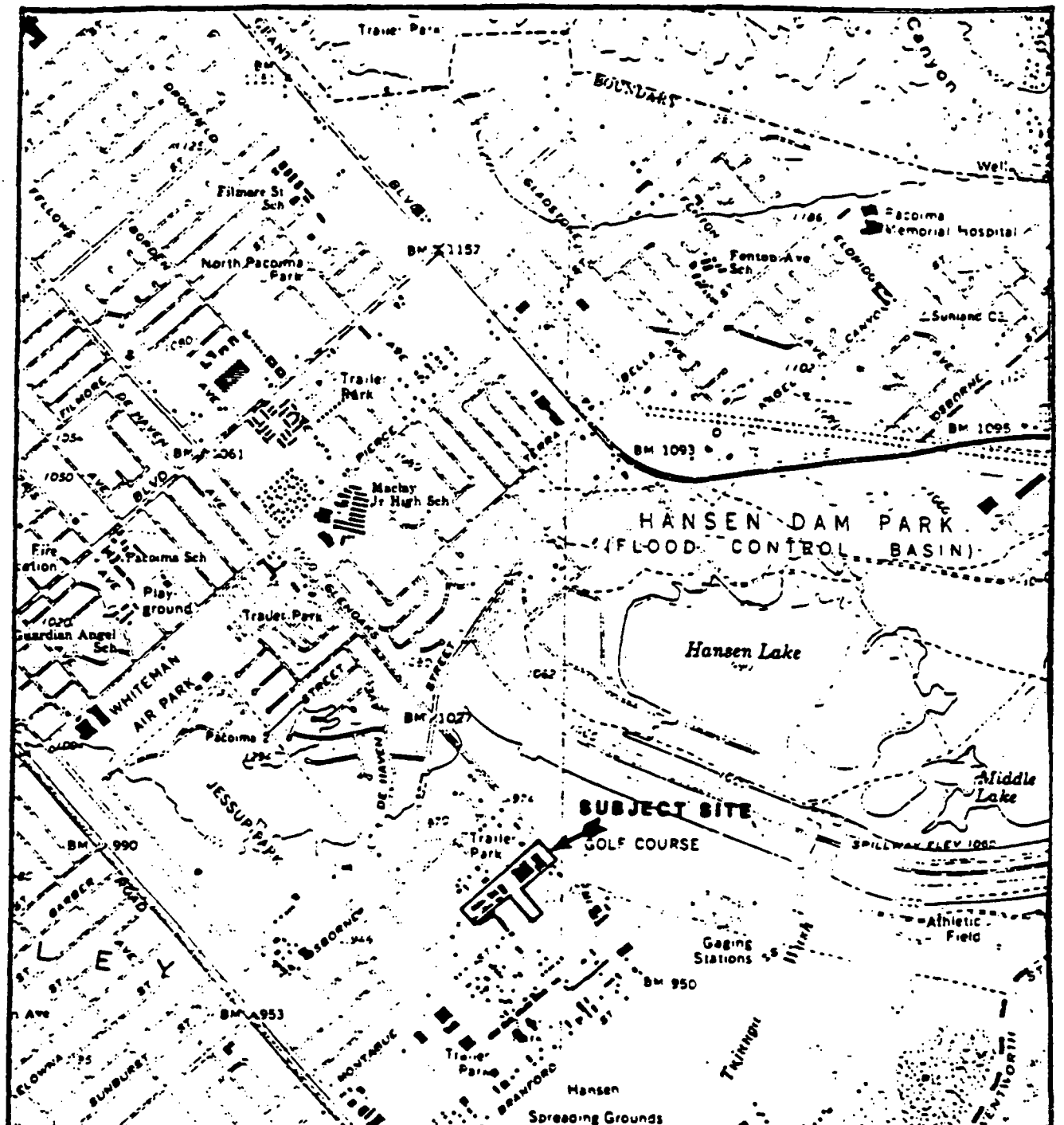


FIGURE 1

INDEX MAP

OF

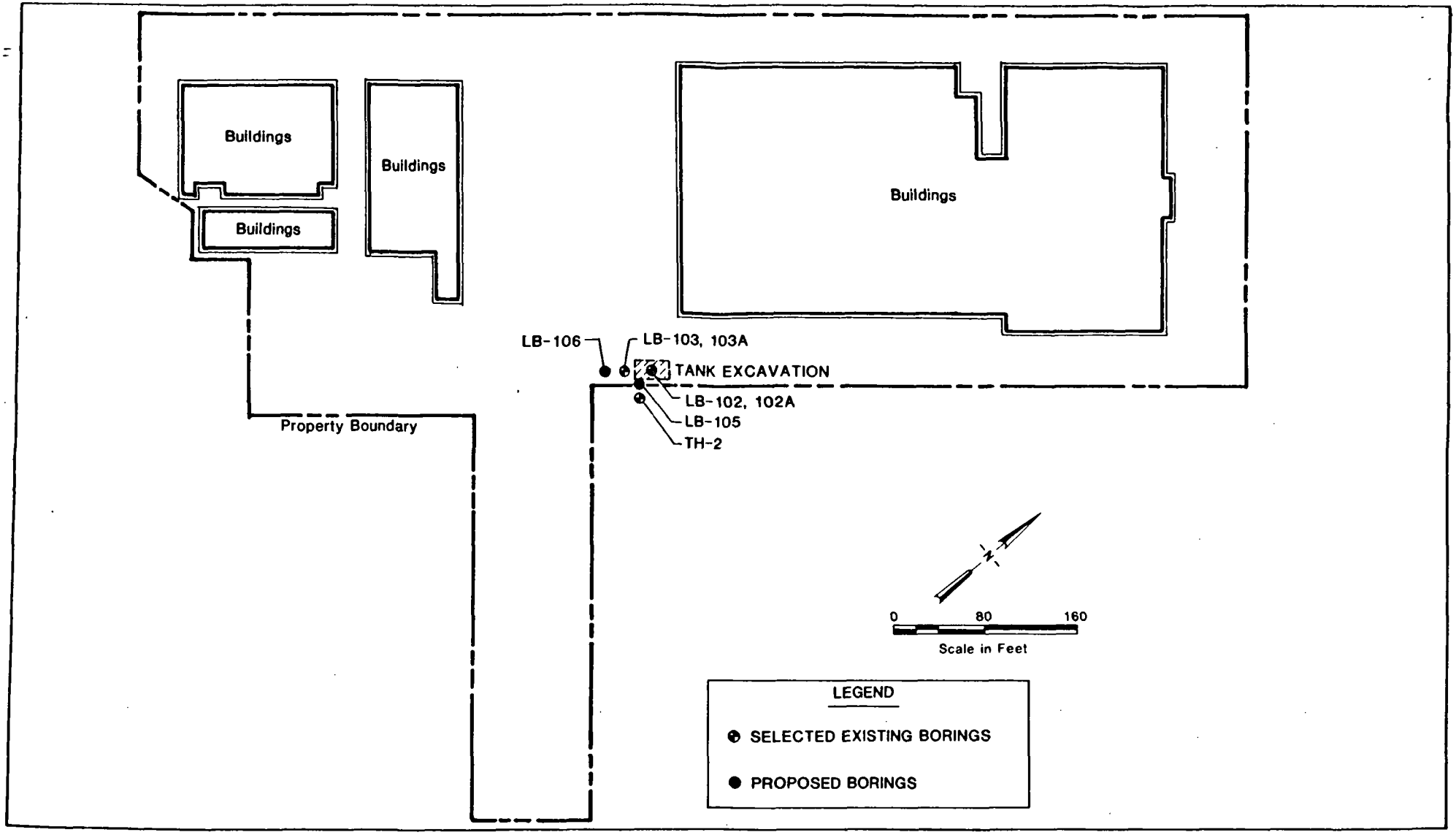
