

GENERAL CONTRACTORS

GENERAL CONTRACTORS • (707) 545-0360 • LICENSE NO. 224358  
11 WEST NINTH STREET • SANTA ROSA • CALIFORNIA 95401

TO Alameda County Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94621

DATE	1/15/90	JOB NO.	B-4736
ATTENTION	Mr. Dennis Bryne		
RE:	Dreyer's Grand Ice Cream		
	5929 College Avenue		
	Oakland, California		

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings       Prints       Plans       Samples       Specifications  
 Copy of letter       Change order       Laboratory Analysis

COPIES	DATE	NO.	DESCRIPTION
1 set	1/11/90		Laboratory analyses of soil samples taken 12/13/89
1 set	1/11/90		Laboratory analyses of soil samples taken 12/14/89

THESE ARE TRANSMITTED as checked below:

- For approval       Approved as submitted       Resubmit \_\_\_\_\_ copies for approval  
 For your use       Approved as noted       Submit \_\_\_\_\_ copies for distribution  
 As requested       Returned for corrections       Return \_\_\_\_\_ corrected prints  
 For review and comment       \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 19\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS Please advise what, if anything, will be required to be done with the tank holes and stockpiled soil removed from the excavation. Your early reply will be appreciated.

COPY TO \_\_\_\_\_

SIGNED: *Donald C. Marchant*

JAN 13 REC'D

January 11, 1990

Mr. Robert Henry  
Petroleum Engineering, Inc.  
11 West 9th Street  
Santa Rosa, CA 95401

RE: PACE Project No. 491214.601  
Dryer Ice Cream

Dear Mr. Henry:

Enclosed is the report of laboratory analyses for samples received  
December 14, 1989.

If you have any questions concerning this report, please feel free  
to contact us.

Sincerely,

  
Stephen F. Nackord  
Director, Sampling and Analytical Services

Enclosures

Petroleum Engineering, Inc.  
11 West 9th Street  
Santa Rosa, CA 95401

January 11, 1990  
PACE Project  
Number: 491214601

Attn: Mr. Robert Henry

*waste oil tank*

Dryer Ice Cream

PACE Sample Number:	805650	805660	805670
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89

Parameter	Units	MDL	6'	6'	6'
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Cadmium	mg/kg wet	1	ND	ND	ND
Chromium	mg/kg wet	1	30	24	25
Lead	mg/kg wet	10	ND	ND	ND
Zinc	mg/kg wet	1	30	35	38

ORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Oil and Grease, Gravimetric (503D&E)	mg/kg wet	50	5915	150	1770
EXTRACTABLE FUELS EPA 3550/8015					
Extractable Fuels, as Diesel	mg/kg	10	370	ND	170
Sonication Extraction, Date Started			12/21/89	12/21/89	12/21/89

PURGEABLE AROMATIC COMPOUNDS, EPA 8020

Benzene	mg/kg wet	0.005	LT 20	LT 10	LT 2.0
Ethylbenzene	mg/kg wet	0.005	LT 20	LT 10	LT 2.0
Toluene	mg/kg wet	0.005	LT 20	LT 10	LT 2.0
Xylenes, Total	mg/kg wet	0.005	LT 20	22	5.5

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Dichlorodifluoromethane	ug/kg	2000	LT500	LT2000	LT2000
Chloromethane	ug/kg	2000	LT500	LT2000	LT2000
Vinyl Chloride	ug/kg	2000	LT500	LT2000	LT2000
Bromomethane	ug/kg	2000	LT500	LT2000	LT2000
Chloroethane	ug/kg	2000	LT500	LT2000	LT2000
Trichlorofluoromethane	ug/kg	2000	LT500	LT2000	LT2000
1,1-Dichloroethene	ug/kg	500	LT500	LT500	LT500

MDL Method Detection Limit  
ND Not detected at or above the MDL.  
LT Less than.

Mr. Robert Henry  
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January 11, 1990

PACE Project

Number: 491214601

*waste oil tanks*

Dryer Ice Cream

PACE Sample Number:	805650	805660	805670
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89

Parameter	Units	MDL	6'	6'	6'
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ORGANIC ANALYSIS

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Methylene Chloride	ug/kg	500	LT500	LT500	LT500
trans-1,2-Dichloroethene	ug/kg	500	LT500	LT500	LT500
1,1-Dichloroethane	ug/kg	500	LT500	LT500	LT500
Chloroform	ug/kg	500	LT500	LT500	LT500
1,1,1-Trichloroethane (TCA)	ug/kg	500	LT500	LT500	LT500
Carbon Tetrachloride	ug/kg	500	LT500	LT500	LT500
1,2-Dichloroethane (EDC)	ug/kg	500	LT500	680	LT500
Trichloroethene (TCE)	ug/kg	500	LT500	LT500	LT500
1,2-Dichloropropane	ug/kg	500	LT500	LT500	LT500
Bromodichloromethane	ug/kg	500	LT500	LT500	LT500
2-Chloroethylvinyl ether	ug/kg	500	LT500	LT500	LT500
trans-1,3-Dichloropropene	ug/kg	500	LT500	LT500	LT500
cis-1,3-Dichloropropene	ug/kg	500	LT500	LT500	LT500
1,1,2-Trichloroethane	ug/kg	500	LT500	LT500	LT500
Tetrachloroethene	ug/kg	500	LT500	LT500	LT500
Dibromochloromethane	ug/kg	500	LT500	LT500	LT500
Chlorobenzene	ug/kg	500	LT500	LT500	LT500
Bromoform	ug/kg	500	LT500	LT500	LT500
1,1,2,2-Tetrachloroethane	ug/kg	500	LT500	LT500	LT500
1,3-Dichlorobenzene	ug/kg	500	LT500	LT500	LT500
1,4-Dichlorobenzene	ug/kg	500	LT500	LT500	LT500
1,2-Dichlorobenzene	ug/kg	500	LT500	LT500	LT500
Bromochloromethane (Surrogate Recovery)			93%	112%	84%
1,4-Dichlorobutane (Surrogate Recovery)			95%	107%	91%

