



Environmental & Water Resources Engineering
Groundwater Consultants

CS
STIP 1211
ENVIRONMENTAL
PROTECTION

99 OCT -5 PM 2:52

October 4, 1999

Madhulla Logan

Alameda County Environmental Health Services

1131 Harbor Bay Parkway, Suite 250

Alameda, CA 94502-6577

Re: Pacific Cryogenic Company

2311 Magnolia Street, Oakland, CA

STIP 1211

Dear Ms. Logan:

On June 4, 1998, we provided Larry Seto of your office two copies of the report entitled "Health-Based Risk Assessment and Recommendation for UST Case Closure: Pacific Cryogenic Company, 2311 Magnolia Street, Oakland, California", by Hageman-Aguiar, Inc., dated June 3, 1998. This report provided 1) a summary and analysis of all data collected to date in terms of subsurface contamination beneath the subject property, 2) the results of a sensitive receptors survey in order to assess the potential for impact upon beneficial uses of surface water and groundwater in the area, and 3) the results of a health-based risk assessment.

The 1998 report concluded that the only route of exposure to be considered is that of vapor intrusion. Direct contact with contaminated soil or groundwater is not possible. Based upon this information, a vapor intrusion model was immediately utilized in order to determine what soil concentrations could remain beneath the site and still be health-protective to on-site personnel. In all cases, continued commercial use of the property is assumed. The results of the vapor intrusion modeling were presented in the report,

along with the conclusion that no further remediation of soil contamination is warranted.

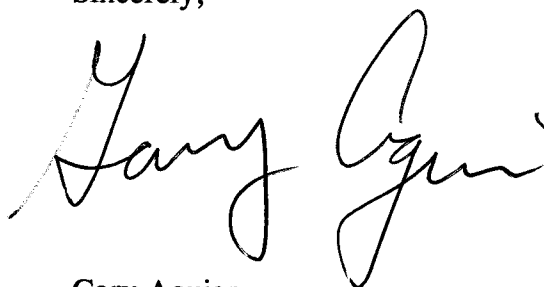
As a follow-up to the previous risk assessment, we have recently conducted additional Tier 1 and Tier 2 RBCA screening for the site, utilizing the GSI, Inc., Tier 1 and Tier 2 RBCA Spreadsheet System, Version 1.0.1 computer program. The analysis was made to be very site-specific, in that the actual dimensions of the existing building were considered, along with an estimate of the area of impacted soil beneath the building. The program's default parameters, such as building exchange rate, exposure duration, etc., are set such that the calculations yield very conservative results.

The results of this recent site-specific Tier 1 and Tier 2 RBCA screening are shown on the attached print-outs. Based upon the known maximum residual BTEX concentrations in the shallow groundwater, as well as the site-specific hydrogeologic conditions, no risk-based screening levels (RBSL's) are exceeded for shallow groundwater. Based upon the average of the residual BTEX concentrations in the soil located directly beneath the existing building, no RBSL's are exceeded for the soil.

It can therefore be concluded that the current concentrations of BTEX in the soil and shallow groundwater beneath the subject property are health-protective.

If you have any further questions regarding the previous risk assessment, the recent Tier and Tier 2 RBCA screening or details of the RBCA program analysis, please contact our offices at (510) 620-0981.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary Aguiar". The signature is written in a cursive style with a large initial "G" and "A".

Gary Aguiar
Principal Engineer

RBCA SITE ASSESSMENT

Tier 1 Worksheet 6.3

Site Name: Pacific Cryogenic Company
Site Location: 2311 Magnolia St., Oakland, CA

Completed By: Renee Athey
Date Completed: 9/29/1999

1 OF 1

GROUNDWATER RBSL VALUES

Target Risk (Class A & B) 1.0E-6 MCL exposure limit?
Target Risk (Class C) 1.0E-5 PEL exposure limit?
Target Hazard Quotient 1.0E+0

Calculation Option: 1

RBSL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration (mg/L)	Groundwater Ingestion			X	Groundwater Volatilization to Indoor Air		X	Groundwater Volatilization to Outdoor Air		Applicable RBSL (mg/L)	RBSL Exceeded ? *■* If yes	Required CRF Only if "yes" left
CAS No.	Name		Residential: (on-site)	Commercial: (on-site)	Regulatory(MCL): (on-site)	Residential: (on-site)	Commercial: (on-site)	Residential: (on-site)	Commercial: (on-site)					
71-43-2	Benzene	6.8E-2	NA	NA	NA	NA	2.8E+0	NA	2.2E+2	2.8E+0	<input type="checkbox"/>	<1		
100-41-4	Ethylbenzene	3.3E-2	NA	NA	NA	NA	>Sol	NA	>Sol	>Sol	<input type="checkbox"/>	<1		
108-88-3	Toluene	2.1E-2	NA	NA	NA	NA	>Sol	NA	>Sol	>Sol	<input type="checkbox"/>	<1		
1330-20-7	Xylene (mixed isomers)	5.6E-2	NA	NA	NA	NA	>Sol	NA	>Sol	>Sol	<input type="checkbox"/>	<1		

