

ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH
Certified Unified Program Agency (CUPA)

INSPECTION REPORT SUMMARY / SUMMARY OF VIOLATIONS - NARRATIVE

Facility Name: BART

Facility Address: 601 EAST 8TH STREET, OAKLAND, CA

PERMIT WAS ISSUED BY OAKLAND FIRE DEPARTMENT TO REMOVE UNDERGROUND HAZARDOUS WASTE PIPING AND INSTALL UNDERGROUND HAZARDOUS WASTE DOUBLE WALLED FIBERGLASS PIPING. PIPING USED TO CONVEY HAZARDOUS WASTE FROM INSIDE FACILITY TO UST. HAZARDOUS WASTE USED OIL IS PNEUMATICALLY PUMPED FROM FACILITY REPAIR SHOP TEMPORARY CONTAINERS TO UST FOR ACCUMULATION.

REMOVAL OF PIPING PRIOR AND ALL WORK PERFORMED UP TO JANUARY 30, 2015 WAS OVERSEEN BY OFD. PIPING INSTALLED AND TESTING PERFORMED AFTER JANUARY 30, 2015 OVERSEEN BY ACDEH.

TEC ACCUTITE
ARNULFO CARDONA, COMPLIANCE MANAGER
262 MICHELLE COURT, SO. SAN FRANCISCO, CA 94080
650.616.1200 ACARDONA@TECACCUITITE.COM

2-11-2015 ONSITE TO WITNESS PRIMARY PIPING PRESSURE TEST DURING THE TESTING THE CONTRACTOR AND ONSITE CONSULTANT INDICATED THAT THE REMOVED UNDERGROUND PIPING WAS SINGLE WALLED THAT CONVEYED THE HAZARDOUS WASTE USED OIL TO THE UNDERGROUND STORAGE TANK. (SEE ATTACHED PHOTOS)

UNDER OFD OVERSIGHT NO SAMPLES UNDER REMOVED PIPING WERE OBTAINED. ACDEH REQUESTED TWO SAMPLES TO BE OBTAINED AT APPROXIMATE LOCATIONS UNDER PIPING JOINTS DUE TO DARK COLORED SOILS ADJACENT TO BUILDING FOOTING. SAMPLING LOCATION UNDER ONE PIPE JOINT ABOVE TANK WAS NOT TAKEN DUE TO POTENTIAL DAMAGE TO TANK.

2-13-2014 ONSITE TO WITNESS SECONDARY PIPING PRESSURE TEST AND SOIL SAMPLING. SECONDARY PIPING PASSED PRESSURE TESTING. ONE SOIL SAMPLE TAKEN/OBTAINED BY RYAN WOOD CDM SMITH CONSULTANTS NEAR THE BUILDING FOOTING (SEE PHOTO). SECOND SAMPLE COULD NOT BE OBTAINED DUE TO THE CLOSE PROXIMITY OF THE UST. ACDEH PROVIDED MR. WOOD WITH THE MINIMUM VERIFICATION ANALYSIS REQUIREMENTS (ATTACHED). SAMPLE ANALYSIS WILL BE PROVIDED TO ACDEH FOR REVIEW.

2-19-2015 ONSITE TO WITNESS SECONDARY CONTAINMENT HYDROSTATIC TEST OF THE TANK TOP SUMP. SUMP PASSED TESTING.

ACDEH RECEIVED SAMPLE RESULTS AND DETERMINED THAT RELEASE HAS OCCURRED FROM THE SINGLE WALLED PIPING THAT CONVEYED HAZARDOUS WASTE USED OIL. THIS FACILITY WILL BE FORWARDED TO ACDEH LOP GROUP FOR REVIEW.

6 MONTH POST CONSTRUCTION INSPECTION / TESTING WILL BE REQUIRED ON OR BEFORE
AUGUST 19, 2015

Date of Inspection

Inspector

Signature of Facility Representative

2-19-2015

CHRIS TOUGERON



Page ____ of ____

Tougeron, Christopher, Env. Health

From: Wickham, Jerry, Env. Health
Sent: Thursday, March 12, 2015 6:22 PM
To: Tougeron, Christopher, Env. Health
Subject: RE: BART Oakland Maintenance Shop - Waste Oil Tank

Chris,

Based on these analytical results, we recommend transferring the site to LOP to open an LOP case and conduct further investigation.

Regards,
Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
510-567-6791
jerry.wickham@acgov.org

From: Tougeron, Christopher, Env. Health
Sent: Thursday, March 12, 2015 5:21 PM
To: Wickham, Jerry, Env. Health
Subject: FW: BART Oakland Maintenance Shop - Waste Oil Tank

Jerry,

Please review and let me know if this will be a potential LOP case

Thank You

Chris Tougeron
Sr. Hazardous Materials Specialist
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Alameda, CA 94502
510-567-6804
christopher.tougeron@acgov.org

From: Wood, Ryan [<mailto:woodr@cdmsmith.com>]
Sent: Wednesday, March 11, 2015 10:22 AM
To: Tougeron, Christopher, Env. Health
Cc: Gary Jensen; Tzou, Cassandra; Smith, Randall T.; Arnulfo Cardona
Subject: RE: BART Oakland Maintenance Shop - Waste Oil Tank

Chris,

We have received results from the soil sample collected at the BART Oakland Maintenance Shop Waste Oil Tank. Please find the attached lab report. All recommended analyses for Underground Waste Oil tanks were performed per the Table#2 word document that we received prior to sampling (attached for reference).

The following is a list of detected compounds:

- Metals:
 - Chromium: 28 mg/Kg
 - Lead: 91 mg/Kg
 - Nickel: 27 mg/Kg
 - Zinc: 220 mg/Kg
- TPH
 - TPH – gasoline: 0.280 mg/Kg
 - Total Oil and Grease: 450 mg/Kg
 - TPH – diesel: 9.4 mg/Kg

No other analytes were detected.

Feel free to contact me with any questions or concerns.

Thanks,

Ryan Wood

T/F: 925.296.8015

Cell Phone: 760.310.6358

woodr@cdmsmith.com

From: Tougeron, Christopher, Env. Health [<mailto:Christopher.Tougeron@acgov.org>]

Sent: Wednesday, February 18, 2015 11:35 AM

To: Wood, Ryan

Cc: Tzou, Cassandra; Gary Jensen

Subject: RE: BART Oakland Maintenance Shop - Waste Oil Tank

Ryan,

Thank you for the email. I agree sampling the second point could potentially damage the tank.

If contamination is discovered, the case will be transferred to the LOP department for further review/investigation.

Thank You

Chris Tougeron

Sr. Hazardous Materials Specialist

Alameda County Department of Environmental Health

1131 Harbor Bay Parkway, Alameda, CA 94502

510-567-6804

christopher.tougeron@acgov.org

From: Wood, Ryan [<mailto:woodr@cdmsmith.com>]

Sent: Tuesday, February 17, 2015 12:43 PM

To: Tougeron, Christopher, Env. Health

Cc: Tzou, Cassandra; Gary Jensen

Subject: RE: BART Oakland Maintenance Shop - Waste Oil Tank

Hi Chris,

Thank you providing this information and meeting out at the Site on Friday. Here is a summary of the two sample locations requested in your email:

- One soil sample of the native soil was successfully collected on Friday from the location next to the building. This sample was relinquished to Torrent Laboratory and will be analyzed for the verification analyses identified in the word document that you provided.
- As for the other sample you requested near or on top of the UST, we were unable to collect the soil sample from this location due to a large quantity of pea gravel (about 4 to 5 feet of gravel) on top of the tank. Removal of the pea gravel near the tank top could have potentially punctured or damaged the tank.

Per your request, we will provide you with a copy of the laboratory analytical report for the native soil sample collected next to the building when the results are available. Please let me know if you have any questions or concerns.

Ryan Wood

T/F: 925.296.8015

Cell Phone: 760.310.6358

woodr@cdmsmith.com

From: Tougeron, Christopher, Env. Health [<mailto:Christopher.Tougeron@acgov.org>]

Sent: Friday, February 13, 2015 6:35 AM

To: Wood, Ryan

Cc: Tzou, Cassandra

Subject: RE: BART Oakland Maintenance Shop - Waste Oil Tank

Ryan,

My office was closed for a holiday on Thursday.

I have attached the minimum verification analysis document to guide in the sampling event.

The code states samples for underground piping are to be taken every 20 linear feet and/or at every joint/change in direction. Based on the photos shown to me by Perry on Wednesday, there are two joints along the piping run that need to be sampled. One in next to the building and the other appears to be near or on top of the UST.

Please let me know if this answers your question(s).

Thank You

Chris Tougeron

Sr. Hazardous Materials Specialist

Alameda County Department of Environmental Health

1131 Harbor Bay Parkway, Alameda, CA 94502

510-567-6804

christopher.tougeron@acgov.org

From: Wood, Ryan [<mailto:woodr@cdmsmith.com>]

Sent: Thursday, February 12, 2015 9:25 AM

To: Tougeron, Christopher, Env. Health

Cc: Tzou, Cassandra

Subject: BART Oakland Maintenance Shop - Waste Oil Tank

Hi Chris,

I wanted to touch base with you regarding the collection of soil samples near the waste oil tank at the Oakland Bart Shop. It sounds like it would be easiest to collect the soil samples tomorrow morning under the oversight of Alameda County. In order to properly prepare for sampling, we will need to know exactly how many samples to collect and which analyses to run.

Also, we typically use a contracted lab through BART for all of our environmental sampling. Would it be sufficient for us to use that lab, or do you have a required lab through the county? We would like to evaluate the potential additional costs of collecting soil samples before we collect them, as soil sampling was not in our original scope of work.

Please give me a call at your earliest convenience so we can work out the details.

Thank you,

Ryan W. Wood | Geologist | CDM Smith | 100 Pringle Avenue, Suite 300 | Walnut Creek, CA 94596 | T/F: 925.296.8015 | Cell
Phone: 760.310.6358 | woodr@cdmsmith.com

Alameda County Department of Environmental Health

Application for Underground Storage Tank Modification

This Application For The Modification Of Underground Storage Tanks Is From A Field Of 6 Months From The Date Of Approval

Project Contact and Telephone Number ARNULFO CARDONA 650.296.1730			
Facility Name BART MAINTENANCE SHOP		Telephone Number 510-464-6654	
Address 601 E. 8 TH STREET OAKLAND, CA			
Cross Street 5 TH AVENUE.			
Underground storage tank -- Owner/Operator BAY AREA RAPID TRANSIT (BART)		Telephone Number 510-464-6654	
Contractor's Name TECHNOLOGY ENGINEERING AND CONSTRUCTION		Telephone Number 650-616-1200	
Contractor Address 262 MICHELLE COURT, SOUTH SAN FRANCISCO, CA 94080		CA License# 762034	Class C36
Hazardous Substance Certificate: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (Qualifying license category _____)		Workers Comp.# 3300067187	
Fire Department		Permit Number	
Does this site have a leaking UST (or did it have a leaking tank system?) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
State Tank ID Number	Tank Size	Material To Be Stored	Installation Date
01-000-			
01-000-			
01-000-			
01-000			
01-000-			

APPROVED

DEPARTMENT OF ENVIRONMENTAL HEALTH

BY C. TOUGERON *[Signature]*

DATE 3-16-2015

510-567-6804

The Applicant shall complete this checklist as applicable for the scope of work proposed. It will serve as a reminder for the applicant of the items under review for the modification of an Underground Storage Tank.

UST SYSTEM INFORMATION (Drawing and submissions must include Number 1 through Number 9)

1. Three complete sets of plans (include manufacturer's specification sheets for proposed equipment to be installed.
2. Plans drawn to scale in non-erasable print. Scale is to be at least 1/4 inch to the foot.
3. Plot plan to show location of tanks and all associated piping.
4. Detail of tank, associated piping, leak detection equipment, excavation and cover.
5. Tank(s) and piping approved by a nationally recognized independent Testing organization. [Title 23, Chapter 10, Article 3, Section 2631 (b), and Section 2635]
6. Verification of product compatibility with the tank(s), piping, monitoring device(s), epoxy or silicone glues, etc.
7. Manufacturer's written installation instructions for tank(s), piping, monitoring devices, etc.
8. na Total number of tanks on site after installation: _____
9. Submit a Site Safety plan. (contractor)
10. Contractor must submit a copy of Workers Compensation Certificate.
11. County/City Building Department notified.
12. County/City Fire District notified.
13. **In the event contamination is observed, confirmed or suspected as a result of the tank system, it is your responsibility as an owner or operator to comply with Title 23, California Code of Regulations, Chapter 16, Article 5 (Release Reporting and Initial Abatement Requirements and Article 11 (Corrective Action Requirements).**

The owner or operator must acknowledge this responsibility for work plan submittal by signature and date below:

Name ARNOLFO CARDONA
Title PROJECT MANAGER Date 02/25/15



State Of California

**CONTRACTORS STATE LICENSE BOARD
ACTIVE LICENSE**



License Number **762034**

Entity **CORP**

Business Name **TECHNOLOGY ENGINEERING &
CONSTRUCTION INC DBA
ACCUTITE**

Classification(s) **A HAZ B C36 C61/D40**

Expiration Date **04/30/2015**

www.cslb.ca.gov



STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY CONTRACTORS STATE LICENSE BOARD



Building Quality



**HAZARDOUS SUBSTANCES REMOVAL AND REMEDIAL
ACTIONS CERTIFICATION**

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



Qualifier: **EDDY ARMAND TABET**
License No.: **762034**
Business Name:

WITNESS my hand and official seal this
day of

24

AUGUST 1999

**TECHNOLOGY ENGINEERING & CONSTRUCTION INC
ACCUTITE**

This certification is the property of the Registrar of Contractors and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason.

