

**GROUNDWATER
TECHNOLOGY, INC.**

4080 Pike Lane, Suite D, Concord, CA 94520 (415) 671-2387

Fax: (415) 685-9148

June 7, 1988

Mr. Roger James
California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607

RE: Request for Issuance of Interim Letter of Approval for
Groundwater Discharge
Emeryville Market Place Property

Dear Mr. James:

Groundwater Technology, Inc. (GTI) was retained by the Christie Avenue Partners to provide environmental consultation in regards to their Emeryville Market Place development located near the intersection of Christie and 64th streets in Emeryville, California. Development of the site requires excavation of trenches for underground utilities within the site. However, due to a suspected perched water table at the site, dewatering of these trenches during utility installation will be required.

The contractor estimates that a maximum of 525,000 gallons of water will need to be discharged over a period of about three weeks. However, this quantity will most likely be much less due to the suspected limited volume of the perched water. On behalf of the Christie Avenue Partners, GTI is submitting the attached National Pollutant Discharge Elimination Standard (NPDES) permit application to Mr. Greg Zentner of your office. GTI proposes to treat the pumped water through activated-carbon filtration prior to discharge to the storm drain system. Water samples collected and analyzed for the site to date have detected only low levels of priority pollutants (EPA 625). Total oil and grease levels of 38 parts per million (ppm) were detected however. As discussed in the NPDES application, GTI will analyze effluent samples so as

Mr. James
June 7, 1988
Page 2

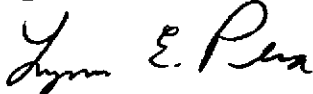
to be in compliance with the criteria discussed in Table 5, Case 1, of the Guidance Document: Discharge of Polluted Groundwater To Surface Waters.

On behalf of the Christie Avenue Partners, GTI requests that a interim letter of approval for discharge of groundwater to the storm drain system be granted for the Emeryville site. Construction cannot continue until the underground utilities are installed. Delays will cost our client up to \$50,000 per day. Therefore, a prompt reply on this matter would be greatly appreciated.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.



Michael J. Wray
SFB Territory Manager/
Hydrogeologist



Lynn E. Pera
Registered Civil Engineer
No. 33431

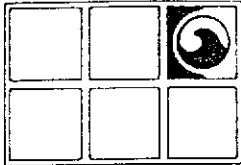
LEP:lbn

cc: Larry Kolb
Greg Zentner

CHRISTIE.LP



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TECHNOLOGY, INC.



**GROUNDWATER
TECHNOLOGY, INC.**

4080 Pike Lane, Suite D, Concord, CA 94520 (415) 671-2387

Fax: (415) 685-9148

June 6, 1988

Mr. Greg Zentner
California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607

RE: NPDES Permit Application
Emeryville Market Place Property

Dear Mr. Zentner:

Groundwater Technology, Inc. (GTI) was retained by the Christie Avenue Partners to provide environmental consultation in regards to their Emeryville Market Place development located near the intersection of Christie and 64th streets in Emeryville, California. Development of the site requires excavation of trenches for underground utilities within the site. However, due to a suspected perched water table at the site, dewatering of these trenches during utility installation will be required.

The contractor estimates that a maximum of 525,000 gallons of water will need to be discharged over a period of about three weeks. However, this quantity will most likely be much less due to the suspected limited volume of the perched water. On behalf of the Christie Avenue Partners, GTI is submitting the attached National Pollutant Discharge Elimination Standard (NPDES) permit application package.

The application package includes the following:

1. Completed and signed copies of:
 - a. EPA General Form 1
 - b. EPA Application Form 2D
 - c. The Signatory and Certification Statement

2. Figures:
 - a. Figure 1 - Site Location map
 - b. Figure 2 - Site Plan Proposed Dewatering Treatment System
 - c. Figure 3 - Water Treatment System Schematic

Mr. Greg Zentner
June 6, 1988
Page 2

3. Carbon Filtration System Sizing Calculations.
4. Recent Groundwater Sample Analyses.
5. Permit Fee Check - \$500.

For a complete assessment of the extent of the contamination, please refer to previously submitted reports prepared by Woodward-Clyde and Earthmetrics Inc.

