ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

July 13, 2004

2855 Mandela Property, LLC
Ms. Faye Beverett
4225 Glen Ave., #200
Oakland, CA 94611

Dear Ms. Beverett:

Subject: Fuel Leak Case RO0000378, 2855 Mandela Parkway, Oakland, CA 94607

This letter responds to your July 2, 2004 request for clarification of the County's involvement with the oversight of the referenced fuel leak site. Such information is requested for the SWRCB Cleanup Fund for their reimbursement decisions. You further commented that there appeared to be a lack of correspondence prior to my oversight. The following is a brief history of actions and correspondences from our office.

- 7/9/92- Notice of Responsibility letter sent to Wareham Property Development.
- 9/1/98- Phase II investigation report from Ceres Associates submitted, free product reported in SB-3.
- 11/28/98- The 11/23/98 Workplan Addendum from Ceres Associates approved by Larry Seto of our office.
- 1/11/99- Meeting with Mr. Larry Seto, Ms. Faye Beverett and consultants from Ceres Associates and Soma Corp. representing former property owner.
- 4/19/99- Approval letter for Treadwell & Rollo 4/14/99 Work Plan for Source Investigation from Mr. Larry Seto.
- 7/15/99- Approval letter for the 6 /15/99 Treadwell & Rollo Work Plan for Phase I Remediation and Additional Subsurface Investigation from Mr. Larry Seto.
- 11/12/99- Approval letter for Treadwell & Rollo 11/10/99 Work Plan for Floating Product Plume Delineation from Mr. Larry Seto.
- 2000- Several correspondences regarding the naming of International Truck (formerly International Harvester) as a RP from you, our office and International Truck.
- 6/14/02- Approval letter for the installation of passive product skimmer in TR-4 through TR-6 by the undersigned.
- 2/10/04- Approval letter for draft Interim Corrective Action Plan by the undersigned.

There appears to have been continual correspondence and oversight by our office. Please be informed that your new caseworker from our office is Mr. Don Hwang, 510-567-6746.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, D. Drogos, D. Hwang

7_13_04 2855MandelaPkwy

R0578-DH

State Water Resources Control Board

Division of Financial Assistance
1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5714 • FAX (916) 341-5806 • www.swrcb.ca.gov/cwphome/ustcf

Terry Tamminen
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

MAY 2 6 2004

JUN 0 2 2004
Environmental Health

2855 Mandela Property LLC
Faye Beverett
4225 Glen Ave
Oakland, CA 94611-4349

UNDERGROUND STORAGE TANK CLEANUP FUND (FUND), CLAIM NO. 017160, FOR SITE ADDRESS: 2855 MANDELA PKWY, OAKLAND

The State Water Resources Control Board (State Board) is able to issue, pursuant to applicable regulations, the enclosed Letter of Commitment (LOC) in an amount not to exceed $70,000. This LOC is based upon our review of the corrective action costs you reported to have incurred to date. The LOC may be modified by the State Board.

It is very important that you read the terms and conditions listed in the enclosed LOC. Claims filed with the Underground Storage Tank Cleanup Fund far exceed the funding available and it is very important that you make use of the funding that has been committed to your cleanup in a timely manner.

You are reminded that you must comply with all regulatory agency time schedules and requirements and you must obtain three bids for any required corrective action. Only corrective action costs *required* by the regulatory agency to protect human health, safety and the environment can be claimed for reimbursement. **You are encouraged to obtain *preapproval of costs* for all future corrective action work (form enclosed).** If you have any questions on obtaining preapproval of your costs or the three bid requirement, please call Sunil Ramdass, our Technical Reviewer assigned to claims in your Region, at (916) 341-5757. Failure to obtain preapproval of your future costs may result in the costs not being reimbursed.

The following documents needed to submit your reimbursement request are enclosed:

Reimbursement Request Instructions and Information packages. **Retain these packages for future reimbursement requests.** These instructions must be followed when seeking reimbursement for corrective action costs incurred after January 1, 1988.

"Reimbursement Request" forms which you **must use to request reimbursement of costs incurred**.

"Spreadsheet" forms which you **must use in conjunction with your reimbursement request.**

☛ **THIS IS IMPORTANT TO YOU, PLEASE NOTE:**
Signature(s) on the application will be the signature(s) required for all future Fund documents.

You have 90 calendar days from the date of this letter to submit your first reimbursement request for incurred corrective action costs. **NO EXTENSIONS CAN BE GRANTED.** If you fail to do so, your LOC funds will automatically be reduced to zero (deobligated). Once this occurs, any future funds for this site are subject to availability when you submit your first reimbursement request. We continuously review the status of all active claims. You must continue to remain in compliance and submit a reimbursement request every 6 months. Failure to do so will result in the Fund taking steps to withdraw your LOC.

If you have any questions regarding the enclosed documents, please contact Toru Okamoto at (916) 341-5649.

Sincerely,

Allan V. Patton, Manager
Underground Storage Tank Cleanup Fund

Enclosures

cc: Ms. Donna Drogos
Alameda County EHD
1131 Harbor Bay Pkway, 2nd Fl.
Alameda, CA 94502-6577

Terry Tamminen
Secretary for Environmental Protection

State Water Resources Control Board

Division of Financial Assistance
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Arnold Schwarzenegger
Governor

Ro 378

FAX TRANSMITTAL

DATE: 3/2/04

TO: Barney Chan

CLAIM NO. 17160 (2855 Mandela Parkway, Oakland)

FAX NUMBER (510) 337-9335

FROM: **UST CLEANUP FUND**
FAX #: (916) 341-5806
PHONE #: (916) 341-5714

NUMBER OF PAGES (including this page): 2

- ☐ For your information
- ☐ Per your request
- ☐ For your review and comment
- ☒ Other –

Hi Barney,

Please sign compliance form + Return to me. I'm only sending ONE page. Return the ORIGINAL signature to me. Thanks,
Shari Knieriem

P.S. Thanks Again

CLAIM NO.: 17160 CLAIMANT NAME: 2855 Mandela Property LLC

SITE ADDRESS: 2855 Mandela Parkway, Oakland

DATE	COMPLIANCE DOCUMENTATION
	3/7/01- Indoor Ambient Air Sampling, Treadwell and Rollo
	3/29/01- Remedial Investigation Work Plan, Treadwell and Rollo
	4/4/01- Work plan approval letter for 3/29/01 Remedial Investigation
	10/23/01- Additional Remedial Investigation, Treadwell and Rollo
	11/28/01- Notice of Responsibility to Faye Beverett, Page Street Properties LLC and Robert Boardman, International Truck
	12/7/01- Notice of Responsibility, Leighton Taylor and Linda Taylor Revocable Trust and Page Street Properties, c/o Faye Beverett, and Robert Boardman, International Truck
	6/3/02- Free Phase Product Monitoring Plan, Treadwell and Rollo
	6/10/02- Addendum to the 1999 Remedial Investigation Report
	6/14/02- Approval letter from Alameda County for Interim Remediation
	1/22/04- Draft Interim Corrective Action Plan, Treadwell and Rollo
	2/10/04- Approval letter from Alameda County for Draft Interim Corrective Action Plan, Treadwell and Rollo

CONFIRMATION OF CORRECTIVE ACTION COMPLIANCE

- [X] Claimant in corrective action compliance
- [ ] Claimant not in corrective action compliance (90 day letter required)
- [ ] Claimant not in corrective action compliance - rejection recommended

Barney Chan — 3/2/04
LEAD AGENCY SIGNATURE — DATE

Shari Kriviem — 3/2/04
CLAIMS REVIEWER SIGNATURE — DATE

TRANSMIT REPORT

2004.03-02 09:50
510 337 9335
ALAMEDA CO EHS HAZ-OPS

COM No.	REMOTE STATION	START TIME	DURATION	PAGES	RESULT	USER ID	REMARKS
466	916 341 5805	03-02 09:49	00'49	01/01	OK		

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03/02/04 08:12 UST CLEAN UP FUND PROG → 510 337 9335 NO.872 002

CLAIM NO.: 17160 CLAIMANT NAME: 2855 Mandela Property LLC

SITE ADDRESS: 2855 Mandela Parkway, Oakland

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Treadwell&Rollo
Environmental and Geotechnical Consultants
501 14th Street, 3rd Floor
Oakland, California 94612
Phone: (510) 874-4500
Fax: (510) 874-4507

RO378

FAX TRANSMITTAL

Date: 23 Feb 2004 Send to fax # 510-337-9335

To: Barney Chan

From: David Kleesattel At Ext: 541

Project name: 2855 Mandela Pkwy Project number: _____

Number of pages, including this cover: 1

Notes: Barney - I got your phone messg.
Faye Beverett's current mailing address is:

1999 Harrison Street, Suite 1750
Oakland, CA 94612

Phone: 510-433-5351
Fax: 510-986-6779
email: fbeverett@colliersparrish.com

This document will also be mailed to you: ☐ Yes ☐ No

Should you encounter any difficulties with this fax, please call 510/874-4500

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

February 10, 2004

Page Street Properties c/o
Ms. Faye Beverett
155 Filbert St., #250
Oakland CA 94607

Dear Ms. Beverett:

Subject: Fuel Leak Case No. RO0000378, 2855 Mandela Parkway, Oakland CA 94607

Alameda County Environmental Health, Local Oversight Program (LOP), has reviewed the case file for the subject site including the following Treadwell and Rollo reports and information: Draft Interim Corrective Action Plan, January 22, 2004, Xitech Product Pumps Specifications, January 30, 2004 and Free Product Recovery Pilot Test Memorandum , February 6, 2004. These reports and product specification sheets support the proposal to install an interim product removal system at this site. It will consist of both existing and two additional recovery wells and an extraction trench for free product collection and removal. The proposed remediation system is approved with the technical comments, which follow.

TECHNICAL COMMENTS

1. A minimum of one additional monitoring well should be installed to define the down-gradient extent of the petroleum plume. Please submit a site figure indicating its location and its proposed construction diagram.
2. The new well and the existing wells not used in the free product remediation system should be monitored on a quarterly basis. The quarterly reports should also summarize the total amount of free product removed and an estimate of the area of influence of the extraction wells and trench. The fourth monitoring report shall provide a summary of the prior year's results and present modifications to monitoring protocol and the remediation system, as necessary.
3. Verification sampling of soil and groundwater will be done after the completion of the interim remediation to verify its effectiveness. A final Corrective Action Plan (CAP) will then be recommended.

Please notify our office prior to initiating this work. You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, D. Drogos
Mr. D. Kleesattel, Treadwell and Rollo, Inc., 501 14th St., Third Floor, Oakland, CA 94612

intCAP2855Mandela2_10_04

Treadwell&Rollo
Environmental and Geotechnical Consultants
501 14th Street, 3rd Floor
Oakland, California 94612
Phone: (510) 874-4500
Fax: (510) 874-4507

R0378

6/14/02

FAX TRANSMITTAL

Date: 6 February 2004 Send to fax # (510) 337-9335

To: Barney Chan - Alameda County Health Services Agency

From: Eric Deratzian At Ext: 545

Project name: 2855 Mandela Parkway Project number: 2543.01

Number of pages, including this cover: 3

Notes:

Barney,

Attached is a memorandum describing the results of our free product recovery pilot study. Please call with any questions.

Thanks,

Eric Deratzian

This document will also be mailed to you: ☐ Yes ☒ No

Should you encounter any difficulties with this fax, please call (510) 874-4500

Treadwell&Rollo

MEMORANDUM

TO: Barney Chan – Alameda County Health Services Agency <facsimile 510-337-9335>

FROM: Eric Deratzian

DATE: 6 February 2004

PROJECT: Mandela Parkway – 2855 Mandela Parkway

SUBJECT: Free Product Recovery Pilot Test

One behalf of David Kleesattel, this memorandum has been prepared to present the results of our free product recovery pilot test at the subject property.

The existing building on the property is a 143,000 square foot, single-story industrial structure. The building is currently occupied by a number of commercial tenants, mainly for warehousing and storage operations. The building was originally constructed in 1941 and operated until approximately 1983 by International Harvester as a truck service and sales facility. A 350-gallon underground gasoline storage tank was removed from the property in 1991 by a previous owner, Cypress Property.

Environmental investigations have confirmed the presence of free-phase product (gasoline) within the Bay Mud as well as significant concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) in groundwater beneath a portion of the property, including under the existing building. The free product recovery pilot study included the use of a Xitech ADJ 1000 Smart Skimmer (pump) attached to the 2500ES Electronic Timer to remove free-phase product from two on-site wells.

Treadwell & Rollo performed the pilot study in two on-site wells (TR-4 and TR-6). The wells were chosen because they were known to contain large quantities of free-phase product.

The following steps were taken during the pilot test:

- Using an oil/water interface probe, the depth to free-phase product and depth to water was measured to find how much free product was in the well.
- Based upon free product thickness, the pump depth was selected within the optimum recovery zone.
- After the system hoses were connected, the 2500ES Electronic Timer was switched to continuous cycle to calculate the time it takes to purge the well of free-phase product. A well was considered purged once gaps of air appeared in the product recovery line.

Treadwell & Rollo, Inc. *Environmental & Geotechnical Consultants*
501 14th Street, 3rd Floor, Oakland, California 94612
Telephone (510) 874-4500 Facsimile (510) 874-4507

Treadwell&Rollo

- The calculated purge time was then used to set the duration of the pumping cycles. After the duration time was set, the number of cycles was based the time required for free product to recover in the well.

- In this study, it took approximately 10 minutes to produce approximately three gallons of free-phase product, which purged the well. Therefore, the timer was set at one cycle (once per 24 hours) for a 10 minute duration.

Pilot Test Results

The first well, TR-4, yielded approximately 7.5 gallons of product over a five day period. The second well, TR-6, yielded approximately 14.5 gallons of product over a three day period. A total of 22 gallons of free-phase product was removed from the wells over an eight day period. Based upon the results of the pilot test, it appears the use of the Xitech ADJ 1000 Smart Skimmer/2500ES Electronic Timer System were effective in removing free-phase product from the on-site wells.

R0378

State Water Resources Control Board

Division of Financial Assistance
1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5714 ♦ FAX (916) 341-5806 ♦ www.swrcb.ca.gov/cwphome/ustcf

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov.

2855 Mandela Property LLC
Faye Beverett
1999 Harrison St
Oakland, CA 94612

November 4, 2003

UNDERGROUND STORAGE TANK CLEANUP FUND (FUND), NOTICE OF PERMIT WAIVER AND ELIGIBILITY DETERMINATION: CLAIM NUMBER 017160 ; FOR SITE 2855 MANDELA PKWY, OAKLAND

Your claim has been accepted for placement on the Priority List in Priority Class "B".

We have completed our initial review. The next step in the claim review process is to conduct a compliance review.

Permit Waiver: Under the amended provisions of Section 25299.57 of the Health and Safety Code (H&SC), the State Board has granted your request for a waiver for the permit requirement as a condition for eligibility to the Fund. It is important to note that when a claimant failed to apply for or obtain the permits required pursuant to Chapter 6.7, Division 20, of the H&SC, by January 1, 1990, and the State Board grants a waiver pursuant to Section 2811(a)(2)(B) of the Underground Storage Tank Cleanup Fund Regulations, the claimant's level of financial responsibility (deductible) is twice the amount otherwise required. In this case, you will be responsible for the first $10,000 of eligible corrective action costs before the Fund coverage begins.

Compliance Review: Staff reviews, verifies, and processes claims based on the priority and rank within a priority class. After the Board adopts the Priority List, your claim will remain on the Priority List until your Priority Class and rank are reached. At that time, staff will conduct an extensive Compliance Review at the local regulatory agency or Regional Water Quality Control Board. During this Compliance Review, staff may request additional information needed to verify eligibility. Once the Compliance Review is completed, staff will determine if the claim is valid or must be rejected. If the claim is valid, a Letter of Commitment will be issued obligating funds toward the cleanup. If staff determine that you have not complied with regulations governing site cleanup, you have not supplied necessary information or documentation, or your claim application contains a material error, the claim will be rejected. In such event, you will be issued a Notice of Intended Removal from the Priority List, informed of the basis for the proposed removal of your claim, and provided an opportunity to correct the condition that is the basis for the proposed removal. Your claim will be barred from further participation in the Fund, if the claim application contains a material error resulting from fraud or intentional or negligent misrepresentation.

Record keeping: During your cleanup project you should keep complete and well organized records of all corrective action activity and payment transactions. If you are eventually issued a Letter of Commitment, you will be required to submit: (1) copies of detailed invoices for all corrective action activity performed (including subcontractor invoices), (2) copies of canceled checks used to pay for work shown on the invoices, (3) copies of technical documents (bids, narrative work description, reports), and (4) evidence that the claimant paid for the work performed (not paid by another party). These documents are necessary for reimbursement and failure to submit them could impact the amount of reimbursement made by the Fund. ***It is not necessary to submit these documents at this time; however, they will definitely be required prior to reimbursement.***

Compliance with Corrective Action Requirements: In order to be reimbursed for your eligible costs of cleanup incurred after December 2, 1991, you must have complied with corrective action requirements of Article 11,

Chapter 16, Division 3, Title 23, California Code of Regulations. Article 11 categorized the corrective action process into ***phases***. In addition, Article 11 requires the responsible party to submit an ***investigative workplan/Corrective Action Plan*** (CAP) before performing any work. This phasing process and the workplan/CAP requirements were intended to:

1. help the responsible party undertake the necessary corrective action in a cost-effective, efficient and timely manner;

2. enable the regulatory agency to review and approve the proposed cost-effective corrective action alternative before any corrective action work was performed; and

3. ensure the Fund will only reimburse the most cost-effective corrective action alternative required by the regulatory agency to achieve the minimum cleanup necessary to protect human health, safety and the environment.

In some limited situations ***interim cleanup*** will be necessary to mitigate a demonstrated immediate hazard to public health, or the environment. Program regulations allow the responsible party to undertake interim remedial action after: (1) notifying the regulatory agency of the proposed action, and; (2) complying with any requirements that the regulatory agency may set. Interim remedial action should only be proposed when necessary to mitigate an immediate demonstrated hazard. ***Implementing interim remedial action does not eliminate the requirement for a CAP and an evaluation of the most cost-effective corrective action alternative.***

Three bids and Cost Preapproval: Only corrective action costs required by the regulatory agency to protect human health, safety and the environment can be claimed for reimbursement. You must comply with all regulatory agency time schedules and requirements and you must obtain three bids for any required corrective action. Unless waived in writing, you are required to obtain preapproval of costs for all future corrective action work. ***If you do not obtain three bids or a waiver of the three bid requirement, reimbursement is not assured and costs may be rejected as ineligible.***

If you have any questions, please contact me at (916) 341-5714.

Sincerely,

Shari Knieriem

Shari Knieriem
Claims Review Unit
Underground Storage Tank Cleanup Fund

cc: Ms. Donna Drogos
Alameda County EHD
1131 Harbor Bay Pkway, 2nd Fl.
Alameda, CA 94502-6577

[redacted]
BARNEY

State Water Resources Control Board

Division of Clean Water Programs
1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5714 • FAX (916) 341-5806 • www.swrcb.ca.gov/cwphome/ustcf

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov.

AUG 12 2002

Page Sp-V, LLC
Faye Beverett
155 Filbert St #250
Oakland, CA 94607

UNDERGROUND STORAGE TANK CLEANUP FUND (FUND), REQUEST FOR FURTHER DOCUMENTATION DURING INITIAL REVIEW: CLAIM NUMBER 017160; FOR SITE ADDRESS: 2855 MANDELA PKWY, OAKLAND

On August 7, 2002, the Fund's Settlement Review Unit, reviewed the Agreement and viewed that the assignment to be acceptable as long as the **previous UST owner/operator** is determined to be eligible. Therefore, the following documents are needed to determine the eligibility of the previous UST owner/operator.

1) The previous UST owner/operator must demonstrate that a permit to own or operate the subject UST was obtained between January 1, 1984 thru January 1, 1990. According to the Site History, the subject UST was removed in 1991. Therefore, the previous owner would have obtained a permit to own or operate and a removal permit to remove the subject USTs. Please provide copies of the above mentioned permits. If a copy of the permit to own or operated cannot be located, the previous UST owner may request a Permit Waiver. (See enclosed).

2) Clarify these two entities: Cypress Property and Wareham Property Group.

3) Please provide the Federal Tax Returns from the previous USTs owner/operator for the last three years and be sure that the enclosed Addendum is completed by the previous UST owner/operator.

4) The subject USTs were removed in 1991, please provide a copy of the first directive that the previous USTs owner/operator received by the local regulator, naming them a responsible party and directing cleanup of the subject site.

5) Please correct page 5 of the claim application.

NOTE: Failure to respond to this request within thirty (30) calendar days from the date of this letter may result in an ineligibility determination of your claim.

If you have any questions, please contact me at (916) 341-5714.

Sincerely,

Shari Knieriem

Shari Knieriem
Claims Review Unit
Underground Storage Tank Cleanup Fund

AUG 15 2002

cc: Mr. Steve Morse
RWQCB, Region 2
1515 Clay Street, Ste. 1400
Oakland, CA 94612

Ms. Donna Drogos
Alameda County EHD
1131 Harbor Bay Pkway, 2nd Fl.
Alameda, CA 94502-6577

2855 Mandela Parkway, LLC

4225 Glen Avenue, #200
Oakland, CA 94611
510-853-1711
fax: 510-658-4620
fbeverett@pagestreet.com

July 2, 2002

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, #250
Alameda, CA 94502

RE: 2855 Mandela Parkway, Oakland
Request for Letter to State UST Fund
Change of Owner Address

Dear Barney:

Thank you for your efforts thus far on our behalf regarding 2855 Mandela Parkway. I would like to request your assistance again to write a letter explaining the County's involvement to date.

I am pleased to say we have been accepted into the State's UST Cleanup Fund. We are in the process of preparing our initial reimbursement request. During Larry Seto's term, there appears to be a lack of correspondence from Alameda County specifically directing the remedial investigation immediately after the discovery of the free-phase product. Such correspondence is beneficial to the Tank Fund staff when reviewing the reimbursement request.

Would you please issue a letter addressed to me at the above address stating that the Alameda County Environmental Health Care Services Agency has been involved with this project since inception, has been kept informed of the progress of the remedial investigation and planning efforts, and has reviewed and approved the interim steps taken to date?

Also, please update my address and phone number in your files to those listed above.

Thank you.

Sincerely,

Faye Beverett

Faye Beverett
Owner

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

June 14, 2002

Page Street Properties c/o
Ms. Faye Beverett
155 Filbert St., #250
Oakland CA 94607

Dear Ms. Beverett:

Subject: Fuel Leak Case No. RO0000378, 2855 Mandela Parkway, Oakland CA 94607

Alameda County Environmental Health, Local Oversight Program (LOP), has received and reviewed the following Treadwell and Rollo reports; June 3, 2002 Free-Phase Product Monitoring Plan and June 10, 2002 Addendum to the 1999 Remedial Investigation Report. We also have considered the items discussed during our June 13, 2002 meeting at the County offices. Our office has the technical comments, which follow.

- In the reports and in our meeting, your consultant has explained why the conventional approaches of soil vapor extraction and groundwater extraction would not be effective at the site. Our office concurs with this decision.
- Our office approves, as interim remediation, the installation of passive product skimming devices within the three wells, TR-4 through TR-6. You may start this immediately. Because of the relative small volume of these wells, they should be emptied frequently until the amount of free product entering the well decreases significantly from the original amount.
- The three perimeter wells, TR-7 through TR-9, should be monitored immediately and quarterly thereafter to verify plume stability.
- It was acknowledged that given the amount of estimated free product and its subsurface location, additional areas of removal should be considered. During our meeting, Treadwell and Rollo proposed to add extraction trenches within the accessible parking lot within the free product plume. Our office agrees with this approach and requests that a work plan be provided with the details of the proposed remediation. Please also include a summary of the alternate remediation approaches considered, ie feasibility study.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Kleesattel, Treadwell and Rollo, Inc., 501 14th St., Third Floor, Oakland, CA 94612

MonitCAP2855Mandela

RO 378
CHAN

State Water Resources Control Board

Division of Clean Water Programs
1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5714 • FAX (916) 341-5806 • www.swrcb.ca.gov/cwphome/ustcf

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
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APR 2 2002

Page Sp-V, LLC
Faye Beverett
155 Filbert St #250
Oakland, CA 94607

UNDERGROUND STORAGE TANK CLEANUP FUND (FUND), REQUEST FOR FURTHER DOCUMENTATION DURING INITIAL REVIEW: CLAIM NUMBER 017160; FOR SITE ADDRESS: 2855 MANDELA PKWY, OAKLAND

After reviewing your claim application to the Cleanup Fund, we find that the following additional information is needed to determine your eligibility for placement on the Priority List:

- Claimants who acquire sites after January 1, 1990, must complete the enclosed Claimant Certification of Compliance with Fund Regulations Section 2811(a)(1)-(2) and 2810.1(c) form.

AND

- A copy of the permit to own or operate the UST from the local implementing agency dated between January 1, 1984 and January 1, 1990 (pursuant to Chapter 6.7 of the Health and Safety Code).

- Claimant is requesting priority class "B" and must complete the enclosed Priority Class B Addendum.

AND

- Claimant must provide employee verification (i.e., Department of Employment Development (DE6) **for the last four quarters** or a declaration letter signed by an officer of the company).

Provide a copy of the first directive that was issued to claimant by the local regulator. Claimant did provide the Notice of Responsibility; however, the directive will establish what corrective action is requested by the local regulator.

Please provide the purchase documents for the subject site. This includes the following: Escrow Instructions, Appraisal Report, Purchase officer, and Final Purchase Agreement.

In order for the Fund to evaluate whether claimant qualifies for Priority Class B, claimant must provide all applicable tax documents. Claimant must provide three years of taxes at the time of application submittal. Claimant has only provided two years. Please submit the tax documents for the year 2002. Along with the submittal of those tax documents, claimant must provide taxes of their partnerships. In this case, the joint claimants must provide all of their partnership tax documents for the last three years at the time of application submittal. The Priority Addendum should incorporate the total gross receipts of claimant and joint claimant.

NOTE: Failure to respond to this request within thirty (30) calendar days from the date of this letter may result in an ineligibility determination of your claim.

If you have any questions, please contact me at (916) 341-5714.

Sincerely,

ORIGINAL SIGNED BY

Shari Knieriem
Claims Review Unit
Underground Storage Tank Cleanup Fund

cc: Mr. Steve Morse
RWQCB, Region 2
1515 Clay Street, Ste. 1400
Oakland, CA 94612

Ms. Donna Drogos
Alameda County EHD
1131 Harbor Bay Pkway, 2nd Fl.
Alameda, CA 94502-6577

INTERNATIONAL TRUCK AND ENGINE CORPORATION
4201 WINFIELD ROAD, P.O. BOX 1488, WARRENVILLE, IL 60555
T 630 753 5000

LAW OFFICES

David A. Piech
Senior Counsel
630 753 3039

Ariu Levi
Contract Project Director
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

December 18, 2001

Re: [redacted]Wareham Property Development 2855 Mandela Pky, Oakland, CA
File No. WH199100506 / ltr2.cyprus.wpd

Dear Mr. Levi:

Please update your address and contact information for International Truck as noted below:

David A. Piech
Senior Counsel
International Truck and Engine Corporation
4201 Winfield Road
Warrenville, Illinois 60555
630-753-3039
630-753-2261fax

If you have any questions, please call me at the number above.

Sincerely,

David A. Piech

cc: Ms. Faye Beverett
Page Street Properties
155 Filbert Street, #250
Oakland, CA 94607

Treadwell&Rollo
Environmental and
Geotechnical Consultants
501 14th Street, 3rd Floor
Oakland, California 94612
Phone: (510) 874-4500
Fax: (510) 874-4507

FAX TRANSMITTAL

Date: Nov. 21, 2001 Send to fax # 510-337-9335

To: Mr. Barney Chan

From: David Kleesattel At Ext: 541

Project name: 2855 Mandela Parkway, Oakland Project number: _____

Number of pages including cover: 3

Notes: Barney - I left you a voicemail regarding this fax. In september, we had initially thought that an Order from the County would be the best procedure to apply to the UST Fund on behalf of the new property owner, Faye Beverett. Because of some issues related to transferring eligibility, we want to explore the option of having a "Notice of Responsibility" issued by the County. Attached is a copy of the NOR issued to the previous owner. We believe that an NOR issued to Faye Beverett will expedite application to the UST Fund. I have also attached a copy of the current property ownership description. Please review this information and call me to discuss.

Thank you, Dave Kleesattel

This document will also be mailed to you: ☐ Yes ☐ No

Should you encounter any difficulties with this fax, please call (510) 874-4500

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

Certified Mail #
03/06/2000

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

Notice of Responsibility

StID#: 3712
WareHam Property Development
2855 Mandela Pkwy
Oakland , CA 94607

SITE

Date First Reported 09/03/1991
Substance: Gasoline
Funding (Federal or State): F
Multiple RPs?: Y

Mr. Robert Boardman
Internation Truck
455 N. City Front Plaza D
Chicago, Il 60611

Responsible Party (RP)
Property Owner

Pursuant to sections 25297.1 and 25297.15 of the Health and Safety Code, you are hereby notified that the above site has been placed in the Local Oversight Program and the individual(s) or entity(ies) shown above, or on the attached list, has(have) been identified as the party(ies) responsible for investigation and cleanup of the above site. Section 25297.15 further requires the primary or active Responsible Party to notify all current record owners of fee title before the local agency considers cleanup or site closure proposals or issues a closure letter. For purposes of implementing section 25297.15, this agency has identified International Truck Formerly International Harvester as the primary or active Responsible Party. It is the responsibility of the primary or active Responsible Party to submit a letter to this agency within 20 calendar days of receipt of this notice which identifies all current record owners of fee title. It is also the responsibility of the primary or active Responsible Party to certify to the local agency that the required notifications have been made at the time a cleanup or site closure proposal is made or before the local agency makes a determination that no further action is required. If property ownership changes in the future, you must notify this local agency within 20 calendar days from when you are informed of the change.

Any action or inaction by this local agency associated with corrective action, including responsible party identification, is subject to petition to the State Water Resources Control Board. Petitions must be filed within 30 days from the date of the action/ inaction. To obtain petition procedures, please FAX your request to the State Water Board at (916) 227-4349 or telephone (916) 227-4408.