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

N-Nitrosodimethylamine	ug/kg	300	ND	ND	ND
Aniline	ug/kg	300	ND	ND	ND

MDL Method Detection Limit  
LT Less than.  
ND Not detected at or above the MDL.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601

W-0

Dryer Ice Cream

PACE Sample Number:	805650	805660	805670
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89

Parameter	Units	MDL	6'	6'	6'
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ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

Bis(2-chloroethyl) ether	ug/kg	300	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	300	ND	ND	ND
Benzyl Alcohol	ug/kg	300	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	300	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	300	ND	ND	ND
Bis(2-chloroisopropyl) ether	ug/kg	300	ND	ND	ND
N-Nitrosodipropylamine	ug/kg	300	ND	ND	ND
Hexachloroethane	ug/kg	300	ND	ND	ND
Nitrobenzene	ug/kg	300	ND	ND	ND
Isophorone	ug/kg	300	ND	ND	ND
Bis(2-chloroethoxy)methane	ug/kg	300	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	300	ND	ND	ND
Naphthalene	ug/kg	300	3020	25600	12800
4-Chloroaniline	ug/kg	300	ND	ND	ND
Hexachlorobutadiene	ug/kg	300	ND	ND	ND
2-Methylnaphthalene	ug/kg	300	5700	22300	13300
Hexachlorocyclopentadiene	ug/kg	300	ND	ND	ND
2-Chloronaphthalene	ug/kg	300	ND	ND	ND
2-Nitroaniline	ug/kg	1500	ND	ND	ND
Dimethylphthalate	ug/kg	300	ND	ND	ND
Acenaphthylene	ug/kg	300	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	300	ND	ND	ND
3-Nitroaniline	ug/kg	1500	ND	ND	ND
Acenaphthene	ug/kg	300	ND	ND	ND
Dibenzofuran	ug/kg	300	ND	326	ND
2,4-Dinitrotoluene	ug/kg	300	ND	ND	ND
Diethylphthalate	ug/kg	300	ND	ND	ND
Fluorene	ug/kg	300	1260	962	ND

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601

W.O

Dryer Ice Cream

PACE Sample Number:	805650	805660	805670
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89

Parameter	Units	MDL	6'	6'	6'
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ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

4-Nitroaniline	ug/kg	1500	ND	ND	ND
4-Chlorophenylphenylether	ug/kg	300	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	300	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	300	ND	ND	ND
4-Bromophenylphenylether	ug/kg	300	ND	ND	ND
Hexachlorobenzene	ug/kg	300	ND	ND	ND
Phenanthrene	ug/kg	300	<del>1940</del>	<del>1530</del>	<del>613</del>
Anthracene	ug/kg	300	ND	ND	ND
Di-n-butylphthalate	ug/kg	300	ND	ND	ND
Fluoranthene	ug/kg	300	ND	ND	ND
Benzidine	ug/kg	1500	ND	ND	ND
Pyrene	ug/kg	300	<del>478</del>	ND	ND
Butylbenzylphthalate	ug/kg	300	ND	ND	ND
Benzo(a)anthracene	ug/kg	300	ND	ND	ND
3,3'-Dichlorobenzidine	ug/kg	600	ND	ND	ND
Chrysene	ug/kg	300	ND	ND	ND
Bis(2-ethylhexyl)phthalate	ug/kg	300	ND	ND	<del>1070</del>
Di-n-octylphthalate	ug/kg	300	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	300	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	300	ND	ND	ND
Benzo(a)pyrene	ug/kg	300	ND	ND	ND
Ideno(1,2,3-cd)pyrene	ug/kg	300	ND	ND	ND
Dibenzo(a,h)anthracene	ug/kg	300	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	300	ND	ND	ND
Phenol	ug/kg	300	ND	ND	ND
2-Chlorophenol	ug/kg	300	ND	ND	ND
2-Methylphenol	ug/kg	300	ND	ND	ND
4-Methylphenol	ug/kg	300	ND	ND	ND

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Mr. Robert Henry  
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January 11, 1990  
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Number: 491214601

Dryer Ice Cream

PACE Sample Number:	805650	805660	805670
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89

Parameter	Units	MDL	6'	6'	6'
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ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

2-Nitrophenol	ug/kg	300	ND	ND	ND
2,4-Dimethylphenol	ug/kg	300	ND	ND	ND
Benzoic Acid	ug/kg	1500	ND	ND	ND
2,4-Dichlorophenol	ug/kg	300	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	300	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	300	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	300	ND	ND	ND
2,4-Dinitrophenol	ug/kg	1500	ND	ND	ND
4-Nitrophenol	ug/kg	1500	ND	ND	ND
2-Methyl-4,6-dinitrophenol	ug/kg	1500	ND	ND	ND
Pentachlorophenol	ug/kg	300	ND	ND	ND
alpha-BHC	ug/kg	300	ND	ND	ND
beta-BHC	ug/kg	300	ND	ND	ND
gamma-BHC	ug/kg	300	ND	ND	ND
delta-BHC	ug/kg	300	ND	ND	ND
Heptachlor	ug/kg	300	ND	ND	ND
Aldrin	ug/kg	300	ND	ND	ND
Heptachlor Epoxide	ug/kg	300	ND	ND	ND
Endosulfan I	ug/kg	300	ND	ND	ND
4,4'-DDE	ug/kg	1500	ND	ND	ND
Dieldrin	ug/kg	300	ND	ND	ND
Endrin	ug/kg	300	ND	ND	ND
Endosulfan II	ug/kg	300	ND	ND	ND
4,4'-DDD	ug/kg	300	ND	ND	ND
Endrin Aldehyde	ug/kg	1500	ND	ND	ND
4,4'-DDT	ug/kg	300	ND	ND	ND
Endosulfan Sulfate	ug/kg	1500	ND	ND	ND
Aroclor-1016	ug/kg	3000	ND	ND	ND

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601 W.O.

