



California Regional Water Quality Control Board

San Francisco Bay Region



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Environmental
Protection

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Gray Davis
Governor

JUL 27 2001

July 26, 2001
File No. 01S0563 (BG)

Port of Oakland
Attn. Dale Klettke
530 Water Street
Oakland, CA 94604

SUBJECT: Approval of Workplan for Removal of Storm Drain Pipe, 7200 Earhart Road, Oakland, Alameda County

Dear Mr. Klettke

This letter responds to your May 21, 2001 workplan for storm drain pipe removal at the subject property. As explained below, I approve the workplan.

The property is owned by the Port of Oakland and leased by Rolls Royce Engine Services (corporate successor to the former tenant, National Aeromotive Corporation). It has been used since 1971 for repair, maintenance, and testing of jet aircraft engines. Facilities at the subject property have been expanded several times since initial development. At this time Rolls Royce Engine Services proposes additional expansion to construct a slab-on-grade building with an approximate footprint of 54,000 square feet and surrounding asphalt paved parking.

The Alameda County Department of Environmental Services (ACDEH) shares regulatory oversight authority for this property through its oversight of a test cell facility and investigations at the subject property have been conducted on a voluntary basis.

Investigations since June 2000 have detected soil and groundwater contamination in the vicinity of an existing storm drain presumably due to uncontrolled releases from a chemical storage area. Contaminants of concern include: total petroleum hydrocarbons as jet fuel, diesel, and motor oil; chromium, arsenic, and lead; and the volatile organic compound 1,1,1-trichloroethane.

Since the proposed construction includes removal of the existing chemical storage area and storm drain, the Port of Oakland describes the proposed action as source remediation and has requested workplan approval from this agency. The planned building and paved parking areas will cover land which is presently unpaved thus reducing human health exposure risks. The Port of Oakland also considers the proposed construction as an interim remedial action.

California Environmental Protection Agency

The May 21, 2001, workplan satisfies applicable requirements. I hereby approve the workplan. Upon completion of the work, please submit a technical report to this office documenting completion.

If you have any questions, please contact Betty Graham of my staff at (510) 622-2358 [e-mail bg@rb2.swrcb.ca.gov].

Sincerely,

Loretta K. Barsamian
Executive Officer



Stephen A. Hill
Chief, Toxics Cleanup Division

cc: Mailing List

Scott Seery
ACDEH
1131 Harbor Bay Parkway
Alameda, CA 94502

Rolls Royce Engine Services- Oakland Inc.
7200 Earhart Road
Oakland, CA 94621

Steve Clements
SCS Engineers
6850 Regional Street, Suite 240
Dublin, CA 94568

**EVALUATION OF
STORM & WASTEWATER MANAGEMENT
AT THE ENGINE TEST FACILITY**

**NATIONAL AIRMOTIVE CORPORATION
7200 Lockheed Street
Oakland, California**

June 28, 1994

**EVALUATION OF
STORM & WASTEWATER MANAGEMENT
AT THE ENGINE TEST FACILITY
NATIONAL AIRMOTIVE CORPORATION
7200 Lockheed Street
Oakland, California**

June 28, 1994

Prepared for:

**National Airmotive Corporation
Oakland, California**

Prepared by:

**Jonas and Associates Inc.
Walnut Creek, California
(510) 933-5360**

EVALUATION OF
STORM & WASTEWATER MANAGEMENT
AT THE ENGINE TEST FACILITY

NATIONAL AIRMOTIVE CORPORATION
7200 Lockheed Street
Oakland, California

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Jonas & Associates Inc.

EVALUATION OF
STORM & WASTEWATER MANAGEMENT
AT THE ENGINE TEST FACILITY

NATIONAL AIRMOTIVE CORPORATION
7200 Lockheed Street
Oakland, California

June 28, 1994

1.0 INTRODUCTION

Jonas and Associates Inc. (J&A) has been retained by National Airmotive Corporation (NAC) to perform an evaluation of storm and waste water management at the Engine Test Facility. The Engine Test Facility is located north of the main NAC facility located at 7200 Lockheed Street, in Oakland, California 94621-4504. This report presents the status of storm and wastewater management practices at the facility as of March 1, 1994. Recommendations are also provided.

NAC's representative for this project is Mr. Cliff Maupin {(510) 613-1017}.

1.1 Site Description

The NAC Engine Test Facility presented in this report is located approximately 1,600 feet northwest of the main NAC manufacturing facility. The regional location of the property is presented in Figure 1-1. The facility is located in Township 2 South, Range 3 West, Section 19, Mount Diablo Baseline and Meridian. The land is essentially flat. To the east of the facility is Doolittle Drive and San Leandro Bay. To the west is a runway for the Oakland International Airport and the Alameda Municipal Golf Course.

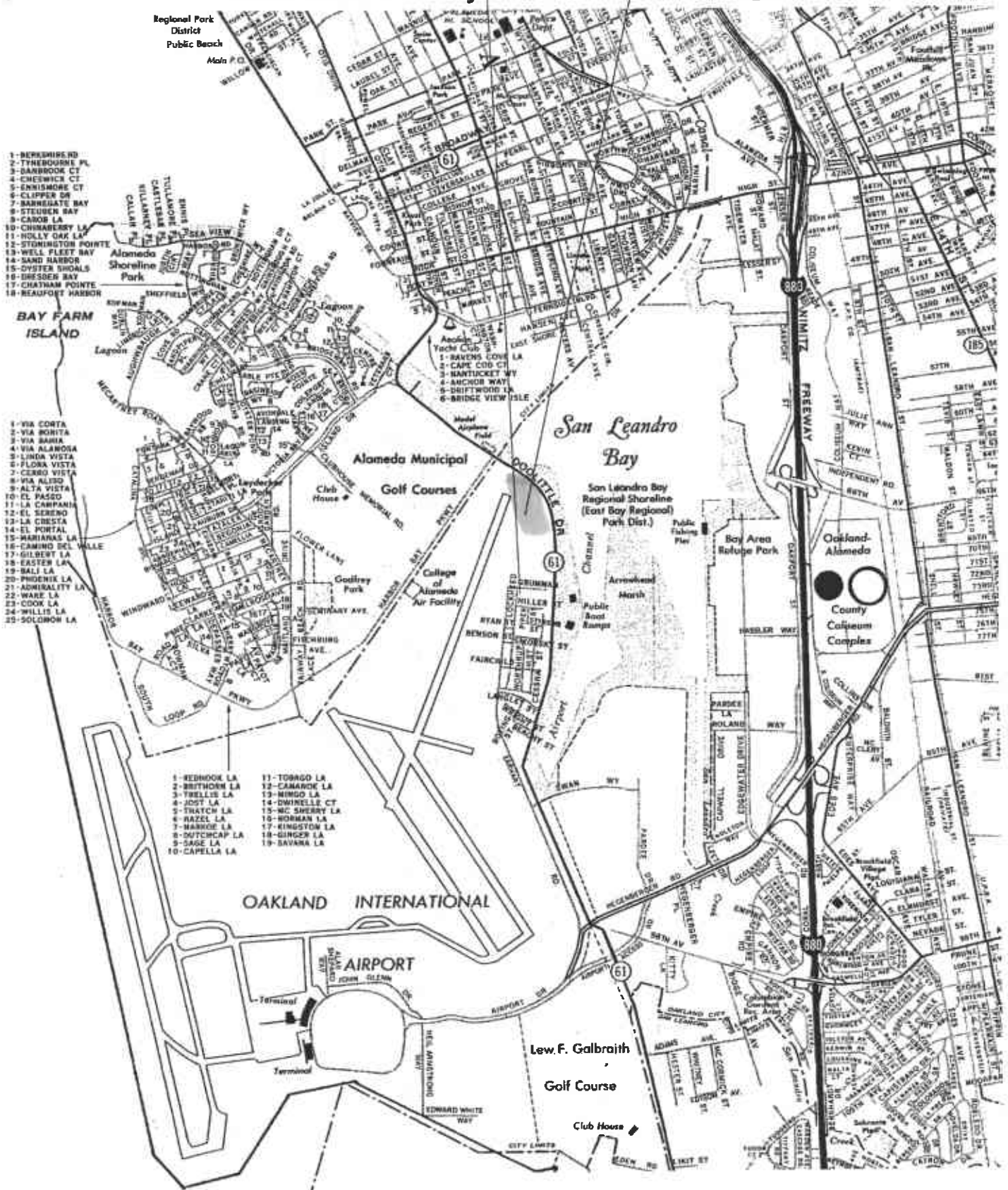
1.2 Scope of Report

This Evaluation of Storm & Wastewater Management at the Engine Test Facility is presented in four sections and four appendices. Section 1, Introduction, provides a brief description of the site and the scope of the report. Section 2, Current Storm and Wastewater Management, presents the status of storm and waste water management practices as of March 1, 1994, in addition to procedures and results of sampling effluent water from the oil/water separator. Section 3, Recommendations, provides recommendations for improved management of storm and waste water practices at the Engine Test Facility. Section 4, References, cites various references relevant to this report.

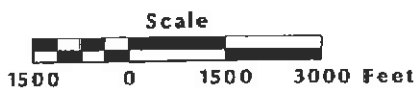
The appendices of the report include laboratory analysis summary tables, the chain-of-custody record, laboratory data sheets, and pictures.

NAC Main Facility

NAC Engine Test Facility



**Regional Location
National Airmotive Corporation
7200 Lockheed Street
Oakland, California
Figure 1-1**



2.0 CURRENT STORM AND WASTEWATER MANAGEMENT

Current improvements of storm and waste water practices at the Engine Test Facility are a result of a concerted effort by the management team responsible for this facility. These include improved implementation of waste minimization procedures; concentrating industrial activities into covered areas serviced by wastewater drains; covering drains which are apparently not necessary for storm water management; and evaluating various alternatives for better management of effluent water from the oil/water separator.

This section of the report presents an overview of current practices associated with the management of storm and wastewater. In addition, to better understand the various options available for disposal of the effluent water from the oil/water separator, a sample was collected on March 16, 1994. The procedures, analyses, and results of this effluent water sample are also presented in this section of the report. Various alternatives for management of the effluent water from the oil/water separator are presented in Section 3.0 under Recommendations.

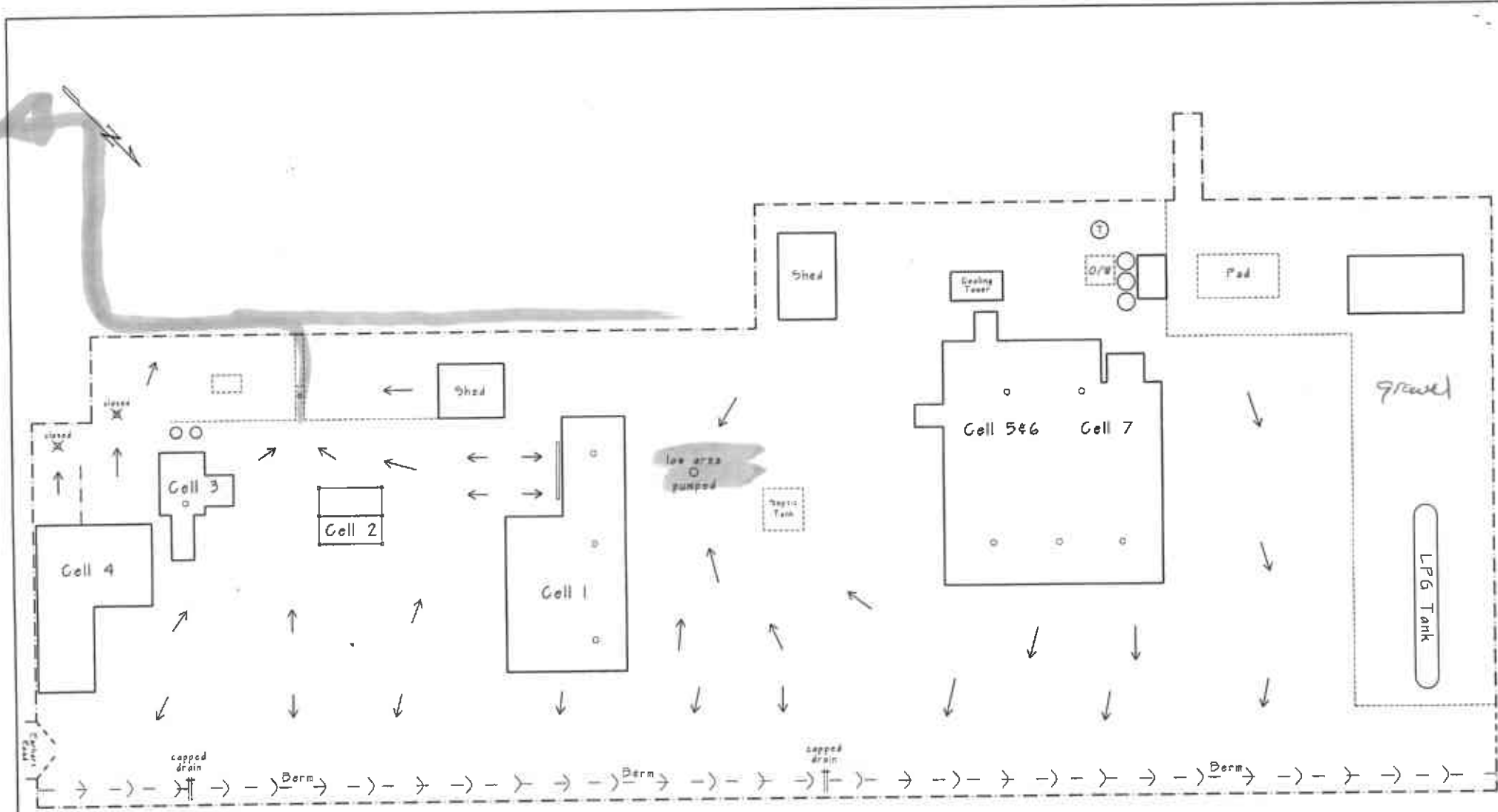
2.1 Current Storm Water Management

Apparently due to the relatively high water table in the area of the Engine Test Facility no storm drains exist on the facility. Because of this, rainwater at the site is currently allowed to either evaporate; runoff; percolate through the relatively limited amount of gravels in a northwest area of the facility; collect along the berm and then discharge through the uncapping of drain pipes; [REDACTED] from a low area at the facility into a grassy area west of the fence line. A minor amount of rainwater which falls onto the site also enters into the industrial wastewater pipeline which eventually discharges to the oil/water separator.

A vast majority of the Engine Test Facility is either covered with buildings or is surfaced with asphalt or concrete. Most of the surfaced area is used for parking for staff at the facility. Currently, Test Cell 2 is located outside, but it is used relatively infrequently. A recommendation is that this test cell be bermed and any collected water be transferred to the oil/water separator.

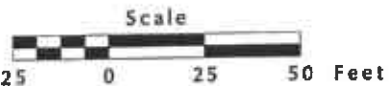
Currently, the total NAC facility is under an NPDES permit managed by the Port of Oakland. Discussions between NAC personnel and the NPDES representative for the Port of Oakland determined that it is apparently acceptable to allow rainwater to be transferred off the site without the need for either treatment or sampling and analysis prior to discharge.

Figure 2-1 provides a diagram with arrows representing the direction of surface water flow based upon the topography of the property.



LEGEND:

↖ Storm Water Flow Direction (approximate)



**Storm Water Flow
Engine Test Facility**

Prepared for
National Airmotive Corporation
Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

Date: 3-16-1994
Locations Approx.

Figure 2-1

Drawing Number
NAC211-3/94:F2-1

2.2 Current Wastewater Management

Industrial wastewater at the Engine Test Facility is largely collected from drains located in the various test cells at the facility. Currently, all of these drains are located inside the buildings except for one which is located outside of Test Cell 1. Much of the wastewater is comprised of drippage from the testing of aircraft engines, cleaning of equipment, inadvertent spills, and wash water. After a review of the various sources of wastewater, modifications of practices have decreased the amount of wastewater being produced. This includes decreasing the water used for washing and the use of pans to collect drippage from machinery and equipment.

After the industrial wastewater goes through the floor drains it is then transported to an oil/water separator. Oil and sludge are said to be periodically removed from the separator and transported and discharged by a licensed waste hauler. Effluent water from the oil/water separator is currently being collected in a steel above-ground tank. Various alternatives are being evaluated for discharge of the effluent water. Recycling of the water has been removed from consideration due to the presence of various constituents which may leave an unwanted residue. Other alternatives for disposal of the effluent water include: boiling it off at the main facility under an existing air permit; evaporating it on-site; disposal to the septic tank if the septic tank hauler considers that it is of acceptable quality; and possible disposal to the sanitary sewer under a permit with the East Bay Municipal Utility District (East Bay MUD). Section 3.0 of this report presents various recommendations associated with each of these disposal options. Figure 2-2 graphically presents the flow paths of the industrial wastewater collected from the various test cells which eventually discharge to the oil/water separator and effluent holding tank.