HR TEXTRON

10445 GLENOAKS BOULEVARD

CITY OF PACOIMA

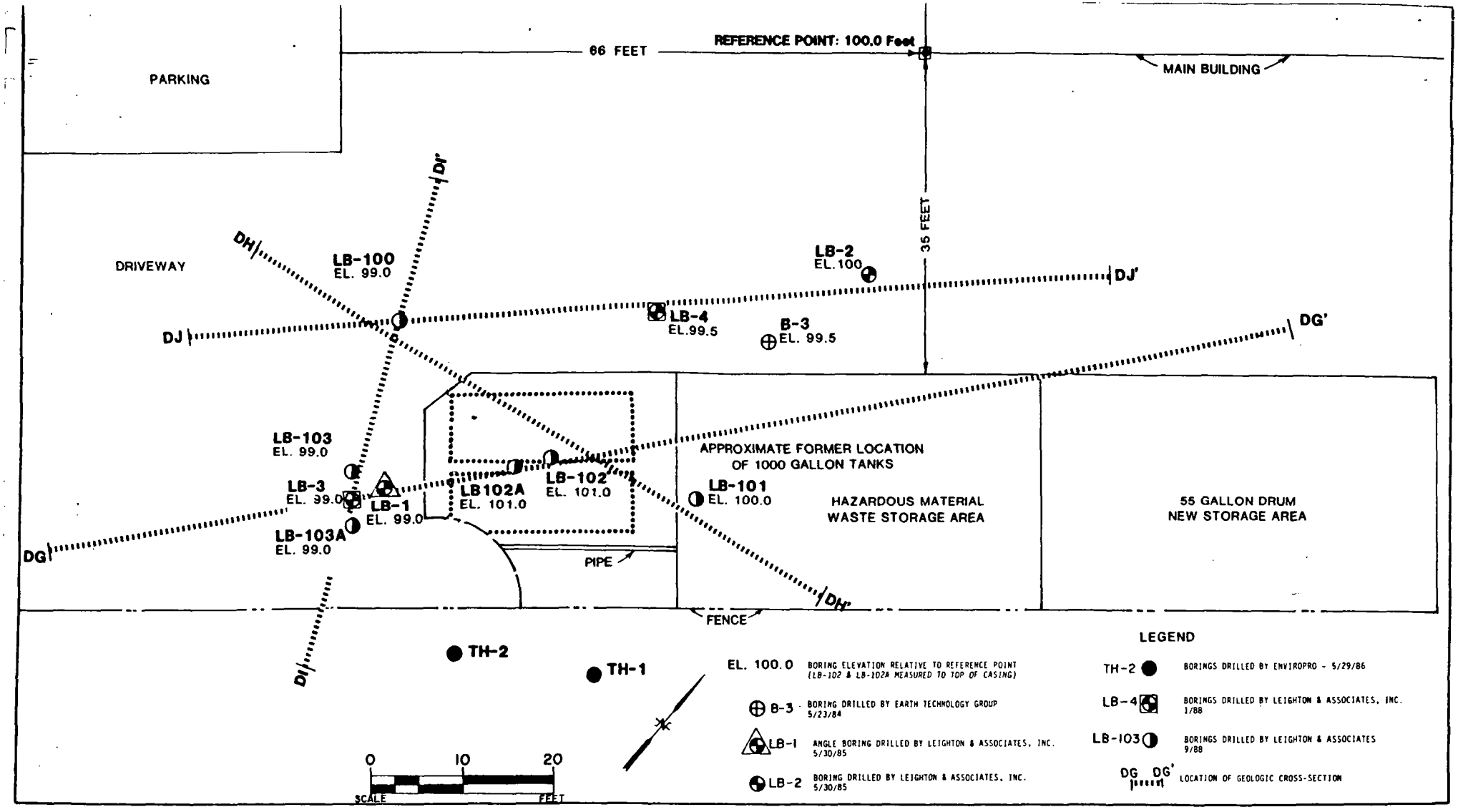
Base Map: USGS San Fernando Quadrangle (1966)
Photo-Revised 1972

LEIGHTON AND ASSOCIATES, INC.