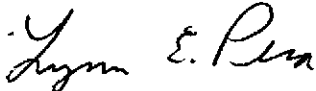
GTI proposes to treat the pumped water through activated-carbon filtration prior to discharge to the storm drain system. Water samples collected and analyzed for the site to date have detected only low levels of priority pollutants (EPA 625). Total oil and grease levels of 38 parts per million (ppm) were detected however. As discussed in the NPDES application, GTI will analyze effluent samples so as to be in compliance with the criteria discussed in Table 5, Case 1, of the Guidance Document: Discharge of Polluted Groundwater To Surface Waters.

Please feel free to contact our office if you have any questions or require additional information.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.



Michael J. Wray
SFB Territory Manager/
Hydrogeologist



Lynn E. Pera
Registered Civil Engineer
No. 33431

LEP:lbm

cc: Larry Kolb
Greg Zentner

CHRISTIE.LP

SIGNATORY AND CERTIFICATION STATEMENT TO NPDES PERMIT APPLICATIONS

Please check the appropriate box

I CERTIFY THAT:

(for a municipal, state, federal, or other public agency) I am a principal executive officer or ranking elected official; or

In the case of Federal agencies, I am the chief executive officer of the agency, or I am the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

(for a partnership or sole proprietorship) I am a general partner (partnership) or a proprietor (sole proprietorship).

(for a corporation) I am President, Vice President, Secretary or Treasurer of the corporation and in charge of a principal business function, or I perform similar policy or decision making functions for the corporation; or,

I am the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), and authority to sign documents has been assigned or delegated to me in accordance with corporate procedures.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date of Cover Letter

Description of Document

- | | |
|------------------|---------------------------------|
| 1. <u>6/6/88</u> | <u>NPDES Permit Application</u> |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |

Signature

Thomas Gram

Date

6/7/88

Name

Thomas Gram

Title

General Partner

Company Name

Christie Avenue Partners

Phone Number

(415) 654-7500

| | | | |
|---|--|---|---|
| FORM 1 | | U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i> | I. EPA I.D. NUMBER |
| LABEL ITEMS I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION | | | GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected. |
| PLEASE PLACE LABEL IN THIS SPACE | | | |

II. POLLUTANT CHARACTERISTICS

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

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

III. NAME OF FACILITY

| | | |
|---|------|-------------------------|
| 1 | SKIP | Emeryville Market Place |
|---|------|-------------------------|

IV. FACILITY CONTACT

| | | | | |
|--|--|----------------------------|-----|------|
| A. NAME & TITLE (last, first, & title) | | B. PHONE (area code & no.) | | |
| 2 Mc Kay, Allen | | 415 | 652 | 5852 |

V. FACILITY MAILING ADDRESS

| | | | |
|-----------------------------------|--|----------|-------------|
| A. STREET OR P.O. BOX | | | |
| 3 6475 Christie Street, Suite 406 | | | |
| B. CITY OR TOWN | | C. STATE | D. ZIP CODE |
| 4 Emeryville | | CA | 94608 |

VI. FACILITY LOCATION

| | | | | | |
|---|--|----------|-------------|---------------------------|--|
| A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER | | | | | |
| 5 Christie and 64th Streets | | | | | |
| B. COUNTY NAME | | | | | |
| Alameda | | | | | |
| C. CITY OR TOWN | | D. STATE | E. ZIP CODE | F. COUNTY CODE (if known) | |
| 6 Emeryville | | CA | 94608 | | |

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

| A. FIRST | | | | B. SECOND | | | |
|-----------------------|---|------|------|-----------|---|--|--|
| C | 7 | 1500 | 1799 | C | 7 | | |
| Building Construction | | | | (specify) | | | |
| C. THIRD | | | | D. FOURTH | | | |
| C | 7 | | | C | 7 | | |
| (specify) | | | | (specify) | | | |

VIII. OPERATOR INFORMATION

| A. NAME | | | | | | | | | | B. Is the name listed in Item VIII-A also the owner? | |
|--------------------------|--|--|--|--|--|--|--|--|--|---|--|
| Christie Avenue Partners | | | | | | | | | | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | |

| C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other", specify.) | | | | | | D. PHONE (area code & no.) | | | |
|--|--|-------------|--|---------|--|----------------------------|-----|-----|------|
| F = FEDERAL | M = PUBLIC (other than federal or state) | P (specify) | | Private | | A | 415 | 652 | 5852 |
| S = STATE | O = OTHER (specify) | | | | | | | | |
| P = PRIVATE | | | | | | | | | |

| E. STREET OR P.O. BOX | | | | | | | | | |
|---------------------------------|--|--|--|--|--|--|--|--|--|
| 6475 Christie Street, Suite 406 | | | | | | | | | |

| F. CITY OR TOWN | | | | | G. STATE | | H. ZIP CODE | | IX. INDIAN LAND | |
|-----------------|--|--|--|--|----------|--|-------------|--|---|--|
| Emeryville, | | | | | CA | | 94608 | | Is the facility located on Indian lands? | |
| | | | | | | | | | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | |