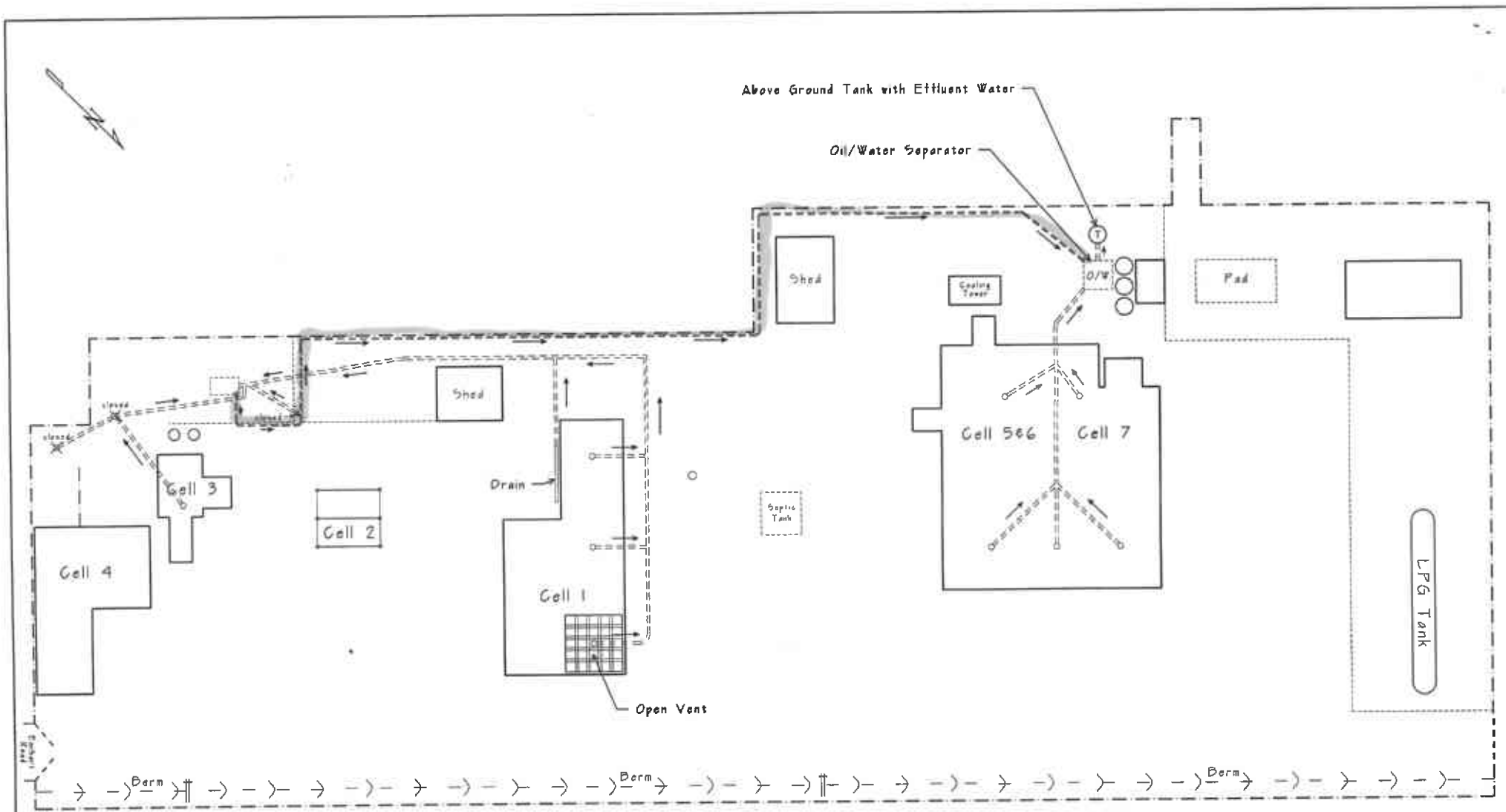
Septic wastewater collected from the bathroom located at the facility is discharged into a septic tank. This septic tank is periodically pumped and the waste is then removed and transported off-site.

2.3 Recent Sampling of Effluent Water

To better characterize the effluent water from the oil/water separator, on March 16, 1994 a water quality sample was collected and analyzed. A summary table of the results of this sampling effort are presented in Appendix A. The Chain-of-Custody and laboratory data sheets are presented in Appendix B and C, respectively.

2.3.1 Sampling Procedures

To collect a sample of effluent water from the above-ground tank next to the oil/water separator, an ISCO sampler was used to draw the water into the various sampling containers. The size of the tank is approximately four feet in diameter, with a height of



LEGEND:



Approximate location of drain and piping.
 Direction of flow is indicated by arrow.

Scale



**Industrial Wastewater
 Engine Test Facility**

Prepared for
National Airmotive Corporation
 Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

Date: 4-25-1994
 Locations Approx.

Figure 2-2

Drawing Number
 NAC211-4/94:F2-2

four feet. The water level in the tank was approximately one foot from the bottom. A total of eight sampling bottles were filled for the necessary analyses.

After collection of the required bottles, the following analyses were performed by ChromaLab, Inc., a California-certified laboratory: Total Extractable Petroleum Hydrocarbons as -Diesel, -Kerosene, and -Motor Oil (EPA Methods 3510/8015); Total Oil & Grease (EPA Method 5520 E&F); Volatile Organics (EPA Method 624); Base/Neutral, Acids (EPA Method 625); CAM 17 Metals (EPA Methods 3010/6010/7470); and Fish BioAssay Acute Toxicity/NPDES. After collection and labeling of the samples, they were placed into a cooler chilled with blue ice for transport to ChromaLab for analysis. A Chain-of-Custody record was also maintained and signed by a representative of J&A and ChromaLab upon submittal of the samples to the laboratory. The following section presents the results of the March 16, 1994 sampling effort.

2.3.2 Sampling Results

As stated previously, summary tables of the sampling results, the Chain-of-Custody record, and the laboratory data sheets are presented in Appendix A, B, and C, respectively. During the sampling effort of the effluent water, pH was measured at 7.1 and Total Dissolved Solids was measured at 400 mg/L. Table 2-1 presents a summary of the analyses performed and the detected analytes.

Table 2-1
March 16, 1994
Effluent Water Sampling Results
NAC Engine Test Facility

Sample I.D.	Analysis	Detected	ppb	
ETF-WW-31694	TEPH as Diesel, Kerosene, Motor Oil (3510/8015) Volatile Organics (624) Base/Neutral, Acids (625) Total Oil & Grease (5520 E&F) CAM 17 Metals (3010/6010/7470) Fish Bio-Assay Acute Toxicity/NPDES	TOTAL Diesel:	60 mg/L	60,000
		TOTAL Kerosene:	20 mg/L	20,000
		TOTAL Grease:	19 mg/L	19,000
		Benzene:	0.11 mg/L	110
		Toluene:	0.022 mg/L	22
		Xylene:	0.047 mg/L	47
		Styrene:	0.120 mg/L	120
		2,4-Dichlorophenol:	0.046 mg/L	46
		Bis(2-Ethylhexyl)Phthalate:	0.21 mg/L	210
		2-Methylnaphthalene:	0.11 mg/L	110
		4-Methylphenol:	0.13 mg/L	130
		Nonhalogenated:	0.87 mg/L	870
		Phenanthrene:	0.024 mg/L	24
		Arsenic:	0.0081 mg/L	8.1
		Barium:	0.10 mg/L	100
		Cadmium:	0.029 mg/L	29
		Chromium:	0.027 mg/L	27
Lead:	0.050 mg/L	50		
Mercury:	0.012 mg/L	12		
Molybdenum:	1.1 mg/L	1100		
Nickel:	0.033 mg/L	33		
Cobalt:	0.083 mg/L	83		
Vanadium:	0.025 mg/L			
Zinc:	2.1 mg/L			
LC50:	12.5%			

Legend - TEPH: Total Extractable Petroleum Hydrocarbons.

3.0 RECOMMENDATIONS

Following are various recommendations for consideration:

- 1/ Construct a berm around Test Cell number 2 and, when necessary, pump any collected water to the oil/water separator.
- 2/ The following recommendations are with respect to options for disposal of the effluent water from the oil/water separator:
 - » Boiling off at main facility: Check with the Bay Area Air Quality Management District (BAAQMD) to determine if the current permit will allow adding this waste stream or if a permit modification is required.
 - » On-site evaporation: Will need a BAAQMD permit to operate.
 - » Disposal in septic tank: Should submit to the company responsible for pumping the septic tank the March 16, 1994 sampling results to determine if they can accept the effluent water.
 - » Disposal to the sanitary sewer: Check that the East Bay MUD permit will allow discharge of the effluent water from the oil/water separator into the sanitary sewer.
- 3/ Possibly install something like an "automatic pool cover" that can be used to cover the ceiling vent in Cell 1 and have it open only when it is necessary for engine testing.
- 4/ Two options may be considered for the area drained by the longitudinal drain to the south of Cell 1: a/ cover the area; or b/ remove the preparation table and plug the drain and pump the collected water to the north of Cell 1.

4.0 REFERENCES

Port of Oakland, 1993. The Port of Oakland and Port Tenant Regional Storm Water Pollution Prevention Program, Prepared by Port of Oakland, Environmental Department, revised June 18, 1993.

State Water Resources Control Board, 1991. Fact Sheet for National Pollutant Discharge Elimination System Permit (NPDES), General Permit for Storm Water Discharges Associated with Industrial Activities Excluding Construction Activities, adopted on November 19, 1991.

Appendix A

Summary Tables of Laboratory Results

Table A/WW1
TEPH & TOG RESULTS - WATER EFFLUENT
ENGINE TEST FACILITY
NATIONAL AIRMOTIVE CORPORATION - OAKLAND, CALIFORNIA

Sample I.D.	Sampling Date	Depth	Matrix	Lab	Sampled by	TEPH-Diesel (3510/8015) (mg/L)	TEPH-Kerosene (3510/8015) (mg/L)	TEPH-Motor Oil (3510/8015) (mg/L)	Total Oil & Grease (5520 E&F) (mg/L)
ETF-WW-31694	3/16/94	~1'	water	CrLab	J&A	60 ¹	20 ²	ND(5.0)	19

notes: 1/ "Unknown hydrocarbon found in diesel/motor oil range quantified as diesel".
 2/ "Unknown hydrocarbon found in kerosene range quantified as kerosene".
 TEPH: Total Extractable Petroleum Hydrocarbons.
 TOG: Total Oil & Grease.
 CrLab: Chromalab, Inc.
 ND(5.0) = Not Detected above the laboratory detection limit in parentheses.

Table A/WW2
 VOLATILE ORGANIC RESULTS - WATER EFFLUENT
 ENGINE TEST FACILITY
 NATIONAL AIRMOTIVE CORPORATION - OAKLAND, CALIFORNIA
 {EPA Method 624; in mg/L}

Sample I.D.	Sampling Date	Depth	Matrix	Lab	Acetone	Benzene	Bromodichloro- methane	Bromoform	Bromo- methane	Carbon Tetrachloride	Chloro- benzene	Chloro- ethane	2-Chloroethyl Vinyl Ether	Chloroform	Chloro- methane	
ETF-WW-31694	3/16/94	~1'	water	CrLab	ND(0.005)	0.011	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)

Sample I.D.	Sampling Date	Depth	Matrix	Lab	Dibromo- chloromethane	1,1-Dichloro- ethane	1,2-Dichloro- ethane	1,1-Dichloro- ethene	cis 1,2- Dichloroethene	trans 1,2- Dichloroethene	1,2-Dichloro- propane	cis 1,3-Di- chloropropene	trans 1,3-Di- chloropropene	Ethyl Benzene	2-Hexanone
ETF-WW-31694	3/16/94	~1'	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	0.022	ND(0.002)

Sample I.D.	Sampling Date	Depth	Matrix	Lab	Methylene Chloride	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	Styrene	1,1,2,2-Tetra- chloroethane	Tetra- chloroethene	Toluene	1,1,1-Tri- chloroethane	1,1,2-Tri- chloroethane	Tri- chloroethene
ETF-WW-31694	3/16/94	~1'	water	CrLab	ND(0.005)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	0.047	ND(0.002)	ND(0.002)	ND(0.002)

Sample I.D.	Sampling Date	Depth	Matrix	Lab	Trichlorofluoro- methane	Vinyl Acetate	Vinyl Chloride	Total Xylenes
ETF-WW-31694	3/16/94	~1'	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	0.120

notes: CrLab: Chromalab, Inc.
 ND(0.005) = Not detected above the laboratory detection limit in parentheses.

Table A/WW3
 BASE/NEUTRAL, ACID RESULTS - EFFLUENT WATER
 ENGINE TEST FACILITY
 NATIONAL AIRMOTIVE CORPORATION - OAKLAND, CALIFORNIA
 (EPA Method 625; in mg/L)

Sample I.D.	Sampling Date	Sampling Depth	Matrix	Lab	Acenaphthene Acenaphthylene	Anthracene	Benzo(a) Anthracene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Benzo(g,h,i) Perylene	Benzo(a) Pyrene	Benzoic Acid	Benzyl Alcohol	4-Bromophenyl Phenyl Ether
ETF-WW-31694	3/16/94	~ 1'	water	CrLab	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	ND(0.020)

Sample I.D.	Sampling Date	Sampling Depth	Matrix	Lab	Di-n-Butyl Phthalate	Butylbenzyl- phthalate	4-Chloro-3- Methylphenol	4-Chloro-Phenyl Ether	4-Chloro- aniline	Bis(2-Chloro- ethoxy)Methane	Bis(2-Chloro- ethyl)Ether	Bis(2-Chloro- isopropyl)Ether	2-Chloronaph- thalene	2-Chloro- phenol	Chrysene
ETF-WW-31694	3/16/94	~ 1'	water	CrLab	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)

Sample I.D.	Sampling Date	Sampling Depth	Matrix	Lab	Dibenzo(a,h) Anthracene	Dibenzo- furan	1,2-Dichloro- benzene	1,3-Dichloro- benzene	1,4-Dichloro- benzene	3,3'-Dichloro- benzidine	2,4-Dichloro- phenol	Diethyl Phthalate	Dimethyl Phthalate	2,4-Dimethyl- phenol	4,6-Dinitro- 2-Methyl Phenol
ETF-WW-31694	3/16/94	~ 1'	water	CrLab	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	0.046	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)

Sample I.D.	Sampling Date	Sampling Depth	Matrix	Lab	2,4-Dinitro- phenol	2,4-Dinitro- toluene	2,6-Dinitro- toluene	Bis(2-Ethyl- hexyl)Phthalate	Fluor- anthene	Fluorene	Hexachloro- benzene	Hexachloro- butadiene	Hexachlorocyclo- pentadiene	Hexachloro- ethane	Indeno(1,2,3 C,D)Pyrene
ETF-WW-31694	3/16/94	~ 1'	water	CrLab	ND(0.10)	ND(0.020)	ND(0.020)	0.21	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)

Sample I.D.	Sampling Date	Sampling Depth	Matrix	Lab	Iso- phorone	2-Methylnaph- thalene	2-Methyl- phenol	4-Methyl- phenol	Naphthalene	2-Nitro- aniline	3-Nitro- aniline	4-Nitro- aniline	Nitro- benzene	2-Nitro- phenol	4-Nitro- phenol
ETF-WW-31694	3/16/94	~ 1'	water	CrLab	ND(0.020)	0.11	ND(0.020)	0.13	0.87	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.10)

Sample I.D.	Sampling Date	Sampling Depth	Matrix	Lab	N-Nitroso-Di-N- Propylamine	N-Nitro- sodiphenylamine	Di-N-Octyl- phthalate	Pentachloro- phenol	Phenanthrene	Phenol	Pyrene	1,2,4-Trichloro- benzene	2,4,5-Tri- chlorophenol	2,4,6-Trichloro- phenol
ETF-WW-31694	3/16/94	~ 1'	water	CrLab	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	0.024	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)

notes: CrLab: Chromalab Inc.
 ND(0.05) = Not Detected above the laboratory detection limit in parentheses.

Table A/WW4
 METAL RESULTS - WATER EFFLUENT
 ENGINE TEST FACILITY
 NATIONAL AIRMOTIVE CORPORATION - OAKLAND, CALIFORNIA
 {EPA Method 3010/6010/7470}

Sample I.D.	Sampling Depth Date	Matrix	Lab	Sampled by	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)
ETF-WW-31694	3/16/94 ~1'	water	CrLab	J&A	ND(0.02)	0.0081	0.10	ND(0.001)	0.029

Sample I.D.	Sampling Depth Date	Matrix	Lab	Sampled by	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Lead (mg/L)	Mercury (mg/L)
ETF-WW-31694	3/16/94 ~1'	water	CrLab	J&A	0.027	ND(0.01)	ND(0.005)	0.050	0.012

Sample I.D.	Sampling Depth Date	Matrix	Lab	Sampled by	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Thallium (mg/L)
ETF-WW-31694	3/16/94 ~1'	water	CrLab	J&A	1.1	0.033	0.083	ND(0.005)	ND(0.02)

Sample I.D.	Sampling Depth Date	Matrix	Lab	Sampled by	Vanadium (mg/L)	Zinc (mg/L)
ETF-WW-31694	3/16/94 ~1'	water	CrLab	J&A	0.025	2.1

notes: CrLab: Chromalab, Inc.
 ND(0.05) = Not Detected above the laboratory detection limit in parentheses.

Table A/WW5
FISH BIOASSAY - WATER EFFLUENT
ENGINE TEST FACILITY
NATIONAL AIRMOTIVE CORPORATION - OAKLAND, CALIFORNIA

Sample I.D.	Sampling Date	Depth	Matrix	Lab	Sampled by	LC50
ETF-WW-31894	3/16/94	~1'	water	GeoAn	J&A	12.5%

notes: GeoAn: GeoAnalytical Laboratories, Inc.

Appendix B

Chain-of-Custody Record

CHROMALAB, INC.

