BP Pipelines North America

1300 Pier B Street
Long Beach CA 90813
Phone: (562) 499-3311
Fax: (562) 499-2300

Timothy S. Hawkins
District Manager

State Water Resources Board
Division of Water Quality
1001 I Street
Sacramento, CA 96514

Dear Water Board Staff:

The enclosed Pollution Prevention Plan states our intent to continue taking samples as authorized under the previous permit. The primary water sample is taken after vault water passes through the first of two activated carbon vessels. If this water does not meet discharge criteria, then the sample that was taken after vault water has passed through both activated carbon vessels can be tested.

Documentation associated with the General Permit seemed to indicate that samples could be taken at:

1) the entrance to the storm drain, or,
2) the receiving water.

Neither of these sample points is representative of the vault water after being processed through two large vessels of activated carbon. Please advise if you would like additional details or justification.

Discharges of water from the Mobile Carbon Unit enter a large number of storm drains but they drain primarily into Los Angeles River watershed or the Dominguez Channel LA/Long Beach Harbor watershed. A map displaying these large watersheds is included in the Plan. Please advise if you would like specific drainage maps for some or all of the 162 vaults.

We propose to carefully inspect water in our vaults before and after treatment with the Mobile Carbon Unit. Please advise if you will also mandate a dry weather inspection of all 162 vaults every year. Years of experience has demonstrated that this is not necessary to prevent pollutants from entering the watershed.

Please feel free to contact Steve Comley at 562-499-2241, if you have any questions or comments on these important issues.

Yours,

Timothy S. Hawkins
District Manager
BP West Coast Products LLC

Enclosures

ATTACHMENT B – NOTICE OF INTENT FORM

NOTICE OF INTENT (NOI)
WATER QUALITY ORDER NO. 2006-0008-DWQ
STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR DISCHARGES FROM UTILITY VAULTS AND UNDERGROUND STRUCTURES TO SURFACE WATERS OF THE UNITED STATES
GENERAL PERMIT NO. CAG990002

I. NOTICE OF INTENT STATUS (See Instructions)

MARK ONLY ONE ITEM	1. ☐ New Discharger	2. ☒ Change of Information – WDID # 4000U000057

II. OWNER/OPERATOR *(If additional owners/operators are involved, provide the information in a supplemental page.)*

A. Name BP WEST COAST PRODUCTS LLC		Owner/Operator Type (Check One) 1. ☐ City 2. ☐ County 3. ☐ State 4. ☐ Gov. Combo 5. ☒ Private	
B. Mailing Address 1300 PIER B STREET			
C. City LONG BEACH	D. County LOS ANGELES	E. State CA	F. Zip Code 90813
G. Contact Person Steve Comley	H. Title HSSE Advisor	I. Phone 562-499-2241	

☐ **ADDITIONAL OWNERS** /

III. BILLING ADDRESS *(Enter information only if different from above)*

Send to: ☐ **Owner/Operator** ☐ **Other**	A. Name	B. Title	
	C. Mailing Address		
D. City	E. County	F. State	G. Zip Code

IV. RECEIVING WATER INFORMATION

A. Receiving water(s): LA RIVER + HARBOR, DOMINGZ CH.	B. Describe the types of receiving waters affected: RIVER, OCEAN
C. Regional Water Quality Control Board(s) where discharge sites are located List all regions where discharge of wastewater is proposed, i.e. Region(s) 1, 2, 3, (4) 5, 6, 7, 8, and/or 9: 4 only	

V. LAND DISPOSAL/RECLAMATION

The State Water Resources Control Board's water rights authority encourages the disposal of wastewater on land or re-use of wastewater where practical. You must evaluate and rule out this alternative prior to any discharge to surface water under this Order.

Is land disposal/reclamation feasible? ☐ **Yes** ☒ **No**

If **Yes**, you should contact the Regional Water Board. This Order does not apply if there is no discharge to surface waters. If **No**, explain:

VI. VERIFICATION

Have you contacted the appropriate Regional Water Board or verified in the appropriate Basin Plan that the proposed discharge will not violate prohibitions or orders of that Regional Water Board? ☐ **Yes** ☒ **No**

VII. TYPE (Check All That Apply)

☐ Electric	☐ Natural Gas	☐ Telephone	☒ Other: PETROLEUM INDUSTRY

VIII. POLLUTION PREVENTION PRACTICES PLAN INFORMATION

A. Company Name			B. Contact Person	
BP WEST COAST PRODUCTS LLC			STEVE COMLEY	
C. Street Address Where PLAN is Located			D. Title of Contact Person	
1300 PIER B STREET			HSSE ADVISOR	
E. City	F. County	G. State	H. Zip Code	I. Phone
LONG BEACH	LOS ANGELES	CA	90813	(562) 499-2241

IX. DESCRIPTION OF DISCHARGE

Describe the discharge(s) proposed. List any potential pollutants in the discharge. Attach additional sheets if needed.

VAULTS ENCLOSE PETROLEUM PIPELINE VALVES. POTENTIAL POLLUTANTS ARE OIL + GREASE, TPH AND SOLIDS (SUSPENDED).

X. VICINITY MAP AND FEE

A. Have you included vicinity map(s) with this submittal? Separate vicinity maps must be submitted for each Region where a proposed discharge will occur.	☒ Yes	☐ No	
B. Have you included payment of the filing fee (for first-time enrollees only) with this submittal?	☐ Yes	☒ No	☐ N/A
C. Have you included your PLAN?	☒ Yes	☐ No	

XI. CERTIFICATION

" I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the criteria for eligibility and the development and implementation of Pollution Prevention Practices, if required, will be complied with."

A. Printed Name: TIMOTHY S. HAWKINS	
B. Signature: Timothy S. Hawkins	C. Date: 11-30-2006
D. Title: LA BASIN DISTRICT MANAGER	

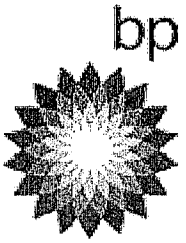
PLEASE SUBMIT THE NOI, FIRST ANNUAL FEE, PLAN AND MAP TO THE FOLLOWING ADDRESS:

UTILITIES NOI
NPDES UNIT
DIVISION OF WATER QUALITY
STATE WATER RESOURCES CONTROL BOARD
P.O. BOX 100
SACRAMENTO, CA 95812-0100

STATE USE ONLY

WDID:	Regional Board Office	Date NOI Received:	Date NOI Processed:
		Fee Amount Received: $	Check #:

BP WEST COAST PRODUCTS, LLC



UTILITY VAULT

POLLUTION PREVENTION PLAN

for the

Mobile Storm Water Treatment System

NPDES Permit No. CAG990002
WDID No. 4000U000057

November 2006

BP West Coast Products, LLC
1300 Pier 'B' Street
Long Beach, CA 90813

Table

Attachments

A – Vicinity Maps of BP's Utility Vaults

B – Valve Box Discharge Inspection Form

I. Introduction

BP West Coast Products, LLC transports crude oil and petroleum products via underground pipelines throughout the RWQCB, Los Angeles Region. Valves are placed along the pipeline in strategic locations in order to regulate and divert flow. These valves are accessed through vaults that are constructed of concrete and covered with steel lids to protect the valve and exposed connecting pipeline segments. Most of the valve vaults are located in or near streets and highways; however, some are found in industrial facilities, remote areas, and along railroad tracks.

During rain events, storm water that runs along the street passes over the vaults on the way to Los Angels County storm drain system. Though covered with steel plating, some water will collect in the vaults. This water cannot drain out since the vaults are constructed to contain liquids. Sufficient storm water can eventually collect during one or several events so that the valves are submerged and cannot be accessed safely by BP personnel. In order to regain access to this equipment, BP has received authorization to discharge the accumulated water to surface waters from the California State Water Resources Control Board under NPDES Permit No. CAG990002

In order to renew coverage under the NPDES Permit No. CAG990002, the facility is required to develop and implement a pollution prevention plan in accordance with the State Water Resources Control Board's permit renewal guidelines. This Plan will describe the BMPs that will be used by BP to minimize the discharge of pollutants while performing utility vault maintenance.

II. Pollution Prevention Team

Although at BP every employee plays an integral role in pollution prevention, a BMP Committee (aka Pollution Prevention Team) has been assembled to develop, establish, and evaluate BMPs best suited for pollution prevention efforts at the BP Terminals and utility vaults. The team incorporates persons from various areas of responsibility to bring the appropriate level of knowledge, skills, and experience to assure that the BMPs are adequate, appropriate, and effective for the maintenance of pipelines via utility vault access.

The following are the responsibilities of the Pollution Prevention Team:

- Meet annually to evaluate the best management practice performance in the light of available analytical and observation data;
- Routinely inspect existing best management practices in their respective areas of responsibility;
- Evaluate the effectiveness of existing best management practices and make recommendations to the Terminal Management for improvements, as necessary;
- Solicit input from other employees on pollution prevention ideas and issues;
- Maintain and keep up to date the BMP corrective action record;
- Facilitate employee and contractor pollution prevention awareness and education; and
- Provide recognition for pollution prevention successes.

A. Pollution Prevention Team Members

The Pollution Prevention Team has eight members consisting of one senior operator each from the Marine Terminals and the Land Terminals, a maintenance person, the operator in charge of hazardous waste inventories, a Health Safety Security & Environmental (HSSE) representative, and two Managers from the Land and Marine Terminals, respectively. These individuals, their position, and responsibilities are shown on the following page in **Table 1**. The table is subject to changes in personnel and responsibilities. The table is reviewed and updated on an annual basis.

Table 1 Pollution Prevention Team

Name	Title	Telephone No.	Responsibility
To be determined	Manager of the Marine Terminals	(562) 499-2249	Management of the Berth 121, Terminal 2, and Terminal 3 Marine Terminals and the Carson Crude Terminal.
John Banda	Manager of the Land Terminals	(562) 728-2754	Management of the East Hynes and Hathaway Terminals.
DeErrol Armenta	Team Lead - Marine Terminals	Office: (562) 499-2279 Control Room # for: CC/T2/T3: (562) 499-2211 B-121: (562) 499-2336	Lead Operator of the Berth 121, Terminal 2, and Terminal 3 Marine Terminals and the Carson Crude Terminal
Joe Jimenez	Team Lead - Land Terminals	Office: (562) 728-2727 Control Room # for: East Hynes: (562) 728-2721; Hathaway: (562) 981-3400	Lead Operator of the East Hynes and Hathaway Terminals.
Louis Nelson	Operator in Charge of Haz. Waste Inventories	(562) 728-2789	Haz. Waste Inventory and Control
TBD	Maintenance Representative		Facility Maintenance
Steve Comley	HSS&E Advisor	(562) 499-2241	Supports the terminal manager by evaluating analytical testing results. Assist the terminal manager with discharge decisions. Advises terminal regarding environmental compliance issues

B. Release Identification and Assessment

Each year the Pollution Prevention Team identifies and assesses the risks of pollutant releases by assuring that a review of existing plans and information sources is performed, including:

BP Operations Manual – BP maintains and follows an operations manual that describes various procedures and standard practices involved with the transfer and storage of petroleum. Topics include information on oil transfer equipment; permanent containment; pre-transfer and transfer operations; vessel mooring, unloading, and loading; housekeeping; and oil spill procedures. A copy of the BP Operations Manual is located in the control room.