Pursuant to section 25299.37(c)(7) of the Health and Safety Code, a responsible party may request the designation of an administering agency when required to conduct corrective action. Please contact Larry Seto, Senior Hazardous Materials Specialis at this office at (510) 567-6700 for further information about the site designation process.

for Ariu Levi, Chief
Contract Project Director

Date: 3-8-00

Please Circle One: Add Delete Change

Reason: Former property owner

cc: Lori Casias, SWRCB
Larry Seto, Senior Hazardous Materials Specialist

Report: Reimb97 5/99

TOTAL P.02
[TX/RX NO 9894] 0002
11/15/01 15:49

age 1

Escrow No. 9810485 -KIO

GRANTEE EXHIBIT

LEIGHTON R. TAYLOR, JR. AND LINDA P. TAYLOR, AS TRUSTEES OF THE RESTATEMENT OF DECLARATION OF TRUST LEIGHTON R. TAYLOR, JR. AND LINDA P. TAYLOR REVOCABLE TRUST CREATED UDT DATED FEBRUARY 11, 1981, AS TO AN UNDIVIDED 93.4 % INTEREST AND PAGE SP-V, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY AS TO AN UNDIVIDED 6.60 % INTEREST, AS TENANTS IN COMMON

Treadwell&Rollo
Environmental and
Geotechnical Consultants
501 14th Street, 3rd Floor
Oakland, California 94612
Phone: (510) 874-4500
Fax: (510) 874-4507

FAX TRANSMITTAL

Date: Nov. 26, 2001 Send to fax # 510-337-9335

To: Mr. Barney Chan

From: David Kleeschulte At Ext: 541

Project name: 2855 Mandela Pkwy, Oakland Project number: _____

Number of pages including cover: 1

Notes: Barney - The "notice of Responsibility" (NOR) should be addressed to "Page Street Properties, LLC" % Ms. Faye Beverett. The "Grantee" information provided to you can be attached to the NOR as an exhibit to define the ownership of the property. There are 3 principals who own the property: Leighton Taylor, Linda Taylor, and Faye Beverett as Page Street Properties. Page Street Properties also manages the property (as well as being part owner). If you have any questions, please call.

Thank you.

Dave Kleeschulte

This document will also be mailed to you: ☐ Yes ☐ No

Should you encounter any difficulties with this fax, please call (510) 874-4500

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

April 4, 2001
StID # 3712

Ms. Faye Beverett
Page Street Properties, LLC
155 Filbert St., Suite 250
Oakland, CA 94607

Re: Remedial Investigation Work Plan, 2855 Mandela Parkway Property, Oakland CA 94607

Dear Ms. Beverett:

Our office has received and reviewed the March 29, 2001 Remedial Investigation Work Plan as prepared by Treadwell & Rollo, your consultant. As you will recall, this work plan is the result of our March 15, 2001 meeting at the County offices and its contents were previously discussed in the meeting. I have spoke with Mr. McGuire and Mr. Kleesattel of Treadwell & Rollo to get further clarification of the proposed work.

The work plan is approved with the following comments:

- Ten soil vapor sampling locations are proposed to evaluate the potential of vapor migration into the enclosed building. Shallow soil vapor samples will be collected from a depth of approximately 2-3' bgs (below ground surface). If possible, you should collect an additional sample at a depth of 5-6' bgs from these borings. If saturated soils are encountered, no samples need be collected. The vapor samples should be analyzed for BTEX and TPH as gasoline. Please include boring logs for these sampling locations.
- Two soil borings will be advanced to approximately 20' bgs within the free-product impacted area. These borings will be continuously logged to determine what the vertical distribution of free product within the affected area might be. Should there be an indication of free product existing in the shallow porous soils, a perched well will be installed to remove the free product. If free product is encountered in either of these borings, the boring should not be advanced to the proposed 20' depth for fear of providing a preferential pathway for vertical migration. In the absence of chemical analysis, the field screening measurements using a PID or UV instrument should be used to identify the presence of free product.
- Three wells, TR-7, TR-8 and TR-9 will be installed at the boundaries of the free product plume. They will be used to verify the limits of the plume, show groundwater concentration stability and verify the groundwater gradient.

As mentioned in our meeting, any proposal to eliminate or reduce the amount of free product removal at the site must have the approval of the Water Board.

You may contact me at (510) 567-6765 if you have any questions or upon scheduling this work.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

✓C: B. Chan, files
Mr. M. McGuire, Treadwell & Rollo, 501 14th St., Third Floor, Oakland, CA 94612
Mr. G. Leong, Soma Corporation, 1412 62nd St., Emeryville, CA 94608
Mr. R. Jacobs, Esq., Howard, Rice, Nemerovski, Falk & Rabkin, Three Embarcadero Center, Seventh Floor, San Francisco, CA 94111-4065
Ms. S. Holland, International Truck and Engine Corp., 455 North Cityfront Plaza Drive, Chicago, IL 60611

Wpap2855Mandela

INTERNATIONAL TRUCK AND ENGINE CORPORATION
455 NORTH CITYFRONT PLAZA DRIVE, CHICAGO, IL 60611
T 312 836 2000
F 312 836 3982

LAW OFFICES

D 312 836 3415

September 25, 2000

Larry Seto
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA, 94502-6577

Dear Mr. Seto,

I am writing in response to your letter dated August 29, 2000 (see attached). International should not be considered a responsible party for clean up at the 2855 Cypress Street property (the site) for the following reasons:

1) International sold the site to Cypress General Partnership (CGP) in 1982, and, since that time nearly 20 years ago, has had no knowledge about how the property and the site's underground storage tanks (USTs) were used. International knows that CGP removed the USTs sometime in 1991. Any contamination found on the site is more likely to have originated from activities that occurred after International no longer owned the property. Contamination due to leaking USTs or supply lines, the UST removal operations, or other property uses between 1982 and the present cannot fairly be attributed to International.

2) International has a full indemnity and defense agreement with CGP for any claims arising out of the existence of the USTs, including any remediation. It would be more expedient for Alameda County to contact CGP directly regarding this matter, since International will tender all remediation claims to CGP.

If you have any questions, please contact me at 312-836-3415.

Sincerely yours,

William Clune

Enclosure

cc: Jeffrey Allen, w/ enclosure

Cypress 199/00306

RECEIVED

SEP 19 2000

LAW OFFICES

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

August 29, 2000

Ms. Sherry Holland
Senior Counsel
International Truck and Engine Corporation
455 North Cityfront Plaza Drive
Chicago, IL 60611
STID 3712

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Holland:

A letter dated July 6, 2000 from this office was sent to you informing you that our records indicates that International Harvester was the only user of the underground storage tanks removed from the site in 1991. I also indicated in the letter that International Harvester would be viewed as a responsible party for site clean up unless new information is provided to this office. As of this date, I have not received a response to my letter. Please inform this office within ten (10) days of the receipt of this letter whether you agree the information in the site file for the above address is correct.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Richard Jacobs, Howard Rice, Nemerovski, Falk & Rabkin, Three Embarcadero Center, 7th Floor, San Francisco, CA 94111
Mike O'Connor, Esq. Alameda County District Attorney's Office, Consumer and Environmental Protection, 7677 Oakport, Suite 400, Oakland, CA 94612
Faye Beverett, Page Street Properties, LLC 155 Filbert Street #250, Oakland, CA 94607
Leroy Griffin, City of Oakland Fire Services, 1605 Martin Luther King, Oakland, CA 94612
Files

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

July 6, 2000

Ms. Sherry Holland
Senior Counsel
International Truck and Engine Corporation
455 North Cityfront Plaza Drive
Chicago, IL 60611
STID 3712

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Holland:

I have received a copy of your May 9, 2000 letter to Richard Jacobs regarding the subject property. In that letter you stated that International is unwilling to participate in further remediation at the site.

In your letter dated May 9, 2000 you stated International Harvester, a predecessor to International Truck and Engine Corporation, owned the property from 1975 to 1982. In fact, the chain of title indicates International Harvester Company purchased the property in 1939. The building plans, done for International Harvester are dated 1941.

This Agency is charged with identifying Responsible Parties and remediating subsurface contamination. The available information indicates that International Harvester was the only user of the tanks removed from the site in 1991. Therefore, this Agency and the State of California will look to International Harvester as a Responsible Party, unless International Harvester can provide new information. The fact that you may have a private agreement with Cypress Properties does not alter or lessen your responsibility as a Responsible Party as defined in the Underground Storage Tank (UST) regulations of the State of California.

I have consulted with Mike O'Connor, Deputy District Attorney in the Consumer and Environmental Protection Division of the Alameda County District Attorney's Office regarding this matter. Mr. O'Connor agrees that the current facts indicate that International Harvester is a responsible party and any private agreement it has does not affect its obligation to this Agency or the State of California. In addition, he concurs with this office that the volume of free product is significant and warrants immediate attention.

Please be advised that the State of California has a Petroleum Underground Storage Tank Cleanup Fund (the "Fund). The Fund covers reimbursement claims for corrective action cost paid or incurred for cleanup work, including preliminary site assessment, soil and water investigation, corrective action implementation and verification monitoring after cleanup is completed. The maximum reimbursement per occurrence ranges from $500,000 to $1 million, depending upon the site usage, and the deductible ranges from $0 to $10,000 depending upon financial need.

In order to seek reimbursement from the Fund, the claimant must be or have been the owner or operator of the UST, which is subject to the claim, and must have been in compliance with applicable permit requirements to own or operate an UST. Since the UST was removed from the site in 1991, the current property owner, 2855 Mandela Property who purchased the site in 1998, does not qualify as a claimant since it neither owned nor operated the UST. However, International Harvester may qualify for reimbursement from the Fund for its expenses of cleanup.

For your information, I have enclosed a manual regarding the Fund.

Please contact me at your earliest convenience to discuss your anticipated role in the investigation and remediation of the site.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Enclosure(s) (1) A Guide to California's Petroleum Underground Storage Tank Cleanup Fund

Cc: Richard Jacobs, Howard Rice, Nemerovski, Falk & Rabkin, Three Embarcadero Center, 7th Floor, San Francisco, CA 94111
Mike O'Connor, Esq. Alameda County District Attorney's Office, Consumer and Environmental Protection, 7677 Oakport, Suite 400, Oakland, CA 94612
Faye Beverett, Page Street Properties, LLC 155 Filbert Street #250, Oakland, CA 94607
Leroy Griffin, City of Oakland Fire Services, 1605 Martin Luther King, Oakland, CA 94612
Files

2855 Mandela Property

2855 Filbert Street, #250
Oakland, CA 94607
Ph: (510) 302-0130
FAX: (510) 302-0135
fbeverett@pagestreet.com

June 19, 2000

Mr. Larry Seto
Environmental Health Services
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite #250
Alameda, CA 94502

RE: Probable Tank Usage at 2855 Mandela Parkway

Dear Larry:

This letter documents our discussion regarding the probable user of the tanks that were removed from Mandela Parkway in 1991.

The current owner of 2855 Mandela Parkway, 2855 Mandela Property, believes that International Harvester was most likely the only user of the tanks that were removed in 1991 due to the information in two Harding Lawson reports. This information appears to indicate that the owner after International Harvester, Cypress Property, had no tenants who used the tanks and had no records regarding the tank.

From the September 25, 1990 Harding Lawson Phase I Preliminary Hazardous Materials Site Assessment:

- Page 7: "Space 9, approximately 9,200 square feet, is vacant. An underground storage tank (UST) was observed inside near the entrance. Ms. Makaruk [an employee of Wareham Property Group, a property management company owned by Rich Robbins who is a part owner of Cypress Property] believed the tank contained gasoline. She stated that the tank had not been used since Wareham purchased the property in 1983. "

From the August 13, 1991 Harding Lawson Underground Storage Tank Removal Report:

- Page 1 "During the course of the [Preliminary Hazardous Material Site Assessment "PSA"] investigation, a vent line was observed indicating that a UST may be present at the site. No records regarding the history, age and integrity testing of the UST are currently available."

Attached please find copies of the above cited pages.

The above information was confirmed to me verbally by Rich Robbins and Dan Norse of Cypress Property during the due diligence phase of 2855 Mandela Property's acquisition of the site in 1998.

Please contact me if you need more information.

Thank you.

Faye Beverett

Faye Beverett
Owner

cc: Richard Jacobs

Page Street Properties, LLC
155 Filbert Street, #250
Oakland, CA 94607
Ph: (510) 302-0130
FAX: (510) 302-0135

6.12.00

Faye Beverett, Principal
e-mail: fbeverett@pagestreet.com

Larry -

attached are

1) copy of Plan for 2855 Mandela done for IH dated 4-17-41

2) Guide to California's UST Cleanup Fund Jtd OCT 1997 reprinted 8/98. There may be a more recent version.

Faye

oil per month to operate machinery. A supplier picks up empty cylinders and drums and recycles them. The three cylinders of liquified petroleum were stored properly and there was no evidence of leakage. A 50-gallon drum of motor oil was lying on its side atop two unstable wooden pallets and was leaking onto the floor (Photo 1). The drum is stored in violation of fire marshall codes. There was no evidence of the heavy staining which was observed in the 1989 aerial photograph.

Space 9, approximately 9,200 square feet, is vacant. An underground storage tank (UST) was observed inside near the entrance. Ms. Makaruk believed the tank contained gasoline. She stated that the tank had not been used since Wareham purchased the property in 1983. The tank is not registered and has not been inspected by any local regulatory agency or fire department. Building records did not reveal any information about the underground tank.

Joinery Structures, a woodworking company, currently occupies Space 10, approximately 5,400 square feet. Several household- and industrial-type paints, thinners, oils, and wood stains were observed on a shelf in the rear of the shop. The containers were in poor condition and the materials have been allowed to leak and contact other containers. Some of the containers were not labeled or could not be identified (Photograph 2).

In addition to the suspected asbestos-containing material in Space 1, there are several cast iron fire doors in the building which may also contain asbestos in the cores of the doors. No other hazardous materials or wastes were observed in vacant Spaces 1A, 2, 3, 6, 7, 11, and 12.

PAGE STREET PROPERTIES, LLC
155 Filbert Street, #250
Oakland, CA 94607
phone: (510) 302-0130
fax: (510) 302-0135
fbeverett@pagestreet.com

FAX TRANSMISSION

DATE: 6/19/00 **TIME:** 4:35 pm

TO: Larry Seto 510.337.9335

Rich Jacobs 415.217.5910

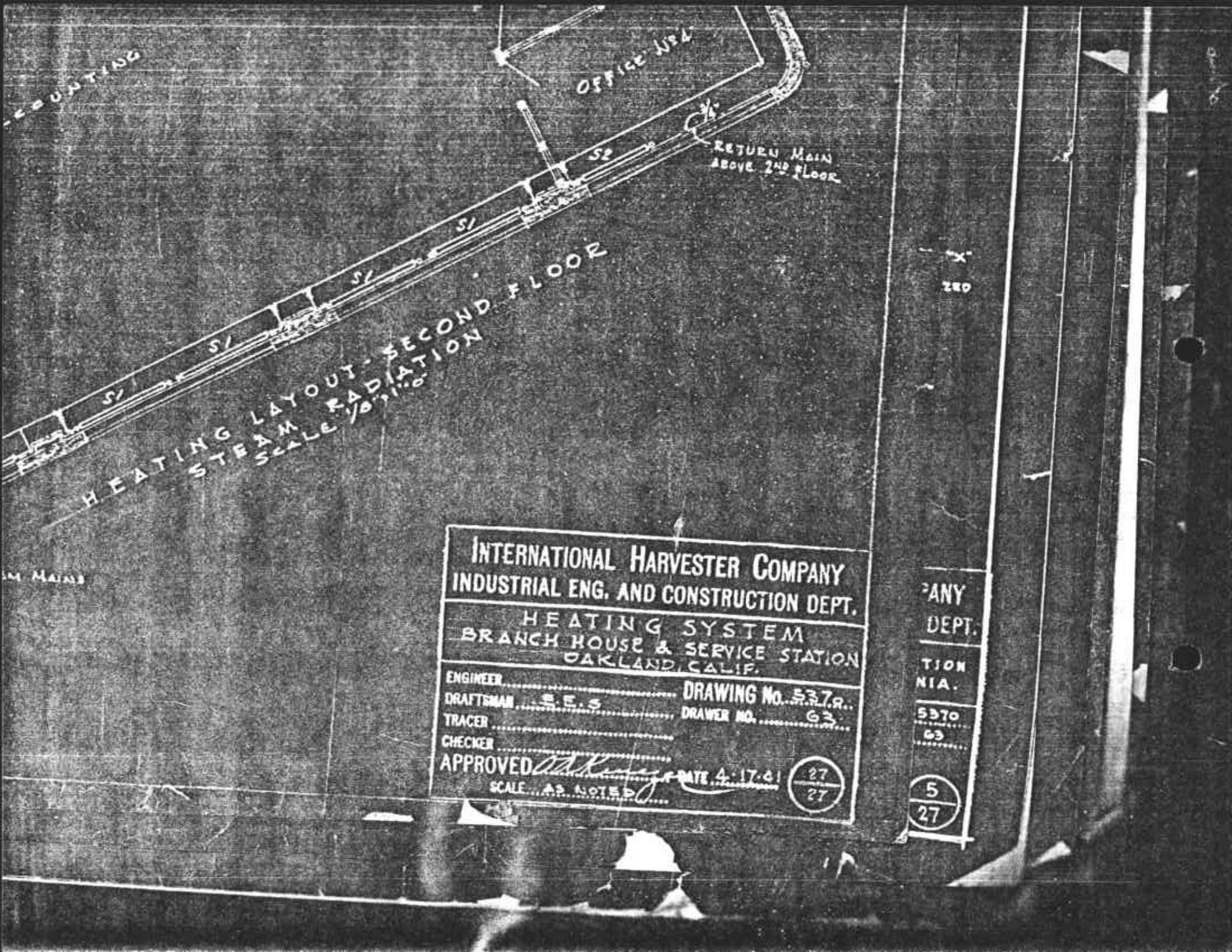
FROM: Faye Beverett

NUMBER OF PAGES INCLUDING COVER: 4

ORIGINALS WILL FOLLOW: No____ Yes X Fed. Exp.____ U.S. Mail X to Larry

MESSAGE:

1H letter


OFFICE AREA
RETURN MAIN ABOVE 2ND FLOOR
S1
S2
HEATING LAYOUT - SECOND FLOOR
STEAM RADIATION
SCALE 1/8" = 1'-0"
INTERNATIONAL HARVESTER COMPANY
INDUSTRIAL ENG. AND CONSTRUCTION DEPT.
HEATING SYSTEM
BRANCH HOUSE & SERVICE STATION
OAKLAND, CALIF.
ENGINEER
DRAFTSMAN E.E.S
DRAWING NO. 5337.R
DRAWER NO. G3
TRACER
CHECKER
APPROVED
DATE 4-17-41
SCALE AS NOTED
27/27
5/27

INTERNATIONAL TRUCK AND ENGINE CORPORATION
455 NORTH CITYFRONT PLAZA DRIVE, CHICAGO, IL 60611
T 312 836 2000
F 312 836 3982

LAW OFFICES

Sherry L. Holland
312 836-3182
Sherry.Holland@Navistar.com

May 10, 2000

Mr. Jeffrey Allen, Esquire
Graves, Allen, Cornelius and Celestre
2101 Webster Street - Suite 1600
Oakland, California 94612

Re: Your client Richard Robbins a/k/a Cypress General Partnership
2855 Cypress Street, Oakland California Cleanup

Dear Mr. Allen:

In 1992, you corresponded with Navistar International Transportation Corporation (formerly International Harvester, "IH"), now known as International Truck and Engine Corporation ("International"), on behalf of your client, Mr. Richard Robbins. The corpus of the correspondence was the above-mentioned piece of property at Cypress Street which International Harvester sold to Cypress General Partnership in 1982. At the time in 1992, your client was embarking on a tank removal and cleanup of the soils in the area of the UST's.

In 1992, your client made a demand of Navistar to pay for the cleanup. Navistar contributed to the cleanup without admitting liability for the issue. In return, your client gave Navistar a complete release and indemnity against future issues arising out of or pertaining to the UST removal and subsequent cleanup.

The Alameda County Health Service and the current owner of the property, Wareham Properties, have made a demand on International to participate in another cleanup pertaining to the same UST's and the same remedial issues which were the subject of the release and indemnity of your client to International in 1992.

International hereby tenders the demand for contribution to remedial actions resulting from contamination to media from the UST leakage on 2855 Cypress Street, renamed 2855 Mandela Parkway, to your client, Richard Robbins, dba Cypress General Partnership, and exerts its right for indemnity under the same document. I attach the subject release and indemnity for your information.

Sincerely,

Sherry L. Holland

Sherry L. Holland
Senior Counsel

cc: D. Piech
Mr. Richard Jacobs, Esq.
Howard, Rice, Nemerovski, Falk & Rabkin
3 Embarcadero Center, 7th Floor
San Francisco, CA 94111-4065

INTERNATIONAL TRUCK AND ENGINE CORPORATION
455 NORTH CITYFRONT PLAZA DRIVE, CHICAGO, IL 60611
T 312 836 2000
F 312 836 3982

LAW OFFICES

Sherry L. Holland
312 836-3182
Sherry.Holland@Navistar.com

May 9, 2000

Richard C. Jacobs, Esq.
Howard, Rice, Nemerovski,
Falk & Rabkin
Three Embarcadero Center
Seventh Floor
San Francisco, CA 94111-4065

Re: 2855 Mandela Parkway (f/k/a Cypress Street)
Oakland, CA 94607

Dear Mr. Jacobs:

I am writing to you in response to my letter to you of April 19, 2000. I indicated in that letter that I would research the archives which International Truck and Engine Corporation, "International", formerly known as International Harvester, "IH", has on the sale of the property which is in question here, formerly known as 2855 Cypress Street.

My research has brought to light the fact that International Harvester owned the property from 1975 to 1982, at which time it was a branch of the company until it was sold in 1982 to Cypress Property, a Limited Partnership, whose General Partner was Richard K. Robbins. IH leased back about 10,000 square feet of warehouse space to store parts until 1987. During that time, some of the property was subleased by IH to Edgewater International Trucking. Similarly, Cypress had multiple industrial tenants in the building after 1982.

In 1991, nine years after IH sold the property to Cypress Properties, which changed its name to Wareham Properties, Wareham sought to refinance the property. They had a Preliminary Site Investigation done by Harding Lawson Associates that showed the presence of two UST's. Wareham sought out IH and demanded payment in full of the charges which they incurred in the removal of the tanks, soil removal and investigation costs. IH, although disagreeing that they retained ownership of the UST's after nine years and a sale document in which

Cypress took the property "as is," participated in the removal by paying one half of the costs.

In return for IH's monetary participation in the removal costs, Cypress executed a release on behalf of IH which releases and discharges IH from any liability regarding anything pertaining to the UST's. I enclose that release for your reference.

In addition, HLA's Preliminary Site Investigation shows TPH and GOC contamination from other surrounding industrial sites up gradient to the Cypress Street property. Other tenants of that property were in the businesses which used petroleum products. It is unclear from the period of 1982 until 1991 when a site investigation was mandated by Cypress's lenders, just what kind of use or management Cypress made of the tanks. In 1985 and 1986, federal and state environmental regulations called for the removal of all UST's not in compliance with the new regulations. Cypress made no attempt to manage those UST's under the law.

In view of the release given to International by Cypress Properties, International is unwilling to participate in further remediation at the Cypress Street site which has known multiple industrial tenants and owners for over eighteen years since IH sold the property.

Sincerely,

Sherry L. Holland

Sherry L. Holland
Senior Counsel

cc: David Piech
Larry Seto and Ariu Levi
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway - Suite 250
Alameda, CA 94502-6577

INTERNATIONAL TRUCK AND ENGINE CORPORATION
455 NORTH CITYFRONT PLAZA DRIVE, CHICAGO, IL 60611
T 312 836 2000
F 312 836 3982

LAW OFFICES

Sherry L. Holland
312 836-3182
Sherry.Holland@Navistar.com

May 9, 2000

Richard C. Jacobs, Esq.
Howard, Rice, Nemerovski,
Falk & Rabkin
Three Embarcadero Center
Seventh Floor
San Francisco, CA 94111-4065

Re: 2855 Mandela Parkway (f/k/a Cypress Street)
Oakland, CA 94607

Dear Mr. Jacobs:

I am writing to you in response to my letter to you of April 19, 2000. I indicated in that letter that I would research the archives which International Truck and Engine Corporation, "International", formerly known as International Harvester, "IH", has on the sale of the property which is in question here, formerly known as 2855 Cypress Street.

My research has brought to light the fact that International Harvester owned the property from 1975 to 1982, at which time it was a branch of the company until it was sold in 1982 to Cypress Property, a Limited Partnership, whose General Partner was Richard K. Robbins. IH leased back about 10,000 square feet of warehouse space to store parts until 1987. During that time, some of the property was subleased by IH to Edgewater International Trucking. Similarly, Cypress had multiple industrial tenants in the building after 1982.

In 1991, nine years after IH sold the property to Cypress Properties, which changed its name to Wareham Properties, Wareham sought to refinance the property. They had a Preliminary Site Investigation done by Harding Lawson Associates that showed the presence of two UST's. Wareham sought out IH and demanded payment in full of the charges which they incurred in the removal of the tanks, soil removal and investigation costs. IH, although disagreeing that they retained ownership of the UST's after nine years and a sale document in which

Cypress took the property "as is," participated in the removal by paying one half of the costs.

In return for IH's monetary participation in the removal costs, Cypress executed a release on behalf of IH which releases and discharges IH from any liability regarding anything pertaining to the UST's. I enclose that release for your reference.

In addition, HLA's Preliminary Site Investigation shows TPH and GOC contamination from other surrounding industrial sites up gradient to the Cypress Street property. Other tenants of that property were in the businesses which used petroleum products. It is unclear from the period of 1982 until 1991 when a site investigation was mandated by Cypress's lenders, just what kind of use or management Cypress made of the tanks. In 1985 and 1986, federal and state environmental regulations called for the removal of all UST's not in compliance with the new regulations. Cypress made no attempt to manage those UST's under the law.

In view of the release given to International by Cypress Properties, International is unwilling to participate in further remediation at the Cypress Street site which has known multiple industrial tenants and owners for over eighteen years since IH sold the property.

Sincerely,

Sherry L. Holland

Sherry L. Holland
Senior Counsel

cc: David Piech
Larry Seto and Ariu Levi
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway - Suite 250
Alameda, CA 94502-6577

INTERNATIONAL TRUCK AND ENGINE CORPORATION
455 NORTH CITYFRONT PLAZA DRIVE, CHICAGO, IL 60611
T 312 836 2000
F 312 836 3982

LAW OFFICES

Sherry L. Holland
(312) 836-3182
Sherry.Holland@Navistar.com

April 20, 2000

Ariu Levi, Chief
Contract Project Director
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: 2855 Cypress St., Oakland, CA 94607 Notice of Responsibility

Dear Mr. Ariu:

International Truck and Engine Corporation (formerly Navistar International Transportation Corporation and International Harvester), "International", is in receipt this date of your letter dated March 8, 2000. In that letter you have notified International that your agency has identified International as a responsible Party at the site referred to as 2855 Cypress Street Oakland, CA.

Per another letter dated March 7, 2000 received this date by International from Larry Seto, Sr. Hazardous Materials Specialist of your office, alleged gasoline contamination is reported to be found on the site. This contamination is alleged to be attributed to International's purported ownership of the property some time between 1941 and 1991.

Some confusion is generated by Mr. Seto's letter in that he refers to the site as 2855 Mandela Parkway. International has never owned any property at such a location. However, International did own property at 2855 Cypress Street, Oakland, CA at one time.

Please be advised that International is researching the facts concerning the site and will be providing a more formal response to the notifications by your office when all the facts have been gathered. I called Mr. Seto on April 6, but got a voice mail recording that he will be out until April 11. The forwarding number which he gives in his message was no longer in service. I will be contacting Mr. Seto upon his return on April 11th to ascertain what records, if any that he might share with International concerning the site.

By indicating receipt of the notice of responsibility, International does not admit nor deny any of the contained allegations and reserves any and all defenses available to International upon full investigation of the facts at issue.

Sincerely,

Sherry L. Holland
Senior Counsel

SLH/dah

cc: David Piech

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 23, 2000

Ms. Faye Beverett 302-0130
155 Filbert Street
Suite 250
Oakland, CA 94607
STID 3712

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Beverett:

As you requested, enclosed is a copy of the certified letter that was sent to International Truck last week. The previous letter was not mailed certified. At this time, this office has not received the signed receipt.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Files

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

March 7, 2000

International Truck (formerly International Harvester)
Mr. Robert Boardman
Senior VP & General Counsel
455 N. City Front Plaza Drive
Chicago, IL 60611
STID 3712

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Mr. (Alido:) ?

Subsurface investigations conducted at the above site by the current property owner have detected a substantial subsurface release of gasoline, resulting in the presence of free product under the site and associated concentrations in soil and groundwater.

The only conclusively identified potential source are underground storage tanks (USTs) that were removed from the site in 1991 by a former property owner. At the time of their removal, they were reported to still contain product and to be severely deteriorated with numerous holes.

Research of the site ownership history identified International Harvester Company (IH) as the property owner from approximately 1941 to 1982. Records indicate that IH operated the property as a truck repair and sales facility until at least 1970 (the last date of Sanborn Map coverage for the property) and possibly as late as 1983. An IH building design drawing identifies a pump and pump island, an indication that one or more underground storage tanks were in the ground during the time IH occupied the site. Information by subsequent property owners indicates that no other operations at the site used underground tanks.

To summarize the investigation, two USTs a waste oil tank and a 350-gallon gasoline tank were discovered and removed in 1991. The UST excavations were backfilled. In 1998, a Phase II subsurface investigation was the first to include groundwater grab samples, and the first to encounter free product. Subsequent investigations concluded the free product occupies approximately 15,000 square feet extending under the building and adjacent outdoor areas as far as about the middle of Willow Street. The free product is gasoline containing organic lead without MTBE. The abandoned gasoline UST located across Willow Street does not appear to be the source of the on-site free product.

State Water Resources Control Board, California Environmental Protection Agency regulations define "Responsible Party" for purpose of underground storage tank corrective action requirements as one of the following:

(1) Any person who owns or operates an underground storage tank used for the storage of any hazardous substance;
(2) In the case of any underground storage tank no longer in use, any person who owned or operated the underground storage tank immediately before the discontinuation of is use;
(3) Any owner of property where an unauthorized release of a hazardous substance from an underground storage tank has occurred; and
(4) Any person who had or has control over an underground storage tank at the time of or following an unauthorized release of a hazardous substance.

In addition, under federal law (42 USC Section 6991(3)(B), the person who owned a tank which was not used after November 8, 1984 immediately before the discontinuance of its use may be named a responsible party, even though substantial evidence does not exist to show that the leak occurred before discontinuance of use.

Based on the information currently available to this office, International Harvester Co. is the last operator, and most likely the only operator of the 350-gallon gasoline UST.