SUL: 9.00233
 CLIENT: JONAS
 DUE: 03/23/94
 REF: 15594

233/46632

Chain of Custody

DATE March 16, 1994 PAGE 1 OF 1

PROJ. MGR. <u>M. Jonas/D. Dauwalder, P.E.</u>					ANALYSIS REPORT															NUMBER OF CONTAINERS						
COMPANY <u>Jonas & Associates Inc.</u>					TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel, K., MO (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520 E&F)	PESTICIDES/PCB (EPA 608, 8080)	PHENOLS (EPA 604, 8040)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	EXTRACTION (TCLP, STLC)		Fish Bio-Assay Acute Toxicity/ NPDES					
ADDRESS <u>2815 Mitchell Drive, Suite 209 Walnut Creek, California 94598</u>																										
SAMPLERS (SIGNATURE) _____ (PHONE NO.) _____																										
Jonas & Associates Inc. (510) 933-5360																										
SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.																						
ETF-WW-31694	3/16/94	1200	water				X			X	X	X				X			X						8	
PROJECT INFORMATION					SAMPLE RECEIPT					RELINQUISHED BY 1.					RELINQUISHED BY 2.					RELINQUISHED BY 3.						
PROJECT NAME: NAC ETF WW Mngt.					TOTAL NO. OF CONTAINERS 8					SIGNATURE <i>Mark L. Jonas</i> 1345					SIGNATURE					SIGNATURE						
PROJECT NUMBER: NAC-211					CHAIN OF CUSTODY SEALS					(TIME)					(TIME)					(TIME)						
SHIPPING ID. NO.					REC'D GOOD CONDITION/COLD					Mark L. Jonas 3/16/94					(DATE)					(DATE)						
VIA: hand-to-hand					CONFORMS TO RECORD					Jonas & Associates Inc.					(DATE)					(DATE)						
LAB NO.										(COMPANY)					(COMPANY)					(COMPANY)						
SPECIAL INSTRUCTIONS/COMMENTS: 0.45 micron filter for CAM 17 metals					RECEIVED BY 1.					RECEIVED BY 2.					RECEIVED BY (LABORATORY) 3.											
					SIGNATURE					SIGNATURE					SIGNATURE											
					(TIME)					(TIME)					(TIME)											
					(DATE)					(DATE)					(DATE)											
										David W. Burgess 1345					David W. Burgess 3.16.94											
										Cyromalab					Cyromalab											
										(COMPANY)					(COMPANY)											

CHROMALAB, INC.

Environmental Services (SDB)

March 22, 1994

ChromaLab File No.: 9403233

JONAS & ASSOCIATES, INC.

Attn: M. Jonas/D. Dauwalder

RE: One water sample for Oil & Grease analysis

Project Name: NAC ETF WW MNGT.

Project Number: NAC-211

Date Sampled: March 16, 1994

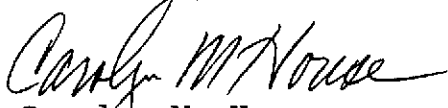
Date Submitted: March 16, 1994

Date Analyzed: March 22, 1994

RESULTS:

<u>Sample</u> <u>I.D.</u>	<u>Oil & Grease</u> <u>(mg/L)</u>
ETF-WW-31694	19
BLANK	N.D.
DETECTION LIMIT	1.0
METHOD OF ANALYSIS	STD METHOD 5520 B & F

ChromaLab, Inc.



Carolyn M. House
Analyst



Eric Tam
Laboratory Director

cc

CHROMALAB, INC.

Environmental Services (SDB)

March 23, 1994

ChromaLab File No.: 9403233

JONAS & ASSOCIATES, INC.

Attn: M. Jonas/D. Dauwalder

RE: One water sample for TEPH analysis

Project Name: NAC ETF WW MNGT.

Project Number: NAC-211

Date Sampled: March 16, 1994

Date Submitted: March 16, 1994

Date Extracted: March 21, 1994

Date Analyzed: March 21, 1994

RESULTS:


Sample I.D.	Kerosene ($\mu\text{g/L}$)	Diesel ($\mu\text{g/L}$)	Motor Oil (mg/L)
ETF-WW-31694	20000*	60000**	N.D.


* Unknown hydrocarbon found in kerosene range quantified as kerosene.

** Unknown hydrocarbon found in diesel/motor oil range quantified as diesel.

BLANK	N.D.	N.D.	N.D.
BLANK SPIKE RECOVERY	---	113%	---
DETECTION LIMIT	500	500	5.0
METHOD OF ANALYSIS	3510/8015	3510/8015	3510/8015

ChromaLab, Inc.


Alex Tam
Analytical Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SDB)

March 23, 1994

ChromaLab File#: 9403233

JONAS & ASSOCIATES, INC.

Atten: M. Jonas/D. Dauwalder

Project: NAC ETF WW MNGT.

Project#: NAC-211

Received: March 16, 1994

re: One sample for Volatile Organic Compounds analysis.

Sample: ETF-WW-31694

Matrix: WATER

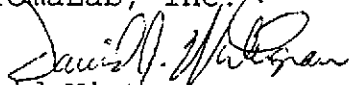
Lab #: 46632-2528 Sampled: March 16, 1994


Analyzed: March 22, 1994

Method: EPA 624

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	5	N.D.	--
BENZENE	11	2	N.D.	--
BROMODICHLOROMETHANE	N.D.	2	N.D.	--
BROMOFORM	N.D.	2	N.D.	--
BROMOMETHANE	N.D.	2	N.D.	--
METHYL ETHYL KETONE	N.D.	2	N.D.	--
CARBON TETRACHLORIDE	N.D.	2	N.D.	--
CHLOROBENZENE	N.D.	2	N.D.	--
CHLOROETHANE	N.D.	2	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	2	N.D.	--
CHLOROFORM	N.D.	2	N.D.	--
CHLOROMETHANE	N.D.	2	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	2	N.D.	--
1,1-DICHLOROETHANE	N.D.	2	N.D.	95
1,2-DICHLOROETHANE	N.D.	2	N.D.	--
1,1-DICHLOROETHENE	N.D.	2	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	2	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	2	N.D.	--
1,2-DICHLOROPROPANE	N.D.	2	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	2	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	2	N.D.	--
ETHYLBENZENE	22	2	N.D.	--
2-HEXANONE	N.D.	2	N.D.	--
METHYLENE CHLORIDE	N.D.	5	N.D.	--
METHYL ISOBUTYL KETONE	N.D.	2	N.D.	--
STYRENE	N.D.	2	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	2	N.D.	109
TETRACHLOROETHENE	N.D.	2	N.D.	80
TOLUENE	47	2	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	2	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	2	N.D.	--
TRICHLOROETHENE	N.D.	2	N.D.	78
TRICHLOROFLUOROMETHANE	N.D.	2	N.D.	--
VINYL ACETATE	N.D.	2	N.D.	--
VINYL CHLORIDE	N.D.	2	N.D.	--
XYLENES	120	2	N.D.	--

ChromaLab, Inc.


David Wintergrass
Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SDB)

March 23, 1994

JONAS & ASSOCIATES, INC.

Project Name: NAC ETF WW MNGT.
Date Sampled: March 16, 1994
Date Submitted: March 16, 1994
Date Analyzed: March 22, 1994
Sample I.D.: ETF-WW-31694

ChromaLab File # 9403233
Submission #: 9403000233
Attn: M. Jonas/D. Dauwalder

Project No: NAC-211
Method of Analysis: EPA 625
Matrix: Water
Reporting Limit: see below
Dilution Factor: 1:10

COMPOUND NAME	Sample mg/l	MDL mg/l	Spike Recovery
PHENOL	N.D.	0.020	76%
BIS(2-CHLOROETHYL) ETHER	N.D.	0.020	-----
2-CHLOROPHENOL	N.D.	0.020	85%
1,3-DICHLOROBENZENE	N.D.	0.020	-----
1,4-DICHLOROBENZENE	N.D.	0.020	-----
BENZYL ALCOHOL	N.D.	0.040	-----
1,2-DICHLOROBENZENE	N.D.	0.020	-----
2-METHYLPHENOL	N.D.	0.020	-----
BIS(2-CHLOROISOPROPYL) ETHER	N.D.	0.020	-----
4-METHYLPHENOL	0.13	0.020	-----
N-NITROSO-DI-N-PROPYLAMINE	N.D.	0.020	-----
HEXACHLOROETHANE	N.D.	0.020	-----
NITROBENZENE	N.D.	0.020	-----
ISOPHORONE	N.D.	0.020	-----
2-NITROPHENOL	N.D.	0.020	-----
2,4-DIMETHYLPHENOL	N.D.	0.020	-----
BENZOIC ACID	N.D.	0.10	-----
BIS(2-CHLOROETHOXY) METHANE	N.D.	0.020	-----
2,4-DICHLOROPHENOL	0.046	0.020	-----
1,2,4-TRICHLOROBENZENE	N.D.	0.020	108%
NAPHTHALENE	0.87	0.020	-----
4-CHLOROANILINE	N.D.	0.040	-----
HEXACHLOROBUTADIENE	N.D.	0.020	-----
4-CHLORO-3-METHYLPHENOL	N.D.	0.040	89%
2-METHYLNAPHTHALENE	0.11	0.020	-----
HEXACHLOROCYCLOPENTADIENE	N.D.	0.020	-----
2,4,6-TRICHLOROPHENOL	N.D.	0.020	-----
2,4,5-TRICHLOROPHENOL	N.D.	0.020	-----
2-CHLORONAPHTHALENE	N.D.	0.020	-----
2-NITROANILINE	N.D.	0.10	-----
DIMETHYL PHTHALATE	N.D.	0.020	-----
ACENAPHTHYLENE	N.D.	0.020	-----
3-NITROANILINE	N.D.	0.10	-----
ACENAPHTHENE	N.D.	0.020	95%
2,4-DINITROPHENOL	N.D.	0.10	-----
4-NITROPHENOL	N.D.	0.10	-----
DIBENZOFURAN	N.D.	0.020	-----

(continued on next page)

CHROMALAB, INC.

Environmental Services (SDB)

Page 2


ChromaLab File # 9403233

Project Name: NAC ETF WW MNGT.
Project No: NAC-211
Sample I.D.: ETF-WW-31694
Method of Analysis: EPA 625

Matrix: water

COMPOUND NAME	Sample mg/l	MDL mg/l	Spike Recovery
2,4-DINITROTOLUENE	N.D.	0.020	-----
2,6-DINITROTOLUENE	N.D.	0.020	63%
DIETHYL PHTHALATE	N.D.	0.020	-----
4-CHLORO-PHENYL PHENYL ETHER	N.D.	0.020	-----
FLUORENE	N.D.	0.020	-----
4-NITROANILINE	N.D.	0.10	-----
4,6-DINITRO-2-METHYL PHENOL	N.D.	0.10	-----
N-NITROSODIPHENYLAMINE	N.D.	0.020	-----
4-BROMOPHENYL PHENYL ETHER	N.D.	0.020	-----
HEXACHLOROBENZENE	N.D.	0.020	-----
PENTACHLOROPHENOL	N.D.	0.10	87%
PHENANTHRENE	0.024	0.020	-----
ANTHRACENE	N.D.	0.020	-----
DI-N-BUTYL PHTHALATE	N.D.	0.020	-----
FLUORANTHENE	N.D.	0.020	-----
PYRENE	N.D.	0.020	120%
BUTYLBENZYLPHthalate	N.D.	0.020	-----
3,3'-DICHLOOROBENZIDINE	N.D.	0.040	-----
BENZO (A) ANTHRACENE	N.D.	0.020	-----
BIS (2-ETHYLHEXYL) PHTHALATE	0.21	0.020	-----
CHRYSENE	N.D.	0.020	-----
DI-N-OCTYLPHthalate	N.D.	0.020	-----
BENZO (B) FLUORANTHENE	N.D.	0.020	-----
BENZO (K) FLUORANTHENE	N.D.	0.020	-----
BENZO (A) PYRENE	N.D.	0.020	-----
INDENO (1,2,3 C,D) PYRENE	N.D.	0.020	-----
DIBENZO (A,H) ANTHRACENE	N.D.	0.020	-----
BENZO (G,H,I) PERYLENE	N.D.	0.020	-----

ChromaLab, Inc.


Alex Tam
Analytical Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

Environmental Services (SDB)

March 22, 1994

ChromaLab File#: 9403233

JONAS & ASSOCIATES, INC.

Atten: M. Jonas/D. Dauwalder

Project: NAC ETF WW MNGT.
Received: March 16, 1994

Project#: NAC-211

re: One sample for CAM 17 Metals analysis.

Sample: ETF-WW-31694 Matrix: WATER Extracted: March 19, 1994
Lab #: 46632-2504 Sampled: March 16, 1994 Analyzed: March 22, 1994
Method: EPA 3010/6010/7470

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	0.02	N.D.	92
ARSENIC	0.0081	0.005	N.D.	91
BARIUM	0.10	0.005	N.D.	90
BERYLLIUM	N.D.	0.001	N.D.	96
CADMIUM	0.029	0.001	N.D.	96
CHROMIUM	0.027	0.01	N.D.	91
COBALT	N.D.	0.01	N.D.	96
COPPER	N.D.	0.005	N.D.	97
LEAD	0.050	0.01	N.D.	96
MOLYBDENUM	1.1	0.005	N.D.	--
NICKEL	0.033	0.02	N.D.	96
SELENIUM	0.083	0.01	N.D.	85
SILVER	N.D.	0.005	N.D.	93
THALLIUM	N.D.	0.02	N.D.	93
VANADIUM	0.025	0.01	N.D.	--
ZINC	2.1	0.005	N.D.	81
MERCURY	0.012	0.001	N.D.	95

ChromaLab, Inc.

Charles N. Woolley
Charles Woolley
Chemist

Refaat Mankarious
Refaat Mankarious
Inorganics Supervisor



GeoAnalytical Laboratories, Inc.

1031 Kansas Avenue
Modesto, CA 95351

Phone (209) 572-0900
FAX (209) 572-0916

CERTIFICATE OF ANALYSIS LC50

Report # F076-03

Date: 03/24/94

ChromaLab
2239 Omega Rd Ste 1
San Ramon CA 94583

Date Received: 03/17/94
Date Started : 03/20/94
Date Completed: 03/24/94

Project # 15594

Project Name:

Sample ID: ETF-WW31694
Lab ID: F31325

Aquatic Toxicity

Species: Pimephales Promelas
Common Name: Fathead Minnow
Supplier: Thomas Fish Farm
Dead in Acclimation Tank: <1 %
Average Length: 32 mm
Average Weight: 0.44 g

Test Type: LC50
Dilution Water: Soft Reconstituted DI water
Number per Tank: 20
Tank Volume: 10 Liters

Initial Control Hardness: 40 mg/L

Final Control Hardness: 44 mg/L

Results/Notes:

Estimated LC50 value for this test=12.5%



GeoAnalytical Laboratories, Inc.

1031 Kansas Avenue
Modesto, CA 95351

Phone (209) 572-0900
FAX (209) 572-0916

CERTIFICATE OF ANALYSIS

Report #: F076-03
Sample ID: ETF-WW31694
Lab ID: F31325

Initial 03/20/94	<u>Control</u>	<u>5%</u>	<u>10%</u>	<u>18%</u>	<u>25%</u>	<u>40%</u>
pH	7.31	6.62	7.31	7.41	7.43	7.39
D.O.	7.65	8.00	7.86	6.09	6.00	8.32
Temp	19° C	19° C	19° C	19° C	19° C	19° C

24 hrs 03/21/94

pH	6.87	6.21	6.72	6.53	6.52	6.51
D.O.	6.82	7.36	6.92	6.37	6.33	6.42
Temp	20° C	20° C	20° C	20° C	20° C	20° C

Mortalities 0 0 3 6 4 7

48 hrs 03/22/94

pH	7.09	6.46	6.77	6.78	6.85	6.59
D.O.	6.74	6.82	7.06	6.73	6.30	6.58
Temp	21° C	21° C	21° C	21° C	21° C	21° C

Mortalities 0 0 3 1 6 11

72 hrs 03/23/94

pH	7.11	6.68	6.87	6.91	6.89	6.67
D.O.	7.26	7.25	6.85	6.90	6.17	6.25
Temp	20° C	20° C	20° C	20° C	20° C	20° C


Mortalities 0 1 1 3 6 2

96 hrs 03/24/94

pH	6.86	6.58	6.61	6.77	6.85	6.65
D.O.	6.42	6.59	6.29	6.51	6.08	5.88
Temp	20° C	20° C	20° C	20° C	20° C	20° C