Dryer Ice Cream

PACE Sample Number:	805650	805660	805670
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89

Parameter	Units	MDL	6'	6'	6'
			1214-1	1214-2	1214-3

ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

Aroclor-1221	ug/kg	3000	ND	ND	ND
Aroclor-1232	ug/kg	3000	ND	ND	ND
Aroclor-1242	ug/kg	3000	ND	ND	ND
Aroclor-1248	ug/kg	3000	ND	ND	ND
Aroclor-1254	ug/kg	3000	ND	ND	ND
Aroclor-1260	ug/kg	3000	ND	ND	ND
Nitrobenzene-d5 (Surrogate Recovery)			140%	89%	63%
2-Fluorobiphenyl (Surrogate Recovery)			123%	113%	89%
Terphenyl-d14 (Surrogate Recovery)			155%	97%	77%
2-Fluorophenol (Surrogate Recovery)			103%	118%	79%
Phenol-d5 (Surrogate Recovery)			105%	69%	64%
2,4,6-Tribromophenol (Surrogate Recovery)			97%	85%	56%

Date Extracted for GCMS Semi-volatiles	12/21/89	12/21/89	12/21/89
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MDL Method Detection Limit  
ND Not detected at or above the MDL.



Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601

W.O.

Dryer Ice Cream

Parameter	Units	MDL	6'	Stockpile	Stockpile
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6

*waste oil*

INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Cadmium	mg/kg wet	1	ND	ND	ND
Chromium	mg/kg wet	1	33	36	39
Lead	mg/kg wet	10	ND	18	54
Zinc	mg/kg wet	1	61	83	130

ORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Oil and Grease, Gravimetric (503D&E)	mg/kg wet	50	5625	100	125
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EXTRACTABLE FUELS EPA 3550/8015

Extractable Fuels, as Diesel	mg/kg	10	1800	70	120
Sonication Extraction, Date Started			12/21/89	12/21/89	12/21/89

PURGEABLE AROMATIC COMPOUNDS, EPA 8020

Benzene	mg/kg wet	0.005	LT 2.0	LT 1.0	ND
Ethylbenzene	mg/kg wet	0.005	LT 2.0	LT 1.0	0.006
Toluene	mg/kg wet	0.005	LT 2.0	LT 1.0	0.022
Xylenes, Total	mg/kg wet	0.005	2.4	LT 1.0	0.038

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Dichlorodifluoromethane	ug/kg	20	-	-	LT2000
Dichlorodifluoromethane	ug/kg	2000	LT2000	-	-
Dichlorodifluoromethane	ug/kg	400	-	LT400	-
Chloromethane	ug/kg	20	-	-	LT2000
Chloromethane	ug/kg	2000	LT2000	-	-
Chloromethane	ug/kg	400	-	LT400	-
Vinyl Chloride	ug/kg	20	-	-	LT2000
Vinyl Chloride	ug/kg	2000	LT2000	-	-
Vinyl Chloride	ug/kg	400	-	LT400	-

MDL Method Detection Limit  
ND Not detected at or above the MDL.  
LT Less than.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601

W.O.

Dryer Ice Cream

Parameter	Units	MDL	6'	Stockpile	Stockpile
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6

ORGANIC ANALYSIS

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Bromomethane	ug/kg	20	-	-	LT2000
Bromomethane	ug/kg	2000	LT2000	-	-
Bromomethane	ug/kg	400	-	LT400	-
Chloroethane	ug/kg	20	-	-	LT2000
Chloroethane	ug/kg	2000	LT2000	-	-
Chloroethane	ug/kg	400	-	LT400	-
Trichlorofluoromethane	ug/kg	20	-	-	LT2000
Trichlorofluoromethane	ug/kg	2000	LT2000	-	-
Trichlorofluoromethane	ug/kg	400	-	LT400	-
1,1-Dichloroethene	ug/kg	100	-	LT100	-
1,1-Dichloroethene	ug/kg	5.0	-	-	LT500
1,1-Dichloroethene	ug/kg	500	LT500	-	-
Methylene Chloride	ug/kg	100	-	LT100	-
Methylene Chloride	ug/kg	5.0	-	-	LT500
Methylene Chloride	ug/kg	500	LT500	-	-
trans-1,2-Dichloroethene	ug/kg	100	-	LT100	-
trans-1,2-Dichloroethene	ug/kg	5.0	-	-	LT500
trans-1,2-Dichloroethene	ug/kg	500	LT500	-	-
1,1-Dichloroethane	ug/kg	100	-	LT100	-
1,1-Dichloroethane	ug/kg	5.0	-	-	LT500
1,1-Dichloroethane	ug/kg	500	LT500	-	-
Chloroform	ug/kg	100	-	LT100	-
Chloroform	ug/kg	5.0	-	-	LT500
Chloroform	ug/kg	500	LT500	-	-
1,1,1-Trichloroethane (TCA)	ug/kg	100	-	LT100	-
1,1,1-Trichloroethane (TCA)	ug/kg	5.0	-	-	LT500
1,1,1-Trichloroethane (TCA)	ug/kg	500	LT500	-	-
Carbon Tetrachloride	ug/kg	100	-	LT100	-

MDL Method Detection Limit  
LT Less than.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601 V.0

Dryer Ice Cream

PACE Sample Number:	805680	805690	805700
Date Collected:	12/14/89	12/14/89	12/14/89
Date Received:	12/14/89	12/14/89	12/14/89
	1214-4	1214-5	1214-6
<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>6'</u> <u>Stockpile</u> <u>Stockpile</u>