BP Pipeline Operating and Maintenance Manual – In accordance with the Federal Hazardous Materials Transportation Regulations in 49CFR 195.402, BP has developed and follows the procedures contained in the BP Pipeline Operating and Maintenance Manual. These procedures include instructions on pipeline and tank operation, repair and maintenance; including information on corrosion control, line testing, and safety issues. A copy is located in the control room.

The above plans are reviewed annually, but may be reviewed by others outside of the Pollution Prevention Team as part of an existing program.

C. Map of Project Locations (See Attachment A)

III. Description of Potential Pollutant Sources

A. Characterization of Actual and Potential Pollutant Sources

The Pollution Prevention Team assures that release identification and assessment is annually conducted to identify and characterize actual and potential pollutant sources. The chemical inventories are reviewed to assure that all applicable chemicals present at the site are included. The review of the maps and inventories and the field inspections may be performed in conjunction with other similar events, such as the ACSCE, weekly hazardous waste inspections, or the daily operations inspections.

B. Evaluation of Potential Pollutants based on the Hazards that they Present to Human Health and the Environment

The Pollution Prevention Team assures that the hazards of the potential pollutants to human health and the environment are annually evaluated. This is performed by maintaining up to date the following information sources on pollutant hazards:

- Material Safety Data Sheets (MSDS) for chemicals stored and used at the facility;
- OSHA-required Hazard Communication Program and the Illness, Injury, and Prevention Program;
- Hazardous Materials Business Plan and Chemical Inventory; and
- The Annual Toxics Release Inventory (TRI) reporting criteria.

C. Identification of Pathways that Potential Pollutants might Reach Environmental and Human Receptors

The Pollution Prevention Team assures that pathways for potential pollutants to environmental and human receptors are identified and evaluated. During the site assessment in Step 2, each area is evaluated for potential problems, such as equipment failure, evidence of wear or corrosion, improper operation, and problems caused by naturallu occurring conditions.

The following is a list identifying the significant materials that may potentially be a pollution source during utility vault maintenance:

- Oil and grease;
- Total Petroleum Hydrocarbons (TPH);
- Total Suspended Solids (TSS)

IV. Inventory of Exposed Material

Materials are not kept at the utility vaults, so there is no potential of exposure to precipitation. Maintenance personnel bring the required equipment/tools from their maintenance yards whenever maintenance or inspections are performed at a utility vault.

A. Risk Identification

BP does not contribute any contaminants to the accumulated water via the vaults, since the vault valves are monitored electronically and periodically inspected and repaired if found to leak. However, since the storm water has contact with the streets and surrounding surface area prior to entering the vault, there is a potential for contaminants to be present due to automobile sources and possible illegal dumping. Potential pollutants include oil and grease, total petroleum hydrocarbons (TPH), and total suspended solids (TSS). Consequently, BP utilizes the granulated active carbon and bag filters as safeguards against discharging potential contaminants into the storm drain.

B. Summary of Existing Discharge Sampling Data

The previous permit required annual sampling and testing for TPH and Oil and Grease from the discharge of the carbon unit system. In addition to the sampling of accumulated precipitation in the utility vaults, samples were required to be collected between the two carbon vessels every 100,000 gallons and analyzed for TPH to ensure that the primary carbon vessel had not reached breakthrough. The annual testing results for the analysis of 'TPH' and 'Oil and Grease' reflect Non Detected (ND) for each parameter.

C. Treatment of Storm Water Prior to Discharge

When maintenance activities are needed the vault cover is removed to determine the condition of the vault. If the vault has standing storm water in it, then a mobile carbon treatment unit is brought to the site to treat the storm water prior to discharge.

BP discharges accumulated storm water from the valve vaults through granular activated carbon filters by use of an electric pump, then directly to the nearest storm drain via flexible hose. The accumulated water is from precipitation and should not have any contaminants.

V. MEASURES AND CONTROLS

Prior to deploying the submersible pump at the valve box, the mobile equipment operator conducts a thorough inspection of the water contained in the vaults. No water is discharged from the vault box through the treatment system if there is evidence of free hydrocarbons. If deemed necessary, the water will be removed by vacuum truck and disposed of at an appropriate facility.

When possible, the condition of the receiving water prior to discharge is noted. Items such as color, flow, and the presence of existing contaminants are some samples of conditions observed. The equipment operator periodically checks the water being discharged out of the system to ensure that no contaminants are being discharged.

The water in the valve box is also periodically inspected during the discharge to ensure that conditions have not changed. Particulates or free hydrocarbons in the discharge stream would indicate the presence of previously unobserved pollutants in the valve box, recently introduced pollutants, or a possible equipment failure. If pollutants are observed in either the valve box or the discharge stream, discharge is discontinued. Records of each discharge event are maintained by BP.

A. Good Housekeeping

The EPA BMPP guidance document states[1],

"Good Housekeeping is essentially the maintenance of a clean, orderly work environment. Maintaining an orderly facility means that materials and equipment are neat and well kept to prevent releases to the environment. Maintaining a clean facility involves the expeditious remediation of releases to the environment. Together, these terms, clean and orderly, define a good housekeeping program.

Maintaining good housekeeping is the heart of a facility's overall pollution control effort. Good housekeeping cultivates a positive employee attitude and contributes to the appearance of sound management principles at a facility. Some of the benefits that may result from a good housekeeping program include ease in locating materials and equipment; improved employee morale; improved manufacturing and production efficiency; lessened ... product losses due to spills, waste, or releases; fewer health and safety problems arising from poor materials and equipment management; environmental benefits resulting from reduced releases of pollution; and overall cost savings. ...

The primary impediment to a good housekeeping program is a lack of thorough organization. To overcome this obstacle, a three-step process can be used, as follows:

[1] Guidance Manual for Developing Best Management Practices, EPA 833-B-93-004, October 1993, p. 2-24 and 2-25.

- *Determine and designate an appropriate storage area for every material and every piece of equipment;*
- *Establish procedures requiring that materials and equipment be placed in or returned to their designated areas;*
- *Establish a schedule to check areas to detect releases and ensure that any releases are being mitigated."*

BP meets these three housekeeping steps as described in greater detail in the following documents:

BP Operations Manual

BP Pipeline Operating and Maintenance Manual

B. Preventative Maintenance

Preventative maintenance (PM) is the practice of routinely inspecting, maintaining, and testing facility equipment and systems to uncover conditions which could cause breakdowns or failures that result in a release of pollutants. BP's PM program includes the following activities:

- Identification of equipment, systems, and structures included in the PM program;
- Determination of appropriate PM tasks and schedules for each piece of equipment;
- Performance of PM activities in accordance with the established schedule; and
- Maintenance of complete PM records.

These four PM program elements are accomplished at the BP Marine and Land Terminals with the use of the MAXIMO PM scheduling program. All equipment requiring maintenance is entered into the MAXIMO system. The required PM tasks, the task owner, and PM schedule are programmed into the system. When a task comes due, MAXIMO generates a work order for the required task. When the task is completed the work order is closed-out in the system by the supervisor of the task by documenting the date of completion and any other related information. Records are maintained in MAXIMO and in the terminal maintenance files.

C. Spill Prevention and Response

All solid material generated while operating the treatment system in the field shall be retained by the Operator and returned to Terminal 2 or East Hynes Terminal for proper disposal. Solids that have accumulated in the treatment system's basket filters should be removed as specified in Section 2.2 of the Operations Manual. These solids will be placed in an appropriate, clearly marked container at the Terminal 2 or East Hynes Waste Storage Area for analysis and proper

disposal. Spent carbon that has been removed from the system should be stored in DOT-approved containers at the Waste Storage Area until proper disposal can be determined.

D. Inspections

Prior to deploying the submersible pump at the valve box, the mobile equipment operator shall make a thorough inspection of the water contained in the vault. The condition of the water shall be noted on a Valve Box Discharge Inspection sheet (Attachment B). One sheet should be filled out for each valve box when discharging of water is conducted.

E. Employee Training

BMP education is included in employee training at each facility. Employees are given ongoing training in the proper operation of processes at the facility, of which spill prevention is a factor. In addition to formal training, employees are given on-the-job training and follow standard operating procedures to ensure the proper operation of equipment and prevention of spills.

Additional training as part of the new employee orientation includes the discussion of recommended spill response procedures. Employee training records are entered and maintained in the BP VTA training database. Records may be accessed through BP's intranet system at any computer terminal within the facility at the following website.

http://pl.bpweb.bp.com/training/

BP personnel are instructed in the following tasks:

- Operation and maintenance of equipment to prevent oil discharges.
- Applicable pollution control laws, rules, and regulations.

The HSS&E Department provides operating personnel with the following training program. Spill prevention briefings are routinely scheduled for operating personnel to ensure adequate understanding of the SPCC plan. The HSS&E Department conducts refresher training sessions with operations personnel on an annual basis. New employees are given immediate briefings on all of the pertinent compliance plan requirements and regulations.

All employees are provided with Hazardous Waste Operations and Emergency Response (HAZWOPER) first responder-level training based upon individual job responsibilities. Basic HAZWOPER training consists of training in hazard communication (HAZCOM) and emergency response. This prepares BP personnel to provide initial response to a spill, including implementing spill countermeasures and notification of the appropriate spill response team.

F. Recordkeeping and Reporting

All records of environmental testing, tank inspections and information, facility diagrams, NPDES records, and any other information related to BMPs or pollution prevention are regularly updated and maintained in the T-2 HSS&E file (for B-121, T-2, T-3, and CCT), the East Hynes HSS&E file (for East Hynes and Hathaway), or the BP Pipelines files at the Carson BP Refinery. Operation inspection records are maintained in the control room. Equipment and non-aboveground storage tank inspection and repair records are maintained on BP's Maximo maintenance database.