X. EXISTING ENVIRONMENTAL PERMITS

| A. NPDES (Discharges to Surface Water) | | | | D. PSD (Air Emissions from Proposed Sources) | | | |
|--|---|---|---------|--|---|---|----|
| C | T | I | | C | T | I | |
| N | | | Pending | 9 | P | | NA |
| B. UIC (Underground Injection of Fluids) | | | | E. OTHER (specify) | | | |
| C | T | I | | C | T | I | |
| U | | | NA | 9 | | | |
| C. RCRA (Hazardous Wastes) | | | | E. OTHER (specify) | | | |
| C | T | I | | C | T | I | |
| R | | | NA | 9 | | | |

XI. MAP

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

XII. NATURE OF BUSINESS (provide a brief description)

Commercial Development

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| A. NAME & OFFICIAL TITLE (type or print) | | B. SIGNATURE | | C. DATE SIGNED | |
|--|--|--|--|----------------|--|
| Thomas Gram General Partner | |  | | 6/7/88 | |

COMMENTS FOR OFFICIAL USE ONLY

| | |
|--|--|
| | |
|--|--|

Form
2D
NPDES



New Sources and New Dischargers Application for Permit to Discharge Process Wastewater

I. Outfall Location

For each outfall, list the latitude and longitude, and the name of the receiving water.

| Outfall Number <i>(list)</i> | Latitude | | | Longitude | | | Receiving Water <i>(name)</i> |
|---------------------------------|----------|-----|-----|-----------|-----|-----|--|
| | Deg | Min | Sec | Deg | Min | Sec | |
| 01 | 37 | 53 | 52 | 122 | 17 | 50 | On-site catch basin to storm main under under Shellmount Street which discharges to Temescal Creek which empties into San Francisco Bay |
| | | | | | | | |

II. Discharge Date *(When do you expect to begin discharging?)*
June 1988

III. Flows, Sources of Pollution, and Treatment Technologies

A. For each outfall, provide a description of (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

| Outfall Number | 1. Operations Contributing Flow <i>(list)</i> | 2. Average Flow <i>(include units)</i> | 3. Treatment <i>(Description or List Codes from Table 2D-1)</i> |
|----------------|--|---|--|
| 01 | Trench Dewatering | 17 gpm | Activated Carbon Filtration |
| | | | |
| | | | |
| | | | |
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| | | | |

B. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item III-A. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

C. Except for storm runoff, leaks, or spills, will any of the discharges described in item III-A be intermittent or seasonal?

Yes (complete the following table) No (go to item IV)

| Outfall Number | 1. Frequency | | 2. Flow | | c. Duration (in days) |
|----------------|------------------------------------|--------------------------------------|-------------------------------------|--|-----------------------|
| | a. Days Per Week (specify average) | b. Months Per Year (specify average) | a. Maximum Daily Flow Rate (in mgd) | b. Maximum Total Volume (specify with units) | |
| 01 | 7 | 0.75 | 0.025 | 0.525 mgd | 21 |

IV. Production

If there is an applicable production-based effluent guideline or NSPS, for each outfall list the estimated level of production (projection of actual production level, not design), expressed in the terms and units used in the applicable effluent guideline or NSPS, for each of the first 3 years of operation. If production is likely to vary, you may also submit alternative estimates (attach a separate sheet).

| Year | a. Quantity Per Day | b. Units of Measure | c. Operation, Product, Material, etc (specify) |
|------|---------------------|---------------------|--|
| NA | | | NA |
| | | | |
| | | | |

NA

01

V. Effluent Characteristics

A, and B: These items require you to report estimated amounts (*both concentration and mass*) of the pollutants to be discharged from each of your outfalls. Each part of this item addresses a different set of pollutants and should be completed in accordance with the specific instructions for that part. Data for each outfall should be on a separate page. Attach additional sheets of paper if necessary.