ORGANIC ANALYSIS

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Carbon Tetrachloride	ug/kg	5.0	-	-	LT500
Carbon Tetrachloride	ug/kg	500	LT500	-	-
1,2-Dichloroethane (EDC)	ug/kg	100	-	LT100	-
1,2-Dichloroethane (EDC)	ug/kg	5.0	-	-	LT500
1,2-Dichloroethane (EDC)	ug/kg	500	LT500	-	-
Trichloroethene (TCE)	ug/kg	100	-	LT100	-
Trichloroethene (TCE)	ug/kg	5.0	-	-	LT500
Trichloroethene (TCE)	ug/kg	500	LT500	-	-
1,2-Dichloropropane	ug/kg	100	-	LT100	-
1,2-Dichloropropane	ug/kg	5.0	-	-	LT500
1,2-Dichloropropane	ug/kg	500	LT500	-	-
Bromodichloromethane	ug/kg	100	-	LT100	-
Bromodichloromethane	ug/kg	5.0	-	-	LT500
Bromodichloromethane	ug/kg	500	LT500	-	-
2-Chloroethylvinyl ether	ug/kg	100	-	LT100	-
2-Chloroethylvinyl ether	ug/kg	5.0	-	-	LT500
2-Chloroethylvinyl ether	ug/kg	500	LT500	-	-
trans-1,3-Dichloropropene	ug/kg	100	-	LT100	-
trans-1,3-Dichloropropene	ug/kg	5.0	-	-	LT500
trans-1,3-Dichloropropene	ug/kg	500	LT500	-	-
cis-1,3-Dichloropropene	ug/kg	100	-	LT100	-
cis-1,3-Dichloropropene	ug/kg	5.0	-	-	LT500
cis-1,3-Dichloropropene	ug/kg	500	LT500	-	-
1,1,2-Trichloroethane	ug/kg	100	-	LT100	-
1,1,2-Trichloroethane	ug/kg	5.0	-	-	LT500
1,1,2-Trichloroethane	ug/kg	500	LT500	-	-
Tetrachloroethene	ug/kg	100	-	LT100	-
Tetrachloroethene	ug/kg	5.0	-	-	LT500

MDL Method Detection Limit  
LT Less than.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601

W. O.

Dryer Ice Cream

Parameter	Units	MDL	805680	805690	805700
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6
			6'	Stockpile	Stockpile

ORGANIC ANALYSIS

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Tetrachloroethene	ug/kg	500	LT500	-	-
Dibromochloromethane	ug/kg	100	-	LT100	-
Dibromochloromethane	ug/kg	5.0	-	-	LT500
Dibromochloromethane	ug/kg	500	LT500	-	-
Chlorobenzene	ug/kg	100	-	LT100	-
Chlorobenzene	ug/kg	5.0	-	-	LT500
Chlorobenzene	ug/kg	500	LT500	-	-
Bromoform	ug/kg	100	-	LT100	-
Bromoform	ug/kg	5.0	-	-	LT500
Bromoform	ug/kg	500	LT500	-	-
1,1,2,2-Tetrachloroethane	ug/kg	100	-	LT100	-
1,1,2,2-Tetrachloroethane	ug/kg	5.0	-	-	LT500
1,1,2,2-Tetrachloroethane	ug/kg	500	LT500	-	-
1,3-Dichlorobenzene	ug/kg	100	-	LT100	-
1,3-Dichlorobenzene	ug/kg	5.0	-	-	LT500
1,3-Dichlorobenzene	ug/kg	500	LT500	-	-
1,4-Dichlorobenzene	ug/kg	100	-	LT100	-
1,4-Dichlorobenzene	ug/kg	5.0	-	-	LT500
1,4-Dichlorobenzene	ug/kg	500	LT500	-	-
1,2-Dichlorobenzene	ug/kg	100	-	LT100	-
1,2-Dichlorobenzene	ug/kg	5.0	-	-	LT500
1,2-Dichlorobenzene	ug/kg	500	LT500	-	-
Bromochloromethane (Surrogate Recovery)			-	98%	95%
Bromochloromethane (Surrogate Recovery)	ug/kg		94%	-	-
1,4-Dichlorobutane (Surrogate Recovery)			-	93%	92%
1,4-Dichlorobutane (Surrogate Recovery)	ug/kg		97%	-	-

MDL Method Detection Limit  
LT Less than.

Mr. Robert Henry  
Page 11

January 11, 1990  
PACE Project  
Number: 491214601

W.O.

Dryer Ice Cream

Parameter	Units	MDL	805680	805690	805700
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6
			6'	Stockpile	Stockpile

ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

N-Nitrosodimethylamine	ug/kg	300	ND	ND	ND
Aniline	ug/kg	300	ND	ND	ND
Bis(2-chloroethyl) ether	ug/kg	300	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	300	ND	ND	ND
Benzyl Alcohol	ug/kg	300	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	300	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	300	ND	ND	ND
Bis(2-chloroisopropyl) ether	ug/kg	300	ND	ND	ND
N-Nitrosodipropylamine	ug/kg	300	ND	ND	ND
Hexachloroethane	ug/kg	300	ND	ND	ND
Nitrobenzene	ug/kg	300	ND	ND	ND
Isophorone	ug/kg	300	ND	ND	ND
Bis(2-chloroethoxy)methane	ug/kg	300	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	300	ND	ND	ND
Naphthalene	ug/kg	300	671	ND	ND
4-Chloroaniline	ug/kg	300	ND	ND	ND
Hexachlorobutadiene	ug/kg	300	ND	ND	ND
2-Methylnaphthalene	ug/kg	300	699	ND	ND
Hexachlorocyclopentadiene	ug/kg	300	ND	ND	ND
2-Chloronaphthalene	ug/kg	300	ND	ND	ND
2-Nitroaniline	ug/kg	1500	ND	ND	ND
Dimethylphthalate	ug/kg	300	ND	ND	ND
Acenaphthylene	ug/kg	300	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	300	ND	ND	ND
3-Nitroaniline	ug/kg	1500	ND	ND	ND
Acenaphthene	ug/kg	300	ND	ND	ND
Dibenzofuran	ug/kg	300	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	300	ND	ND	ND

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Mr. Robert Henry  
Page 12

January 11, 1990  
PACE Project  
Number: 491214601

W.O.