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Software: GSI RBCA Spreadsheet
Version: v 1.0

Serial: G-213-ADX-926

RBCA SITE ASSESSMENT

Tier 1 Worksheet 6.2

Site Name: Pacific Cryogenic Company
Site Location: 2311 Magnolia St., Oakland, CA

Completed By: Renee Athey
Date Completed: 9/29/1999

1 OF 1

**SUBSURFACE SOIL RBSL VALUES
(> 3 FT BGS)**

Target Risk (Class A & B) 1.0E-6 MCL exposure limit?
Target Risk (Class C) 1.0E-5 PEL exposure limit?
Target Hazard Quotient 1.0E+0

Calculation Option: 1

RBSL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration (mg/kg)	Soil Leaching to Groundwater			X	Soil Volatilization to Indoor Air		X	Soil Volatilization to Outdoor Air		Applicable RBSL (mg/kg)	RBSL Exceeded ? *■* If yes	Required CRF Only if "yes" left
CAS No.	Name		Residential: (on-site)	Commercial: (on-site)	Regulatory(MCL): (on-site)	Residential: (on-site)	Commercial: (on-site)	Residential: (on-site)	Commercial: (on-site)					
71-43-2	Benzene	7.3E-1	NA	NA	NA	NA	2.1E+0	NA	1.7E+2	2.1E+0	<input type="checkbox"/>	<1		
100-41-4	Ethylbenzene	9.9E-1	NA	NA	NA	NA	>Res	NA	>Res	>Res	<input type="checkbox"/>	<1		
108-88-3	Toluene	1.3E+0	NA	NA	NA	NA	>Res	NA	>Res	>Res	<input type="checkbox"/>	<1		
1330-20-7	Xylene (mixed isomers)	5.4E+0	NA	NA	NA	NA	>Res	NA	>Res	>Res	<input type="checkbox"/>	<1		

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Software: GSI RBCA Spreadsheet
Version: v 1.0

Serial: G-213-ADX-926

RBCA TIER 1/TIER 2 EVALUATION

Output Table 1

Site Name: Pacific Cryogenic Company Job Identification: 69
 Site Location: 2311 Magnolia St., Oakland, CA Date Completed: 9/29/99
 Completed By: Renee Athey

Software: GSI RBCA Spreadsheet
 Version: v 1.0

NOTE: values which differ from Tier 1 default values are shown in bold *italics* and underlined.

DEFAULT PARAMETERS

Exposure Parameter	Definition (Units)	Residential		Commercial/Industrial		
		Adult	(1-6yrs)	(1-16 yrs)	Chronic	Constrctn
ATc	Averaging time for carcinogens (yr)	70				
ATn	Averaging time for non-carcinogens (yr)	30	6	16	25	1
BW	Body Weight (kg)	70	15	35	70	
ED	Exposure Duration (yr)	30	6	16	25	1
EF	Exposure Frequency (days/yr)	350			250	<u>250</u>
EF.Derm	Exposure Frequency for dermal exposure	350			250	<u>250</u>
IRgw	Ingestion Rate of Water (l/day)	2			1	
IRs	Ingestion Rate of Soil (mg/day)	100	200		50	100
IRadj	Adjusted soil ing. rate (mg-yr/kg-d)	1.1E+02			9.4E+01	
IRa.in	Inhalation rate indoor (m ³ /day)	15			20	
IRa.out	Inhalation rate outdoor (m ³ /day)	20			20	
SA	Skin surface area (dermal) (cm ²)	5.8E+03		2.0E+03	20	10
SAadj	Adjusted dermal area (cm ² -yr/kg)	2.1E+03			5.8E+03	5.8E+03
M	Soil to Skin adherence factor	1			1.7E+03	
AAFs	Age adjustment on soil ingestion	FALSE			FALSE	
AAFd	Age adjustment on skin surface area	FALSE			FALSE	
tox	Use EPA tox data for air (or PEL based)	TRUE			FALSE	
gwMCL?	Use MCL as exposure limit in groundwater?	FALSE				

