CURRENT DAILIES for this case -- All records from Dailies on this StID are already debited. --CASE COMPLETION STATEMENT REFUND RECIPIENT: Name: Address: State Forms A,B & C ATTACH: __ Billing Adjustment* PROJECT COMPLETED BY : DATE OF COMPLETION : 10/22/9 DATE SENT TO BILLING:__/__/_ REFUND AMOUNT: \$ ----TOTAL PROJECT COST : (Bill Adj. form needed if site in UST program.) DRCloBlk.txt; Rev 6/97 Current HazMat Dailies Statement Complete TOTAL COUNTS: #Current Dailies: 0 Both Archived & Current: 1

Close case - not a problem.

No # ! not closure letter issued -

6/22/97

ed: 10/22/97

**** Alameda County Department of Environmental Health ****
BILLING's WORKLOG: Total Deposit/Refund History for All Accounts at Site

** SITE INFORMATION **

Site#: 2101 -- StID: 6056 Date Open: 01/19/93

BRIDGEWATER CONDO 545 PIERCE STREET ALBANY CA 94706

Date Closed:

** PAYOR INFORMATION **

> Project # --2101A for Payor #

697 MASSINGHAM & ASSOCIATES. 46750 FREMONT BLVD. #110 FREMONT CA 94538

** DEPOSIT HISTORY **

Proj#	Deposit Date	Receipt#	Amo	unt Received
				*
2101A	01/19/93	668901	\$	\$483.00
			===	
			\$	\$483.00

** WORKLOG HISTORY **

Proj#	Work Date	Activity Description	Insp Time (hrs)	Amount Charged
2101a	01/22/93	Plan review	0.75	\$56.25
2101a	01/25/93	Plan review	2.	\$150.00
2101a	01/26/93	call w/contractor	0.25	\$18.75
2101a	01/29/93	site inpsection	3.	\$225.00
2101a	06/09/93	report/file review	0.25	\$18.75
2101a	08/19/93	File Review	0.25	\$18.75
				\$487.50

Balance.

-\$4.50 Artic

Amount Refunded:

ALAMEDA COUNTY ENVIRONMENTAL HEALTH - HAZARDOUS MATERIALS PROGRAM DEPOSIT / REFUND ARCHIVED DAILIES STATEMENT FOR WORK AFTER 08/19/93

database = DAILY ARCHIVES			
SITE INFORMATION			
Bridgewater Condos StID: 6056 Site#:			
ARCHIVED DAILY -	DEPREF STATEMENT		as of 10/22/97
INSPECTOR Act Date Initial Time	\$ Rate CHARGE	Time Charge	Billing Date
Proj#:2101A - Arc93A Dail:	ies		
06/09/93 LS 0.25 Activ. Code: 75-Review Comment: Bridgewater Cor	Plans/Reports		5
SUBTOTAL ARCHIVE-93	3_A, PROJECT 2101	1A 0.25 \$	318.75

DRDai93A; Rev 4/97

Number of Daily records from ARCHIVED DAILIES:

Listing of HAZMAT - DEPREF SITE HISTORY since 1990 for StID # 6056 as of 10/22/97 only Activity Codes in 40's & 70's

SITE NAME & ADDRESS:

Bridgewater Condos -- 545 Pierce St , Albany CA 94706

InspDat Insp Act InspT StID Proj# COMMENTS DailBDat

Archived Dailies:

InspDat Insp Act InspT StID DRPro Comment www.eee :eeeeneee/weeee waak (gaage propositionisticonisticonisticonisticonisticonisticonisticonisticonisticon

DailBDat

06/09/93 LS 75 0.25 6056 2101A Bridgewater Condo, 545 Pierce St., Albany

Current Dailies:

NO WORK FOR THIS SITE IS IN CURRENT DAILIES:

Complete

FIXIH

Hesselberg, Keesee & Associates, Inc., Consulting Elevator Engineers

May 26, 1993

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

Attention: LARRY SETO

Project: BRID

BRIDGEWATER CONDOMINIUMS

545 PIERCE STREET

ALBANY, CA.

Subject: FEE

Dear Larry:

While auditing our files on the above project, I ran across the receipt for the fees for the County's services and remembered that our Client may be entitled to a refund.

Please review and return any refund to the following address:

Mr. John D. Dreisbach Warren's Waller Press 339 Harbor Way South San Francisco, CA 94080

Project: Bridgewater Condominiums

Check Payable To: Bridgewater Homeowners Assoc.

We thank you again for your corporation on the project.

Sincerely,

HESSELBERG, KEESEE & ASSOCIATES, INC.

James H. Finley Principal

JHF/kr

pc: John Dreisbach

Bridgewater Condominiums

Enclosure:

Attachment No. 1- Receipt

REF./ A/C NO. COUNTY OF ALAMEDA OFFICE OF THE AUDITOR-CONTROLLER	DATE: 1 /19/93
MISCELLANEOUS RECEIPT	Nº 668901 \$483 = DOLLARS
FROM: Bridgewoder Conto. Assac. 4673 FOR: Bridgewoder Condo Missoure	50 Fremant Bluck. FRI
RECEIVED Spates Albany Spates CASH Spersonal Cashier's CHECK/M. 0. + 2075	DEPT. NO.: 430 - 453

(4)

ALAMEDA COUNTY HAZARDOUS MATERIALS DIVISION Acknowledgement of Refund Recipient for Site Account DEPOSITOR FILLS OUT PER SITE

-- REQUIRED --

The depositor will use this form to acknowledge that the property owner or his or her designee will receive any refund due at the completion of all deposit/refund projects at the site listed below.

