EMCON
1921 Ringwood Avenue • San Jose, California 95131-1721 • **(408) 453-7300** • Fax (408) 437-9526

September 15, 1995
Project 20805-135.004

Ms. Susan Hugo
Department of Environmental Health
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Product line repair, precision line testing, and soil sampling at ARCO service station 6148, 5131 Shattuck Avenue, Oakland, California

Dear Ms. Hugo:

EMCON submits this letter report on behalf of ARCO Products Company (ARCO) regarding corrective action taken and soil sampling analytical results after damage to a gasoline product line at ARCO service station 6148 in Oakland, California (Figure 1). This letter is being submitted in response to the request by the Alameda County Health Care Services Agency (ACHCSA).

On August 14, 1995, ARCO commenced construction activities at the subject site for installation of an interim soil and groundwater remediation system. EMCON, on behalf of ARCO, was observing the construction activities. On August 15, 1995, during excavation of a trench approximately 4 feet south of the southern pump island, Balch Petroleum, Inc. (Balch), the subcontractor for ARCO on the project, damaged a gasoline product line 26 inches below ground surface (BGS) (Drawing C1). Balch crew members were hand-digging in the proposed excavation zone as a precautionary measure to avoid damaging existing underground utilities in the excavation zone. Despite the cautious procedure of hand-digging, the gasoline product line was scraped by a shovel being used by one of Balch's crew members, resulting in a slow drip of gasoline product from the product line.

The incident occurred at 11:00 a.m. Balch's crew immediately placed a 5-gallon bucket under the product line to prevent the gasoline from dripping into the subsurface soil in the excavated zone; the crew then informed Sailaja Yelamanchili of EMCON regarding the incident. Photographs of the damaged product line are presented in Appendix A. Subsequently, Linda Andrews, environmental coordinator for ARCO, was informed of the incident, who then informed Susan Hugo of the ACHCSA. Brian P. Oliva, Hazardous Materials Specialist, ACHCSA, arrived at the site the same day (August 15, 1995) at 2:00 p.m. to inspect the damage. Between 11:00 a.m. and 2:00 p.m. on August 15, 1995,

less than 4 ounces of gasoline leaked from the product line. Mr. Oliva inspected the damaged product line, and completed a hazardous materials inspection form, a copy of which was given to Ms. Yelamanchili.

On August 16, 1995, EMCON observed that a total of less than 6 ounces of gasoline had leaked from the product line into the 5-gallon bucket.

According to the instructions outlined in the hazardous materials inspection form issued by Mr. Oliva, the following corrective actions were performed:

- Balch repaired the damaged product line on August 16, 1995. (A copy of the procedure adopted to repair the fiberglass product line is presented as Appendix B.)

- An unauthorized release form (URF) was not prepared because the amount of gasoline released from the leak (less than 6 ounces) is less than the 2-gallon reportable quantity listed on the hazardous materials inspection form issued by Mr. Oliva.

- On behalf of ARCO, Scott Testing Company performed precision pressure-test of the repaired product line on August 17, 1995. The repaired product line passed the pressure test. A copy of the test report and photographs of the repaired product line are presented as Appendix C.

- One soil sample (labeled Product Line) was collected in a brass ring from the subsurface soil beneath the product line (approximately 30 inches below ground surface). The ends of the brass ring were first sealed with Teflon® tape, then closed with plastic caps. The brass ring was then labeled and placed in an ice chest and shipped to Sequoia Analytical Laboratories in Redwood City, where it was analyzed for total petroleum hydrocarbons as gasoline (TPHG) by modified U.S. Environmental Protection Agency (USEPA) method 8015, and for benzene, toluene, ethylbenzene, and total xylenes by USEPA method 8020. Results of the analysis indicated a TPHG concentration 3.2 milligrams per kilogram (mg/kg). The concentration of benzene was below the method detection limit of 0.0050 mg/kg. A copy of the laboratory analytical report is provided in Appendix D. As requested by Mr. Oliva, a comparison of the results of previous subsurface environmental investigations conducted at the site indicated that the concentration of TPHG in soil sample collected from beneath the product line is lower than the highest concentration of TPHG (740 mg/kg) in soil sample collected from boring B-2 at 17 feet BGS. Results of subsurface environmental

investigations conducted at the site were summarized and presented in a *Remedial Action Plan (RAP), Interim Soil and Groundwater Remediation, ARCO Service station 6148, 5131 Shattuck Avenue, Oakland, California*, dated June 1995. A copy of the RAP was submitted to the ACHCSA in June 1995.

Please call if you have questions or need additional information.