General Instructions (See table 2D-2 for Pollutants)

Each part of this item requests you to provide an estimated daily maximum and average for certain pollutants and the source of information. Data for all pollutants in Group A, for all outfalls, must be submitted unless waived by the permitting authority. For all outfalls, data for pollutants in Group B should be reported only for pollutants which you believe will be present or are limited directly by an effluent limitations guideline or NSPS or indirectly through limitations on an indicator pollutant.

| 1. Pollutant | 2. Maximum Daily Value (include units) | 3. Average Daily Value (include units) | 4. Source (see instructions) |
|----------------------|---|---|------------------------------|
| BOD | | | NA |
| COD | | | NA |
| TOC | | | NA |
| TSS | | | NA |
| FLOW | | | 1 |
| AMMONIA | | 0.66 mg/l | 1 |
| Temperature (winter) | | 55°F | 3 |
| Temperature (summer) | | 60°F | 3 |
| pH | | 6.7 | 1 |
| Oil and grease | 38 mg/l | | 1 |
| Lead | 0.12 mg/l | | 1 |
| Chromium | 0.11 mg/l | | 1 |
| Beryllium | <.01 mg/l | | 1 |
| Benzene | <1 ug/l | | 1 |
| Toluene | <1 ug/l | | 1 |
| Ethylbenzene | <1 ug/l | | 1 |
| Silver | <.01 mg/l | | 1 |
| Cadmium | <.01 mg/l | | 1 |
| Copper | 0.04 mg/l | | 1 |
| Arsenic | 0.014 mg/l | | 1 |
| Mercury | 0.0003 mg/l | | 1 |
| 1,2 Dichlorethylene | <1 ug/l | | 1 |

CONTINUED FROM THE FRONT

EPA ID Number (copy from Item 1 of Form 1)
NA

C. Use the space below to list any of the pollutants listed in Table 2D-3 of the instructions which you know or have reason to believe will be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it will be present.

| 1. Pollutant | 2. Reason for Discharge |
|--------------|-------------------------|
| NA | |

VI. Engineering Report on Wastewater Treatment

A. If there is any technical evaluation concerning your wastewater treatment, including engineering reports or pilot plant studies, check the appropriate box below.

Report Available

No Report

B. Provide the name and location of any existing plant(s) which, to the best of your knowledge, resembles this production facility with respect to production processes, wastewater constituents, or wastewater treatments.

| Name | Location |
|---|--|
| Chevron Service Station Armour Oil City of Gilroy | Castro Valley, California Davis, California Gilroy, California |

VII. Other Information (Optional)

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations for the proposed facility. Attach additional sheets if necessary.

See cover letter and attachments

VIII. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name and Official Title (type or print)