SITE NUMBER/ADDRESS:

REFUND RECIPIENT-PROPERTY OWNER

Site Number	<u>-</u> .		11	Ascac
BRIDGEWA	TER CONDOMINIUM	5 BRIDGEWAT	er home	
Company Name		Owner's Name		
	and Himself	545 PIER	CF 57	#1304
545 PIER	CE 57, \$1304	345 1161	27.21	
Street Address	***	Owner's Address		a a
ALBANY (CA. 94507	ALBANY	CA	94507
City	Zip Code	Owner's City	State	Zip
rojects being he property of Signature of Deposito	eposit money remaini conducted at this s wher or his or her d H. Finley H. Finley	ITE WILL DE LEI	//5/93	lely to
HESSEL	BERG Keesee	2 Associ	ates	
Company Name	27			
221 M	AID ST. SI	LITE 15	80	
Street Address				
SAN FI	earcisco C	A ge	4105	
City / Zip	/			

ALAMEDA COUNTY HAZARDOUS MATERIALS DIVISION Declaration of Site Account Refund Recipient SITE OWNER FILLS OUT PER SITE -- OPTIONAL --

The property owner will use this form to designate someone other than him- or her- self to receive any refund due at the completion of all deposit/refund projects at the site listed below. In the absence of this form, the property owner will receive any refund. Only one person at any one time may be designated to receive any refund.

SITE NUMB	ER/ADDRESS:	PROPERT	Y OWNER	
Site Number				2
Company Name	***	Owner's Name	14	
Street Address		Owner's Address)	-
City	Zip Code	Owner's City	St	ate Zî
I designa due at th	te the following per e completion of all	cson to receive deposit/refund	e any re i projec	fund ts:
I designa due at th	te the following per e completion of all	cson to receive deposit/refund	e any re i projec	fund ts:
due at th	e completion of all	rson to receive deposit/refund	e any re i projec	fund
due at th	e completion of all	cson to receive deposit/refund	e any re	fund
Name Street Add	e completion of all	rson to receive deposit/refund	e any re	fund

RETURN FORM TO: Alameda County, Hazardous Materials Div.

80 Swan Way, Rm 200 Oakland, CA 94621-1439 Phone: (510) 271-4320

CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

01/11/93

PRODUCER

Diversified Risk Ins. Brokers 1335 Stanford Avenue Suite 100 Emeryville, CA 94608

JLV

INSURED

K. M. McRae, Inc. DBA: McRae Drilling 238 Esther Court Hayward, CA 94544 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.

COMPANIES AFFORDING COVERAGE

COMPANY A Transamerica

COMPANY B Republic Western

COMPANY C Fremont/Pacific Compensation

COMPANY D

COMPANY E

COVERAGES

THIS IS TO CERTIFY THAT THE 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. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO TR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DDYY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMIT	8	
П	GENERAL LIABILITY				GENERAL AGGREGATE	\$	2,000,000
	X COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OP AGG.	\$	2,000,000
A	CLAIMS MADE X OCCUR.	T735024124	07/01/92	07/01/93	PERSONAL & ADV. INJURY	\$	1,000,000
	X OWNER'S & CONTRACTOR'S PROT			1	EACH OCCURRENCE	\$	1,000,000
			1		FIRE DAMAGE (Any one fire)	8	50,000
					MED. EXPENSE (Any one person)	\$	5,000
	X ANY AUTO				COMBINED SINGLE	8	1,000,000
A	ALL OWNED AUTOS SCHEDULED AUTOS	CA31914396	07/01/92	07/01/93	BODILY INJURY (Per person)	\$	
	X HIRED AUTOS X NON-OWNED AUTOS				BODILY INJURY (Per accident)	s	
	GARAGE LIABILITY				PROPERTY DAMAGE	\$	
	EXCESS LIABILITY				EACH OCCURRENCE	8	5,000,000
В	X	RUL0550067(93)	07/01/92	07/01/93	AGGREGATE	\$	5,000,000
	OTHER THAN UMBRELLA FORM	1102000007(75)	0//02/52	0770255			
	WORKER'S COMPENSATION				STATUTORY LIMITS	-	
c	AND	WN9253625201	07/01/92	07/01/93	EACH ACCIDENT	\$	1,000,000
٦	EMPLOYERS' LIABILITY	W119233023201	07/01/92	07/01/93	DISEASE—POLICY LIMIT	5	1,000,000
- 1	CMI COTERO DADIGITI				DISEASE—EACH EMPLOYEE	\$	1,000,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

Re: All operations

CERTIFICATE HOLDER

Hesselberg, Keesee & Associates, Inc. 221 Main Street, Suite 1580 San Francisco, CA 94105

FAX 4 415-243-0781

ACORD 25-5 (7/90)

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

GACORD CORPORATION 1990

Hesselberg, Keesee & Associates, Inc., Consulting Elevator Engineers

TELECOMMUNICATIONS COVER LETTER

TO

DATE:	1/26/93
PLEASE DELIVER	THE FOLLOWING TO:
Name:	Carry Seto
Location:	AcA. Cty HAZ MAT.
Project:	BRIDGEWATER
TOTAL NUMBER OF	PAGES INCLUDING COVER LETTER
From:	Jim FINLEY
IF YOU DO NOT B	ECEIVE ALL THE PAGES, PLEASE CALL: (415) 243-0313
REMARKS:	Aportional luto. Re:
	HARLTH & Safety PLAN -
1)	40 HR TRAINING CERT
1	8 An REGRESHEN CENT JOHN
3)	8 AR REFRESHER Cents - Ken
4)	State Lic. Cert.
(2)	LIST OF PENSONNEL
MATE.	RESPIRATORS/CARTENGES WILL BE
70076	Mare Available.
ORIGINAL MAILED	YES NO







JOHN MeRAE

Has Met The & Hour Refresher Training Requirement Under OSHA Standard, 29CER1910.120 Hazardina Waste Operations And Emergency Response

mathbal

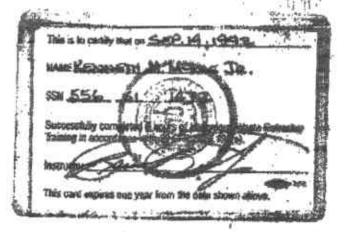
The state of the s

ACKNOWLEDGEMENT

MAChiclustries Inc.