Sincerely,

EMCON

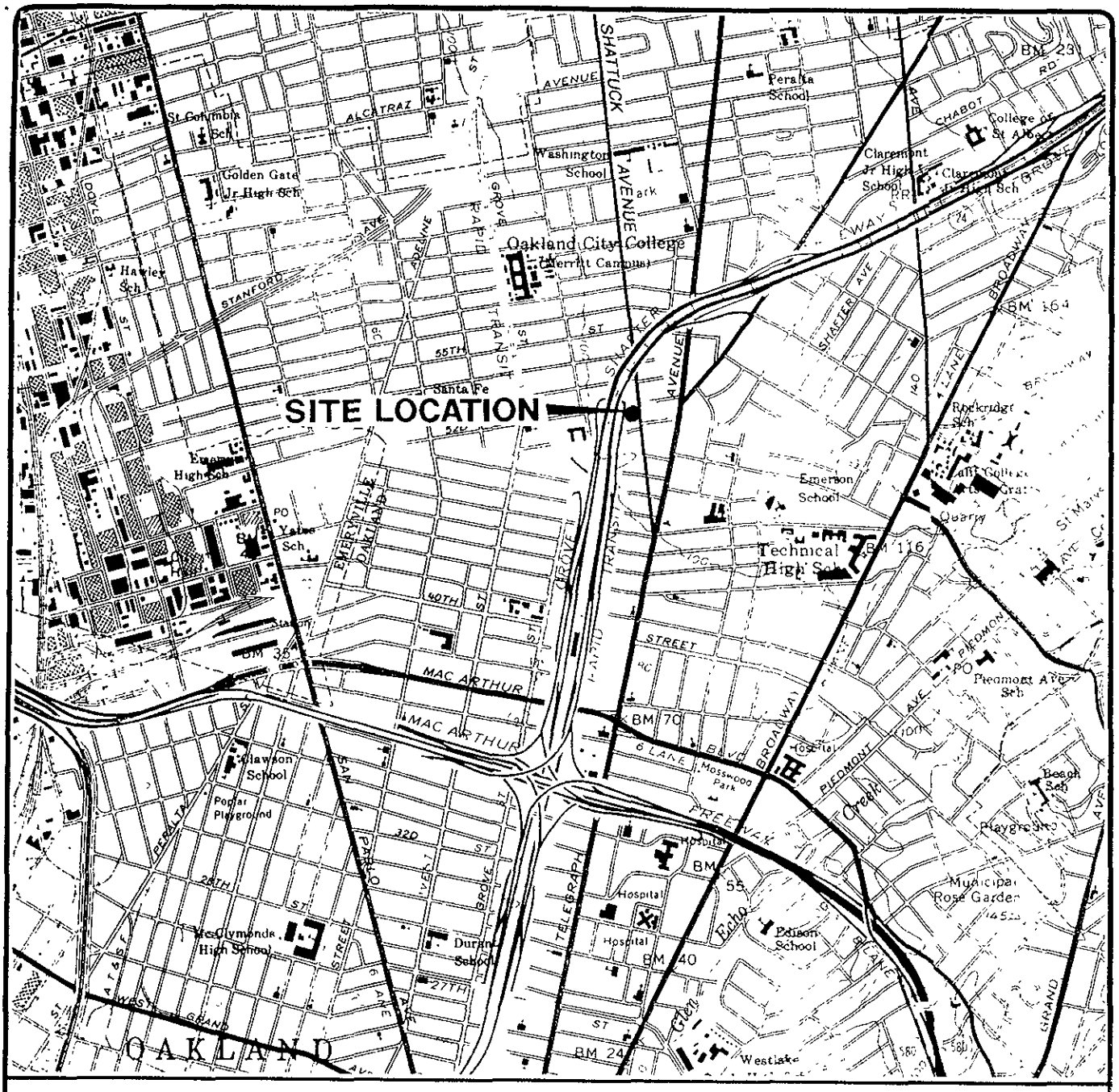
Sailaja Yelamanchili
Staff Engineer

Bruce Maeda
Project Engineer

Attachments:
Figure 1 - Site Location
Drawing C1 - Site Plan
Appendix A - Copies of photographs of damaged product line
Appendix B - Procedure adopted to repair the damaged product line
Appendix C - Results of pressure testing of repaired product line and photographs of repaired product line
Appendix D - Laboratory analytical report for soil sampling analysis

cc: Mr. Michael Whelan, ARCO Products Company

152753



Base map from USGS 7 5' Quad Maps
Oakland East and Oakland West California
Photorevised 1980