Registrar of Contractors

13L-38 (12/97)

762034



Technology, Engineering, & Construction, Inc.
262 Michelle Court, South San Francisco, CA 94080
Tel.: 650-616-1200 Fax: 650-616-1244

December 05, 2014

SCOPE OF WORK
Waste Oil Tank Upgrades

BART Oakland Station
601 East 8th Street, Oakland, CA 94606

- 1- **Replace Underground Waste Oil and Vent Piping runs**
 - * Disconnect existing vent pipe line and remote fill piping draining waste oil residues to the main tank.
 - * Concrete saw, break and dispose of approximately 2 cubic yards of concrete.
 - * Remove existing spill bucket containment and piping manhole.
 - * Remove pea gravel and stockpile for reuse
 - * Expose and remove existing piping and properly dispose as a hazardous waste.
 - * Remove all tank top fittings from bungs in order to accommodate risers for direct fill, remote fill, vent line, automatic tank gauge and overfill sensor.
 - * Install a temporary spill bucket in order to keep the tank operational.
 - * Install fiberglass primary piping for the vent and remote fill lines; including secondary piping containment for both lines.
 - * Furnish and install new piping sump penetrations to accommodate new piping, sealing existing.
 - * Terminate primary piping using ball valves and flex connectors at the sump end.
 - * Perform pipe and sump testing after repairs.
 - * Schedule permit upgrade inspection and sign-off.

- 2- **Install a New Multi-port manhole**
 - * Install a new multi-port spill containment manhole over the top of tank sump to preserve future access to the tank top and to facilitate direct fill.
 - * Backfill and compact excavated area. Resurface trenched area with rebar and 6" of concrete.

- 3- **Install a New Overfill Shut-off System**
 - * Install a new audible and visual monitor connected directly to a high level sensor installed on tank top; including a solenoid valve to provide shut off the oil transfer pump.
 - * Verify system operability
 - * Provide training for the new system and installation.
 - * Provide testing report and permit sign-off.

Arnulfo Cardona
Project Manager



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

7/1/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Druml Group, Inc. 1135 Farragut Blvd Foster City CA 94404	CONTACT NAME: David Mahler
	PHONE (A/C No. Ext): (800) 949-6247 FAX (A/C No.): (650) 341-8352
	E-MAIL ADDRESS: dmahler@drumlgroup.com
	INSURER(S) AFFORDING COVERAGE NAIC #
	INSURER A: Philadelphia Indemnity 18058
	INSURER B: Cypress Insurance Company 10855
	INSURER C: Travelers Property Casualty 25674
	INSURER D:
	INSURER E:
	INSURER F:

COVERAGES CERTIFICATE NUMBER: CL147100847 REVISION NUMBER:

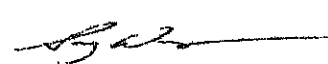
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE 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.

INSR LTR	TYPE OF INSURANCE	ADDL. SUBR. INSR. WVD.	POLICY NUMBER	POLICY EFF. (MM/DD/YYYY)	POLICY EXP. (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY					EACH OCCURRENCE \$
	COMMERCIAL GENERAL LIABILITY					DAMAGE TO RENTED PREMISES (Ea occurrence) \$
	CLAIMS-MADE <input type="checkbox"/> OCCUR <input type="checkbox"/>					MED EXP (Any one person) \$
						PERSONAL & ADV INJURY \$
						GENERAL AGGREGATE \$
	GEN'L AGGREGATE LIMIT APPLIES PER:					PRODUCTS - COM/OP AGG \$
	POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/>					\$
A	AUTOMOBILE LIABILITY		PHPK1197880	7/1/2014	7/1/2015	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS					BODILY INJURY (Per person) \$
	<input checked="" type="checkbox"/> HIRED AUTOS	<input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS				BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> Comp - \$500	<input checked="" type="checkbox"/> Coll - \$1,000				PROPERTY DAMAGE (Per accident) \$
						Terrorism \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/>					EACH OCCURRENCE \$
	EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/>					AGGREGATE \$
	DED <input type="checkbox"/> RETENTION \$ <input type="checkbox"/>					\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		3300067187	7/1/2014	7/1/2015	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N				E.L. EACH ACCIDENT \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below	N/A				E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
						E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Equipment Floater		QT-660-7444L72A-TTL-14	7/1/2014	7/1/2015	Rented/Leased Equipment \$300,000
	Crime					Dishonesty/Forgery/Alteration \$100,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
[Re: PROOF OF INSURANCE]

CERTIFICATE HOLDER

CANCELLATION

Technology, Engineering and Construction, dba Accutite 262 Michelle Court South San Francisco, CA 94080	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE
	Soy Wong / SWONG 

ACORD₁₁ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
7/3/2014

PRODUCER
ISU INS SER. - BC ENV. BROKERAGE
1037 SUNCAST LANE, SUITE 103
EL DORADO HILLS, CA 95762
(916) 939-1080

INSURED
TECHNOLOGY ENGINEERING & CONSTRUCTION
dba TEC ACCUTITE & GHG ANALYTICAL
262 MICHELLE COURT
SOUTH SAN FRANCISCO, CA 94080

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.

INSURERS AFFORDING COVERAGE

INSURER A: HOMELAND INSURANCE CO OF NY	NAIC# 34452
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

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. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L NSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
A		GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> CONT. POLLUTION GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	793-00-07-32-0002	07/01/14	07/01/15	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
		AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
A		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE RETENTION \$	793-00-07-33-0002 OVER LIAB, AUTO W/C	07/01/14	07/01/15	EACH OCCURRENCE \$ 4,000,000 AGGREGATE \$ 4,000,000
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A		OTHER E&O LIAB. CLAIMS MADE	793-00-07-32-0002 RETRO: 7/1/02	07/01/14	07/01/15	\$1,000,000 OCCURRENCE \$2,000,000 AGGREGATE

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

CERTIFICATE HOLDER

-FOR INFORMATION ONLY

CANCELLATION

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

AUTHORIZED REPRESENTATIVE

Matthew C. Walker

**UNIFIED PROGRAM CONSOLIDATED FORM
UNDERGROUND STORAGE TANK
CERTIFICATION OF INSTALLATION / MODIFICATION**
(One form per project)

I. FACILITY INFORMATION

FACILITY ID # (Agency Use Only)										
BUSINESS NAME (Same as Facility Name or DBA - Doing Business As)										
BART - Maintenance Shop Oakland										
BUSINESS SITE ADDRESS					103.	CITY			104.	
601 E. 8 TH Street						Oakland, CA 94606				

II. INSTALLATION / MODIFICATION PROJECT DESCRIPTION

TYPE OF PROJECT (Check all that apply)		483a.	WORK AUTHORIZED UNDER PERMIT	483b.
<input type="checkbox"/> 1. TANK INSTALLATION OR REPLACEMENT <input checked="" type="checkbox"/> 2. PIPING INSTALLATION OR REPLACEMENT <input type="checkbox"/> 3. SUMP INSTALLATION OR REPLACEMENT <input type="checkbox"/> 4. UNDER DISPENSER CONTAINMENT INSTALLATION OR REPLACEMENT <input type="checkbox"/> 5. OTHER			(Number or Date):	
DESCRIPTION OF WORK BEING CERTIFIED:				
- Replace Underground Waste Oil and Vent Piping runs - Concrete saw, break and dispose of approximately 2 cubic yards of concrete, and remove existing spill bucket. - Install fiberglass primary piping for the vent and remote fill lines; including secondary piping containment for both lines. - Furnish and install new piping sump penetrations to accommodate new piping, sealing existing. - Perform pipe and sump testing after repairs. - Install a new OPW multi-port spill containment manhole. - Backfill and compact excavated area. Resurface trenched area with rebar and 6" of concrete. - Schedule permit upgrade inspections and sign-off.				

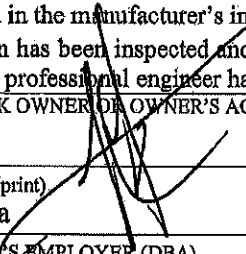
III. CONTRACTOR INFORMATION

NAME OF CONTRACTOR WHO PERFORMED INSTALLATION / MODIFICATION				482a.
Technology Engineering & Construction, Inc. dba TEC ACCUTTITE				
CONTRACTOR LICENSE #		482b.	ICC CERTIFICATION #	482c.
762034			8308490	

IV. CERTIFICATION

I certify that the information provided herein is true, accurate, and that the following conditions have been satisfied:

- The installer has met the requirements set forth in 23 CCR §2715, subdivisions (g) and (h).
- The underground storage tank, any primary piping, and any secondary containment was installed according to applicable voluntary consensus standards and any manufacturer's written installation instructions.
- All work listed in the manufacturer's installation checklist has been completed.
- The installation has been inspected and approved by the local agency, or if required by the local agency, inspected and certified by a registered professional engineer having education and experience with underground storage tank system installations.

SIGNATURE OF TANK OWNER OR OWNER'S AGENT		DATE	484.	PHONE	487.
		2/25/2015		(650) 616-1200 x 229	
CERTIFIER'S NAME (print)		485.		CERTIFIER'S TITLE:	
Arnulfo Cardona				Project Manager	
NAME OF CERTIFIER'S EMPLOYER (DBA)		488.		CERTIFIER'S RELATIONSHIP TO TANK OWNER	
TEC ACCUTTITE				<input type="checkbox"/> 1. TANK OWNER <input type="checkbox"/> 2. TANK OPERATOR <input checked="" type="checkbox"/> 3. CONTRACTOR <input type="checkbox"/> 4. PROPERTY OWNER <input type="checkbox"/> 5. OTHER AUTHORIZED AGENT OF TANK OWNER	

BART OAKLAND
601 E 8TH ST
OAKLAND

02/19/2015 8:27 AM

SUMP LEAK TEST REPORT

WOSUMP

TEST STARTED 8:12 AM
TEST STARTED 02/19/2015
BEGIN LEVEL 5.2184 IN
END TIME 8:27 AM
END DATE 02/19/2015
END LEVEL 5.2182 IN
LEAK THRESHOLD 0.002 IN
TEST RESULT PASSED

WO SB

TEST STARTED 8:12 AM
TEST STARTED 02/19/2015
BEGIN LEVEL 5.6834 IN
END TIME 8:27 AM
END DATE 02/19/2015
END LEVEL 5.6836 IN
LEAK THRESHOLD 0.002 IN
TEST RESULT PASSED

B.A.R.T. MAIN SHOP
601 E. 8TH ST.
OAKLAND CA. 94606
510-464-6652

FEB 25, 2015 2:25 PM

SYSTEM STATUS REPORT

ALL FUNCTIONS NORMAL

INVENTORY REPORT

T 1:6000 UNLEADED
VOLUME = 4094 GALS
ULLAGE = 1803 GALS
90% ULLAGE = 1213 GALS
TC VOLUME = 4091 GALS
HEIGHT = 59.98 INCHES
WATER VOL = 0 GALS
WATER = 0.00 INCHES
TEMP = 66.4 DEG F

T 2:8000 UNLEADED
VOLUME = 5532 GALS
ULLAGE = 2264 GALS
90% ULLAGE = 1484 GALS
TC VOLUME = 5530 GALS
HEIGHT = 60.81 INCHES
WATER VOL = 0 GALS
WATER = 0.00 INCHES
TEMP = 64.8 DEG F

T 3:6000 DIESEL
VOLUME = 3276 GALS
ULLAGE = 2621 GALS
90% ULLAGE = 2031 GALS
TC VOLUME = 3275 GALS
HEIGHT = 49.87 INCHES
WATER VOL = 0 GALS
WATER = 0.00 INCHES
TEMP = 67.2 DEG F

T 4:WASTE OIL
VOLUME = 86 GALS
ULLAGE = 457 GALS
90% ULLAGE = 402 GALS
TC VOLUME = 85 GALS
HEIGHT = 10.25 INCHES
WATER VOL = 2 GALS
WATER = 0.99 INCHES
TEMP = 68.0 DEG F

***** END *****

ALARM HISTORY REPORT

----- IN-TANK ALARM -----

T 4:WASTE OIL

SETUP DATA WARNING
FEB 2, 2004 11:19 AM

HIGH WATER ALARM
MAR 8, 2004 10:48 AM
FEB 2, 2004 11:22 AM

OVERFILL ALARM
JUL 8, 2010 9:57 AM

LOW PRODUCT ALARM
MAY 26, 2004 8:38 AM

HIGH PRODUCT ALARM
MAY 5, 2014 8:37 AM
APR 10, 2012 8:38 AM
JUL 8, 2010 9:56 AM

INVALID FUEL LEVEL
OCT 18, 2007 10:54 AM
OCT 18, 2007 10:01 AM
OCT 17, 2007 1:56 PM

✓ PROBE OUT
FEB 25, 2015 2:21 PM
FEB 19, 2015 6:58 AM
FEB 11, 2015 9:58 AM

HIGH WATER WARNING
MAR 8, 2004 10:48 AM
FEB 2, 2004 11:30 AM

MAX PRODUCT ALARM
MAY 7, 2014 9:23 AM
JUL 8, 2010 9:57 AM
OCT 18, 2007 9:54 AM

***** END *****

ALARM HISTORY REPORT

----- SENSOR ALARM -----

L 5:WASTE OIL BUMP
PIPING SUMP
✓ FUEL ALARM
FEB 25, 2015 2:22 PM

✓ SENSOR OUT ALARM
FEB 25, 2015 1:14 PM

SENSOR OUT ALARM
FEB 25, 2015 12:51 PM

***** END *****

----- SENSOR ALARM -----

L 4:WASTE OIL ANNULAR
ANNULAR SPACE
LOW LIQUID ALARM
FEB 25, 2015 2:26 PM

ALARM HISTORY REPORT

----- SENSOR ALARM -----

→ L 4:WASTE OIL ANNULAR
ANNULAR SPACE
✓ LOW LIQUID ALARM
FEB 25, 2015 2:26 PM

✓ SENSOR OUT ALARM
FEB 20, 2015 1:16 PM

LOW LIQUID ALARM
FEB 20, 2015 1:06 PM

***** END *****

B.A.R.T. MAIN SHOP
601 E. 8TH ST.
OAKLAND CA. 94606
510-464-6652

FEB 25, 2015 2:27 PM

SYSTEM STATUS REPORT

ALL FUNCTIONS NORMAL

B.A.R.T. MAIN SHOP
601 E. 8TH ST.
OAKLAND CA, 94606
510-464-6652

FEB 25, 2015 12:42 PM

SYSTEM STATUS REPORT

ALL FUNCTIONS NORMAL

----- SENSOR ALARM -----
L 5:WASTE OIL SUMP
PIPING SUMP
✓ SENSOR OUT ALARM
FEB 25, 2015 12:51 PM

----- SENSOR ALARM -----
L 6:WASTE OIL SUMP
PIPING SUMP
SENSOR OUT ALARM
FEB 25, 2015 1:14 PM

B.A.R.T. MAIN SHOP
601 E. 8TH ST.
OAKLAND CA, 94606
510-464-6652

FEB 25, 2015 1:27 PM

SYSTEM STATUS REPORT

ALL FUNCTIONS NORMAL

----- IN-TANK ALARM -----
T 4:WASTE OIL
PROBE OUT
FEB 25, 2015 2:21 PM

----- SENSOR ALARM -----
L 5:WASTE OIL SUMP
PIPING SUMP
✓ FUEL ALARM
FEB 25, 2015 2:22 PM

B.A.R.T. MAIN SHOP
601 E. 8TH ST.
OAKLAND CA, 94606
510-464-6652

FEB 25, 2015 2:23 PM

SYSTEM STATUS REPORT

ALL FUNCTIONS NORMAL





FIRE PREVENTION BUREAU
250 Frank Ogawa Plaza, Suite 3341
Oakland, California 94612-2032
(510) 238-3851