DATE

HESSELBERG & KEESEE FROM Operating Engineers Local Union No. 3, This is to certify that Kenneth M. McRae, Jr. August 2, 19 91 has successfully completed the annual 40-hour Hazardous Waste Training Program in accordance with 29 CFR 1910.120 T.J. "Tom" Stapleton, LyShort, Director of Safety Business Manager

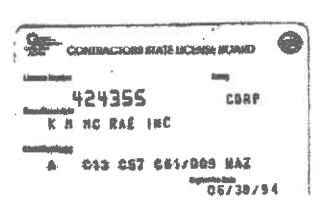


K' N' NOSSE INC'

9062-489-019

P.04

TO



PERSONNEL LIST

Kenneth McRae James Figueroa Earl Brown John McRae

Site Safety Officer: Kenneth McRae

ALAI DA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 510/271-4320

HYDRAULIC ELEVATOR CLOSURE PLAN * * * Complete according to attached instructions * * *

1.	Business Name Bridgewater Con	dominiums		
	Business Owner Bridgewater Hom	eowners Associa	tion	
2.	Site Address 545 Pierce St.			
	City Albany, CA	Zip 94507	Phone (510)	589-626
3.	Mailing Address <u>see above</u>			
	City		Phone	0
4.	Land Owner see above			
	Address	City, State	Zip	
5.	Generator name under which tank Bridgewater Homeowners Assoc			
	EPA I.D. No. under which tank w	ill be manifeste	ed N/A	

- 1 -

6.	Contractor K. M. McKde, The.
	Address238 Esther Court
	City Havward, CA Phone (510) 537-653
	License Type* C-13 #424355 ID# A C13 C57 C61/009 HAZ
	*Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Heste Certification issued by the State Contractors License Board. Indicate that the certificate has been received, in addition, to holding the appropriate contractors license type.
7.	Consultant Hesselberg, Keesee & Associates, Inc.
•	Address21 Main St., Suite 1580
	City San Francisco, CA 94105 Phone (415) 243-0313
8.	Contact Person for Investigation
	NameJames H. Finley TitlePrincipal
	Phone (415) 243-0313
9.	Number of tanks being closed under this planone
8	Length of piping being removed under this planN/A
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 REMCO EPA I.D. No. CAD 0289814
	Hauler License No. 0367 License Exp. Date 11/30/93 Address 2717 GOOD RICK AVE.
	City Richmono state CA Zip 9480/
	b) Product/Residual Sludge/Rinsate Disposal Site
	Name SEE ABOUE EPA I.D. No.
	Address
	City State Zip

	c) falk and riping fransporter
	Name N/A EPA I.D. No.
	Hauler License No License Exp. Date
	Address
	City State Zip
	d) Tank and Piping Disposal Site
,	Name <u>SEE ITEM av)</u> EPA I.D. No.
	Address
	City State Zip
11.	Experienced Sample Collector
	Name BRIAN FLAHERTY
	Company ENGEO INC.
	Address 240/ CROW CANYON RD. #200
	City SAN RAMON State CA Zip 94583 Phone 510-838-166
12.	Name CHROMALAB
	Address 2239 Om EGA RD. #/
	city SAN RAMON State CA. Zip 94583
	State Certification No. 238
13.	Has elevator Have xbanks xorx pipes leaked in the past? Yes [x] No []
	If yes, describe. ELEUATOR PIZESSURC TEST REVEALED
	THAT CYCLINDER WAS LEAKING. ELEVATOR WAS
	SHUT DOWN OF 12/8/92.

14. Describe methods to be used for rendering tank inert

N/A			
•			
	•		

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

Tar	nk	Material to be sampled	Location and		
Capacity	Use History (see instructions)	(tank contents, soil, ground-water, etc.)	1		
# 175 Gallon approx. # TANK, pioine 4 cylinoer.	elevator cylinder/reservoir	soil and groundwith of gresent	28' + 2' Native soil @ 30 feet		

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)	Sampling Plan				
10 cubic feet	DNE (1) DISCRETE SAMPLE FOR EACH 20 cubic yards				

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
Total oil and grease		5520 DUF	
TPH (DIESEL)		3550	

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

- 19. Submit Plot Plan (See Instructions)
- 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 50 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.

Signati	re of Contractor	
Name	(please type) K.M MaRAC, INC.	
Sign	sture hometh M. Mclas fr.	_
Date	1-14-93	
Signatu	re of Site Owner or Operator	
Name	(Please type) JOHN D DREISBACH	
•	ature	-
* Date	1-15-93/-	-

Donal D'Murphy
Mass noughous
\$ 15500-

Lic. #424355

Foundation Drilling

Soils Investigation

Drain Holes

K.M. McRAE, INC.

DRILLING CONTRACTOR 238 ESTHER COURT HAYWARD, CALIFORNIA 94544 (415) 537-6539

Elevator Shafts

 Pier and Caissons with belled footing

SITE SAFETY PLAN 545 Pierce St. Albany, CA

- SITE HISTORY: Existing hydraulic elevator with leaking cylinder. No other info. ava.
- 2. SITE SAFETY OFFICER: Kenneth McRae Jr. Responsibilities: To supervise job site, regulate and enforce site safety plan.
- JOB ANALYSIS:
 - A. Chemical: Hydraulic oil see page into ground. Ground water contamination

possible.

- B. Physical:
 - Overhead rigging
 - 2. Falling objects
 - 3. Rig pinch points
 - 4. Railings & Platforms
 - Drill bits & extension placement
- 4. RISK ASSESSMENT SUMMARY
 - A. Air: O.V.A. meter will be used to monitor air quality in exclusion zone. LEL meter will also be used in the E.Z.
- 5. PERSONAL PROTECTIVE EQUIPMENT
 - A. Hard Hat
 - B. Saranex-Tyvek All Purpose Cover All
 - C. Steel Toe Chemical Resistant Boots
 - D. Chemical Resistant Inner & Outer Gloves.
 - E. Respirator Protection: Should not be needed, however air monitoring will dictate any changes. Air pungying respirators should be accoulable
 - F. Safety Glasses
- 6. WORK ZONES:

Exclusion Zone: Elevator hatch at pit floor level only. (Red caution tape) Contaminator Reduction Zone: Lobby area in garage & first floor level.

(Yellow caution tape)

Support Zone: 5 X 20' area outside lobby in basement & stairwell between 1st floor & garage.