Matrix of Exposed Persons to Complete Exposure Pathways

Groundwater Pathways:	Definition (Units)	Residential		Commercial/Industrial	
		Chronic	Constrctn	Chronic	Constrctn
GW.i	Groundwater Ingestion	FALSE		FALSE	
GW.v	Volatilization to Outdoor Air	FALSE		TRUE	
GW.b	Vapor Intrusion to Buildings	FALSE		TRUE	
Soil Pathways					
S.v	Volatiles from Subsurface Soils	FALSE		TRUE	
SS.v	Volatiles and Particulate Inhalation	FALSE		FALSE	FALSE
SS.d	Direct Ingestion and Dermal Contact	FALSE		TRUE	FALSE
S.l	Leaching to Groundwater from all Soils	FALSE		FALSE	
S.b	Intrusion to Buildings - Subsurface Soils	FALSE		TRUE	

Matrix of Receptor Distance and Location on- or off-site

	Definition (Units)	Residential		Commercial/Industrial	
		Distance	On-Site	Distance	On-Site
GW	Groundwater receptor (cm)		TRUE		TRUE
S	Inhalation receptor (cm)		TRUE		TRUE

Matrix of Target Risks

	Definition (Units)	Residential	
		Individual	Cumulative
TRab	Target Risk (class A&B carcinogens)	1.0E-06	
TRc	Target Risk (class C carcinogens)	1.0E-05	
THQ	Target Hazard Quotient	1.0E+00	
Opt	Calculation Option (1, 2, or 3)	1	
Tier	RBCA Tier	1	

Surface Parameters	Definition (Units)	Residential		Commercial/Industrial	
		Chronic	Construction	Chronic	Construction
t	Exposure duration (yr)	30			
A	Contaminated soil area (cm ²)	<u>3.7E+05</u>		25	1
W	Length of affected soil parallel to wind (cm)	<u>6.7E+02</u>			<u>3.7E+06</u>
W.gw	Length of affected soil parallel to groundwater (cm)	<u>1.5E+03</u>			<u>6.7E+02</u>
Uair	Ambient air velocity in mixing zone (cm/s)	2.3E+02			
delta	Air mixing zone height (cm)	2.0E+02			
Lss	Definition of surficial soils (cm)	<u>2.7E+02</u>			
Pe	Particulate areal emission rate (g/cm ² /s)	2.2E-10			

Groundwater Parameters	Definition (Units)	Value
delta.gw	Groundwater mixing zone depth (cm)	2.0E+02
I	Groundwater infiltration rate (cm/yr)	3.0E+01
Ugw	Groundwater Darcy velocity (cm/yr)	2.5E+03
Ugw.tr	Groundwater Transport velocity (cm/yr)	6.8E+03
Ks	Saturated Hydraulic Conductivity (cm/s)	
grad	Groundwater Gradient (cm/cm)	
Sw	Width of groundwater source zone (cm)	
Sd	Depth of groundwater source zone (cm)	
BC	Biodegradation Capacity (mg/L)	
BIO?	Is Bioattenuation Considered	FALSE
phi.eff	Effective Porosity in Water-Bearing Unit	3.8E-01
fo.c.sat	Fraction organic carbon in water-bearing unit	1.0E-03

Soil Parameters	Definition (Units)	Value
hc	Capillary zone thickness (cm)	<u>3.0E+01</u>
hv	Vadose zone thickness (cm)	<u>3.4E+02</u>
rho	Soil density (g/cm ³)	1.7
fo.c	Fraction of organic carbon in vadose zone	0.01
phi	Soil porosity in vadose zone	0.38
Lgw	Depth to groundwater (cm)	<u>3.7E+02</u>
Ls	Depth to top of affected soil (cm)	<u>1.8E+02</u>
Lsubs	Thickness of affected subsurface soils (cm)	<u>9.1E+01</u>
pH	Soil/groundwater pH	<u>7.3</u>
		capillary vadose foundation
phi.w	Volumetric water content	0.342 0.12 0.12
phi.a	Volumetric air content	0.038 0.26 0.28

Building Parameters	Definition (Units)	Residential	Commercial
Lb	Building volume/area ratio (cm)	<u>3.7E+03</u>	<u>3.7E+03</u>
ER	Building air exchange rate (s ⁻¹)	1.4E-04	2.3E-04
Lcrk	Foundation crack thickness (cm)	<u>1.0E-01</u>	
eta	Foundation crack fraction	<u>0.0005</u>	

Dispersive Transport Parameters	Definition (Units)	Residential	Commercial
Groundwater			
ax	Longitudinal dispersion coefficient (cm)		
ay	Transverse dispersion coefficient (cm)		
az	Vertical dispersion coefficient (cm)		
Vapor			
dcy	Transverse dispersion coefficient (cm)		
dcz	Vertical dispersion coefficient (cm)		