CALIF

Scale 200' 4000 Feet

EMCON

ARCO PRODUCTS COMPANY
SERVICE STATION 6148, 5131 SHATTUCK AVENUE
REMEDIAL DESIGN
OAKLAND, CALIFORNIA

SITE LOCATION

FIGURE 1

PROJECT NO. 805-135.02

COMMERCIAL PROPERTY

52ND STREET

EXISTING STORM DRAIN CATCH BASIN

EXISTING PG&E SERVICE VAULT

EXISTING WATER METER VAULT

WATER

EXISTING ON-SITE DRAIN

EXISTING PACIFIC BELL SERVICE VAULT

EXISTING ON-SITE DRAIN

DRIVEWAY

SIDEWALK

PLANTER

DRIVEWAY

PLANTER

SB-1

MW-7

CONNECTION POINT FOR NEW ELECTRICAL SERVICE (SEE NOTE 1)

MW-6

SERVICE ISLAND

EXISTING 6' HIGH CHAIN-LINK FENCE

EXISTING PARKING SPACES

ELECTRICAL TRENCH LINE (SEE NOTES 1 AND 3)

LOCATION OF DAMAGED PRODUCT LINE

GASOLINE PRODUCT LINE

5 GAL. JUNIPERS @ 4'0" CENTERS; CONTRACTOR TO SUBMIT PLANT SPECIFICATION TO CITY AND ENGINEER PRIOR TO PLANTING

PUBLIC TELEPHONES

UST CONCRETE PAD

UST FILL PORT

VW-9

SERVICE ISLAND

EXISTING SHRUBS AND GROUND COVER

PULL BOX FOR MAIN ELECTRICAL CONDUIT (P-2) (SEE DWG. G2 FOR SPECS.)

PULL BOX FOR MAIN ELECTRICAL CONDUIT (P-1) (SEE DWG. G2 FOR SPECS.)

VW-6

AS-1

MINIMUM DEPTH OF TRENCH IS 22 7/8" (SEE NOTE 4)

VW-7

(TYPICAL OF ALL TRENCHES)

EXISTING PG&E SERVICE VAULT

SHATTUCK AVENUE

(ABANDONED SERVICE ISLAND)

SIDEWALK

DRIVEWAY

COMMERCIAL PROPERTY

OFF-RAMP FROM CALIFORNIA STATE HIGHWAY 24

RESTRIPE AS HANDICAPPED SPACE

AS-5

PLANTER

VW-8

EXISTING PLANTER MINIMUM 3' WIDE

AS-4

1" ABOVE GRADE CONDUIT AND CABLE FOR TELEPHONE SERVICE

EXISTING TELEPHONE SERVICE POINT

EXISTING AIR/WATER DISPENSER

MW-5

STATION BUILDING

REMEDIATION COMPOUND

SEE DETAIL 2/C4 3/M4

TRENCH FOR U.G. TELEPHONE CONDUIT

UST VENTS

AC UNIT

EXISTING SEWER CLEANOUT

EXISTING ELECTRICAL METER FOR SERVICE TO STATION BUILDING

15' (R-50 REGULATION) SETBACK REQUIREMENT

VW-5

TRASH COMPOUND

EXISTING 8' HIGH FENCE AND GATE

MINIMUM DEPTH OF TRENCH IS 28 5/8" (SEE NOTE 4)

VW-10

VW-4

STB-1

STB-2

AS-3

MW-1

MW-2 AS-2/VW-2

VW-2

VW-3

MW-4

EXISTING TREE (WILL BE TRIMMED SUCH THAT THE TOP OF THE TREE WILL BE AT LEAST 2' BELOW THE TOP OF THE EXHAUST STACK)

4' SETBACK REQUIREMENT (R-50 REGULATION)

EXISTING SUBGRADE PG&E JUNCTION BOX

STATIONARY BOLLARDS

EXISTING 8' HIGH FENCE AND GATE

EXISTING BRICK MASONRY WALL 8' HIGH

10'

MW-3

VW-1

ELECTRICAL METER AND 320 AMP MAIN SERVICE PEDESTAL LOCATION (SERVICE TO REMEDIATION COMPOUND) (SEE NOTES 2 AND 3)

(C-28 REGULATION SETBACK REQUIREMENT)

FORMER WASTE-OIL TANK

EXISTING 20'LX8'WX8'H METAL ENCLOSURE. MOVE ENCLOSURE AS NECESSARY DURING CONSTRUCTION

MINIMUM DEPTH OF TRENCH IS 28 3/8" (SEE NOTE 4)

ARCO PROPERTY BOUNDARY

TRENCH CONTAINING ELECTRICAL CONDUITS (SEE DRAWING E1)

WELLHEAD, SEE DETAIL 2/C4 4/M5 (TYP. 20 PLCS.)