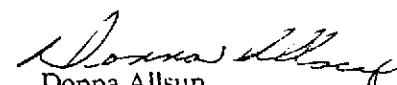
Mortalities 0 1 1 2 1 0

Total Mortalities 0 2 8 12 17 20


Craig Soares

Bacteriological Dept. Head

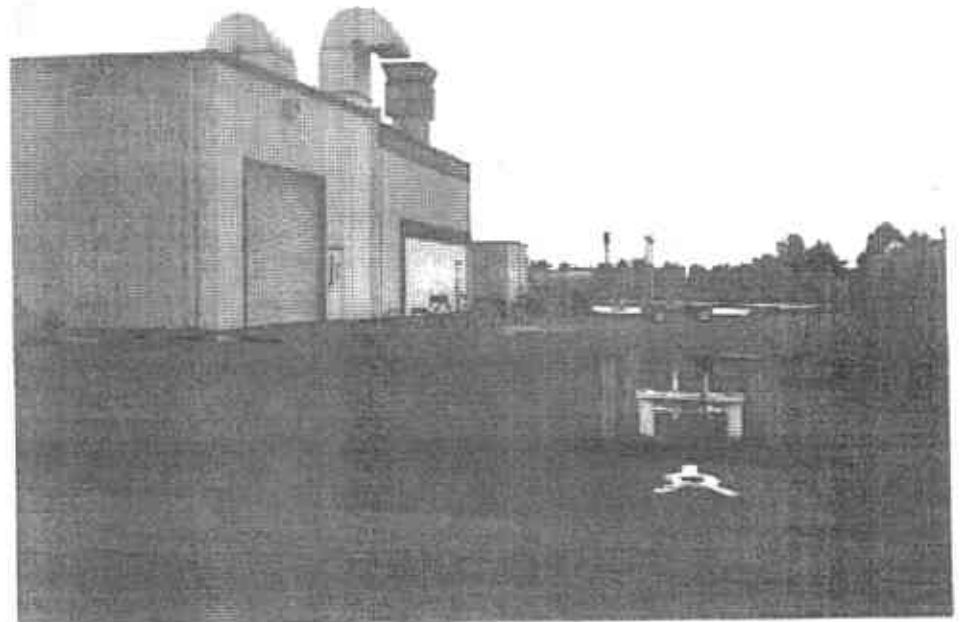
Certification # E757


Donna Allsup

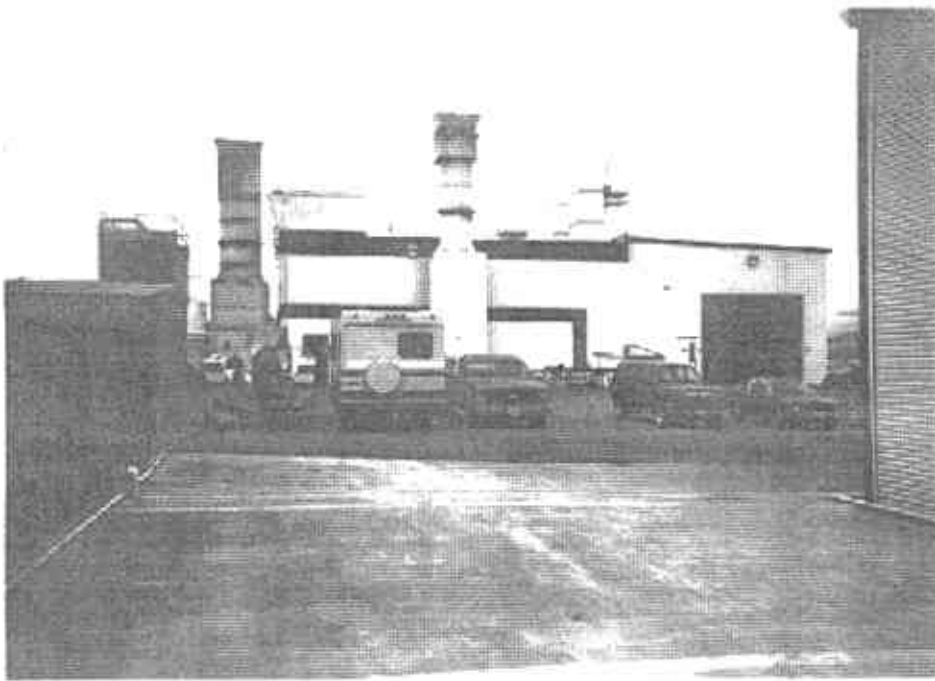
Laboratory Director



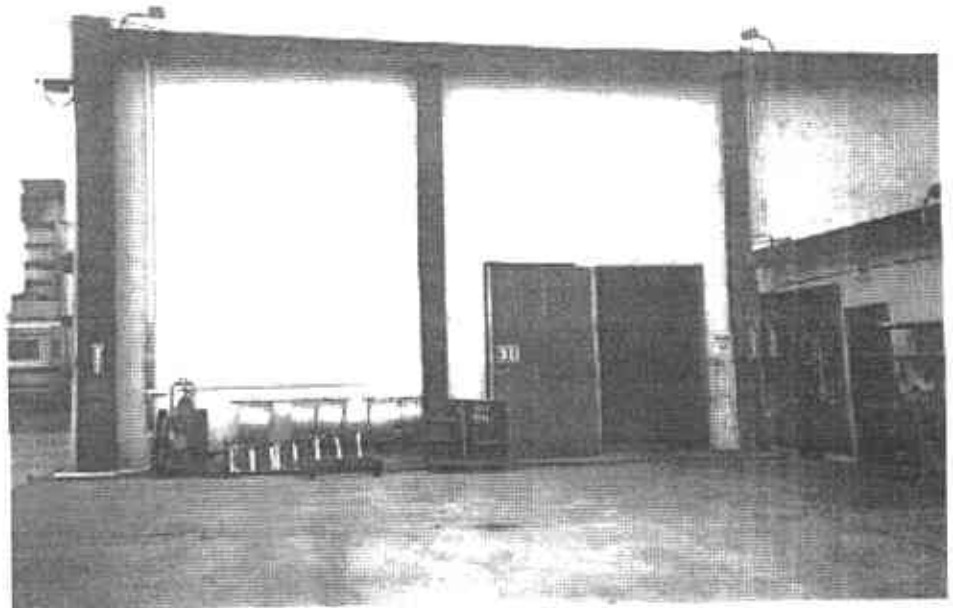
Picture 1: National Airmotive Engine Test Facility, building and asphalt/concrete parking area.



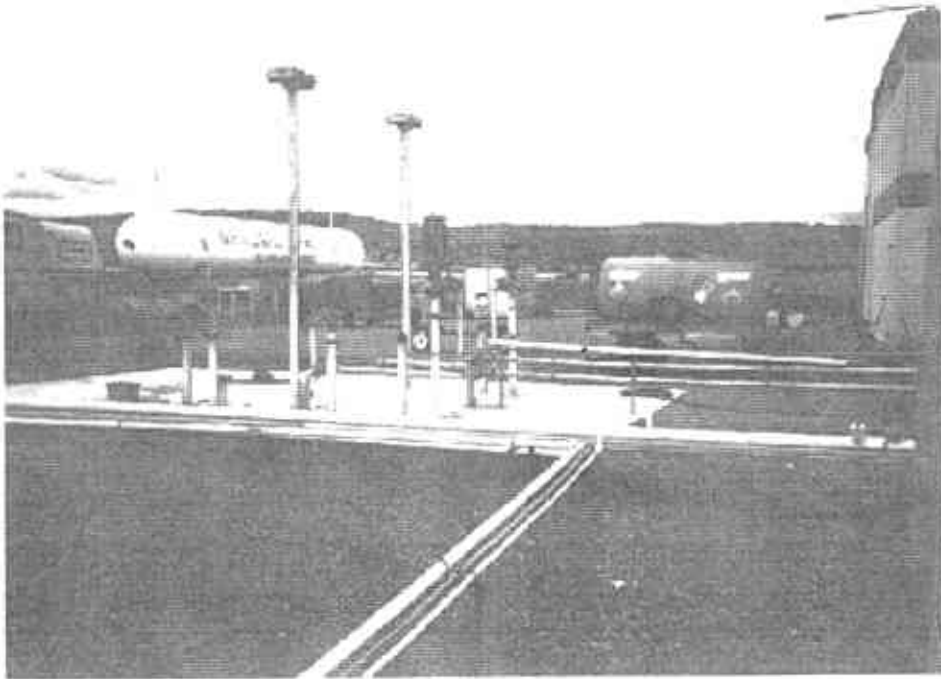
Picture 2: Building and asphalt/concrete parking area.



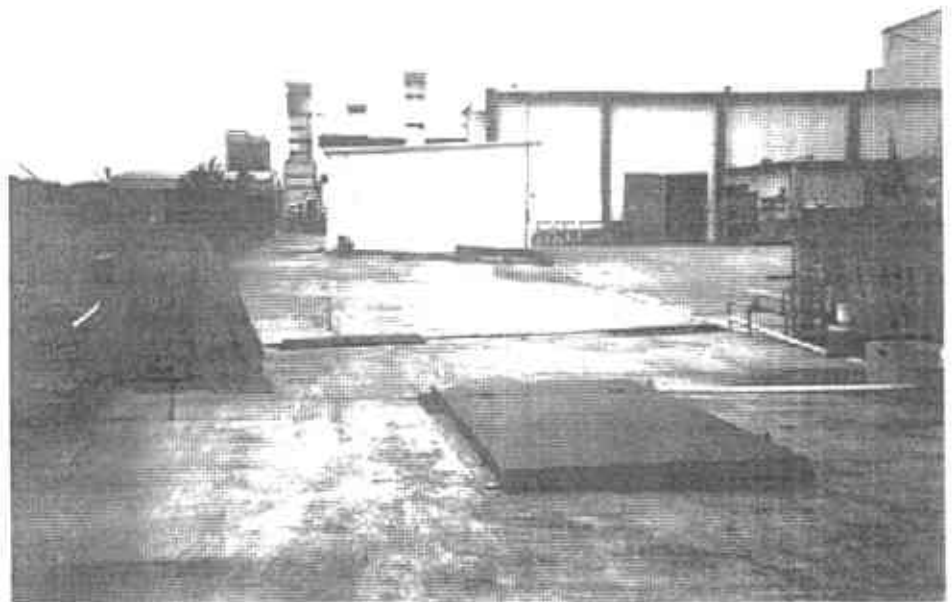
Picture 3: Buildings, parking area, and fence along western side of facility.



Picture 4: Engine test cell, concrete pad, and grated drain which transfers water to oil/water separator.



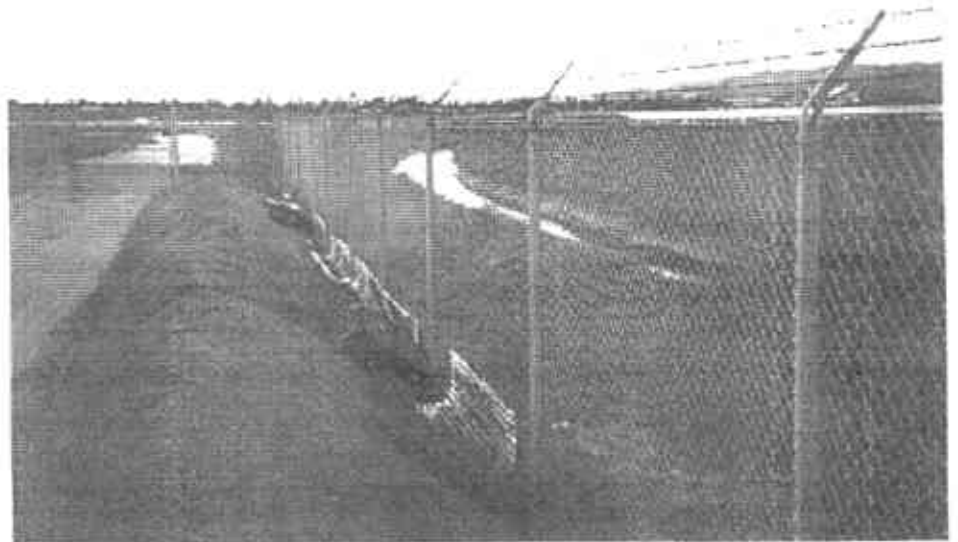
Picture 5: Gravel and asphalt in northern area of the facility.



Picture 6: Buildings, concrete pad, and former oil/water separator.



Picture 7: Pump and low area in asphalt/concrete parking lot where storm water collects.



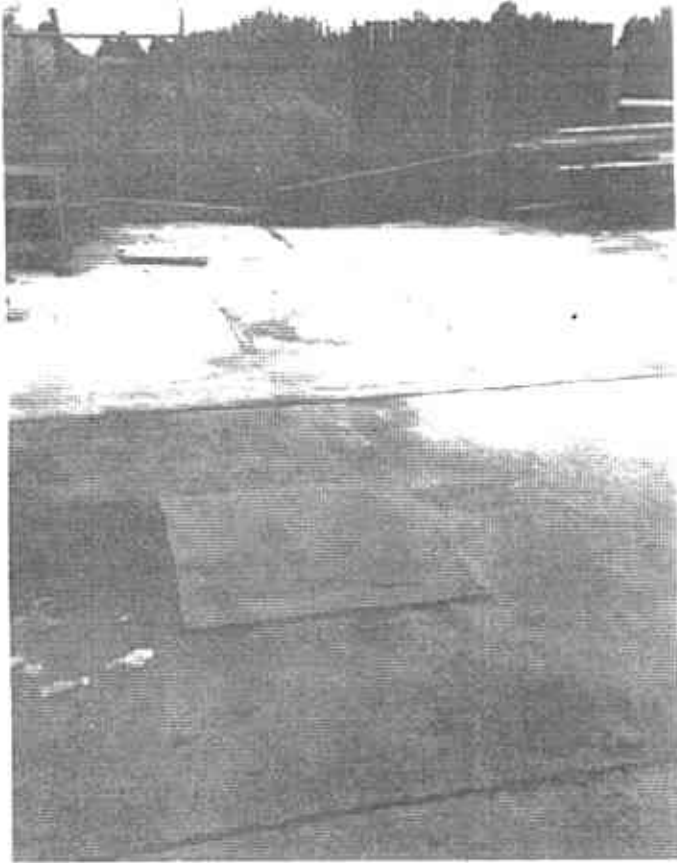
Picture 8: Berm along eastern border of the facility, with small slough in the background.



Picture 9: Engine test cell and PVC pipe for transferring storm water from the roof.



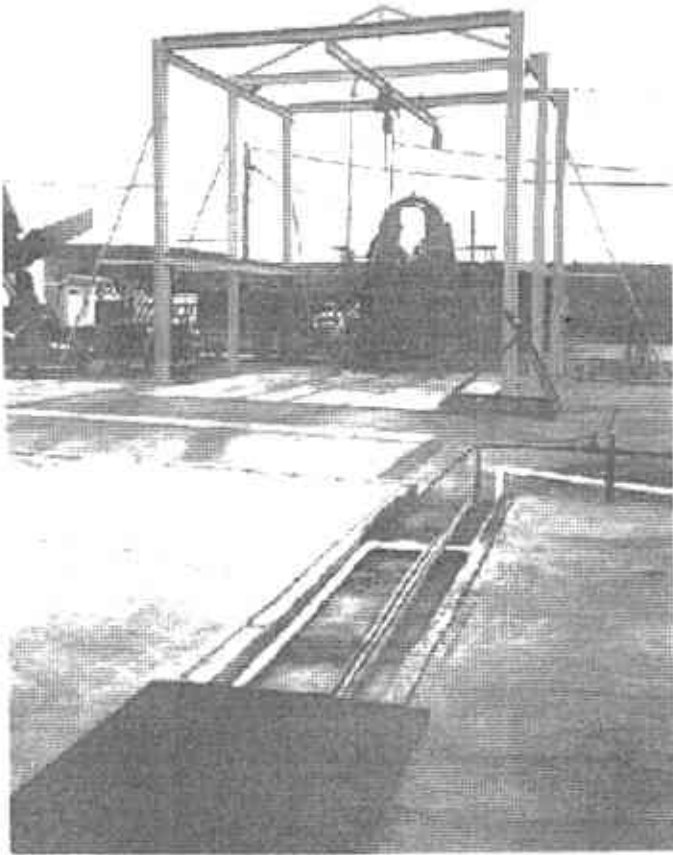
Picture 10: Covered grated drain previously used to transfer storm water to oil/water separator.



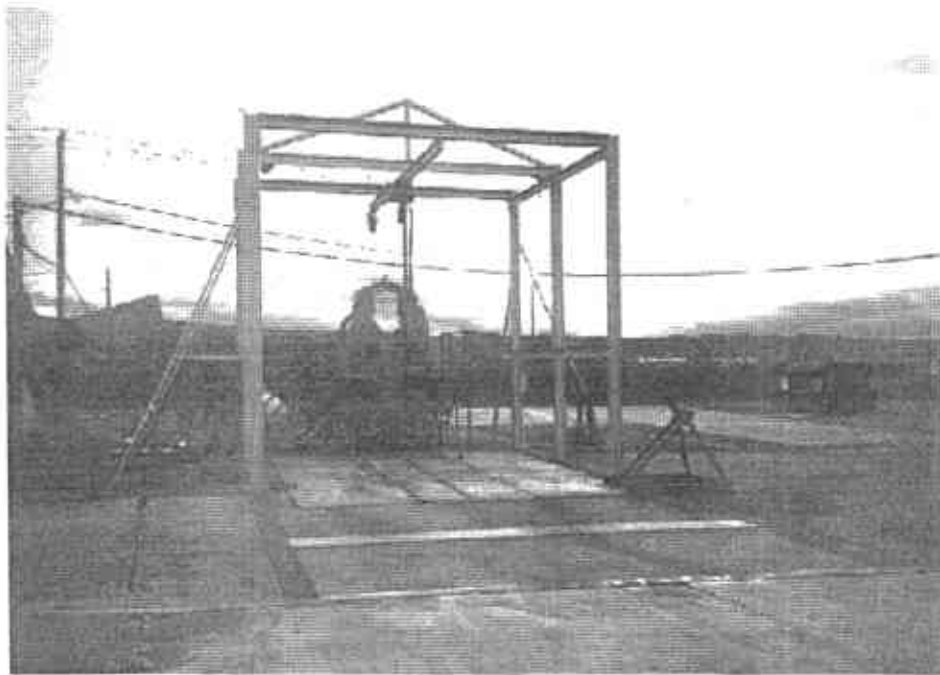
Picture 11: Covered grated drain previously used to transfer storm water to oil/water separator.



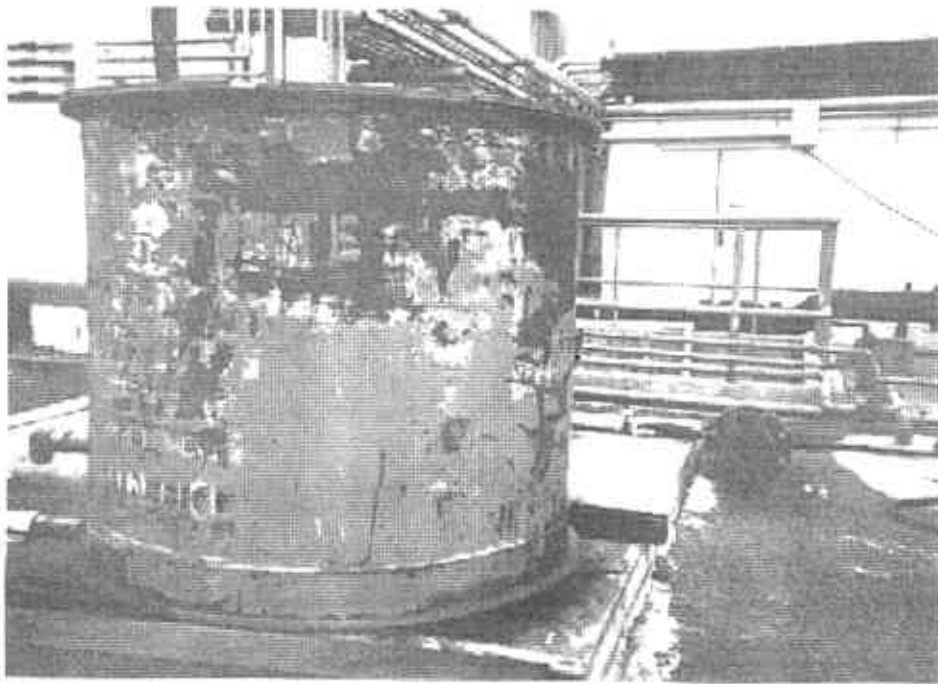
Picture 12: Covered grated drain previously used to transfer storm water to oil/water separator.