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



February 28, 2000

ENVIRONMENTAL HEALTH SERVICES

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

Mr. Aldo Guidotti
Estate of Jean Josephin
1 Bates Blvd., Suite 300
Orinda, CA 94563

INTENT TO MAKE A DETERMINATION THAT NO FURTHER ACTION IS
REQUIRED OR ISSUE A CLOSURE LETTER FOR PACIFIC CRYOGENIC,
2311 MAGNOLIA STREET, OAKLAND, CA 94607

Dear Mr. Guidotti:

This letter is to inform you that Alameda County Environmental Health Department, Local Oversight Program (LOP), intends to make a determination that no further action is required at the above site or to issue a closure letter. Please notify this agency of any input and recommendations you may have on these proposed actions within 20 days of the date of this letter.

In accordance with section 25297.15 of Ch. 6.7 of the Health & Safety Code, you must provide certification to the local agency that all of the current record fee title owners have been informed of the proposed action. Please provide this certification to this office within 20 days of the date of this letter.

If you have any questions about these proposed actions, please contact Larry Seto at (510) 567-6774.

Sincerely,

Thomas Peacock
Manager, LOP

cc: Chuck Headlee, RWQCB
Leroy Griffin, City of Oakland Fire Department, 1605 Martin Luther King,
Oakland, CA 94612
Larry Seto, Alameda County Environmental Health
Files



February 28, 2000

Mr. Aldo Guidotti
Estate of Jean Josephin
1 Bates Blvd., Suite 300
Orinda, CA 94563
STID 1211

RE: Pacific Cryogenic, 2311 Magnolia Street, Oakland, CA 94607

LANDOWNER NOTIFICATION AND PARTICIPATION REQUIREMENTS

Dear Mr. Guidotti:

This letter is to inform you of new legislative requirements pertaining to cleanup and closure of sites where an unauthorized release of hazardous substance, including petroleum, has occurred from an underground storage tank (UST). Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code requires the primary or active responsible party to notify all current record owners of fee title to the site of: 1) a site cleanup proposal, 2) a site closure proposal, 3) a local agency intention to make a determination that no further action is required, and 4) a local agency intention to issue a closure letter. Section 25297.15(b) requires the local agency to take all reasonable steps to accommodate responsible landowners' participation in the cleanup or site closure process and to consider their input and recommendations.

For purposes of implementing these sections, you have been identified as the primary or active responsible party. Please provide to this agency, within twenty (20) calendar days of receipt of this notice, a complete mailing list of all current record owners of fee title to the site. You may use the enclosed "list of landowners" form (sample letter 2) as a template to comply with this requirement. If the list of current record owners of fee title to the site changes, you must notify the local agency of the change within 20 calendar days from when you are notified of the change.

If you are the sole landowner, please indicate that on the landowner list form. The following notice requirements do not apply to responsible parties who are the sole landowner for the site.

LANDOWNER NOTIFICATION

Re: Pacific Cryogenic, 2311 Magnolia Street, Oakland, CA 94607

February 28, 2000

Page 2 of 2

In accordance with Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code, you must certify to the local agency that all current record owners of fee title to the site have been informed of the proposed action before the local agency may do any of the following:

- 1) consider a cleanup proposal (corrective action plan)
- 2) consider a site closure proposal
- 3) make a determination that no further action is required
- 4) issue a closure letter

You may use the enclosed "notice of proposed action" form (sample letter 3) as a template to comply with this requirement. Before approving a cleanup proposal or site closure proposal, determining that no further action is required, or issuing a closure letter, the local agency will take all reasonable steps necessary to accommodate responsible landowner participation in the cleanup and site closure process and will consider all input and recommendations from any responsible landowner.

Please call me at (510) 567-6774 should you have any questions about the content of this letter.

Sincerely,



Larry Seto
Sr. Hazardous Materials Specialist

Attachments

cc: Chuck Headlee, RWQCB

SAMPLE LETTER (2): LIST OF LANDOWNERS FORM

Name of local agency
Street address
City

SUBJECT: CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR (*Site Name and Address*)

(Note: Fill out item 1 if there are multiple site landowners. If you are the sole site landowner, skip item 1 and fill out item 2.)

1. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (*name of primary responsible party*), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site:

2. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (*name of primary responsible party*), certify that I am the sole landowner for the above site.