Project Name: PACOIMA PLANT Project Number: 07841189-21 Drafted By: JOHN SISKER (4/24/89) Reviewed By: RUSS POWERS (5/12/89) Report Date: 5/19/89	PROPOSED BORINGS PACOIMA PLANT 10445 GLENOAKS BLVD. PACOIMA, CALIFORNIA

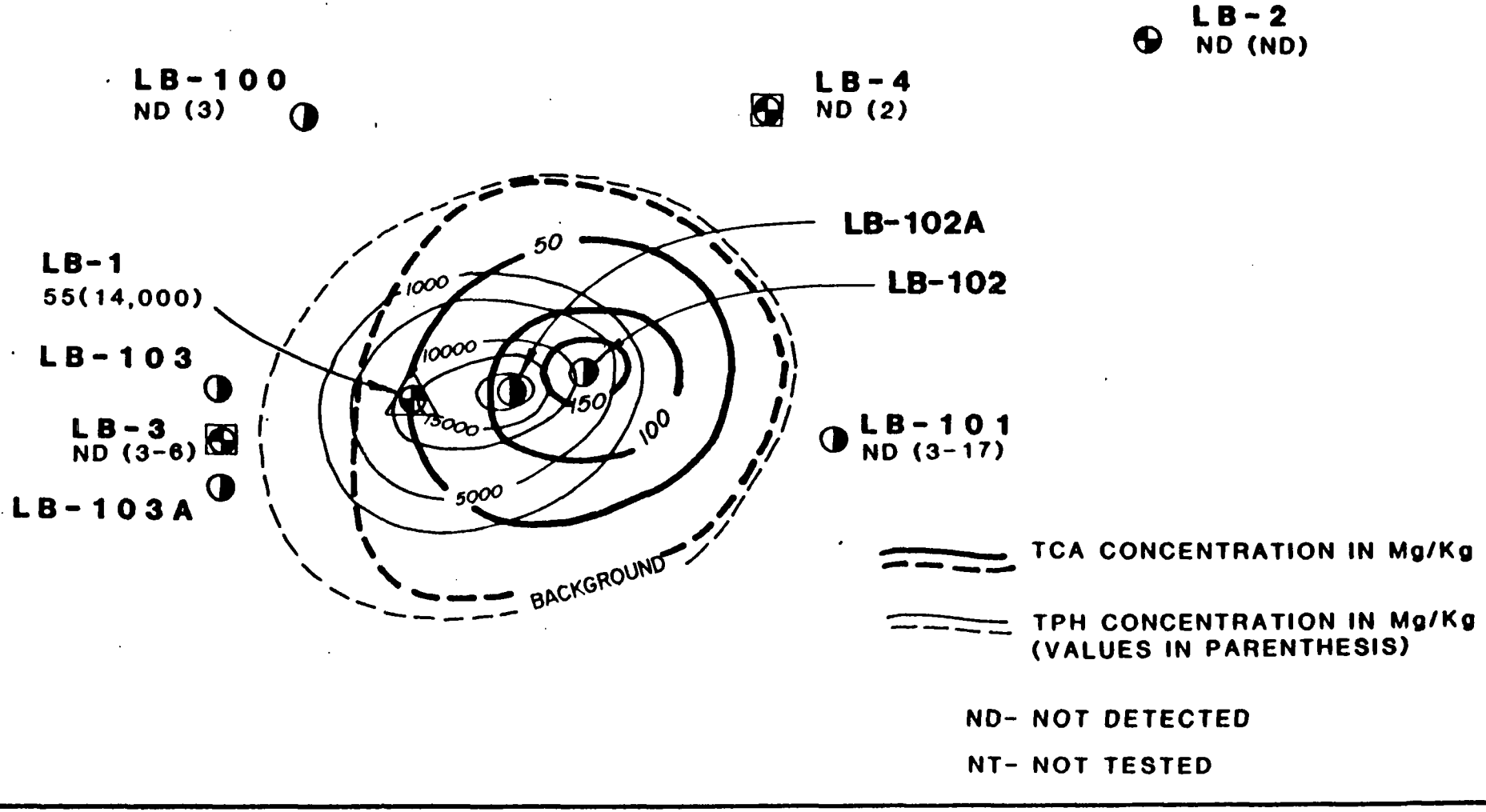
Figure No. 2



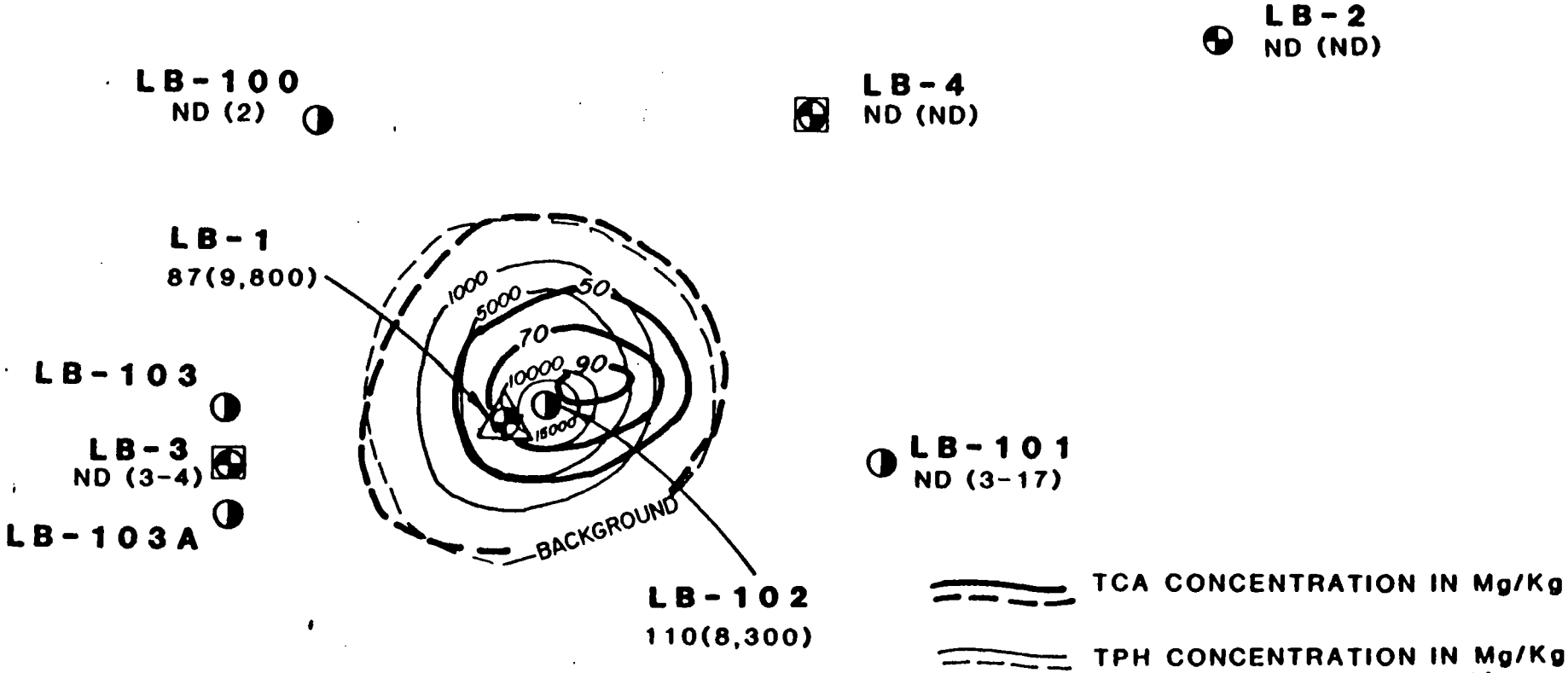
Project Name: HR TEXTRON
Project Number: 78141189-21
Drafted By: db
Reviewed By: RSP
Report Date: 5/12/89