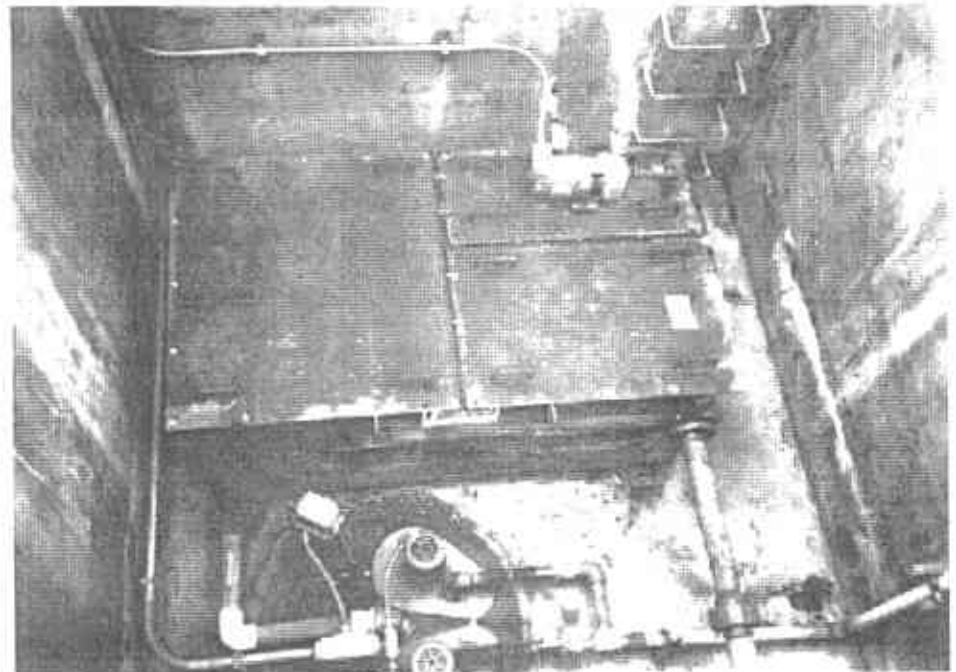
Picture 13: Outside test cell.



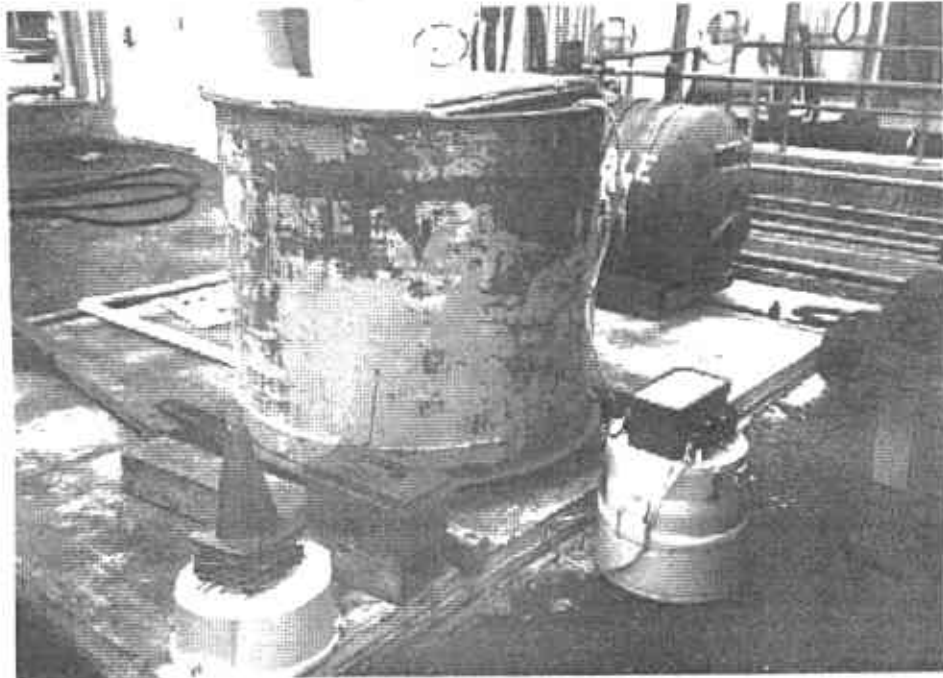
Picture 14: Outside test cell.



Picture 15: Holding tank for effluent water from oil/water separator.



Picture 16: Oil/water separator.



Picture 17: Effluent water holding tank and sampling equipment used on March 16, 1994.

PHONE CALL

FOR Leroy DATE 10/13 TIME 3:10 A.M.
P.M.

M Tom Reese

OF 410-1255

PHONE AREA CODE NUMBER EXTENSION

FAX# Per 7200 contact

MESSAGE 150-98 11A or Noon

Piping Tomorrow

TELEPHONED

RETURNED YOUR CALL

PLEASE CALL

WILL CALL AGAIN
CAME TO SEE YOU
10/14

WANTS TO SEE YOU

SIGNED

Adams
11510

**City Of Oakland
FIRE PREVENTION
BUREAU**



250 Frank Ogawa Plaza, Ste. 3341
Oakland California 94612-2032
510-238-3851

*Permit To Excavate And Install,
Repair,*

Or Remove Inflammable Liquid Tanks

Oakland, California September 22, 1998

Tank Permit Number: 150-98

Permission Is Hereby Granted To:

Modify Jet A fuel

Tank And Excavate Commencing:

Feet Inside: property

Line.

On The:

Site Address: 7200 Earhart Rd.

Present Storage: Jet A

Owner: National Airmotive

Address: 7200 Earhart Rd., Oakland 94621

Phone: 613-1017

Applicant:Foss Environmental Services

Address: 1605 Ferry Point Alameda, 94501

Phone: 749-4131

Dimensions Of Street (sidewalk) Surface To Be Disturbed : X **No. Of Tanks** 3 **Capacity** See Below **Gallons, Each**

Remarks Modify (2) tanks @ 8000 gal. and (1) tank @ 10,000 gal.

This Permit Is Granted In Accordance With Existing City Ordinances. Owner Hereby Agrees To Remove Tanks On Discontinuance Of Use Or When Notified By The City Authorities When Installing, Removing Or Repairing Tanks, No Open Flame To Be On Or Near Premises.

CERTIFICATE OF TANK AND EQUIPMENT INSPECTION

Tank Removal: Inspected And Passed On:

Approved: _____

By: _____

Tank Installations/modifications:

Inspection Fee Paid: \$ _____

Pressure Test: Inspected By: _____ **Date:** _____

Received By: _____

Primary Piping Test: Inspected By: _____ **Date:** _____

Secondary Containment & Sump Testing:

Inspected By: _____ **Date:** _____

Final: Inspected By: _____ **Date:** _____

Before Covering Tanks, Above Certification Must Be Signed When Ready For Inspection Notify Fire Prevention Bureau 238-3851

THIS PERMIT MUST BE LEFT ON THE WORK SITE AS AUTHORITY THEREFORE

CITY OF OAKLAND
FIRE PREVENTION BUREAU
250 Frank Ogawa Plaza, Ste. 3341
OAKLAND, CALIFORNIA 94612-2032
(510) 238-3851

MODIFY

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

Request Submittal Date: _____

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) Jet A 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 _____ side of _____ St./Ave. _____ feet _____ of _____ St./Ave.

Site Address: 7200 Earhart Rd. Testcell Present storage Jet A

Owner: National Airmotive Address 7200 Earhart Rd Phone (510) 613-1017
Oakland, CA 94621

Applicant: Foss Environmental Services Address 1605 Kerry Point Phone (510) 749-4131
Alameda, CA 94501

~~Sidewalk surface to be disturbed~~ No Number of Tanks 3 Capacity 2-8,000 1-10,000 Gallons ea.

Remarks _____

Signature [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
- 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. 15078
Copies to: Electrical Inspection

Amt. Recv'd 740 Date Issued: 9/22/98
Ck# 1013651 Cash _____
Receipt# 776393 Recv'd by: [Signature] Tk

APPLICATION FOR PERMIT TO OPERATE, MAINTAIN OR STORE

Make check payable to: CITY OF OAKLAND
Mail to: Fire Services Agency
Fire Prevention Bureau
250 Frank Ogawa Plaza, 3rd. Fl.
Oakland, CA 94612-2032
PHONE: 238-3851

Due Date:
Original
Renewal

To: maintain Jet A
store
Pursuant to Section of Oakland Fire Code

Specify use if Public Assembly

Application made by/Business Name: National Airmotive Co.

Location: 7200 Earhart Rd. Oakland, CA 94621

Mailing Address: same

Signed Robert as agent for National Airmotive Applicant Phone # (510) 749-4131

Date: 9/21/98
Fee: 140
Cash CK. No. 0113631
Receipt No. 176399
Received by: [Signature]

Event Dates: DO NOT WRITE BELOW THIS LINE

Plans submitted Checked by (GROUP TYPE AND AREA)

Occupancy Group Other Occupancies in Building?

Floor to be Used Area to be Used sq. ft. Previous Occupancy

BUILDING: Height Stories, ft. Type of Construction? Is there a basement?

Location-Exterior Wall Openings: Type of Protection

Is there 20 sq. ft. of Opening in every 50' on one exterior wall in Cellar? Basement? Story?

Distance from Property Line on North? South? East? West?

EXITS: Number Total Widths How far Apart? Do Exits Lead to Street?

Number of Exits from Hazardous Area (over 200 sq. ft.)? Panic Bars?

Do Doors Swing Out? Exit Signs? illuminated?

Number of Stairways? Width? Open or Enclosed?

Exterior Stairway or Fire Escape? (WHICH) Where Located? Distance from Street?

FIRE PROTECTION: Standpipes: Wet? Dry? Sprinklers?

Number and Type of Extinguishers?

Other Fire Protection?

Flameproofing Required? Is it Satisfactory?

DATE OF INSPECTION

REMARKS

Signed FIRE INSPECTOR

ENGINE CO.:

Application Denied: (DATE) Why?

Application Approved: (DATE) Provided

Application Approved: (DATE) Premises meet minimum fire safety requirements.

Signed SUPERVISING OFFICER

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B



COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM	<input type="checkbox"/> 1 NEW PERMIT	<input type="checkbox"/> 3 RENEWAL PERMIT	<input checked="" type="checkbox"/> 5 CHANGE OF INFORMATION	<input type="checkbox"/> 7 PERMANENTLY CLOSED ON SITE
	<input type="checkbox"/> 2 INTERIM PERMIT	<input type="checkbox"/> 4 AMENDED PERMIT	<input type="checkbox"/> 6 TEMPORARY TANK CLOSURE	<input type="checkbox"/> 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: _____

I. TANK DESCRIPTION COMPLETE ALL ITEMS - SPECIFY IF UNKNOWN

A. OWNER'S TANK I. D. # <u>2</u>	B. MANUFACTURED BY: <u>unk.</u>
C. DATE INSTALLED (MO/DAY/YEAR) <u>unk.</u>	D. TANK CAPACITY IN GALLONS: <u>8,000</u>

II. TANK CONTENTS IF A-1 IS MARKED, COMPLETE ITEM C.

A. <input type="checkbox"/> 1 MOTOR VEHICLE FUEL	4 OIL	B. <input checked="" type="checkbox"/> 1 PETROLEUM	C. <input type="checkbox"/> 1a REGULAR UNLEADED
<input checked="" type="checkbox"/> 2 PETROLEUM	<input type="checkbox"/> 80 EMPTY	<input checked="" type="checkbox"/> 1 PRODUCT	<input type="checkbox"/> 3 DIESEL
<input type="checkbox"/> 3 CHEMICAL PRODUCT	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 2 WASTE	<input type="checkbox"/> 4 GASAHOL
			<input type="checkbox"/> 6 AVIATION GAS
			<input type="checkbox"/> 7 METHANOL
			<input type="checkbox"/> 8 M85
			<input type="checkbox"/> 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED _____ C. A. S. #: _____

III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E

A. TYPE OF SYSTEM	<input checked="" type="checkbox"/> 1 DOUBLE WALL	<input type="checkbox"/> 3 SINGLE WALL WITH EXTERIOR LINER	<input type="checkbox"/> 5 INTERNAL BLADDER SYSTEM	<input type="checkbox"/> 95 UNKNOWN
	<input type="checkbox"/> 2 SINGLE WALL	<input type="checkbox"/> 4 SINGLE WALL IN A VAULT	<input type="checkbox"/> 99 OTHER _____	
B. TANK MATERIAL (Primary Tank)	<input type="checkbox"/> 1 BARE STEEL	<input type="checkbox"/> 2 STAINLESS STEEL	<input checked="" type="checkbox"/> 3 FIBERGLASS	<input type="checkbox"/> 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC
	<input type="checkbox"/> 5 CONCRETE	<input type="checkbox"/> 6 POLYVINYL CHLORIDE	<input type="checkbox"/> 7 ALUMINUM	<input type="checkbox"/> 8 100% METHANOL COMPATIBLE W/FRP
	<input type="checkbox"/> 9 BRONZE	<input type="checkbox"/> 10 GALVANIZED STEEL	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER _____
C. INTERIOR LINING OR COATING	<input type="checkbox"/> 1 RUBBER LINED	<input type="checkbox"/> 2 ALKYD LINING	<input type="checkbox"/> 3 EPOXY LINING	<input type="checkbox"/> 4 PHENOLIC LINING
	<input type="checkbox"/> 5 GLASS LINING	<input checked="" type="checkbox"/> 6 UNLINED	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER _____
	IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? YES ___ NO ___			
D. EXTERIOR CORROSION PROTECTION	<input type="checkbox"/> 1 POLYETHYLENE WRAP	<input type="checkbox"/> 2 COATING	<input type="checkbox"/> 3 VINYL WRAP	<input type="checkbox"/> 4 FIBERGLASS REINFORCED PLASTIC
	<input type="checkbox"/> 5 CATHODIC PROTECTION	<input checked="" type="checkbox"/> 91 NONE	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER _____
E. SPILL AND OVERFILL, etc.	SPILL CONTAINMENT INSTALLED (YEAR) <u>1990</u>		OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) <u>1990</u>	
	DROPTUBE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		STRIKER PLATE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
			DISPENSER CONTAINMENT YES ___ NO ___	

IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE

A. SYSTEM TYPE	A U 1 SUCTION	<u>A</u> U 2 PRESSURE	A U 3 GRAVITY	A U 4 FLEXIBLE PIPING	A U 99 OTHER
B. CONSTRUCTION	<u>A</u> U 1 SINGLE WALL	A U 2 DOUBLE WALL	A U 3 LINED TRENCH	A U 95 UNKNOWN	A U 99 OTHER
C. MATERIAL AND CORROSION PROTECTION	A U 1 BARE STEEL	A U 2 STAINLESS STEEL	A U 3 POLYVINYL CHLORIDE (PVC)	A U 4 FIBERGLASS PIPE	
	A U 5 ALUMINUM	A U 6 CONCRETE	A U 7 STEEL W/ COATING	A U 8 100% METHANOL COMPATIBLE W/FRP	
	A U 9 GALVANIZED STEEL	A U 10 CATHODIC PROTECTION	A U 95 UNKNOWN	A U 99 OTHER	
D. LEAK DETECTION	<input type="checkbox"/> 1 MECHANICAL LINE LEAK DETECTOR	<input checked="" type="checkbox"/> 2 LINE TIGHTNESS TESTING	<input type="checkbox"/> 3 CONTINUOUS INTERSTITIAL MONITORING	<input type="checkbox"/> 4 ELECTRONIC LINE LEAK DETECTOR	<input type="checkbox"/> 5 AUTOMATIC PUMP SHUTDOWN
				<input type="checkbox"/> 99 OTHER _____	

V. TANK LEAK DETECTION

<input type="checkbox"/> 1 VISUAL CHECK	<input type="checkbox"/> 2 MANUAL INVENTORY RECONCILIATION	<input type="checkbox"/> 3 VADOZE MONITORING	<input checked="" type="checkbox"/> AUTOMATIC TANK GAUGING	<input type="checkbox"/> 5 GROUND WATER MONITORING	<input type="checkbox"/> 6 ANNUAL TANK TESTING
<input type="checkbox"/> 7 CONTINUOUS INTERSTITIAL MONITORING	<input type="checkbox"/> 8 SIR	<input type="checkbox"/> 9 WEEKLY MANUAL TANK GAUGING	<input type="checkbox"/> 10 MONTHLY TANK TESTING	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER

VI. TANK CLOSURE INFORMATION (PERMANENT CLOSURE IN-PLACE)

1. ESTIMATED DATE LAST USED (MO/DAY/YR) _____	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING _____ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL? YES <input type="checkbox"/> NO <input type="checkbox"/>
---	--	--

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

TANK OWNER'S NAME (PRINTED & SIGNATURE) Bill Bassett as agent for National Airmaxine DATE 9-14-98

LOCAL AGENCY USE ONLY THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I.D.#	COUNTY #	JURISDICTION #	FACILITY #	TANK #
PERMIT NUMBER	PERMIT APPROVED BY/DATE		PERMIT EXPIRATION DATE	

THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED. FORM C MUST BE COMPLETED FOR INSTALLATIONS. THIS FORM SHOULD BE ACCOMPANIED BY A PLOT PLAN. FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A
COMPLETE THIS FORM FOR EACH FACILITY/SITE