Dryer Ice Cream

Parameter	Units	MDL	805680	805690	805700
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6
			6'	Stockpile	Stockpile

ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

Diethylphthalate	ug/kg	300	ND	ND	ND
Fluorene	ug/kg	300	ND	ND	ND
4-Nitroaniline	ug/kg	1500	ND	ND	ND
4-Chlorophenylphenylether	ug/kg	300	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	300	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	300	ND	ND	ND
4-Bromophenylphenylether	ug/kg	300	ND	ND	ND
Hexachlorobenzene	ug/kg	300	ND	ND	ND
Phenanthrene	ug/kg	300	ND	ND	ND
Anthracene	ug/kg	300	ND	ND	ND
Di-n-butylphthalate	ug/kg	300	ND	ND	ND
Fluoranthene	ug/kg	300	ND	ND	ND
Benzidine	ug/kg	1500	ND	ND	ND
Pyrene	ug/kg	300	ND	ND	ND
Butylbenzylphthalate	ug/kg	300	ND	ND	ND
Benzo(a)anthracene	ug/kg	300	ND	ND	ND
3,3'-Dichlorobenzidine	ug/kg	600	ND	ND	ND
Chrysene	ug/kg	300	ND	ND	ND
Bis(2-ethylhexyl)phthalate	ug/kg	300	1270*	ND	ND
Di-n-octylphthalate	ug/kg	300	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	300	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	300	ND	ND	ND
Benzo(a)pyrene	ug/kg	300	ND	ND	ND
Ideno(1,2,3-cd)pyrene	ug/kg	300	ND	ND	ND
Dibenzo(a,h)anthracene	ug/kg	300	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	300	ND	ND	ND
Phenol	ug/kg	300	ND	ND	ND
2-Chlorophenol	ug/kg	300	ND	ND	ND

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Mr. Robert Henry  
Page 13

January 11, 1990  
PACE Project  
Number: 491214601

W.O

Dryer Ice Cream

Parameter	Units	MDL	6'	Stockpile	Stockpile
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6

ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

2-Methylphenol	ug/kg	300	ND	ND	ND
4-Methylphenol	ug/kg	300	ND	ND	ND
2-Nitrophenol	ug/kg	300	ND	ND	ND
2,4-Dimethylphenol	ug/kg	300	ND	ND	ND
Benzoic Acid	ug/kg	1500	ND	ND	ND
2,4-Dichlorophenol	ug/kg	300	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	300	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	300	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	300	ND	ND	ND
2,4-Dinitrophenol	ug/kg	1500	ND	ND	ND
4-Nitrophenol	ug/kg	1500	ND	ND	ND
2-Methyl-4,6-dinitrophenol	ug/kg	1500	ND	ND	ND
Pentachlorophenol	ug/kg	300	ND	ND	ND
alpha-BHC	ug/kg	300	ND	ND	ND
beta-BHC	ug/kg	300	ND	ND	ND
gamma-BHC	ug/kg	300	ND	ND	ND
delta-BHC	ug/kg	300	ND	ND	ND
Heptachlor	ug/kg	300	ND	ND	ND
Aldrin	ug/kg	300	ND	ND	ND
Heptachlor Epoxide	ug/kg	300	ND	ND	ND
Endosulfan I	ug/kg	300	ND	ND	ND
4,4'-DDE	ug/kg	1500	ND	ND	ND
Dieldrin	ug/kg	300	ND	ND	ND
Endrin	ug/kg	300	ND	ND	ND
Endosulfan II	ug/kg	300	ND	ND	ND
4,4'-DDD	ug/kg	300	ND	ND	ND
Endrin Aldehyde	ug/kg	1500	ND	ND	ND
4,4'-DDT	ug/kg	300	ND	ND	ND

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Mr. Robert Henry  
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January 11, 1990  
PACE Project  
Number: 491214601

W.O.

Dryer Ice Cream

Parameter	Units	MDL	805680	805690	805700
PACE Sample Number:			805680	805690	805700
Date Collected:			12/14/89	12/14/89	12/14/89
Date Received:			12/14/89	12/14/89	12/14/89
			1214-4	1214-5	1214-6
			6'	Stockpile	Stockpile

ORGANIC ANALYSIS

EXTRACTABLE ORGANICS BY EPA 8270 (GC/MS)

Endosulfan Sulfate	ug/kg	1500	ND	ND	ND
Aroclor-1016	ug/kg	3000	ND	ND	ND
Aroclor-1221	ug/kg	3000	ND	ND	ND
Aroclor-1232	ug/kg	3000	ND	ND	ND
Aroclor-1242	ug/kg	3000	ND	ND	ND
Aroclor-1248	ug/kg	3000	ND	ND	ND
Aroclor-1254	ug/kg	3000	ND	ND	ND
Aroclor-1260	ug/kg	3000	ND	ND	ND
Nitrobenzene-d5 (Surrogate Recovery)			92%	91%	84%
2-Fluorobiphenyl (Surrogate Recovery)			94%	90%	94%
Terphenyl-d14 (Surrogate Recovery)			102%	95%	96%
2-Fluorophenol (Surrogate Recovery)			90%	87%	79%
Phenol-d5 (Surrogate Recovery)			87%	89%	82%
2,4,6-Tribromophenol (Surrogate Recovery)			87%	70%	76%
Date Extracted for GCMS Semi-volatiles			12/21/89	12/21/89	12/21/89

MDL Method Detection Limit  
ND Not detected at or above the MDL.



Mr. Robert Henry  
Page 15

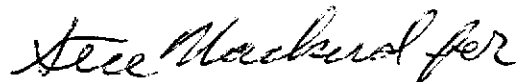
January 11, 1990  
PACE Project  
Number: 491214601

Dryer Ice Cream

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my direct supervision.



Stephen F. Nackord  
Director, Sampling and Analytical Services



Douglas E. Oram, Ph.D.  
Organic Chemistry Manager



REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California
Leawood, Kansas
Irvine, California
Asheboro, North Carolina

PACE Laboratories, Inc.