International Harvester Co. and 2855 Mandela Property are considered jointly and severally responsible for site cleanup. The enclosed Notice of Responsibility identifies your role as a responsible party. 2855 Mandela Property is a responsible party only because they are the current property owner.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Mr. Ferdinand Alido, International Truck, 455 N. City Front Plaza Drive, Chicago, IL 60611
Faye Beverett, 2855 Mandela Property c/o Page Street Properties, Three Embarcadero, San Francisco, CA 94111
Michael McGuire, Treadwell & Rollo, 2 Theatre Square, Suite 216, Orinda, CA 94563
Glenn Leong, Soma Corporation, 1412 62nd Street, Emeryville, CA 94608-2036
Leroy Griffin, City of Oakland-Fire, 505 14th Street, Oakland, CA 94612
Files

199100506

MAJ

(M)

Law Offices Of

HOWARD RICE NEMEROVSKI CANADY FALK & RABKIN

A Professional Corporation

THREE EMBARCADERO CENTER, 7TH FLR
SAN FRANCISCO, CALIFORNIA 94111-4065
TELEPHONE 415/434-1600
FACSIMILE 415/217-5910
www.howardrice.com

BY FEDERAL EXPRESS

RECEIVED
MAR 0 1 2000
LAW DEPT.

Robert Boardman, Esq.
Senior Vice President and General Counsel
International Truck
455 N. City Front Plaza Drive
Chicago, Illinois 60611

Re: 2855 Mandela Parkway, Oakland, CA 94607

Dear Mr. Boardman:

We represent the current owner of the property referenced above.

By a notice dated March 6 and a letter dated March 7, 2000, the Alameda County Health Care Services Agency notified International Truck , as successor to International Harvester Company, that it was responsible for cleanup of the contamination identified at the property. Copies of that notice and letter are enclosed. This determination was based on work performed and reports prepared by the environmental consultant for our client.

We of course are interested in having International Truck move expeditiously to confirm the contamination and International Truck's responsibility, so that it can begin appropriate cleanup and our client can move forward with plans for use of the property that have been significantly delayed by discovery of the contamination. We do not want development of the property delayed any more than it has already been. To that end, we would be pleased to meet with representatives of International Truck and its consultants to provide the information that we have developed.

Robert Boardman, Esq.
International Truck
March 29, 2000

RE: 2855 Mandela Parkway, Oakland, CA 94607

Please feel free to contact me at the above telephone number, or to contact Michael McGuire of Treadwell & Rollo, our consultant, at 510-874-4500, ext. 527, to arrange such a meeting.

Yours very truly,

RICHARD C. JACOBS

cc: Ferdinand Alido,
International Truck

2855 Mandela Property
Michael McGuire

WD 032900/1-1315001/826147/v1

Seto, Lawrence, Public Health, EH Ke 378

From: Michael McGuire[SMTP:mpmcguire@treadwellrollo.com]
Sent: Tuesday, February 15, 2000 7:07 PM
To: Larry Seto
Subject: Fw: 2855 Mandela

Larry: here are the addresses for International Harvester (now called Navistar) Environmental Dept. and Legal Dept. I'll also fax this to you.

Michael P. McGuire, P.E.
Treadwell & Rollo, Inc.
2 Theatre Square, Suite 216
Orinda, CA 94563
phone 925.253.2683
email: mpmcguire@treadwellrollo.com

-----Original Message-----
From: Michael McGuire < mpmcguire@treadwellrollo.com>
To: Larry Seto < lseto@co.alameda.ca.us>
Cc: Faye Beverett < fbeverett@pagestreet.com>
Date: Thursday, February 10, 2000 5:06 PM
Subject: 2855 Mandela

Larry: as you requested, here is the address for International Harvester. IH is now known as Navistar International.

Navistar International
Environmental Affairs
Mr. Ferdinand Alido
455 N. Cityfront Plaza Drive
Chicago, IL 60611
Main tel no. 312-836-2000
toll-free 800-448-7825
Main fax no. 312-836-3982

Robert Boardman
Senior VP & General Counsel
Admin. Assistant: 312-836-2252

Michael P. McGuire, P.E.
Treadwell & Rollo, Inc.
2 Theatre Square, Suite 216
Orinda, CA 94563
phone 925.253.2683
email: mpmcguire@treadwellrollo.com

PAGE STREET PROPERTIES, LLC
Three Embarcadero Center, #1150
San Francisco, CA 94111
phone: (415) 398-2266
fax: (415) 398-2272
fbeverett@pagestreet.com

FAX TRANSMISSION

DATE: 2/11/00 **TIME:** 8:50 AM

TO:
Larry Seto 510 337-9335
Rich Jacobs 217-5910

FROM: Faye Beverett

NUMBER OF PAGES INCLUDING COVER: 2

ORIGINALS WILL FOLLOW: No X Yes ____ Fed. Exp. ____ U.S. Mail ____

MESSAGE:
Int'l Harvester address.
IH is now called Navistar.

Thanks

Faye

R0378

Faye Beverett

From: Michael McGuire [mpmcguire@treadwellrollo.com]
Sent: Thursday, February 10, 2000 5:07 PM
To: Larry Seto
Cc: Faye Beverett
Subject: 2855 Mandela

Larry: as you requested, here is the address for International Harvester. IH is now known as International. International Truck

Navistar International
Environmental Affairs
Mr. Ferdinand Alido
455 N. Cityfront Plaza Drive
Chicago, IL 60611
Main tel no. 312-836-2000
toll-free 800-448-7825
Main fax no. 312-836-3982

Michael P. McGuire, P.E.
Treadwell & Rollo, Inc.
2 Theatre Square, Suite 216
Orinda, CA 94563
phone 925.253.2683
email: mpmcguire@treadwellrollo.com

Seto, Lawrence, Public Health, EH

From: Carrie Austin[SMTP:cmaustin@treadwellrollo.com]
Sent: Thursday, January 27, 2000 12:52 PM
To: lseto@co.alameda.ca.us
Cc: Michael McGuire; Dawn York
Subject: Errata: Title of Figure 8, 2855 Mandela Parkway

Dear Larry,
Treadwell & Rollo regrets to inform you of a correction to the January 2000 report, *1999 Site Investigation and Remediation Activities.* Namely, the title of Figure 8 should read "Groundwater Elevation Contour Map, 12 May 1999", not 4 October.

Please note this on your copies of the report (it is probably most convenient to just write in this small correction, since the report is comb bound). If, however, you would like a replacement figure, we can provide it.

We apologize for any confusion this may have caused.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9432

November 12, 1999

Ms. Faye Beverett, Property Owner
Page Street Properties, LLC
Three Embarcadero Center, Suite 1150
San Francisco, CA 94111
STID 3712

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Beverett:

I have reviewed your Workplan for Floating Product Plume Delineation dated November 10, 1999 that was prepared by Treadwell/Rollo. It is acceptable.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Carrie Austin, Treadwell & Rollo, 2 Theatre Square, Suite 216, Orinda, CA 94563
Michael McGuire, Treadwell & Rollo, 2 Theatre Square, Suite 216, Orinda, CA 94563
Glenn Leong, Soma Corporation, 1260B 45th Street, Emeryville, CA 94608
Leroy Griffin, City of Oakland-Fire, 505 14th Street, Oakland, CA 94612
Files

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

July 12, 1999

Ms. Carrie Austin
Treadwell & Rollo
2 Theatre Square, Suite 216
Orinda, CA 94563

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Austin:

As per our telephone conversation today, the free product extracted from the groundwater may not be classified as a hazardous waste if all of the following conditions are met:

1) A laboratory report from a certified laboratory identifies the compounds in the floating product
2) A copy of this laboratory report in #1 above is given to the disposal/energy facility for review. The disposal/energy facility must put in writing that they have reviewed the analytical report, and can use the floating product extracted from the ground as an energy source.
3) Verification that the disposal facility is licensed to perform their activities at their site

If you have any questions, please contact me at (510)567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Michael McGuire, Treadwell & Rollo, 2 Theatre Square, Suite 216, Orinda, CA
Faye Beverett, Page Street Properties, Three Embarcadero Center, Suite 1150, San Francisco, CA 94111
Hernan Gomez, City of Oakland Haz Mat., 505-14th Street, Oakland, CA 94612
Files

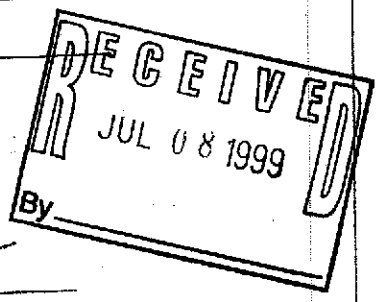
PAGE STREET PROPERTIES, LLC
Three Embarcadero Center, #1150
San Francisco, CA 94111

FAX TRANSMISSION

DATE: 7/8/99 TIME: 10:30am

TO: Barbara Coleman-ALI

(510) 337-9335



FROM: Mariko Gutierrez
phone: (415) 398-2271
fax: (415) 398-2279
e-mail: Pagest2@aol.com

NUMBER OF PAGES INCLUDING COVER: 2

ORIGINALS WILL FOLLOW: No ✓ Yes ____ Fed. Exp. ____ U.S. Mail ____

MESSAGE:

2855 Mandela Property

Three Embarcadero Center, Suite 1150
San Francisco, CA 94111
Ph: (415) 398-2266
FAX: (415) 398-2272
fbeverett@pagestreet.com

July 8, 1999

Ms. Earlene Coleman-Ali
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: 2855 Mandela Parkway, Oakland

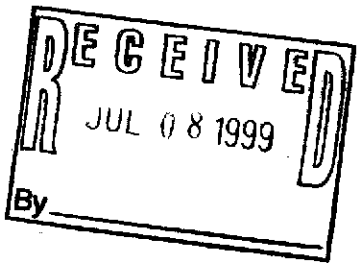
Dear Earlene:

We are presently working on a remediation plan for clean up at the above referenced property. Through Larry Seto of your office, we have recently learned the County holds a file for this property. I would like to request to review the file. Please let me know if this is possible. I can be reach at (415) 398-2271. Thank you for your assistance.

Regards,

Mariko

Mariko Gutierrez
Project Manager



ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

June 15, 1999

Ms. Faye Beverett, Property Owner
Page Street Properties, LLC
Three Embarcadero Center, Suite 1150
San Francisco, CA 94111

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Beverett:

I have reviewed your Workplan for Phase I Remediation and Additional Subsurface Investigation dated June 15, 1999 that was prepared by Treadwell & Rollo. It is acceptable.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Michael McGuire, Treadwell & Rollo, 2 Theatre Square, Suite 216, Orinda, CA 94563
Glenn Leong, Soma Corporation, 1260B 45th Street, Emeryville, CA 94608
Leroy Griffin, City of Oakland-Fire, 505-14th Street, Oakland, CA 94612
Files

6-9-99

They will submit a workplan to install 3-4" monitoring wells, and a remediation method to remove groundwater. At this time, it does not appear the contamination is coming off site from their neighbor. Present at the meeting were

Mike Mc Guire, Treadwell + Rollo
Glenn Leong, Soma Corp.
Faye Bewett, Property Owner
Marilco Gutierrez, Page St. Prop.

7-6-99 Met with the following persons concerning the soil gas survey results:

Faye Bewett
Mike Mc Guire
Glenn Leong
Madhulla Logan

We discussed the soil gas survey results obtained by ATEC and CERES summarized in the letter dated 7-6-99 from Treadwell + Rollo. We compared the results with the Draft Commercial receptors for concentration of BTEX in vapor at 5' below ground surface. It was agreed that additional soil vapor samples will be taken inside the bubbler on the side of the loading dock.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

April 19, 1999

Ms. Faye Beverett, Property Owner
Page Street Properties, LLC
Three Embarcadero Center, Suite 1150
San Francisco, CA 94111

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Beverett:

I have reviewed your Workplan for Source Investigation of Free Product dated April 14, 1999, prepared by Treadwell & Rollo. It is acceptable with the condition that soil samples are collected every 5 feet from each boring, and submitted to the analytical laboratory. The samples can be put on hold for future use if necessary.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Michael McGuire, Treadwell & Rollo, 2 Theatre Square, Suite 216, Orinda, CA 94563
Glenn Leong, Soma Corporation, 1260B 45th Street, Emeryville, CA 94608
Leroy Griffin, 505-14th Street, 7th Floor, Oakland, CA 94612
Files

2855 Mandela Property

Three Embarcadero Center, Suite 1150
San Francisco, CA 94111
Ph: (415) 398-2266
FAX: (415) 398-2272
Pagestr@aol.com

March 23, 1999

via overnight delivery

Ms. Beverly Wirth
Successor Trustee of the Marjorie G. Hubbel Trust
9 Westminster Place
Walnut Creek, CA 94595

RE: 2607 Mandela Parkway

Dear Ms. Wirth:

I am one of the property owners of 2855 Mandela Parkway, the building across Willow Street from 2607 Mandela Parkway, the building formerly owned by you. On March 12, 1999, the Alameda County Health Care Services Agency sent you a letter directing us to work together to initiate a subsurface investigation as it appears the contamination under 2855 Mandela may be migrating from 2607 Mandela.

If the contamination source is not 2607 Mandela, it could be an "area-wide" problem which means individual property owners may not have cleanup responsibility. We need to perform subsurface testing on and around 2607 Mandela in order to gain more knowledge.

You have indicated to the County that you have limited funds. We are willing to pay for the "area-wide" portion of the testing and can discuss an equitable method of splitting the cost when we meet. Our offer to pay is predicated, however, on you allowing us to review and copy any building insurance documents you have and the purchase contract for the sale of the building to Tom Breunig and Mike Dinga as those documents may contain information which might allow you reimbursement for testing cost. For example, if the purchase contract says the buyer purchased 2607 Mandela "as-is", the buyer may be responsible for the testing cost.

Generally the County requires a work plan within 30 days of notice, or, in this case, by April 12, 1999. I would like to request a meeting during the week of March 29, 1999 with you and our environmental consultant, Michael McGuire of Treadwell & Rollo, to discuss the findings to date and our proposed testing plan. The meeting would be in Michael's offices at:

2 Theatre Square, Suite 216
Orinda, CA
(925) 253-2683.

I will call you on Thursday to arrange a convenient meeting time.

Thank you.

Regards,

Faye Beverett

Faye Beverett
Owner
cc: Larry Seto, Alameda County Health Care Services
Michael McGuire, Treadwell & Rollo

wirth1

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 12, 1999

Ms. Beverly Wirth
Successor Trustee of the Marjorie G. Hubbel Trust
9 Westminster Place
Walnut Creek, CA 94595
STID 3712

RE: 2607 Mandela Parkway, Oakland, CA 94607

Dear Ms. Wirth:

On March 3, 1999 we had a telephone conversation concerning the above site that you were formerly responsible for. An underground tank was closed in place before the site was sold to the present owners. There is groundwater data that has been collected downgradient from the above site that indicates **contamination maybe migrating from 2607 Mandela Parkway towards 2853 Mandela Parkway**. I made a request that you initiate a subsurface investigation since you were the last owner of the underground tank before it was closed. Your response was that you did not have the money to initiate a subsurface investigation.

Groundwater data currently available to this office indicates that groundwater is moving from 2607 Mandela Parkway to 2853 Mandela Parkway. Two groundwater samples collected on Willow Street, which separates the two properties, contained more than 3 feet of floating product in each sample.

I suggest that the property owners at 2607 and 2853 Mandela Parkway open a dialogue and reach an agreement to initiate a subsurface investigation in accordance to Article 11, California Code of Regulations, Title 23, Underground Storage Tank Regulations. The purpose of this investigation should be to identify the source of the contamination that is affecting the groundwater on and adjacent to your properties.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Leroy Griffin, City of Oakland-Fire Department, 505-14th Street, Oakland, CA 94612
Faye Beverett, Page Street Properties, Three Embarcadero Center Suite 1150, San Francisco, CA 94111
Tom Breunig, 2607 Mandela Parkway, #1, Oakland, CA 94606
Mike Dinga, 2607 Mandela Parkway, #1, Oakland, CA 94606
William Wasko, The Ordway Building, One Kaiser Plaza, Suite 1545 Oakland, CA 94612
Files

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

Certified Mailer# Z 199 067 057

February 25, 1999

Ms. Beverly Wirth, Successor Trustee 925-934-8956
of the Marjorie G. Hubbell Trust
9 Westminster Place
Walnut Creek, CA 94595
STID 3712

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms.Wirth:

I would like to introduce myself as the caseworker that is overseeing the investigation of the subsurface petroleum hydrocarbon contamination at the above address. The new owner of the site, Faye Beverett of Page Street Properties, LLC had Ceres Associates perform a Phase II investigation, and a follow-up investigation. Five soil borings were advanced on Willow Street (SB-8, SB-9, SB-13, SB-14 & SB-15), and soil and groundwater samples were collected. Groundwater samples collected from SB-8 and SB-9 had more than 3' (three feet) of floating product. The groundwater sample from SB-13 contained 1,800 ppb TPH(g), 88 ppb benzene, 100 ppb toluene, 85 ethylbenzene and 160 ppb xylenes. The groundwater sample from SB14 contained 14 ppb of MTBE and the sample from SB15 contained 0.55 ppb xylenes.

The groundwater flow direction beneath the above site is towards the west-northwest (2607 Mandela Parkway towards 2853-2863 Mandela Parkway). Ceres Associates calculated the groundwater flow direction during the August 1998 investigation by installing temporary well casings in three soil borings located across the property, allowing groundwater in each borehole to stabilize for at least 24 hours, and then surveying the water table elevations at each sample location. The groundwater samples collected from SB-3, SB-3B and SB-3C, the three soil borings at the above site closet to Willow Street contained floating product.

The data currently available to this office indicates that petroleum hydrocarbon contamination maybe migrating from your former property to your neighbor's property at the above address. It is my understanding after the underground storage tank that formerly contained gasoline was closed in place in February 1997, the property was transferred to Mr. Thomas Breunig and Mr. Mike Dinga of CounterForce. (Enclosed is a copy of the Soil and Groundwater Assessment Report dated December 28, 1998 that was prepared by Ceres Associates.)

As per Section 2724, Title 22, California Code of Regulations, Article 11, you are required to submit a Soil and Water Investigation workplan within 30 days. This workplan must be prepared by a California –Register Geologist, Certified Engineering Geologist, or Registered Civil Engineer.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Leroy Griffin, City of Oakland-Fire Department, 505-14th Street, Oakland, CA 94612
Faye Beverett, Page Street Properties, Three Embarcadero Center Suite 1150, San Francisco, CA 94111
Tom Breunig, 2607 Mandela Parkway, #1, Oakland, CA 94606
Mike Dinga, 2607 Mandela Parkway, #1, Oakland, CA 94606
William Wasko, The Ordway Building, One Kaiser Plaza, Suite 1545 Oakland, CA 94612
Files

Z 199 067 057

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to: Ms Beverly Wirth	
Street and No.: 9 Westminster Place	
P.O., State and ZIP Code: Walnut Creek, CA 94595	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date: Feb. 25, 1999	

PS Form **3800**, March 1993

Is your **RETURN ADDRESS** completed on the reverse side?

SENDER: Larry Seto STID 3718

- **Complete items** 1 and/or 2 for additional services.
- **Complete items** 3, 4a, and 4b.
- **Print** your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- **Write** *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Ms. Beverly Wirth,
Successor Trustee of the
Marjorie G. Hubbell Trust
9 Westminster Place
Walnut Creek, CA 94595

4a. Article Number: Z 199 067 057

4b. Service Type
- ☐ Registered
- ☑ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ Return Receipt for Merchandise
- ☐ COD

7. Date of Delivery: 2/27

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X Beverly Wirth

PS Form **3811**, December 1994 102595-97-B-0179 **Domestic Return Receipt**

Thank you for using Return Receipt Service.

WILLIAM A. WASKO
Attorney • At • Law

February 23, 1999

BY FACSIMILE ONLY
510-337-9336

Mr. Larry Seto
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: 2855 Mandela Parkway, Oakland, CA

Dear Mr. Seto:

Per our conversation of last week, you agreed to pursue the prior owner of the property at 2607 Mandela Parkway, Oakland, CA relative to any further investigation that you determine is needed at that site. The prior owner is as follows:

Beverly Wirth, Successor Trustee
of the Marjorie G. Hubbell Trust
dated May 25, 1989
9 Westminster Place
Walnut Creek, CA 94595
Phone: 925-934-6956

I anticipate that your letter will be addressed directly to Beverly Wirth and not to Thomas Breunig c/o of Ms. Wirth. I think it will have more impact if the letter is directly to Ms. Wirth.

Please call if you have any questions.

Sincerely,

William A. Wasko

cc: Thomas Breunig

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

Certified Mailer#

January 12, 1999

Mr. Thomas Breunig / Mike Dinga
CounterForce
2607 Mandela Parkway, #1
Oakland, CA 94606

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Mr. Breunig:

I would like to introduce myself as the caseworker that is overseeing the investigation of the subsurface petroleum hydrocarbon contamination at the above address. The new owner of the site, Faye Beverett of Page Street Properties, LLC had Ceres Associates perform a Phase II investigation, and a follow-up investigation. Five soil borings were advanced on Willow Street (SB-8, SB-9, SB-13, SB-14 & SB-15), and soil and groundwater samples were collected. Groundwater samples collected from SB-8 and SB-9 had more than 3' (three feet) of floating product. The groundwater sample from SB-13 contained 1,800 ppb TPH(g), 88 ppb benzene, 100 ppb toluene, 85 ethylbenzene and 160 ppb xylenes. The groundwater sample from SB14 contained 14 ppb of MTBE and the sample from SB15 contained 0.55 ppb xylenes.

The groundwater flow direction beneath the above site is towards the west-northwest (2607 Mandela Parkway towards 2853-2863 Mandela Parkway). Ceres Associates calculated the groundwater flow direction during the August 1998 investigation by installing temporary well casings in three soil borings located across the property, allowing groundwater in each borehole to stabilize for at least 24 hours; and then surveying the water table elevations at each sample location. The groundwater samples collected from SB-3, SB-3B and SB-3C, the three soil borings at the above site closet to Willow Street contained floating product.

The data currently available to this office indicates that petroleum hydrocarbon contamination maybe migrating from your property to your neighbor's property at the above address. Enclosed is a copy of the Soil and Groundwater Assessment Report dated December 28, 1998 that was prepared by Ceres Associates.

As per Section 2724, Title 22, California Code of Regulations, Article 11, you are required to submit a Soil and Water Investigation workplan within 30 days. This workplan must be prepared by a California –Register Geologist, Certified Engineering Geologist, or Registered Civil Engineer.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Leroy Griffin, City of Oakland, Fire Department
Faye Beverett, Page Street Properties, Three Embarcadero Center
Suite 1150, San Francisco, CA 94111
Files

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. THOMAS BREUNIG
COUNTER FORCE
2607 MANDELA PKWY #1
OAKLAND, CA. 94606

4a. Article Number
Z 115 363 879

4b. Service Type
☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
28 Jan 99

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form 3811, December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

January 11, 1999

Ms. Faye Beverett, Property Owner
Page Street Properties, LLC
Three Embarcadero Center, Suite 1150
San Francisco, CA 94111

RE: 2855 Mandela Parkway, Oakland, CA 94607

Dear Ms. Beverett:

Today I met with you, Mr. Nicholas Patz and Mr. Michael Siembieda from Ceres Associates, your consultants, and Glenn Leong of Soma Corporation, the consultant representing the previous property owner. Groundwater samples taken from six soil borings on your property contained floating product. Five of the boring locations are up gradient from the former underground tank location, and groundwater samples from three of the borings had more than three feet of floating product. In addition, the product appears to increase in volume upgradient from the former tanks on your property. With the data currently available, it appears that an off-site source may be responsible for the contamination detected beneath the southeast portion of your property and beneath Willow Street. I am in the process of contacting the property owner at 2607 Mandela Parkway (the property located in the immediate up gradient direction) to request an investigation of his abandoned-in-place gasoline underground storage tank. The product beneath the southeast portion of your property and beneath Willow Street may originate from this site.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Nicholas Patz, Ceres Associates, 5040 Commercial Circle, Suite F, Concord, CA 94520
Michael Siembieda, Ceres Associates, 5040 Commercial Circle, Suite F, Concord, CA 94520
Glenn M. Leong, SOMA Corporation, 1260B 45th Emeryville, CA 94608
Files

PAGE STREET PROPERTIES, LLC
Three Embarcadero Center, #1150
San Francisco, CA 94111
phone: (415) 398-2266
fax: (415) 398-2272
Pagestr@aol.com

FAX TRANSMISSION

DATE: 1/11/99 **TIME:** 11:30 A

TO: Lamy Seto 510 337-9335
Glenn Leong 510 654-1960

FROM: Faye Beverett

NUMBER OF PAGES INCLUDING COVER: 4

ORIGINALS WILL FOLLOW: No____ Yes X Fed. Exp.____ U.S. Mail____
Hand

MESSAGE:

Agenda + Goals for
our 2pm meeting

Faye

PAGE STREET PROPERTIES, LLC

Three Embarcadero Center, Suite 1150
San Francisco, CA 94111
Ph: (415) 398-2266
Fax: (415) 398-2272
E-Mail: pagestr@aol.com

January 11, 1999

Mr. Larry Seto
Alameda County Environmental Health Dept.
1131 Harbor Bay Parkway, #250
Alameda, CA 94502

RE: Agenda for January 11, 1999 Meeting for 2855 Mandela Parkway

Dear Larry:

Attached please find an agenda for our 2 PM meeting today. After further discussion with CERES Associates and SOMA Corporation (the former property owner's consultant), my goals for the meeting are slightly revised from my December 30, 1998 letter to you. The following briefly outlines my goals:

1. Discuss current site conditions (brief outline of previous site investigations).

2. Discuss the likelihood that floating product from 2607 Mandela Parkway is moving downgradient to 2855 Mandela Parkway. Floating product at 2855 Mandela Parkway appears to be coming from an offsite source. This source may be 2607 Mandela Parkway as:
   - 2607 Mandela Parkway is upgradient from the floating product in Willow Street and at 2855 Mandela Parkway.
   - The observed floating product thickness increases in the direction of 2607 Mandela Parkway.
   - The former gasoline tank at 2607 Mandela Parkway was abandoned-in-place in 1997 as was reported to be "rusty, pitted, (and had) several holes."
   - The floating product under both Willow Street and 2855 Mandela Parkway observed during our recent investigations was relatively "clean," indicating a more recent release. The tanks at 2855 Mandela Parkway were removed in 1991.
   - At the time the 2855 Mandela Parkway tanks were removed and in the subsequent 1992 investigation, there was no indication of free product.
   - A second source/tank may be present at 2607 Mandela Parkway based upon previous land use as observed in aerial photographs.
   - No additional source was found at 2855 Mandela Parkway after a series of subsurface investigations (including subsurface utility surveys).

3. Discuss the potential for separation of the 2607 Mandela Parkway investigation and the 2855 Mandela Parkway investigation.
   - It may be difficult to separate the investigations due to the complexity of the site conditions, including the presence of clean floating product and a potential offsite source.
   - Depending upon your opinion and authority, we may solicit a letter from you regarding the complexity of the problems and the difficulty in separating the two property investigations.

4. Present recommendations to Alameda County Environmental Health Department regarding investigation requirements for 2607 Mandela Parkway.
   - Installation of 6 to 8 soil borings with at least 3 borings in the northern half and 3 borings in the southern half of the building. Samples should be collected from 10 and 15 feet below ground surface.
   - Groundwater collection from the boring locations from temporary wells following the boring installation (as feasible, depending upon field conditions), as well as 3-4 hours later or overnight.
   - Installation of one monitoring well in Willow Street to further evaluate the floating product thickness
   - Samples should be analyzed for TPHg, benzene, toluene, ethylbenzene, xylenes, and methyl-tert-butyl ether, in part by using US EPA methods 8015 and 8020, as appropriate. We would also suggest collecting split product samples (if floating product is found), or soil/groundwater samples for petroleum hydrocarbon fingerprint characterization.

5. Present proposed future work for 2855 Mandela Parkway.
   - Evaluation of the potential of preferential pathways of migration in the subsurface through utility line backfill. CERES Associates would analyze City of Oakland maps to determine if these pathways might exist.

We look forward to meeting with you today.

Regards,

Faye Beverett

Faye Beverett
Property Owner

AGENDA
REVIEW OF SITE CONDITIONS
2853-2863 MANDELA PARKWAY
OAKLAND, CA

Meeting with Alameda County Environmental Health Department
January 11, 1999
2 PM

1. Brief Site History

2. Review Site Investigations
   a. Harding Lawson/ATEC
      -USTs/residual impacts
   b. CERES Associates August and November 1998

3. Summarize Apparent Subsurface Conditions
   a. Soil/groundwater
   b. Free product

4. Potential Sources
   a. 2855 Mandela Parkway
   b. 2607 Mandela Parkway
   c. Other sources?

5. Potential Responsible Parties

6. Potential Remedial Process
   a. Future work

PAGE STREET PROPERTIES, LLC

Three Embarcadero Center, Suite 1150
San Francisco, CA 94111
Ph: (415) 398-2266
Fax: (415) 398-2272
E-Mail: pagestr@aol.com

December 30, 1998

Mr. Larry Seto
Alameda County Environmental Health Dept.
1131 Harbor Bay Parkway, #250
Alameda, CA 94502

RE: Final Assessment for 2855 Mandela Parkway, Oakland

Dear Larry:

Attached please find CERES Associates' 12/28/98 soil and groundwater assessment report for the gasoline-related contamination at 2855 Mandela Parkway, Oakland (the "Property"). This report covers the final round of testing the Property owners have done in an attempt to determine the source and extent of the contamination.

As we have discussed previously, there is gasoline-related contamination found (1) under the center of the Property, (2) under the side of the Property near Willow Street, and (3) under Willow Street. The contamination in items (2) and (3) together shall be called the "Willow Street Contamination." The contamination at all three locations includes free product and high levels of TPHg and Benzene.

We believe the contamination under the center of the Property may have been caused by a gasoline UST on the Property that was removed in 1991. We believe the Willow Street Contamination may have been caused by an abandoned-in-place gasoline UST and a second UST, as yet unlocated, both at 2607 Mandela Parkway directly across Willow Street, for the following reasons:

1. The Willow Street Contamination is down gradient from 2607 Mandela Parkway (and up gradient from the Property tanks removed in 1991).
2. The depth of the free product increases closer to 2607 Mandela Parkway.
3. At the time of abandonment, the consultant's report indicated the 2607 Mandela Parkway tank was "rusty, pitted, (and had) several holes."
4. We conducted a geophysical survey and could not find a tank on the Property or in Willow Street near the Property. As documented in its 11/18/98 report, CERES Associates surveyed the Property and Willow Street with (a) ground penetrating radar, (b) a hand-held magnetic locator, (c) split box inductive locator and metal detector, (d) magnetometer, and (e) 9 probe holes, and could not find a tank.
5. The north portion of 2607 Mandela Parkway was constructed after the south portion and may have a second UST which is now located under the existing building. The north side apparently was a paved lot used for parking trucks and other vehicles prior to building construction.