45°

25'LX20'WX8'HX8" THICK BRICK MASONRY WALL

MINIMUM DEPTH OF TRENCH IS 28 1/4" (SEE NOTE 4)

EXISTING BRICK MASONRY WALL, 8' HIGH

RESIDENTIAL PROPERTY (2-STORY HOUSES)

SCALE: 0 10 20 30 40 50 FEET

EXPLANATION

- GROUNDWATER MONITORING WELL
- SOIL VAPOR EXTRACTION (SVE)/ BUBBLE AIR (BA) WELL
- AIR SPARGE (AS) WELL
- GROUNDWATER MONITORING/BUBBLE AIR (BA) WELL
- ABANDONED WELL
- UNDERGROUND STORAGE TANKS
- CENTERLINE OF TRENCHLINES CARRYING SUBGRADE REMEDIATION PIPING AND/OR ELECTRICAL CONDUIT.
- STB-1 — STUBOUT LOCATIONS WHERE SUBGRADE REMEDIATION PIPING IS CAPPED AND STUBBED BELOW GRADE. A 2 1/2" DIA. X 3". DEEP BRASS MONUMENT SURVEY MARKER IS PLACED FLUSH TO GRADE AT THESE STUBOUT LOCATIONS.
- PROPERTY SETBACK REQUIREMENT LINES BASED ON RESIDENTIAL/COMMERCIAL CLASSIFICATION OF PROPERTY

NOTES:

1. INSTALL SUBGRADE SPLICE BOX (SB-1), 3" PVC SCH. 40 U.G. CONDUIT AND CABLES AND TIE INTO ELECTRICAL SERVICE PROVIDED BY PG&E INSIDE SPLICE BOX AND 320 AMP SERVICE PANEL PER DRAWING E1, PG&E SPECIFICATIONS AND NEC CODES.
2. INSTALL SERVICE PEDESTAL TO MOUNT ELECTRICAL METER PROVIDED BY PG&E AND 320 AMP SERVICE PANEL PER PG&E SPECIFICATIONS AND DRAWING E1.
3. INSTALL PVC SCH 40 CONDUITS AND WIRES RATED FOR ELECTRICAL USE PER DRAWING E1, PG&E, CITY OF OAKLAND BUILDING AND ENGINEERING DEPARTMENTS AND NEC CODES FROM THE 320 AMP MAIN SERVICE PEDESTAL TO THE REMEDIATION COMPOUND.
4. ALL UNDERGROUND SVE PIPES TO SLOPE A MINIMUM OF 1/16" PER FOOT TOWARDS THE WELLS.
5. NOISE LEVELS AT PROPERTY LINES ARE NOT ANTICIPATED TO BE GREATER THAN 58 dBA.
6. ALL TRENCHES CARRYING SUBGRADE REMEDIATION PIPING AND/OR ELECTRICAL CONDUIT WILL BE AT LEAST 5 FEET AWAY FROM THE WEST PROPERTY LINE.
7. CONTRACTOR TO SLURRY SEAL ALL ASPHALT AREAS OF THE SITE WITH TWO COATS OF OIL-EMULSION SAND SLURRY TRI-AMERICA™ TA-100 OR EQUIVALENT, EXCEPT THE AREA BENEATH THE METAL STORAGE ENCLOSURE BEHIND THE STATION BUILDING.

REV	DATE	DESCRIPTION	DWN BY	CHK BY	APP BY
1	7/24/95	ISSUED FOR CONSTRUCTION			
0	6/16/95	ISSUED FOR BID			
A	5/23/95	ISSUED FOR PERMITTING			