The record retention requirement differs for the various regulations and should be determined on a case-by-case basis.

VI. Comprehensive Site Compliance Evaluation and Re-evaluation Phase Considerations

Logistically it is not practical to annually perform a comprehensive evaluation on each of the more than 140 utility vaults operated by BP. Therefore, all vault discharges that do occur will involve a compliance evaluation while performing the scheduled discharge. Dry weather inspections will not be routinely conducted.

A. Evaluate Plan Implementation Benefits

Benefits to employees include limiting exposure to hazardous pollutant sources and providing a safer and cleaner work environment. Benefits to the environment include reduced releases to the environment from spills, volatilization, and losses to storm water runoff. Reduced expenditures result from implementing less expensive pollution prevention techniques rather than the more expensive end-of-pipe treatment.

B. Periodically or As Needed, Repeat Planning and Development Phase Considerations

The Pollution Prevention Team evaluates the various elements of this Pollution Prevention Plan annually to assure that they are being implemented and adequately address the potential pollutant sources. In addition, the following conditions also require a re-evaluation of this Plan:

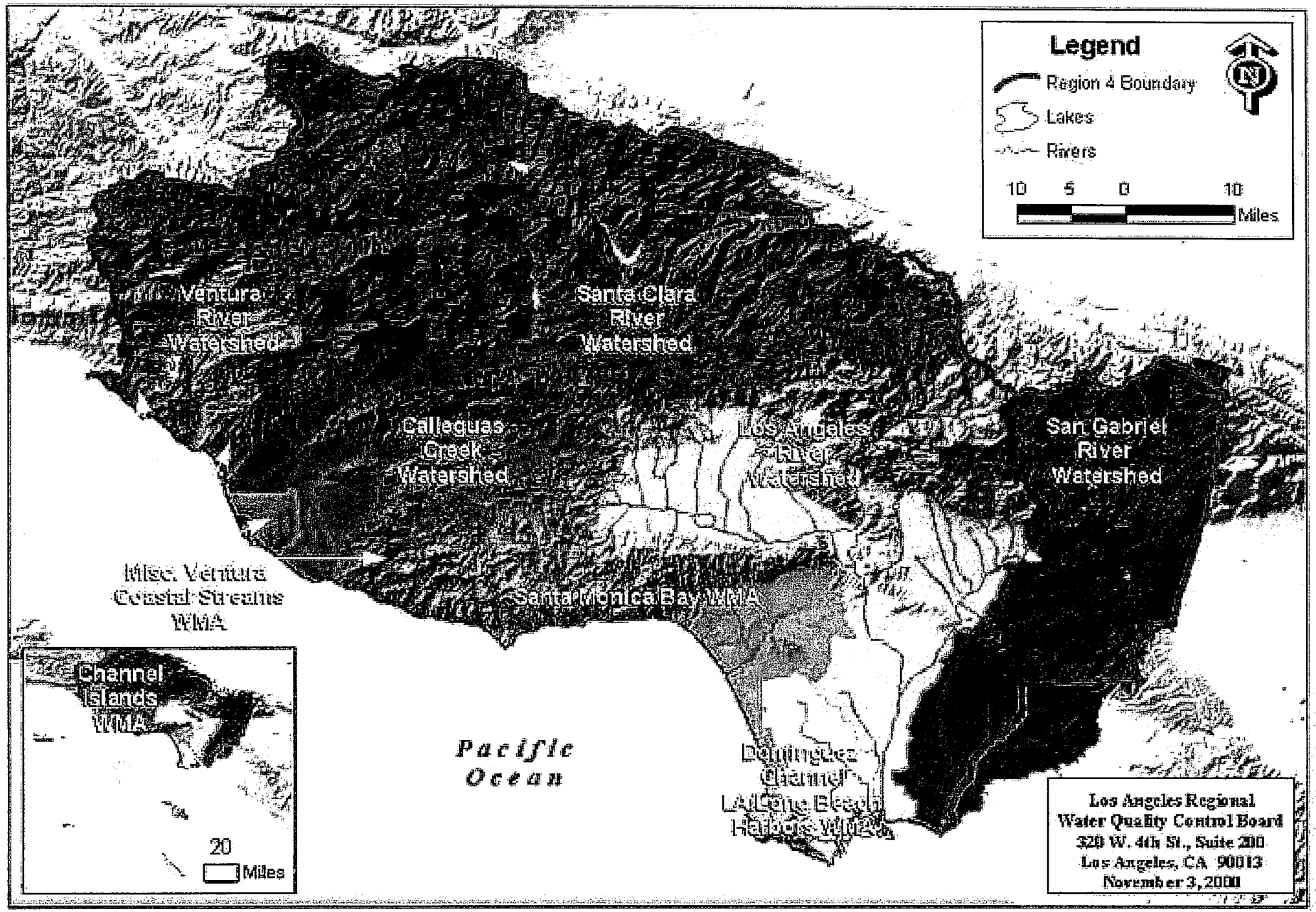
- Restructuring of facility management;
- Substantial growth (throughput);
- Significant changes in the nature or quantity of pollutants discharged (as indicated by NPDES testing results and/or the TRI report);
- Changes in process or treatment controls;
- New permit requirements;
- New legislation related to BMPs;
- And releases to the environment.

Attachment A

Vicinity Map of BP's

Utility Vaults

Los Angeles Regional Water Quality Control Board
Watersheds, Lakes, and Rivers



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ARCO Pipe Line Company Valve Box Tally by City	
City	**No. of Valve Boxes**
Signal Hill	9
Long Beach	62
Wilmington	17
San Pedro	1
Carson	33
Huntington Beach	4
Lakewood	1
Torrance	3
LAX	1
Rancho Dominguez	2
Bellflower	3
South Gate	5
Los Alamitos	1
Los Angeles	
Burbank	

VALVE BOX DRAWINGS

	VAULT	VAULT NAME	LOCATION	DRAWING NO.	DATE	FIELD CHK	FINISHED
S.H.	1	JUNIPERO VAULT	ON JUNIPERO AT 2900 BLK			2/26/96	
L.B.	2	25-WEBSTER	ON WEBSTER AT 2500 BLK			2/26/96	
L.B	3	28-DEFOREST	ON DEFOREST AT 2800 BLK	08-B-P-0003	10/23/95	1/18/96	CHECK PRN
S.H.	4	CHEMOIL CONNECTION	AT CALIFORNIA AND 27	31-B-P-3659	10/23/95	4/2/96	CHECK PRN
L.B.	5	MARLEX CONNECTION	ON 28 AND ROSE AT INTERSECTION	31-B-P-3671	10/23/95	2/26/96	CHECK PRN
L.B.	6	9TH-HARBOR	LOMITA GAS			4/11/96	
L.B.	7	BURNETT-DEFOREST	ON DEFOREST AT 2400 BLK	01-B-P-0007	10/23/95	4/4/96	CHECK PRN
L.B.	8	BURNETT TRESTLE	L.A. RIVER EMBANKMENT. SEE DWG.	01-B-P-0008	10/24/95	4/2/96	CHECK PRN
L.B.	9	BURNETT BOX	ON T.I. FRWY SOUTH AFTER WILLOW	31-B-P-3625	10/24/95	2/26/96	CHECK PRN
L.B.	10	CARSON TOOL CITY	CARSON ST. RRX 1900 BLK N. SIDE	10-B-P-0010	10/24/95	4/2/96	CHECK PRN
L.B.	11	CHERRY-WARDLOW	WARDLOW RD. RRX 2000 BLK S. SIDE	11-B-P-0011	10/25/95	4/2/96	CHECK PRN
WILM.	12	ALAMEDA BOX	G.A.T.X. PROPERTY	52-B-P-0012	10/25/95	4/1/96	CHECK PRN
WILM.	13	B-LAGOON	ON B AT 500 BLK SOUTH SIDE	52-B-P-3657	10/25/95	1/16/96	CHECK PRN
WILM.	14	LOMITA CAGE	ON LOMITA AT 350 BLK NORTH SIDE	39-B-P-1420	10/26/95	3/1/96	CHECK PRN
S.H.	15	JOHN'S HAMBURGER	ON SPRING AND JUNIPERO AT 2400 BLK	08-B-P-4094	10/26/95	2/29/96	CHECK PRN
S.H.	16	CALIFORNIA-BURNETT	OFF CALIFORNIA THRU FENCE 900 BLK	31-B-P-0016	10/26/95	4/2/96	CHECK PRN
S.H.	17	EDISON PLANT	S.C.E.C. PROPERTY	52-B-P-1297	10/26/95	1/16/96	CHECK PRN
L.B.	18	9-CANAL	OFF 9 NEAR RRX 1500 BLK SOUTH SIDE	79-B-P-3617	10/27/95	1/16/96	CHECK PRN
L.B.	19	25-FASHION	ON FASHION AT INTERSECTION 2501 BLK	49-B-P-0496	10/27/95	4/11/96	CHECK PRN
L.B	20	FASHION-WILLOW	ON FASHION SOUTH OF WILLOW	32-B-P-0609	10/31/95	1/18/96	CHECK PRN
S.H.	21	SPRING-WALNUT	ON SPRING 1600 BLK. NORTH SIDE	32-B-P-3672	11/6/95	4/10/96	CHECK PRN
L.B.	22	SPRING-GOLDEN	ON GOLDEN S.E. CORNER ON SIDEWALK	01-B-P-0022	11/6/95	1/18/96	CHECK PRN
WILM.	23	C-FIGUEROA	ON CORNER OF C ST. AT TRUCK WASH	38-B-P-0945	11/6/95	1/16/96	CHECK PRN
L.B.	24	BURNETT-FASHION	ON BURNETT NORTH EAST INTERSECTION	31-B-P-3664	11/6/95	1/18/96	CHECK PRN
L.B.	25	BURNETT MANIFOLD	ON BURNETT AT END NEAR 710 L.B.	34-B-P-1286	11/6/95	1/18/96	CHECK PRN
L.B.	26	P.C.H.-710 NORTH	710 NORTH EXIT P.C.H. EAST	01-B-P-0026	11/7/95	2/28/96	CHECK PRN
L.B.	27	SOUTH-R.R.X.	SOUTH SIDE OF SOUTH ST 2400 BLK.	12-B-P-3661	11/7/95	2/27/96	CHECK PRN
L.B.	28	CANDLEWOOD-R.R.X.	NORTH SIDE OF CANDLEWOOD 2400 BLK	11-B-P-3662	11/7/95	4/2/96	CHECK PRN
L.B.	29	BIXBY MANIFOLD	ON COUNTRYCLUB AND LOS CERRITOS	32-B-P-1457	11/7/95	2/27/96	CHECK PRN
L.B.	30	ANAHEIM-SOUTH R.R.X.	ON ANAHIEM AND ULTRAMAR TRUCK	79-B-P-0972	11/8/95	1/16/96	CHECK PRN
WILM	31	YANG MING	YANG MING PROPERTY ALONG J.S.G.	101-B-P-031	11/8/95	1/16/96	CHECK PRN
S.P.	32	AMERICAN PRESIDENT	A.P.L. ENTRANCE ROAD RIGHT SIDE	101-B-P-032	11/8/95	2/29/96	CHECK PRN
WILM	33	BROAD-AVALON CAGE	ON AVALON SOUTH OF BROAD E.SIDE	51-B-P-0033	11/8/95	1/17/96	CHECK PRN
WILM.	34	HUNTWAY	HUNTWAY REFINERY	48-B-P-2800	11/8/95	1/11/96	CHECK PRN
WILM	35	TEXACO TANK FARM	ON ALAMEDA 1600 BLK EAST SIDE	51-B-P-0035	11/9/95	1/11/96	CHECK PRN
WILM.	36	TEXACO MANIFOLD 79	TEXACO PROPERTY NEAR #35	79-B-P-0036	11/9/95	1/11/96	CHECK PRN
L.B.	37	ULTRAMAR	ULTRAMAR REFINERY			4/1/96	
CAR	38	FLECTCHER	ON LOMITA WEST OF MAIN IN CAGE	30-B-P-1243	11/10/95	2/29/96	CHECK PRN