MARK ONLY ONE ITEM	<input type="checkbox"/> 1 NEW PERMIT	<input type="checkbox"/> 3 RENEWAL PERMIT	<input checked="" type="checkbox"/> 5 CHANGE OF INFORMATION	<input type="checkbox"/> 7 PERMANENTLY CLOSED SITE
	<input type="checkbox"/> 2 INTERIM PERMIT	<input type="checkbox"/> 4 AMENDED PERMIT	<input type="checkbox"/> 6 TEMPORARY SITE CLOSURE	

I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

DBA OR FACILITY NAME National Airmotive Test Cell		NAME OF OPERATOR National Airmotive Corp.		
ADDRESS 7200 Earhart Rd.		NEAREST CROSS STREET Lockheed	PARCEL # (OPTIONAL)	
CITY NAME Oakland		STATE CA	ZIP CODE 94621	SITE PHONE # WITH AREA CODE (510)613-1017
<input checked="" type="checkbox"/> BOX TO INDICATE <input checked="" type="checkbox"/> CORPORATION <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> LOCAL-AGENCY DISTRICTS <input type="checkbox"/> COUNTY-AGENCY* <input type="checkbox"/> STATE-AGENCY* <input type="checkbox"/> FEDERAL-AGENCY*				
* If owner of UST is a public agency, complete the following: name of supervisor of division, section or office which operates the UST				
TYPE OF BUSINESS		<input checked="" type="checkbox"/> IF INDIAN RESERVATION OR TRUST LANDS		# OF TANKS AT SITE 3
<input type="checkbox"/> 1 GAS STATION	<input type="checkbox"/> 2 DISTRIBUTOR	<input type="checkbox"/> 3 FARM	<input type="checkbox"/> 4 PROCESSOR	<input checked="" type="checkbox"/> 5 OTHER
E. P. A. I. D. # (optional)				

EMERGENCY CONTACT PERSON (PRIMARY)

EMERGENCY CONTACT PERSON (SECONDARY) - optional

DAYS: NAME (LAST, FIRST) Ano, Woody		PHONE # WITH AREA CODE (510)613-1017		DAYS: NAME (LAST, FIRST)		PHONE # WITH AREA CODE	
NIGHTS: NAME (LAST, FIRST) Ano, Woody		PHONE # WITH AREA CODE (510)613-1017		NIGHTS: NAME (LAST, FIRST)		PHONE # WITH AREA CODE	

II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

NAME National Airmotive Corporation		CARE OF ADDRESS INFORMATION		
MAILING OR STREET ADDRESS 7200 Earhart Rd.		<input checked="" type="checkbox"/> box to indicate <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> LOCAL-AGENCY <input type="checkbox"/> STATE-AGENCY <input checked="" type="checkbox"/> CORPORATION <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> COUNTY-AGENCY <input type="checkbox"/> FEDERAL-AGENCY		
CITY NAME Oakland		STATE CA	ZIP CODE 94621	PHONE # WITH AREA CODE (510)613-1017

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

NAME OF OWNER National Airmotive Corporation		CARE OF ADDRESS INFORMATION		
MAILING OR STREET ADDRESS 7200 Earhart Rd.		<input checked="" type="checkbox"/> box to indicate <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> LOCAL-AGENCY <input type="checkbox"/> STATE-AGENCY <input checked="" type="checkbox"/> CORPORATION <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> COUNTY-AGENCY <input type="checkbox"/> FEDERAL-AGENCY		
CITY NAME Oakland		STATE CA	ZIP CODE 94621	PHONE # WITH AREA CODE (510)613-1017

IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 322-9669 if questions arise.

TY (TK) HQ **44-**

V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) - IDENTIFY THE METHOD(S) USED

<input checked="" type="checkbox"/> box to indicate	<input type="checkbox"/> 1 SELF-INSURED	<input type="checkbox"/> 2 GUARANTEE	<input checked="" type="checkbox"/> 3 INSURANCE	<input type="checkbox"/> 4 SURETY BOND	<input type="checkbox"/> 5 LETTER OF CREDIT	<input type="checkbox"/> 6 EXEMPTION	<input type="checkbox"/> 7 STATE FUND
	<input type="checkbox"/> 8 STATE FUND & CHIEF FINANCIAL OFFICER LETTER	<input type="checkbox"/> 9 STATE FUND & CERTIFICATE OF DEPOSIT	<input type="checkbox"/> 10 LOCAL GOVT. MECHANISM	<input type="checkbox"/> 99 OTHER			

VI. LEGAL NOTIFICATION AND BILLING ADDRESS Legal notification and billing will be sent to the tank owner unless box I or II is checked.

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING:
 I.
 II.
 III.

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

TANK OWNER'S NAME (PRINTED & SIGNATURE) Bill Barrett	TANK OWNER'S TITLE as agent for National Airmotive	DATE MONTH/DAY/YEAR 9/14/98
--	--	---------------------------------------

LOCAL AGENCY USE ONLY

COUNTY # <input type="text"/> <input type="text"/>	JURISDICTION # <input type="text"/> <input type="text"/> <input type="text"/>	FACILITY # <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
LOCATION CODE - OPTIONAL	CENSUS TRACT # - OPTIONAL	SUPVISOR - DISTRICT CODE - OPTIONAL

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

OWNER MUST FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B



COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM	<input type="checkbox"/> 1 NEW PERMIT	<input type="checkbox"/> 3 RENEWAL PERMIT	<input checked="" type="checkbox"/> 5 CHANGE OF INFORMATION	<input type="checkbox"/> 7 PERMANENTLY CLOSED ON SITE
	<input type="checkbox"/> 2 INTERIM PERMIT	<input type="checkbox"/> 4 AMENDED PERMIT	<input type="checkbox"/> 6 TEMPORARY TANK CLOSURE	<input type="checkbox"/> 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED:

I. TANK DESCRIPTION COMPLETE ALL ITEMS -- SPECIFY IF UNKNOWN	
A. OWNER'S TANK I. D. # <u>1</u>	B. MANUFACTURED BY: <u>unk.</u>
C. DATE INSTALLED (MO/DAY/YEAR) <u>unk.</u>	D. TANK CAPACITY IN GALLONS: <u>8,000</u>

II. TANK CONTENTS IF A-1 IS MARKED, COMPLETE ITEM C.		
A. <input type="checkbox"/> 1 MOTOR VEHICLE FUEL <input checked="" type="checkbox"/> 2 PETROLEUM <input type="checkbox"/> 3 CHEMICAL PRODUCT	B. <input type="checkbox"/> 4 OIL <input type="checkbox"/> 80 EMPTY <input type="checkbox"/> 95 UNKNOWN <input checked="" type="checkbox"/> 1 PRODUCT <input type="checkbox"/> 2 WASTE	C. <input type="checkbox"/> 1a REGULAR UNLEADED <input type="checkbox"/> 1b PREMIUM UNLEADED <input type="checkbox"/> 1c MIDGRADE UNLEADED <input type="checkbox"/> 2 LEADED <input type="checkbox"/> 3 DIESEL <input type="checkbox"/> 4 GASAHOL <input checked="" type="checkbox"/> 5 JET FUEL <input type="checkbox"/> 99 OTHER (DESCRIBE IN ITEM D, BELOW)
D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED		C. A. S. #:

III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E		
A. TYPE OF SYSTEM <input checked="" type="checkbox"/> 1 DOUBLE WALL <input type="checkbox"/> 2 SINGLE WALL	<input type="checkbox"/> 3 SINGLE WALL WITH EXTERIOR LINER <input type="checkbox"/> 4 SINGLE WALL IN A VAULT	<input type="checkbox"/> 5 INTERNAL BLADDER SYSTEM <input type="checkbox"/> 99 OTHER
B. TANK MATERIAL (Primary Tank) <input type="checkbox"/> 1 BARE STEEL <input type="checkbox"/> 5 CONCRETE <input type="checkbox"/> 9 BRONZE	<input type="checkbox"/> 2 STAINLESS STEEL <input type="checkbox"/> 6 POLYVINYL CHLORIDE <input type="checkbox"/> 10 GALVANIZED STEEL	<input checked="" type="checkbox"/> 3 FIBERGLASS <input type="checkbox"/> 7 ALUMINUM <input type="checkbox"/> 95 UNKNOWN <input type="checkbox"/> 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC <input type="checkbox"/> 8 100% METHANOL COMPATIBLE W/FRP <input type="checkbox"/> 99 OTHER
C. INTERIOR LINING OR COATING <input type="checkbox"/> 1 RUBBER LINED <input type="checkbox"/> 5 GLASS LINING	<input type="checkbox"/> 2 ALKYD LINING <input checked="" type="checkbox"/> 6 UNLINED	<input type="checkbox"/> 3 EPOXY LINING <input type="checkbox"/> 4 PHENOLIC LINING <input type="checkbox"/> 95 UNKNOWN <input type="checkbox"/> 99 OTHER
D. EXTERIOR CORROSION PROTECTION <input type="checkbox"/> 1 POLYETHYLENE WRAP <input type="checkbox"/> 5 CATHODIC PROTECTION		<input type="checkbox"/> 2 COATING <input checked="" type="checkbox"/> 91 NONE <input type="checkbox"/> 3 VINYL WRAP <input type="checkbox"/> 95 UNKNOWN <input type="checkbox"/> 4 FIBERGLASS REINFORCED PLASTIC <input type="checkbox"/> 99 OTHER
E. SPILL AND OVERFILL, etc. SPILL CONTAINMENT INSTALLED (YEAR) <u>1990</u> OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) <u>1990</u> DROP TUBE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> STRIKER PLATE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> DISPENSER CONTAINMENT YES <input type="checkbox"/> NO <input type="checkbox"/>		

IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE		
A. SYSTEM TYPE A U 1 SUCTION <input checked="" type="checkbox"/> A U 2 PRESSURE	A U 3 GRAVITY A U 4 FLEXIBLE PIPING	A U 99 OTHER
B. CONSTRUCTION <input checked="" type="checkbox"/> A U 1 SINGLE WALL	<input checked="" type="checkbox"/> A U 2 DOUBLE WALL	<input type="checkbox"/> A U 3 LINED TRENCH <input type="checkbox"/> A U 95 UNKNOWN <input type="checkbox"/> A U 99 OTHER
C. MATERIAL AND CORROSION PROTECTION <input checked="" type="checkbox"/> A U 1 BARE STEEL <input checked="" type="checkbox"/> A U 5 ALUMINUM	<input type="checkbox"/> A U 2 STAINLESS STEEL <input type="checkbox"/> A U 8 CONCRETE	<input type="checkbox"/> A U 3 POLYVINYL CHLORIDE (PVC) <input type="checkbox"/> A U 7 STEEL W/ COATING <input type="checkbox"/> A U 9 GALVANIZED STEEL <input type="checkbox"/> A U 10 CATHODIC PROTECTION <input type="checkbox"/> A U 95 UNKNOWN <input type="checkbox"/> A U 99 OTHER
D. LEAK DETECTION <input type="checkbox"/> 1 MECHANICAL LINE LEAK DETECTOR <input checked="" type="checkbox"/> 2 LINE TIGHTNESS TESTING <input type="checkbox"/> 3 CONTINUOUS INTERSTITIAL MONITORING <input type="checkbox"/> 4 ELECTRONIC LINE LEAK DETECTOR <input type="checkbox"/> 5 AUTOMATIC PUMP SHUTDOWN <input type="checkbox"/> 99 OTHER		

V. TANK LEAK DETECTION		
<input type="checkbox"/> 1 VISUAL CHECK <input type="checkbox"/> 7 CONTINUOUS INTERSTITIAL MONITORING	<input type="checkbox"/> 2 MANUAL INVENTORY RECONCILIATION <input type="checkbox"/> 8 SIR	<input type="checkbox"/> 3 VADQZE MONITORING <input type="checkbox"/> 9 WEEKLY MANUAL TANK GAUGING <input checked="" type="checkbox"/> 4 AUTOMATIC TANK GAUGING <input type="checkbox"/> 10 MONTHLY TANK TESTING
<input type="checkbox"/> 5 GROUND WATER MONITORING <input type="checkbox"/> 95 UNKNOWN		<input type="checkbox"/> 6 ANNUAL TANK TESTING <input type="checkbox"/> 99 OTHER

VI. TANK CLOSURE INFORMATION (PERMANENT CLOSURE IN-PLACE)		
1. ESTIMATED DATE LAST USED (MO/DAY/YR):	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING _____ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL? YES <input type="checkbox"/> NO <input type="checkbox"/>

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

TANK OWNER'S NAME (PRINTED & SIGNATURE) Bill Bassett BioBart as agent for National Airmotive DATE 9-14-98

LOCAL AGENCY USE ONLY THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW				
STATE I.D.#	COUNTY #	JURISDICTION #	FACILITY #	TANK #
PERMIT NUMBER	PERMIT APPROVED BY/DATE		PERMIT EXPIRATION DATE	

THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED. FORM C MUST BE COMPLETED FOR INSTALLATIONS. THIS FORM SHOULD BE ACCOMPANIED BY A PLOT PLAN. FILE THIS FORM WITH THE LOCAL AGENCY IMPLEMENTING THE UNDERGROUND STORAGE TANK REGULATIONS

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B



COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM	<input type="checkbox"/> 1 NEW PERMIT	<input type="checkbox"/> 3 RENEWAL PERMIT	<input checked="" type="checkbox"/> 5 CHANGE OF INFORMATION	<input type="checkbox"/> 7 PERMANENTLY CLOSED ON SITE
	<input type="checkbox"/> 2 INTERIM PERMIT	<input type="checkbox"/> 4 AMENDED PERMIT	<input type="checkbox"/> 8 TEMPORARY TANK CLOSURE	<input type="checkbox"/> 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: _____

I. TANK DESCRIPTION COMPLETE ALL ITEMS - SPECIFY IF UNKNOWN	
A. OWNER'S TANK I. D. # <u>3</u>	B. MANUFACTURED BY: <u>UNK</u>
C. DATE INSTALLED (MO/DAY/YEAR) <u>UNK</u>	D. TANK CAPACITY IN GALLONS: <u>10,000</u>

II. TANK CONTENTS IF A-1 IS MARKED, COMPLETE ITEM C.			
A. <input type="checkbox"/> 1 MOTOR VEHICLE FUEL	<input type="checkbox"/> 4 OIL	B. <input checked="" type="checkbox"/> 1 PRODUCT	C. <input type="checkbox"/> 1a REGULAR UNLEADED
<input checked="" type="checkbox"/> 2 PETROLEUM	<input type="checkbox"/> 80 EMPTY	<input type="checkbox"/> 2 WASTE	<input type="checkbox"/> 1b PREMIUM UNLEADED
<input type="checkbox"/> 3 CHEMICAL PRODUCT	<input type="checkbox"/> 95 UNKNOWN		<input type="checkbox"/> 2 LEADED
D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED _____		C. A. S. #: _____	
		3 DIESEL	
		4 GASAHOL	
		5 JET FUEL	
		6 AVIATION GAS	
		7 METHANOL	
		99 OTHER (DESCRIBE IN ITEM D. BELOW)	

III. TANK CONSTRUCTION MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E				
A. TYPE OF SYSTEM	<input checked="" type="checkbox"/> 1 DOUBLE WALL	<input type="checkbox"/> 3 SINGLE WALL WITH EXTERIOR LINER	<input type="checkbox"/> 95 UNKNOWN	
	<input type="checkbox"/> 2 SINGLE WALL	<input type="checkbox"/> 4 SECONDARY CONTAINMENT (VAULTED TANK)	<input type="checkbox"/> 99 OTHER	
B. TANK MATERIAL (Primary Tank)	<input type="checkbox"/> 1 BARE STEEL	<input type="checkbox"/> 2 STAINLESS STEEL	<input checked="" type="checkbox"/> 3 FIBERGLASS	<input type="checkbox"/> 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC
	<input type="checkbox"/> 5 CONCRETE	<input type="checkbox"/> 6 POLYVINYL CHLORIDE	<input type="checkbox"/> 7 ALUMINUM	<input type="checkbox"/> 8 100% METHANOL COMPATIBLE W/FRP
	<input type="checkbox"/> 9 BRONZE	<input type="checkbox"/> 10 GALVANIZED STEEL	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER
C. INTERIOR LINING	<input type="checkbox"/> 1 RUBBER LINED	<input type="checkbox"/> 2 ALKYD LINING	<input type="checkbox"/> 3 EPOXY LINING	<input type="checkbox"/> 4 PHENOLIC LINING
	<input type="checkbox"/> 5 GLASS LINING	<input checked="" type="checkbox"/> UNLINED	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER
IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? YES ___ NO ___				
D. CORROSION PROTECTION	<input type="checkbox"/> 1 POLYETHYLENE WRAP	<input type="checkbox"/> 2 COATING	<input type="checkbox"/> 3 VINYL WRAP	<input type="checkbox"/> 4 FIBERGLASS REINFORCED PLASTIC
	<input type="checkbox"/> 5 CATHODIC PROTECTION	<input checked="" type="checkbox"/> 91 NONE	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER
E. SPILL AND OVERFILL	SPILL CONTAINMENT INSTALLED (YEAR) <u>1990</u>		OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) <u>1998</u>	

IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE				
A. SYSTEM TYPE	A U 1 SUCTION	<u>BU</u> 2 PRESSURE	A U 3 GRAVITY	A U 99 OTHER
B. CONSTRUCTION	<u>AU</u> 1 SINGLE WALL	<u>AU</u> 2 DOUBLE WALL	A U 3 LINED TRENCH	A U 95 UNKNOWN A U 99 OTHER
C. MATERIAL AND CORROSION PROTECTION	<u>AU</u> 1 BARE STEEL	A U 2 STAINLESS STEEL	A U 3 POLYVINYL CHLORIDE (PVC)	<input checked="" type="checkbox"/> FIBERGLASS PIPE
	A U 5 ALUMINUM	A U 8 CONCRETE	A U 7 STEEL W/ COATING	A U 8 100% METHANOL COMPATIBLE W/FRP
	A U 9 GALVANIZED STEEL	A U 10 CATHODIC PROTECTION	A U 95 UNKNOWN	<input checked="" type="checkbox"/> 99 OTHER <u>FRP</u>
D. LEAK DETECTION	<input checked="" type="checkbox"/> 1 AUTOMATIC LINE LEAK DETECTOR	<input type="checkbox"/> 2 LINE TIGHTNESS TESTING	<input type="checkbox"/> 3 INTERSTITIAL MONITORING	<input type="checkbox"/> 99 OTHER

V. TANK LEAK DETECTION				
<input type="checkbox"/> 1 VISUAL CHECK	<input type="checkbox"/> 2 INVENTORY RECONCILIATION	<input type="checkbox"/> 3 VADOZE MONITORING	<input checked="" type="checkbox"/> 4 AUTOMATIC TANK GAUGING	<input type="checkbox"/> 5 GROUND WATER MONITORING
<input type="checkbox"/> 6 TANK TESTING	<input type="checkbox"/> 7 INTERSTITIAL MONITORING	<input type="checkbox"/> 91 NONE	<input type="checkbox"/> 95 UNKNOWN	<input type="checkbox"/> 99 OTHER

VI. TANK CLOSURE INFORMATION		
1. ESTIMATED DATE LAST USED (MO/DAY/YR)	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING _____ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL? YES <input type="checkbox"/> NO <input type="checkbox"/>

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE) Bill Bassett Bill Bassett as agent for National Automotive DATE 9-14-98

LOCAL AGENCY USE ONLY THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW				
STATE I.D.#	COUNTY #	JURISDICTION #	FACILITY #	TANK #
PERMIT NUMBER	PERMIT APPROVED BY/DATE		PERMIT EXPIRATION DATE	

**APPLICATION PACKET
FOR
UNDERGROUND STORAGE TANK
~~INSTALLATION~~/MODIFICATION PLANS**

This packet has Three Parts:

- 1) **Instructions - 3 pages**
- 2) **Application - (signature) 2 pages**
- 3) **Checklist - 6 pages**

**City of Oakland
Fire Services Agency
Office of Emergency Services
Hazardous Materials Program
505-14th St. Suite 702
Oakland, CA 94612**

**Phone (510) 238-3938
Fax (510) 238-7761**

TO: INSTALLERS AND OWNERS OF NEW UNDERGROUND STORAGE TANKS

Fire Services Agency, Office of Emergency Services (FSA/OES) has established the following guidelines to assist you in the completion of your construction project. The guidelines specify the construction and monitoring criteria necessary to complete our review of your proposed underground storage tank (UST) system.