7. DECONTAMINATION

(CRZ) A. Equipment Drop

B. Boot and Glove Wash & Rinse (CRZ)

C. Boot and Outer Glove Removal (CRZ)

D. Saranex Suit Removal (CRZ)

E. Inner Glove Removal (CRZ)

F. Field Wash: Wash hands and face before eating.

8. GENERAL SAFE WORK PRACTICES

A. Enter site with P.P.E. in place.

B. Hard hats to be worn at all times on site.

C. Ear plugs to be worn during drilling portion of work.

D. Decontamination Procedures to be followed prior to eating or leaving site.

9. STANDARD SAFE OPERATING PROCEDURE

Burning and Welding: All protective clothing must be worn. 'Fire Extinguisher must be present at time of work. A stand by man will be present to supervise and assist in work.

10. SPILL CONTAINMENT

With most drilling being confined to the elevator hatch spill risk will be at a minimum. Each site will have 1 - empty 55 gallon drum with 5-50 lb. bags of chemical absorbent and 30 chemical absorbent pads. Shovel, broom visqueen will be on all sites.

11. EMPLOYEE TRAINING

All employees of K.M. McRae, Inc. on this site will have received 40 hours of HAZ/MAT training and be enrolled in our medical surveillance program per 29 CFR 1910.120.

12. EMERGENCY SERVICES:

Hospital: Brookside Hospital (510) 235-7000

Phone #:

2000 Vale Rd., San Pablo, CA. 94806 Location:

From Site: Hwy 80 East, exit San Pablo Dam Rd. west, Left on Vale Rd.

Fire or Emergency: 911



Hesselberg, Keesee & Associates, Inc., Consulting Elevator Engineers

BRIDGEWATER CONDOMINIUMS

545 PIERCE STREET, ALBANY, CA

DATE:	January 14,	1993			Pa	ge .	1	of	
	ADDENDU	NO 1	TO	THE CON	TRACT	DO	CUMEN	ITS	
								····	
•	REVISI	THE CON	TRACT	DOCUMENT	S AS	FOL:	LOWS:	:	
		<u>\$</u>	SPECIFI	CATIONS					
SECTIO	N 14212								

A. Article 2.02 D (New Article)

D. Contractor to remove existing entrance frame, door and wall at Ground Level (Second floor) to provide access for drilling rig. Entrance is to be reinstalled following the removal of the drill rig. Wall to be reinstalled and painted by Owner.

ALTERNATE

No. 1- Delete Title 23 provisions for the tank unit, oil line and pit i.e., containment and sensors. Include one sensor and lead in bottom of PVC with lead extended to a 4" x 4" box in the pit for future compliance with Title 23.

SPECIFICATIONS

FOR

BRIDGEWATER CONDOMINIUMS
545 PIERCE STREET
ALBANY, CA.

REMOVE AND REINSTALL JACK ASSEMBLY

HESSELBERG, KEESEE & ASSOCIATES, INC. 221 MAIN STREET, SUITE 1580 SAN FRANCISCO, CALIFORNIA 94105

JANUARY 11, 1993

BRIDGEWATER CONDOMINIUMS 00010: INDEX TO SPECIFICATIONS REMOVE AND REINSTALL JACK ASSEMBLY

INDEX TO SPECIFICATIONS

DIVISION	SECTION	TITLE	# OF PAGES
		,	
1	01000	Special Provisions	9
	01100	Scheduling Requirements	1
14	14212	Hydraulic Passenger Elevator	7
		LIST OF PLATES	÷
Jack Settin	ng Detail		1
Plot Plan			1
Attachment	1- Site Heal	lth & Safety Plans	2

01000: SPECIAL PROVISIONS

SECTION 01000

SPECIAL PROVISIONS

PART 1 - GENERAL

1.01 NAME, LOCATION AND ACCESS TO PROJECT

- A. Existing elevator at:
 - 1. Bridgewater Condominiums, 545 Pierce St., Albany, CA.
- B. Elevator No. 1.
- C. Permission for access to the site may be revoked for any and all persons who violate Owner's traffic regulations including speed limits, parking restrictions, operating instructions. Delivery personnel shall be made aware of and shall comply at all times with the regulations.

1.02 SCOPE OF WORK

- A. This project is to remove existing jack cylinder and any steel inter casing, (if existing), redrill and enlarge, the existing hole to 20 inches and install new closed bottom steel casing and PVC closed bottom casing on existing Elevator No. 1: Dual containment and required sensors are to be installed per Title 23.
- B. Contractor's driller shall be certified to remove hazardous materials and furnish the required sampling and laboratory services for the sampling of any contaminated soil. Driller shall furnish and place any contaminated spoils, rinse, etc., into approved DOT 55 gallon drums for disposal.
- C. Owner shall provide EPA number and engage the services of a hazardous material transporter and be responsible for the transportation and disposal of any contaminated soils.

1.03 CODES AND REGULATIONS

A. The codes and regulations adopted by the State and Federal agencies having jurisdiction shall govern minimum requirements for this project.

PAGE 1 OF 9

01000: SPECIAL PROVISIONS

Where codes and regulations conflict with the specifications, the more stringent shall apply and such conflict shall be brought to the immediate attention of the Engineer.

- 1. State of California Administrative Code:
 - a. Title 8. Industrial Relations.
 - b. Title 19, Public Safety.
 - c. Title 23- Waters, Division 3- State Water Resources Control Board, Chapter 16-Underground Tank Regulations.
 - d. Title 24, Building Standards, Parts 1-7.
- 2. Uniform Building Code (UBC).
- 3. Occupational Safety and Health Act (OSHA).
- 4. National Electrical Code (NEC).
- 5. National Fire Protection Association Codes and Standards (NFPA).
- B. The latest edition of the requirements published at the time of calling for bids shall apply.

1.04 INTERPRETATIONS OF TERMS

The term "Engineer," used in these specifications, is synonymous with the "Owner's Representative." "as directed," "as required," "as permitted," "approved," "acceptable," "satisfactory," mean by or to the Engineer.