APPLICATION for PERMIT to INSTALL, REMOVE or REPAIR TANKS
In the CITY OF OAKLAND

Request Submittal Date: 01/08/15

PLEASE CIRCLE APPROPRIATE ACTIONS: Application is hereby made for permit to:

(a) Remove (b) Install (c) Repair (d) Modify (e) Abandon/Close in Place A

(a) Gasoline (b) Fuel oil (c) Diesel (d) WASTE OIL tank(s) and excavate, commencing:

(a) four feet inside the curb line*; (b) inside the property line; (c) aboveground; (d) underground tank(s)
*inside curb line, please attach copy of sidewalk/excavation permit from PLANNING AND BUILDING

on the N/A side of _____ St. Ave. _____ feet of _____ St./Ave.

Site Address: 601 E. 8th STREET Present storage WASTE OIL

Owner: BART Address 300 LAKESIDE DR. Phone (510) 464-6654

Applicant: ARNULFO CARDONA Address 262 MICHELLE CT. Phone 650-616-1229

TEC XCCUTITE

Sidewalk surface to be disturbed N/A Number of Tanks _____ Capacity _____ Gallons ea.

Remarks WASTE OIL TANK (650 GAL.) IS INSIDE THE PROPERTY
NEXT TO THE BUILDING.

Signature _____

PLEASE ATTACH/SUBMIT: (All applicants must have a City Business License Permit)

- (2) Copies of Closure Plans for underground tank removal (s)
- (2) Sets of plans and (1) copy of specifications for above ground tank removal
- (2) Sets of plans and (2) sets of application packets for underground tank installation/modifications
- (2) Sets of plans for aboveground tank installation and specifications
- copy or prepare to show Planning and Building approval for aboveground tank removal and tank repair

NOTE: FOR TANK INSTALLATION PLEASE SUBMIT THIS APPLICATION FORM ALONG WITH A APPLICATION FOR PERMIT TO OPERATE, MAINTAIN OR STORE

FOR OFFICE USE ONLY

Permit No. _____ Amt. Recv'd _____ Date Issued: _____

Copies to: Electrical Inspection ok# _____ Cash _____



Oakland, CA 94612-2032

(510) 238-3851
TTY (510) 238-6884

Inspection Work Order

Business Name:	BART Oakland Shop Facility / Luis Leon	Reason:	Tanks
Address:	601 E 8TH ST	Scheduled:	2015-01-08 1:30PM
Job (Insp Ref#):	2015-00080	Assigned To:	Skilern, Sheryl

Comments: 01/08/15 - Mr. Arnulfo Cardona w/ TEC Accutite, 650-296-1730, submitted & paid \$2,660.00 (check # 34098) for 1 underground storage tank removal application plan review including its inspection fee - CL.

Invoice # 2015-00084
 Invoice Amount 2,660.00

Applicant:
 Applicant Ph#:
 Contractor:
 Contractor Ph#:

Contact Name	Arnulfo Cardona
Field Contact #	650-296-1730
Review Type	UST
Review Type	MODIFY/REPAIR (TI)
Review Type	Underground

REVIEWED AND APPROVED
 OAKLAND FIRE DEPARTMENT
 BY: *Sheryl Skilern*
 TITLE: *Senior Haz Mat Insp*
 DATE: *1/16/15*
 ALL INSPECTIONS REQUIRE
 48 HOURS NOTICE

FACILITY INFORMATION

Facility/Residence Name BART Oakland Station Business Type _____
Site Address 601 E. 8th Street City Oakland Zip 94606
Contact Person Luis Leon Title _____ Phone (510) 464-6654
E-Mail _____ Cell Phone _____
Owner, Agency, or Corporation Name Bay Area Rapid Transit Phone _____
Mailing Address 300 Lakeside Dr. City Oakland State CA Zip 94612
EPA ID Number _____
Note: Include "Proof of Financial Responsibility"

CONTRACTOR REMOVING TANK(S) AND PIPING:

Contractor TEC Accutite
Contract Person Arnulfo Cardona Phone (650) 616-1200
Business Address 262 Michelle Ct. City South San Francisco Zip 94080
State Contractors License 762034
Note: Attach a copy of Contractors License, Hazardous Materials Certification, and Workers Compensation

HAZARDOUS WASTE HAULERS:

Hazardous Waste Hauler, Tank(s) _____ EPA ID # _____
Business Address _____ City _____
Contact _____ Phone _____
Tank(s) and piping destination _____
Hazardous Waste Hauler (Rinsate) _____ EPA ID # _____
Business address _____ City _____
Contact _____ Phone _____
Note: Include Hauler License No. _____ License Exp. Date _____

SAMPLE COLLECTION AND ANALYSIS:

Sample Collector _____ Company _____
Address _____ City _____ Phone _____
Soil/Water Analysis Laboratory _____
State certification No. _____ Contact _____ Phone _____
Business Address _____ City _____ Zip _____

TANK(S) INFORMATION

TANK SYSTEM: SIZE (GALLONS)	TANK CONSTRUCTION	SUBSTANCE(S) PREVIOUSLY CONTAINED
TANK 1 <u>550 gal.</u>	<u>DW-Fiberglass</u>	<u>Waste/Used Oil</u>
TANK 2 _____	_____	_____

REVIEW AND APPROVE _____

Applicant Declaration:

I certify the application information is correct and factual. I declare that I have read and will follow the "procedures to Close Underground Storage tank(s) Systems." I further agree to comply with all applicable City of Oakland Ordinances; Fire Code; Health and Safety Code Chapter 6.7; Title 23, California Code of Regulations.

Applicant Chris Vinice Applicant *Chris Vinice* Date 1/5/15
Print Signature

"This box for OFM use only"

Comments _____

Inspectors Signature *Sheryl [Signature]* Approval Date 1/10/15



December 05, 2014

**SCOPE OF WORK
WASTE OIL TANK UPGRADES**

**BART Oakland Station
601 East 8th Street, Oakland, CA 94606**

REVIEWED AND APPROVED OAKLAND FIRE DEPARTMENT
BY: <u>[Signature]</u>
TITLE: <u>SPILL & HAZARDOUS</u>
DATE: <u>1/16/15</u>
ALL INSPECTIONS REQUIRE 48 HOURS NOTICE

Replace Underground Waste Oil and Vent Piping runs

- Disconnect existing vent pipe line and remote fill piping draining waste oil residues to the main tank.
- Concrete saw, break and dispose of approximately 2 cubic yards of concrete.
- Remove existing spill bucket containment and piping manhole.
- Remove pea gravel and stockpile for reuse
- Expose and remove existing piping and properly dispose as a hazardous waste.
- Remove all tank top fittings from bungs in order to accommodate risers for direct fill, remote fill, vent line, automatic tank gauge and overfill sensor.
- Install a temporary spill bucket in order to keep the tank operational.
- Install fiberglass primary piping for the vent and remote fill lines; including secondary piping containment for both lines.
- Furnish and install new piping sump penetrations to accommodate new piping, sealing existing.
- Terminate primary piping using ball valves and flex connectors at the sump end.
- Perform pipe and sump testing after repairs.
- Schedule permit upgrade inspection and sign-off.

Install a New Multi-port manhole

- Install a new OPW multi-port spill containment manhole.

Install a New Overfill Shut-off System

- Install a new audible and visual monitor connected directly to a high level sensor installed on tank top; Including a solenoid valve to provide shut off the oil transfer pump.
- Verify system operability
- Provide training for the new system and installation.
- Provide testing report and permit sign-off.

Technology, Engineering & Construction, Inc.


Arnulfo Cardona
Project Manager

REVIEWED AND APPROVED
OAKLAND FIRE DEPARTMENT
BY: <u>Sheryl Spill</u>
TITLE: <u>Senior HAZ MAT IOSP</u>
DATE: <u>1/16/15</u>
ALL INSPECTIONS REQUIRE
48 HOURS NOTICE

Applications

- Service station product, vent and vapor recovery piping
- Bulk plant terminals and fueling terminals
- Central fuel oil systems
- Marinas and marine terminals (onshore only)
- All piping systems requiring UL or ULC Listing for MV, HB, CT and A&M fuels.

Performance

Operating pressures to 200 psig (13.8 bar)
Continuous operating temperatures to 150°F (66°C)
Individual system components may not have the same ratings as the pipe. Refer to the detailed product information for the specific components to determine the pressure rating for the system as a whole.

Listings

Dualoy 3000/L is Listed with Underwriters Laboratories Standard 971-2004 for nonmetallic underground piping for motor vehicle (MV), high blend (HB), concentrated (CT) and aviation and marine (A&M) fuels (File MH9162). Dualoy 3000/L pipe and fittings are also Listed with Underwriters Laboratories of Canada (File CMH 715). In Great Britain the Dualoy 3000/L system has been tested and accepted by the London Fire and Civil Defence Authority. Dualoy 3000/L has been issued a Certificate of Compliance to the Institute of Petroleum (IP) Specification by ERA Technology, Ltd.

Composition

Pipe — Filament-wound fiberglass reinforced epoxy pipe with integral epoxy liner and exterior coating. When classified in accordance with ASTM D2310 and ASTM D2996, the pipe meets the following cell limits: RTRP 11CXF1-5420.

Fittings — Compression-molded and filament-wound fiberglass reinforced epoxy

Adhesive — PSX•20 ambient-cure, two-part epoxy for all services (including alcohols)

Joining System

Bell and spigot taper/taper adhesive bonded joint

Pipe Lengths

Standard 6.1 m (20-ft) random lengths 5.2 to 6.4 m (17 to 21 ft)
Other lengths available on request

Fittings

Adapters: bell x NPT male⁽¹⁾

Adapters: bell x NPT female⁽²⁾

Adapters: spigot x NPT female⁽²⁾

Adapters: spigot x NPT male⁽²⁾

45° Elbows⁽¹⁾

90° Elbows⁽¹⁾

End caps⁽¹⁾

Dispenser pan penetration fittings⁽¹⁾ Tees⁽¹⁾

Flange rings⁽¹⁾

Flange stub ends⁽¹⁾

Isolation bushings⁽¹⁾

Nipples⁽²⁾

Reducer bushings⁽¹⁾

Repair couplings⁽¹⁾

Sleeve couplings⁽²⁾

Tees⁽¹⁾

(1) Indicates molded fitting.

(2) Indicates filament-wound fitting.

(3) Other fittings available without UL listing.

Typical Pipe Dimensions and Weights

Nominal Pipe Size		Pipe OD ⁽¹⁾		Pipe ID		Wall Thickness				Capacity		Pipe Weight	
						Total		Structural					
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(gal/ft)	(l/m)	(lb/ft)	(kg/m)
2	50	2.37	60	2.21	56	0.080	2.03	0.060	1.5	0.20	2.5	0.47	0.70
4	100	4.50	114	4.33	110	0.087	2.21	0.070	1.8	0.77	2.92	1.00	1.49

(1) Typical outside diameters of 2 through 6-inch pipe are within API, ASTM and ANSI fiberglass and steel pipe dimensions.

Typical Pipe Performance

Nominal Pipe Size		Pressure Rating ⁽¹⁾		Ultimate Internal Pressure ⁽¹⁾		Ultimate Collapse Pressure ⁽²⁾	
(in)	(mm)	(psig)	(MPa)	(psig)	(MPa)	(psig)	(MPa)
2	50	200	2.07	3200	22.1	153	1.05
4	100	175	1.21	2000	13.8	39	0.27

(1) At 80°F (27°C).

(2) At 80°F (27°C). For continuous service do not exceed 75% of these values.

For dimensions of fittings, consult publication Dualoy 3000/L Fittings Dimensions FP266. Pressure ratings of fittings without UL listing are available on request.

Fittings Pressure Performance

Nominal Pipe Size		All Fittings ⁽¹⁾	
(in)	(mm)	(psig)	(MPa)
2	50	250	1.72
4	100	125	0.86

(1) Some fittings have higher pressure ratings than shown.

Dualoy 3000/L piping systems are designed to function at temperatures ranging from -40 to 150°F (-40 to 66°C) at service pressures between -1 and 20 bar. Dualoy 3000/L pipe conforms to ASTM D2310, D2517 and D2996.