Thomas Gram General Partner

B. Phone No.

(415)654-7500

C. Signature

Thomas Gram

D. Date Signed

6/7/88

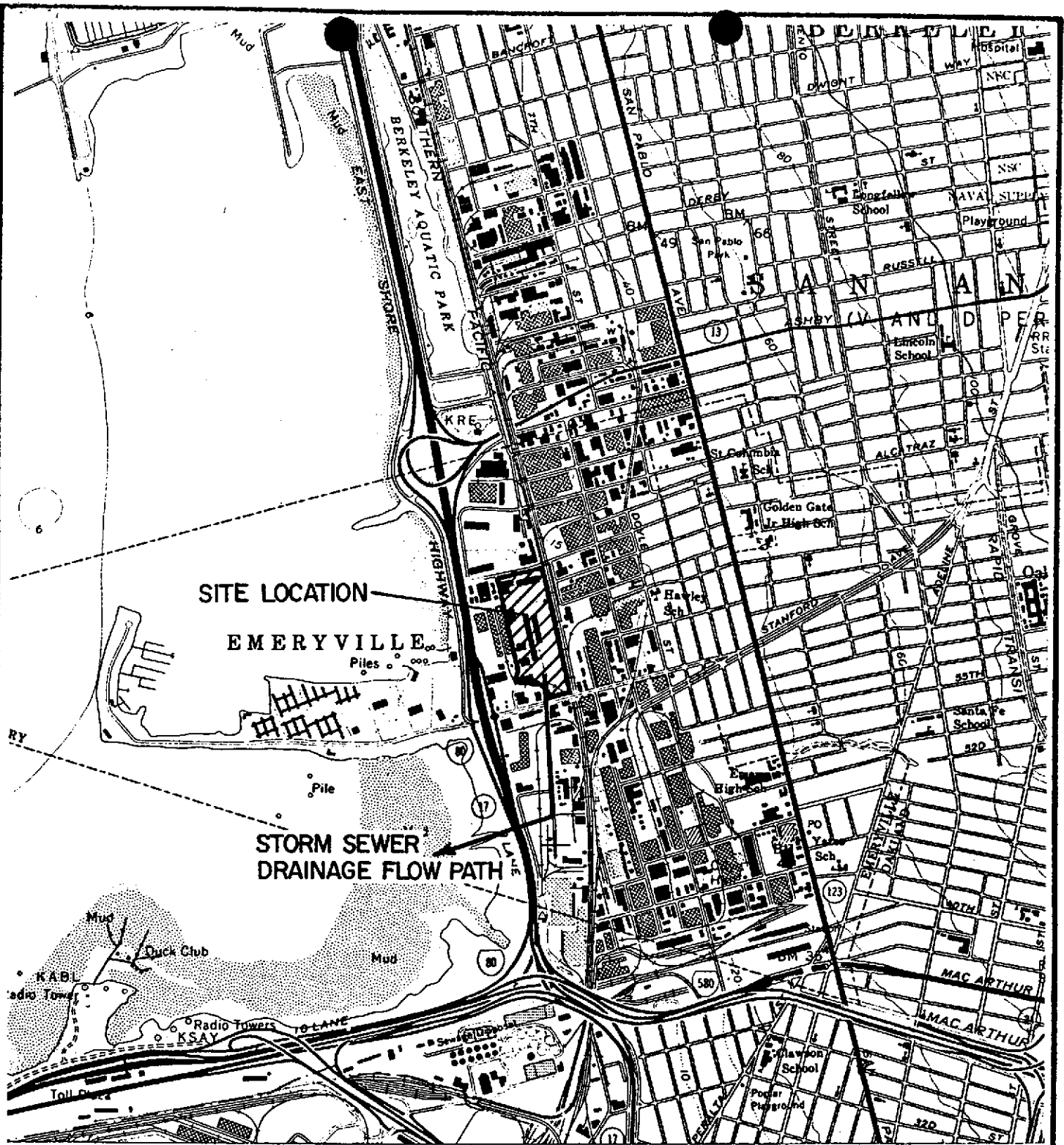


FIGURE I
SITE LOCATION MAP
 DRAINAGE FLOW PATH



THE MARTIN CO.
 EMERYVILLE, CALIF.



GROUNDWATER
 TECHNOLOGY

RAILROAD RIGHT OF WAY

64th ST.

EXISTING BUILDING

EXISTING BUILDING

CHRISTIE AVE.

LEGEND

- APPROX. LOCATION OF DEWATERING TRENCH
- DEWATERING PUMP SYSTEM
- ACTIVATED CARBON FILTRATION
- ☒ CATCH BASIN
- TEMPORARY DISCHARGE LINE

FIGURE 2
SITE PLAN

PROPOSED DEWATERING
TREATMENT SYSTEM

1" = 160'



GROUNDWATER
TECHNOLOGY, INC.

CHRISTIE AVENUE PARTNERS
EMERYVILLE, CALIF.