Based on the above findings, we would like to propose the following action plan:

1. Meet with you to review the findings and our proposed action plan.

2. Propose that the County of Alameda request the owner of 2607 Mandela Parkway perform at least the following investigation:
   a) Install 6 to 8 soil borings on the 2607 Mandela Parkway site with at least 3 borings in the northern half and 3 borings in the southern half of the building. Borings to sample soil at 10 and 15 feet bgs.
   b) Sample the groundwater after the borings are installed and then again 3-4 hours later.
   c) Analyze the soil and groundwater samples including US EPA method 8015 modified for TPHg and US EPA method 8020 for BTEX and MTBE.

3. Begin remediation of the contamination under the Property by passive skimming of free product, using either monitoring wells or French drains or a combination of the two systems.

We look forward to meeting with you at your earliest convenience and I will call you to arrange a time.

Regards,

Faye Beverett
Property Owner

cc: Nick Patz, CERES Associates
Glenn Leong, SOMA Corporation

seto2

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

November 25, 1998

Ms. Faye Beverett, Property Owner
Page Street Properties, LLC
Three Embarcadero Center, Suite 1150
San Francisco, CA 94111

RE: 2855 Mandela Parkway, Oakland, CA

Dear Ms. Beverett:

I have reviewed the Workplan-Addition Phase II Environmental Site Assessment, dated November 23, 1998 that was prepared Ceres Associates. It is acceptable with the condition that the soil and groundwater samples be tested for the presence of MTBE.

If you have any questions, please contact me at (510) 567-6774.

Sincerely,

Larry Seto
Sr. Hazardous Materials Specialist

Cc: Nicholas Patz, Ceres Associates, 5040 Commercial Circle, Suite F, Concord, CA 94520

CERES Associates

5040 Commercial Circle, Suite F
Concord, CA 94520
(925) 825-4466 / fax (925) 825-4441

ENVIRONMENTAL PROTECTION

98 NOV 20 AM 9:58

11-20-98
Informed Faye Beverette that I will review the report within two weeks.

November 19, 1998

Larry Seto
Alameda County Environmental Health Department
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: 2853-2863 Mandela Parkway, Oakland, California

Dear Larry:

Please find enclosed one copy of the Additional Subsurface Investigation at 2853-2863 Mandela Parkway in Oakland. I have sent three copies of the report to Faye Beverette, the current owner of 2853-2863 Mandela Parkway, with the intention that she would give one of the copies to the owner of 2607 Mandela Parkway.

Ms. Beverette mentioned that she has been in contact with the owner of the site across the street (2607 Mandela Parkway) and that he appears willing to cooperate with additional work requirements in conjunction with the subsurface contamination near his site.

If you have any questions regarding this report, you can contact Nick Patz at (925) 825-4466.

Sincerely,

CERES Associates

John Love
Senior Geologist

11-10-98 Met with Faye Beverett, Principal and Marilco Gutierrez of Page St. Properties. Also at the meeting was John Cove of Aceres Ass., their consultants. We discussed the investigation they did last month that identified floating product (gas) up to 3' in ~~the~~ borings upgradient from their property. Mr. Cove will put together a final report for this investigation with a recommendation that the upgradient property owners at 2607 Cypress St (Mandela Parkway) be contacted to commence an investigation.

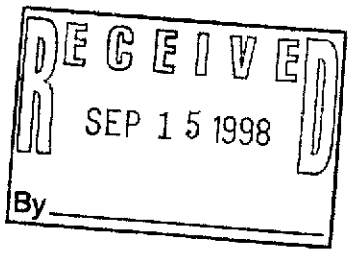
1-28-99 Mike Dinga, co-owner of 2607 Mandela Parkway with Thomas Breunig called and we discussed the protocol when he should implement an investigation. He said he will contact his environmental consultant, and have that person contact me.

2-5-99 Tom Breunig, co-owner of 2607 Mandela Parkway called, and he wanted to know why they had to spend money on this investigation. I told him he should get an attorney and determine what his rights are since he bought his site with the understanding the site was clean per the prior owner.

PAGE STREET PROPERTIES, LLC

Three Embarcadero Center, Suite 1150
San Francisco, CA 94111
Ph: (415) 398-2266
Fax: (415) 398-2272
E-Mail: pagestr@aol.com

September 14, 1998



Mr. Brian Oliva
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Suite 250
Alameda, CA 94502

RE: Request for Remediation Plan

Dear Mr. Oliva:

We recently purchased 2855 Mandela Parkway, Oakland, a 142,000 square foot industrial building. We would like to ask your assistance in preparing a remediation plan for the site which, in an isolated area, has high levels of gasoline-related contamination and free product on the water table.

We have a financing requirement that a remediation plan be approved by December 17, 1998. Therefore, I would request you review these materials at your earliest convenience and that we might schedule a meeting with you the week of September 28, 1998.

Recent History

During the purchase due diligence, we discovered that two leaking underground storage tanks had been removed in 1991 but there was no closure letter issued from any agency. We commissioned a Phase II, the results of which found high levels of contamination and free product near the location of the removed tanks.

Request

We would like to request a meeting to review our draft plan for additional testing. Based on the results of the additional testing, we would work with you to determine an appropriate remediation plan.

The lead consultant will be John Love, CERES Associates. As the seller took back a large note to be paid when closure is achieved, the seller's consultant, Glenn Leong, SOMA, will also attend any meetings.

oliva

Attached please find the following items for your review prior to our meeting:

1. September 2, 1998 letter from John Love regarding proposed testing plan.
2. September 1, 1998 Phase II Subsurface Investigation Report, CERES Associates
3. July 16, 1992 Subsurface Soil Investigation, ATEC Environmental Consultants
4. August 13, 1991, Underground Storage Tank Removal Report, Harding Lawson Associates
5. September 25, 1990, Phase I Preliminary Hazardous Materials Site Assessment, Harding Lawson Associates ?

John Love will call you in a few days to schedule a meeting. If you have any questions on the information presented here, please contact him at (925) 825-4466.

Thank you for your assistance. I look forward to working with you.

Regards,

Faye by mg

Faye Beverett
for 2855 Mandela Parkway

cc: John Love, CERES Associates (9/2 letter only)
Glenn Leong, SOMA (9/2 letter only)

oliva

CERES Associates

5040 Commercial Circle, Suite F
Concord, CA 94520
(510) 825-4466 / fax (510) 825-4441

September 2, 1998

Faye Beverette
Page Street Properties
Three Embarcadero Center, Suite 1150
San Francisco, CA 94111

RE: **2853-2863 Mandela Parkway, Oakland, CA**

Dear Faye:

Please find enclosed three copies of the Phase II Soil and Groundwater Sampling report for the commercial property located at 2853-2863 Mandela Parkway in Oakland (Property).

As you know, results of the investigation indicate that high contaminant concentrations are present in soil and groundwater beneath the south portion of the Property near the former underground storage tanks (USTs), and free product is present on the water table surface east of the former USTs. As such, additional investigation will be necessary to fully characterize the extent of the release before the appropriate remediation alternative is employed and the contamination issue at the Property is resolved.

We recommend that you report the findings of this investigation to the Alameda County Health Care Services Agency (HCSA). We also suggest that you make copies of the tank removal report and subsurface investigations conducted by Harding Lawson and ATEC in 1991 and 1992, respectively, and submit them as well if the HCSA does not already have copies of these documents on file.

It is CERES' opinion that the following scope of work will be necessary to further evaluate the lateral extent of petroleum contamination beneath the south portion of the Property:

- Conduct an in-depth aerial photograph review of the Property and surrounding area at Pacific Aerial Surveys in Oakland.

  Aerial photographs should be reviewed for the purpose of identifying whether other unknown USTs may be contributing to the subsurface contamination identified east of the former known UST locations. Groundwater flow direction data and free product found east of the former USTs in the upgradient groundwater flow direction suggests that another source may be contributing the soil and groundwater contamination in this area.

- Install six (6) additional soil borings to evaluate the lateral extent of soil and groundwater contamination around the former USTs. Two borings should be placed east of SB-3 in Willow Street (see figures in report). One soil boring should be placed northeast of the former UST excavation inside the portion of the building now occupied by Joinery Structures.

Two borings should be positioned northwest and west of the excavation inside the building occupied by Poser Envelopes, and one additional soil boring should be placed west of the former tanks near SV-6 (see figures in report). Soil and groundwater sample results collected from SB-1 during the recent subsurface investigation indicate that contaminant migration south of the former UST is adequately defined in this direction.

Information obtained from the above recommended scope of work will be useful in assessing potential future monitor well locations, as well as potential remediation options. The HCSA and Regional Water Quality Control Board will likely require that the free product observed at SB-3 be removed from the ground and monitor wells be installed to confirm that contaminant concentrations are decreasing beneath the Property with time. The free product reported on the groundwater surface at SB-3 can probably be removed with a passive skimmer installed in a groundwater well constructed in this area if the total volume of free product is limited, and another source of contamination is not present.

If you have any questions, please give me a call at (925) 825-4466.

Sincerely,

CERES Associates

John Love, RG
Project Geologist

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

Certified Mailer # P 418 724 680
October 14, 1993
STID 3712

Daniel Nourse
Cypress Property
1120 Nye St., Suite 400
San Rafael CA 94901

re: Wareham Property
2855 Cypress St.
Oakland CA 94607

NOTICE OF VIOLATION

Dear Mr. Nourse,

I have received your letter dated 7/19/93 regarding the above-referenced site. I wrote a letter to you dated 8/10/93 (attached), and have not received a response. Therefore, this is considered a Notice of Violation. Here is my list of concerns:

1) Do you represent the former tank operator? It is our understanding that you represent the property owner.

2) We do not have an Unauthorized Leak Report (ULR) on file. This is required within 5 days of the detection of a leak of hazardous substance. I have enclosed a copy of this form for your convenience. Please fill it out and return it **within 15 days or by October 29, 1993.**

3) The tank excavation was filled with the stockpiled soil from the tank removal, according to the 8/13/91 report by Harding Lawson Associates (HLA). This soil contained 410 ppm TPH-motor oil, 230 ppm TPH-diesel, and 81 ppm TPH-gasoline. Was this soil subsequently removed?

4) According to your letter dated 7/19/93, a stockpile of soil still exists onsite. What is the origin of this stockpile? Has it been sampled? What are the results? What is the estimated quantity? Has the Bay Area Air Quality Management District been notified of its aeration, presuming it has elevated levels of petroleum hydrocarbons?

Please respond to these items **within 30 days or by November 14, 1993.** If you have any questions, please contact me at 510-271-4530.

Please be advised that "no person shall close an underground tank system unless that person . . . demonstrates to the appropriate agency . . . that the site has been investigated to determine if there are any present, or were past releases, and if so, that appropriate corrective or remedial actions have been taken," as per Section 25298 (c) (4) of the California Health & Safety Code, (CH&SC) Division 20, Chapter 6.7. Further, "any operator of an underground tank system shall be liable for a civil penalty of not less than five hundred dollars ($500) or more than five thousand dollars ($5,000) for each underground storage tank for each day of violation for. . .failure to properly close an underground tank system," as per Section 25299 (a) (5) of CH&SC, Division 20, Chapter 6.7.

Sincerely,

Jennifer Eberle
Hazardous Materials Specialist

cc: **Ed Howell/file**
Chris Rossito, Harding Lawson Assoc., 200 Rush Landing Rd., Novato CA 94945

P 418 724 680

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to	Daniel Nourse
Street and No.	900 Nev Street, Ste 400
P.O., State and ZIP Code	San Rafael CA 94901
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, June 1991

TF #3712

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

4a. Article Number P418 724 680

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

8. Addressee's Address (Only if requested and fee is paid)

3. Article Addressed to: TF #3712
Daniel Nourse
Cypress Property
1120 Nye St. Suite 400
San Rafael Ca, 94901

5. Signature (Addressee)

6. Signature (Agent)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 DOMESTIC RETURN RECEIPT

Is your RETURN ADDRESS completed on the reverse side?

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

August 10, 1993
STID 3712

Daniel Nourse
Cypress Property
1120 Nye St., Suite 400
San Rafael CA 94901

re: Wareham Property
2855 Cypress St.
Oakland CA 94607

Dear Mr. Nourse,

I have received your letter dated 7/19/93 regarding the above-referenced site. Since we have been playing phone tag, and since I have inherited this case from my predecessor Dennis Byrne, I am writing you with a list of concerns:

1) Do you represent the former tank operator? It is our understanding that you represent the property owner.

2) We do not have an Unauthorized Leak Report (ULR) on file. This is required within 5 days of the detection of a leak of hazardous substance. I have enclosed a copy of this form for your convenience. Please fill it out and return it **within 15 days or by August 25, 1993.**

3) The tank excavation was filled with the stockpiled soil from the tank removal, according to the 8/13/91 report by Harding Lawson Associates (HLA). This soil contained 410 ppm TPH-motor oil, 230 ppm TPH-diesel, and 81 ppm TPH-gasoline. Was this soil subsequently removed?

4) According to your letter dated 7/19/93, a stockpile of soil still exists onsite. What is the origin of this stockpile? Has it been sampled? What are the results? What is the estimated quantity? Has the Bay Area Air Quality Management District been notified of its aeration, presuming it has elevated levels of petroleum hydrocarbons?

Please respond to these items **within 30 days or by September 10, 1993.** If you have any questions, please contact me at 510-271-4530.

Sincerely,

Jennifer Eberle
Hazardous Materials Specialist

cc: Ed Howell/file
Chris Rossito, Harding Lawson Assoc., 200 Rush Landing Rd., Novato CA 94945

je

CYPRESS PROPERTY

1120 Nye Street
Suite 400
San Rafael, CA 94901
415 457-4964
FAX 415 459-4605

July 19, 1993

Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621
Attn: ~~Dennis Byrne~~ JE

RE: 2655 Cypress Street, Oakland, CA 94607
STID # 3712

Dear Dennis:

In August of 1991, we submitted a report for the removal of two underground tanks and various testing of a loading dock excavation adjacent to the two tanks. We suspended the completion of the dock at that time.

It became necessary to complete the dock last month. This letter is to inform you of that fact, and to describe what was done with the excavated soil.

The excavation was completed and a new, sealed concrete dock has been installed where noted on the August 13, 1991 report.

The soil from the excavation has been left to aerate on site. No hydrocarbon odors were noted before, during, or after the excavation.

The completion of the dock was necessary. It also afforded us the opportunity to excavate this additional soil for aeration (if necessary) and diminish the potential problem in the future.

Please feel free to contact me if you have any questions.

Sincerely,

Daniel M. Nourse, for
CYPRESS PROPERTY

cc: Rich Robbins
Jeff Allen

3712

10-28-92 Tel con w/C. Rossito
tank rem. report was last work they did.
I can call Wareham Prop - Devel.

Don Nourse
415-457-4964

7-26-93 Revu 7-19 ltr fm RP.

1. how much soil is being SP'd/aerated?
2. AQMD Notification?
3. need ULR
4. need MWs
5. Sole RP? p.o? tank operator?

WH 199100506

THE LAW OFFICES OF
GRAVES, ALLEN,
CORNELIUS & CELESTRE
2101 Webster Street, Suite 1600
Oakland, California 94612
Telephone: 510/839-8777
Facsimile: 510/839-5192

Mailing Address:
P.O. Box 30817
Oakland, CA 94604-6917

Jeffrey Allen
Bruce Cornelius
W. Michael Celestre
Michael Ann Ferreira
Janice L. Bouba

Jay Graves (1915-1984)

Of Counsel:
Stephen J. Russell

June 5, 1992

RECEIVED
JUN - 9 1992
LAW OFFICES

Michael A. Jarrick
Senior Counsel
Navistar International
455 North Cityfront Plaza Drive
Chicago, Illinois 60611

In re: **Cypress / Wareham v. Navistar**
Navistar # WH 199100506

Dear Michael:

You will find enclosed the release modified to include the language you requested. The release has been executed by Richard Robbins as general partner of Cypress Property, a California Limited Partnership.

You will also find enclosed a photocopy of the agreement as signed by Mr. Robbins. Please obtain an original signature from an authorized officer of Navistar International Transportation Corporation on the enclosure with the photocopied signature and return that document to my office at your earliest convenience. In accordance with your earlier instructions, we are distributing the settlement check to our client for negotiation.

Thank you for your cooperation in this matter.

Very truly yours,

Jeffrey Allen
JA/vj
c: Richard Robbins

RELEASE

We, Cypress Property, a California Limited Partnership formerly known as Cypress General Partnership as successor in interest to Richard K. Robbins, et al. (hereafter collectively "Cypress") and Navistar International Transportation Corporation as successor to International Harvestor, Inc. (hereafter "Navistar)", for ourselves, our heirs, executors, administrators and assigns, for valuable consideration, including the payment of $15,871.37 from Navistar to Cypress, hereby fully release and forever discharge the other, his heirs, executors, administrators, assigns, agents, employees, representatives and successors, from all rights, claims and actions which each of us and our above mentioned successors now have or may, after the signing of this Release, have against the others arising out of the existence of underground storage tanks ("UST's") on real property commonly known as 2801 and 2855 Cypress Street (the "Property"), leakage from the UST's, the removal of the UST's and the monitoring of the Property with respect to environmental issues arising out of leakage from the UST's (the "Subject").

A. This Release, notwithstanding Section 1542 of the California Civil Code which provides that *"a general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the Release, which if known by him must have materially affected his settlement with the debtor"*, releases all injuries, damages or losses to our person and property, real or personal, whether known or unknown, foreseen, unforeseen, patent or latent which any of us may have against the others or their successors. Each of the undersigned understands and acknowledges the significance and consequence of such specific waiver of Section 1542, and hereby assumes full responsibility for any injuries, damages or losses arising out of or in any way connected to the Subject.

B. Each of us, for ourselves and our heirs, principals, agents, officers, directors, employees, executors, administrators, successors, partners, representatives, predecessors and assigns, hereby releases, acquits and forever discharges the others and their respective associates,

partners, heirs, principals, agents, employees, executors, administrators, successor, representatives, attorneys and assigns, of and from any and all claims, demands, debts, liabilities, obligations, actions, causes of action, costs and expenses of every nature, character and description whether known or unknown, and whether anticipated or unanticipated of any nature whatever (including, but not limited to, all action, causes of action, claims, demands, damages, costs and expenses) arising out, on account of, in connection with or in any way related directly or indirectly to the above described claim and to the Subject.

C. Each of us acknowledges and understands that payment of the consideration referred to above, shall not be deemed or construed an admission of the validity of any claims made by other parties to this release with respect to the Subject, and that said payment is made solely for the purpose of compromising and settling the disputed claims and liabilities between the parties.

D. Each of us acknowledges, understands and agrees that this Release is executed voluntarily and without any duress or undue influence on the part of or on behalf of any person, partnership corporation or entity. Each of us acknowledges and represents that no promise, inducement or agreement not set forth in this Release has been made or relied upon in executing this Release.

E. Each of us further acknowledges that we have been represented in the negotiations with respect to this settlement and compromise by counsel of our own choice; that we have each read this Release and have had it fully explained to us by such counsel. Each of us is fully aware of the contents of this Release and its legal effect.

F. All costs, expenses and attorneys' fees incurred by each of us in connection with the Subject, the negotiation and preparation of this Release will be borne by the party who originally incurred such costs. Each of the undersigned agrees to indemnify and hold the other parties to this Release and their respective principals, agents, employees, successors, representatives, partners and assigns, harmless and free against any loss, expense or damage occasioned by any claim

arising from or out of the Subject of this Release and/or such costs and expenses as are referred to in this paragraph..

G. This Release contains the entire agreement between the parties relating to the subject matter of this Release. This Release supersedes all other written and oral agreements between the parties respecting the Subject. The terms of this Release are contractual and not a mere recital.

H. Whenever the context or the signatures to this Release so require, the singular includes the plural and the masculine includes the feminine and vice versa.

I. This agreement is entered into at Oakland, California and is subject to, made in accordance with and to be interpreted pursuant to the laws of the State of California. This agreement and the releases contained herein are expressly conditioned upon delivery of the sum of $15,871.37 by Navistar to Cypress.

J. Cypress Property does hereby agree to indemnify, defend and hold harmless Navistar from any and every claim or demand, right, suit or cause of action whatsoever, which is now or may hereafter be asserted against Navistar by any person or entity whatsoever on account of or arising out of the existence of the UST's, their removal or the remediation of the real property.

Executed in duplicate original as of June 2, 1992.

Navistar International Transportation, Corp.

Dean P Stanley 6/11/92

Authorized Officer

Cypress Property, a California Limited Partnership

Richard K. Robbins, General Partner

WH199100506

Navistar International
Transportation Corp.

455 North Cityfront Plaza Drive
Chicago Illinois 60611
Telephone 312 836-2000

Law Offices

NAVISTAR®

May 27, 1992

Jeffrey Allen, Esquire
GRAVES, ALLEN. CORNELIUS
& CELESTRE
2101 Webster Street, Suite 1600
Oakland, California 94612

Re: Cypress Property Release
Navistar File No. WH199100506

Dear Mr. Allen:

Enclosed please find my client's draft made payable to Cypress Property, a California Limited Partnership, in the amount of $15,871.37. Please do not negotiate the draft or deliver it to your clients until they have signed the releases containing the additional language I have suggested. If there are any questions, please call.

Very truly yours,

Michael A. Jarrick
Senior Counsel

MAJ/lp

Enclosure

Via Registered Mail
Return Receipt Requested
P 832 255 131

ck Number 2611 | Navistar International Trar rtation Corp. | In full settlement of account as stated below. | Supplier No.

chase Document No. | Invoice Number | Loc. | A. | it | Purchase Document No. | I. | e Number | Loc. | Amount

$15871.37***

INVOICE NUMBER CYPRESSPRP42392 DATED 4-23-92

ct inquiries on an invoice to location shown to the invoice number.

See reverse for location code identification.

NAVISTAR™

Navistar International Transportation Corp.
And Affiliated Companies

Accounting Service Center
Oak Brook IL 60522-5317

Form 605

02611

Pay To
The Order Of

Date 5-26-92

Check No. 02611

64-12
61

Amount

CYPRESS PROPERTY, A CALIFORNIA LIMITED PARTNERSHIP

$15871.37**********

The Citizens and Southern
National Bank
Atlanta DeKalb County Georgia

Navistar International Transportation Corp.
CDS Account

G.R. Beat

⑈002611⑈ ⑆061112788⑆ 011 11 418⑈

not listed

Wareham Property Development
1120 Nye St. Suite 400
San Rafael CA 94901
Attn: Daniel Nourse

DATE: 2/26/92

TO : **Local Oversight Program**

FROM: Juliet Shin

SUBJ: **Transfer of Elligible Oversight Case**

Site name: Wareham Property Development

Address: 2855 Cypress St. City Oakland Zip 94607

Closure plan attached? (Y) N DepRef remaining $ 423.25

DepRef Project # 5029 STID #(if any) 3712 ✓ 7/1/92

Number of Tanks: 2 removed? (Y) N Date of removal 6/21/91

Leak Report filed? Y (N) Date of Discovery ~~8/13/89~~ 9/3/91 report

Samples received? (Y) N Contamination: Soil

Petroleum (Y) N Types: Avgas Jet ~~leaded~~ unleaded ~~Diesel~~
fuel oil waste oil ~~kerosene~~ solvents

Monitoring wells on site None Monitoring schedule? Y (N)

Briefly describe the following:

Preliminary Assessment UST Removal / Soil Investigation 8/13/89

Remedial Action NA

Post Remedial Action Monitoring NA

Enforcement Action NA

Comments: Two USTs, one 250-gallon waste oil tank, and one 500-gallon gasoline/waste oil tank, were removed in June 1991. Two soil samples were collected, one from beneath the waste oil tank, and one from the east excavation wall of the gasoline tank. TPH as gasoline (as high as ~~4~~ 240 ppm), TPH as diesel (as high as ~~4~~ 1,800 ppm), TPH as motor oil (~~4 to 32 ppm~~ 2,000 ppm) & TOG (~~85 to 370 ppm~~ 120 ppm), were identified in these soil samples. ~~BTEX was identified.~~ Up to 1.1 ppm of benzene was detected. ~~The RP does not~~ I don't think the RP installed any wells on site.

* need to submit ULR

CYPRESS PROPERTY

1120 Nye Street
Suite 400
San Rafael, CA 94901
415 457-4964
FAX 415 459-4605

91 SEP 10 AM 11:51

September 6, 1991

Dennis Byrne
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Dear Mr. Byrne:

Enclosed, please find a copy of the August 13, 1991 report on the tank removal work at 2855 Cypress.

Please review the report and contact me to discuss the next action.

Sincerely,

Daniel M. Nourse, for
CYPRESS PROPERTY

Enclosure

cc: Rich Robbins
Jeff Allen

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

Hazardous Materials Division Inspection Form

Site ID# _____ Site Name _____ Today's Date 6/21/91

Site Address 2855 Cypress EPA ID# _____

City Oakland Zip 94607 Phone _____

MAX Amt. Stored > 500lbs/55g/200cf? Y N
Hazardous Waste generated per month? _____

Inspection Categories:
___ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
___ II. Business Plans, Acute Hazardous Materials
✓ III. Underground Tanks

The marked items represent violations of the Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

I.A GENERATOR (Title 22)

	1. Waste ID	* 66471
	2. EPA ID	66472
	3. > 90 days	66508
	4. Label dates	66508
	5. Biennial	66493
Manifest	6. Records	66492
	7. Correct	66484
	8. Copy sent	66492
	9. Exception	66484
	10. Copies Rec'd	66492
Misc.	11. Treatment	66371
	12. On-site Disp. (H.S.&C.)	26189.5
	13. Ex Haz. Waste	66570
Prevention	14. Communications	67121
	15. Aisle Space	67124
	16. Local Authority	67126
	17. Maintenance	67120
	18. Training	67105
Contin. gency	19. Prepared	67140
	20. Name List	67141
	21. Copies	67141
	22. Emg. Coord. Trng.	67144
Containers, Tanks	23. Condition	67241
	24. Compatibility	67242
	25. Maintenance	67243
	26. Inspection	67244
	27. Buffer Zone	67246
	28. Tank Inspection	67259
	29. Containment	67245
	30. Safe Storage	67261
	31. Freeboard	67257

I.B TRANSPORTER (Title 22)

	32. Applic./Insurance	66428
	33. Comp. Cert./CHP Insp.	66448
	34. Containers	66465
Manifest	35. Vehicles	66465
	36. EPA ID #s	66531
	37. Correct	66541
	38. HW Delivery	66543
	39. Records	66544
Con'rs	40. Name/ Covers	66545
	41. Recyclables	66800

Comments:

Observed removal of two UGT's

1) 250 gallon waste oil O2 10% LEL 5%
obvious holes observed in tank
1 soil sample collected from clay under tank
at about 5'

2) 500 gallon gasoline (waste oil)
obvious holes in tank
LEL - 10% O2 12% - numerous holes
in tank prevented a sufficient reduction
in O2.
The tank was wrapped in plastic
following removal
One soil sample collected from
pit near gasoline tank at ± 2'

One composite sample was collected of
the spoils pile. Pit was lined
with plastic and backfilled with
original material.
300 Lakeside.

Rev 6/88

Contact: _____

Title: _____ Inspector: _____

Signature: _____ Signature: _____

5-10-91 Clos. Plan accepted
2 tanks
(1 w.o. + 1 gas).

6-21-91 removal of 2 usts.
250 gal w.o. obvious holes
500 gal gas obvious holes
SP sampled.

8-13-91 "UST Removal Report" by HLA.
gas ust: 240 ppm TPH-g
~~2000 ppm TPH-g~~
1800 " TPH-d } (#7)
1.1 " benz
w.o. ust: 120 " O+G } (#6)
.93 " benz
.012 " chlorobenz (VOC)
.44 " 2-methylnapthalene } (SVOCs)
.87 " napthalene
TTLC 65 ppm Cr (5 > 10X STLC)

10-15-92 reviewed file.
Tel con Chris Rossitto at HLA. 415-892-0821
He'll v file + call back. re ~~for~~ status.

10-21-92 X6712 C. Rossitto dlm

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320

Project Specialist (print) Dennis Byrne

ACCEPTED 5/10/91

DEPARTMENT OF ENVIRONMENTAL HEALTH
470 - 27th Street, Third Floor
Oakland, CA 94612
Telephone: (415) 874-7237

These plans have been reviewed and found to be accepta... and essentially meet the requirements of State ... local health laws. Changes to your plans indicated by this ... Department are to assure compliance with State and local ... laws. The project proposed herein is now released for iss... or any required building permits for construction.

One copy of these accepted plans must be on the job and ... available to all contractors and craftsmen involved with ... removal.

Any ... or alterations of these plans and specifications ... be submitted to this Department and to the Fire and ... Prevention Department to determine if such ... meet the requirements of State and local laws.

... the Department at least 48 hours prior to the ... required inspections:

_____ Removal of Tank and Piping

_____ Sampling

_____ Final Inspection

... accepted plans and all applicable laws and ...

... INSPECTION.

UNDERGROUND TANK CLOSURE PLAN
*** * * Complete according to attached instructions * * ***

1. Business Name WAREHAM PROPERTY DEVELOPMENT
   Business Owner Contact: MR. DAN NOURSE
2. Site Address 2855 CYPRESS ST.
   City OAKLAND, CA. Zip 94607 Phone 415-457-4964
3. Mailing Address 1120 NYE ST.
   City SAN RAFAEL Zip 94901 Phone 415-457-4964
4. Land Owner WAREHAM PROPERTY DEVELOPMENT
   Address 1120 NYE ST. City, State SAN RAFAEL Zip _____
5. Generator name under which tank will be manifested _____
   WAREHAM PROPERTY DEVELOPMENT
   EPA I.D. No. under which tank will be manifested CAC 000582632

rev 12/90

Project # U592429

Fee Paid $642.00

Date 5/3/91

6. Contractor DEES EXCAVATION

Address 3015 LEAFWOOD CIR.

City ANTIOCH, CA. Phone 415-757-7712

License Type "A" ID# 613027
WITH HAZARDOUS SUBSTANCE REMOVAL

7. Consultant HARDING LAWSON & ASSOCIATES

Address P.O. BOX 578

City NOVATO, CA. 94948 Phone 415-892-0521

8. Contact Person for Investigation

Name CARY FERGUS Title PROJECT GEOLOGIST

Phone 415-899-7331

9. Number of tanks being closed under this plan 2

Length of piping being removed under this plan NONE

Total number of tanks at facility 2

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

** Underground tanks are hazardous waste and must be handled ** as hazardous waste

a) Product/Residual Sludge/Rinsate Transporter

Name KVS TRANSPORTATION EPA I.D. No. CAD 982495608

Hauler License No. 2946 License Exp. Date 11/30/91

Address P.O. BOX 5295

City BAKERSFIELD, CA. State CA. Zip 93388

b) Product/Residual Sludge/Rinsate Disposal Site

Name GIBSON OIL EPA I.D. No. CAD 980883177

Address 3121 STANDARD

City BAKERS FIELD State CA. Zip 93305

rev 12/90

c) Tank and Piping Transporter

Name ERICKSON, INC EPA I.D. No. CAD009466392

Hauler License No. 019 License Exp. Date 2/10/92

Address 255 PARR BLVD

City Richmond State CA. Zip 94801

d) Tank and Piping Disposal Site

Name ERICKSON, INC. EPA I.D. No. CAD009466392

Address 255 PARR BLVD.