1.05 DEFINITION OF TERMS USED

A. Owner Bridgewater Homeowner's Association.

B. Engineer James H. Finley
Hesselberg, Keesee & Associates, Inc.
221 Main Street, Suite 1580
San Francisco, CA 94105
(415) 243-0313

C. Project Manager John D. Dreisbach
Bridgewater Homeowner's Association
545 Pierce St., Albany, CA 94507
(415) 589-6162

01000: SPECIAL PROVISIONS

D. Local Agency Larry Seto

Alameda County Health Care Services Department of Environmental Health

Hazardous Materials Division

80 Swan Way, Room 200 Oakland, Ca. 94621 ((510) 271-4320

E. Drilling Contractor John McRae

K.M. McRae, Inc.
238 Esther Court
Hayward, CA. 94544
(510) 537-6539

F. Transporter* REMCO

2717 Goodrick Ave. Richmond, CA. 94801

G. Disposal Site* REMCO

2717 Goodrick Ave. Richmond, CA. 94801

H. Sample Collector** Brian Flaherty

ENGEO

2401 Crow Canyon RD., Suite 200

San Ramon, CA., 94583

I. Laboratory** Chromalab

2239 Omega Road, Suite No. 1

San Ramon, CA., 94583

State Certification No. 238

* Services engaged by the Owner.

** Services engaged by the Drilling Contractor.

1.06 EXAMINATION OF EXISTING CONDITIONS

- A. Verify measurements in field, as required, for work fabricated to fit job conditions. Before starting work, examine adjoining work on which installment is in any way dependent for perfect workmanship and fit. Give written description of any existing deficiencies detrimental to proper and timely installation of work.
- B. A walk-through will be held at the site on Wednesday, January 13, 1993 at 9:00 a.m. for the listed bidders.

1.07 PARKING AND ACCESS TO SITE

- A. Vehicular access to the site shall be by routes designated by the Owner.
- B. On Site Parking: Contractor to coordinate with project manager.

1.08 PROJECT MEETINGS

- A. Pre-construction Conference: Contractor shall attend pre-construction conference to be scheduled after notification to proceed and prior to start of construction, and shall be prepared to review job schedules, discuss various aspects of the work, and procedures for smooth job progress.
- B. Progress Meetings: Periodic job-site meetings will be held to review progress of the work and resolve construction problems as required. Representatives of the Owner, Engineer and Contractor shall attend.

1.09 NOTIFICATION OF ENGINEER

Notify Engineer not less than two (2) working days in advance of any observation required.

1.10 JOB SIGNS AND PUBLICITY RELEASES

- A. Do not display advertising or job signs except as may be required for identification and deliveries.
- B. Do not release any information, story, photograph, plan or drawings relating information about the project to anyone, including press or other public communications medium.

1.11 WORK HOURS

Normal work hours on the construction site shall not commence earlier than 7:00 a.m., unless otherwise approved by the Project Manager.

1.12 TEMPORARY CONSTRUCTION UTILITIES

- A. The Owner shall provide and pay for necessary power and water required during the course of construction. The Contractor shall be responsible for providing temporary facilities required to deliver such utility services from their existing location in the building to point of intended use.
- B. Contractor shall verify characteristics of power available in building. Where power of higher voltage or different phases or current is required, Contractor shall be fully responsible for providing such service and shall pay all costs required therefore. Work to be done in accordance with applicable California Administrative Codes.
- C. The Contractor shall furnish, wire for, install and maintain temporary electric lights wherever it is necessary to provide illumination for the proper performance and/or observation of the work.
- D. Use backflow preventers on water lines at point of connection to Owner's water supply.

1.13 TEMPORARY FIRE SYSTEM PROTECTION

Where existing fire protection system of the building is inadequate or impaired by construction operations, provide temporary fire protection for the building during the course of construction.

1.14 SANITARY FACILITIES

Appointed sanitary facilities within the existing building will be made available for Contractor's use. Contractor shall be responsible for cleanliness.

1.15 PROJECT SECURITY

The Contractor is responsible for project security for materials, tools, equipment, supplies and partially completed construction.

1.16 ACCESS AND EXITWAYS

- A. Do not interfere with use of or access to occupied portions of building or adjacent property.
- B. Maintain all corridors, stairs, halls and other exitways of occupied buildings clear and free of debris or obstructions at all times.
- C. Provide full height (8 feet high) solid barricades around the immediate work area surrounding the second floor and first floor shaft openings. The intent of this provision is to completely shield the work area, including all contractor's personnel and equipment.

1.17 CARE OF EXISTING FACILITIES

- A. The Contractor shall be responsible for repair or replacement of existing facilities including any land-scaping, paving, roads, sidewalks, carpet, tile and gutters damaged as a result of the performance of this work. Any facilities or finishes damaged shall be repaired or replaced with materials and workmanship equivalent to that employed in executing the original work and to the Project Manager's satisfaction.
- B. The Contractor shall take care not to overload the existing structure by storing material, erecting shoring, placing equipment or similar activities.
- C. Do not park trucks, store materials, perform work or cross over landscaped area. Do not dispose of paint thinners, water from cleaning, plastering, or concrete operations or other deleterious materials in landscaped areas. Any plant materials damaged as a result of the performance of this work will either be replaced with new plant materials equal in size to those damaged or by payment of an amount representing the value of the damaged material as determined by the Owner.

1.18 POWDER DRIVEN FASTENERS

Powder driven fasteners are not permitted.

1.19 NOISE AND DUST CONTROL

- A. Contractor shall note that the building and adjacent facilities will remain in operation during the entire construction period and he shall take all reasonable precautions to eliminate dust and minimize noise.
- B. Erect temporary partitions to confine noise and dust as required.

1.20 CLEAN-UP DURING CONSTRUCTION

Maintain job in a clean, orderly fashion. Pick up and remove debris daily, if required, but not less frequently than weekly. If work under this Contract creates dusty, dirty or unsightly conditions in adjacent areas, the Contractor will immediately clean up the affected areas.

1.21 UTILITY SHUTDOWNS AND INTERRUPTIONS

A. Give the Owner three (3) days notice, in writing, of need to shut off existing utility services or equipment interruptions. The Owner shall set exact time for and execute shutdown. All work required to re-establish service such as connections, line taps, cable splicing shall be performed by the Contractor.

1.22 SPECIFIED ITEMS - SUBSTITUTES

Wherever catalog numbers and specific brands of trade Α. names followed by the designation "or equal" are used in conjunction with a designated material, product, thing or service mentioned in these specifications, they are used to establish the standards of quality, utility and appearance required. Substitutions which are equal in quality, utility and appearance to those specified will be approved, subject to the following provisions: all substitutions must be approved by the Engineer in writing. For this purpose, the Contractor shall submit to the Engineer, a typewritten list containing a description of each proposed substitute item or material. Sufficient data, drawings, samples, literature or other detailed information which will demonstrate to the Engineer that the proposed substitute is equal in quality, utility and appearance to the material specified shall be appended to this list.