Laboratory Report Invoice

ROUTING

Client Name: Petroleum Engineering, Inc.
11 West 9th Street

Project #: 491214601

Client #: 780631

Routing lines with labels DEO and SFN

ATTN.: Santa Rosa, CA 95401
Mr. Robert Henry

Bill to #: \_\_\_\_\_

Samples Received: December 14, 1989.

Client Project #:

Purchase Order #: # 1783

Project Name: Dryer Ice Cream

Analysis Cost \_\_\_\_\_

Field Cost \_\_\_\_\_

502017010 Inorganic Cost \_\_\_\_\_

502017011 Organic Cost \_\_\_\_\_

502017015 Field Cost \_\_\_\_\_

TOTAL COST \_\_\_\_\_

Invoice #: \_\_\_\_\_ Date : \_\_\_\_\_

CHAIN-OF-CUSTODY RECORD  
Analytical Request

Client Petroleum Engineering  
Address 11 W. Ninth St  
Santa Rosa CA. 95401  
Phone (707) 545-0360

Report To: Robert Henry  
Bill To: Petroleum Eng.  
P.O. # / Billing Reference # 1783  
Project Name / No. Dryer Ice Cream

Pace Client No. 780631  
Pace Project Manager TSG  
Pace Project No. 491214.601  
\*Requested Due Date: Std

Sampled By (PRINT):  
Donald Tokarski  
Sampler Signature Donald Tokarski Date Sampled 12-14-89

NO. OF CONTAINERS	PRESERVATIVES				ANALYSES REQUEST	REMARKS
	UNPRESERVED	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	VOA		
					TPH Heavy TOG BTX+E 8010 8270 Cd, Cr, Pb, Zn, TPAH	J/3

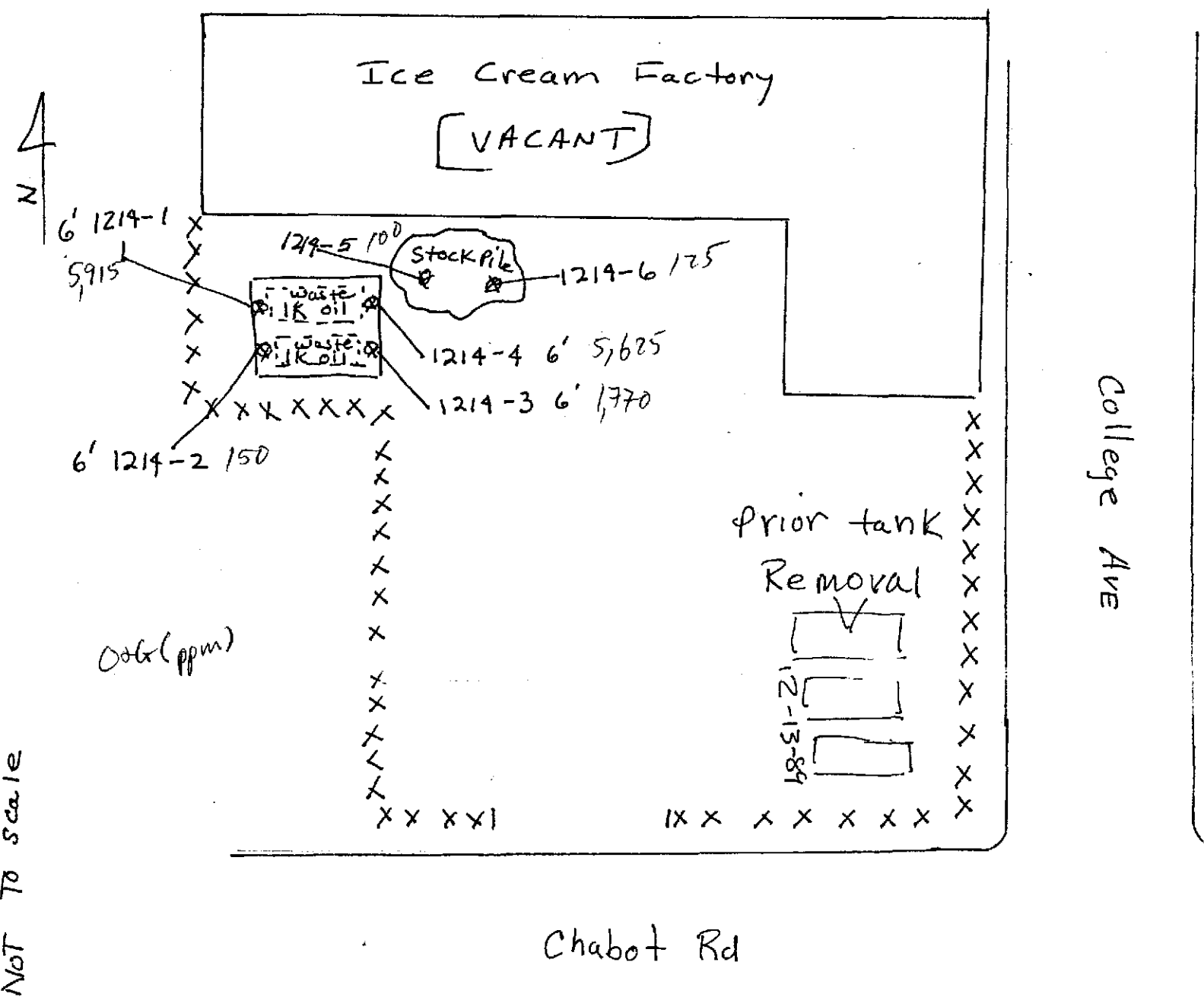
ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	UNPRESERVED	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	VOA	ANALYSES REQUEST	REMARKS
1	1214-1		Soil	80565	1					X X X X X X	6'
2	1214-2			566	1					X X X X X X	6'
3	1214-3			567	1					X X X X X X	6'
4	1214-4			568	1					X X X X X X	6'
5	1214-5			569	1					X X X X X X	
6	1214-6		↓	80570	1					X X X X X X	stockpile
7											
8											