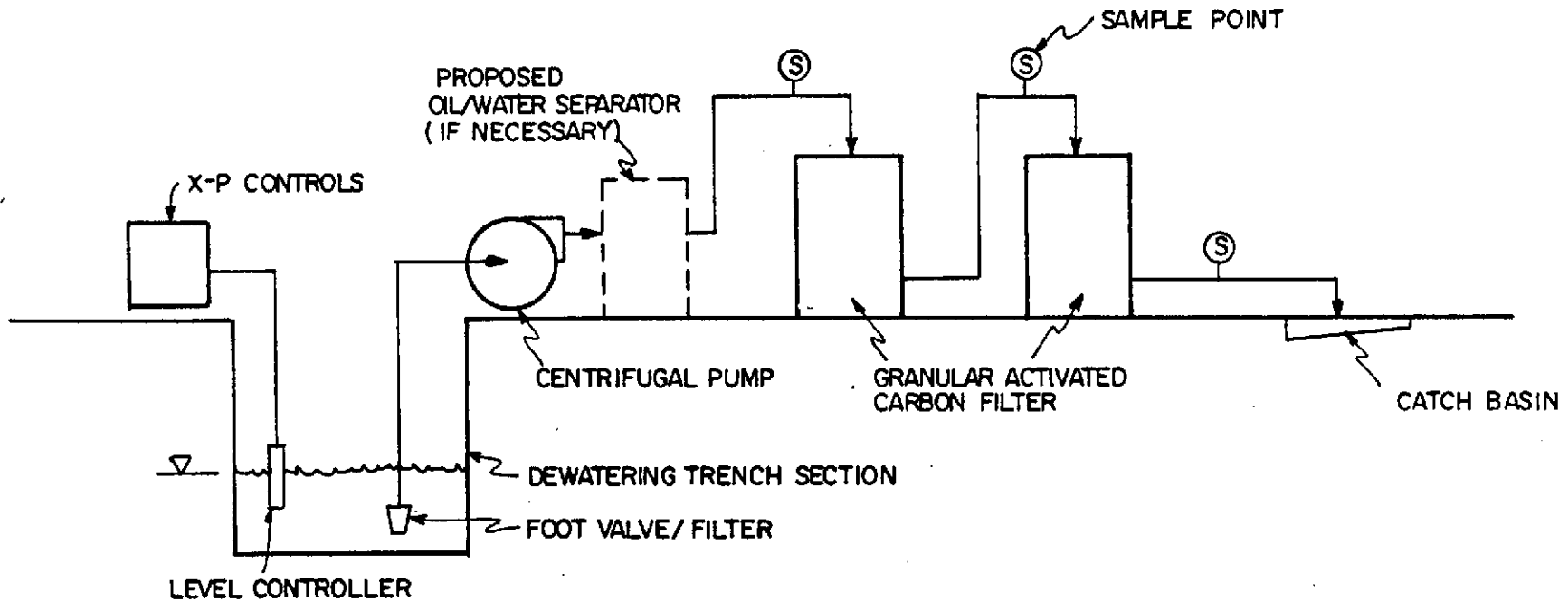


FIGURE 3
WATER TREATMENT SYSTEM SCHEMATIC

NO SCALE

CHRISTIE AVENUE PARTNERS
 EMERYVILLE, CALIF.

 GROUNDWATER
 TECHNOLOGY, INC.

WORST CASE

CARBON FILTRATION SYSTEM SIZING

Using a contaminant concentration of 11 mg/l based upon groundwater sampling analyses for total fuel hydrocarbons taken on May 24, 1988, the following carbon expenditure calculation was made:

Given: A dewatering pumping rate estimate = 17 gpm

$$17 \text{ gpm} \times 11 \frac{\text{mg}}{\text{L}} \times 3.785 \frac{\text{L}}{\text{gal}} \times \frac{1 \text{ gm}}{1000 \text{ mg}} \times 1440 \frac{\text{min}}{\text{day}} \times \frac{1 \text{ lb}}{454 \text{ gm}} = 2.24 \frac{\text{lbs}}{\text{day}}$$

Therefore: Approximately 2.3 lbs of contaminants need to be removed by the carbon filtration system prior to discharge.

Assuming a conservative carbon adsorbative capacity of 3 pounds of contaminants per 100 pounds of carbon (the presence of oil and grease constituents in the analyses indicates that this capacity may be more realistic), GTI proposes to use a carbon filter series of at least, two filters on each of two manifolded branch streams. Using readily available carbon filter canisters containing 150 pounds of carbon (9 pounds adsorbative capacity) a 4 day carbon filter change out will be required to prevent break through in the primary filters of the series.

GTI proposes the usage of an oil/water separator scheme between the pump and the carbon filtration for prolonged carbon life should the oil and grease constituent become a problem.