City Richmond State CA. Zip 94801

11. Experienced Sample Collector

Name CARY FERGUS

Company HARDING LAWSON & ASSOCIATES

Address P.O. BOX 578

City NOVATO State CA. Zip 94948 Phone 415-899-7331

12. Laboratory

Name NATIONAL ENVIRONMENTAL TESTING

Address 435 TESCONI CIR.

City SANTA ROSA, CA. State CA. Zip 95401

State Certification No. 178

13. Have tanks or pipes leaked in the past? Yes [ ] No [X]

If yes, describe. _____

14. Describe methods to be used for rendering tank inert

TANK will Be Pumped of all Material.

75 LBS Dry ice will Be inserted into Each Tank

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be plugged.

The Bay Area Air Quality Management District (771-6000), along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of explosion proof combustible gas meters to verify tank inertness. **It is the contractor's responsibility to bring a working combustible gas meter on site to verify tank inertness.**

15. Tank History and Sampling Information

Tank		Material to be sampled (tank contents, soil, ground-water, etc.)	Location and Depth of Samples
Capacity	Use History (see instructions)		
250 Gal	Waste Oil Tank	Soil Beneath Tank	1 Ft Below Surface
350 Gal	Gasoline Tank Leaded & Unleaded	Soil Beneath Tank	1 Ft Below Surface
	Tanks Have Been out of Service For more than 2 years.		

One soil sample must be collected for every 20 feet of piping that is removed. A ground water sample must be collected should any ground water be present in the excavation.

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated) 5 To 6 YDS	Sampling Plan 1 Composite Sample

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

    The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
Leaded Gas		TPH G GCFID(5030) BTX&E 8020 OR 8240 TPH AND BTX&E 8260 TOTAL LEAD AA ------Optional------- TEL DHS-LUFT EDB DHS-AB1803	
Waste and Used Oil or Unknown (All analyses must be completed and submitted)		TPH G GCFID(5030) TPH D GCFID(3550) TPH AND BTX&E 8260 O & G 5520 D & F BTX&E 8020 or 8240 CL HC 8010 or 8240 ICAP or AA TO DETECT METALS: Cd, Cr, Pb, Zn, Ni METHOD 8270 FOR SOIL PCB* PCP* PNA CREOSOTE	

* If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)

17. Submit Site Health and Safety Plan (See Instructions)

Kirk Hoek

18. Submit Worker's Compensation Certificate copy

Name of Insurer STATE FUND #1243740

19. Submit Plot Plan (See Instructions) Attached

20. Enclose Deposit (See Instructions)

21. **Report any leaks or contamination to this office within 5 days of discovery.** The report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report form. (see Instructions)

22. Submit a closure report to this office within 60 days of the tank removal. This report must contain all the information listed in item 22 of the instructions.

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true.

I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

Signature of Contractor

Name (please type) FRED R. BOURRET

Signature Fred R. Bourret

Date 5/2/91

Signature of Site Owner or Operator

Name (please type) MARGARET STEWART

Signature Margaret Stewart

Date 5/2/91

rev 12/90

State of California

Contractors State License Board

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code
and the Rules and Regulations of the Contractors State License Board,
the Registrar of Contractors does hereby issue this license to:

DEES EXCAVATION

to engage in the business or act in the capacity of a contractor
in the following classification(s):

A - General Engineering Contractor
HAZ - Hazardous Substances Removal

DEPARTMENT OF
Consumer Affairs

Witness my hand and seal this day,

March 14, 1991

Issued February 19, 1991

Signature of Licensee

Signature of License Qualifier

Registrar of Contractors

613027
License Number

This license is the property of the Registrar of Contractors, is not transferrable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed.

13L-24 (REV. 1-89)

№ 287528

STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY CONTRACTORS STATE LICENSE BOARD
DEPARTMENT OF
Consumer Affairs

Building Quality

HAZARDOUS SUBSTANCES REMOVAL AND REMEDIAL ACTIONS CERTIFICATION

Pursuant to the provisions of Section 7058.7 of the Business and Professions Code, the Registrar of Contractors does hereby certify that the following qualifying person has successfully completed the hazardous substances removal and remedial actions examination.

REGISTRAR OF CONTRACTORS
DEPARTMENT OF CONSUMER AFFAIRS
STATE OF CALIFORNIA

Qualifier: CLIFTON H. DEES

License No.: 613027

Namestyle: DEES EXCAVATION

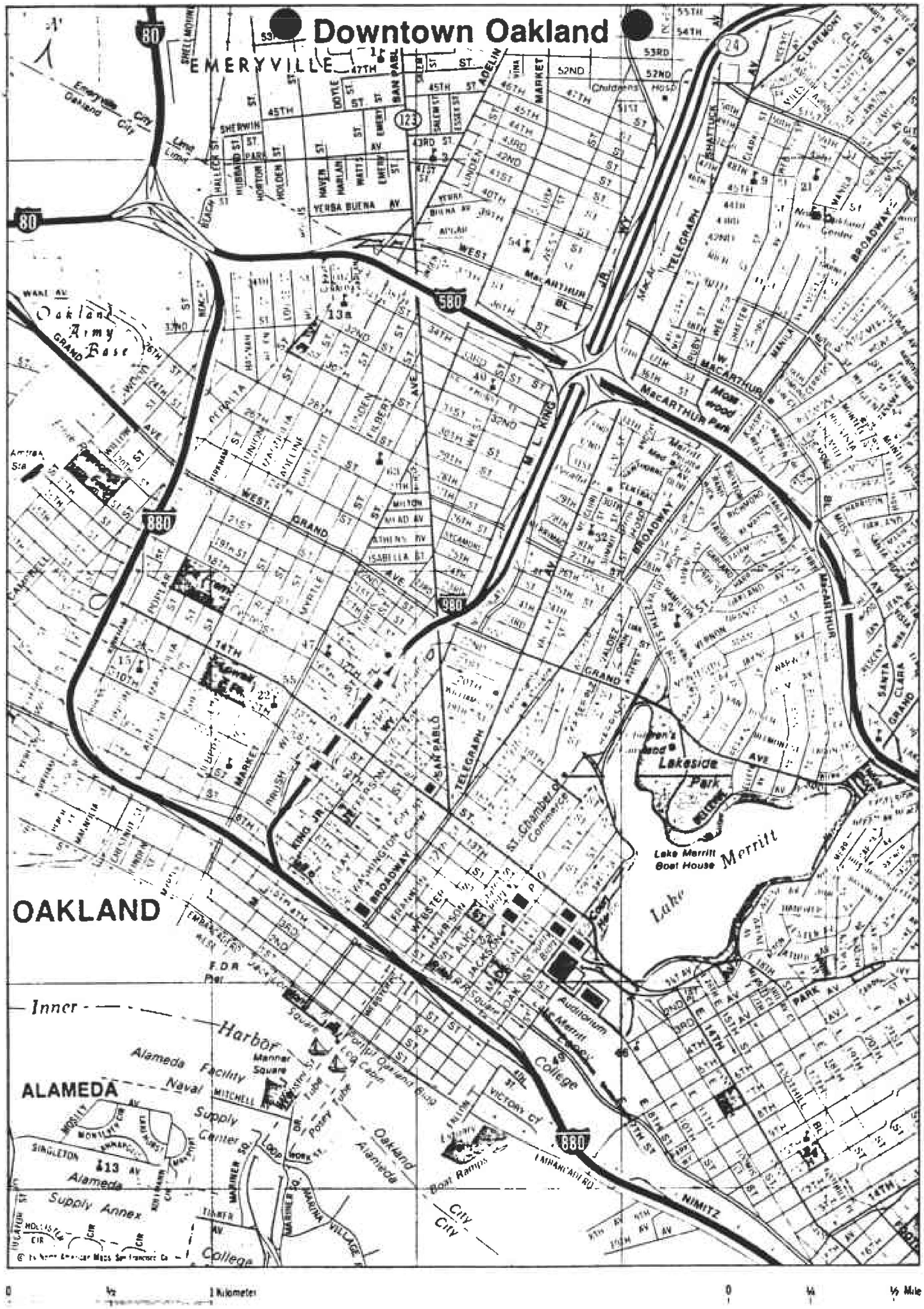
WITNESS *my hand and official seal this*
19TH *day of* FEBRUARY, 1991

Dino R Ellis
Registrar of Contractors

13L-36 (7/88)

This certification is the property of the Registrar of Contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason.

A3777


Downtown Oakland
EMERYVILLE
OAKLAND
ALAMEDA
Oakland Army Base
Inner Harbor
Lake Merritt
Lake Merritt Boat House
Lakeside Park
MacARTHUR Park
Alameda Naval Supply Center
Alameda Supply Annex
Auditorium
Chamber of Commerce
Jack London Square
F.D.R. Pier
Boat Ramps
NIMITZ
TELEGRAPH
BROADWAY
GRAND
WEST GRAND
SAN PABLO
MARKET
MacARTHUR
14TH
EMBARCADERO
580
880
980
80
24
123
0 ½ 1 Kilometer
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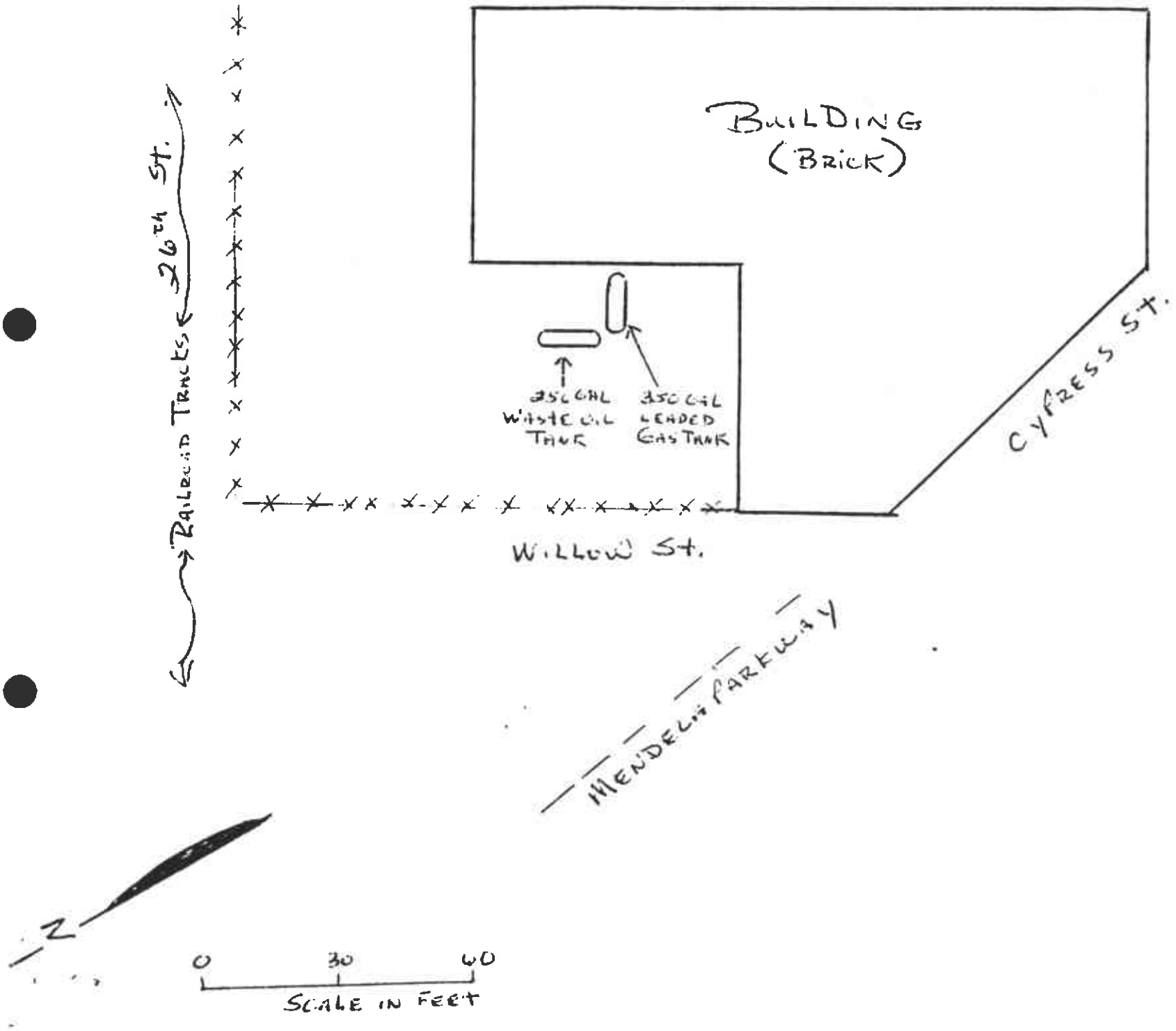
BUILDING
(BRICK)
25 CAL
WASTE OIL
TANK
350 GAL
LEADED
GAS TANK
CYPRESS ST.
WILLOW ST.
MENDELL PARKWAY
RAILROAD TRACKS
26TH ST.
N
0
30
60
SCALE IN FEET

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
P.O. BOX 942732
SACRAMENTO, CA 94234-7320

(916) 324-2430

*** HAZARDOUS WASTE HAULER REGISTRATION ***

NAME AND ADDRESS OF REGISTERED HAULER:

KVS Transportation, Inc.
P.O. Box 5295
Bakersfield, CA 93388

HAULER REGISTRATION NO: 2946

EXPIRATION DATE: November 30, 1991

THIS IS TO CERTIFY THAT THE FIRM NAMED ABOVE IS DULY REGISTERED TO HAUL HAZARDOUS WASTE IN THE STATE OF CALIFORNIA IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 6.5, DIVISION 20 OF THE HEALTH AND SAFETY CODE AND CHAPTER 30, DIVISION 4, TITLE 22 OF THE CALIFORNIA CODE OF REGULATIONS.

THIS REGISTRATION MUST BE CARRIED IN THE VEHICLE USED TO TRANSPORT HAZARDOUS WASTE.

(AUTHORIZED SIGNATURE)

NOV 27 1990

(Date)

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act (RCRA). Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D NUMBER ➤ CAD982495608 RETAIN FOR RECORDS

MORRISON EDWARD 8055695220
K V S TRANSPORTATION INC
P O BOX 5295
BAKERSFIELD CA 93388

INSTALLATION ADDRESS ➤ 3752 ALLEN RD
BAKERSFIELD 93312

EPA Form 8700-12A (4-80)

Craig Wright

California State University, Sacramento
B.A. PreMed (Human Biology/Chemistry) 1975
Masters Physiology (Pathology/Toxicology) 1978
U.C. Davis, Certificate Hazardous Materials Management 1987
California Registered Environmental Assessor, #00554

Craig Wright has 15 years experience in Chemistry, Toxicology, Hazardous Materials Management and Consulting. His experience includes overall planning, compilation and management of all aspects in the environmental spectrum. His specialties include Regulatory Compliance Consultation, Appraisal and Assessments and Technical Instruction in Hazardous Materials (HAZMAT) handling.

- Mr. Wright compiled and presently instructs 40 hour classes to meet 29 CFR 1910.120 (OSHA)
- Mr. Wright has currently written a Waste Management Plan for the U.S. Navy Remedial Investigation/Feasibility Study.
- Mr. Wright is responsible for writing an Operations Plan for Mendocino County DHS pesticide remediation.
- Mr. Wright has performed Assessments and wrote Operational Remediation Plans in San Joaquin, Solano, Sacramento and Sonoma Counties.
- Mr. Wright was involved with operations management of 35-45 chemists at a DHS certified laboratory on California Class I TSDF. He was responsible for Hazardous Waste Analyses classifications for 3000+ industrial waste streams (NPDES Discharge Parameters thru Extremely Hazardous Toxicants).
- Mr. Wright was chemical addition treatability supervisor. He was directly responsible for the total peroxidation of reactives, phenolics, amenable pesticides: precipitation and extraction of restricted metals: Acid/Base neutralization; and Incinerator POHG compliance.
- Mr. Wright, as a Regulations Specialist, was responsible for interaction with Agency representatives; EPA, DHS, RWQCB, ARQCB, etc. for client and corporate mitigation. He handled Part B permit applications and innovative technology (TTU) permit applications.
- Mr. Wright, as an Analytical Chemist, has full knowledge of Wet, Organic and Inorganic methodologies according to Water/Wastewater Standard Methods and EPA (SW846) solid waste methods.
- Mr. Wright was Executive and Technical Recruiter, developing and marketing Industry/Client Interactions specializing in Aerospace composite materials engineering and Environmental Remediation Engineering firms.

acord CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY): 3-12-91

PRODUCER

Tolman & Wiker
P.O. Box 1388
Ventura, CA 93002

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

Kern Backhoe Services, Inc.
DBA: KBA Manyfacturing
DBA: Kern Environment Service
DBA: Kern Vacuum Service
KVS Transportation. Inc.
P.O. Box 5337, Bakersfield CA 93388

COMPANIES AFFORDING COVERAGE

COMPANY LETTER	A	Lloyds of London/ Lemac
COMPANY LETTER	B	Golden Eagle/ Grey Stone
COMPANY LETTER	C	American Home Assurance (AIG)
COMPANY LETTER	D	
COMPANY LETTER	E	

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS	EACH OCCURRENCE	AGGREGATE
A	GENERAL LIABILITY	0221	01-31-91	01-31-92	BODILY INJURY	$	$
	X COMPREHENSIVE FORM				PROPERTY DAMAGE	$	$
	X PREMISES/OPERATIONS				BI & PD COMBINED	$ 1,000	$ 1,000
	X UNDERGROUND EXPLOSION & COLLAPSE HAZARD				PERSONAL INJURY		$ 1,000
	X PRODUCTS/COMPLETED OPERATIONS						
	X CONTRACTUAL						
	X INDEPENDENT CONTRACTORS						
	X BROAD FORM PROPERTY DAMAGE						
	X PERSONAL INJURY						
	X PRODUCTS CLAIM MADE						
B	AUTOMOBILE LIABILITY	CCP135673	02-01-91	01-31-92	BODILY INJURY (PER PERSON)	$	
	ANY AUTO				BODILY INJURY (PER ACCIDENT)	$	
	X ALL OWNED AUTOS (PRIV PASS)				PROPERTY DAMAGE	$	
	X ALL OWNED AUTOS (OTHER THAN PRIV. PASS)				BI & PD COMBINED	$ 1,200	
	X HIRED AUTOS						
	X NON-OWNED AUTOS						
	GARAGE LIABILITY						
A	EXCESS LIABILITY	26562	01-31-91	01-31-92	BI & PD COMBINED	$ 4,000	$ 4,000
	UMBRELLA FORM						
	X OTHER THAN UMBRELLA FORM						
C	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY	WC5822132	01-01-91	01-01-92	STATUTORY		
						$ 1,000 (EACH ACCIDENT)	
						$ 1,000 (DISEASE-POLICY LIMIT)	
						$ 1,000 (DISEASE-EACH EMPLOYEE)	
	OTHER						

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

Verification of Coverage

CERTIFICATE HOLDER

Dees Excavation
3645 Leafwood Cir
Antioch, CA 94509
Attn: Fred Bourret

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

HEALTH & SAFETY PLAN
SITE SPECIFIC

SITE NAME & ADDRESS:	WAreham Property Development 2855 Cypress St. Oakland, Ca. 94607
HEALTH & SAFETY OFFICER:	Craig Wright Responsible for overall Company Safety.
PROJECT SUPERVISOR:	Cliff Dees Responsible for implementation of Safety and Health plan at the job site.
COMMUNICATIONS:	Portable Telephone will be on site during working hours. (916-952-1640)
EMERGENCY TELE. NUMBER:	911 Fire Department, Ambulance, Police.
HEALTH HAZARDS:	1. Hydrocarbon Vapors from the Waste Oil and Gasoline tanks. This can occur upon removal of the tank if it has leaked into the soil or is ruptured. (MSDS Sheets Attached) Effects are Irritation to eyes, nose, and throat. Dizziness. Difficulty in breathing. 2. Explosion Tanks will be vacuumed free of any liquids prior to excavation. Tank will be rendered inert before final excavation and removal.
PERSONAL PROTECTIVE EQUIPMENT:	Level D A. Coveralls (Fire resistant) B. Boots/ Shoes (Safety or chemical resistant) C. Safety glasses or safety goggles D. Gloves E. 1/2 face air-purifying respirator with organic-cartridge to be kept on job site for possible use if the total vapor reading goes between 0 ppm to 5 ppm above background.
AIR MONITORING:	OVA/OVM for direct reading will be

used to check excavation during project working hours for Hydrocarbons present. If levels go above 5ppm work should cease until level goes down or move to level C protection up to 100 ppm.

BASIC SAFETY:

A. No eating, drinking, chewing gum, or tobacco, or taking medication is permitted in work area.
B. No smoking except in designed areas.
C. Wash face and hands before eating, drinking or smoking.
D. Fire Extinguisher in work area shall be inspected daily before working.
E. All Employees shall be clean shaven around the seal of a respirator.
F. Report any unusual physical symptoms to supervisor.

DECONTAMINATION

A. Equipment will be wiped down with damp rags if contamination is found. Rags will be shipped with contaminated soil to disposal site.

B. Personal protective equipment will be cleaned or disposed of with waste going to disposal site. This includes cartridges from respirator.

TAILGATE SAFETY MEETING:

ALL PERSONNEL WILL READ THIS SAFETY PLAN AND SIGN IT PRIOR TO STARTING WORK EACH DAY.

SPILL CONTROL/CONTINGENCY PLAN

1. Work Included. DE&S shall develop, implement, maintain, supervise, and be responsible for this spill control plan during work activities.

   DE&S shall provide methods, means, and facilities required to prevent contamination of soil, water, atmosphere, uncontaminated structures, equipment or material by the discharge of any waste from spills due to UE's operations.

   UE shall provide equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage. This collected spill material shall be properly containerized and disposed of.

   UE shall provide equipment and personnel to perform decontamination measures that may be required to remove spillage from previously uncontaminated structures, equipment, or material. Decontaminated residues must be containerized and disposed of.

2. Actions to be taken. If a spill occurs, the following actions shall be taken by DE&S

   a) Notify the Company Representative immediately.

   b) Evaluate the possible hazards to human health or to the environment that may result or take actions described in paragraph e.

   c) Implement the appropriate containment procedures as specified in Section 3.

   d) Implement the proper cleanup procedures as described in Sections 3, 4, 6.

   e) Take immediate measures to control and contain the spill within the site boundries. This shall include the following:

      - Keep unnecessary people away; isolate hazardous area and deny entry.
      - Do not allow anyone to touch spilled material.
      - Stay upwind; keep out of low areas.
      - Allow no flares, smoking, or flames in hazardous area.
      - Keep combustibles or incompatibles away from the spilled material.
      - Other actions as needed.

   f) Ensure that all personnel involved in spill cleanup are at the appropriate level of personnel protection unless otherwise determined by the dispatcher.

3. Small Spill Control Actions. UE shall implement the following spill control actions:

   - Small dry spills: Shovel contaminated materials into dry containers and cover; label container as to contents and dispose of properly as soon as possible.
   - Small liquid spills: Absorb with noncombustible, nonorganic absorbent material. Place contaminated soil in a container; cover, label, and dispose of properly.
   - Document spill on UE's copy of the daily quality control report or Site Safety Plan and provide to the site Representative at the completion of work.
   - For small spills within the confines of the facility during normal working hours, personnel who are trained in spill cleanup procedures shall immediately contain all free-flowing liquids with "Speedy-Dry", a highly absorbent compound or other product especially designed to absorb and retain the chemicals with which it comes in contact. Special attention shall be given to the possibility of spilled material reaching navigable waters, and appropriate cations, such as sealing off or diking storm drains, will be taken. Following containment, cleanup procedures shall begin commensurate with the type of contaminated surface. The following cleanup techniques shall be used at the facility:

     - Free Flowing Liquid - All free-flowing liquid shall be absorbed and removed with " Speedy-Dry" or product suited to absorb on neutralize spill. After the initial application of absorbent is swept, a second application of the absorbent is to be spread over the contaminated surface and swept/brushed with stiff brooms to remove the residue that may remain. All materials and equipment used in the cleanup procedure will either be cleaned for disposal in accordance with established EPA regulations.
     - Contaminated Spoils - All contaminated solids shall be removed until there is no visible evidence of contamination. The removed contaminated solids shall be placed in approved containers for disposal in accordance with established EPA regulations.

4. Large Spill Control Actions. For large spills, UE shall implement the following actions:

   - On solids, mobilize the front loader to contain and channel spills into appropriate tarped waste hauling bins.
   - For liquids, use berms or booms to contain, and then remove liquid using a vacuum truck, or an equivalent device.
   - Document all spills.

5. Decontamination Procedures. Decontamination procedures will be required after cleanup to eliminate traces of the substance spilled or to reduce it to an acceptable level. Complete cleanup shall require removal of contaminated liquids and solid waste. Personnel protective equipment, including respirators, safety glasses, hard hats, and gloves shall be decontaminated by appropriate cleaning methods. Washing facilities shall be provided for personal decontamination. All contaminated materials including disposable clothing, solvents, cloth, soil, wood, etc., that cannot be decontaminated will be containerized, labeled, and disposed of properly. All wastes will be disposed of.

6. Spill Report. DHS or its on-site representative will file a written report. For spills which migrate off-site, a spill report must be filed with the California Department of Health Services, State Water Resources Control Board, or the Environmental Protection Agency. The National Response Center should also be notified by telephone immediately.

Addresses:

California Department of Health Services
Northern California Section
Toxic Substances Control Division
4250 Power Inn Road
Sacramento, California 95826

State Water Resources Control Board
Paul R. Bonderson Building
901 P Street
P.O. Box 100
Sacramento, California 95801

Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, California 94105

Telephone Numbers:

National Response Center
800-424-8802

California Office of Emergency Response
800-852-7550

The report shall consist of the following information:

- Name of the facility
- Name of the owner or operator of the facility
- Location of the facility
- Date of the spill incident
- Quantities and types of material in spill

- Description of the facility including maps, flow diagrams, and topographical maps
- The cause(s) of such spill including a failure of system or subsystem in which the failure occurred
- The correcting actions and/or countermeasures taken including an adequate description of equipment repairs and/or replacement
- Additional preventative measures taken or considered to minimize the possibility of recurrence

EMERGENCY RESPONSE

The following are typical features of PGE's emergency response plan which will be utilized to minimize or eliminate possible hazards or releases from potentially dangerous scenarios.

1. General Emergency Procedures. In case of an emergency or hazardous situation as described in these sections, the team member that observes this condition shall immediately give the alarm or take other appropriate measures.

    1. All unnecessary communications will cease and the member giving the alarm will proceed to give the foreman and/or the dispatcher all pertinent information.
    2. Actions to be taken will be dictated by the emergency.
    3. Power equipment will be shut down and operators will stand by for instruction.
    4. Injured personnel will be processed to the Personnel Decontamination Trailer (PDT) (Reference 3).
    5. In case of fire, explosion or hazard alarm, individuals will proceed immediately to assigned contingency stations or predesignated safe sites.
    6. Upon arrival at safe site, a complete head count will be given to the Project Supervisor and individuals at the safe site will stay until the area is secured.
    7. The foreman will act as the on-scene coordinator for emergencies occuring during normal working hours.

2. Site Emergency Warning System. Several warning systems may be utilized depending on the worksite conditions or emergency involved.

    1. Verbal communications.
    2. Radio communications.
    3. Verbal communications assisted with a bull horn.
    4. Portable hand-held compressed gas horns.

Radio communications are used on site to give instructions and directions. Emergency radio communications are prefixed, and have priority over operational communications. Horn signals are used to signify an emergency warning.

One long blast is used on-site to signify emergency evacuation of the immediate work area to a predetermined location upwind, where a head count will be taken and further information given.

Repeated short blasts are used to signify evacuation of all personnel from the site to a predetermined location upwind where further instructions will be given after a head count is taken.

3. Personal Injury.

   1. If an injury occurs, the foreman or dispatcher will be immediately notified. All injuries will be reported. Any injury which requires hospitalization must be reported to Cal-OSHA.
   2. The foreman or dispatcher will be given all pertinent information concerning the nature of the injury so that treatment preparations and/or medical attention can be initiated. The cause of the injury will also be reported, or determined, so necessary changes in work procedures can be implemented.
   3. The injured person will be transported, when appropriate, to the Personnel Decontamination Trailer where decontamination and first aid treatment can begin.
   4. If the injured person is unable to be moved due to the nature or extent of injury then medical attention will be directed to the injured. Contamination of responding personnel and equipment will be minimized and decontaminated when necessary.
   5. When an injury requires medical attention, the closest clinic shall be notified. When necessary, the injured party will be transferred to a private ambulance service and taken to a local hospital.

4. Fire Suppression.

   1. The potential for fire will be minimized be eliminating fire hazards.
   2. Dry chemical fire extinguishers and the Urea or Alcohol foam kits will be used to suppress fires at the earliest stage. This will be determined by the type of chemical involved.

TRICHLOROETHANE

TCE

Common Synonyms	Watery liquid	Colorless	Sweet odor
1,1,1-Trichloroethane Methylchloroform Aerothene Chlorothene	Sinks in water. Irritating vapor is produced.		

Stop discharge if possible. Keep people away
Avoid contact with liquid and vapor
Call fire department
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Combustible.
POISONOUS GASES ARE PRODUCED IN FIRE.
Wear goggles and self-contained breathing apparatus
Extinguish with dry chemical, carbon dioxide, or foam

Exposure

CALL FOR MEDICAL AID

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause dizziness or difficult breathing

Move to fresh air
If breathing has stopped, give artificial respiration
If breathing is difficult, give oxygen

LIQUID
Irritating to skin and eyes.
If swallowed, may produce redness.