COOLER NOS.	BAILERS	SHIPMENT OUT/DATE	METHOD RETURNED/DATE	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
				1-6	Donald Tokarski Pace	J. Sanderson	12/14/89	1630

Additional Comments  
Time at site  
1330 to 1530  
2 hrs  
61 miles (35)  
1.5 hr

Request Copy  
Frank Gray  
Fire Insp. Oakland  
Robert Byrne  
Dennis mut. spec  
Haz Alameda

491214.601



at site  
 1330 to 1530  
 2 hrs  
 61 miles  
 1.5 hrs  
 Total 3.5 hrs

at site  
 Dennis Byrne  
 Haz. Mat Spec  
 Alameda  
 Frank Gray  
 Fire Insp.  
 City of OAKLAND  
 Robert Henry  
 Proj Manager  
 Petroleum Eng.

6' { 1214-1  
 1214-2 } waste oil  
 1214-3 } sandy soil  
 1214-4 } blot-gray soil

Stockpile { 1214-5 } waste oil  
 1214-6 }

JAN 13 REC'D

January 11, 1990

Mr. Robert Henry  
Petroleum Engineering, Inc.  
11 West 9th Street  
Santa Rosa, CA 95401

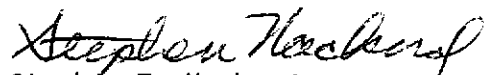
RE: PACE Project No. 491213.601  
Dreyer's Ice Cream

Dear Mr. Henry:

Enclosed is the report of laboratory analyses for samples received  
December 13, 1989.

If you have any questions concerning this report, please feel free  
to contact us.

Sincerely,



Stephen F. Nackord  
Director, Sampling and Analytical Services

Enclosures

Petroleum Engineering, Inc.  
11 West 9th Street  
Santa Rosa, CA 95401

January 11, 1990  
PACE Project  
Number: 491213601

Attn: Mr. Robert Henry

Dreyer's Ice Cream

PACE Sample Number:  
Date Collected:  
Date Received:  
Parameter

gas tanks      diesel

	805240	805250	805260
Date Collected:	12/13/89	12/13/89	12/13/89
Date Received:	12/13/89	12/13/89	12/13/89
MDL	1213-1	1213-2	1213-3

Units

MDL

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015)

PURGEABLE AROMATICS (BTXE BY EPA 8020):

Benzene

Ethylbenzene

Toluene

Xylenes, Total

EXTRACTABLE FUELS EPA 3550/8015

Extractable Fuels, as Diesel

Sonication Extraction, Date Started

PURGEABLE AROMATIC COMPOUNDS, EPA 8020

Benzene

Ethylbenzene

Toluene

Xylenes, Total

	mg/kg wet	1.0	30	40	-
Purgeable Fuels, as Gasoline (EPA 8015)	mg/kg wet	1.0	30	40	-
Benzene	mg/kg wet	0.005	LT 0.038	LT 0.038	-
Ethylbenzene	mg/kg wet	0.005	LT 0.038	0.15	-
Toluene	mg/kg wet	0.005	0.043	0.045	-
Xylenes, Total	mg/kg wet	0.005	0.16	0.16	-
Extractable Fuels, as Diesel	mg/kg	10	-	-	17
Sonication Extraction, Date Started					12/21/89
Benzene	mg/kg wet	0.005	-	-	LT 10
Ethylbenzene	mg/kg wet	0.005	-	-	LT 10
Toluene	mg/kg wet	0.005	-	-	LT 10
Xylenes, Total	mg/kg wet	0.005	-	-	LT 10

MDL Method Detection Limit  
LT Less than.

Mr. Robert Henry  
Page 2

January 11, 1990  
PACE Project

Number: 491213601

diesel tanks

Dreyer's Ice Cream

Parameter	Units	MDL	805270	805280	805290
PACE Sample Number:			805270	805280	805290
Date Collected:			12/13/89	12/13/89	12/13/89
Date Received:			12/13/89	12/13/89	12/13/89
Parameter	Units	MDL	1213-4	1213-5	1213-6

ORGANIC ANALYSIS

EXTRACTABLE FUELS EPA 3550/8015	mg/kg	10	350	23	46
Extractable Fuels, as Diesel					
Sonication Extraction, Date Started			12/21/89	12/21/89	12/21/89

PURGEABLE AROMATIC COMPOUNDS, EPA 8020	mg/kg wet	0.005	LT 20	LT 20	LT 2.5
Benzene	mg/kg wet	0.005	LT 20	LT 20	LT 2.5
Ethylbenzene	mg/kg wet	0.005	LT 20	LT 20	LT 2.5
Toluene	mg/kg wet	0.005	LT 20	LT 20	LT 2.5
Xylenes, Total	mg/kg wet	0.005	38	LT 20	LT 2.5

MDL Method Detection Limit  
LT Less than.

Mr. Robert Henry  
Page 3

January 11, 1990  
PACE Project

Number: 491213601

*gas tank*

Dreyer's Ice Cream

PACE Sample Number:	805300	805310
Date Collected:	12/13/89	12/13/89
Date Received:	12/13/89	12/13/89
Parameter	Units	MDL
		1213-7
		1213-8

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):

Purgeable Fuels, as Gasoline (EPA 8015) mg/kg wet 1.0 320 190

PURGEABLE AROMATICS (BTXE BY EPA 8020):

Benzene mg/kg wet 0.005 1.3 0.046

Ethylbenzene mg/kg wet 0.005 5.1 2.5

Toluene mg/kg wet 0.005 4.1 0.32

Xylenes, Total mg/kg wet 0.005 21 9.5

MDL Method Detection Limit

The data contained in this report were obtained using EPA or other approved methodologies. All analyses were performed by me or under my direct supervision.