DATE OF ISSUE MAY 1995 | DWN BY K. TROYER | CHK BY C. DECKER | DES BY S. YELAMANCHILI | APP BY V. VORUGANTI

emcon

ARCO PRODUCTS COMAPNY
SERVICE STATION 6148
5131 SHATTUCK AVENUE
OAKLAND, CALIFORNIA

SITE PLAN

DRAWING NO. C1

PROJECT NO. 805-135.02

L\805\135\TRNCPLN REV 1 09/14/95 13:11:01 KAV A:\PLOT\ARCO.PCP

APPENDIX A

COPIES OF PHOTOGRAPHS OF DAMAGED PRODUCT LINE


location of
damaged product
line

APPENDIX B

PROCEDURE ADOPTED TO REPAIR THE DAMAGED PRODUCT LINE

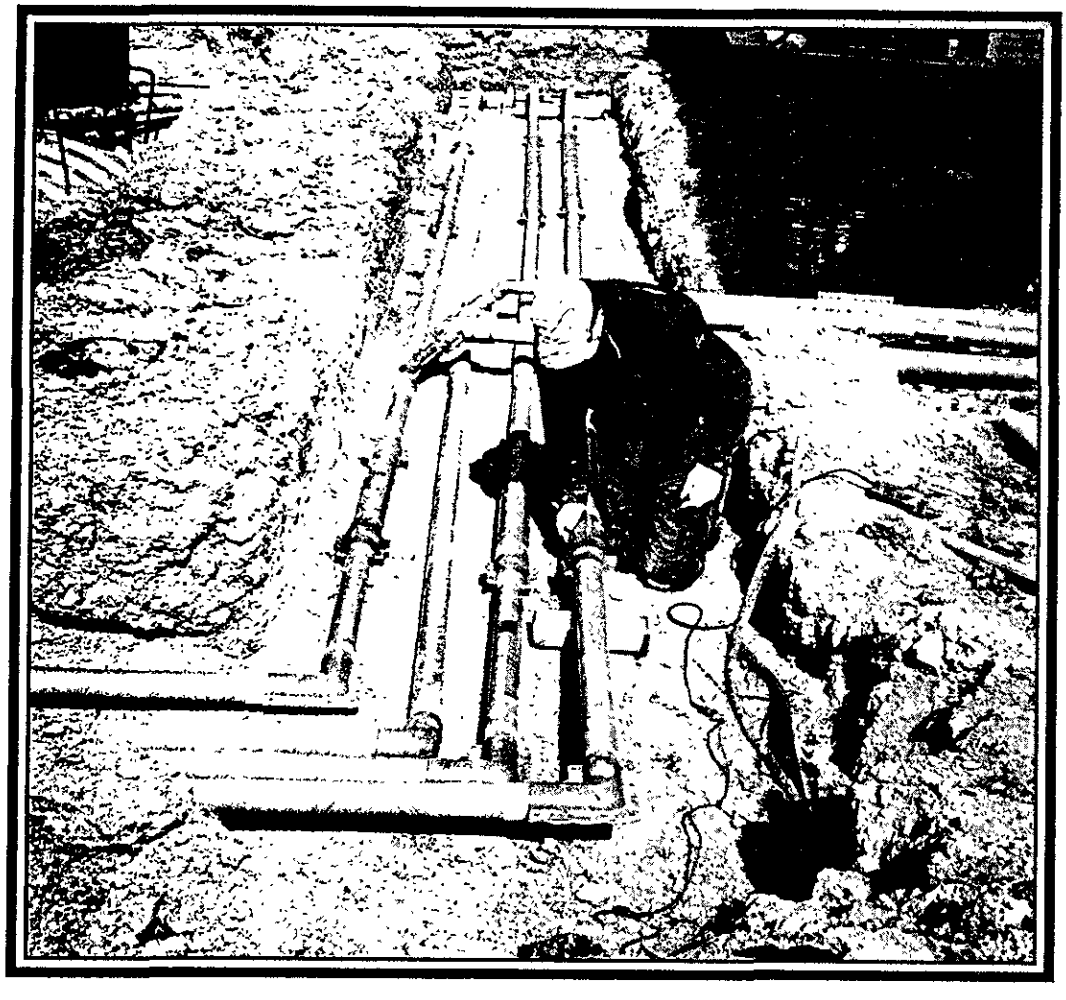
Manual No. B2160
March 15, 1994

General Installation Instructions for UL Listed

RED THREAD® IIA Pipe & Fittings

RED THREAD IIA Secondary Containment Fittings

(nonmetallic underground piping for petroleum products, alcohols and alcohol-gasoline mixtures)



SMITH FIBERGLASS PRODUCTS INC.
2700 West 65th Street • Little Rock, Arkansas 72209-8592
Telephone (501) 568-4010 • FAX (501) 568-4465

7. While the pipe is being checked for leaks, do not stand at the end of the piping system or where it changes directions. CAUTION: **Failure to strictly follow these instructions can result in serious personal injury, death, and/or property damage.**

8. Smith Fiberglass Products recommends that after the piping has passed the 50 psig (0.35 MPa) pressure test, the contractor should reduce the product line pressure to a pressure of not more than 25 psig (0.172 MPa) and maintain this pressure until all paving has been completed. Leave pressure gauge on each line for inspection. The contractor should check the gauge daily to verify that the pipe is holding pressure.