Remove contaminated clothing and shoes
Flush affected areas with plenty of water
IF IN EYES, hold eyelids open and flush with plenty of water
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting
IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm

Water Pollution

Effect of low concentrations on aquatic life is unknown.
May be dangerous if it enters water intakes

Notify local health and wildlife officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Halogenated hydrocarbon
3.2 Formula: CH_3CCl_3
3.3 IMO/UN Designation: Not listed
3.4 DOT ID No.: 2831
3.5 CAS Registry No.: 71-55-6

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Chloroform-like; sweetish

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Organic vapor-acid gas canister; self-contained breathing apparatus for emergencies; neoprene or polyvinyl-alcohol-type gloves; chemical safety goggles and face shield; neoprene safety shoes (or leather safety shoes plus neoprene footwear); neoprene or polyvinyl alcohol suit or apron for splash protection
5.2 Symptoms Following Exposure: INHALATION: symptoms range from loss of equilibrium and incoordination to loss of consciousness, high concentration can be fatal due to simple asphyxiation combined with loss of consciousness. INGESTION: produces effects similar to inhalation and may cause some feeling of nausea. EYES: slightly irritating and lachrymatory. SKIN: defatting action may cause dermatitis.
5.3 Treatment of Exposure: Get medical attention for all eye exposures and any other serious overexposures. Do NOT administer adrenalin or ephedrine; otherwise, treatment is symptomatic. INHALATION: remove victim to fresh air; if necessary, apply artificial respiration and/or administer oxygen. INGESTION: have victim drink water and induce vomiting. EYES: flush thoroughly with water. SKIN: remove contaminated clothing and wash exposed area thoroughly with soap and warm water.
5.4 Threshold Limit Value: 350 ppm
5.5 Short Term Inhalation Limits: 1,000 ppm for 60 min. in man
5.6 Toxicity by Ingestion: Grade 1: LD_{50} = 5 to 15 g/kg (rat, mouse, rabbit, guinea pig)
5.7 Late Toxicity: Data not available
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 100 ppm
5.11 IDLH Value: 1,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: Data not available
6.2 Flammable Limits in Air: 7%-16%
6.3 Fire Extinguishing Agents: Dry chemical, foam, or carbon dioxide
6.4 Fire Extinguishing Agents Not to be Used: Not pertinent
6.5 Special Hazards of Combustion Products: Toxic and irritating gases are generated in fires.
6.6 Behavior in Fire: Not pertinent
6.7 Ignition Temperature: 832°F
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: (est.) 2.8 mm/min.
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: Reacts slowly, releasing corrosive hydrochloric acid
7.2 Reactivity with Common Materials: Corrodes aluminum, but reaction is not hazardous.
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 36

8. WATER POLLUTION

8.1 Aquatic Toxicity: 75-150 ppm/"/pinfish/TL$_m$/salt water *Time period not specified.
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): Data not available
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: Uninhibited; inhibited; industrial inhibited; white room; cold cleaning
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)
A-X-Y

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: ORM-A
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	1
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	2
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	1
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 133.41
12.3 Boiling Point at 1 atm: 165°F = 74°C = 347°K
12.4 Freezing Point: <-38°F = <-39°C = <234°K
12.5 Critical Temperature: Not pertinent
12.6 Critical Pressure: Not pertinent
12.7 Specific Gravity: 1.31 at 20°C (liquid)
12.8 Liquid Surface Tension: 25.4 dynes/cm = 0.0254 N/m at 20°C
12.9 Liquid Water Interfacial Tension: (est.) 46 dynes/cm = 0.046 N/m at 20°C
12.10 Vapor (Gas) Specific Gravity: 4.6
12.11 Ratio of Specific Heats of Vapor (Gas): 1.104
12.12 Latent Heat of Vaporization: 100 Btu/lb = 56 cal/g = 2.4 X 10^5 J/kg
12.13 Heat of Combustion: (est.) 4700 Btu/lb = 2600 cal/g = 110 X 10^5 J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.17 Heat of Fusion: Data not available
12.18 Limiting Value: Data not available
12.19 Reid Vapor Pressure: 4.6 psia

NOTES

TRICHLOROFLUOROMETHANE

TCF

Common Synonyms	Liquid	Colorless	Odorless
F-11, Freon 11 Genetron 11 Arcton 9 Isotron 11; Eskimon 11 Frigen 11 Isotron 11; Ucon 11	Sinks in water. Harmful vapor is produced. Boiling point @ 75°F.		

Stop discharge if possible. Keep people away
Avoid contact with liquid
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Not flammable.
POISONOUS GASES MAY BE PRODUCED IN FIRE.
Wear goggles and self-contained breathing apparatus.

Exposure

CALL FOR MEDICAL AID

VAPOR
If inhaled, will cause dizziness or difficult breathing
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Not harmful

Water Pollution

Not harmful to aquatic life.
May be dangerous if it enters water intakes

Notify local health and wildlife officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Not listed
3.2 Formula: $CFCl_3$
3.3 IMO/UN Designation: Not listed
3.4 DOT ID No.: Data not available
3.5 CAS Registry No.: 75-69-4

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Odorless; weak chlorinated solvent

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Air line respirator; rubber gloves; monogoggles
5.2 Symptoms Following Exposure: Breathing concentrations approaching 10% in air will cause dizziness and drowsiness. Contact with liquid may cause frostbite.
5.3 Treatment of Exposure: INHALATION: remove victim to non-contaminated area and apply artificial respiration if breathing has stopped, call a physician immediately; oxygen inhalation may be utilized. SKIN: If frostbite has occurred, flush areas with warm water.
5.4 Threshold Limit Value: 1000 ppm
5.5 Short Term Inhalation Limits: Data not available
5.6 Toxicity by Ingestion: Data not available
5.7 Late Toxicity: Data not available
5.8 Vapor (Gas) Irritant Characteristics: Non-irritating
5.9 Liquid or Solid Irritant Characteristics: May cause frostbite.
5.10 Odor Threshold: Data not available
5.11 IDLH Value: Data not available

6. FIRE HAZARDS

6.1 Flash Point: Not flammable
6.2 Flammable Limits in Air: Not flammable
6.3 Fire Extinguishing Agents: Not pertinent
6.4 Fire Extinguishing Agents Not to be Used: Not pertinent
6.5 Special Hazards of Combustion Products: Produces irritating and toxic products when heated to decomposition temperatures.
6.6 Behavior in Fire: Not pertinent
6.7 Ignition Temperature: Not flammable
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: Not flammable
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: Data not available

8. WATER POLLUTION

8.1 Aquatic Toxicity: None
8.2 Waterfowl Toxicity: None
8.3 Biological Oxygen Demand (BOD): None
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: Technical
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Safety relief

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-C-I-J

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Not listed
11.2 NAS Hazard Rating for Bulk Water Transportation: Data not available
11.3 NFPA Hazard Classification: Data not available

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Data not available
12.2 Molecular Weight: Data not available
12.3 Boiling Point at 1 atm: Data not available
12.4 Freezing Point: Data not available
12.5 Critical Temperature: Data not available
12.6 Critical Pressure: Data not available
12.7 Specific Gravity: Data not available
12.8 Liquid Surface Tension: Data not available
12.9 Liquid Water Interfacial Tension: Data not available
12.10 Vapor (Gas) Specific Gravity: Data not available
12.11 Ratio of Specific Heats of Vapor (Gas): Data not available
12.12 Latent Heat of Vaporization: Data not available
12.13 Heat of Combustion: Data not available
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.25 Heat of Fusion: Data not available
12.26 Limiting Value: Data not available
12.27 Reid Vapor Pressure: Data not available

NOTES

TETRACHLOROETHANE

TEC

Common Synonyms	Liquid	Colorless to pale yellow	Sweet odor
1, 1, 2, 2-Tetrachloroethane Acetylene tetrachloride	Sinks in water		

AVOID CONTACT WITH LIQUID AND VAPOR. KEEP PEOPLE AWAY.
Wear rubber overclothing (including gloves)
Stop discharge if possible
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Not flammable
Poisonous gases may be produced when heated.

Exposure

CALL FOR MEDICAL AID

VAPOR
Irritating to eyes, nose and throat.
Harmful if inhaled.
If in eyes, hold eyelids open and flush with plenty of water
If breathing has stopped, give artificial respiration
If breathing is difficult, give oxygen

LIQUID
POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED.
Irritating to skin and eyes.
If swallowed will cause nausea and vomiting
Remove contaminated clothing and shoes
Flush affected areas with plenty of water
IF IN EYES, hold eyelids open and flush with plenty of water
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting
IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm

Water Pollution

Effect of low concentrations on aquatic life is unknown
May be dangerous if it enters water intakes

Notify local health and wildlife officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Issue warning-poison, air contaminant
Restrict access
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Halogenated hydrocarbon
3.2 Formula: $Cl_2CHCHCl_2$
3.3 IMO/UN Designation: Not listed
3.4 DOT ID No.: 1702
3.5 CAS Registry No.: 1298-90-7

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
yellowish green
4.3 Odor: Chloroform-like, pleasant, like carbon tetrachloride, mild, sweetish, similar to several other chlorinated hydrocarbons.

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Chemical safety goggles, plastic face shield, air or oxygen-supplied mask, safety hat with brim, solvent-proof apron, synthetic rubber gloves
5.2 Symptoms Following Exposure: Compound is a powerful narcotic and liver poison, may also cause changes in blood composition and neurological disturbances. Repeated exposure by inhalation can be fatal. Ingestion causes vomiting, diarrhea, severe mucosal injury, liver necrosis, cyanosis, unconsciousness, loss of reflexes, and death. Contact with eyes causes irritation and lachrymation. Can be absorbed through the skin and may produce severe skin lesions.
5.3 Treatment of Exposure: INHALATION: remove victim from exposure, begin artificial respiration if breathing has ceased. INGESTION: induce vomiting, call a physician. EYES: irrigate with water for 15 min. SKIN: remove clothing; wash skin thoroughly with warm water and soap.
5.4 Threshold Limit Value: 1 ppm
5.5 Short Term Inhalation Limits: 10 ppm, 30 min.
5.6 Toxicity by Ingestion: Grade 3; oral LD_{50} = 500 mg/kg (rat)
5.7 Late Toxicity: Liver poisoning, nervous disorders
5.8 Vapor (Gas) Irritant Characteristics: Vapor is moderately irritating such that personnel will not usually tolerate moderate or high vapor concentrations.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 0.5 ppm
5.11 IDLH Value: 150 ppm

6. FIRE HAZARDS

6.1 Flash Point: Not flammable
6.2 Flammable Limits in Air: Not flammable
6.3 Fire Extinguishing Agents: Not pertinent
6.4 Fire Extinguishing Agents Not to be Used: Not pertinent
6.5 Special Hazards of Combustion Products: Irritating hydrogen chloride vapor may form in fire.
6.6 Behavior in Fire: Data not available
6.7 Ignition Temperature: Not pertinent
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: Not pertinent
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: May attack some forms of plastics
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 36

8. WATER POLLUTION

8.1 Aquatic Toxicity: Data not available
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): Data not available
8.4 Food Chain Concentration Potential: Data not available

9. SHIPPING INFORMATION

9.1 Grades of Purity: Technical, 99%
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-X

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: ORM-A
11.2 NAS Hazard Rating for Bulk Water Transportation: Not listed
11.3 NFPA Hazard Classification: Not listed

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 167.85
12.3 Boiling Point at 1 atm: 296.3°F = 146.3°C = 419.5°K
12.4 Freezing Point: −48.8°F = −43.8°C = 229.4°K
12.5 Critical Temperature: Data not available
12.6 Critical Pressure: Data not available
12.7 Specific Gravity: 1.595 at 20°C (liquid)
12.8 Liquid Surface Tension: 37.56 dynes/cm = 0.03755 N/m at 20°C
12.9 Liquid Water Interfacial Tension: Data not available
12.10 Vapor (Gas) Specific Gravity: 5.79
12.11 Ratio of Specific Heats of Vapor (Gas): 1.080 at 25°C
12.12 Latent Heat of Vaporization: 88.2 Btu/lb = 53.1 cal/g = 2.30 X 10^5 J/kg
12.13 Heat of Combustion: Not pertinent
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.17 Heat of Fusion: Data not available
12.18 Limiting Value: Data not available
12.19 Reid Vapor Pressure: 0.5 psia

NOTES

1,1-DICHLOROETHANE

DCH

Common Synonyms	Oily liquid	Colorless	Chloroform like ethereal
Ethylidene chloride Ethylidene dichloride Chlorinated hydrochloric ether	Sinks and mixes with water.		

Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves)
Stop discharge if possible. Keep people away
Shut off ignition sources and call fire department.
Avoid contact with liquid
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Flammable.
POISONOUS GAS MAY BE PRODUCED IN FIRE OR WHEN HEATED.
Containers may explode in fire.
Wear goggles and self-contained breathing apparatus
Extinguish with alcohol foam, carbon dioxide, or dry chemical
Water may be ineffective on fire.

Exposure

CALL FOR MEDICAL AID

LIQUID
If swallowed may cause nausea, vomiting and faintness
Irritating to skin and eyes.
Flush affected areas with plenty of water
IF IN EYES, hold eyelids open and flush with plenty of water
IF SWALLOWED and victim is CONSCIOUS have victim drink water or milk and induce vomiting

Water Pollution

Dangerous to aquatic life in high concentrations
May be dangerous if it enters water intakes

Notify local health and wildlife officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)
Issue warning-high flammability.
Restrict access.
Chemical and physical treatment.

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Halogenated hydrocarbon
3.2 Formula: $C_2H_4Cl_2$
3.3 IMO/UN Designation: Not listed
3.4 DOT ID No.: 2362
3.5 CAS Registry No.: 75-34-3

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Oily liquid
4.2 Color: Colorless
4.3 Odor: Chloroform

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: In areas of poor ventilation or high concentration, a self-contained breathing apparatus with full face mask should be worn. Chemical workers goggles, rubber gloves, and protective clothing should be worn.
5.2 Symptoms Following Exposure: INHALATION: Irritation of respiratory tract. Salivation, sneezing, coughing, dizziness, nausea, and vomiting. EYES: Irritation, lacrimation, and reddening of conjunctiva. SKIN: Irritation. Prolonged or repeated skin contact can produce a slight burn. INGESTION: Ingestion incidental to industrial handling is not considered to be a problem. Swallowing of substantial amounts could cause nausea, vomiting, faintness, drowsiness, cyanosis, and circulatory failure
5.3 Treatment of Exposure: Call a doctor. INHALATION: Remove from contaminated area, keep warm and quiet. If breathing has stopped, give artificial respiration. Administer oxygen. EYES: Flush with large amounts of water or weak bicarbonate of soda solution. SKIN: Dilute with large amounts of water. Remove contaminated clothing. INGESTION: Attempt to empty stomach, dilute by administering fluids (tap water, soapy water, salt water, or milk).
5.4 Threshold Limit Value: 200 ppm.
5.5 Short Term Inhalation Limits: 250 ppm.
5.6 Toxicity by Ingestion: Grade 2; LD_{50} = 0.5 to 5 g/kg (rat).
5.7 Late Toxicity: Chronic exposure may cause liver damage and dermatitis. Animal experimentation has shown this compound to be slightly embryo-toxic and to retard fetal development.
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. This effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin.
5.10 Odor Threshold: Data not available
5.11 IDLH Value: 4,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: 57°F O.C. = 22°F C.C.
6.2 Flammable Limits in Air: 5.6% to 11.4%
6.3 Fire Extinguishing Agents: Alcohol foam, water, foam, CO_2, dry chemical, carbon tetrachloride
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective
6.5 Special Hazards of Combustion Products: When heated to decomposition emits highly toxic fumes to phosgene.
6.6 Behavior in Fire: Explosion hazard
6.7 Ignition Temperature: 856°F
6.8 Electrical Hazard: Data not available
6.9 Burning Rate: Data not available
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: Data not available
7.3 Stability During Transport: Data not available
7.4 Neutralizing Agents for Acids and Caustics: Data not available
7.5 Polymerization: Data not available
7.6 Inhibitor of Polymerization: Iodo Data not available
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 36

8. WATER POLLUTION

8.1 Aquatic Toxicity:
TL_m (Marine pinperch) 250 to 275 mg/l
24-hour TL_m Brine shrimp: 320 mg/l
24-hour TL_m Pinperch: 180 mg/l
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): Percent, 0.05 g/g for 10 days Percent, 0.002 g/g for 5 days
8.4 Food Chain Concentration Potential: Data not available

9. SHIPPING INFORMATION

9.1 Grades of Purity: Data not available
9.2 Storage Temperature: Cool
9.3 Inert Atmosphere: Data not available
9.4 Venting: Data not available

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)
A-P-Q-R-S

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Not listed
11.2 MAB Hazard Rating for Bulk Water Transportation: Not listed
11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 98.97
12.3 Boiling Point at 1 atm: 135.14°F = 57.3°C = 330.5°K
12.4 Freezing Point: −143.32°F = −97.4°C = 175.75°K
12.5 Critical Temperature: 502.7°F = 261.5°C = 534.65°K
12.6 Critical Pressure: 734.8 psia = 50 atm = 5.065 MN/m²
12.7 Specific Gravity: 1.174 at 20°C
12.8 Liquid Surface Tension: 24.75 dynes/cm = 0.02475 N/m at 20°C
12.9 Liquid Water Interfacial Tension: Data not available
12.10 Vapor (Gas) Specific Gravity: 3.42
12.11 Ratio of Specific Heats of Vapor (Gas): 1.138 at 20°C (68°F)
12.12 Latent Heat of Vaporization: 191.5 Btu/lb = 73.1 cal/g = 3.06 X 10⁵ J/kg
12.13 Heat of Combustion: −4,774 Btu/lb = −2,652 cal/g = −111 X 10⁵ J/kg
12.14 Heat of Decomposition: Data not available
12.15 Heat of Solution: Data not available
12.16 Heat of Polymerization: Data not available
12.17 Heat of Fusion: Data not available
12.18 Limiting Value: Data not available
12.19 Reid Vapor Pressure: 7.35 psia

NOTES

JUNE 1985

NAPHTHALENE

NTM

Common Synonyms	Solid	Colorless	Mothballs odor
Naphthalin Tar camphor	Solubles and floats or sinks in water		

Stop discharge if possible. Keep people away.
Call fire department.
Avoid contact with liquid and solid.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

Combustible.
Wear goggles and self-contained breathing apparatus.
Extinguish with water, foam, dry chemical or carbon dioxide.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

SOLID OR LIQUID
Irritating to skin and eyes.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.
Fouling to shoreline.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Should be removed.
Chemical and physical treatment.

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Aromatic Hydrocarbon
3.2 Formula: $C_{10}H_8$
3.3 IMO/UN Designation: 4.1/2304
3.4 DOT ID No.: 2304
3.5 CAS Registry No.: 91-20-3

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Molten solid
4.2 Color: Colorless
4.3 Odor: Coal tar; moth balls

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: U.S. Bureau of Mines approved organic vapor canister unit (USBM Type G), rubber gloves, chemical safety goggles, face shield, coveralls and/or rubber apron, rubber shoes or boots.
5.2 Symptoms Following Exposure: Vapors or fumes are irritating to eyes, nose, and throat and may cause headaches, dizziness, nausea, etc. Solid may be irritating to skin.
5.3 Treatment of Exposure: INHALATION: remove to fresh air. SKIN OR EYES: flush immediately with plenty of water for at least 15 min.; remove contaminated clothing immediately; call a physician.
5.4 Threshold Limit Value: 10 ppm
5.5 Short Term Inhalation Limits: 15 ppm for 5 min
5.6 Toxicity by Ingestion: Grade 2, oral rat LD_{50} = 1780 mg/kg
5.7 Late Toxicity: Data not available
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Hot liquid can cause severe burn. The solid may irritate the skin.
5.10 Odor Threshold: Data not available
5.11 IDLH Value: 500 ppm

6. FIRE HAZARDS

6.1 Flash Point: 174°F C.C.; 190°F O.C.
6.2 Flammable Limits in Air: 0.9%-5.9%
6.3 Fire Extinguishing Agents: Water fog, carbon dioxide, dry chemical, or foam
6.4 Fire Extinguishing Agents Not to be Used: Not pertinent
6.5 Special Hazards of Combustion Products: Toxic vapors given off in a fire.
6.6 Behavior in Fire: Not pertinent
6.7 Ignition Temperature: 979°F
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: 4.3 mm/min.
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: Molten naphthalene splatters and foams in contact with water. No chemical reaction is involved.
7.2 Reactivity with Common Materials: None
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 32

8. WATER POLLUTION

8.1 Aquatic Toxicity: 150 mg/l/96 hr/sunfish/TL_m/fresh water
1.8 ppm/72 hr/fingerling salmon/critical/ salt water
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): (Theor.) 58.5%, 5 days
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: Pure, crude 95% Pure; mp = 176°F Crude, mp = 165—176°F
9.2 Storage Temperature: Elevated
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open (flame arrester) or pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U-X

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: CRM-A
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	1
Health	
Vapor Irritant	2
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	3
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	2
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Solid
12.2 Molecular Weight: 128.16
12.3 Boiling Point at 1 atm: 424°F = 218°C = 491°K
12.4 Freezing Point: 176.4°F = 80.2°C = 353.4°K
12.5 Critical Temperature: 887.4°F = 475.2°C = 748.4°K
12.6 Critical Pressure: 568 psia = 40.0 atm = 4.05 MN/m²
12.7 Specific Gravity: 1.145 at 20°C (solid)
12.8 Liquid Surface Tension: 31.8 dynes/cm = 0.0318 N/m at 100°C
12.9 Liquid Water Interfacial Tension: Data not available
12.10 Vapor (Gas) Specific Gravity: Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas): 1.058
12.12 Latent Heat of Vaporization: 145 Btu/lb = 80.7 cal/g = 3.38 X 10⁴ J/kg
12.13 Heat of Combustion: —16,720 Btu/lb = —9297 cal/g = —388.8 X 10⁴ J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.35 Heat of Fusion: 35.05 cal/g
12.36 Limiting Value: Data not available
12.37 Reid Vapor Pressure: Low

NOTES

DIBUTYL PHTHALATE

DPA

Common Synonyms	Oily liquid	Colorless	Odorless
DBP Butyl phthalate Phthalic acid, dibutyl ester RC Plasticizer DBP Witcizer 300	Sinks slowly in water.		

Stop discharge if possible
Call fire department
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Combustible.
Extinguish with dry chemical, foam, or carbon dioxide

Exposure

LIQUID
No appreciable harm.

Water Pollution

Dangerous to aquatic life in high concentrations.
Fouling to shorelines
May be dangerous if it enters water intakes.

Notify local health and pollution control officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)
Mechanical containment
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Ester
3.2 Formula: $O\text{-}C_6H_4[COO(CH_2)_3CH_3]_2$
3.3 IMO/UN Designation: Not listed
3.4 DOT ID No.: 9095
3.5 CAS Registry No.: 84-74-2

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Slight characteristic ester odor; mild; practically none; slightly aromatic

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Eye protection.
5.2 Symptoms Following Exposure: Vapors from very hot material may irritate eyes and produce headache, drowsiness, and convulsions.
5.3 Treatment of Exposure: Remove to fresh air. Wash affected skin areas with water. Flush eyes with water.
5.4 Threshold Limit Value: 5 mg/m³
5.5 Short Term Inhalation Limits: Not pertinent
5.6 Toxicity by Ingestion: Grade 1; LD_{50} = 5 to 15 g/kg (rat)
5.7 Late Toxicity: Birth defects in rats; polyneuritis in humans
5.8 Vapor (Gas) Irritant Characteristics: Not pertinent
5.9 Liquid or Solid Irritant Characteristics: No appreciable hazard. Practically harmless to the skin.
5.10 Odor Threshold: Data not available
5.11 IDLH Value: 9,000 mg/m³

6. FIRE HAZARDS

6.1 Flash Point: 365°F O.C.; 315°F C.C.
6.2 Flammable Limits in Air: 0.5%-2.5% (calculated)
6.3 Fire Extinguishing Agents: Dry powder, carbon dioxide, foam
6.4 Fire Extinguishing Agents Not to be Used: Water or foam may cause frothing.
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Not pertinent
6.7 Ignition Temperature: 757°F
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: Data not available
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 34

8. WATER POLLUTION

8.1 Aquatic Toxicity: 1230 ppm/24 hr/bluegill/TL_m/fresh water
8.2 Waterfowl Toxicity: LC_{50} > 5000 ppm
8.3 Biological Oxygen Demand (BOD): 0.43lb/lb, 5 days
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: 99.6%
9.2 Storage Temperature: Data not available
9.3 Inert Atmosphere: Data not available
9.4 Venting: Data not available

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)
A-T-U-I-X-Y

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Not listed
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	1
Health	
Vapor Irritant	0
Liquid or Solid Irritant	0
Poisons	0
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	0
Aesthetic Effect	1
Reactivity	
Other Chemicals	0
Water	1
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	0
Flammability (Red)	1
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 278.35
12.3 Boiling Point at 1 atm: 644°F = 340°C = 613°K
12.4 Freezing Point: −31°F = −35°C = 238°K
12.5 Critical Temperature: 932°F = 500°C = 773°K
12.6 Critical Pressure: 360 psia = 17 atm = 1.7 MN/m²
12.7 Specific Gravity: 1.049 at 20°C (liquid)
12.8 Liquid Surface Tension: 34 dynes/cm = 0.034 N/m at 20°C
12.9 Liquid Water Interfacial Tension: 27 dynes/cm = 0.027 N/m at 22.7°C
12.10 Vapor (Gas) Specific Gravity: Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
12.12 Latent Heat of Vaporization: Not pertinent
12.13 Heat of Combustion: −13,300 Btu/lb = −7400 cal/g = −310 X 10³ J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.17 Heat of Fusion: Data not available
12.18 Limiting Value: Data not available
12.27 Reid Vapor Pressure: Data not available

NOTES

CREOSOTE, COAL TAR

CCT

Common Synonyms	Liquid	Yellow to black	Tarry odor
Creosote oil Dead oil	May float or sink in water.		

Stop discharge if possible
Call fire department.
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Combustible.
Extinguish with dry chemicals, foam or carbon dioxide.
Water may be ineffective on fire

Exposure

CALL FOR MEDICAL AID

LIQUID
Irritating to skin and eyes.
Harmful if swallowed.
Remove contaminated clothing and shoes
Flush affected areas with plenty of water
IF IN EYES, hold eyelids open and flush with plenty of water
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting
IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm

Water Pollution

Effect of low concentrations on aquatic life is unknown.
Feeding to shoreline.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Issue warning-water contaminant
Mechanical containment
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Phenols, cresols
3.2 Formula: Mixture
3.3 IMO/UN Designation: 9/1883
3.4 DOT ID No.: 1883
3.5 CAS Registry No.: 8001-58-9

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Yellow to brown to black
4.3 Odor: Creosote or tarry, aromatic

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: All-service canister mask; rubber gloves, chemical safety goggles and/or face shield, overalls or a neoprene apron, barrier creams.

5.2 Symptoms Following Exposure: Vapors cause moderate irritation of nose and throat. Liquid causes severe burns of eyes and reddening and itching of skin. Prolonged contact with skin can cause burns. Ingestion causes salivation, vomiting, respiratory difficulties, thready pulse, vertigo, headache, loss of pupillary reflexes, hypothermia, cyanosis, mild convulsions.

5.3 Treatment of Exposure: INHALATION: remove victim to fresh air; if he is not breathing, give artificial respiration, preferably mouth-to-mouth; if breathing is difficult, give oxygen; call a physician. EYES: flush immediately with plenty of water for at least 15 min. and call a physician. SKIN: wipe with vegetable oil or margarine, then wash with soap and water. INGESTION: have victim drink water or milk; do NOT induce vomiting

5.4 Threshold Limit Value: 0.2 mg/m³

5.5 Short Term Inhalation Limits: Data not available

5.6 Toxicity by Ingestion: Grade 2; LD_{50} = 0.5 to 5 g/kg

5.7 Late Toxicity: Repeated exposures may cause cancer of skin.

5.8 Vapor (Gas) Irritant Characteristics: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.

5.9 Liquid or Solid Irritant Characteristics: Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes' contact.

5.10 Odor Threshold: Data not available

5.11 IDLH Value: 400 mg/m³

6. FIRE HAZARDS

6.1 Flash Point: > 160°F C.C.
6.2 Flammable Limits in Air: Not pertinent
6.3 Fire Extinguishing Agents: Dry chemical, carbon dioxide or foam
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective.
6.5 Special Hazards of Combustion Products: Data not available
6.6 Behavior in Fire: Heavy, smoking black smoke is formed.
6.7 Ignition Temperature: 637°F
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: Data not available
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 21

8. WATER POLLUTION

8.1 Aquatic Toxicity: Data not available
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): Data not available
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: Whole creosote or various fractions, depending on boiling point. All have similar properties.
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open (flame arrester)

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U-X-Y

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Combustible liquid

11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	1
Health	
Vapor Irritant	2
Liquid or Solid Irritant	3
Poisons	2
Water Pollution	
Human Toxicity	2
Aquatic Toxicity	3
Aesthetic Effect	4
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	2
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: Mixture
12.3 Boiling Point at 1 atm: >356°F = >180°C = >353°K
12.4 Freezing Point: Not pertinent
12.5 Critical Temperature: Not pertinent
12.6 Critical Pressure: Not pertinent
12.7 Specific Gravity: 1.05-1.09 at 15°C (liquid)
12.8 Liquid Surface Tension (est.): 15 dynes/cm = 0.015 N/m at 20°C
12.9 Liquid Water Interfacial Tension (est.): 20 dynes/cm = 0.020 N/m at 20°C
12.10 Vapor (Gas) Specific Gravity: Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
12.12 Latent Heat of Vaporization: Not pertinent
12.13 Heat of Combustion: (est.) —12,500 Btu/lb = —6,800 cal/g = —290 X 10^3 J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.25 Heat of Fusion: Data not available
12.26 Limiting Value: Data not available
12.27 Reid Vapor Pressure: Low

NOTES

p-XYLENE

XLP

Common Synonyms	Watery liquid	Colorless	Sweet odor
1, 4-Dimethylbenzene Xylol	Floats on water. Flammable, irritating vapor is produced. Freezing point is 56°F.		