Typical Physical Properties

Pipe Property	Units	Value	ASTM
Thermal conductivity	Btu-in/(h•ft ² •°F)	1.7	C177
	W/m•°C	7.6	
Linear thermal expansion	in/in/100°F	6.6	D2996
	mm/mm/100°C	12.6	
Friction factor	Hazen-Williams	150.0	—
Absolute roughness	in/ft	15.0	—

Typical Mechanical Properties

Pipe Property ¹	Units	Value ¹	ASTM
Tensile strength	10 ³ psi MPa	35.0 241.0	D2105
Circumferential	10 ³ psi MPa	70.0 483.0	D1599
Tensile modulus	10 ³ psi GPa	2.6 177.2	D2105
Compressive modulus	10 ³ psi GPa	1.6 110.2	FGSTM
Compressive strength	10 ³ psi MPa	24.5 168.9	FGSTM
Cyclic	10 ³ psi MPa	8.0 55.0	D2992(A)
Poisson's Ratio ⁽²⁾		0.16 0.25	FGSTM FGSTM

- (1) Based on structural wall thickness.
(2) The first subscript denotes the direction of applied stress and the second that of measured contraction
x denotes longitudinal direction.
y denotes circumferential direction.

Nominal Pipe Size		Stiffness Factor ⁽¹⁾	
(in)	(mm)	(lb•in ³ /in ²)	(N•m)
2	50	45	5.1
3	75	75	8.5
4	100	60	6.8
6	150	275	31.1

- (1) At 5% deflection.

Bending Radius						
Nominal Pipe Size		Minimum Bending Radius		Maximum Deflection per 20-ft Joint	Minimum Length Required for 10° Change	
(in)	(mm)	(ft)	(m)	(deg)	(ft)	(m)
2	50	75	23	15	13	4
3	75	100	30	9	10	3
4	100	150	46	7.5	27	8

Units

All dimensions are in U.S. Customary units (inches).
Diametric dimensions are maximums.
Insertion depths (X1, X2) are typical.
All weights (lb) are approximate.

Tolerances

Tolerance for centerline-to-face dimensions on fittings with bell-end configuration is $\pm 1/16$ inch.

Listings

Dualoy 3000/L is Listed in the U.S. with Underwriters Laboratories for nonmetallic underground piping for motor vehicle (MV), high blend (HB), concentrated (CT) and aviation and marine (A&M) fuels (File MH9162). Dualoy 3000/L pipe and fittings are also listed with Underwriters Laboratories of Canada (File CMH 715). In Great Britain the Dualoy 3000/L system has been tested and accepted by the London Fire and Civil Defence Authority. Dualoy 3000/L has been issued a Certificate of Compliance to the Institute of Petroleum (IP) Specification by ERA Technology, Ltd.

End Configurations

Bell end is standard.

Taper Angle

The taper angle on all bell and spigot end configurations is 1%.

Pressure Ratings

See publication Dualoy 3000/L Fiberglass Pipe and Fittings, FP265, for pressure ratings. Individual system components may not have the same ratings as the pipe. Refer to the detailed product information for the specific components to determine the pressure rating for the system as a whole.

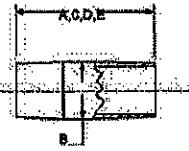
Manufacturing Methods

The fiberglass-reinforced epoxy resin fittings shown in this document are manufactured by filament winding or compression molding.

Adapters: bell x NPT female
Adapters: bell x NPT male
Adapters: isolation
Adapters: spigot x NPT female
Adapters: spigot x NPT male
45° Elbows
90° Elbows
End caps

Flange rings
Flange stub ends
Nipples
Reducer bushings
Repair couplings
Sleeve couplings
Sump penetration pieces
Tees

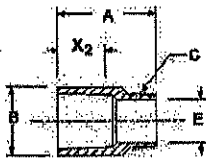
**Nipples
(filament wound)**



(in)	(mm)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)
2	50	6.00	2.38	8.00	10.00	12.00	—	—	0.5 ⁽¹⁾
3	80	—	3.59	8.00	10.00	12.00	—	—	0.7
4	100	—	4.50	—	10.00	12.00	—	—	1.0
6	150	—	6.68	—	—	12.00	—	—	—

(1) Lb/ft.

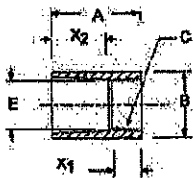
**Adaptors: Bell x NPT male
(molded)**



2	50	4.16	2.92	2 x 11½ ⁽¹⁾	—	1.90	—	2.00	0.4
3	80	5.00	3.92	3 x 8	—	3.00	—	2.05	0.7
4	100	5.19	4.88	4 x 8	—	3.90	—	2.05	0.9
6	150	6.90	7.40	6 x 8	—	5.90	—	3.20	—

(1) Nominal pipe size x NPT threads per inch. BSP threads available.

**Adaptors: Bell x NPT
female (filament wound)**

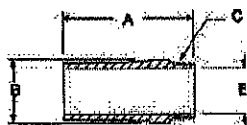


2 x 1½ ⁽¹⁾	50 x 40	6.00	2.80	1½ x 11½ ⁽²⁾	—	2.29	0.70	2.31	0.8
3	80 x 80	5.38	3.65	3 x 8	—	3.00	1.00	2.00	0.7
4	100 x 100	5.85	4.65	4 x 8	—	4.00	1.00	2.26	0.9
6 x 6	150 x 150	6.75	6.90	6 x 8	—	6.00	1.20	3.48	2.1

(1) Consists of a 2-inch filament-wound sleeve coupling with a factory-bonded 2 x 1½ NPT molded bushing. The end of the sleeve coupling containing the bushing has been reduced in length to facilitate thread make-up in the field.

(2) Nominal pipe size x NPT threads per inch. BSP threads available.

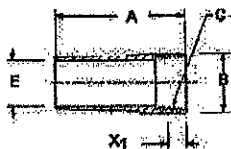
**Adaptors: Spigot x NPT
male (filament wound)**



2	50	4.38	2.55	2 x 11½ ⁽¹⁾	—	2.00	—	—	0.5
3	80	5.00	3.65	3 x 8	—	3.00	—	—	—
4	100	6.00	4.65	4 x 8	—	4.00	—	—	1.7
6	150	6.90	6.90	6 x 8	—	6.00	—	—	—

(1) Nominal pipe size x NPT threads per inch. BSP threads available

**Adaptors: Spigot x NPT
female (filament wound)**



2	50	4.38	2.55	2 x 11½ ⁽¹⁾	—	2.00	0.70	—	0.5
3	80	5.00	3.65	3 x 8	—	3.00	1.00	—	—
4	100	6.00	4.65	4 x 8	—	4.00	1.20	—	1.7
6	150	6.90	6.90	6 x 8	—	6.00	1.00	—	1.2

(1) Nominal pipe size x NPT threads per inch. BSP threads available

**Repair Couplings
(molded)**



2 ⁽¹⁾	50	14.00	4.00	—	—	—	8 ⁽²⁾	1.50	1.3
3	80	14.00	6.00	—	—	—	8	1.50	1.7
4	100	14.00	7.00	—	—	—	8	1.50	2.0

Uses and Applications

- Service station product, vent and vapor recovery piping
- Bulk plant terminals and fuelling terminals
- Central fuel oil systems
- Marinas and marine terminals (onshore only)
- All piping systems requiring UL or ULC Listing for MV, HB, CT and A&M fuels
- Containment piping for all of the above

Description

Dualoy 3000/L secondary containment systems require pipe one size larger than the primary and specially designed fittings. The system provides complete enclosure of UL- and ULC-Listed Dualoy primary piping used in product lines and vapor recovery lines from the sump at the product storage tank to the shear valve connector at the dispenser, and vent lines from the tank. Dualoy containment systems have been sized for close make-up and ease of installation.

Features of Dualoy 3000/L containment systems include:

- Filament-wound, fiberglass-reinforced pipe with integral liner;
- Compact fittings dimensions to minimize trench excavation;
- Smooth exterior pipe surface that eliminates the need for special end preparation tools;
- Ready accessibility to and complete inspectability of primary fittings prior to closure of the containment;
- Complete testability during installation and at any time thereafter;
- Rapid joint makeup with pre-inserted nuts and ambient cure adhesive.

Listings

Dualoy 3000/L is Listed in the United States with Underwriters Laboratories Standard 971-2004 for nonmetallic underground piping for motor vehicle (MV), high blend (HB), concentrated (CT) and aviation and marine (A&M) fuels for both primary and contained piping systems (File MH9162). Dualoy 3000/L pipe and fittings are also Listed with Underwriters' Laboratories of Canada (File CMH715). In Great Britain the Dualoy/3000L system has been tested and accepted by the London Fire and Civil Defense Authority. Dualoy 3000/L has been issued a Certificate of Compliance to the Institute of Petroleum (IP) Specification by ERA Technology, Ltd.

Performance

Operating pressures to 100 psig

Continuous operating temperatures to 150°F (66°C)

Individual system components may not have the same ratings as the pipe. Refer to the detailed product information for the specific components to determine the pressure rating for the system as a whole.

Secondary employs full-performance pipe — Many contained fuel handling systems employ materials in the secondary that fall far short of the primary piping in regard to chemical resistance and mechanical strength. By contrast, Dualoy 3000/L systems are manufactured with the same high-performance fiberglass-reinforced pipe in the secondary as in the primary. Thus, Dualoy 3000/L containment systems easily withstand both high external loads from backfill and traffic as well as internal pressures as high as 100 psig.

Compact containment fittings — Dualoy 3000/L containment fittings are compact clamshell-type closure pieces. Crossovers can be made with the same centerline-to-centerline dimension as single-wall system.

Characteristics

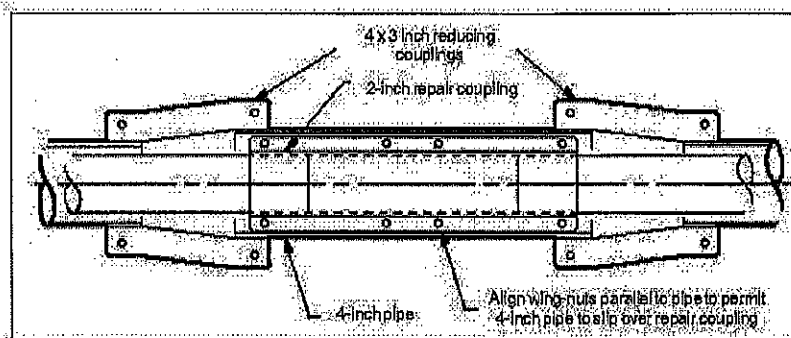
winding process that provides an extremely precise, consistent outside diameter. Light sanding of the pipe end to remove the surface gloss and obtain a suitable bonding surface is the only end prep required, although the scarfing feature of tapering tools can be used.

Easy containment fitting assembly — Dualoy 3000/L containment fitting clamshells are supplied in matched pairs. One half of each pair is fitted with pre-inserted propeller nuts, allowing the fitting to be assembled from one side, using the bolts provided.

Complete retestability — Dualoy 3000/L containment employs rigid-wall pipe and fittings that maintain their slope during the entire service life of the station. When installed with isolating penetration fittings (see page 3), Dualoy 3000/L containment piping can be repeatedly retested whenever desired.

Convenient repair capability — Contained piping systems are occasionally damaged after installation. Damage is generally caused by paving or excavation operations. Dualoy 3000/L contained piping systems are designed so that only the damaged section need be replaced instead of the entire line. The 2-inch Dualoy repair coupling is sized so that it can be contained within 4-inch Dualoy 3000/L containment pipe.

Two-inch primary pipe contained within 3-inch containment pipe can be repaired with a UL-listed 2-inch repair coupling. The containment is restored by replacement of a section of the existing containment pipe with a 4-inch containment nipple. The 4-inch replacement nipple is then joined to the existing containment pipe with Dualoy reducing couplings.

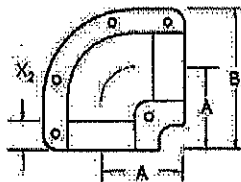


Containment Pipe and Fittings Dimensions

Pipe

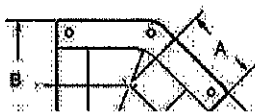
Nominal Pipe Size		A	B	C	X ₂	No. of Bolt Holes	Wt.
(in)	(mm)	(in)	(in)	(in)	(in)		(lb)
3	80	3.50	3.32	—	—	—	0.72
4	100	4.50	4.33	—	—	—	1.00
6	150	6.83	6.39	—	—	—	2.10

90° Elbows

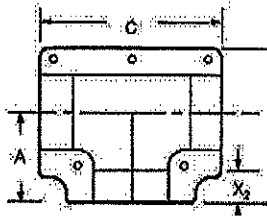


3	80	4.28	7.28	—	1.50	5	1.1
4	100	4.77	8.25	—	1.50	5	1.3
6	150	5.62	10.53	—	2.00	8	1.5

45° Elbows

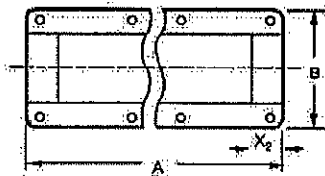


3	80	3.50	6.00	—	1.50	5	0.8
4	100	3.75	7.00	—	1.50	5	1.2
6	150	6.32	9.75	—	2.00	8	1.5



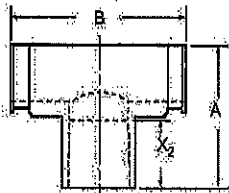
Pipe Size		A	B	C	X ₂	Bolt Holes	Wt.
(in)	(mm)	(in)	(in)	(in)	(in)		(lb)
3	80	4.28	7.24	8.56	1.50	5	1.2
4	100	4.78	8.25	9.58	1.50	5	1.6
6	150	5.72	10.67	11.65	2.00	6	1.7

Couplings



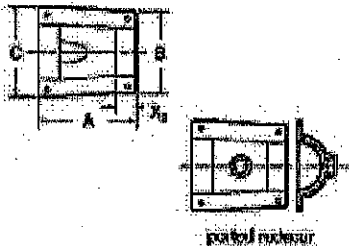
2	50	14.00	4.00	—	1.50	8	1.3
3	80	14.00	6.00	—	1.50	8	1.7
4	100	14.00	7.00	—	1.50	8	2.0
6	150	5.37	9.75	—	4.00	10	2.0

Saddles



3 x 2	80 x 50	4.00	6.00	—	2.15	—	1.3
4 x 2	100 x 50	4.50	6.00	—	2.15	—	1.7
6 x 2	150 x 50	5.56	7.75	—	2.15	—	2.1

Reducers, Plain and with 3/4 inch NPT Outlet



3 x 1½	80 x 40	6.25	4.48	6.10	1.50	4	0.6
3 x 1½	80 x 40	6.25	4.47	6.10	1.50	4	1.1 ⁽¹⁾
3 x 2	80 x 50	6.25	4.90	6.10	1.00	4	0.7
3 x 2	80 x 50	6.25	4.90	6.10	1.00	4	1.1 ⁽¹⁾
4 x 3	100 x 80	7.00	6.00	7.00	1.50	4	0.9
4 x 3	100 x 80	7.00	6.00	7.00	1.50	4	2.0 ⁽¹⁾
6 x 4	150 x 100	7.17	7.62	9.74	2.00	6	1.0

(1) Ported reducer

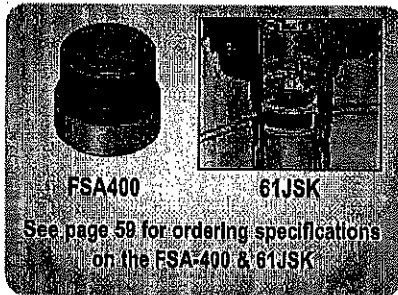
Sump Penetration Fittings

Sump penetrations are designed for use at turbine sumps and dispenser pans. Plain sump penetration fittings permit the annular space between the primary and secondary lines to communicate with the interior of the sump or pan. Penetration fittings with factory-installed centralizers, sleeve couplings and monitoring ports may be used to isolate the pipe annular space from the sump or pan. When the annular space is so isolated, the secondary containment line can be retested at any time and as often as desired.