VALVE BOX DRAWINGS

	VAULT	VAULT NAME	LOCATION	DRAWING NO.	DATE	FIELD CHK	FINISHED
L.B	39	FASHION-BURNETT	ON FASHION AT INTERSECTION SOUTH	71-B-P-0944	11/3/95	1/11/96	CHECK PRN
CAR	40	G.A.T.X.-MACMILLIAN	GATX REF. CO. SEPULVEDA BLVD	B 51BPLTR 1		4/1/96	
				B 51BPLTR 2		1/11/96	
				B 52BPLTR		1/11/96	
	41	SOLD	PIER D AVE 200 BLK	01 BPLTR 1			SOLD
L.B.	42	PICO-PIER D	PICO-PIER D ST	01 BPLTR 2		2/27/96	
CAR	43	I.D.S.C.	2222 SEPULVEDA	51 BPLTR 3		3/26/96	
	44	NOT USED					
WLM	45	FOOTE-ANAHEIM	FOOTE AVE. 800 BLOCK W. OF ANAHEIM	40 BPLTR		1/11/96	
	46	SOLD	TOPCO Z1#2 TK FARM 946 PIER G AVE.	01 BPLTR 3			SOLD
WLM	47	OLYMPIC TANK FARM	ALAMEDA 1100 BLK AT ACROSS O.T.F	55 BPLTR4		3/26/96	
	48	SOLD	TOPCO TANK FARM PIER G AVE.	01 BPLTR 4			SOLD
	49	SOLD	TOPCO TANK FARM PIER G AVE.	01 BPLTR 5			SOLD
	50	SOLD	TOPCO TANK FARM PIER F AVE.	01 BPLTR 6			SOLD
L.B.	51	THUMS	THUMS PROPERTY BROADWAY NORTH	01BPLTR 7		3/26/96	
L.B.	52	PICO-R.R.X.	PICO EAST OF R.R NORTH OF PIER D. ST	01BPLTR 8		2/29/96	
L.B.	53	PACIFIC ENERGY	710N EXIT ANAHEIM E.100YRDS BEF. END	01BPLTR 9		3/27/96	
	54	NOT USED					
L.B.	55	SOUTH-R.R.X.	SOUTH ST. 2400 BLK NORTH SIDE AT R.R	11 BPLTR		4/2/96	
L.B.	56	710-WILLOW WEST	710 N/W WILLOW ON RAMP 50 YARDS	32 BPLTR		3/26/96	
L.B.	57	CHERRY-53	CHERRYAVE 5300 BLK R.R.X.OVERPASS	12 BPLTR		2/27/96	
CAR.	58	CHEMOIL CO.	CHEMOIL CO.2005 SEPULVEDA BLVD	32 BPLTR 1		3/26/96	
				104 BPLTR			
WLM	59	TEXACO REF.	TEXACO REF SUOTH OF PCH	48 BPLTR		4/9/96	
WLM	60	TEXACO LUBRIC ANTS	LEEDS & M.ST	79BPLTR		4/9/96	
WLM	61	OLYMPIC TANK FARM	TEXACO LOADING RACK	79BPLTR 1		4/9/96	
	62	SOLD		48 BPLTR 2			SOLD
CAR	63	SHELL CONNECTION	LINE E-52 SHELL LOMITA	52 BPLTR 3		3/1/96	
WLM	64	NAVY CONNECTION	FRIGATE AVE. & E. STREET (M.H.)	38 BPLTR 1		4/11/96	
WLM	65	GOLDEN EAGLE	FRIGATE AVE. & L STREET (M.H.)	38 BPLTR 2		4/14/96	
WLM	66	TEXACO CN-3	TEXACO REFINERY	E 51BPLTR 4		1/17/96	
				E 52 BPLTR 5			
L.B.	67	ULTRAMAR	ULTRAMAR REFINERY			4/1/96	
CAR	68	MOBIL OIL CONNECTION	A.T. & S.F.R.R. R/W AT MAIN ST.	38 BPLTR 3		4/9/96	
L.B.	69	ULTRAMAR	ULTRAMAR REFINERY	48 BPLTR 4&5		4/1/96	
L.B.	70	4 VALVE MANIFOLD	CARRACK AVE & PIER B	93 BPLTR 1		4/10/96	
L.B	71	MARINE TERMINAL 1B	BERTH 121	82 BPLTR 1&2		4/10/96	
L.B.	72	TOYOTA YARD	LONG BEACH N. HABBOR TOYOTA PKG.	82 BPLTR 4&5		4/10/96	

VALVE BOX DRAWINGS

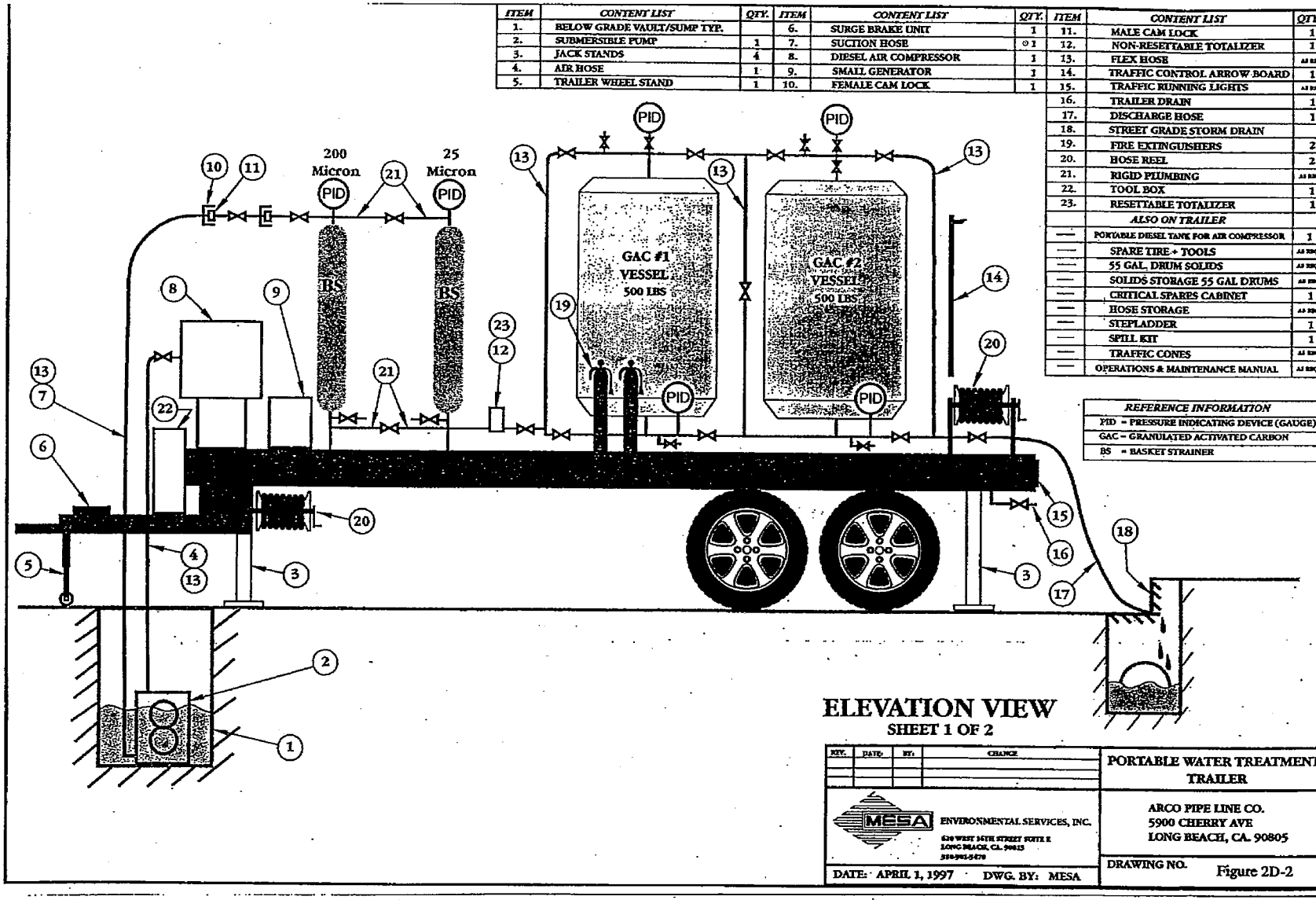
	VAULT	VAULT NAME	LOCATION	DRAWING NO.	DATE	FIELD CHK	FINISHED
L.B.	73	MARINE TERMINAL T2					
L.B.	74	SUN OIL CONNECTION	1 ST. EAST OF DOMINGUEZ CHANNEL	46 BPLTR 1		4/10/96	
	75	NOT USED	NOT USED				
L.B.	76	TERMINAL # 3 TANK		73 BPLTR 11		4/10/96	
				72 BPLTR 12			
				53 BPLTR 13			
L.B	77	SPRING-CHERRY	M.H. IN THE STREET	06 BPLTR1-14		4/2/96	
L.B.	78	SPRING-REDONDO	M.H. SPRING & REDONDO AVE	06 BPLTR2-15		4/3/96	
	79	NOT USED					
	80	NOT USED					
CARSON	81	CARSON CRUDE	WILMINGTON & LOMITA	63 BPLTR 2		4/11/96	
				86 BPLTR 1			
				84 BPLTR 1			
CAR.	82	UNOCAL CARSON	ALAMENDA SOUTH OF SEPULVEDA			4/2/96	
CAR.	83	CARSON MARKETING	2149 SEPULVEDA	21 BPLTR		2/28/96	
				33 BPLTR 1			
CAR	84	CARSON BOOSTER		69 BPLTR		2/28/96	
CAR	85	G.A.T.X.	ALAMEDA / SEPULVEDA	31 BPLTR 0		4/4/96	
CAR	86	GA.T.X. REF.CONN	GATX REF.	46 BPLTR 2&3		4/4/96	
CAR	87	TEXACO REF. CONN	TEXACO REF.	46 BPLTR 3		4/9/96	
	88	NOT USED	SAME AS # 34				
H.B.	89	HUNTINGTON BEACH	M.H. CRYSTAL-CLAY			4/8/96	
H.B.	90	GOLDEN WEST MANIFOLD	M.H GOLDEN WEST & NEIL	Valve 1936 only		4/8/96	
L.B.	91	CANDLEWOOD JUNCTION	CANDLE WOOD & MARKET	90 BPLTR		2/27/96	
				23 BPLTR			
H.B.	92	UNOCAL	NEIL & ALGONQUIN			4/11/96	Sale Pending
H.B.	93	UNOCAL	NEIL & ALGONQUIN			4/11/96	Sale Pending
LAKEW	94	LAKEWOOD-SOUTH	M.H WOOD-SOUTH			4/11/96	Sale Pending
	95	NOT USED	M.H. LAKEWOOD-HEDDA			4/12/96	
L.B.	96	GATX	SOUTH ST. EAST OF ORAZIBA				Sale Pending
S.H.	97	SIGNAL HILL TERM ALLIN	SPRING ST			4/11/96	Sale Pending
	98	SOLD					SOLD
L.B.	99	SPRING-WALNUT				4/10/96	
L.B.	100	WESTERN PETRO.	1621 SPRING M.H.			4/10/96	
L.B.	101	DUNCAN LEASE	SPRING & PASADEN M.H.			4/10/96	
S.H.	102	GOLDEN EAGLE	SPRING & ORANGE				
Toll.	103	CRENSHAW JUNCTION	CRENSHAW & DEL AMO	93 BPLTR 1		3/28/96	