01000: SPECIAL PROVISIONS

The Engineer will approve, in writing, such proposed substitutions which are, in the Engineer's opinion, equal in quality, utility and appearance to the items or materials specified. Such approval shall not relieve the Contractor from complying with the requirements of the drawings and specifications, and the Contractor shall be responsible at the Contractor's own expense for any changes resulting from the Contractor's proposed substitution which affect other parts of the Contractor's own work or the work of others.

- B. Failure of the Contractor to submit proposed substitutions for review in the manner described above and within the time prescribed shall be sufficient cause for disapproval by the Engineer of any substitutions otherwise proposed.
- C. Wherever catalog numbers and specific brands or trade names not followed by the designation "or equal" are used in conjunction with a designated material, product, thing or service mentioned in these specifications, no substitutions will be approved.
- D. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the project design and the use of alternative-named manufacturer's products or substitutes may require modification in the project design and construction. If such alternatives are proposed by Contractor and are favorably reviewed by the Engineer, Contractor shall assume costs required to make necessary revisions and modifications including additional costs to the Owner for evaluations of modification of the project design submitted by Contractor to the Engineer.
- E. When materials are specified by first manufacturer's name and product number, second manufacturer's name, or equal, the second manufacturer's product shall be submitted in accordance with the requirements for substitute items.
- F. If the Engineer, in review of the list of materials and equipment, requires revisions or corrections to be made or shop drawings and/or supplemental data to be submitted, Contractor shall promptly do so. If any proposed substitute is judged by the Engineer to be unacceptable, the specified item shall be provided; further submissions will not be allowed, unless directed by the Engineer.

G. In review of the data submitted in support of substitutes, the Engineer will use for purposes of comparison all the characteristics of the specified item as they appear in the manufacturer's published data even though all the characteristics of the specified item may not have been particularly mentioned in the specification. If more than two submissions of data are required, the cost of reviewing these additional submissions shall be charged directly against Contractor; and the Owner will withhold the funds necessary to cover these costs.

1.23 FINAL CLEAN-UP

Clean up the entire construction area and adjacent areas affected by the performance of work under this Contract. Remove all temporary construction, tools, equipment, excess materials and spoils.

1.24 PREPARATION FOR ACCEPTANCE (PRIOR TO FINAL INSPECTION)

- A. Temporary facilities and utilities shall be properly disconnected, removed and disposed of off-site.
- B. All systems, equipment and devices shall be in full and proper adjustment and operation and properly labeled and identified.
- C. All materials and finishes shall be neat, clean, unmarred and parts securely attached.
- D. All broken work, including glass, curbs, slabs and paving shall be replaced or properly repaired.
- E. Clean-up of the site shall be complete.

1.25 FINAL INSPECTION

A. Upon receipt of notice from the Contractor that the work is ready for final inspection and acceptance, the Engineer and Contractor shall promptly make a joint inspection of the work and note deficiencies, if any. When noted deficiencies have been removed and the Engineer finds the work to be complete according to the Contract Documents, the Engineer will advise the Owner.

END OF SECTION

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BRIDGEWATER CONDOMINIUMS 01100: SCHEDULING REQUIREMENTS REMOVE AND REINSTALL JACK ASSEMBLY

SECTION 01100

SCHEDULING REQUIREMENTS

PART 1 - GENERAL

1.01 SCHEDULING REQUIREMENTS

- A. Before beginning any work, the contractor shall submit to the Project Manager for discussion and approval a complete plan of operations and progress schedule of the proposed construction operations. This schedule should reflect the provisions as to timing of the start and completion of all contract work.
- B. The schedule may be in a bar chart form or other approved system by which are shown predicted starting and completion dates for the various work units or trades involved. The schedule should indicate duration and time of work to occur for each major phase of the elevator work.
- C. No work shall be started until the schedule has been approved by the Project Manager.
- D. No on-site work shall commence unless approved by the Project Manager.
- E. Access to work areas is subject to user constraints and the Contractor may have to delay or reschedule his work periods to accommodate the user at the Project Manager's direction.

END OF SECTION

SECTION 14212

HYDRAULIC PASSENGER ELEVATOR

PART 1 GENERAL

1.01 SCOPE

All labor, materials, equipment and services necessary to remove the existing jack assembly, redrill new 20 inch diameter hole, install a closed bottom steel casing, install on-site schedule 40, 140 psi PVC casing and install new on-site jack cylinder with existing plunger and moisture sensors and return elevator to service.

A. General Summary of Work:

- Remove existing steel jack assembly and any casing or PVC found in the hole. Redrill hole to receive new steel casing and a PVC closed bottom casing.
- Install new steel casing with closed bottom.
- Install new PVC closed bottom casing.
- 4 Install new jack cylinder (on-site) and repipe.
- 51 Install sensors supervisory system as required by Title 23.
- 61 Install PVC containment around piping from jack to power unit. Install sensors as required.
- 7 Provide pan under power unit to contain 110% of the total fluid volume in the reservoir. Install sensors as required.
- Remove spoils and clean up.
- B. Compliance with governing codes.
- C. Clean Up: Upon completion of the work prior to final inspection, thoroughly clean all exposed features, remove equipment and leave the entire installation in a neat, clean and usable condition. Remove all cement, paint, grease, oil and other foreign substances.

1.02 QUALITY ASSURANCE

- A. Qualified Bidders:
 - 1. The following bidders have been invited to bid:
 - a. Armor Elevator Company
 - b. Millar Elevator Company
 - c. Otis Elevator Company
 - 2. General: The Contractor may supply his standard equipment provided that all details of this specification are met. The decision of the Engineer shall be final should disputes arise regarding any details of the equipment.
- B. Design Criteria:
 - Performance:
 - a. Contract Speed: 100 FPM
 - b. Floor-to-Floor Time: Existing.
 - c. Leveling: Within one half (1/2) inch under any loading condition. Car shall level into floor at all times, not overrun floor and level back.
 - Operating Qualities: Engineer and the Project Manager shall judge riding qualities of car. Contractor shall make all necessary adjustments, if requested, by the Engineer or the Project Manager.
- C. Requirements of Regulatory Agencies:
 - 1. Codes: Material and workmanship shall be in accordance with the latest applicable edition requirements of the following and as specified.
 - a. CCR:

Titles 8, 19, 23 & 24; California Code of Regulations.