*Steve Blackwell for:*

Douglas E. Oram, Ph.D.  
Organic Chemistry Manager



CHAIN-OF-CUSTODY RECORD  
Analytical Request

Client Petroleum Engineering  
Address 11 W. Ninth St  
Santa Rosa CA. 95401  
Phone (707) 545-0360

Report To: Rob Henry  
Bill To: Petroleum Engineering  
P.O. # / Billing Reference  
Project Name / No. Dryers Ice Cream

Pace Client No. 780631  
Pace Project Manager TSG  
Pace Project No. 991213.601  
\*Requested Due Date: 5/1

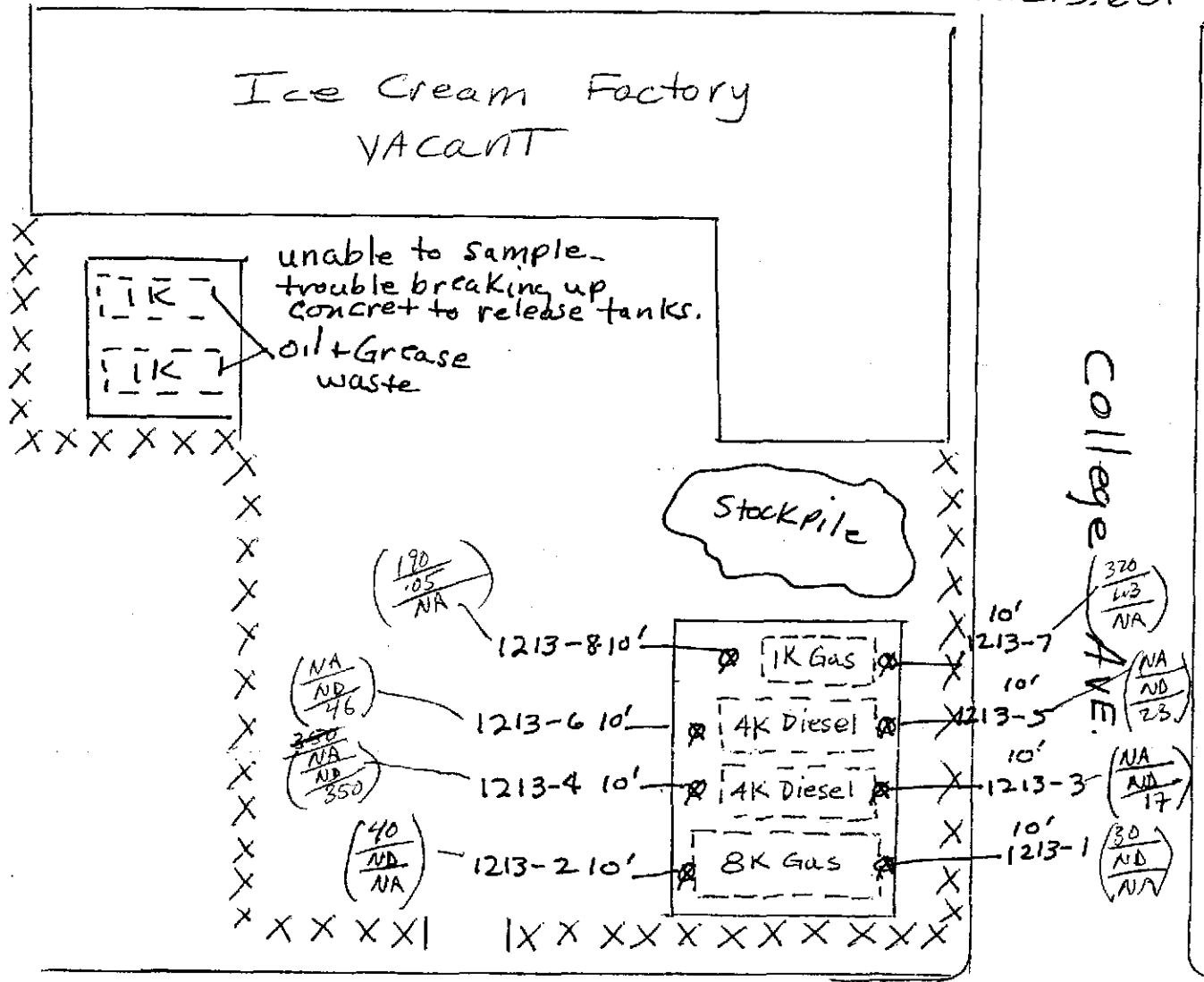
Sampled By (PRINT): DONALD Tokarski  
Sampler Signature: Donald Tokarski Date Sampled: 12-13/89

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES			ANALYSES REQUEST	REMARKS
						UNPRESERVED	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>		
1	1213-1		Soil	80524	1				X	
2	1213-2			525	1				X	
3	1213-3			526	1				X	
4	1213-4			527	1				X	
5	1213-5			528	1				X	
6	1213-6			529	1				X	
7	1213-7			530	1				X	
8	1213-8			80531	1				X	

COOLER NOS.	BAILERS	SHIPMENT METHOD	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
		OUT/DATE RETURNED/DATE	1-8	Donald Tokarski Pace of Danderson		12/13/89	500pm

Additional Comments  
Requested Lab Results:  
City of Oakland  
Fire Inspector  
FRANK Gray  
Alameda County  
Dennis Byrne  
HAZ. Mat. Spec.

NOT TO SCALE



at site  
 10AM to 3:30PM  
 5.5 hrs  
 Travel time  
 1.5 hrs  
 60 miles

at site  
 Dennis Byrne  
 HAZ. Mut. Spec.  
 Alameda  
 Frank Gray  
 Fire Insp.  
 City of Oakland  
 Rob Henry  
 Proj. manager  
 Petroleum Eng

TPkg  
 B (ppm)  
 TPKld

Gas { 1213-1 10'  
 1213-2  
 Diesel { 1213-3  
 1213-4  
 1213-5  
 1213-6  
 Gas { 1213-7  
 1213-8

Light gray clay  
 like soil mixed w  
 gravel