VALVE BOX DRAWINGS

VAULT	VAULT NAME	LOCATION	DRAWING NO.	DATE	FIELD CHK	FINISHED
104	MOBIL METER AREA	DEL AMO & VAN NESS	93 BPLTR 2		3/28/96	
105	SHELL OIL REF.	DEL AMO & TILLMAN	93 BPLTR 3		4/9/96	
106	CHEVRON OIL REF.	TANK FARM	93 BPLTR 4		3/28/96	
107	UNOCAL TANK FARM	TANK FARM	93 BPLTR 5		3/28/96	
108	ARCO S.W. TANK FRM	WILMINGTON/ LINCOLN	86 BPLTR 1		3/28/96	
109	SEPULVEDA-FIGUEROA	M.H. IN STREET	86 BPLTR 2		4/11/96	
110	SEPULVEDA-BONITA	CAGE	30 BPLTR 1		3/28/96	
111	TEXACO REF.	10" #1 LINE			4/11/96	SOLD
112	LAX FUELS	7100 WORLD WAY			3/28/96	
113	DEL AMO RRX	DEL AMO EAST OF WILLINGTON			4/10/96	
114	AIR FORCE CONNECTION	ALAMEDA NORTH OF SEPULVEDA	41 BPLTR		4/1/96	
115	ARCO CARSON	WEST OF CARSON MARKETING	52 BPLTR		2/12/96	
116	RHONE POULENC	LINE 29 WILLINGTON SOUTH OF DEL AMO			3/26/96	
117	ULTRAMAR CONNECTION	SEPULVEDA CAGE			4/2/96	
118	COMPTON-LAKEWOOD	(M.H.) V1231,1611,1612			4/11/96	SALE PEND.
119	PARAMOUNT PETRO	COMPTON EAST & LAKE WOOD	35 BPLTR		3/27/96	SALE PEND.
120	LUNDAY THAGARD	GARFIELD & SOUTHERN			4/12/96	
121	CERRITOS-CLARK	CERRITOS WEST OF CLARK			4/11/96	
122	SOUTHERN-GARFIELD	M.H.			4/3/96	
123	RIO HONDA NORTH	GARFIELD & MILLER WAY	53 BPLTR		4/3/96	
124	RIO HONDA SOUTH	GARFIELD & SOUTHERN			4/3/96	
125	ATLANTIC-HARDING	M.H. IN STREET			4/3/96	
126	61-ATLANTIC	M.H. IN STREET			2/27/96	
127	SOUTH WEST TNK FARM	GATE 43 ON WILLINGTON			3/29/96	
128	PACIFIC U.P.R.R.	LINE 63 EAST OF LA. RIVER	63 BPLTR 1		2/27/96	
129	DOMINGUEZ-710 FRWY	LINE 63 WEST OF LA RIVER	63 PLTR 2		2/27/96	
130	DOMINGUEZ-710 FRWY	LINE 63 WEST OF LA RIVER	63 BPLTR 3		2/27/96	
131	DEFOREST-80	DE FOREST PARK	80 BPLTR		4/4/96	
132	DEL AMO-SUSANNA	M.H.	80 BPLTR		4/10/96	
133	DEL AMO-SANTA FE	M.H.	80 BPLTR		4/11/96	
134	ARCO CARSON	WEST OF CARSON MARKETING	32 BPLTR		2/28/96	
135	ARCO CARSON	WEST OF CARSON MARKETING			2/28/96	
136	88 BOOSTER STATION	SOUTH OF 190TH ON PRAIRE	88 BPLTR		3/29/96	
137	LOMITA GAS	9TH STREET	212 BPLTR		4/9/96	
138	SHELL CONNECTION		93 BPLTR		3/28/96	
139	SFPPL WATSON STATION	WILLINGTON & DEL AMO	63 BPLTR		3/28/96	
			80 BPLTR			
140	SPRING-SHIPWAY	M.H. IN STREET			4/8/96	

VALVE BOX DRAWINGS

	VAULT	VAULT NAME	LOCATION	DRAWING NO.	DATE	FIELD CHK	FINISHED
LOS AL.	141	CERRITOS-CHESTNUT	M.H.			4/9/96	
	142	SOLD	GOLDEN WEST - N. OF ELLIS			4/11/96	SOLD
	143	STANDARD OIL CONNECT.		17 BPLTR		2/26/96	
C.B	144	TERMINAL 1B	LONG BEACH BERTH 121				
L.B.	145	TERMINAL 2	LONG BEACH PIER B ST	T2-B-P-0001	11/13/95		
L.B.	146	TERMINAL 2	LONG BEACH PIER B ST	T2-B-P-1463	11/14/95		
L.B.	147	TERMINAL 2	LONG BEACH PIER B ST	T2-B-P-1464			
L.B.	148	TERMINAL 2	LONG BEACH PIER B ST	T2-B-P-1465	11/14/95		
L.B.	149	TERMINAL 2	LONG BEACH PIER B ST	T2-B-P-2581			
L.B.	150	SAME AS # 76	LONG BEACH TERMINAL 3	T3-B-P-2578	11/14/95		
L.B.	151	EAST HYNES					
L.B.	152	WEST HYNES					
L.B.	153	EDGINGTON REFINERY	ARTESIA & PARAMOUNT			3/1/96	
S.V.	154	HATHAWAY TERMINAL					
L.B.	155	EAST HYNES					
L.B.	156	WEST GYNES					
S.G.V.	157	VINVALE STORAGE	FIRESTONE & GARFIELD				
CAR	158	ARCO REFINERY	ADMIN BLDG PARKING LOT				
CAR	159	ARCO REFINERY	ADMIN BLDG PARKING LOT				
CAR	160	ARCO LOS ANGELES REF.	ARCO LOS ANGELES REFINERY				
L.A.	161	2123-L-63 LINE	9959 GLEN OAKS SUN VALLEY				
L.A.	162	2124-L-63 LINE	GLEN OAKS 1/4 MI EAST OF BRANFORD"				



ITEM	CONTENT LIST	QTY.	ITEM	CONTENT LIST	QTY.
1.	BELOW GRADE VAULT/SUMP TYP.		6.	SURGE BRAKE UNIT	1
2.	SUBMERSIBLE PUMP	1	7.	SUCTION HOSE	01
3.	JACK STANDS	4	8.	DIESEL AIR COMPRESSOR	1
4.	AIR HOSE	1	9.	SMALL GENERATOR	1
5.	TRAILER WHEEL STAND	1	10.	FEMALE CAM LOCK	1

ITEM	CONTENT LIST	QTY.
11.	MALE CAM LOCK	1
12.	NON-RESETTABLE TOTALIZER	1
13.	FLEX HOSE	AS REQ'D.
14.	TRAFFIC CONTROL ARROW BOARD	1
15.	TRAFFIC RUNNING LIGHTS	AS REQ'D.
16.	TRAILER DRAIN	1
17.	DISCHARGE HOSE	1
18.	STREET GRADE STORM DRAIN	
19.	FIRE EXTINGUISHERS	2
20.	HOSE REEL	2
21.	RIGID PLUMBING	AS REQ'D.
22.	TOOL BOX	1
23.	RESETTABLE TOTALIZER	1
	ALSO ON TRAILER	
—	PORTABLE DIESEL TANK FOR AIR COMPRESSOR	1
—	SPARE TIRE + TOOLS	AS REQ'D.
—	55 GAL. DRUM SOLIDS	AS REQ'D.
—	SOLIDS STORAGE 55 GAL DRUMS	AS REQ'D.
—	CRITICAL SPARES CABINET	1
—	HOSE STORAGE	AS REQ'D.
—	STEPLADDER	1
—	SPILL KIT	1
—	TRAFFIC CONES	AS REQ'D.
—	OPERATIONS & MAINTENANCE MANUAL	AS REQ'D.