PLOT PLAN
SHOWING BORING LOCATIONS AND LOCATION OF SECTIONS
HR TEXTRON
PACOIMA, CALIFORNIA

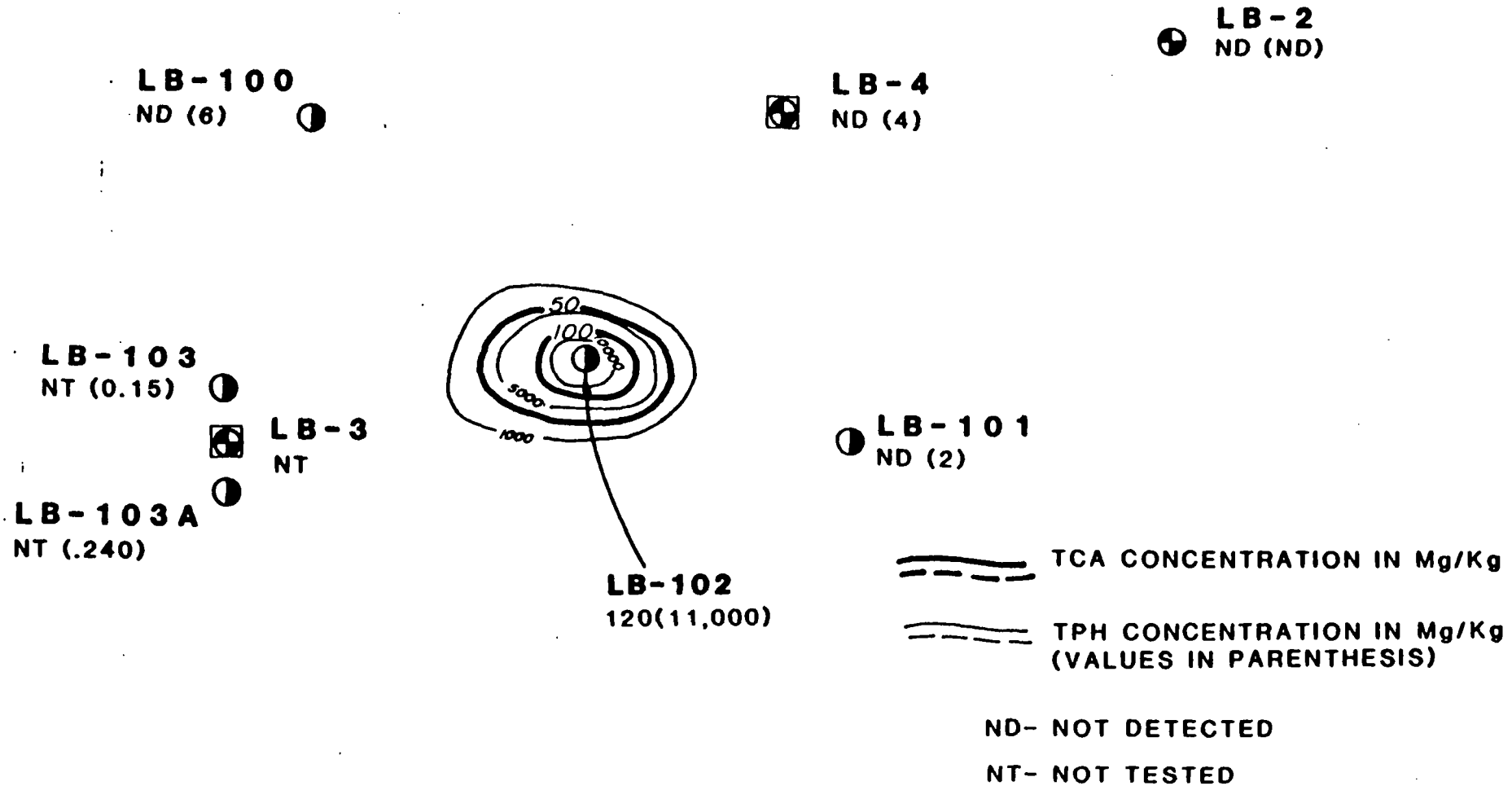
PLATE No. 1



Project Name: HR TEXTRON Project Number: 78141189-21 Drafted By: db Reviewed By: RSP Report Date: 5/12/89	TCA AND TPH CONCENTRATIONS AT 20 FT. DEPTH PLATE No.6