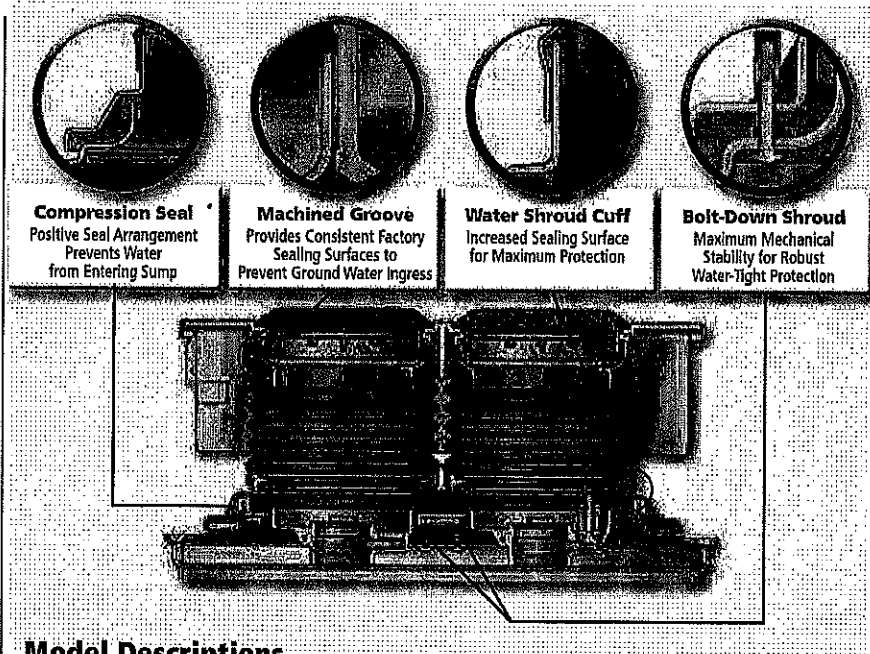
OPW Multi-Port Spill Containment Manholes

OPW Multi-Port Spill Containment Manholes provide spill containment for underground storage tank (UST) fill pipes and vapor recovery risers in a completely integrated single manhole package. Multi-ports are installed over the top of tank sumps to preserve future access to the tank top and to facilitate containment of tank bung fittings. OPW offers a vast array of standard multi-port configurations and options, in addition to an almost unlimited ability to provide custom solutions for virtually any spill containment application.



Replacement Parts

Part #	Description
C05223M	Shroud Boot Cap to Isolate One FRP Cover Port
D02575M	5 Gallon Shroud Boot
SIP-6	6" Sump Inspection Port Sight Glass
SIP-4	4" Sump Inspection Port Sight Glass for Quad Port
205181	Lower Clamp for 5 Gallon Shroud
205183	Upper Clamp for 5 Gallon Shroud



Model Descriptions

- ◆ **OPW 411 Series** – features a flush-mounted manhole lid and raised dual dam and groove spill container rings, with P2105 Buckets using OPW 1-2105 Style Slip-On 5-gallon containers. Base is standard 1" offset from center and can be used for 12", 14", 16" or wider riser spacing. Optional 1P-2105 Hand Pump available.
- ◆ **OPW 500 Series (511 / 521) EVR Multi-Port** – features a flush-mounted manhole lid and raised dual dam and groove spill container ring, with P511-EVR Buckets using OPW 1-2100 Style Thread-On Spill Containers. All Fill Ports in these spill containers feature an enhanced 1DK-2100-EVR vapor tight drain valve. The Vapor Return Spill Container features a permanent plug in the drain port as per EVR requirements. EVR Multi-Port Thread-On Spill containers are available in Composite or Cast Iron bases with 5 gallon buckets. Drain Valve Spill Bucket & Plug Spill Bucket standard on Dual Ports, Drain Valve Spill Bucket standard on Single Port.
- ◆ **Required for EVR APPLICATIONS** – the FSA-400 Threaded Riser Face Seal Adaptor is installed on the fill pipe below the spill container to provide a true sealing for the drop tube flange on the 71SO overflow prevention valve. The 61SO and/or 71SO series valve is installed in the base of the OPW EVR spill container with the patent pending 61JSK jack screw device. This configuration allows liquid in the spill container to be drained directly into the drop tube, thereby isolating the drain valve from the tank ullage, eliminating a notorious leak point in previous systems.

Ordering Specifications

Part #	Description
Bolt-Down Water Shroud Options	
MPWS-33BD	33" FRP Bolt-Down Water Shroud / Includes 203246 - 42" x 33" FRP Bolt-Down Top Hat / Dual Port
	33" FRP Bolt-Down Water Shroud / Includes 203246 - 42" x 33" FRP Bolt-Down Top Hat /

- ◆ **Contractor-Friendly Installation** – studded mounting ring simply bolts together inside the spill containment bucket. No need to align bolt holes in the manhole cover.
- ◆ **Raintight Service** – nitrile gaskets on the manhole and spill bucket mounting rings help prevent contamination of the sump area from surface water intrusion.
- ◆ **Highway 20 Load Rating** – the rugged diamond plate steel manhole covers, as well as the ductile iron (RT) or aluminum (SC) spill container covers meet H20 Load Rating requirements.
- ◆ **Spill Container and Manhole Positive I.D. System** – special recesses cast into spill container covers allow product I.D. tags to be attached to the lids. Matching bucket tags can be affixed to the inside of the spill container to prevent covers from getting switched.
- ◆ **CARB Certified** – 500 Series CARB EVR Approved Executive Order #VR-102
- ◆ **Fill/Vapor Ports** – configurations are available to accommodate a single fill riser, dual ports for both a fill and vapor riser, and triple and quad ports for multiple fill and vapor risers. Ports can be supplied with or without containment buckets.
- ◆ **Port Configurations** – standard port locations match the popular riser spacings (16" or 24") and bung configurations on underground storage tanks. Custom port locations are easily accommodated. For riser spacings less than 16", old style buckets must be used.
- ◆ **Manhole Cover Sizes** – standard bolt-down manhole cover diameters of 30" (76 cm), 37" (94 cm), 42" (107 cm) and 48" (122 cm) allow ample access to the sump area. Heavy-duty reinforced lid options are also available upon request.
- ◆ **Spill Container Cover Options** – standard spill container options include the patented OPW dam and groove raintight (RT) design and the watertight Sealable Cover (SC) "plumber's plug" design. The raintight cover features a finger-grip lifting facility and an integral seal. The sealable cover features a cam-operated mechanism that expands the seal against the vertical wall of the mounting ring. Both of these water-shedding covers are protected by raised mounting rings.
- ◆ **Fastener Options** – two types of fasteners are available to secure the manhole lid and monitoring port to mounting rings. Standard are 5/16"-18 hex head bolts. Optional are OPW Roto-Lock Fasteners. The OPW Roto-Lock system enables a secure, watertight connection without the need to locate threaded bolt holes on the mounting ring.
- ◆ **Custom Multi-Port Manholes** – contact your OPW representative.
- ◆ **Powder Coated Rings & Covers** – available upon request.
- ◆ **Replacement Covers** – see Part Number Configurations at www.opwglobal.com.

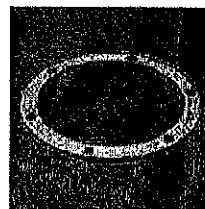
Multi-Port Manhole Water Shroud System Option*

The OPW Multi-Port Manhole Water Shroud (MPWS) system is designed to completely isolate surface water. The MPWS features an injection-molded fiberglass Water Shroud lid that mates to a standard tank sump top hat reducer. Shroud Boots isolate the spill container buckets using stainless steel band clamps, which provide a tight seal between the water shroud top hat and the underside of the spill container mounting rings. A 6" Sump Inspection Port is provided on each FRP Cover, allowing full inspection access through the Multi-Port Gauge Port. The OPW Water Shroud system is available in 33" and 36" models. The MPWS Water Shroud is sold separately.

* Only available for use with post 11/03 design "EVR" spill containers.



Shroud Boots – Vinyl Plastisol



Sump Inspection Port (SIP) – Clear ABS Construction Inspection Port



FRP Cover – Injection Molded Fiberglass Cover

OPW MULTI-PORT SPILL CONTAINMENT ORDERING SPECIFICATIONS

Product Number
6 _____ **EVR** _____ - _____

(500 Series Only)
 Do Not Enter "EVR"
 for old style multiports

Hole-Down Model Number

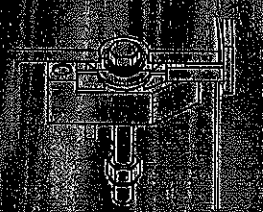
601EVR Hole-Down Thread-On Composite Base, Bolt-Down
 602EVR Hole-Down Thread-On Cast Iron Base, Bolt-Down
 401 Hole-Down Slip-On Composite Base

Roto-Lock Model Number


701EVR Hole-Down Thread-On Composite Base, Roto-Lock
 702EVR Hole-Down Thread-On Cast Iron Base, Roto-Lock
 402 Hole-Down Slip-On Composite Base with Roto-Lock Fastener


Optional Roto-Lock Fastener System


The OPW Roto-Lock System enables a secure, airtight connection without the need to locate threaded bolt holes on the mounting ring.





Fill/Vapor Port Configurations


A 
 (Dead Center)

B 

E 

G 
 (42" Minimum Cover)

L 
 (Offset Single Port)

T 

Replacement / Retrofit Manhole
 RP* (No Ring/Skirt)

*RP cover orders must be accompanied by an up-to-date OPW field survey form.

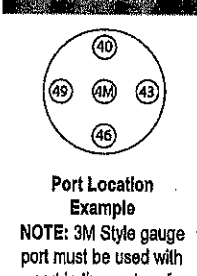
Riser Spacing

00 - Single Port (A Configurations)
 16 - 16" Centers
 24 - 24" Centers (42" Minimum Cover)



Gauge Port Location

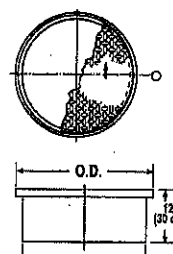
00 - No Gauge Port
 40 - Port at 12 o'clock
 41 - Port at 3 o'clock
 46 - Port at 6 o'clock
 49 - Port at 9 o'clock
 4M - Port in Center
 7X - Flush Mount



Port Location Example
 NOTE: 3M Style gauge port must be used with port in the center of "G" Style

Manhole Cover Size*

30" (Configurations)
 36 - 36" Retrofit Only
 37 - 37"
 39 - 39" Retrofit Only
 42 - 42"
 48 - 48"
 * 42" is standard



Dimensions

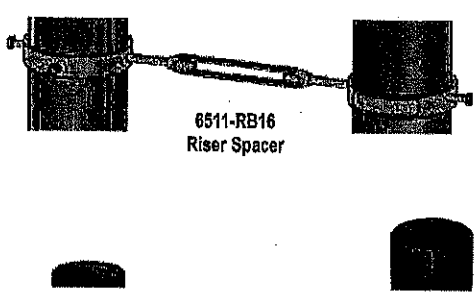
O.D.		I.D.		Thickness	
in.	cm	in.	cm	in.	cm
30	76	26 1/4	68	3/8	0.953
37	94	34 1/4	86	3/8	0.953
42	107	39 1/4	100	1/2	1.27
48	122	44 1/4	113	1/2	1.27

EVR Multi-Ports

Thread-On Spill Containers are available in composite or cast iron bases with either 5 or 15-gallon buckets. (1) Drain Valve Spill Bucket & (1) Plug Spill Bucket standard on Dual Ports. Drain Valve Spill Bucket standard on Single Port.