REFERENCE INFORMATION
PID = PRESSURE INDICATING DEVICE (GAUGE)
GAC = GRANULATED ACTIVATED CARBON
BS = BASKET STRAINER

ELEVATION VIEW

SHEET 1 OF 2

REV.	DATE:	BY:	CHANGE

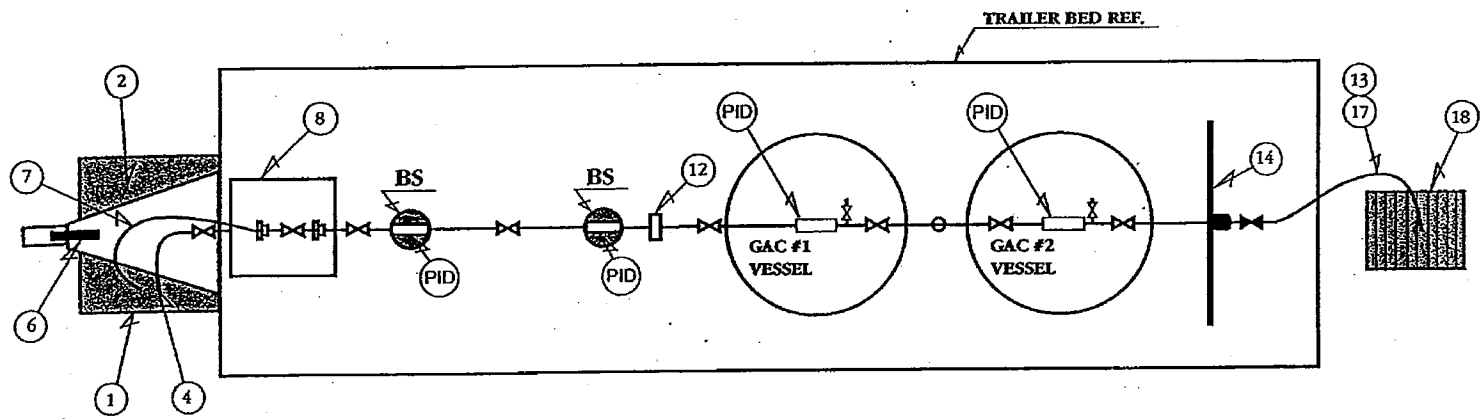
MESA ENVIRONMENTAL SERVICES, INC.
620 WEST 16TH STREET SUITE E
LONG BEACH, CA. 90813
310-901-5470

DATE: APRIL 1, 1997 DWG. BY: MESA

PORTABLE WATER TREATMENT TRAILER

ARCO PIPE LINE CO.
5900 CHERRY AVE
LONG BEACH, CA. 90805

DRAWING NO. Figure 2D-2



PLAN VIEW

SHEET 2 OF 2

REV.	DATE:	BY:	CHANGE

PORTABLE WATER TREAMENT TRAILER

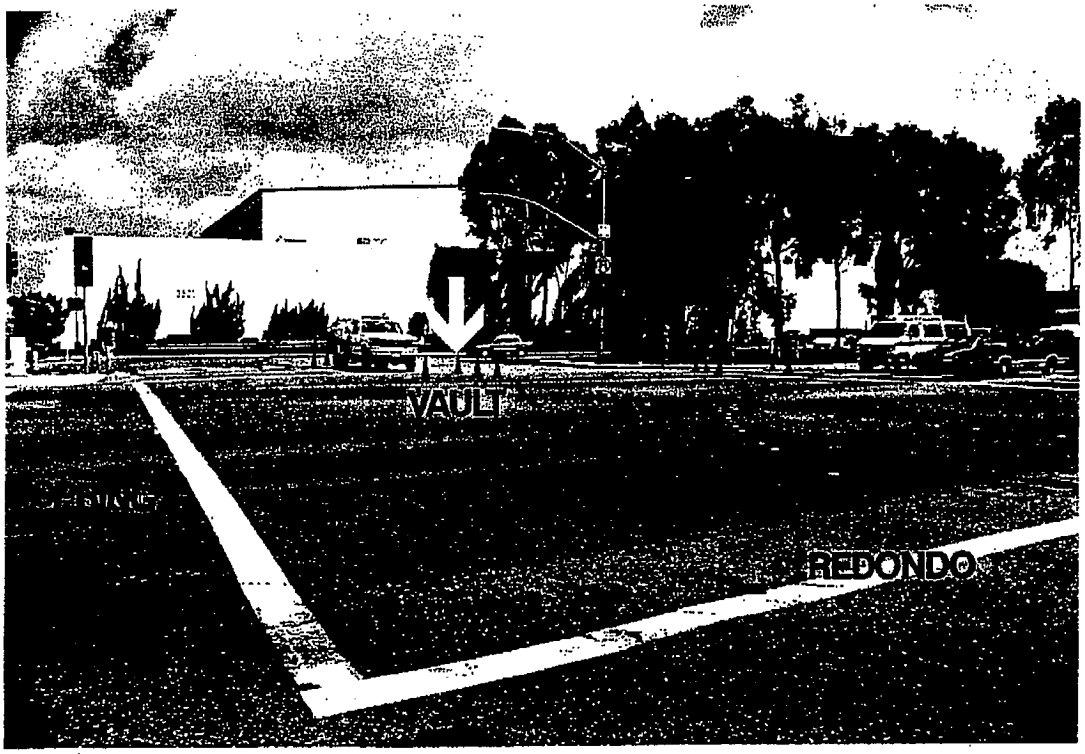
MESA ENVIRONMENTAL SERVICES, INC.
630 WEST 16TH STREET SUITE E
LONG BEACH, CA. 90813
310-901-3479

ARCO PIPE LINE CO.
5900 CHERRY AVE.
LONG BEACH, CA. 90805

DRAWING NO. Figure 2D-3

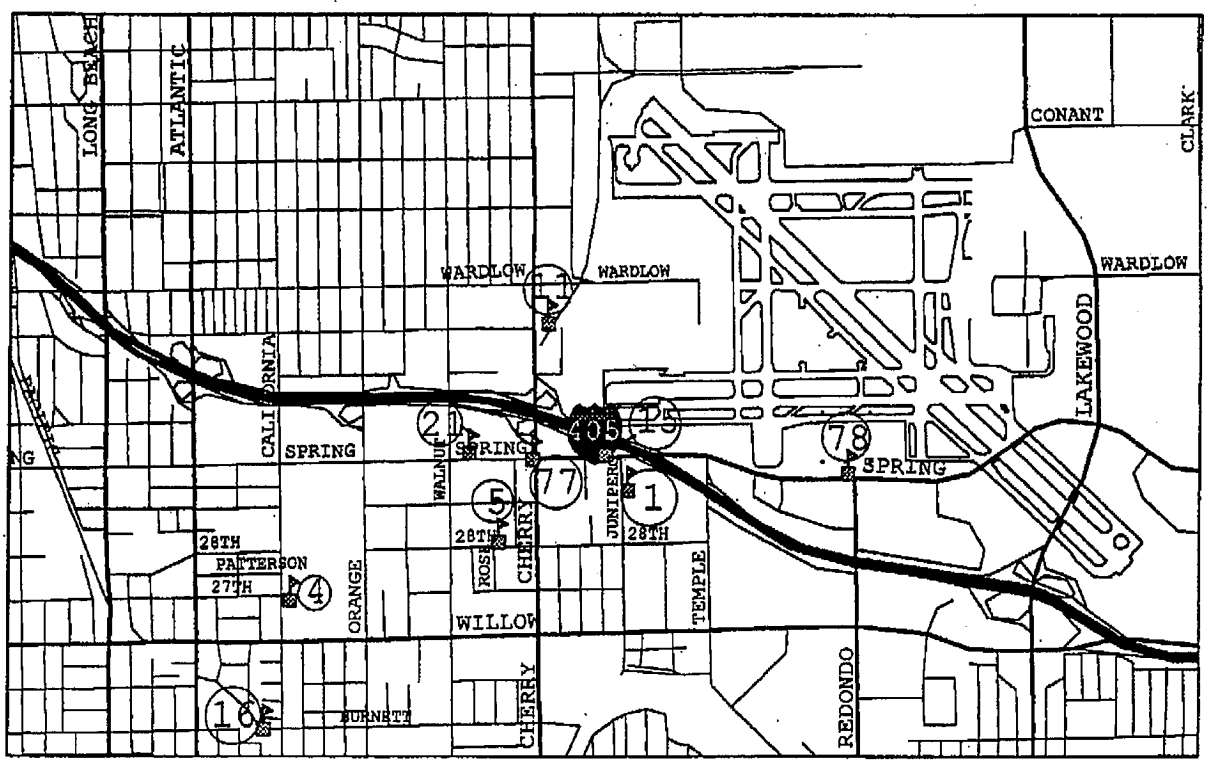
VALVE BOX / VAULT NO.78

SPRING & REDONDO - THOMAS BROS. PG 795 J-2



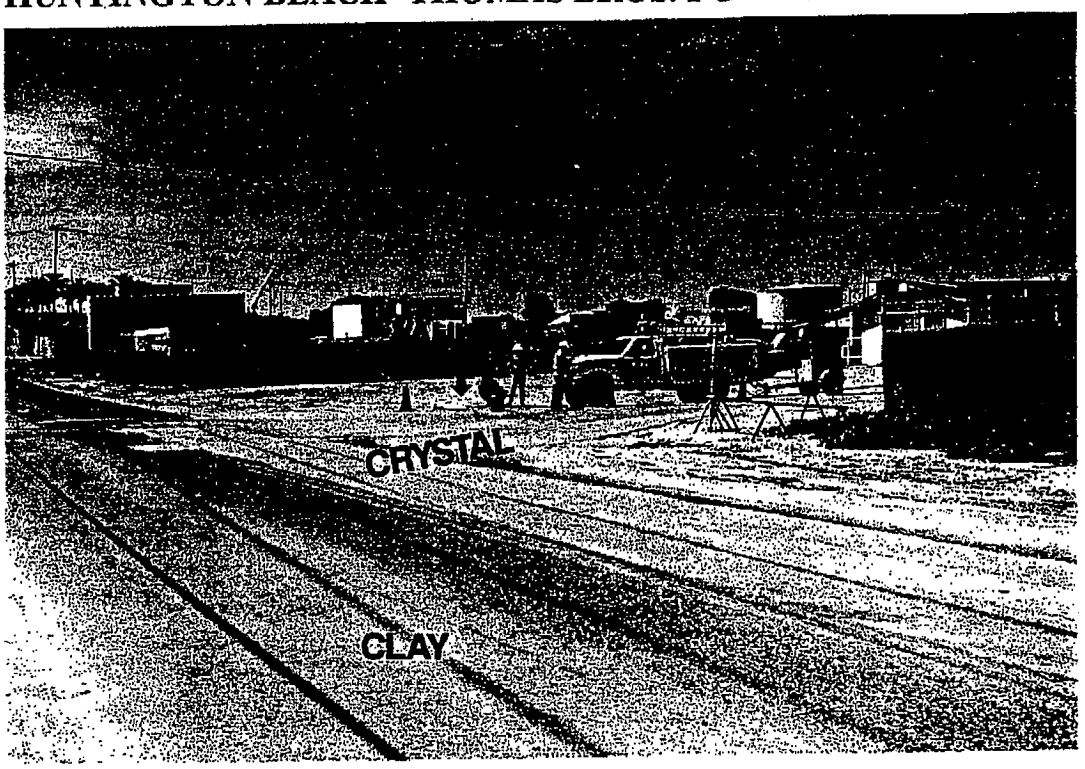
Line No. / Valve No. contained in valve box / vault:

Line 8 V-2403, V-2404, V-2406, V-2407 Manhole located on the north east corner of Spring and Redondo.