   If a leak is encountered during the test procedure, immediately release all pressure in the piping system and refer to Section 8 for proper repair procedures. Upon completing any necessary repairs to the piping system, follow the proper testing sequence and verify the system's integrity.

SECTION 8 • REPAIR PROCEDURES

For damaged pipe and for leaking joints, Smith Fiberglass Products recommends only the repair methods listed below. DO NOT attempt to repair damaged fittings. Always pressure test repair work before putting the line back into service to assure the soundness of the repaired section. Contact your local Smith Fiberglass Products' representative for further information.

During repair, the pipeline cannot be under pressure, and the area to be repaired must be clean and dry throughout the procedure.

8.1 Repairing Weather Damage

When machined surfaces of pipe or fittings are exposed to direct sunlight prior to installation, the result is a loss of joint bonding strength. Therefore, if protective coverings have been removed and ultraviolet exposure was greater than one day, the following steps must be taken:

1. For exposed spigot ends, cut ½" to 1" (13 mm to 25 mm) off the end and retaper. This will remove the weathered layer and give a fresh surface for bonding. For fittings with spigot ends, it is sometimes possible to lightly sand the spigot using the same procedure as for bell ends.

2. For exposed bell ends (pipe or fittings), sand thoroughly until the entire surface appears fresh. Hand sanding with 40 grit sandpaper is recommended. A flapper sander of about 40 grit mounted on an electric hand drill also works well; however, use a light sanding operation to prevent changing the taper angle.

Note: Use of solvent does not remove ultraviolet degradation.

COUPLINGS OR INTEGRAL BELLS WITH T.A.B. THREADS THAT HAVE BEEN OVEREXPOSED MUST BE REPLACED.

1.8.2 Pipe Patching

Follow these instructions to repair pipe wall damage where the damaged area is two inches (50 mm) or less in diameter.

1. Cut a length of good pipe long enough to adequately cover the damaged area and extend at least three inches (75 mm) (and preferably four inches/100 mm) to either side of the damaged area (see Fig. 1.8.1).

FIGURE 1.8.1

2. Slit this "patch" lengthwise twice and remove a section so that about three-fourths of the circumference remains (see Fig. 1.8.2).


FIGURE 1.8.2

3. Thoroughly sand the inner surface of the patch and sand a corresponding area on the pipe around the damaged section (see Fig. 1.8.3). Use coarse sandpaper, a file, or a disc sander to remove all gloss from the surfaces to be bonded.


FIGURE 1.8.3

4. If solvent is used to clean all bonding surfaces, allow the solvent to evaporate, then apply a thick coating of adhesive to both surfaces, snap the patch in place, and apply pressure with hose clamps or banding material until the adhesive hardens (see Fig. 1.8.4). The clamps

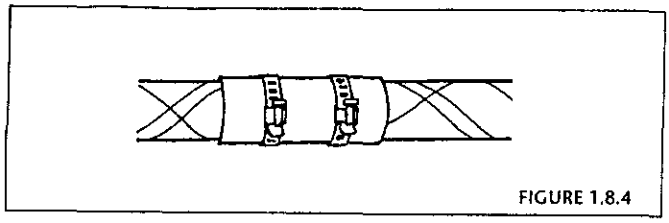


FIGURE 1.8.4

may be left on or removed after heat curing, depending on their salvage value.

1.8.3 Repairing Extensive Damage

When the damaged area in the pipe wall is larger than two inches (50 mm) in diameter, follow these instructions:

1. When damage is local (less than two inches/50 mm long, but more than two inches/50 mm around the circumference of the pipe), check to see if there is enough slack in the pipe to cut out the damaged section. If there is enough slack, cut out the damaged section, retaper the cut ends, and bond a sleeve coupling between the tapered ends. Make sure that the joints are locked up and fully cured before pressure testing the repair.

   If the pipe is buried, excavate a working area large enough to allow for tapering tool rotation. Taper the cut ends of the pipeline and install the sleeve coupling using the procedures shown in Fig. 1.8.5.