LOG NO: E88-05-609

Received: 23 MAY 88

Reported: 03 JUN 88

Mr. Peter Nance
Earth Metrics
859 Cowan
Burlingame, California 94010

CODV

Project: 9570.AB

REPORT OF ANALYTICAL RESULTS

Page 1

| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|-------------------------------|-------------------------------------|--------------|
| 05-609-1 | W-1E | 23 MAY 88 |
| PARAMETER | 05-609-1 | |
| Beryllium, mg/L | <0.01 | |
| Cadmium, mg/L | <0.01 | |
| Chromium, mg/L | <0.02 | |
| Copper, mg/L | 0.04 | |
| Lead, mg/L | 0.12 | |
| Nickel, mg/L | <0.05 | |
| Silver, mg/L | <0.01 | |
| Thallium, mg/L | <0.1 | |
| Zinc, mg/L | 0.22 | |
| Antimony, mg/L | 0.3 | |
| Arsenic, mg/L | 0.014 | |
| Selenium, mg/L | <0.001 | |
| Mercury, mg/L | 0.0003 | |
| Oil and Grease, mg/L | 38 | |
| Nitric Acid Digestion, Date | 05.24.88 | |
| Total Fuel Hydrocarbons, mg/L | 11 | |



LOG NO: E88-05-609

Received: 23 MAY 88

Reported: 03 JUN 88

Mr. Peter Nance
Earth Metrics
859 Cowan
Burlingame, California 94010

COPY

Project: 9570.AB

REPORT OF ANALYTICAL RESULTS

Page 2

| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|----------------------------------|-------------------------------------|--------------|
| 05-609-1 | W-1E | 23 MAY 88 |
| PARAMETER | 05-609-1 | |
| B/N,A Ext.Pri.Poll. (EPA-625) | | |
| Extraction | 05.25.88 | |
| Date Analyzed | 06.02.88 | |
| 1,2,4-Trichlorobenzene, ug/L | <100 | |
| 1,2-Dichlorobenzene, ug/L | <100 | |
| 1,2-Diphenylhydrazine, ug/L | <100 | |
| 1,3-Dichlorobenzene, ug/L | <100 | |
| 1,4-Dichlorobenzene, ug/L | <100 | |
| 2,4,6-Trichlorophenol, ug/L | <10 | |
| 2,4-Dichlorophenol, ug/L | <10 | |
| 2,4-Dimethylphenol, ug/L | <10 | |
| 2,4-Dinitrotoluene, ug/L | <100 | |
| 2,4-Dinitrophenol, ug/L | <100 | |
| 2,6-Dinitrotoluene, ug/L | <100 | |
| 2-Chloronaphthalene, ug/L | <100 | |
| 2-Nitrophenol, ug/L | <10 | |
| 2-Chlorophenol, ug/L | <10 | |
| 2-Methyl-4,6-dinitrophenol, ug/L | <10 | |
| 3,3'-Dichlorobenzidine, ug/L | <100 | |
| 4-Bromophenylphenylether, ug/L | <100 | |
| 4-Chloro-3-methylphenol, ug/L | <10 | |
| 4-Chlorophenylphenylether, ug/L | <100 | |
| 4-Nitrophenol, ug/L | <200 | |
| Acenaphthene, ug/L | <100 | |
| Acenaphthylene, ug/L | <100 | |
| Anthracene, ug/L | <100 | |
| Bis(2-ethylhexyl)phthalate, ug/L | <10000 | |



LOG NO: E88-05-609

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REPORT OF ANALYTICAL RESULTS

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| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|-----------------------------------|-------------------------------------|--------------|
| 05-609-1 | W-1E | 23 MAY 88 |
| PARAMETER | 05-609-1 | |
| Benzidine, ug/L | <4000 | |
| Bis(2-chloroethyl)ether, ug/L | <100 | |
| Bis(2-chloroisopropyl)ether, ug/L | <100 | |
| Bis(2-chloroethoxy)methane, ug/L | <100 | |
| Benzo(a)anthracene, ug/L | <100 | |
| Benzo(a)pyrene, ug/L | <100 | |
| Benzo(b)fluoranthene, ug/L | <100 | |
| Benzo(g,h,i)perylene, ug/L | <100 | |
| Benzo(k)fluoranthene, ug/L | <100 | |
| Butylbenzylphthalate, ug/L | <100 | |
| Chrysene, ug/L | <100 | |
| Di-n-octylphthalate, ug/L | <100 | |
| Dibenzo(a,h)anthracene, ug/L | <100 | |
| Dibutylphthalate, ug/L | <100 | |
| Diethylphthalate, ug/L | <100 | |
| Dimethylphthalate, ug/L | <100 | |
| Fluorene, ug/L | <100 | |
| Fluoranthene, ug/L | 320 | |
| Hexachlorobenzene, ug/L | <100 | |
| Hexachlorobutadiene, ug/L | <100 | |
| Hexachlorocyclopentadiene, ug/L | <100 | |
| Hexachloroethane, ug/L | <100 | |
| Indeno(1,2,3-c,d)pyrene, ug/L | <100 | |
| Isophorone, ug/L | <100 | |
| N-Nitrosodi-n-propylamine, ug/L | <100 | |
| N-Nitrosodimethylamine, ug/L | <100 | |
| N-Nitrosodiphenylamine, ug/L | <100 | |