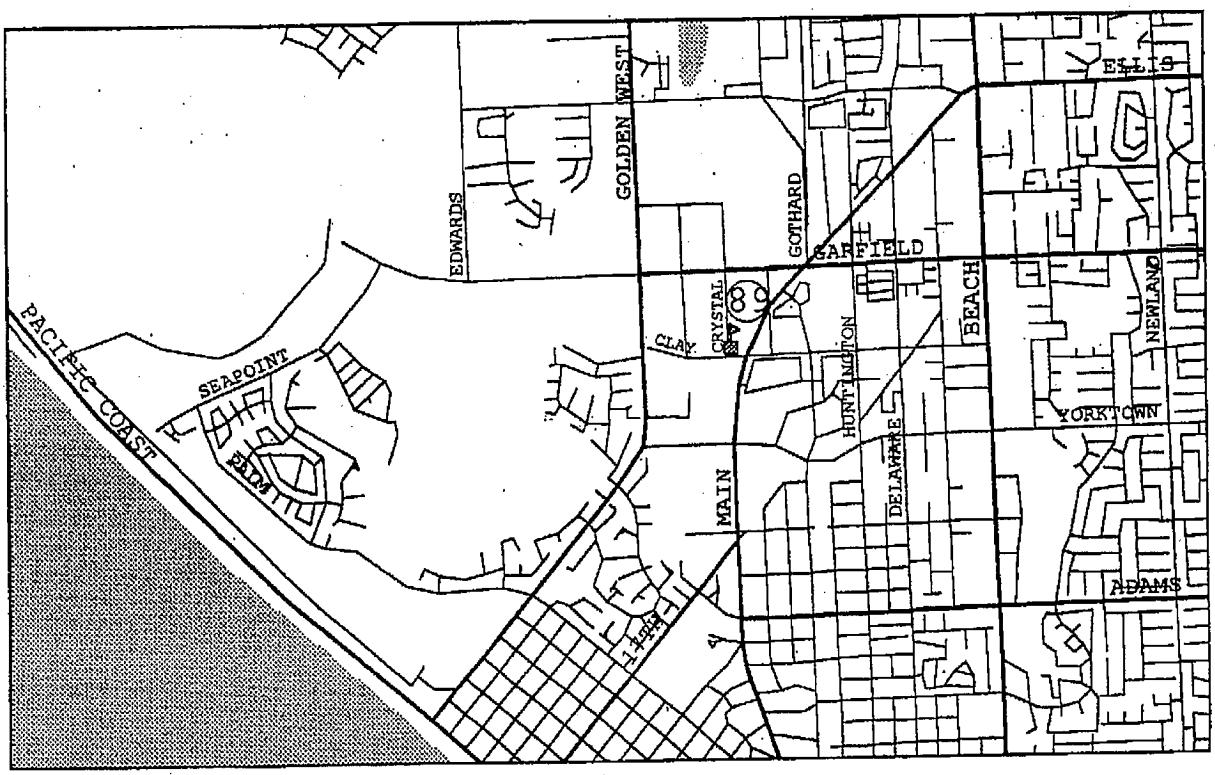
VALVE BOX / VAULT NO.89

HUNTINGTON BEACH- THOMAS BROS. PG 857 H-5



Line No. / Valve No. contained in valve box / vault:

Line 8 V-2254,V-2255. Manhole is located AT Crystal & Clay. South on Golden West to Garfield, East on Garfield to Crystal then South to Clay.

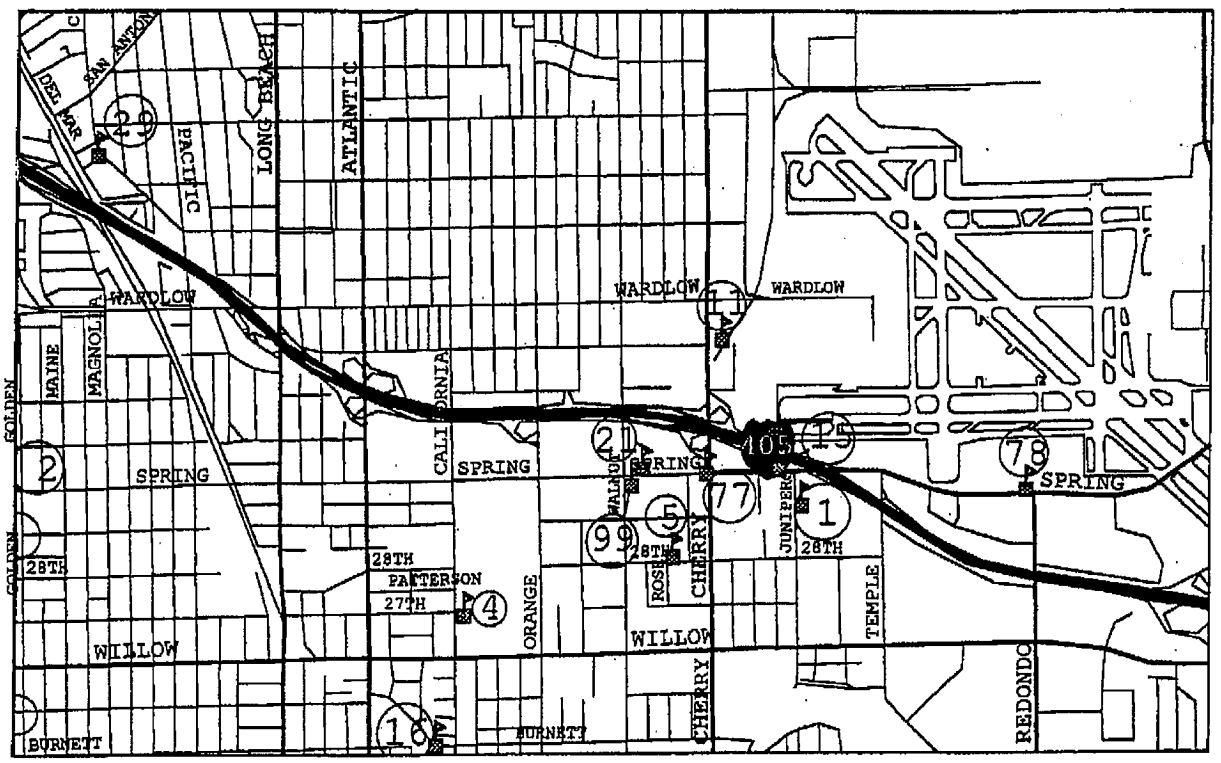


VALVE BOX / VAULT NO.99

SPRING & WALNUT- THOMAS BROS. PG 795 F-2

Line No. / Valve No. contained in valve box / vault:

Line 8 V-1992 Manhole located on Spring, at the south east corner of Walnut.