Optional ACCESSORIES

601RB16	16" Riser
601RB24	24" Riser
601RB30	30" Riser
601RB36	36" Riser
601RB42	42" Riser
601RB48	48" Riser
601RB60	60" Riser
601RB72	72" Riser
601RB84	84" Riser
601RB96	96" Riser
601RB108	108" Riser
601RB120	120" Riser
601RB132	132" Riser
601RB144	144" Riser
601RB156	156" Riser
601RB168	168" Riser
601RB180	180" Riser
601RB192	192" Riser
601RB204	204" Riser
601RB216	216" Riser
601RB228	228" Riser
601RB240	240" Riser
601RB252	252" Riser
601RB264	264" Riser
601RB276	276" Riser
601RB288	288" Riser
601RB300	300" Riser
601RB312	312" Riser
601RB324	324" Riser
601RB336	336" Riser
601RB348	348" Riser
601RB360	360" Riser
601RB372	372" Riser
601RB384	384" Riser
601RB396	396" Riser
601RB408	408" Riser
601RB420	420" Riser
601RB432	432" Riser
601RB444	444" Riser
601RB456	456" Riser
601RB468	468" Riser
601RB480	480" Riser
601RB492	492" Riser
601RB504	504" Riser
601RB516	516" Riser
601RB528	528" Riser
601RB540	540" Riser
601RB552	552" Riser
601RB564	564" Riser
601RB576	576" Riser
601RB588	588" Riser
601RB600	600" Riser
601RB612	612" Riser
601RB624	624" Riser
601RB636	636" Riser
601RB648	648" Riser
601RB660	660" Riser
601RB672	672" Riser
601RB684	684" Riser
601RB696	696" Riser
601RB708	708" Riser
601RB720	720" Riser
601RB732	732" Riser
601RB744	744" Riser
601RB756	756" Riser
601RB768	768" Riser
601RB780	780" Riser
601RB792	792" Riser
601RB804	804" Riser
601RB816	816" Riser
601RB828	828" Riser
601RB840	840" Riser
601RB852	852" Riser
601RB864	864" Riser
601RB876	876" Riser
601RB888	888" Riser
601RB900	900" Riser
601RB912	912" Riser
601RB924	924" Riser
601RB936	936" Riser
601RB948	948" Riser
601RB960	960" Riser
601RB972	972" Riser
601RB984	984" Riser
601RB996	996" Riser
601RB1008	1008" Riser
601RB1020	1020" Riser
601RB1032	1032" Riser
601RB1044	1044" Riser
601RB1056	1056" Riser
601RB1068	1068" Riser
601RB1080	1080" Riser
601RB1092	1092" Riser
601RB1104	1104" Riser
601RB1116	1116" Riser
601RB1128	1128" Riser
601RB1140	1140" Riser
601RB1152	1152" Riser
601RB1164	1164" Riser
601RB1176	1176" Riser
601RB1188	1188" Riser
601RB1200	1200" Riser
601RB1212	1212" Riser
601RB1224	1224" Riser
601RB1236	1236" Riser
601RB1248	1248" Riser
601RB1260	1260" Riser
601RB1272	1272" Riser
601RB1284	1284" Riser
601RB1296	1296" Riser
601RB1308	1308" Riser
601RB1320	1320" Riser
601RB1332	1332" Riser
601RB1344	1344" Riser
601RB1356	1356" Riser
601RB1368	1368" Riser
601RB1380	1380" Riser
601RB1392	1392" Riser
601RB1404	1404" Riser
601RB1416	1416" Riser
601RB1428	1428" Riser
601RB1440	1440" Riser
601RB1452	1452" Riser
601RB1464	1464" Riser
601RB1476	1476" Riser
601RB1488	1488" Riser
601RB1500	1500" Riser
601RB1512	1512" Riser
601RB1524	1524" Riser
601RB1536	1536" Riser
601RB1548	1548" Riser
601RB1560	1560" Riser
601RB1572	1572" Riser
601RB1584	1584" Riser
601RB1596	1596" Riser
601RB1608	1608" Riser
601RB1620	1620" Riser
601RB1632	1632" Riser
601RB1644	1644" Riser
601RB1656	1656" Riser
601RB1668	1668" Riser
601RB1680	1680" Riser
601RB1692	1692" Riser
601RB1704	1704" Riser
601RB1716	1716" Riser
601RB1728	1728" Riser
601RB1740	1740" Riser
601RB1752	1752" Riser
601RB1764	1764" Riser
601RB1776	1776" Riser
601RB1788	1788" Riser
601RB1800	1800" Riser
601RB1812	1812" Riser
601RB1824	1824" Riser
601RB1836	1836" Riser
601RB1848	1848" Riser
601RB1860	1860" Riser
601RB1872	1872" Riser
601RB1884	1884" Riser
601RB1896	1896" Riser
601RB1908	1908" Riser
601RB1920	1920" Riser
601RB1932	1932" Riser
601RB1944	1944" Riser
601RB1956	1956" Riser
601RB1968	1968" Riser
601RB1980	1980" Riser
601RB1992	1992" Riser
601RB2004	2004" Riser
601RB2016	2016" Riser
601RB2028	2028" Riser
601RB2040	2040" Riser
601RB2052	2052" Riser
601RB2064	2064" Riser
601RB2076	2076" Riser
601RB2088	2088" Riser
601RB2100	2100" Riser
601RB2112	2112" Riser
601RB2124	2124" Riser
601RB2136	2136" Riser
601RB2148	2148" Riser
601RB2160	2160" Riser
601RB2172	2172" Riser
601RB2184	2184" Riser
601RB2196	2196" Riser
601RB2208	2208" Riser
601RB2220	2220" Riser
601RB2232	2232" Riser
601RB2244	2244" Riser
601RB2256	2256" Riser
601RB2268	2268" Riser
601RB2280	2280" Riser
601RB2292	2292" Riser
601RB2304	2304" Riser
601RB2316	2316" Riser
601RB2328	2328" Riser
601RB2340	2340" Riser
601RB2352	2352" Riser
601RB2364	2364" Riser
601RB2376	2376" Riser
601RB2388	2388" Riser
601RB2400	2400" Riser
601RB2412	2412" Riser
601RB2424	2424" Riser
601RB2436	2436" Riser
601RB2448	2448" Riser
601RB2460	2460" Riser
601RB2472	2472" Riser
601RB2484	2484" Riser
601RB2496	2496" Riser
601RB2508	2508" Riser
601RB2520	2520" Riser
601RB2532	2532" Riser
601RB2544	2544" Riser
601RB2556	2556" Riser
601RB2568	2568" Riser
601RB2580	2580" Riser
601RB2592	2592" Riser
601RB2604	2604" Riser
601RB2616	2616" Riser
601RB2628	2628" Riser
601RB2640	2640" Riser
601RB2652	2652" Riser
601RB2664	2664" Riser
601RB2676	2676" Riser
601RB2688	2688" Riser
601RB2700	2700" Riser
601RB2712	2712" Riser
601RB2724	2724" Riser
601RB2736	2736" Riser
601RB2748	2748" Riser
601RB2760	2760" Riser
601RB2772	2772" Riser
601RB2784	2784" Riser
601RB2796	2796" Riser
601RB2808	2808" Riser
601RB2820	2820" Riser
601RB2832	2832" Riser
601RB2844	2844" Riser
601RB2856	2856" Riser
601RB2868	2868" Riser
601RB2880	2880" Riser
601RB2892	2892" Riser
601RB2904	2904" Riser
601RB2916	2916" Riser
601RB2928	2928" Riser
601RB2940	2940" Riser
601RB2952	2952" Riser
601RB2964	2964" Riser
601RB2976	2976" Riser
601RB2988	2988" Riser
601RB3000	3000" Riser



Spill Container Cover Style

R - Raintight
 SC - Sealable Cover
 (OO - Ring Cover)

IR - Raintight
 SC - Sealable Cover
 (L - In Open Position)

Spill Container Capacity***

00 - No Containment
 05 - 5-Gallon
 15 - 15-Gallon

*** 5-Gallon bucket is standard

POWERS Multi-Ports With Containment

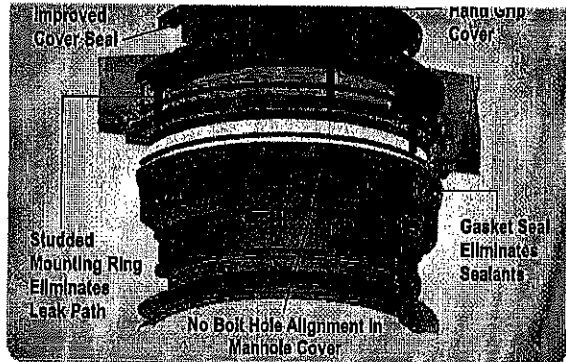
Powder Coated Manhole Covers

R - (1) Red
 (1) Orange
 W - (1) White
 (1) Orange
 Y - (1) Yellow

411-5-gallon (Slip-On)

511-5-gallon (Thread-On)

** Raintight cover is standard



Current Replacement Parts

For New 500 Series EVR Multi-Ports 6511/6521, 6561/571 made post 11/2003

Part #	Description
P711-EVRDV	Replacement 5-Gallon Bucket, w/ Drain Valve
P711-EVRPL	Replacement 5-Gallon Bucket, w/Plug (Vapor)
P761C-EVRDV	Replacement 5-Gallon Bucket, C.I. Base w/Drain Valve
P761C-EVRPL	Replacement 5-Gallon Bucket, C.I.
P411-EVRPL	Replacement 5-Gallon Slip-On Bucket
P511-15-EVRDV	Replacement 15-Gallon Bucket, Comp Base, W/ Drain Valve
C05170M	Gasket, Spill Bucket & Mounting Ring
H15167M	Replacement Seal for New Rain Tight Cover

Note: New P711 & P761 EVR buckets will only work with New "EVR" Multi-Port covers. (made post 11/2003)

See page 73 for replacement rings and covers part numbers.

Old Style Replacement Parts

311/411/511/521 Series Multi-Ports

Note: 511/521 parts are for Multi-Ports made prior to Nov. 2003

Part #	Description
P1000MEVR	6511/521 Series Drain Valve
P514SCRING	Mounting Ring for SC Cover
H15694M	Replacement Seal for SC cover
P10027C	34" x 34" Manhole Gasket
P10027C	42" Manhole Gasket
P10027C	48" Manhole Gasket
P100100C	(1) Rotolock
P100100C	Replacement (1) Style Change for Rotolock (R)
H1620M	Replacement Gasket for Old Style Single Port
P5101BK	Old Style Bolt Washer Kit for complete cover
P5101	Replacement Old Style Bolt Down Gauge Bolt Lid
P5101C	Bucket Top Flange Gasket
P5101CGBK	Spill Bucket, SC Ring, Kit (R) Bolt Washer & Gaskets

Part #	Description
P2105BUCKET	411 Replacement Bucket 5-Gallon
P2105	Hand Pump Kit (1) 5-GP 2-1/2"
P310WTL	Replacement Cover (R)
P310WTLSE	Replacement Seal for Cover
P5001R	Replacement Ring
P5001R	Replacement Ring (R)
P5105BUCKET	Replacement 5-Gallon Bucket
P5105EVRBUCKET	Replacement 5-Gallon Bucket with Drain Valve
P5105C	Bucket Top Flange Gasket for Notched on Gasket
P5110EVRBUCKET	Replacement 5-Gallon Bucket with Plug
P5105EVRBUCKET	Replacement 5-Gallon Bucket with C.I. Base and Drain Valve
P5105EVRBUCKET	Replacement 5-Gallon Bucket with C.I. Base and Plug
P5105EVRBUCKET	Replacement 5-Gallon Bucket with Drain Valve 12" x 12" Riser
P5105EVRBUCKET	Replacement 5-Gallon Bucket with Plug 12" x 12" Riser
P5105EVRBUCKET	Replacement 5-Gallon Bucket

1. ACCOUNT NUMBER: 1981544

2. TAX RATE: \$1.80 per \$1,000

3. INDUSTRY CODE : H

SECTION I - BUSINESS INFORMATION:

4. Mailing Address

TEC ACCUTITE/TECHNOLOGY ENGINEERIN

262 MICHELLE CT

SOUTH SAN FRANCISCO, CA 94080-6201

All Businesses and Rentals are subject to the \$1.00 State Mandated Fee*

Check the following applicable box(es):

- 4a. If you are making changes to Lines 4-12, see enclosed instructions.
- 4b. Claiming a Small Business Exemption (total gross receipts must be \$2,800 or less & you MUST submit a Form 4506T (<http://irs.gov/pub/irs-pdf/f4506t.pdf>)
Note: This exemption must be claimed on or before March 2, 2015 to qualify.
- 4c. Discontinued or sold your business or rental property:
 - In 2014 - Complete Section III and return signed declaration, or
 - In 2015 - Complete Sections II and III and return signed declaration with 2015 payment due (no proration of tax allowed)

THIS DOCUMENT HAS A TRUE DOCUCHECK™ WATERMARK AND VISIBLE FIBERS DISCERNIBLE FROM BOTH SIDES

CITY OF OAKLAND
BUSINESS TAX CERTIFICATE

ACCOUNT NUMBER: 1981544
 BUSINESS LOCATION: 262 MICHELLE CT, SOUTH SAN FRANCISCO, CA 94080-6201
 BUSINESS TYPE: H - Construction Contractors
 NAME: TEC ACCUTITE/TECHNOLOGY ENGINEERING & C
 MAILING ADDRESS: 262 MICHELLE CT, SOUTH SAN FRANCISCO, CA 94080-6201

EXPIRATION DATE: 12/31/2014



A BUSINESS TAX CERTIFICATE IS REQUIRED FOR EACH BUSINESS LOCATION AND IS NOT VALID FOR ANY OTHER ADDRESS.

YOU MAY BE REQUIRED TO OBTAIN A VALID ZONING CLEARANCE TO OPERATE YOUR BUSINESS LEGALLY. RENTAL OF REAL PROPERTY IS EXCLUDED FROM ZONING.

PUBLIC INFORMATION ABOVE THIS LINE TO BE CONSPICUOUSLY POSTED!

JAN 31 2014

THIS DOCUMENT IS ALTERATION PROTECTED AND REFLECTS FLUORESCENT FIBERS UNDER UV LIGHT

THIS DOCUMENT HAS A TRUE DOCUCHECK™ WATERMARK AND VISIBLE FIBERS DISCERNIBLE FROM BOTH SIDES

CITY OF OAKLAND
BUSINESS TAX CERTIFICATE

ACCOUNT NUMBER: 1981544
 BUSINESS LOCATION: 262 MICHELLE CT, SOUTH SAN FRANCISCO, CA 94080-6201
 BUSINESS TYPE: H - Construction Contractors
 NAME: TEC ACCUTITE/TECHNOLOGY ENGINEERING & C
 MAILING ADDRESS: 262 MICHELLE CT, SOUTH SAN FRANCISCO, CA 94080-6201

EXPIRATION DATE: 12/31/2013



JAN 31 2013

A BUSINESS TAX CERTIFICATE IS REQUIRED FOR EACH BUSINESS LOCATION AND IS NOT VALID FOR ANY OTHER ADDRESS.