National Electrical Code.

c. UBC:

b.

NEC:

Uniform Building Code.

1.03 GENERAL REQUIREMENTS

A. Delivery, Storage and Handling: Discharge materials carefully and store on clean, concrete surface or raised platform in safe, dry area.

1.04 SUBMITTALS

- A. Layouts: Contractor to submit plan and section of pit and machine room.
- B. Details: Submit details of contractor's method of dual containment.

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C. Health and Safety Plan: Contractor is to provide written Health and Safety Plan and as a minimum provide the information as recommended by the Local Agency. A copy of these minimum requirements can be found in Attachment 1 to these specifications.

PART 2 - PRODUCTS:

2.01 DESCRIPTION OF EQUIPMENT:

<i>-</i>	outilion of Deolimber.		After	
		<u>Present</u>	Rehabilitation	
1.	Manufacturer:	Otis LRV	Same	
2.	Number and Type:	One Passenger	Same	
3.	Capacity and Speed:	2500 Pounds 100 FPM	Same	
4.	Travel:	27'-10" (approx.)	Same	
5.	Stops and Openings:	4/4 (B, 1-3)	Same	
6.	Well Casing:	Unknown	New 10 Gage Steel	
7.	PVC	Unknown	New Schedule 40- 140 PSI	
8.	Cylinder	Steel 5.88"	New Steel	
9.	Plunger:	3.88 inch	Same	
10.	Piping:	2"	Modify Existing	

2.02 REMOVAL OF JACK CYLINDER MATERIAL

A. The existing steel jack cylinder sections shall be removed. The contractor shall exercise his best judgement in the removal of the steel sections and any existing PVC casing sections or any steel sections which may be encountered.

- B. Each removed sections shall be flushed out to remove all evidence of hydraulic. Rimse shall be emptied into DOT supplied 55 gallon drums supplied by the drilling contractor.
- C. Contractor shall make available each of the sections for inspection to determine where the jack was leaking.

2.03 DRILLING OF HOLE:

- A. Remove any existing PVC or steel casing which may exist.
- B. Drill new well hole of proper size and depth. Drilling to be done with inside drilling rig under existing conditions. The Local Agency will require that hole be drilled two feet below the bottom of the existing jack cylinder.

1. All contaminated soil to be placed in DOT supplied 55 gallon drums for transportation to a disposal site.

- 2. A discrete soil sample shall be taken for every 20 cubic feet of material removed from the hole. Samples from native soil shall be taken at approximately 30 feet. Sampling levels will determine the extent of the contamination in the soil. Contaminated soil shall be removed to the extent possible and will be determined by the Local Agency.
- 2. Install closed bottom 10 ga. steel casing with water seal ring as detailed in jack setting detail. Provide casing as manufactured by California Steel Industries, Kai Well water well casing with .20 percent copper or equal, no know equal. If casing must be driven, steel bottom may be omitted. In lieu of steel bottom provide minimum of two feet of concrete in bottom of hole. Use Pour Stone, or equal, no known equal. Backfill with clean dry sand.
- 3. Coat water seal ring with suitable waterproofing compound and seal void between concrete and casing with quick setting hydraulic cement.

2.04 PVC CASING

A. Install Schedule 40 PVC (140 psi) casing with watertight sealed couplings and bottom end cap. PVC casing to be a minimum of six (6) inches greater in diameter than the jack cylinder. Extend PVC above pit floor to fit snug against the pit channels.

B. Installation: Set PVC casing in hole and back fill with clean, dry sand or bentenite mixture. Provide a watertight seal between the PVC and steel casing.

2.05 CYLINDER AND PLUNGER

- A. Cylinder: Steel pipe, factory tested for 400 pounds/square inch working pressure. Sandblast or wire brush outside of cylinder to remove rust and scale. Paint with heavy coat of epoxy or mastic. Wrap with 20 mil wrapping of Trantex Tapecoat, Glasswrap or equal. Work shall be done in shop and repaired in field if coating is damaged.
- B. Sensors: Install moisture sensor in the space between the PVC and the jack cylinder. Sensor shall be a maximum of two inches above the bulkhead of the PVC. Seal area between the PVC and the cylinder to form a watertight seal.
- B. Plunger: Reuse existing plunger.
- C. Packing. Provide new packing which inhibits leaking of oil with drip ring.

2.06 PLATEN ISOLATION

A. Reuse existing platen connection.

2.07 PIPING

- A. Match existing pipe size with new connections at the cylinder head suitable for 400 pounds pressure.
- B. Provide PVC containment for the to/from line from the jack to the power unit. Containment piping shall be slanted from the power unit to the pit. Install sensors as required to monitor any leaks in the piping.

2.08 PIT

A. The pit floor, pit sump and walls of the pit shall be lined with a water/oil tight membrane sealant to contain 110 percent of the amount of oil in the tank reservoir and the oil line (no less than six (6) inches in height).

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2.09 OIL

A. Refill system with oil rated for 150 SSU at 100 degrees F. temperature. Match existing oil in system. The existing oil may be reused provided that the oil is filtered before filling the reservoir.

2.10 POWER UNIT

- A. Provide a sheet metal pan under the existing power unit to contain 110 percent of the volume of the tank reservoir. Pan is to be water and oil tight and is intended to contain any oil that may leak from the reservoir.
- B. The containment pan shall be supported and isolated from the power unit. Provide necessary seismic restraints. Provide sensor as required by Title 23.

2.11 SENSOR SUPERVISORY PANEL

A. Locate panel in machine room and connect to existing 110 volt supply. Install sensor leads in conduit. Sensors shall furnish a visual and audible signal any time a sensor detects the presence of water and/or oil in the covered areas. Detection by one or more of the sensors shall signal the elevator to shut down.