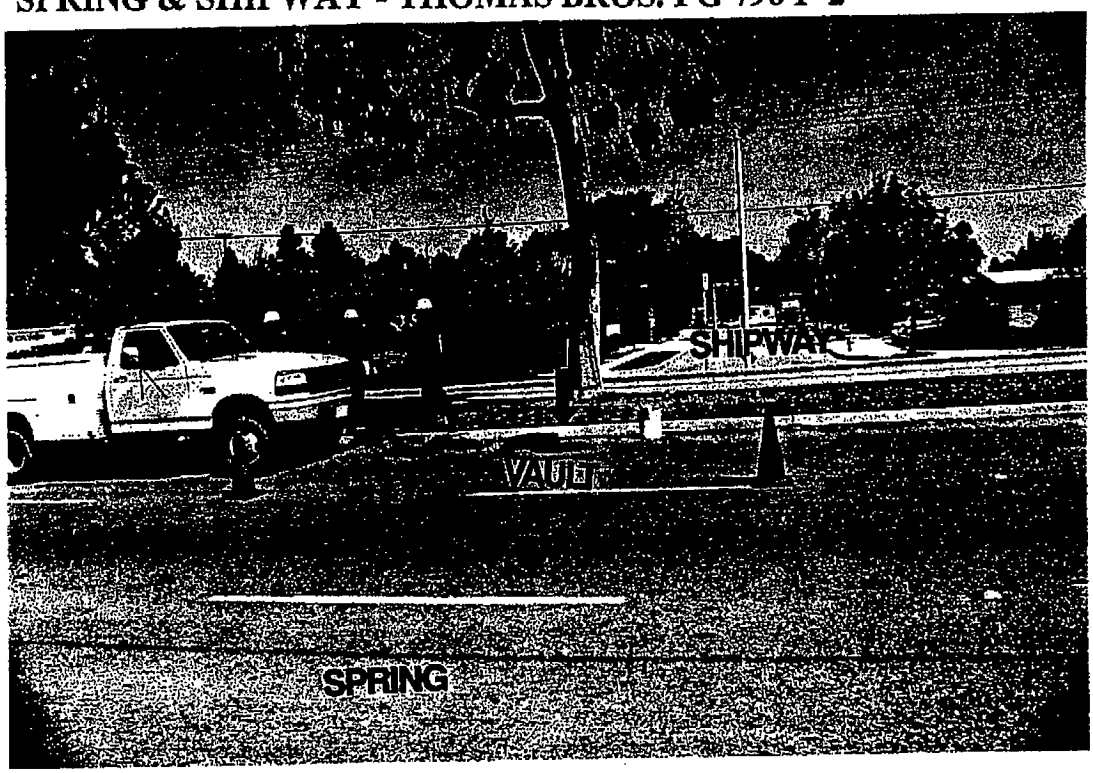


VALVE BOX / VAULT NO.129

DOMINGUEZ & 710 FRWY - THOMAS BROS. PG 765 B-5

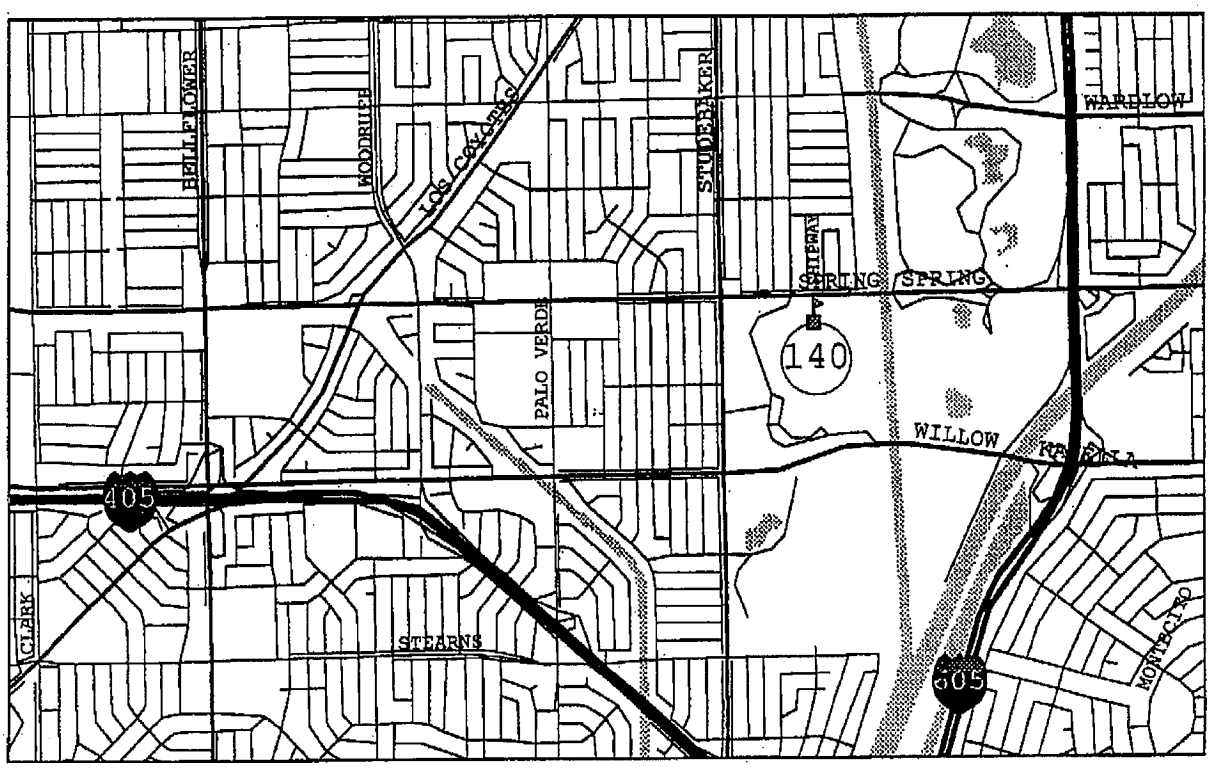
VALVE BOX / VAULT NO.140

SPRING & SHIPWAY - THOMAS BROS. PG 796 F-2



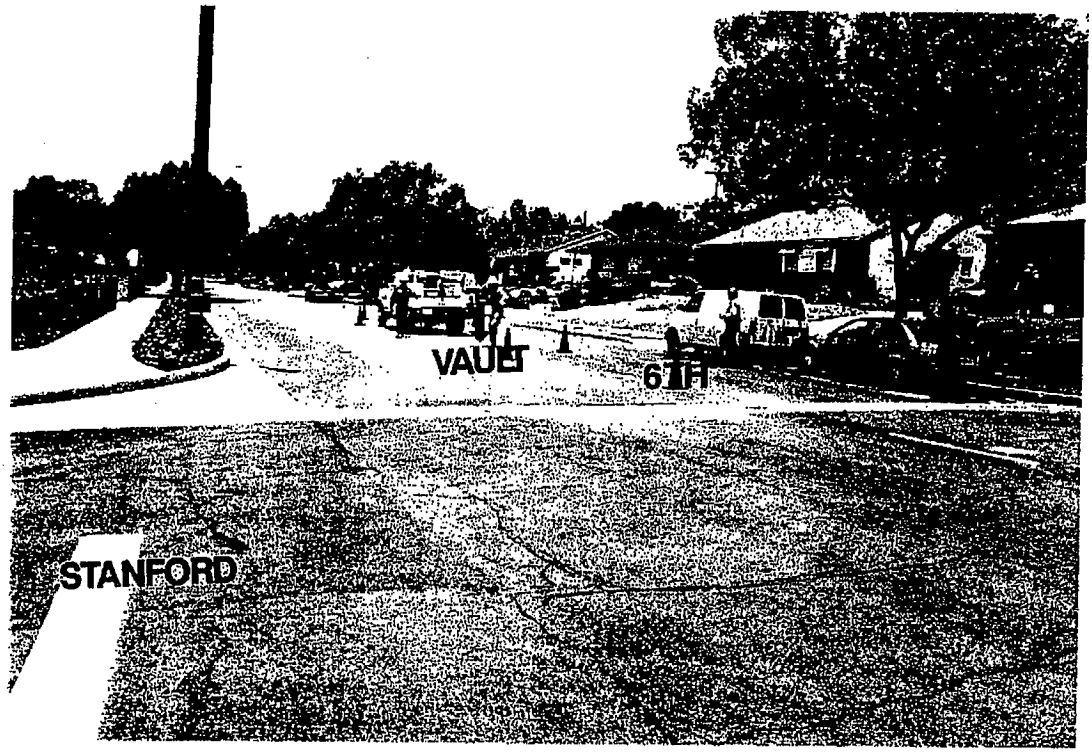
Line No. / Valve No. contained in valve box / vault:

Line 8 Valve 2670 Manhole is located on south side of Spring at Shipway. East of Studebaker.



VALVE BOX / VAULT NO. 187

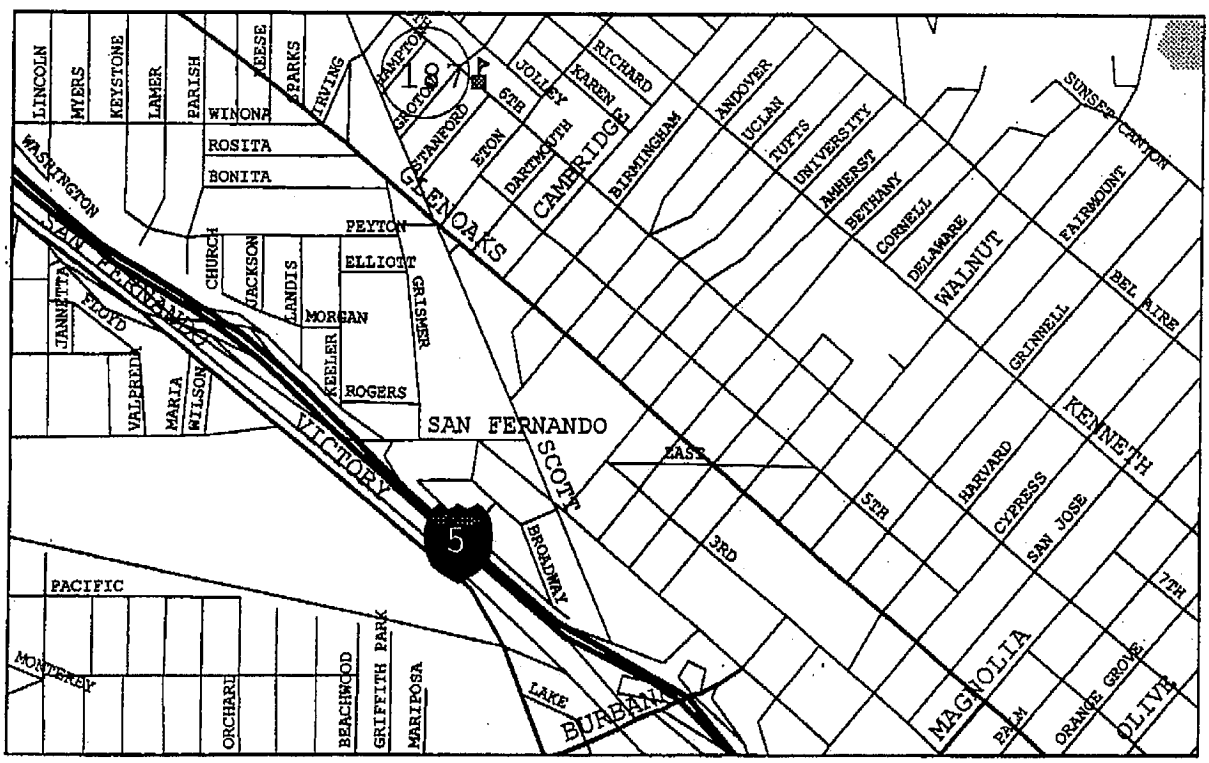
6th & STANFORD RD. (BURBANK)- THOMAS BROS. PG. 533 F-4



Line No. / Valve No. contained in valve box / vault:

Line 63 Valve 2122

Vault is located on 6th 25 yards west of Stanford.



Attachment B

Valve Box Discharge

Inspection Form

MCU Inspection Form (Attachment B)

Date: _____ Time (start of inspection): _____

Vault # _____ Volume of vault (approx): _____

Location: _____

Inspector (print): _____ ; (sign) _____

Job title: _____

Duration of discharge: _____ minutes (Start time: _____ End time: _____)

Estimated volume of discharge: _____ gallons

Vault water observations prior to filtration:

Oil sheen?	Yes	No
Is water cloudy?	Yes	No
Floating materials?	Yes	No

Discharge water observations:

Samples taken?	Yes	No
Visible oil droplets or sheen?	Yes	No
Odor or color present?	Yes	No
Floating materials?	Yes	No
Cloudy? (disregard air bubbles)	Yes	No

Equipment:

Generator operating properly?	Yes	No
Pump operating properly?	Yes	No
Hoses & valves OK?	Yes	No

Recommended maintenance: _____