Stop discharge if possible. Keep people away
Call fire department
Avoid contact with liquid and vapor
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

FLAMMABLE
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area
Wear self-contained breathing apparatus
Extinguish with foam, dry chemical, or carbon dioxide
Water may be ineffective on fire
Cool exposed containers with water

Exposure

CALL FOR MEDICAL AID

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause dizziness, difficult breathing, or loss of consciousness.
Move to fresh air
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen

LIQUID
Irritating to skin and eyes.
If swallowed, will cause nausea, vomiting, loss of consciousness.
Remove contaminated clothing and shoes
Flush affected areas with plenty of water
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS
Fouling to shoreline
May be dangerous if it enters water intakes.
Notify local health and wildlife officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)
Issue warning-high flammability
Evacuate area
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: Flammable liquid
2.2 Class: 3

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Aromatic Hydrocarbon
3.2 Formula: $p\text{-}C_6H_4(CH_3)_2$
3.3 IMO/UN Designation: 3.2/1307
3.4 DOT ID No.: 1307
3.5 CAS Registry No.: 106-42-3

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Like benzene; characteristic aromatic

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Approved canister or air-supplied mask, goggles or face shield; plastic gloves and boots.
5.2 Symptoms Following Exposure: Vapors cause headache and dizziness. Liquid irritates eyes and skin. If taken into lungs, causes severe coughing, distress, and rapidly developing pulmonary edema. If ingested, causes nausea, vomiting, cramps, headache, and coma. Can be fatal. Kidney and liver damage can occur.
5.3 Treatment of Exposure: INHALATION: remove to fresh air, administer artificial respiration and oxygen if required; call a doctor. INGESTION: do NOT induce vomiting; call a doctor. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.
5.4 Threshold Limit Value: 100 ppm
5.5 Short Term Inhalation Limits: 200 ppm for 30 min.
5.6 Toxicity by Ingestion: Grade 3; LD_{50} = 50 to 500 mg/kg
5.7 Late Toxicity: Kidney and liver damage.
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 0.05 ppm
5.11 IDLH Value: 10,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: 81°F C.C.
6.2 Flammable Limits in Air: 1.1%-6.6%
6.3 Fire Extinguishing Agents: Foam, dry chemical, or carbon dioxide
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective.
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back.
6.7 Ignition Temperature: 870°F
6.8 Electrical Hazard: Class I, Group D
6.9 Burning Rate: 3.8 mm/min.
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 32

8. WATER POLLUTION

8.1 Aquatic Toxicity:
22 ppm/96 hr/bluegill/TL$_m$/fresh water
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD):
0 lb/lb in 5 days
8.4 Food Chain Concentration Potential: Data not available

9. SHIPPING INFORMATION

9.1 Grades of Purity: Research: 99.99%; Pure: 99.5%; Technical: 98.5%
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open (flame arrester) or pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)
A-T-U

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Flammable liquid
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	3
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	2
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 106.16
12.3 Boiling Point at 1 atm:
292.5°F = 138.3°C = 411.5°K
12.4 Freezing Point:
55.9°F = 13.3°C = 286.5°K
12.5 Critical Temperature:
649.4°F = 343.0°C = 616.2°K
12.6 Critical Pressure:
509.4 atm = 34.65 psia = 3.510 MN/m²
12.7 Specific Gravity:
0.861 at 20°C (liquid)
12.8 Liquid Surface Tension:
28.3 dynes/cm = 0.0283 N/m at 20°C
12.9 Liquid Water Interfacial Tension:
37.8 dynes/cm = 0.0378 N/m at 80°C
12.10 Vapor (Gas) Specific Gravity:
Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas):
1.071
12.12 Latent Heat of Vaporization:
150 Btu/lb = 81 cal/g =
3.4 X 10⁴ J/kg
12.13 Heat of Combustion: −17,500 Btu/lb = −9794.7 cal/g = −408.41 X 10³ J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.20 Heat of Fusion: 37.63 cal/g
12.26 Limiting Value: Data not available
12.27 Reid Vapor Pressure: 0.34 psia

NOTES

o-XYLENE

XLO

Common Synonyms	Watery liquid	Colorless	Sweet odor
1, 2-Dimethylbenzene Xylol	Floats on water. Flammable, irritating vapor is produced.		

Stop discharge if possible. Keep people away.
Call fire department.
Avoid contact with liquid and vapor.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

FLAMMABLE
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Wear self-contained breathing apparatus.
Extinguish with foam, dry chemical, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause headache, difficult breathing, or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Irritating to skin and eyes.
If swallowed, will cause nausea, vomiting, or loss of consciousness.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING.

Water Pollution

Dangerous to aquatic life in high concentrations.
Fouling to shoreline.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Issue warning-high flammability
Evacuate area
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: Flammable liquid
2.2 Class: 3

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Aromatic Hydrocarbon
3.2 Formula: $o\text{-}C_6H_4(CH_3)_2$
3.3 IMO/UN Designation: 3.3/1307
3.4 DOT ID No.: 1307
3.5 CAS Registry No.: 95-47-6

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Benzene-like; characteristic aromatic

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Approved canister or air-supplied mask; goggles or face shield; plastic gloves and boots.
5.2 Symptoms Following Exposure: Vapors cause headache and dizziness. Liquid irritates eyes and skin. If taken into lungs, causes severe coughing, distress, and rapidly developing pulmonary edema. If ingested, causes nausea, vomiting, cramps, headache, and coma. Can be fatal. Kidney and liver damage can occur.
5.3 Treatment of Exposure: INHALATION: remove to fresh air; administer artificial respiration and oxygen if required. call a doctor. INGESTION: do NOT induce vomiting; call a doctor. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.
5.4 Threshold Limit Value: 100 ppm
5.5 Short Term Inhalation Limits: 300 ppm for 30 min.
5.6 Toxicity by Ingestion: Grade 3; LD_{50} = 50 to 500 mg/kg
5.7 Late Toxicity: Kidney and liver damage.
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 0.05 ppm
5.11 IDLH Value: 10,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: 63°F C.C.; 75°F O.C.
6.2 Flammable Limits in Air: 1.1%-7.0%
6.3 Fire Extinguishing Agents: Foam, dry chemical, or carbon dioxide
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective.
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back.
6.7 Ignition Temperature: 869°F
6.8 Electrical Hazard: Class I, Group D
6.9 Burning Rate: 5.6 mm/min.
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 32

8. WATER POLLUTION

8.1 Aquatic Toxicity: >100 mg/l/96 hr/D magna/TL_m/fresh water
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): 0 lb/lb, 5 days; 2.5% (theor.), 5 days
8.4 Food Chain Concentration Potential: Data not available

9. SHIPPING INFORMATION

9.1 Grades of Purity: Research: 99.99%; Pure: 99.7%; Commercial: 95+ %
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No reaction
9.4 Venting: Open (flame arrester) or pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Flammable liquid
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	3
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	2
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 106.16
12.3 Boiling Point at 1 atm: 291.9°F = 144.4°C = 417.6°K
12.4 Freezing Point: −13.3°F = −25.2°C = 248.0°K
12.5 Critical Temperature: 674.9°F = 357.1°C = 630.2°K
12.6 Critical Pressure: 541.5 atm = 36.84 psia = 3.722 MN/m²
12.7 Specific Gravity: 0.880 at 20°C (liquid)
12.8 Liquid Surface Tension: 30.53 dynes/cm = 0.03053 N/m at 18.5°C
12.9 Liquid Water Interfacial Tension: 36.06 dynes/cm = 0.03606 N/m at 20°C
12.10 Vapor (Gas) Specific Gravity: Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas): 1.086
12.12 Latent Heat of Vaporization: 148 Btu/lb = 82.8 cal/g = 3.47 X 10^4 J/kg
12.13 Heat of Combustion: −17,566 Btu/lb = −9754.7 cal/g = −408.41 X 10^4 J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.17 Heat of Fusion: 30.64 cal/g
12.18 Limiting Value: Data not available
12.19 Reid Vapor Pressure: 0.26 psia

NOTES

m-XYLENE

XLM

Common Synonyms	Watery liquid	Colorless	Sweet odor
1,3-Dimethylbenzene Xylol	Floats on water. Flammable, irritating vapor is produced.		

Stop discharge if possible. Keep people away.
Call fire department.
Avoid contact with liquid and vapor.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

FLAMMABLE
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Wear self-contained breathing apparatus.
Extinguish with foam, dry chemical, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID

VAPOR
Irritating to eyes, nose, and throat.
If inhaled, will cause headache, difficult breathing, or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Irritating to skin and eyes.
If swallowed, will cause nausea, vomiting, or loss of consciousness.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING.

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS
Floating to shoreline.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Issue warning-high flammability
Evacuate area
Shovel to remove
Chemical and physical treatment

2. LABEL

2.1 Category: Flammable liquid
2.2 Class: 3

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Aromatic Hydrocarbon
3.2 Formula: $m\text{-}C_6H_4(CH_3)_2$
3.3 IMO/UN Designation: 3.2/1307
3.4 DOT ID No.: 1307
3.5 CAS Registry No.: 108-38-3

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Like benzene; characteristic aromatic

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Approved canister or air-supplied mask, goggles or face shield, plastic gloves and boots
5.2 Symptoms Following Exposure: Vapors cause headache and dizziness. Liquid irritates eyes and skin. If taken into lungs, causes severe coughing, dizziness, and rapidly developing pulmonary edema. If ingested, causes nausea, vomiting, cramps, headache, and coma; can be fatal. Kidney and liver damage can occur.
5.3 Treatment of Exposure: INHALATION: remove to fresh air, administer artificial respiration and oxygen if required, call a doctor. INGESTION: do NOT induce vomiting, call a doctor. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.
5.4 Threshold Limit Value: 100 ppm
5.5 Short Term Inhalation Limits: 300 ppm for 30 min.
5.6 Toxicity by Ingestion: Grade 3, LD_{50} = 50 to 500 g/kg
5.7 Late Toxicity: Kidney and liver damage
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard if spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 0.05 ppm
5.11 IDLH Value: 10,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: 84°F C.C.
6.2 Flammable Limits in Air: 1.1%-6.6%
6.3 Fire Extinguishing Agents: Foam, dry chemical, or carbon dioxide
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back
6.7 Ignition Temperature: 986°F
6.8 Electrical Hazard: Class I, Group D
6.9 Burning Rate: 5.5 mm/min.
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 32

8. WATER POLLUTION

8.1 Aquatic Toxicity:
22 ppm/96 hr/bluegill/TL_m/fresh water
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD):
0 lb/lb, 5 days; 0% (theor.), 6 days
8.4 Food Chain Concentration Potential: Data not available

9. SHIPPING INFORMATION

9.1 Grades of Purity: Research, 99.99%; Pure, 99.9%; Technical, 99.2%
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open (flame arrester) or pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations:
Flammable liquid
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	3
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	2
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 16°C and 1 atm: Liquid
12.2 Molecular Weight: 106.16
12.3 Boiling Point at 1 atm:
282.4°F = 139.8°C = 412.9°K
12.4 Freezing Point:
−54.2°F = −47.9°C = 225.3°K
12.5 Critical Temperature:
650.0°F = 343.8°C = 617.0°K
12.6 Critical Pressure:
512.8 atm = 34.95 psia = 3,540 kN/m²
12.7 Specific Gravity:
0.864 at 20°C (liquid)
12.8 Liquid Surface Tension:
28.8 dynes/cm = 0.0288 N/m at 20°C
12.9 Liquid Water Interfacial Tension:
36.4 dynes/cm = 0.0364 N/m at 20°C
12.10 Vapor (Gas) Specific Gravity:
Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas):
1.071
12.12 Latent Heat of Vaporization:
147 Btu/lb = 81.8 cal/g = 3.43×10^4 J/kg
12.13 Heat of Combustion: −17,554 Btu/lb = −9752.4 cal/g = -408.31×10^4 J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.17 Heat of Fusion: 26.01 cal/g
12.18 Limiting Value: Data not available
12.19 Reid Vapor Pressure: 0.34 psia

NOTES

TOLUENE

TOL

Common Synonyms	Watery liquid	Colorless	Pleasant odor
Toluol Methylbenzene Methylbenzol	Floats on water. Flammable, irritating vapor is produced.		

Stop discharge if possible. Keep people away.
Shut off ignition sources and call fire department.
Stay upwind and use water spray to "knock down" vapor.
Avoid contact with liquid and vapor.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

FLAMMABLE.
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Wear goggles and self-contained breathing apparatus.
Extinguish with dry chemical, foam, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause nausea, vomiting, headache, dizziness, difficult breathing, or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing difficult, give oxygen.

LIQUID
Irritating to skin and eyes.
If swallowed, will cause nausea, vomiting or loss of consciousness.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING.

Water Pollution

Dangerous to aquatic life in high concentrations.
Fouling to shoreline.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Issue warning-high flammability.
Evacuate area.

2. LABEL

2.1 Category: Flammable liquid
2.2 Class: 3

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Aromatic Hydrocarbon
3.2 Formula: $C_6H_5CH_3$
3.3 IMO/UN Designation: 3.2/1294
3.4 DOT ID No.: 1294
3.5 CAS Registry No.: 108-88-3

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Pungent, aromatic, benzene-like, distinct, pleasant

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Air-supplied mask, goggles or face shield, plastic gloves
5.2 Symptoms Following Exposure: Vapors irritate eyes and upper respiratory tract; causes dizziness, headache, anesthesia, respiratory arrest. Liquid irritates eyes and causes drying of skin. If aspirated, causes coughing, gagging, distress, and rapidly developing pulmonary edema. If ingested causes vomiting, griping, diarrhea, depressed respiration.
5.3 Treatment of Exposure: INHALATION: remove to fresh air, give artificial respiration and oxygen if needed, call a doctor. INGESTION: do NOT induce vomiting, call a doctor. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.
5.4 Threshold Limit Value: 100 ppm
5.5 Short Term Inhalation Limits: 500 ppm for 30 min.
5.6 Toxicity by Ingestion: Grade 2; LD_{50} = 0.5 to 5 g/kg
5.7 Late Toxicity: Kidney and liver damage may follow ingestion.
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard if spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 0.17 ppm
5.11 IDLH Value: 2,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: 40°F C.C.; 85°F O.C.
6.2 Flammable Limits in Air: 1.27%-7%
6.3 Fire Extinguishing Agents: Carbon dioxide or dry chemical for small fires, ordinary foam for large fires
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Vapor is heavier than air and may travel a considerable distance to a source of ignition and flash back.
6.7 Ignition Temperature: 897°F
6.8 Electrical Hazard: Class I, Group D
6.9 Burning Rate: 5.7 mm/min.
6.10 Adiabatic Flame Temperature: Data not available

(Continued)

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 32

8. WATER POLLUTION

8.1 Aquatic Toxicity: 1180 mg/l/96 hr/sunfish/TL_m/fresh water
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): 0%, 5 days, 36% (theor), 8 days
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: Research, reagent, nitration-all 99.8 + %; industrial: contains 94 + %, with 5% xylene and small amounts of benzene and nonaromatic hydrocarbons; 90/120 less pure than industrial.
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open (flame arrester) or pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Flammable liquid
11.2 NAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	3
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	2
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	3
Aesthetic Effect	2
Reactivity	
Other Chemicals	1
Water	0
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 92.14
12.3 Boiling Point at 1 atm: 231.1°F = 110.6°C = 383.8°K
12.4 Freezing Point: −139°F = −95.0°C = 178.2°K
12.5 Critical Temperature: 605.4°F = 318.6°C = 591.8°K
12.6 Critical Pressure: 596.1 psia = 40.56 atm = 4.106 MN/m²
12.7 Specific Gravity: 0.867 at 20°C (liquid)
12.8 Liquid Surface Tension: 28.0 dynes/cm = 0.0280 N/m at 20°C
12.9 Liquid Water Interfacial Tension: 36.1 dynes/cm = 0.0361 N/m at 25°C
12.10 Vapor (Gas) Specific Gravity: Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas): 1.089
12.12 Latent Heat of Vaporization: 155 Btu/lb = 86.1 cal/g = 3.61 X 10⁵ J/kg
12.13 Heat of Combustion: −17,430 Btu/lb = −9686 cal/g = −405.6 X 10⁵ J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.20 Heat of Fusion: 17.17 cal/g
12.26 Limiting Value: Data not available
12.27 Reid Vapor Pressure: 1.1 psia

6. FIRE HAZARDS (Continued)

6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

BENZENE

BNZ

Common Synonyms	Watery liquid	Colorless	Gasoline-like odor
Benzol Benzole	Floats on water. Flammable, irritating vapor is produced. Freezing point is 42°F.		

Avoid contact with liquid and vapor. Keep people away.
Wear goggles and self-contained breathing apparatus.
Shut off ignition sources and call fire department.
Stop discharge if possible.
Stay upwind and use water spray to "knock down" vapor.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

FLAMMABLE
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Wear goggles and self-contained breathing apparatus.
Extinguish with dry chemical, foam, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause headache, difficult breathing, or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Irritating to skin and eyes.
Harmful if swallowed.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Issue warning-high flammability.
Restrict access.

2. LABEL

2.1 Category: Flammable liquid
2.2 Class: 3

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Aromatic Hydrocarbon
3.2 Formula: C_6H_6
3.3 IMO/UN Designation: 3.2/1114
3.4 DOT ID No.: 1114
3.5 CAS Registry No.: 71-43-2

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Colorless
4.3 Odor: Aromatic; rather pleasant aromatic odor; characteristic odor

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Hydrocarbon vapor canister, supplied air or a hose mask; hydrocarbon-insoluble rubber or plastic gloves, chemical goggles or face splash shield; hydrocarbon-insoluble apron such as neoprene.
5.2 Symptoms Following Exposure: Dizziness, excitation, pallor, followed by flushing, weakness, headache, breathlessness, chest constriction, coma and possible death.
5.3 Treatment of Exposure: SKIN: flush with water followed by soap and water, remove contaminated clothing and wash skin. EYES: flush with plenty of water until irritation subsides. INHALATION: remove from exposure immediately. Call a physician. If breathing is irregular or stopped, start resuscitation, administer oxygen.
5.4 Threshold Limit Value: 10 ppm
5.5 Short Term Inhalation Limits: 75 ppm for 30 min
5.6 Toxicity by Ingestion: Grade 3, LD_{50} = 50 to 500 mg/kg
5.7 Late Toxicity: Leukemia
5.8 Vapor (Gas) Irritant Characteristics: If present in high concentrations, vapors may cause irritation of eyes or respiratory system. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard: if spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: 4.68 ppm
5.11 IDLH Value: 2,000 ppm

6. FIRE HAZARDS

6.1 Flash Point: 12°F C.C.
6.2 Flammable Limits in Air: 1.3%-7.9%
6.3 Fire Extinguishing Agents: Dry chemical, foam, or carbon dioxide
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back.
6.7 Ignition Temperature: 1087°F
6.8 Electrical Hazard: Class I, Group D
6.9 Burning Rate: 6.6 mm/min
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 32

8. WATER POLLUTION

8.1 Aquatic Toxicity:
5 ppm/6 hr/sunnow/lethal/distilled water
20 ppm/24 hr/sunbish/TL_m/tap water
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD):
1.2 lb/lb, 10 days
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity:
Industrial pure ..... 99+ %
Thiophene-free ..... 99+ %
Nitration ..... 99+ %
Industrial 90% ..... 85+ %
Reagent ..... 99+ %
9.2 Storage Temperature: Open
9.3 Inert Atmosphere: No requirement
9.4 Venting: Pressure-vacuum

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U-V-W

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations:
Flammable liquid
11.2 MAS Hazard Rating for Bulk Water Transportation:

Category	Rating
Fire	3
Health	
Vapor Irritant	1
Liquid or Solid Irritant	1
Poisons	3
Water Pollution	
Human Toxicity	3
Aquatic Toxicity	1
Aesthetic Effect	3
Reactivity	
Other Chemicals	2
Water	1
Self Reaction	0

11.3 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	3
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: 78.11
12.3 Boiling Point at 1 atm:
176°F = 80.1°C = 353.3°K
12.4 Freezing Point:
42.0°F = 5.5°C = 278.7°K
12.5 Critical Temperature:
552.0°F = 288.9°C = 562.1°K
12.6 Critical Pressure:
710 psia = 48.3 atm = 4.89 MN/m²
12.7 Specific Gravity:
0.879 at 20°C (liquid)
12.8 Liquid Surface Tension:
28.8 dynes/cm = 0.0288 N/m at 20°C
12.9 Liquid Water Interfacial Tension:
35.0 dynes/cm = 0.035 N/m at 20°C
12.10 Vapor (Gas) Specific Gravity: 2.7
12.11 Ratio of Specific Heats of Vapor (Gas): 1.061
12.12 Latent Heat of Vaporization:
169 Btu/lb = 94.1 cal/g = 3.94 X 10⁵ J/kg
12.13 Heat of Combustion: −17,460 Btu/lb = −9698 cal/g = −406.0 X 10⁵ J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.17 Heat of Fusion: 30.45 cal/g
12.18 Limiting Value: Data not available
12.19 Reid Vapor Pressure: 3.22 psia

NOTES

JUNE 1985

SYNONYMS: PCBS
CHLORODIPHENYL (__% CL)
CHLORINATED BIPHENYL
POLYCHLORINATED BIPHENYL
CHLORINATED BIPHENYLS
(APPROX. __% CL)

TRADE NAMES:(COMMONLY USED MONSANTO PRODUCTS)

ASKAREL**
AROCLOR 1 SERIES 1016, 1221, 1232, 1242, 1248, 1254, 1260 THERMINOL FR SERIES

CAS NO.: 001336363, 053469219, 012672296, 011097691, 011096825 AND OTHERS

WARNING STATEMENTS

FEDERAL REGULATIONS UNDER THE TOXIC SUBSTANCE CONTROL ACT REQUIRE PCB'S AND PCB ITEMS TO BE MARKED. (CHECK REGULATIONS FOR DETAILS.*)

C A U T I O N CONTAINS PCBS (POLYCHLORINATED BIPHENYLS)

A TOXIC ENVIRONMENTAL CONTAMINANT REQUIRING SPECIAL HANDLING AND DISPOSAL IN ACCORDANCE WITH U.S. ENVIRONMENTAL PROTECTION AGENCY REGULATIONS 40CFR 761. FOR DISPOSAL INFORMATION CONTACT THE NEAREST U.S. EPA OFFICE.

IN CASE OF ACCIDENT OR SPILL CALL TOLL FREE THE U.S. COAST GUARD NATIONAL RESPONSE CENTER 800-424-8802
ALSO CONTACT
TEL. NO.

C A U T I O N - CONTAINS PCBS (POLYCHLORINATED BIPHENYLS) FOR PROPER DISPOSAL INFORMATION CONTACT U.S. ENVIRONMENTAL PROTECTION AGENCY

PRECAUTIONARY MEASURES

CARE SHOULD BE TAKEN TO PREVENT ENTRY INTO THE ENVIRONMENT THROUGH SPILLS, LEAKAGE, USE, VAPORIZATION, OR DISPOSAL OF LIQUID OR CONTAINERS. AVOID PROLONGED BREATHING OF VAPORS OR MISTS. AVOID CONTACT WITH EYES OR PROLONGED CONTACT WITH SKIN. IF SKIN CONTACT OCCURS, REMOVE BY WASHING WITH SOAP AND WATER. FOLLOWING EYE CNTACT, FLUSH WITH WATER. IN CASE OF SPILLAGE ONTO CLOTHING, THE CLOTHING SHOULD BE REMOVED AS SOON AS PRACTICAL, SKIN WASHED, AND CLOTHING LAUNDERED. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CONSULT A PHYSICIAN. DO NOT INDUCE VOMITING OR GIVE ANY OILY LAXATIVES. NOTE TO PHYSICIAN: IF LARGE

AMOUNTS ARE INGESTED, GASTRIC LAVAGE IS SUGGESTED.

SKIN: IF LIQUID OR SOLID PCBS ARE SPLASHED OR SPILLED ON SKIN, CONTAMINATED CLOTHING SHOULD BE REMOVED AND THE SKIN WASHED THOROUGHLY WITH SOAP AND WATER. NOTE TO PHYSICIAN: HOT PCBS MAY CAUSE THERMAL BURNS.

EYES: EYES SHOULD BE IRRIGATED IMMEDIATELY WITH COPIOUS QUANTITIES OF RUNNING WATER FOR AT LEAST 15 MINUTES IF LIQUID OR SOLID PCBS GET INTO THEM. A PETROLATUM-BASED OPHTHALMIC OINTMENT MAY BE APPLIED TO THE EYE TO RELIEVE THE IRRITATING EFFECTS OF PCBS.

INHALATION: REMOVE TO FRESH AIR. IF SKIN RASH OR RESPIRATORY

IRRITATION PERSIST, CONSULT A PHYSICIAN. NOTE TO PHYSICIAN: IF ELECTRICAL EQUIPMENT ARCS OVER, PCBS OR OTHER CHLORINATED HYDROCARBON DIELECTRIC FLUIDS MAY DECOMPOSE TO PRODUCE HCL, HYDROCHLORIC ACID, A RESPIRATORY IRRITANT.

OCCUPATIONAL CONTROL PROCEDURES

EYE PROTECTION: WEAR CHEMICAL SPLASH GOGGLES AND HAVE EYE BATHS AVAILABLE WHERE THERE IS SIGNIFICANT POTENTIAL FOR EYE CONTACT.

SKIN PROTECTION: WEAR APPROPRIATE PROTECTIVE GLOVES AND PROTECTIVE CLOTHING THAT PROVIDE A BARRIER TO PREVENT SKIN CONTACT. CONSULT GLOVE MANUFACTURER TO DETERMINE APPROPRIATE TYPE GLOVE FOR GIVEN APPLICATION. WEAR CHEMICAL SAFETY GOGGLES AND A FACE SHIELD AND A PROTECTIVE APRON THAT PROVIDES A BARRIER WHEN SPLASHING IS LIKELY WASH IMMEDIATELY IF SKIN IS CONTAMINATED. REMOVE CON-

TAMINATED CLOTHING PROMPTLY AND LAUNDER BEFORE REUSE. CLEAN PROTECTIVE EQUIPMENT BEFORE REUSE. PROVIDE A SAFETY SHOWER AT ANY LOCATION WHERE SKIN CONTACT CAN OCCUR. WASH THOROUGHLY AFTER HANDLING.
ATTENTION: REPEATED OR PROLONGED CONTACT MAY CAUSE CHLORACNE IN SOME PEOPLE.

RESPIRATORY PROTECTION: AVOID BREATHING VAPOR OR MIST. USE NIOSH/MSHA APPROVED EQUIPMENT WHEN AIRBORNE EXPOSURE LIMITS ARE EXCEEDED. FULL FACEPIECE EQUIPMENT IS RECOMMENDED AND, IF USED, REPLACES NEED FOR FACE SHIELD AND/OR CHEMICAL SPLASH GOGGLES. CONSULT RESPIRATOR MANUFACTURER TO DETERMINE TYPE EQUIPMENT FOR GIVEN APPLICATION. THE RESPIRATOR USE LIMITATIONS SPECIFIED BY NIOSH/MSHA OR THE MANUFACTURER MUST BE OBSERVED. HIGH AIRBORNE CONCENTRATIONS MAY REQUIRE USE OF SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR RESPIRATOR. RESPIRATORY PROTECTION PROGRAMS MUST BE IN COMPLIANCE WITH 29 CFR PART 1910.134.

VENTILATION: PROVIDE VENTILATION TO CONTROL EXPOSURE LEVELS BELOW

AIRBORNE EXPOSURE LIMITS. USE LOCAL MECHANICAL EXHAUST VENTILATION AT SOURCES OF AIR CONTAMINATION SUCH AS OPEN PROCESS EQUIPMENT.

AIRBORNE EXPOSURE LIMITS: CHLORINATED BIPHENYL (APPROXIMATELY 42% CHLORINE)

OSHA PEL: 1 MG/M3 8-HR TIME-WEIGHTED AVERAGE - SKIN*
ACGIH TLV: 1 MG/M3 8-HR TIME-WEIGHTED AVERAGE - SKIN*
2 MG/M3 SHORT-TERM EXPOSURE LIMIT - SKIN

CHLORINATED BIPHENYL (APPROXIMATELY 54% CHLORINE)

OSHA PEL: 0.5 MG/M3 8-HR TIME-WEIGHTED AVERAGE - SKIN*
ACGIH TLV: 0.5 MG/M3 8-HR TIME-WEIGHTED AVERAGE -SKIN*
1 MG/M3 SHORT-TERM EXPOSURE LIMIT - SKIN*

* SKIN NOTATION MEANS THAT SKIN ABSORPTION OF THIS MATERIAL MAY ADD TO THE OVERALL EXPOSURE. AVOID SKIN CONTACT.

FIRE PROTECTION INFORMATION

FIRE AND EXPLOSION: PCBS ARE FIRE-RESISTANT COMPOUNDS. THEY MAY DECOMPOSE TO FORM CO, CO2, HCL, PHENOLICS, ALDEHYDES AND OTHER TOXIC COMBUSTION PRODUCTS UNDER SEVERE CONDITIONS SUCH AS EXPOSURE TO FLAME OR HOT SURFACES.

AT TEMPERATURES IN THE RANGE OF 600-650C IN THE PRESENCE OF EXCESS OXYGEN PCBS MAY FORM POLYCHLORINATED DIBENZOFURANS (PCDFS). LABORATORY STUDIES UNDER SIMILAR CONDITIONS HAVE DEMONSTRATED THAT PCBS DO NOT PRODUCE POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDS).

PCBS IN ELECTRICAL EQUIPMENT HAVE BEEN REPORTED TO PRODUCE BOTH CHLORINATED DIOXINS (PCDDS) AND FURANS DURING FIRE SITUATIONS. THESE COMBUSTION PRODUCTS MAY RESULT ALL, OR IN PART, FROM NON-PCB COMPONENTS OF THE

DIELECTRIC FLUIDS OR OTHER COMBUSTED MATERIALS. CONSULT THE EQUIPMENT MANUFACTURER FOR INFORMATION REGARDING COMPOSITION OF THE DIELECTRIC FLUIDS IN ELECTRICAL APPARATUS.

STANDARD FIRE FIGHTING WEARING APPAREL AND SELF-CONTAINED BREATHING APPARATUS SHOULD BE WORN WHEN FIGHTING FIRES THAT INVOLVE POSSIBLE EXPOSURE TO CHEMICAL COMBUSTION PRODUCTS. FIRE FIGHTING EQUIPMENT SHOULD BE THOROUGHLY CLEANED AND DECONTAMINATED AFTER USE.

IF A PCB TRANSFORMER IS INVOLVED IN A FIRE-RELATED INCIDENT, THE OWNER OF THE TRANSFORMER MAY BE REQUIRED TO REPORT THE INCIDENT. CONSULT AND FOLLOW APPROPRIATE FEDERAL, STATE, AND LOCAL REGULATIONS.

HEALTH EFFECTS SUMMARY

SKIN CONTACT: PCBS CAN BE ABSORBED THROUGH INTACT SKIN. LOCAL ACTION ON SKIN IS SIMILAR TO THAT OF COMMON ORGANIC SOLVENTS WHERE CONTACT LEADS TO REMOVAL OF NATURAL FATS AND OILS WITH SUBSEQUENT DRYING AND CRACKING OF THE SKIN. A POTENTIAL EXISTS FOR THE CONTRACTING OF CHLORACNE.

EYE CONTACT: THE LIQUID PRODUCTS AND THEIR VAPORS ARE MODERATELY IRRITATING TO EYE TISSUES.

INGESTION: THE ACUTE ORAL TOXICITIES OF THE UNDILUTED COMPOUNDS ARE: LD50 RATS - 8.65 GM/KG FOR 42% CHLORINATED, AND 11.9 GM/KG FOR 54% CHLORINATED - "SLIGHTLY TOXIC."