Sincerely,

Signature of primary responsible party

Name of primary responsible party

SAMPLE LETTER 3: NOTICE OF PROPOSED ACTION SUBMITTED TO LOCAL AGENCY

Name of local agency

Street address

City

SUBJECT: NOTICE OF PROPOSED ACTION SUBMITTED TO LOCAL AGENCY
FOR *(Site Name and Address)*

In accordance with section 25297,15(a) of Chapter 6.7 of the Health & Safety Code, I, *(name of primary responsible party)*, certify that I have notified all responsible landowners of the enclosed proposed action. Check space for applicable proposed action(s):

cleanup proposal (corrective action plan)

site closure proposal

local agency intention to make a determination that no further action is required

local agency intention to issue a closure letter

Sincerely,

Signature of primary responsible party

Name of primary responsible party

cc: Names and addresses of all record fee title owners

ALDO P. GUIDOTTI, INC.
CHARLES A. LEE

GUIDOTTI AND LEE
A PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
ONE BATES BOULEVARD, SUITE 300
ORINDA, CALIFORNIA 94563
TELEPHONE (925) 254-3450
FAX (925) 254-6411

ENVIRONMENTAL PROTECTION
00 MAR -8 PM 1:25
RAYMOND E. MELLANA
RETIRED

March 6, 2000

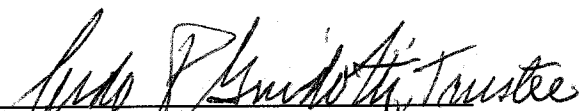
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Certified List of Record Fee Title Owners for
Pacific Cryogenics, 2311 Magnolia Street,
Oakland, CA 94607

Gentlemen:

In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, the undersigned certifies that the undersigned shareholder's liquidating trust is the sole landowner of the above site, and that the Estate of Jean L. Josephian (Proceeding #228997-5 Alameda County), is the sole beneficiary of said liquidating trust.

Very truly yours,


ALDO P. GUIDOTTI, Trustee
Shareholders Liquidating
Trust dated 12/15/86

APG:m

ALDO P. GUIDOTTI, INC.
CHARLES A. LEE

GUIDOTTI AND LEE
A PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW
ONE BATES BOULEVARD, SUITE 300
ORINDA, CALIFORNIA 94563
TELEPHONE (925) 254-3450
FAX (925) 254-6411

ENVIRONMENTAL
PROTECTION
00 MAR -8 PM 1:25

RAYMOND E. MELLANA
RETIRED

March 6, 2000

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

Re: Certified List of Record Fee Title Owners for
Pacific Cryogenics, 2311 Magnolia Street,
Oakland, CA 94607

Dear Mr. Seto:

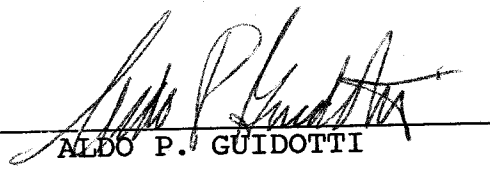
Your letter dated February 28, 2000 is acknowledged.

Enclosed herewith is Certificate of Record Fee Title Owners
which you requested.

Very truly yours,

GUIDOTTI and LEE

By


ALDO P. GUIDOTTI

APG:m

Enclosure

CS 5710 1211

GUIDOTTI AND LEE

A PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

ONE BATES BOULEVARD, SUITE 300

ORINDA, CALIFORNIA 94563

TELEPHONE (925) 254-3450

FAX (925) 254-6411

ALDO P. GUIDOTTI, INC.
CHARLES A. LEE

ENVIRONMENTAL
PROTECTION
RAYMOND E. MELLANA
00 MAR -9 AMT: 51

March 7, 2000

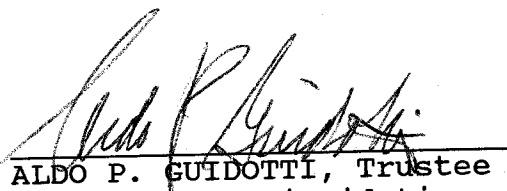
Mr. Thomas Peacock
Manager, LOP
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: INTENT TO MAKE A DETERMINATION THAT NO FURTHER
ACTION IS REQUIRED OR ISSUE A CLOSURE LETTER FOR
PACIFIC CRYOGENIC, 2311 MAGNOLAI STREET, OAKLAND 94607

Dear Mr. Peacock:

This will acknowledge and thank you for your letter of
February 28, 2000, with reference to the above matter.

The Estate of Jean L. Josephian, the sole beneficiary of the
Shareholders Liquidating Trust, is most appreciative since it has
been pending for the past ten years, during which time remediation
of this site was ongoing under the supervision of Hageman-Aguiar,
Inc.



ALDO P. GUIDOTTI, Trustee
Shareholders Liquidating
Trust dated 12/15/86
Estate of Jean L. Josephian
Sole Beneficiary of said trust

APG:m