**1) SUBMITTAL OF PLANS
INSTALLATION:**

- a) Submit 2 complete sets of drawings illustrating the locations of all existing and proposed structures, including existing UST(s), to FSA/OES. Upon approval, one set will be retained by FSA/OES and the other two will be returned.
- b) Include equipment and material specification sheets and manufacturer's brochures describing field testing procedures, operating and monitoring systems and listing numbers or other evidence of a nationally recognized testing organization approval. All proposed leak detention methods and equipments must meet the requirements specified in 40 CFR 280.40 and be accepted by the State Water Division 3, Chapter 16.
- c) All interstitial monitors must perform according to manufacturer's standards, and must be tested annually in accordance with Section 2630 (d), California Code of Regulations (CCR), Title 23 Waters. Division 3, Chapter 16.
- d) Submit a completed Consolidated Tank Management Plan (or equivalent) in accordance with Section 2632 (d) (1) & (2), CCR, Title 23 Waters, Division 3, Chapter 16.
- e) The plans should include a cross sectional diagram of the tank and piping system including secondary containment, overflow prevention equipment (spill and overflow devices), pump locations for pressure or suction piping, locations of monitoring devices (probes, sensors, and line leak detectors), and extension of all pipes and/or ports from below grade to finish grade.
- f) Submit completed State Water Resources Control Board "Facility Permit (A)" and "Tank Permit (B)" application forms. (One Form A for the facility and one Form B for each tank.)

POTENTIAL CONTAMINATION:

- a) In the event potential contamination is observed, confirmed or suspected as a result of a leaking UST system it is the responsibility of the owner or operator to submit a workplan to the FSA/OES. Based upon the information received the site could be referred to the Alameda County Environment Health Services, Local Oversight Program (LOP), prior to FSA/OES approval for initiating any assessment or remediation activities.

2) PLAN REVIEW AND OPERATING PERMIT FEES

- a) The fees due at the time of plan submittal include: (See chart on the next page.)
 - (1) Payment of the annual fee. The starting date of the 5 year operating permit will be when the system passes the final inspection. The annual fees will be due each year on the anniversary of the final inspection.

A check made payable to the City of Oakland shall accompany this application. This amount is for all plan review and installation inspection work done by this office.

- 3) \$56.00 state surcharge fee per tank is due at the time of plan submittal.

(Note: The annual fees are collected for tank and piping installations. The fees are also collected if the installation is only new piping. This follows the procedure set up by the state. Fire Services Agency, Office of Emergency Services charges an annual fee on each tank.)

1	\$210	\$730	\$56	\$996
2	\$312	\$830	\$112	\$1254
3	\$415	\$930	\$168	\$1513
4	\$521	\$1030	\$224	\$1775
5	\$603	\$1130	\$280	\$2013
6	\$717	\$1230	\$336	\$2283

- b) The maximum review time for UST installation plans is 20 working days. A preliminary review will be conducted by the FSA/OES within 10 working days of submittal date to identify any gross plan deficiencies.
- c) If deficiencies are identified, the plans will be returned with a checklist identifying the deficiencies.
- 3) **PLAN REVIEW GUIDELINES**
- a) The enclosed plan review application and checklist are to be completed and submitted with the three sets of drawings.
- b) A copy of the California UST Regulations may be obtained from the California State Water Resources Control board at (916) 227-4303.
- c) Permits and/or plan check approval may also be required by the Bay Area Air Quality Management District (415) 771-6000, the City of Oakland, Office of Planning and Building.
- d) The applicant/contractor must follow the approved plan and any change or deviation shall be reported to and approved by FSA/OES prior to installation.
- e) The approved application for installation of underground tanks is only valid for 6 months from the date of approval. Approval may be extended if a letter is sent to FAS/OES requesting this extension **thirty days prior to the expiration date**. A one time, 6-month extension may be granted by FSA/OES upon receipt of the letter.

4) **REQUIRED INSPECTIONS**

Note: The contractor's FSA/OES and Fire Prevention Bureau approved plans of the UST installation shall be retained at the job site and must be shown to the Hazardous Materials Inspector upon request. **All appointments for inspections must be at least 72 hours in advance.** Below are the minimum required inspections:

- a) Before installation, the tank shall be tested for tightness at the installation site in accordance with the manufacturer's written guidelines. If there are no guidelines, the primary and secondary containment shall be tested for tightness with air pressure between 3 and 5 pounds per square inch (p.s.i.). In lieu of a pressure test, a vacuum expressed in inches of mercury in the interstitial space of the secondary containment, is acceptable. The pressure (or vacuum in the interstitial space) shall be maintained for a minimum of 30 minutes. Where appropriate a Holiday test must be performed at the installation site at the same time as the tightness test.
- b) All new primary piping and secondary containment systems shall be tested for tightness after installation in accordance with manufacturer's guidelines. Primary **pressurized** piping shall be hydrostatically tested at 150 percent of design operating pressure or pneumatically at 110 percent of design operating pressure. The pressure shall be used as the test pressure. The pressure shall be maintained for a minimum of 30 minutes and all joints shall be soap tested. If there are no manufacturer's guidelines, secondary containment systems shall be tested using an applicable method specified in an industry code or engineering standard.
- c) All lines other than pressure piping shall be pressure tested at not less than 3 p.s.i. and not more than 5 p.s.i. for a minimum of 39 minutes and soap tested while under pressure.
- d) Containment sumps and spill containments (minimum 15 gallon) shall pass a 24-hour hydrostatic leak test.
- e) The spill container (minimum 15-gallon) shall be shown to be capable of draining liquid back into the fuel tanks.
- f) The monitoring system shall pass a functional test. The functional test shall consist of the activation of the alarm via all monitoring probes/sensors. The monitoring board shall be labeled to indicate which sensor is in alarm.
- g) Final inspection and approval to operate will be granted after the above requirements are satisfied and hard copy of the tank integrity test (as required by Section 2635 (a) (5)) is submitted to the inspector at the site. At the time of final inspection the test boot (in the piping sump) for the secondary piping must be moved so any liquid in the secondary may freely drain into the sump.
- h) As-built plans must be submitted within 30 days of the final inspection.
- i) State form C "Certification of Compliance for Underground Storage Tank Installation" must be submitted within 30 days of the final inspection.

If you need further assistance, or wish to schedule an appointment to discuss the plan review or field inspection, please contact us at (510) 238-3938.

**City of Oakland, Fire Services Agency, Office of Emergency Services
Hazardous Materials Program
APPLICATION FOR UNDERGROUND TANK INSTALLATION**

FACILITY	Project Contact & Phone # <u>Woody Ano (510) 749 613-1017</u>			
	Facility Name	<u>National Airmotive Test Cell Facility</u>	Phone# <u>same</u>	
	Address <u>7200 Earhart Rd., Oakland, CA 94621</u>			
	Cross Street <u>Lockheed St.</u>			
CONTRACTOR	Owner/Operator	<u>National Airmotive Corporation</u>	Phone # <u>(510) 613-1017</u>	
	Contractor Name	<u>Foss Environmental Services</u>	Phone # <u>(510) 749-4131</u>	
	Contractor Address	<u>1605 Ferry Point, Alameda CA</u>	License # <u>716581</u> Class <u>A</u>	
	Hazardous Waste Certified: (Qualifying license category <u>Haz. Sub. Rem.</u> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Workers Comp# <u>WC 365504801</u>	
	City of Oakland Business Tax License #		Permit #	
	Does this site have a leaking UST (or did it have a leaking tank system?)			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
TANKS	State Tank ID#	Tank Size	Material That Was Stored	Proposed Installation Date
	<u>39-</u>	<u>8,000</u>	<u>Jet A</u>	<u>1980's</u>
	<u>39-</u>	<u>8,000</u>	<u>Jet A</u>	<u>1980's</u>
	<u>39-</u>	<u>10,000</u>	<u>Jet A</u>	<u>1980's</u>
	<u>39-</u>			
	<u>39-</u>			
PLAN	<input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> APPROVED WITH CONDITION(S) <input type="checkbox"/> DISAPPROVED			
	PLAN REVIEWER'S SIGNATURE <u>[Signature]</u>		DATE OF APPROVAL <u>22 Sept 98</u>	

APPLICANT MUST PERFORM ALL WORK IN ACCORDANCE WITH CITY OF OAKLAND ORDINANCES, STATE LAWS, AND RULES AND REGULATIONS OF THE CITY OF OAKLAND FIRE SERVICES AGENCY. OWNER OR LICENSED AGENT'S SIGNATURE CERTIFIES THE FOLLOWING: " I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS INSTALLATION PLAN IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IS SUCH A MANNER AS TO BECOME SUBJECT TO WORKER'S COMPENSATION LAWS OF CALIFORNIA." CONTRACTOR'S HIRING OR SUBCONTRACTING SIGNATURE CERTIFIES THE FOLLOWING: "I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS INSTALLATION PLAN IS ISSUED, I SHALL EMPLOY PERSONS SUBJECT TO WORKER'S COMPENSATION LAWS OF CALIFORNIA."

APPLICANT'S SIGNATURE [Signature] TITLE: as agent for National Airmotive DATE: 9-14-98



UST SYSTEM DRAWING INFORMATION (Drawings and submissions must include #1 through #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. Type of tank anchor and calculation of sufficiency. *Pre-existing*
5. Tank cross-sectional diagram. (Sticker plates or drop tube-mounted bottom protectors illustrated below all accessible openings.)
6. Detail of tank, associated piping, leak detection equipment, excavation and cover.
7. Tank(s) and piping approved by a nationally recognized independent testing organization. (Title 23, Chapter 16 Article 3, Section 2631 (b), and Section 2635)
8. Verification of product compatibility with the tank(s), piping, monitoring device(s), epoxy or silicone glues, etc.
9. Manufacturer's written installation instructions for tank(s), piping, monitoring devices, etc.

TANK COMPOSITION

10. **Tank Information Table. Please fill in the information for each tank.**

TANK #	# 1	# 2	# 3	#	#
CAPACITY	8000	8000	10000		
MANUFACTURER	unk.	unk.	unk.		
COMPOSITION	dwt	dwt	dwt		
MODEL	unk	unk	unk		
PRODUCT	Jet A	Jet A	Jet A		
CORROSION PROTECTION	—	—	—		
UL LISTED	unk	unk	unk		
COMPATIBILITY WITH 100% METHANOL	unk	unk	unk		

TANK(s) TO BE INSTALLED (Section 2635) (Note which type of tank is to be installed. Note the applicable requirements.)

11. ___ **Steel - clad with fiberglass reinforced plastic coatings, composites, or equivalent non-metallic exterior coatings or coverings. (Installation requirements).**
___(A) Tested at the installation site using an electric resistance holiday detector.
___(B) Tightness tested before installation: (manufacturer's guidelines).
12. ___ **Fiberglass tank (primary and secondary are fiberglass) or Composite (jacketed) tank (primary tank steel and secondary tank fiberglass)**
___(A) Tightness tested before installation: (manufacturer's guidelines).
13. ___ **Non-clad steel tank (Section 2635 (a) (2) (A)) (For example Stip. tanks)**
___(A) Cathodic protection provided for entire tank, piping and components (nuts, bolts, washer, etc.).
___(B) Field installed cathodic protection for entire tank, piping and components (nuts, bolts, washers, etc.).
___(C) Impressed current systems to be inspected no less than every 60 days.
___(D) Tightness tested before installation: (manufacturer's guidelines).

ALTERNATE CONSTRUCTION

(For new underground storage tanks containing motor vehicle fuel. These tanks are to be in compliance with Section 2633 and Section 2634.)

14. ___ Monitoring and response plan complies with Section 2634.
15. ___ Underground storage tank composed of...
___(A) Fiberglass reinforced plastic, or
___(B) Cathodically protected steel, or
___(C) Steel with fiberglass reinforced plastic, or
___(D) Other material that complies with section 2631 and 2632.
16. ___ Floor of leak interception and detection (LID) system constructed on a firm base and sloped to a collection sump (use of membrane liner so complies with Section 2631 (d) (6) requirements.)
17. ___ Access casings shall be installed in the collection sump of a secondary containment system which has backfill in the interstitial space. The access casing shall meet all of the following: (see Section 2633 (e))
___(A) Designed and installed to allow the liquid to flow into the casing.
___(B) Sized to allow removal of collected liquid and able to withstand all anticipated applied stresses.
___(C) Constructed of material that will not be structurally weakened.

- (D) Screened along entire vertical zone of permeable material.
- (E) Capable of preventing leakage of any hazardous substance from the casing.
- (F) Extend to the ground surface and covered with a locked waterproof cap.
- (G) Capable of meeting Alameda County Zone 7 Well Standards.
- (H) Leak interception and detection system shall prevent the leaked hazardous substance from entering ground water.

INTERSTITIAL SPACE MONITORING

(For tanks constructed and installed according to section 2631.) (Indicate which monitoring will be used.)

18. Visual monitoring (Section 2632(c)(1) (Must include all of the following:))
- (A) Exterior surface and floor beneath tank monitored by direct viewing,
 - (B) Daily visual inspections (see 2632(c)(1)(B) for exceptions),
 - (C) Liquid level in tank to be recorded at time of each inspection,
 - (D) If liquid observed around or beneath primary tank, owner will determine if an unauthorized release has occurred.

19. Mechanical or electronic monitoring (Section 2632 (c) (2)) (The following apply where appropriate:)

Continuous monitoring system connected to an audible and visual alarm system.

Monitoring equipment to be installed:

Manufacturer: Veeder Root

Model Number: TLS-350

Sensor/Panel specifications.

(Submit manufacturer's specifications for the sensors and for the panel.)

Location(s) for sensors:

Tank: in tank Piping: pipng sump

Dispenser: _____

20. Monitoring and response plan submitted (Section 2632 (d) (1) & (2))

SPECIAL ACCESSORIES, FITTINGS, COATINGS, OR LININGS

(Not inherent within the initial design of the primary tank or double-wall UST.) (Section 2631 (b))

21. Approved by a nationally recognized independent testing organization.
22. Demonstration of integrity with the primary and/or secondary containment.

TANKS SUBJECT TO FLOTATION. (SECTION 2635 (a) (7)) (Provide the following:)

- 23. ___ Anchored by deadman or slab.
- 24. ___ Anchors to be installed as specified by manufacturer.
- 25. ___ Installation details provided on plans.
- 26. ___ Calculations provided.

SPILL AND OVERFILL PREVENTION

(Underground storage tank equipped with spill container and an overflow prevention system. Provide a detailed drawing of spill container(s)/piping sump(s), including tank fill and all openings).

- 27. ___ pre-existing Spill container (Section 2635 (b)(1)). (Must meet the following:)

- ___ (A) If made of metal, exterior wall protected from galvanic corrosion.
- ___ (B) Capacity: (minimum of fifteen gallons) _____
- ___ (C) Equipped with a drain valve which allows drainage of spill into primary container.
- ___ (D) Manufacturer: _____

- 28. **Overflow prevention system does not allow for manual override and meets one of the following requirements:**
(See PIPING #30(c) below for exception.)

- ___ (A) Alert transfer operator at 90% full by restricting the flow into the tank or triggering an audible and visual alarm (Section 2635(b)(2)(A))

Manufacturer: _____ Model: _____

or

- ___ (B) Restrict delivery flow to the tank 30 minutes before overflow when tank is filled at no more than 95% capacity and activates an audible alarm at least five minutes before overflow (Section 2635 (b) (2) (B)).

Manufacturer: _____ Model: _____

or

- (C) Provide positive shut off at not more than 95% capacity (Section 2635 (b) (2) (C)).