INHALATION: ANIMAL EXPERIMENTS OF VARYING DURATION AND AT DIFFERENT AIR CONCENTRATIONS SHOW THAT FOR SIMILAR EXPOSURE CONDITIONS, THE 54% CHLORINATED MATERIAL PRODUCES MORE LIVER INJURY THAN THE 42% CHLORINATED MATERIAL.

OTHER: THERE ARE LITERATURE REPORTS THAT PCBS CAN IMPAIR REPRODUCTIVE FUNCTIONS IN MONKEYS. A STUDY REPORTED IN THE LITERATURE WITH FEMALE RATS USING AROCLOR 1260 STATED THAT AROCLOR 1260 CAUSED LIVER CANCERS. MONSANTO SPONSORED ANIMAL FEEDING STUDIES OF AROCLOR 1242 1254 AND 1260. THESE COMPOUNDS, FED TO BOTH SEXES OF RATS, DID NOT PRODUCE CANCERS. THE NATIONAL CANCER INSTITUTE PERFORMED A STUDY IN 1977 USING AROCLOR 1254 WITH BOTH SEXES OF RATS. NCI STATED THAT THE PCB, AROCLOR 1254, WAS NOT CARCINOGENIC UNDER THE CONDITION OF THEIR BIOASSAY.

THE CONSISTENT FINDING IN ANIMAL STUDIES PCBS IS THAT THEY PRODUCE LIVER INJURY FOLLOWING PROLONGED AND REPEATED EXPOSURE BY ANY ROUTE, IF THE EXPOSURE IS OF SUFFICIENT DEGREE AND DURATION. LIVER INJURY IS PRODUCED FIRST, AND BY EXPOSURES THAT ARE LESS THAN THOSE REPORTED TO CAUSE CANCER IN RODENTS. THEREFORE, EXPOSURE BY ALL ROUTES SHOULD BE KEPT SUFFICIENTLY LOW TO PREVENT LIVER INJURY.

NUMEROUS EPIDEMIOLOGICAL STUDIES OF HUMANS, BOTH OCCUPATIONALLY EXPOSED AND NONWORKER ENVIRONMENTALLY EXPOSED POPULATIONS, HAVE NOT DEMONSTRATED ANY STATISTICALLY SIGNIFICANT CASUAL RELATIONSHIP BETWEEN PCB EXPOSURES AND CHRONIC HUMAN ILLNESSES SUCH AS CANCER OR NEUROLOGICAL OR CARDIOVASCULAR EFFECTS. NOR WAS THERE ANY INCREASE IN OVERALL CANCER MORTALITY AS A RESULT OF PCB EXPOSURE. PCBS CAN CAUSE DERMATOLOGICAL SYMPTOMS; HOWEVER, THESE ARE REVERSIBLE UPON REMOVAL OF EXPOSURE SOURCE.

PCBS ARE IDENTIFIED AS HAZARDOUS CHEMICALS UNDER CRITERIA OF THE OSHA HAZARD COMMUNICATION STANDARD (29

3 1 a1

Harding Lawson Associates

August 13, 1991

18452,047.02

Wareham Property Group
1120 Nye Street, Suite 400
San Rafael, California 94901

Attention: Mr. Dan Nourse

Report
Underground Storage Tank Removal
2855 Cypress Street
Oakland, California

This letter presents to the Wareham Property Group (Wareham) the results of Harding Lawson Associates' (HLA's) environmental services during the removal of two underground storage tanks (UST's) at 2855 Cypress Street, Oakland, California (site). An area map showing the site location is presented in Plate 1. The work was performed in response to the discovery of the USTs and the detection of hydrocarbon odors in soil from a nearby excavation. The purpose of HLA's investigation was to observe and document tank removal activities and perform soil sampling. The work was performed in accordance with HLA's proposal dated March 7, 1991, and authorized by a signed HLA Service Agreement dated March 27, 1991.

BACKGROUND

Harding Lawson Associates (HLA) has provided Wareham Property Group with a Preliminary Hazardous Materials Site Assessment (PSA) report of the 2855 Cypress Street property dated September 5, 1990. The purpose of the PSA was to provide information about the site and surrounding area relative to the potential presence of hazardous materials. During the course of the PSA investigation a vent line was observed indicating that a UST may be present at the site. No records regarding the history, age, and integrity testing of the UST are currently available. HLA recommended in the PSA that the possible presence for a UST be further evaluated.

FIELD INVESTIGATION

Geophysical Investigation

HLA was authorized by Wareham to perform an underground tank evaluation at the site. Pursuant to HLA's proposal of February 14, 1991, a geophysical investigation was performed to locate a possible UST and associated pipelines. The geophysical

CFR PART 1910.1200). THE STANDARD REQUIRES THAT THIS DOCUMENT MENTION THAT PCBS HAVE BEEN LISTED IN THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) MONOGRAPHS (1982)-GROUP 2B AND IN THE NATIONAL TOXICOLOGY PROGRAM (NTP) ANNUAL REPORT ON CARCINOGENS (THIRD).

PHYSICAL DATA

TABLE 1 - PROPERTIES OF SELECTED AROCLORS

PROPERTY	1016	1221	1232	1242
COLOR (APHA)	40	100	100	100
PHYSICAL STATE	MOBILE OIL	MOBILE OIL	MOBILE OIL	MOBILE OIL
STABILITY	INERT	INERT	INERT	INERT
DENSITY (LB/GAL 25C)	11.40	9.85	10.55	11.50
SPECIFIC GRAVITY X/15.5C	1.36-1.37 X-25	1.18-1.19 X-25	1.27-1.28 X-25	1.30-1.39 X-25
DISTILLATION RANGE (C)	323-356	275-320	290-325	325-366
ACIDITY MG KOH/G, MAXIMUM	.010	.014	0.14	.015
FIRE POINT (C)	NONE TO BOILING POINT	176	238	NONE TO BOILING POINT
FLASH POINT (C)	170	141-150	152-154	176-180
VAPOR PRESSURE (MM HG @ 100F)	NA	NA	0.005	0.001
VISCOSITY (SAYBOLT UNIV. SEC. @ 100F)	71-81	38-41	44-51	82-92

TABLE 1 - PROPERTIES OF SELECTED AROCLORS (CONT.)

PROPERTY	1248	1254	1260
COLOR (APHA)	100	100	150
PHYSICAL STATE	MOBILE OIL	VISCOUS LIQUID	STICKY RESIN
STABILITY	INERT	INERT	INERT

DENSITY (LB/GAL 25C)	12.04	12.82	13.50
SPECIFIC GRAVITY X/15.5C	1.40-1.41 X-65	1.49-1.50 X-65	1.55-1.56 X-90
DISTILLATION RANGE (C)	340-375	365-390	385-420
ACIDITY MG KOH/G, MAXIMUM	.010	.010	.014
FIRE POINT (C)	NONE TO BOILING POINT	NONE TO BOILING POINT	NONE TO BOILING POINT
FLASH POINT	193-196	NONE	NONE
VAPOR PRESSURE (MM HG @ 100F)	0.00037	0.00006	NA
VISCOSITY (SAYBOLT UNIV. SEC. @ 100 F)	185-240	1800-2500	-

NA - NOT AVAILABLE

REACTIVITY DATA

PCB'S ARE VERY STABLE, FIRE-RESISTANT COMPOUNDS.

SPILL, LEAK AND DISPOSAL INFORMATION

DISPOSAL OF LIQUID PCBS AND OTHER PCB ITEMS IS STRICTLY REGULATED BY THE FEDERAL GOVERNMENT. THE REGULATIONS ARE FOUND AT 40 CFR PART 761. CONSULT THESE REGULATIONS AS WELL AS APPLICABLE STATE AND LOCAL REGULATIONS PRIOR TO ANY DISPOSAL OF PCBS, PCB ITEMS, OR PCB-CONTAMINATED ITEMS.

IF PCBS LEAK OR ARE SPILLED, THE FOLLOWING STEPS SHOULD BE TAKEN IMMEDIATELY:

ALL NON-ESSENTIAL PERSONNEL SHOULD LEAVE THE LEAK OR SPILL AREA.

THE AREA SHOULD BE ADEQUATELY VENTILATED TO PREVENT THE ACCUMULATION OF VAPORS.

THE SPILL/LEAK SHOULD BE CONTAINED. LOSS TO SEWER SYSTEMS, NAVIGABLE WATERWAYS AND STREAMS SHOULD BE PREVENTED. SPILLS/LEAKS SHOULD BE REMOVED PROMPTLY BY MEANS OF ABSORPTIVE MATERIAL, SUCH AS SAWDUST, VERMICULITE, DRY SAND, CLAY, DIRT OR OTHER SIMILAR MATERIALS, OR TRAPPED AND REMOVED BY PUMPING OR OTHER SUITABLE MEANS (TRAPS, DRIP-PANS, TRAYS, ETC.).

PERSONNEL ENTERING THE SPILL OR LEAK AREA SHOULD BE FURNISHED WITH APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING AS NEEDED. SEE OCCUPATIONAL CONTROL PROCEDURES SECTION OF THIS MSDS.

PERSONNEL TRAINED IN THE EMERGENCY PROCEDURES AND PROTECTED AGAINST THE ATTENDANT HAZARDS SHOULD SHUT OFF SOURCES OF PCBS, CLEAN UP SPILLS, CONTROL AND REPAIR LEAKS AND FIGHT FIRES IN PCB AREAS.

ALL WASTES AND RESIDUES CONTAINING PCBS (E.G., WIPING CLOTHS, ABSORBENT MATERIAL, USED DISPOSABLE PROTECTIVE GLOVES, CLOTHING, ETC.) SHOULD BE COLLECTED, PLACED IN PROPER CONTAINERS, MARKED AND DISPOSED OF IN THE MANNER PRESCRIBED BY EPA REGULATIONS (40 CFR PART 761) AND APPLICABLE STATE AND LOCAL REGULATIONS.

VARIOUS FEDERAL, STATE, AND LOCAL REGULATIONS MAY REQUIRE REPORTING OF PCB SPILLS AND MAY ALSO DEFINE SPILL CLEAN-UP LEVELS. CONSULT YOUR ATTORNEY OR APPROPRIATE REGULATORY OFFICIALS FOR INFORMATION RELATING TO SPILL REPORTING AND SPILL CLEAN-UP.

ADDITIONAL COMMENTS

POLYCHLORINATED BIPHENYLS

FOR REGULATORY PURPOSES, UNDER THE TOXIC SUBSTANCES CONTROL ACT THE TERM "PCB'S" REFERS TO A CHEMICAL SUBSTANCE LIMITED TO THE BIPHENYL MOLECULE THAT HAS BEEN CHLORINATED TO VARYING DEGREES OR ANY COMBINATION OF SUBSTANCES WHICH CONTAIN SUCH SUBSTANCE (40 CFR PART 761).

CHEMICALLY, COMMERCIAL PCBS ARE DEFINED AS A SERIES OF TECHNICAL MIXTURES, CONSISTING OF MANY ISOMERS AND COMPOUNDS THAT VARY FROM MOBILE OILY LIQUIDS TO WHITE CRYSTALLINE SOLIDS AND HARD NON-CRYSTALLINE RESINS. TECHNICAL PRODUCTS VARY IN COMPOSITION, IN THE DEGREE OF CHLORINATION AND POSSIBLY ACCORDING TO BATCH.

THE MIXTURE GENERALLY USED CONTAINS AN AVERAGE OF 3 ATOMS CHLORINE PER MOLECULE (42% CHLORINE) TO 5 ATOMS OF CHLORINE PER MOLECULE (54% CHLORINE). THEY ARE USED AS COMPONENTS OF DIELECTRIC FLUIDS IN TRANSFORMERS AND CAPACITORS. PRIOR TO 1972, PCB APPLICATIONS INCLUDED HEAT TRANSFER MEDIA, HYDRAULIC AND OTHER INDUSTRIAL FLUIDS, PLASTICIZERS, CARBONLESS

PAPER, PAINTS, INKS AND ADHESIVES. FEDERAL REGULATIONS SPECIFY THAT NON-TOTALLY ENCLOSED PCB ACTIVITIES ARE PERMITTED ONLY IF SPECIFICALLY EXEMPTED OR AUTHORIZED. (40 CFR PART 761).

CAS NO. 001336363: FOR GENERAL CLASS OF COMPOUNDS

TRADE NAMES/COMMON NAMES

**ASKAREL - GENERIC NAME FOR A BROAD CLASS OF FIRE-RESISTANT SYNTHETIC CHLORINATED HYDROCARBONS AND MIXTURES USED AS DIELECTRIC FLUIDS THAT COMMONLY CONTAINED ABOUT 30-70% PCBS. SOME ASKAREL FLUIDS CONTAINED 99% OR GREATER PCBS.

PYRANOL AND INERTEEN ARE TRADEMARKS FOR COMMONLY USED DIELECTRIC FLUIDS THAT MAY HAVE CONTAINED VARYING RATIOS OF

PCBS. SOME ASKAREL FLUIDS CONTAINED 99% OR GREATER PCBS.

PYRANOL AND INERTEEN ARE TRADEMARKS FOR COMMONLY USED DIELECTRIC FLUIDS THAT MAY HAVE CONTAINED VARYING RATIOS OF PCBS AS WELL AS OTHER COMPONENTS INCLUDING CHLORINATED BENZENES.

THIS LIST OF TRADE NAMES IS REPRESENTATIVE OF SEVERAL COMMONLY USED MONSANTO PRODUCTS (OR FORMULATED WITH MONSANTO PRODUCTS). OTHER TRADEMARKED PCB PRODUCTS WERE MARKETED BY MONSANTO AND OTHER MANUFACTURERS. PCBS WERE ALSO MANUFACTURED AND SOLD BY SEVERAL EUROPEAN AND JAPANESE COMPANIES. CONTACT THE MANUFACTURER OF THE TRADEMARKED PRODUCT DIRECTLY, IF NOT IN THIS LISTING, TO DETERMINE IF THE FORMULATION CONTAINED PCBS AND ITS COMPOSITION.

DATE: 10/15/85

MSDS NUMBER: S00010793

----------FOR PRODUCT AND SALES INFORMATION----------

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE

----------PRODUCT IDENTIFICATION----------

PRODUCT NAME: CREOSOTE
COMMON NAMES/SYNONYMS: NONE

CAS NO.: UNASSIGNED
VW&R CODE: P5803

FORMULA: MIXTURE
HAZARD RATING (NFPA 704 CRITERIA)
HEALTH: 1
FIRE: 2
REACTIVITY: 0
SPECIAL: NONE

DATE ISSUED: 08/88
SUPERCEDES: NONE
HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

----------HAZARDOUS INGREDIENTS----------

			EXPOSURE LIMITS, PPM			
COMPONENT	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER LIMIT	HAZARD
1-NAPHTHONITRILE	86-53-3	<0.5	NONE	NONE	NONE	NONE
3-METHYLDIPHENYLENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
2-NAPHTHONITRILE	613-46-7	<0.5	NONE	NONE	NONE	NONE
9-10 DIHYDRO-ANTHRACENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
2-METHYLFLUORENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
DIPHENYLENE SULFIDE	132-65-0	>0.5 <3.0	NONE	NONE	NONE	NONE
PHENANTHRENE	85-01-8	>5.0	NONE	NONE	NONE	NONE
ANTHRACENE	UNREPORTED	>3.0 <5.0	NONE	NONE	NONE	NONE
ACRIDENE	260-94-6	<0.5	NONE	NONE	NONE	NONE
3-METHYLPHENANTHRENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
CARBAZOLE	86-74-8	>0.5 <3.0	NONE	NONE	NONE	NONE
4,5 METHYLENEPHENANTHRENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
2-METHYLANTHRACENE	UNREPORTED	<0.5	NONE	NONE	NONE	NONE
9-METHYLANTHRACENE	779-02-2	>0.5 <3.0	NONE	NONE	NONE	NONE
2-METHYLCARBAZOLE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
FLUORANTHENE	206-44-0	<5.0	NONE	NONE	NONE	NONE
1,2 BENZODIPHENYLENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
PYRENE	129-00-0	>0.5 <3.0	NONE	NONE	NONE	NONE
BENZOFLUORENE	UNREPORTED	>0.5 <3.0	NONE	NONE	NONE	NONE
CHRYSENE	2-18-01-9	>0.5	NONE	NONE	NONE	NONE

UNIDENTIFIED COMPOUND IN DISTILLATE	UNREPORTED	<3.0 <5.0	NONE	NONE	NONE	NONE

----------PHYSICAL PROPERTIES----------

BOILING POINT, DEG F: 410-797 VAPOR PRESSURE, MM HG/20 DEG C: 80
MELTING POINT, DEG F: NOT APPLICABLE VAPOR DENSITY (AIR=1): >1
SPECIFIC GRAVITY (WATER=1): 1.03-1.18 WATER SOLUBILITY, %: INSOLUBLE

APPEARANCE AND ODOR: DARK BROWN LIQUID WITH A PENETRATING SMOKEY ODOR AND A BURNING CAUSTIC TASTE. EVAPORATION RATE (BUTYL ACETATE=1): <1

----------FIRST AID MEASURES----------

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

IF SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING 2 GLASSES OF WATER AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

----------HEALTH HAZARD INFORMATION----------

PRIMARY ROUTES OF EXPOSURE: SKIN OR EYE CONTACT, INHALATION.

SIGNS AND SYMPTOMS OF EXPOSURE
INHALATION: BREATHING VAPOR MAY IRRITATE THE NOSE AND THROAT AND CAUSE COUGHING AND CHEST DISCOMFORT. PROLONGED EXPOSURE CAN RESULT IN ACUTE TOXIC EFFECTS SUCH AS RESPIRATORY DIFFICULTY, CONVULSIONS AND POSSIBLE CARDIOVASCULAR COLLAPSE.

EYE CONTACT: VAPORS WILL IRRITATE THE EYES. LIQUID AND MISTS WILL IRRITATE AND MAY BURN THE EYES.

SKIN CONTACT: NO IRRITATION IS LIKELY AFTER BRIEF CONTACT BUT MAY BE IRRITATING AFTER PROLONGED CONTACT.

SWALLOWED: IRRITATION OF THE GASTRO INTESTINAL TRACT FOLLOWED BY NAUSEA AND VOMITING, ABDOMINAL DISCOMFORT, RAPID PULSE, CARDIOVASCULAR COLLAPSE MAY OCCUR. FATAL DOSE IS APPROXIMATELY 0.1 G/KG OF BODY WEIGHT.

CHRONIC EFFECTS OF EXPOSURE: PROLONGED AND REPEATED SKIN EXPOSURE MAY LEAD TO CHANGES IN SKIN PIGMENTATION, BENIGN SKIN GROWTHS AND MAY IN SOME CASES, RESULTS IN SKIN CANCER.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE REPORTED.

TOXICITY DATA

ORAL: NO DATA FOUND

DERMAL: NO DATA FOUND

INHALATION: NO DATA FOUND

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

OTHER DATA: NONE

PERSONAL PROTECTION

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MINIMIZING EMISSIONS AT THE POINT OF USE.

RESPIRATORY PROTECTION: WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE

FOR THE VAPOR OR MIST CONCENTRATION AT THE POINT OF USE. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

EYE PROTECTION: CHEMICAL GOGGLES AND FULL FACE SHIELD. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

FIRE AND EXPLOSION INFORMATION

FLASH POINT, DEG F: 158
METHOD USED: CC

FLAMMABLE LIMITS IN AIR, %
LOWER: N/D UPPER: N/D

EXTINGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOL FOAM. DO NOT USE A DIRECT WATER STREAM.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTINGUISH ALL NEARBY SOURCES OF IGNITION.

HAZARDOUS REACTIVITY

STABILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HEAT, SPARKS, AND OPEN FLAMES.

MATERIALS TO AVOID: STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE AND CARBON DIOXIDE.

----------SPILL, LEAK, AND DISPOSAL PROCEDURES----------

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. EXTINGUISH ALL IGNITION SOURCES AND ENSURE THAT ALL HANDLING EQUIPMENT IS ELECTRICALLY GROUNDED. FOR SMALL SPILLS OR DRIPS, MOP OR WIPE UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, CONTAIN BY DIKING WITH SOIL OR OTHER NON-COMBUSTIBLE ABSORBENT MATERIALS AND THEN PUMP INTO DOT-APPROVED WASTE CONTAINERS; OR ABSORB WITH NON-COMBUSTIBLE SORBENT MATERIAL, PLACE RESIDUE IN DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL.
COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

----------SPECIAL PRECAUTIONS----------

HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM HEAT, SPARKS, AND FLAMES. STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. VENT CONTAINER FREQUENTLY, AND MORE OFTEN IN WARM WEATHER, TO RELIEVE PRESSURE. ELECTRICALLY GROUND ALL EQUIPMENT WHEN HANDLING THIS PRODUCT AND USE ONLY NON-SPARKING TOOLS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: DO NOT CUT, GRIND, WELD, OR DRILL ON OR NEAR THIS CONTAINER.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

----------PREPARATION INFORMATION----------

CONTACT MSDS CO-ORDINATOR, VAN WATERS & ROGERS INC.
DURING BUSINESS HOURS, PACIFIC TIME (408)435-8700

----------NOTICE----------

**VAN WATERS & ROGERS LTD. EXPRESSLY DISCLAIMS ALL EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH

DEES
EXCAVATION
AN ENVIROMENTAL COMPANY
3645 Leafwood Circle, Antioch, Ca. 94509
415-757-7712

APRIL 12, 1991

Subject: Medical Fitness
Employee training 29 CFR 1910.

TRAINING

All personnel that will be assigned or work on this project have received the required 40 hour OSHA trainig and the 8 hour refresher training if their training was more than a year ago. In addition all drivers have received their 24 hour DOT training. This includes all subcontractors who will work on this project, KVS transportation, Erickson Trucking, and Craig Wright who presently instructs the course. Under no circumstance will any person work on this project who has not received this training.

MEDICAL

All personnel for Dees Excavation, KVS transportation, and Erickson trucking have received thier pre-placement as well as their annual examinations and meet all requirements as well as all recommentdations for occupational health monitoring. This also includes drug screening.

(23) EVALUATION CRITERIA FOR PRE-EMPLOYMENT EXAM

1. Experience In Providing Pre-employment Screening.

A. History and Scope

Occupational Medicine Associates, which is a DBA for the occupational medicine practice component of the Sun Valley Medical Group, has extensive experience in the provision of pre-employment screening. We also have broad-based experience in developing, implementing and monitoring pre-placement screening programs as well as Functional Capacity Assessment and Return to Work programs for both small and large clients.

We provide a variety of pre-placement screening evaluations for our clients based upon their needs. This often requires us to perform several types of physicals for a single client based upon different job categorizations and tasks. Our experience has shown us that the best possible pre-placement screening can be performed when our clients and the providers of our medical group have a clear, concise, mutual understanding of specific job task requirements for each category of employee.

We conduct screening programs in a manner that complies with legal, ethical, invasion of privacy and medical considerations. These include Title VII of Civil Rights Act of 1964, applicable state laws, the Federal Rehabilitation Act of 1973 and the recently enacted Americans With Disabilities Act.

B. Provider Expertise

Our primary providers have been specifically designated by a number of entities who only utilize select, experienced providers and clinics to provide their screening evaluations. This list includes:

Lucky Stores
United States Postal Service
Federal Aviation Administration
California Highway Patrol
Department of Rehabilitation
San Francisco Board of Pilots
U.S. Nuclear Regulatory Commission
OCCUMED
City of Moraga
City of Pleasant Hill
City of Walnut Creek

These relationships require Occupational Medicine Associates and its primary providers to be experienced in providing screening in a tightly structured and controlled system that follows specific medical qualifications, standards, and procedures to ensure fair and consistent application of the program.

As noted above, we are providers to the highly structured OCCUMED medical screening program. We are the only East Bay providers for the San Francisco Board of Pilots detailed medical program. We are one of the highest volume providers of medical screening for the FAA in the East Bay. Additionally, we are one of only a few designated non-FAA employed physicians to provide pre-placement and annual medical screening for Air Traffic Controllers. We do extensive work for the Department of Transportation and interpret their Motor Carrier Safety Regulations. We are familiar with the federal government's extensive interpretations of these regulations and utilize them as well as our own internal network of physicians and the Oakland, Concord and Sacramento offices of the Department of Motor Vehicles Driver Safety Divisions. We have frequently participated in the exacting process of determining fitness under these regulations as a part of the DMV appeal process initiated after an employer has reported a disqualified driver to the DMV as required by California Vehicle Code 14606 B.

C. <u>Special Projects Expertise</u>

Occupational Medicine Associates and Dr. Shoop have developed a pre-placement medical evaluation program that is very similar to the medical evaluation requirements of Alameda County's Class II medical evaluations. This project requires administrating up to 8,000 pre-placement evaluations annually throughout Northern California. The program has included providing over 100 physical evaluations per month at our San Leandro clinic. We have identified more than twenty other medical providers throughout Northern California to include in the program based upon their experience and ability to provide appropriate medical screening in a timely manner. The project is administered and controlled from our San Leandro clinic. The two physicians are the program Medical Review Officers and review every physical evaluations performed for thoroughness, completeness and appropriateness of the fitness

determination and are responsible for the medical quality of the project.

D. Systems Development

The project described above required us to develop systems, protocols and quality assurance systems to handle a high volume of pre-placement screens with two days' notice of the needed appointment as well as the requirement for prompt determinations and communication of results with a minimum of paperwork. This program also has necessitated the development of systems for identifying pre-existing medical conditions and making prompt specific determinations. This requires the ability to quickly and thoroughly communicate with many private physicians so that Occupational Medicine Associates providers have any and all additional medical information necessary to make a well-informed determination based on objective medical data.

This large program also involves pre-placement drug screening of each applicant. We act as the program administrator as well as functioning as the Medical Review Officer, utilizing our expertise in administrating such programs.

E. Hazardous Exposure Screening

Occupational Medicine Associates has experience and expertise in the provision of pre-employment screening for individuals who may, in the course of their work, be exposed to biologically and chemically hazardous materials. We have developed programs for a variety of employers that meet all OSHA and SARA requirements. This includes the performance of medical surveillance evaluations for asbestosis, respirator fitness, formaldehyde and lead standards, as examples.

In addition to providing these types of surveillance examinations, we also act in the capacity of the Medical Review Officer and medical consultant to a regional firm and an international firm, providing medical control for their surveillance programs.

F. Federally Mandated Drug Screening Programs

Occupational Medicine Associates physicians also serve as formally designated Medical Review Officers for a variety of companies required to

test for substances of abuse by the Department of Transportation. This includes implementation and interpretation of drug testing programs required by the Federal Aviation Administration, Urban Mass Transit Authority and the Federal Highways Administration. Part of this project requires us to perform fitness evaluations as part of the mandated return to work fitness evaluation program.

Dr Shoop is a licensed physician with the knowledge of substance abuse disorders who has appropriate medical training to interpret the value of positive urine drug and alcohol test results. Dr. Shoop has been a practicing physician since 1970. His primary practice until 1984 consisted primarily of the practice of Emergency Medicine which required knowledge regarding substance abuse disorders and their treatment and interpretations. He has been practicing full time Occupational Medicine since 1984 and has been serving as a Medical Review Officer formally since 1986. He has attended courses regularly presented by a variety of medical education providers on this subject including the American College of Occupational Medicine. He has extensive experience in performing fitness evaluations of individuals in all aspects of Occupational Medicine. This includes the evaluating of individuals who have suffered from substance abuse disorders. This requires making determinations regarding their medical fitness to perform their required job tasks.

In order to assure a high level of understanding on the part of our providers, Dr.Shoop has developed, organized, and presented seminars concerning the D.O.T required drug testing program. A major component of these continuing education seminars has been the specific role of the MRO.

Dr. Shoop has broad-based clinical experience in the field of Occupational Medicine. His practice consists of providing care for Workers Compensation illnesses and injuries, pre-placement and annual evaluations, return to work evaluations, and function capacity assessments. This clinical experience is augmented by his role as Managing Partner of the Sun Valley Medical Group and Occupational Medicine Associates where he has developed treatment guidelines and protocols and quality assurance programs. He also manages a large project involving over 25 medical clinics in a pre-placement medical evaluation project throughout Northern California. This project includes MRO responsibilities. Dr. Shoop performs fitness evaluations as required under the Department of Transportation regulations for it's various agencies under the federal Drug Free Workplace Act. Dr. Shoop has attended formally presented programs for Medical Review Officers presented by the Federal Aviation Administration and the Department of Transportation. Dr. Shoop is board certified in Emergency Medicine.

Dr. Shoop has knowledge of the medical use of prescription drugs and the pharmacology and toxicology of illicit drugs based on sixteen years in clinical practice. In addition, continuing education classes and focused review of medical literature have provided knowledge of the pharmacology and toxicology of the illicit drugs that will be tested for by this project.

Certificate of Training

HAZARDOUS WASTE OPERATIONS

DICK CURTIS

has completed a required course of Initial 40 hour classroom instruction in accordance with the requirements of 29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response.

KERN ENVIRONMENTAL SERVICE

A Division of Kern Backhoe Service, Inc.

FRANK R. ROSENLIEB

DENNIS POWERS

12-17-89
DATE

Certificate of Training

HAZARDOUS WASTE OPERATIONS

Eugenio Bustamante

has completed a required course of initial 40 hour classroom instruction in accordance with the requirements of 29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response.

KERN ENVIRONMENTAL SERVICE

A Division of Kern Backhoe Service, Inc.

Dennis Powers

Rod Williams

3-3-90
DATE

Certificate of Training

HAZARDOUS WASTE OPERATIONS

DON SMITH

has completed a required course of initial 40 hour classroom instruction in accordance with the requirements of 29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response.

KERN ENVIRONMENTAL SERVICE

A Division of Kern Backhoe Service, Inc.

FRANK R. ROSENLIEB

DENNIS POWERS

DECEMBER 17, 1989
DATE

Certificate of Training

HAZARDOUS WASTE OPERATIONS

DON BAKER

has completed a required course of initial 40 hour classroom instruction in accordance with the requirements of 29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response.

KERN ENVIRONMENTAL SERVICE

A Division of Kern Backhoe Service, Inc.

FRANK R. ROSENLIEB

DENNIS POWERS

JANUARY 12, 1990
DATE

Certificate of Training

HAZARDOUS WASTE OPERATIONS

DAVID RUOZI

has completed a required course of initial 40 hour classroom instruction in accordance with the requirements of 29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response.

KERN ENVIRONMENTAL SERVICE

A Division of Kern Backhoe Service, Inc.

R.V. Williams
ROD WILLIAMS

DENNIS POWERS

1-15-91
DATE

Certificate of Training

HAZARDOUS WASTE OPERATIONS

HAROLD O'NEAL

has completed a required course of initial 40 hour classroom instruction in accordance with the requirements of 29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response.

KERN ENVIRONMENTAL SERVICE

A Division of Kern Backhoe Service, Inc.

FRANK R. ROSENLIEB

DENNIS POWERS

JANUARY 12, 1990
DATE