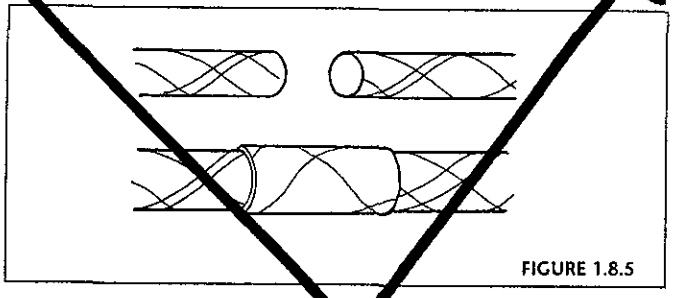


FIGURE 1.8.5

2. When damage is extensive (too large for replacement by a sleeve coupling), cut out the damaged section, taper the cut ends, and install two sleeve couplings and a pipe nipple as shown in Fig. 1.8.6. This procedure requires sufficient slack in the line to make the final joint by lifting the pipe (or moving the pipe to one side) to engage the bell and spigot joint. Therefore, it may be necessary to remove additional backfill from a buried line to allow for pipeline movement of several feet.

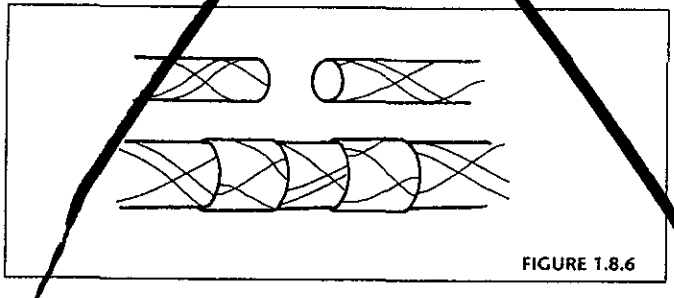


FIGURE 1.8.6

a. Cut out the damaged section of pipe.

b. Taper one end of a piece of pipe at least as long as the damaged section. When tapering, carefully observe the position of the nipple on the tapering tool. This taper will be used as a gauge. Cut this nipple to the proper length in the following steps.

c. When pipe is buried, excavate a working area large enough to allow for tapering tool rotation. Taper the cut ends of the pipeline and install the two sleeve couplings. Cure these joints and then measure the gap between the sleeve couplings. At this point, determine the proper length of the pipe nipple. This length is the sum of the distance between the two sleeve couplings, the insertion length of the tapered ends and an additional "wet" make-up length to assure joint lock-up.

   To determine the insertion length of the tapered ends, move one of the couplings to the side and use the end of the repair nipple made in the previous step to determine the dry fit into each bell. (Note: The dry fit must be very tight, i.e. use a 2x4 to drive the joint together tightly enough that it is difficult to separate.) The total length of the repair nipple is determined by adding these two measurements to the distance between the sleeve couplings and then adding the two make-up dimensions from Table 1.8.1.

TABLE 1.8.1 Make-up Dimensions (Wet)

Pipe Size (in.)	Pipe Size (mm)	Make-up Dimensions (in.)	Make-up Dimensions (mm)
2	50	⅛	3
3	75	3/16	5
4	100	3/16	5

This added length is needed due to additional insertion that occurs because the adhesive acts as a lubricant. (Caution: This additional insertion will be greater if a tight, dry fit is not achieved when measuring. It will also be different for each size of pipe.)

After the final nipple length is determined, cut the other end of the nipple and taper it, making sure that the nipple is on the tapering tool in exactly the same position as the first taper, which was used to measure the insertion length.

APPENDIX C

RESULTS OF PRESSURE TESTING OF REPAIRED PRODUCT LINE AND PHOTOGRAPHS OF REPAIRED PRODUCT LINE

SCOTT CO.
MECHANICAL CONTRACTORS
1717 Doolittle Drive
P.O. Box 5555
San Leandro, California 94577-0555
(510) 895-2333
Contractors License No. 184460

FAX COVER SHEET

DATE: 9-11-95

TO: Sailaji

COMPANY: EMCON

FAX NO.: 408 437-9526

FROM: PAUL FERREIRA EXT #: 385

REFERENCE: Line test for ARCO #6148 Oakland

NUMBER OF PAGES (including this sheet) _____

COMMENTS: _____

PLEASE FEEL FREE TO CALL IF YOU HAVE ANY FURTHER QUESTIONS.