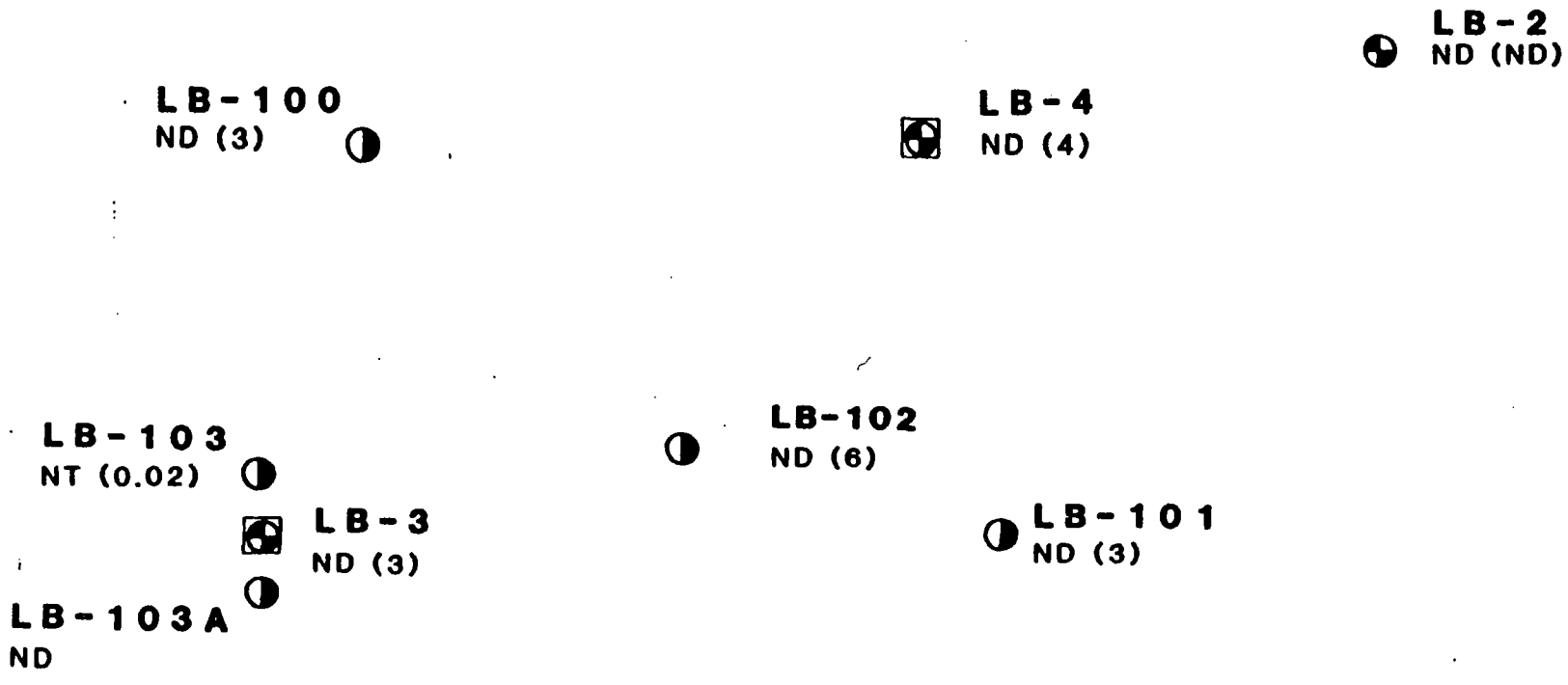
Project Name: HR TEXTRON Project Number: 78141189-21 Drafted By: db Reviewed By: RSP Report Date: 5/12/89	TCA AND TPH CONCENTRATIONS AT 30 FT. DEPTH PLATE No. 7



Project Name: HR TEXTRON
Project Number: 78141189-21
Drafted By: db
Reviewed By: RSP
Report Date: 5/12/89

TCA AND TPH CONCENTRATIONS IN CLAY BED AT 50 FT. (APPROXIMATE) DEPTH

PLATE No. 8



ND- NOT DETECTED

NT- NOT TESTED

Project Name: HR TEXTRON Project Number: 78141189-21 Drafted By: db Reviewed By: RSP Report Date: 5/12/89	TCA AND TPH CONCENTRATIONS AT 56-60 FT. DEPTH PLATE No.9