YOU MAY BE REQUIRED TO OBTAIN A VALID ZONING CLEARANCE TO OPERATE YOUR BUSINESS LEGALLY. RENTAL OF REAL PROPERTY IS EXCLUDED FROM ZONING.

License Number **762034** Entity **CORP**

Business Name **TECHNOLOGY ENGINEERING & CONSTRUCTION INC DBA ACCUTITE**

Classification(s) **A HAZ B C36 C61/D40**

Expiration Date **04/30/2015**

www.cslb.ca.gov



STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY CONTRACTORS STATE LICENSE BOARD



Building Quality



HAZARDOUS SUBSTANCES REMOVAL AND REMEDIAL ACTIONS CERTIFICATION

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



Qualifier: **EDDY ARMAND TABET**
License No.: **762034**
Business Name:

WITNESS my hand and official seal this

24

AUGUST 1999 **TECHNOLOGY ENGINEERING & CONSTRUCTION INC**
ACCUTITE

Registrar of Contractors

13L-38 (12/97)

This certification is the property of the Registrar of Contractors. It is not transferable and shall be returned to the Registrar upon demand when a complaint is revoked or invalidated by any means.

REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Druml Group, Inc. 1135 Farragut Blvd Foster City CA 94404	CONTACT NAME: David Mahler PHONE (A/C No. Ext): (800) 949-6247 FAX (A/C No.): (650) 341-8382 E-MAIL ADDRESS: dmahler@drumlgroup.com
	INSURER(S) AFFORDING COVERAGE
INSURED Technology, Engineering And Construction, 262 Michelle Court South San Francisco CA 94080	INSURER A: Philadelphia Indemnity 18058
	INSURER B: Cypress Insurance Company 10855
	INSURER C: Travelers Property Casualty 25674
	INSURER D:
	INSURER E:

COVERAGES **CERTIFICATE NUMBER:** CL147100847 **REVISION NUMBER:**

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.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	INSUR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COM/PROP AGG \$	
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> Camp - \$500 <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS <input checked="" type="checkbox"/> Coll - \$1,000			PHPK1197880	7/1/2014	7/1/2015	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Terrorism \$ EACH OCCURRENCE \$ AGGREGATE \$	
	UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB OCCUR CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$	
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) (If yes, describe in NH DESCRIPTION OF OPERATIONS below)		Y/N N	N/A	3300067187	7/1/2014	7/1/2015	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Equipment Floater Crime			QT-660-7444L72A-TTL-14	7/1/2014	7/1/2015	Rented/Leased Equipment \$300,000 Dishonesty/Forgery/Alteration \$100,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
[Re: PROOF OF INSURANCE]

CERTIFICATE HOLDER

Technology, Engineering and Construction,
 dba Accutite
 262 Michelle Court

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

BL DORADO HILLS, CA 95762
(916) 939-1080

ALLES THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED TECHNOLOGY ENGINEERING & CONSTRUCTION
dba TEC ACCUTITE & GHG ANALYTICAL
262 MICHELLE COURT
SOUTH SAN FRANCISCO, CA 94080

INSURERS AFFORDING COVERAGE		NAIC#
INSURER A:	HOMELAND INSURANCE CO OF NY	34452
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		

COVERAGES

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. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ACCT NBRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A		GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> CONT. POLLUTION GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	793-00-07-32-0002	07/01/14	07/01/15	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
		AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA AGG \$ AGG \$
A		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$	793-00-07-33-0002 OVER LIAB, AUTO W/C	07/01/14	07/01/15	EACH OCCURRENCE \$ 4,000,000 AGGREGATE \$ 4,000,000
A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A		OTHER H&O LIAB. CLAIMS MADE	793-00-07-32-0002 RETRO: 7/1/02	07/01/14	07/01/15	\$1,000,000 OCCURRENCE \$2,000,000 AGGREGATE

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

CERTIFICATE HOLDER

-FOR INFORMATION ONLY

CANCELLATION

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



International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.

Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

EXTERIOR OF CARD

**ICC CERTIFICATIONS HELD
ARE FOUND ON THE
REVERSE SIDE OF THIS
CARD**

Julian Cruz has successfully completed
Bondor Training as set forth in the NOV Fiber Glass Systems' Total
Quality Installation Program for the installation of UL listed primary
and secondary containment products.

Red Thread HA 3000L 3000LCX 7/30/14
Primary and Secondary Containment Systems Date

Renewal of the bondor training is recommended every three years
or when the bonding process has not been practiced for a period of 6 months.

NOV Fiber Glass Systems

Marty Martin has successfully completed
Bondor Training as set forth in the NOV Fiber Glass Systems' Total
Quality Installation Program for the installation of UL listed primary
and secondary containment products.

Red Thread HA 3000L 3000LCX 7/30/14
Primary and Secondary Containment Systems Date

Renewal of the bondor training is recommended every three years
or when the bonding process has not been practiced for a period of 6 months.

NOV Fiber Glass Systems

Ross Barakia has successfully completed
Bondor Training as set forth in the NOV Fiber Glass Systems' Total
Quality Installation Program for the installation of UL listed primary
and secondary containment products.

Red Thread HA 3000L 3000LCX 7/30/14
Primary and Secondary Containment Systems Date

Renewal of the bondor training is recommended every three years
or when the bonding process has not been practiced for a period of 6 months.



91 out of 100 (91%)

Technology Engineering & Construction, Inc.

icon

2 Year Certification

Containment Solutions

Start Date: July 15, 2014

Repair Products



**APPLICATION PACKET
FOR
UNDERGROUND STORAGE TANK
REMOVAL
In the CITY OF OAKLAND**

**OAKLAND FIRE DEPARTMENT
Fire Prevention Bureau
250 Frank H. Ogawa Plaza, Suite 3341
Oakland, CA 94612**

**Phone (510) 238-3927
Fax (510) 238-6739**

48 HOURS NOTICE

**BAY AREA RAPID TRANSIT
WASTE OIL TANK UPGRADES – OAKLAND SHOP
601 E. 8th Street
Oakland, CA 94606**

This site specific Safety Plan for **BART – Oakland Shop** establishes the general safety requirements necessary to protect the public, contractor, employees, owner/operator and properties involved in this project. **ALWAYS BE ALERT TO CHANGING CONDITIONS.**

SCOPE OF WORK:

TEC Accutite will perform the following work at said location:

- Concrete saw, break and dispose of approximately 2 cubic yards of concrete.
- Remove pea gravel and stockpile for reuse.
- Expose and remove vent piping
- Install fiberglass piping for the vent and the remote fill lines.
- Install new sump penetrations to accommodate new piping, sealing existing.
- Install a new OPW multi-port spill containment manhole.
- Backfill and compact excavated area and resurface with of concrete.

ONSITE ORGANIZATION AND COORDINATION:

The following personnel are designated to fulfill the stated job functions on site:

TITLE	NAME	JOB FUNCTION
Project Manager	Arnulfo Cardona	Supervision / Project Management
Health and Safety Coordinator / Foreman	Julian Cruz Frank Munoz	Foreman
Field Technicians	Lupe Ponce Art Perez Martin Martin Luis Carrera	General Labor
State Agency Representative	N/A	
Local Agency Representative	Cesar Avila	Oakland Fire
Subcontractor(s)	N/A	
Subcontractor(s)	N/A	

The Health and Safety Coordinator will be on site during all work to verify adherence with the Site Safety Plan. The Health and Safety Coordinator will also coordinate all work with Local and State Health and Safety Representative(s), as needed.

SAFETY AND PROTECTIVE PROCEDURES:

1. The Project Manager or the Field Foreman will fill out an on-site Job Site Safety Meeting Report, on a weekly basis and an Inspection Checklist and Correction Form, on a daily basis. (Sample copies attached).
2. All personnel involved with hazardous materials operations are properly trained in use of Personal Protective Equipment (PPE) – Hard Hats, Vests, Eye Protection, Gloves, Long Sleeve Shirts, Long Pants, Steel Toed Boots, and proper respiratory equipment if required.
3. When working, be sure to use lift help if pipe or equipment is too heavy for one person. Also, use proper ingress/egress procedures and trench safety using plates and/or boxes.
4. The Health and Safety Coordinator (HSC) will mark the Exclusion Zone (contaminated area) by identifying boundaries by use of temporary fencing, cones & caution tape for a safe perimeter and monitor the site for the presence of any non-OSHA trained personnel onsite. All visitors are required and shall sign-in; if non-OSHA trained visitors or personnel are on-site the HSC will ask the individual(s) to exit the exclusion zone.
5. Refer to the proper MSDS' for all chemicals being used
6. **If required**, TEC Accutite will notify USA 48 hours before the scheduled activities to locate underground utilities.
7. **NO SMOKING, DRINKING OR EATING WILL BE ALLOWED IN WORK AREAS.**

ENGINEERING CONTROLS:

1. Do not use any equipment that could spark; such as any power tools, metallic hand tools, etc. when fuel vapors are present.
2. Stay upwind
3. Cover contaminated soil

HAZARDOUS COMMUNICATION PROCEDURES:

(Horn blast, siren, etc) is the emergency signal to indicate that all personnel should leave the excavation area / exclusion zone.

The following standard hand signals will be used in case of failure of radio communications:

Hand Gripping Throat	=	Out of Air, Can't Breathe
Grip Partner's Wrist or Both Hands around Waist	=	Leave Area Immediately
Hands on Top of Head	=	Need Assistance

PERSONAL PROTECTIVE EQUIPMENT:

LEVEL A		LEVEL C	
LEVEL B		LEVEL D	No Respiratory Protection Minimal Skin Protection

Based on evaluation of potential hazards at this site, the following levels of Personal Protection have been designated for the applicable work areas and/or tasks.

- If needed Silicone half mask air purifying cartridge respirators with organic vapor cartridge are appropriate for use with the involved substances and concentrations, when significant detector readings are recorded, or if a significant gasoline odor is detected.
- If gas pooling occurs, inner and outer chemical-resistant gloves would be required. Area should be monitored for explosive vapors, and the use of any electrical equipment will be prohibited (unless explosion proof).

The Health and Safety Coordinator, a competent individual, will have determined that all criteria for using all types of protection have been met and are directly responsible to the Project Manger for safety recommendations on site.

LIST OF EMERGENCY PHONE NUMBERS:

In an emergency, all work will be halted and the appropriate agencies / facilities will be contacted

AGENCY / FACILITY	PHONE	CONTACT
FIRE	911	
PROJECT MANAGER	650-296-1730	Arnulfo Cardona
OAKLAND FIRE DEPARTMENT	510-238-7253	Cesar Avila
POLICE	911	

EMERGENCY MEDICAL CARE:

In the event of an emergency, the Field Supervisor will contact **911** when person(s) is/are injured severely and cannot be removed from site. If condition of injured personnel is such as he/she could be driven to nearest hospital, they will go to:

* **Highland General Hospital, Emergency room at 1411 East 31st Street Oakland, CA 94602 (510) 437-4800 located at 1.9 miles approximately 6 minutes from this location. See attached map for directions.**

* **Alta Bates Summit Medical Center, Emergency room at 350 Hawthorne Avenue, Oakland, CA 94609 (510) 655-4000 located at 2.6 miles approximately 11 minutes from this location. See attached map for directions.**

substances involved. It is imperative if any work related injuries occur that the Worker's Compensation Coordinator, at the office is notified within one (1) day of injury and OSHA is notified with eight (8) hours of a work related death, as per appropriate OSHA section.

First aid equipment is available on site, at the following locations: Jobsite & Service Trucks

EMERGENCY MEDICAL INFORMATION FOR SUBSTANCES PRESENT ON SITE:

SUBSTANCE	EXPOSURE SYMPTOMS	FIRST AID INSTRUCTIONS
UNLEADED GASOLINE	High concentrations of vapor / mist may cause eye discomfort.	Flush eyes immediately with fresh water for at least 15 minutes while holding eyelids open. Remove contacts, if worn.
	Prolonged exposure or contact can defeat the skin and lead to irritation and/or dermatitis.	Wash skin thoroughly with soap and water. Remove and wash contaminated clothing.
	Inhalation of vapor / aerosol above recommended concentrations may cause headaches, drowsiness, and nausea and may lead to unconsciousness or death.	Move person to fresh air.
	Harmful or fated if inhaled into lungs. Ingestion causes gastrointestinal irritation and diarrhea.	If swallowed, give milk or water and telephone for medical advice. DO NOT MAKE PERSON VOMIT. If medical advice cannot be obtained; seek immediate medical attention.
DIESEL FUEL NUMBER 2	Exposure to vapor or mist may cause eye irritation.	Flush eyes immediately with fresh water for at least 15 minutes while holding eyelids open. Remove contacts, if worn. Thermal burns require immediate medical attention.
	Repeated or prolonged exposure may cause defatting, redness, itching, inflammation, cracking and possibly secondary infection. Repeated or massive skin contact may cause poisoning. High pressure skin injections may not appear serious, within hours tissue may become swollen, discolored and extremely painful.	Remove contaminated clothing immediately. Wash area of contact with soap and water. High pressure skin injections and thermal burns require immediate medical attention.
	Inhalation may cause respiratory tract irritation and pneumonitis. May cause Central Nervous System effects excitation, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, and convulsions, loss of consciousness, coma, respiratory arrest and death.	Move person to fresh air. If not breathing clear airway and administer CPR. If breathing difficulty occurs, administer oxygen, continue to monitor closely. Seek medical attention.
	Ingestion may cause central nervous system effects, such as, excitation, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, and convulsions, loss of consciousness, coma, respiratory arrest and death. Gastrointestinal effects as	DO NOT INDUCE VOMITING. If spontaneous vomiting occurs, monitor for breathing difficulty. Seek immediate medical attention

Department:

Date:

Jobsite:

Time:

am/pm

Employees in attendance:

Any Accidents? YES/NO (please circle one) If yes, please provide details:

Review of any accidents that have occurred since last meeting:

Unsafe acts and/or conditions resulting from inspection:

Review of any unsafe acts and/or conditions from last meeting:

Safety Topics Discussed:

Employee/Subcontractor: Suggestions, Recommendations, Remarks:

Jobsite Foreman: Suggestions, Recommendations, Remarks:

TEC ACCUTITE
INSPECTION CHECKLIST AND CORRECTION FORM

Daily:

General Area or Job Safety Class:

(TANK INSTALLATIONS, REMOVALS, OVEREXCAVATIONS & DRILLING)

Date Prepared

Preparer

Safe Work Condition, Safe Work Practices or Personal Protective Equipment

1. Cal/OSHA permits on site (if required)
2. U.G. utilities marked by U.S.A.
3. Excavation barricaded
4. Spoils piles 2 feet or more from edge
5. Employees wearing proper protection
5a. Hard Hats
5b. Safety Shoes
5c. Respirators available
6. Fire extinguishers within 25 feet of excavation
7. First aid kits on site
8. All vehicles, equipment, and power tools in safe operating order
9. Potable water available
10. Emergency medical services available

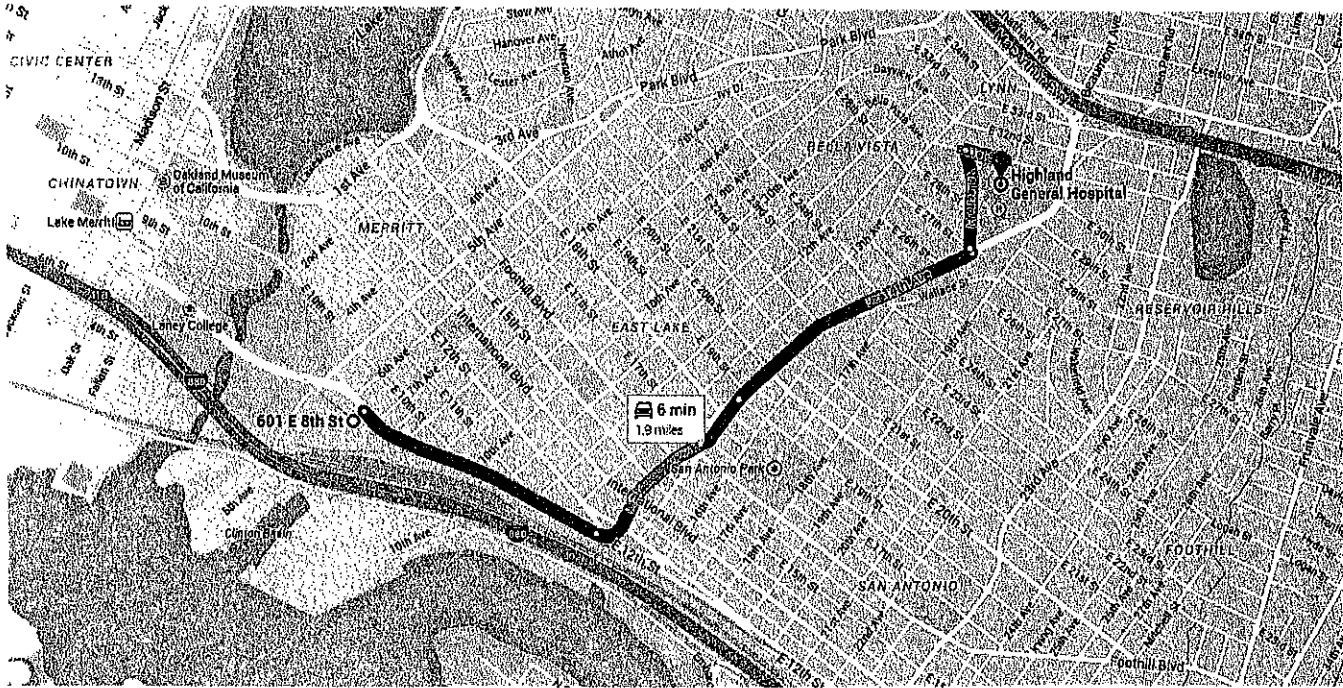
Is Equipment Locked Out / Tagged Out (LOTO): YES / NO

Method of LOTO:

Corrective Action Needed or Taken? YES / NO If yes, state action taken:

Person responsible for correction: _____

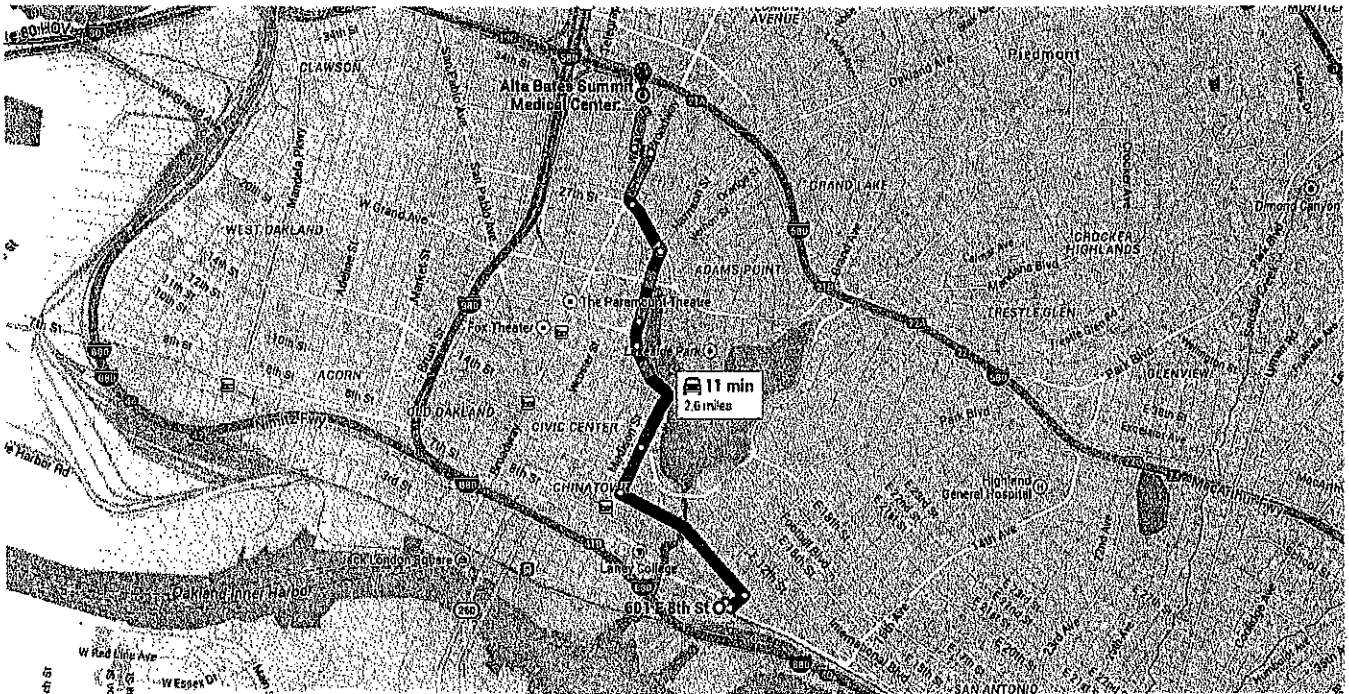
Correction Action Completed / Due: _____
Date Time



○ 601 E 8th St
Oakland, CA 94606

- | | | |
|---|----------------------------------------------|--------|
| ↑ | 1. Head southeast on E 8th St toward 7th Ave | 0.5 mi |
| ↙ | 2. Turn left onto 14th Ave | 0.3 mi |
| ↙ | 3. Slight left onto 15th Ave | 0.1 mi |
| ↑ | 4. Continue onto 14th Ave | 0.6 mi |
| ↙ | 5. Turn left onto E 27th St | 62 ft |
| ↗ | 6. Slight right onto Vallecito Pl | 0.2 mi |

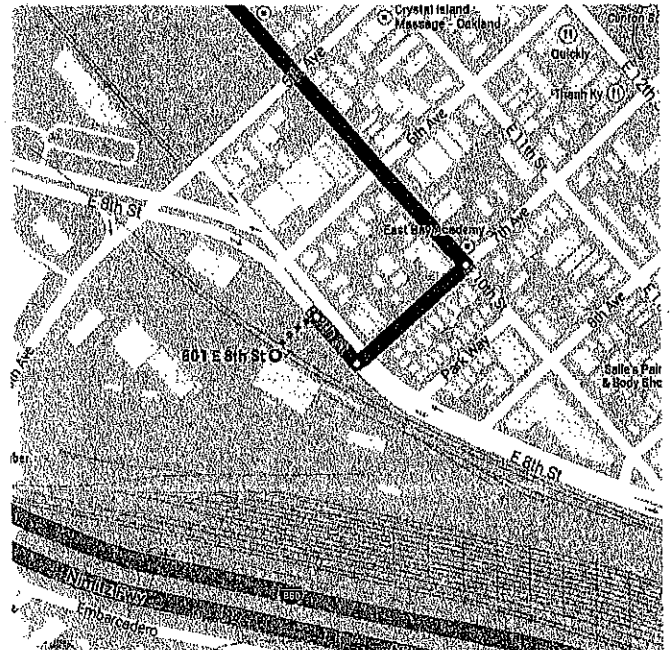
Temporary, seasonal, necessary, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

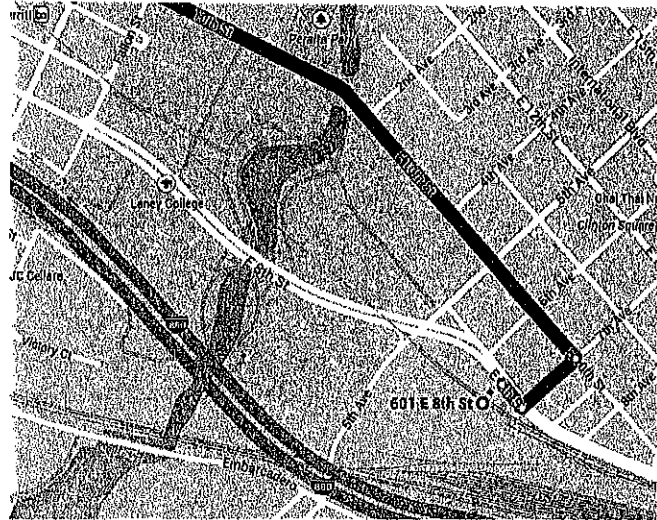


○ 601 E 8th St
Oakland, CA 94606

↑ Head southeast on E 8th St toward
7th Ave

171 ft / 3 s

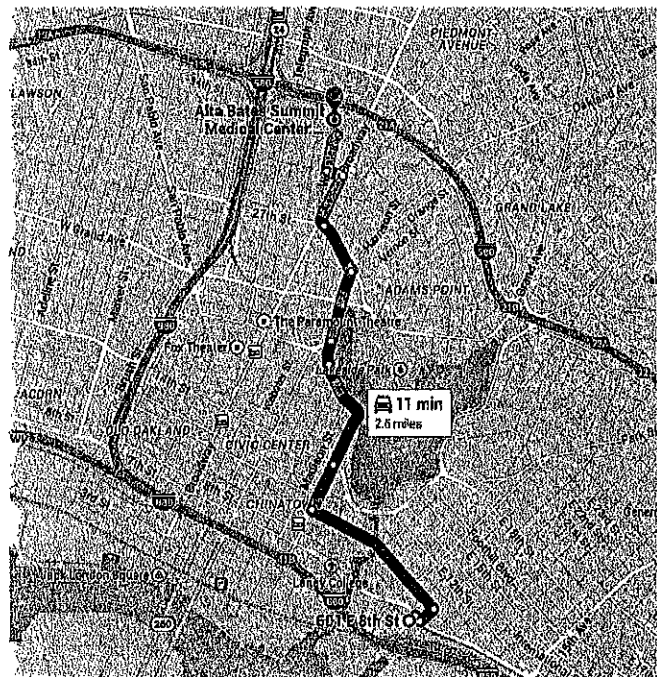




Take Lakeside Dr and Harrison St to 30th St

1.6 mi / 5 min

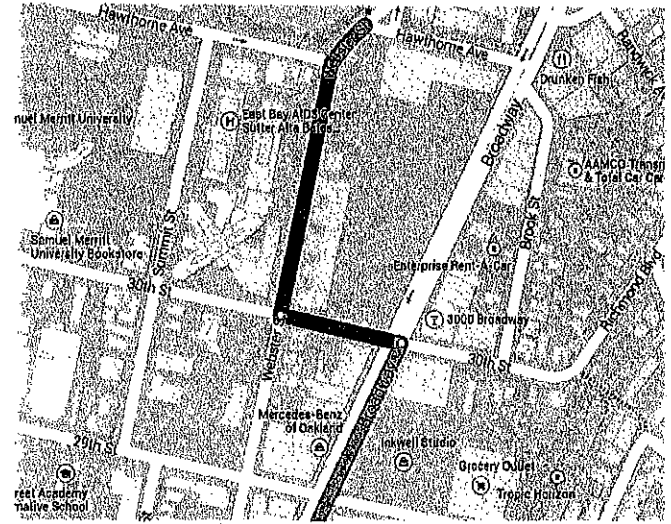
- 4. Turn right onto Oak St 0.2 mi
- ↑ 5. Continue onto Lakeside Dr 0.5 mi
- ↗ 6. Slight right to stay on Lakeside Dr 0.1 mi
- ⤴ 7. Merge onto Harrison St 0.3 mi
- ↶ 8. Turn left onto 27th St 0.2 mi
- 9. Take the 2nd right onto Broadway 0.2 mi



Drive to Webster St

0.2 mi / 1 min

- ↶ 10. Turn left onto 30th St 358 ft



⦿ Alta Bates Summit Medical Center: Emergency Department Services

350 Hawthorne Avenue, Oakland, CA 94609

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