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| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|-------------------------------------|-------------------------------------|--------------|
| 05-609-1 | W-1E | 23 MAY 88 |
| PARAMETER | 05-609-1 | |
| Naphthalene, ug/L | <100 | |
| Nitrobenzene, ug/L | <100 | |
| Pentachlorophenol, ug/L | 420 | |
| Phenanthrene, ug/L | <100 | |
| Phenol, ug/L | 220 | |
| Pyrene, ug/L | 550 | |
| Other B/N,A Ext.Pri.Poll. (EPA-625) | --- | |
| Semi-Quantified Results ** | | |
| Benzene Acetic Acid, ug/L | 90 | |
| C12H16O2, ug/L | 300 | |
| Unidentified Matrix, ug/L | 500 | |

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Sim D. Lessley
Sim D. Lessley, Ph.D., Laboratory Director



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REPORT OF ANALYTICAL RESULTS

Page 1

| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|---------------------------------|-------------------------------------|--------------|
| 05-533-1 | W-1D | 19 MAY 88 |
| PARAMETER | 05-533-1 | |
| Purgeable Priority Pollutants | | |
| Date Extracted | 05.20.88 | |
| 1,1,1-Trichloroethane, ug/L | <10 | |
| 1,1,2,2-Tetrachloroethane, ug/L | <10 | |
| 1,1,2-Trichloroethane, ug/L | <10 | |
| 1,1-Dichloroethane, ug/L | <10 | |
| 1,1-Dichloroethylene, ug/L | <10 | |
| 1,2-Dichloroethane, ug/L | <10 | |
| 1,2-Dichloropropane, ug/L | <10 | |
| 1,3-Dichloropropene, ug/L | <10 | |
| 2-Chloroethylvinylether, ug/L | <10 | |
| Acrolein, ug/L | <100 | |
| Acrylonitrile, ug/L | <100 | |
| Bromodichloromethane, ug/L | <10 | |
| Bromomethane, ug/L | <10 | |
| Benzene, ug/L | <10 | |
| Chlorobenzene, ug/L | <10 | |
| Carbon Tetrachloride, ug/L | <10 | |
| Chloroethane, ug/L | <10 | |
| Bromoform, ug/L | <10 | |
| Chloroform, ug/L | <10 | |
| Chloromethane, ug/L | <10 | |
| Dibromochloromethane, ug/L | <10 | |
| Ethylbenzene, ug/L | <10 | |
| Methylene chloride, ug/L | <10 | |
| Tetrachloroethylene, ug/L | <10 | |
| Trichloroethylene, ug/L | <10 | |



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REPORT OF ANALYTICAL RESULTS

Page 2

| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|----------------------------------|-------------------------------------|--------------|
| 05-533-1 | W-1D | 19 MAY 88 |
| PARAMETER | 05-533-1 | |
| Trichlorofluoromethane, ug/L | <10 | |
| Toluene, ug/L | <10 | |
| Vinyl chloride, ug/L | <10 | |
| trans-1,2-Dichloroethylene, ug/L | <10 | |
| trans-1,3-Dichloropropene, ug/L | <10 | |

Sim D. Lessley
Sim D. Lessley, Ph.D., Laboratory Director



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| LOG NO | SAMPLE DESCRIPTION, AQUEOUS SAMPLES | DATE SAMPLED |
|----------------------------------|-------------------------------------|--------------|
| 05-533-1 | W-1D | 19 MAY 88 |
| PARAMETER | | 05-533-1 |
| Trichlorofluoromethane, ug/L | | <10 |
| Toluene, ug/L | | <10 |
| Vinyl chloride, ug/L | | <10 |
| trans-1,2-Dichloroethylene, ug/L | | <10 |
| trans-1,3-Dichloropropene, ug/L | | <10 |

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