PART 3 - EXECUTION

3.01 GENERAL

A. Bidding Documents: Contractor shall examine the existing elevator and specifications. Any discrepancies which affect the elevator work or conditions adverse to the contractors's equipment shall be brought to the Engineer's and Project Manager's attention immediately.

3.02 PREPARATION

A. Field Measurements: Field verify dimensions before proceeding with the work.

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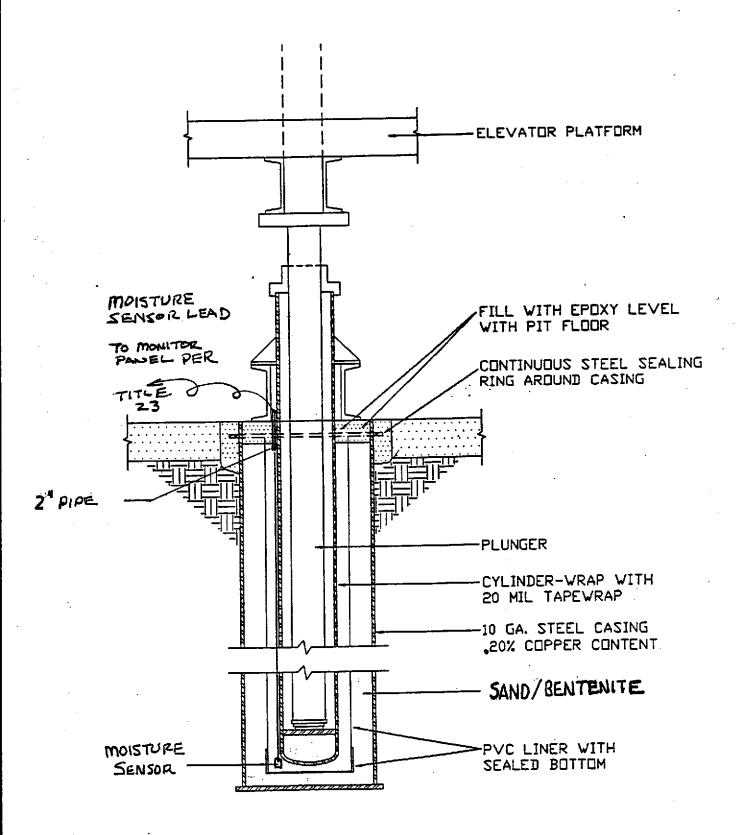
3.03 INSTALLATION

A. General: Install per manufacturer's requirements, those of regulatory agencies and as specified.

3.04 FIELD QUALITY CONTROL

- A. Examination and Testing: When installation is ready for final acceptance, notify and assist Owner in making a walk-through inspection of entire installation to assure workmanship and equipment complies with contract documents.
- B. Correction: Make corrections to defects or discrepancies at no cost to Owner. Should discrepancies be such that re-examination and retesting are required, all costs including those of the Engineer shall be paid for by the Contractor.
- C. Final Acceptance: Final acceptance of the installation will be made only after all corrections are complete, final submittals and certificates received, and the Owner is satisfied and the installation is complete in all respects.

END OF SECTION



Underground Storage Tank Removal Projects

A <u>site specific</u> Health and Safety plan must be submitted for UST removal projects. We advocate the site health and safety plan include the following items, at a minimum:

- a) The name and responsibilities of the site health and safety officer;
- b) An outline of briefings to be held before work each day to appraise employees of site health and safety hazards;
- c) Identification of the health and safety hazards of each work task. Include potential fire, explosion, physical, and chemical hazards;
- d) For each hazard, identify the action levels (contaminant concentrations in air) or physical conditions which will trigger changes in work habits to ensure workers are not exposed to unsafe chemical levels or physical conditions;
- e) Description of the work habit changes triggered by the above action levels or physical conditions;
- f) Frequency and types of air and personnel monitoring along with the environmental sampling techniques and instrumentation - to be used to detect the above action levels. Include instrumentation maintenance and calibration methods and frequencies;
- g) Confined space entry procedures (if applicable);
- h) Decontamination procedures;
- i) Measures to be taken to secure the site, excavation and stockpiled soil during and after work hours (e.g. barricades, caution tape, fencing, trench plates, plastic sheeting, security guards, etc.);
- j) Spill containment/emergency/contingency plan. Be sure to include emergency phone numbers, the location of the phone nearest the site, and directions to the hospital nearest the site;
- k) Documentation that all site workers have received the appropriate OSHA approved trainings and participate in appropriate medical surveillance per 29 CFR 1910.120; and
- 1) Page for employees to sign indicating they have read and will comply with the site health and safety plan.

ATTACHMENT 1

Site Health and Safety Plan
Page 2 of 2

The safety plan must be distributed to all employees and contractors working in hazardous waste operations on site. A complete copy of the site health and safety plan along with any standard operating procedures shall be on site and accessible at all times.

Notes:

<u>General note</u>: These requirements are <u>excerpts</u> from 29 CFR Part 1910.120(b)(4), Hazardous Waste Operations and Emergency Response; Final Rule, March 6, 1989. Safety plans of certain underground tank sites may need to meet the <u>complete</u> requirements of this Rule.

Note for item d): Action levels may be based on O2 levels, LEL, PEL, TLV, IDLH, or other values and conditions. A source for LEL, PEL, and IDLH levels, along with other chemical information, is the following:

NIOSH Pocket Guide to Chemical Hazards, DHHS (NIOSH)
Publication No. 85-114, Division of Standards, Development and
Technology Transfer, National Institute for Occupational Safety
and Health, 4676 Columbia Parkway, Cincinnati, Ohio 45226-1998

A source for up-to-date TLV values is the following booklet:

Threshold Limit Values and Biological Exposure Indices, the American Conference of Governmental Industrial Hygienists, 6500 Glenway Ave., Bldg. D-7, Cincinnati, Ohio, 45211-4438 (513) 661-7881.

Note for item e): The work habit changes may include upgrading personal protective clothing, donning/doffing fitted respirators or SCBAs, ventilating the site, halting and restarting work, or any other special action. In describing work changes, be sure to be specific, for example: identify the type and material of any personal protective equipment to be donned; if fitted respirators are to be donned, indicate the respirator and cartridge type to be used.