THANK YOU. PAUL

DATA CHART #619
For Use With

LOCATION: ARCO 5137 Shattuck Ave Oakland CA 9-17-95
OWNER: ARCO 5137 Shattuck Ave Oakland
OPERATOR: ARCO
REASON FOR TEST: Unl Reg Line Repaired
TEST REQUESTED BY: BAIH Petroleum
SPECIAL INSTRUCTIONS: Test Product Line (Unl Reg)
CONTRACTOR OR COMPANY MAKING TEST / MECHANIC(S) NAME: SCOTT Company William McCarthy
IS A TANK TEST TO BE MADE WITH THIS LINE TEST? ☐ YES ☑ NO
MAKE AND TYPE OF PUMP OR DISPENSERS: Red JACKET Pumps
WEATHER: Warm TEMPERATURE IN TANKS: 72° °F °C
COVER OVER LINES: Concrete
APPROXIMATE BURIAL DEPTH: 2½ TO 3'
DATE OF TEST: 8-17-95
LOCATION No.: 5137 Shattuck Ave

IDENTIFY LINE TESTED	12 TIME (MILITARY)	13 LOG OF TEST PROCEDURES, AMBIENT TEMPERATURE, WEATHER, ETC.	14 PRESSURE PSI OR kPa BEFORE	14 PRESSURE PSI OR kPa AFTER	15 VOLUME READING BEFORE	15 VOLUME READING AFTER	15 VOLUME NET CHANGE	16 TEST RESULTS CONCLUSIONS, REPAIRS AND COMMENTS
	[illegible]							Had To purge Line For Test. Purged 30 Gallons From EACH Nozzles
	[illegible]							
	[illegible]							
	10:40	Reg unl		45		.0325		Bleedback +.029
	10:55		44		.0325	.0315	-.0010	
	11:10		44		.0315	.0310	-.0005	
	11:25		45		.0310	.0310	±.0000	-.0015 G.P.H.
	11:40		45	↓	.0310	.0310	±.0000	PASS

APPENDIX D

LABORATORY ANALYTICAL REPORT FOR SOIL SAMPLING ANALYSIS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

EMCON Associates
[redacted]21 Ringwood Avenue
[redacted]n Jose, CA 95131

Attention: Bruce Maeda

Client Proj. ID: Arco 6148/Oakland
Sample Descript: Product Line
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9508B85-05

Sampled: 08/16/95
Received: 08/16/95
Extracted: 08/17/95
Analyzed: 08/17/95
Reported: 08/21/95

QC Batch Number: GC081795BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**3.2**
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.040**
Ethyl Benzene	**0.0050**	**0.040**
Xylenes (Total)	**0.0050**	**0.32**
Chromatogram Pattern:		
Weathered Gas		**C7-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Vytas Ankaitis
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Emcon Associates
1921 Ringwood Avenue
San Jose, CA 95131
Attention: Bruce Maeda

Client Project ID: Arco 6148/Oakland
Matrix: Solid
Work Order #: 9508B85 -01- 05

Reported: Aug 23, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC081795BTEXEXA	GC081795BTEXEXA	GC081795BTEXEXA	GC081795BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Garcia	G. Garcia	G. Garcia	G. Garcia
MS/MSD #:	950867502	950867502	950867502	950867502
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/17/95	8/17/95	8/17/95	8/17/95
Analyzed Date:	8/17/95	8/17/95	8/17/95	8/17/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.17	0.17	0.17	0.52
MS % Recovery:	85	85	85	87
Dup. Result:	0.16	0.16	0.16	0.47
MSD % Recov.:	80	80	80	78
RPD:	6.1	6.1	6.1	10
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:				
Prepared Date:				
Analyzed Date:				
Instrument I.D.#:				
Conc. Spiked:				
LCS Result:				
LCS % Recov.:				
MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Vytas Ankaitis
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

[redacted]CO [redacted]duct[redacted] Company
Division of AtlanticRichfieldCompany

Task Order No. ARCO # 18334.00

Chain of Custody

ARCO Facility no. 6148	City (Facility) OAKLAND	Project manager (Consultant) BRUCE MAEDA, EMCON	Laboratory name SEQUOIA
ARCO engineer MIKE WHELAN	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 453-7300	Fax no. (Consultant) (408) 437-9526
Consultant name EMCON	Address (Consultant) 1921 Ringwood Ave, San Jose, CA 95131-1721		Contract number 07-073

Method of shipment: 9508885

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015	TPH Modified 8015 Gas ☒ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
2 PRODUCT LINE			X			X		8/16/95	1:35pm	X		X										

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

- Priority Rush 1 Business Day ☒
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☐

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler	8/16/95	1:55	Received by		
Relinquished by	8/16/95		Received by		
Relinquished by			Received by laboratory	8/16/95	1529

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant
APC-3292 (2-91)


TKA-X
X = Soil sample location


Mid-Grade Extra
113 9/10
Self Serve Gasoline
Super U
92
127 9/10
Self Serve Gasoline
Self
Serv
No Smoking
Stop Motor
Do Not Over
PAY
QUIC
HERE
WITH
ATM