Manufacturer: Emco Wheaton Model: A1100-056

or

- ___ (D) Provide positive shut-off of flow to the tank so that the fittings on top of the tank are not exposed to the product overflowing (Section 2635 (b) (2) (D)).

Manufacturer: _____ Model: _____

PIPING INFORMATION

29. PIPING Table (Please fill in the information for each tank.)

	* 75'			
	Enviroflex			
	pressure			
	double walled			
	fiberglass reinforced plastic			
	Veeder Root TLS-350			
	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		
	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		

* System Type; suction, pressure, or gravity

** Construction: single-walled, double-walled, lined-trench, etc.

*** Material Type; steel with cathodic protection, stainless-steel, or fiberglass reinforced plastic

PIPING (provide the following on the cross-sectional diagram, including connections to tank and dispensers).

30. Vent and Fuel Drop tank riser primary containment system equipped with an overfill prevention system that:

(A) Restricts delivery of flow to tank and activates an audible alarm (Section 2635 (b) (2) (B) or (C)), or

(B) Provide positive shut off of flow to the tank at no more than 95% (Section 2635 (b) (2) (C)), unless

(C) ".....the tank inlet exists in an observable area, the spill container is adequate to collect any overfill, and the tank system if filled by transfers of no more than 25 gallons at one time." (Section 2635 (b) (3))

31. Corrodible underground piping protected against corrosion (Section 2636 9b).

32. Underground primary piping must meet all of the following requirements:

Except as provided below, all piping shall be secondarily contained.

- Vent or tank riser piping attached to tanks protected by an overfill prevention system (see #30), or
- Vapor recovery piping designed so it cannot contain liquid phase product, or
- Suction piping (below grade piping operates at less than atmospheric pressure) (Section 2636 (a) (3))
 - Sloped so contents of the pipe will drain back into the storage tank if the suction is released, and
 - No valves or pumps installed below grade, and
 - Inspection method provided to demonstrate compliance with section 2636 (a) (3).

(A) Primary piping in contact with hazardous substance under normal operation conditions shall be installed inside a secondary containment system (see exception above) in the form of:

secondary pipe, or vault, or lined trench

which is to be sloped to a collection sump located at the low point of the secondary containment

(B) Primary piping and secondary containment systems will be installed in accordance with industry code of proactive and voluntary consensus standards.

(C) Lined trench used as secondary containment must meet the following:

Material is compatible with the substance stored.

Covered and capable of supporting any expected vehicular traffic.

33. Underground piping with secondary containment shall be equipped and monitored as follows:

Secondary containment will be equipped with a continuous monitoring system connected to an audible and visual alarm system, and if

Pressurized piping:

Automatic line leak detectors will be installed on pressurized piping unless the continuous monitor shuts down the pump and activates the alarm system when a release is detected.

Manufacturer: _____ Model: _____

Annual monitoring will be conducted on the pressurized piping with secondary containment unless the continuous monitoring system:

- shuts down the pump and activates the alarm system when a release is detected, and
- the pumping system shuts down if the continuous monitoring system fails or is disconnected.

ADDITIONAL CONCERNS

34. What is the approximate depth to ground water: estimated 10'
(include source of information-borehole logs, monitoring well data, water studies, etc.)

35. Total number of tanks on site after installation: 3

36. Submit a Site Safety plan. (contractor)

37. Contractor must submit a copy of Workers Compensation Certificate.

38. Office of Planning and Building notified.

39. Submit documentation of Financial Responsibility Certification.

40. In the event contamination is observed, confirmed or suspected as a result of a leaking UST system it is your responsibility (in accordance with (CCR) Title 23, Division 3, Chapter 16, Article 11, Corrective Action Requirements) as an owner or operator to submit a workplan to Fire Services Agency. Based upon information received the case could be referred Alameda County Environmental Health Services LOP Site Mitigation Unit for review. Prior to approval for initiating any assessment or remediation activities.

The owner or operator must acknowledge this responsibility for workplan submittal by signature and date below.

Name Bill Bassett
Title as agent for National Airmotive Date 9-14-98

Upon review of the installation application, installation application checklist, and accompanying documentation the following conditions are attached as a part of the approved installation application.

INDICATE THE RESPONSIBLE PARTY TO BE BILLED FOR ADDITIONAL FSA/OES STAFF TIME EXPENDED BEYOND THE HOURS COVERED BY THE INITIAL DEPOSIT AMOUNT. THE PARTY MUST ACKNOWLEDGE THIS RESPONSIBILITY FOR THE ADDITIONAL BILLING BY SIGNATURE AND DATE BELOW.

NAME Foss Environmental Services Co.

MAILING ADDRESS 1605 Ferry Point, Alameda, CA 94501
STREET CITY, STATE, ZIP

DAY PHONE NUMBER (510) 749-4131
area code phone #

SIGNATURE 

DATE 9-14-98

CONDITIONS OF APPROVAL:

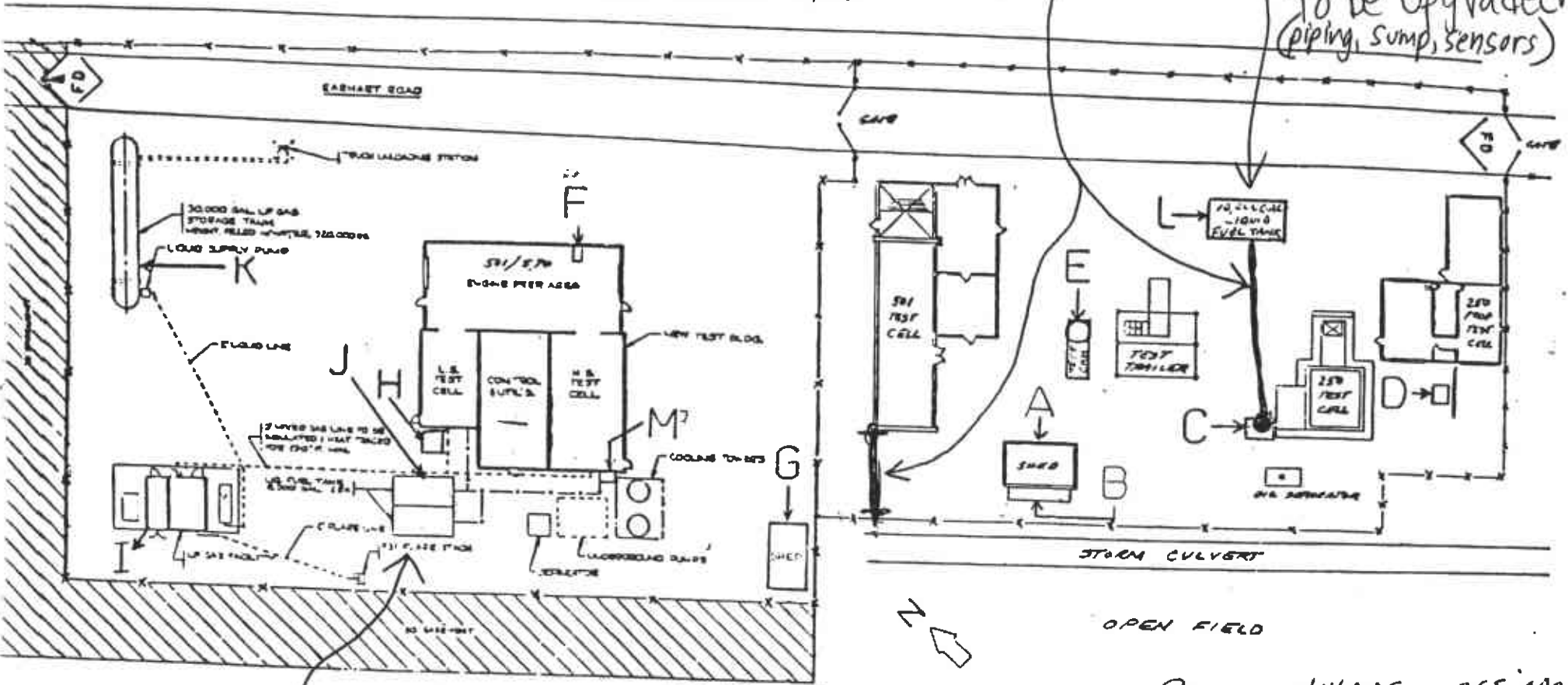
1. At the installation site, prior to installation, a tightness test shall be performed on both primary (1) and secondary (2) containment systems before covering. (Section 2635 (a) (3) & (4))
2. Tank integrity test or equivalent required upon completion of installation with tank in operating condition. Test results to be submitted directly to Fire Services Agency, Office of Emergency Services from the testing company or owner of facility. (Health & Safety code, Division 20, Chapter 6.7, Section 25291 (h))
3. Submit as-built plans to this office within 30 days of the final inspection.

underground
Piping to
be replaced

10,000 gal.
tank
to be upgraded
(piping, sump, sensors)

TIDAL MARSH LAND

EARNHART ROAD



OPEN FIELD

OPEN FIELD

2 - 8,000 gal. tanks to
be upgraded
(replace intank sensors)

9 employees assigned
2 acres

NATIONAL AIRMOTIVE CORP.
7200 LOCKHEED STREET
SITE LAYOUT DIAGRAM

FOSS

ENVIRONMENTAL &
INFRASTRUCTURE

Always Ready

Site Safety & Health Plan

Customer: National Automotive Date: 9/14/98
Business Type (Industry): Testing jet engines

I. Site Information

Address: 7200 Earhart Rd., Oakland, CA
Contact: _____ Title: _____ Phone: _____
Woody Ano Fac. Mgr. (510) 613-1017

II. Emergency Contacts

Regional Foss Office: Alameda Spill/Release Contact: Todd Roloff
Customer Contact: Bill Bassett Phone: (510) 749-1390
Medical Emergency Telephone and Location: 911

III. Project Summary

Scope of Work (Check all that apply):

- Labpacking
- Repacking
- Other tank upgrades
- Haz. Cat.
- Sampling
- Overpacking
- T & D
- Bulking

Site Hazard (Check all that apply): *- Requires H & S Manager Review

- Inhalation Hazard*
- Poor Lighting
- Biohazard*
- Carcinogens*
- Other (list) Heavy equipment
- Corrosive
- Poor Ventilation
- Oxygen Deficiency*
- Explosives*
- Flammable
- Cold
- Permit Confined Space*
- Noise
- Sharps
- Heat
- Radioactivity*
- Reactive

Training Requirements:

- Site Orientation
- Hazard Communication
- Evacuation Procedure
- Emergency Response
- Other _____

IV. Safety Control

Safety Equipment Required

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> Fixed Eyewash / Shower | <input type="checkbox"/> Portable Eyewash / Shower | <input checked="" type="checkbox"/> First Aid Kit | <input checked="" type="checkbox"/> Spill Kit |
| <input checked="" type="checkbox"/> Decon Supplies | <input checked="" type="checkbox"/> Fire Extinguisher | <input checked="" type="checkbox"/> Non-Sparking Tools | |
| <input type="checkbox"/> Bonding Clips / Grounds / Wires | <input type="checkbox"/> Barrier Shields | <input checked="" type="checkbox"/> Caution Tape | <input checked="" type="checkbox"/> Cones |
| <input type="checkbox"/> Specific Hazard Warning Signs | <input type="checkbox"/> Portable Hood | <input type="checkbox"/> Portable Lights | <input type="checkbox"/> Pallet Jack |
| <input type="checkbox"/> Drum Dolly | <input type="checkbox"/> Level A | <input type="checkbox"/> Level B | <input checked="" type="checkbox"/> Level C |
| <input type="checkbox"/> Other _____ | | | |

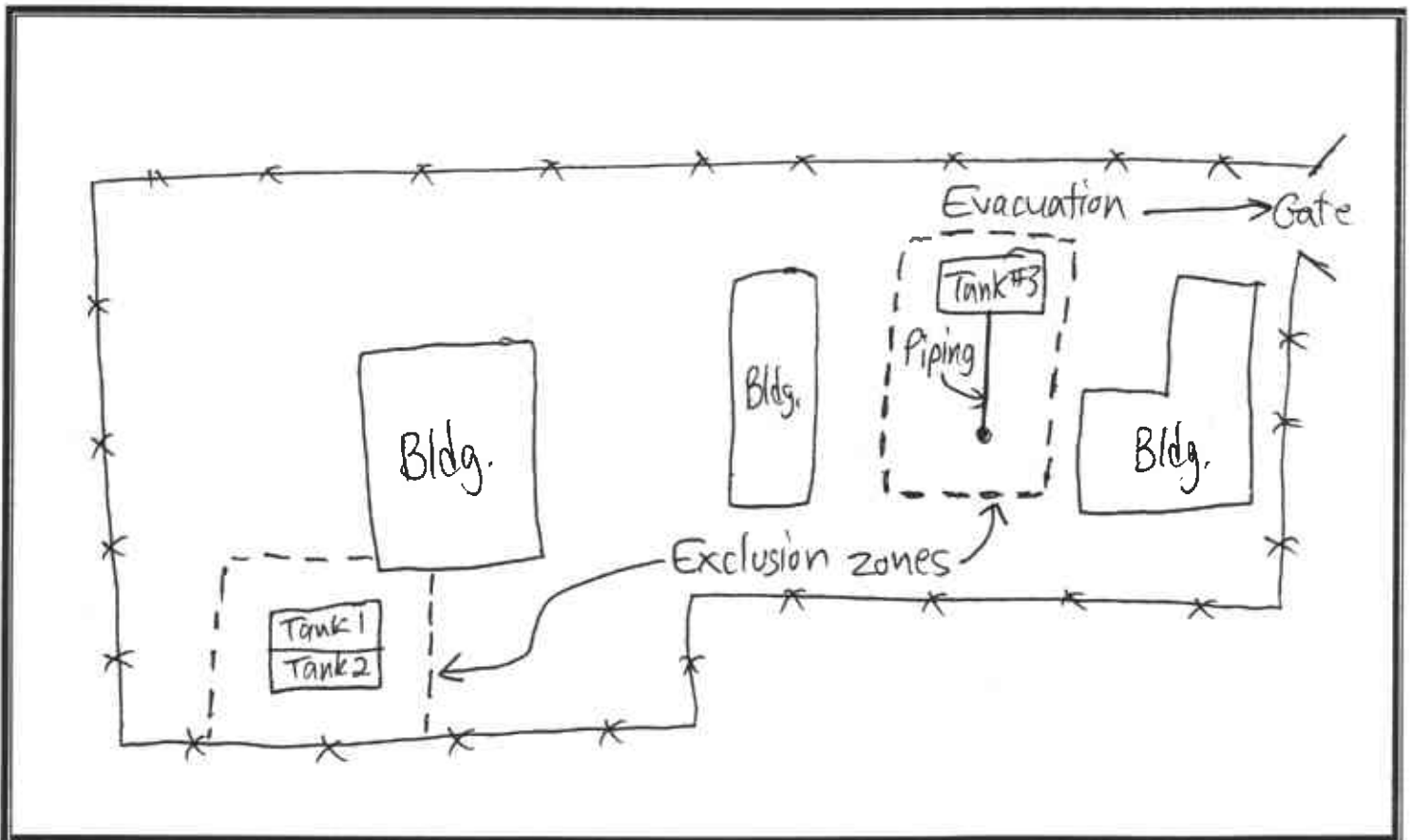
Foss Uniform, Safety Shoes & Safety Glasses with side shields required on all jobs.

Notes & Special Instructions: Work carefully around heavy machinery.

V. Site Diagram:

Sketch the work area or attach a schematic drawing. Please include the following:

- ◆ Evacuation Route
- ◆ Exits
- ◆ Alarms
- ◆ Telephone
- ◆ Eyewash / Shower
- ◆ Exclusion zone
- ◆ Decontamination Zone
- ◆ Support Zone
- ◆ Fire Extinguisher



ACORD CERTIFICATE OF LIABILITY INSURANCE

PAGE 1 OF 1 DATE (MM/DD/YY) 25-SEP-1997

PRODUCER
 Willis Corroon Corporation of Seattle
 P. O. Box 34201
 701 Fifth Avenue
 4200 Columbia Center
 Seattle WA 98124
 (206) 386-7400
 Julie Dullea
 INSURED

41578

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

- A** COMPANY Zurich Insurance Company
- B** COMPANY American Guarantee & Liability Insurance Co.
- C** COMPANY Steadfast Insurance Company
- D** COMPANY

Foss Environmental Services Company
 1605 Ferry Point
 Alameda CA 94501

COVERAGES

REPORTED AS OF 01-OCT-1997

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS								
A	GENERAL LIABILITY	GLO804568404	01-OCT-1997	01-OCT-1998	GENERAL AGGREGATE \$ 1,000,000								
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT				PRODUCTS-COMP/OP AGG \$ 1,000,000 PERSONAL & ADV INJURY \$ 1,000,000 EACH OCCURRENCE \$ 1,000,000 FIRE DAMAGE (Any one fire) \$ 50,000 MED EXP (Any one person) \$ 5,000								
B	AUTOMOBILE LIABILITY	BAP804568503	01-OCT-1997	01-OCT-1998	COMBINED SINGLE LIMIT \$ 1,000,000								
	<input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS <input checked="" type="checkbox"/> MCS-90 Filing				BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$								
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY \$ EACH ACCIDENT \$ AGGREGATE \$								
	EXCESS LIABILITY				UMBRELLA FORM \$ OTHER THAN UMBRELLA FORM \$								
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WC365504801	01-JUL-1997	01-JUL-1998	<table border="1"> <tr> <td>WC STATUTORY LIMITS</td> <td>OTHER</td> </tr> <tr> <td>EL EACH ACCIDENT</td> <td>\$ 1,000,000</td> </tr> <tr> <td>EL DISEASE-POLICY LIMIT</td> <td>\$ 1,000,000</td> </tr> <tr> <td>EL DISEASE-EA EMPLOYEE</td> <td>\$ 1,000,000</td> </tr> </table>	WC STATUTORY LIMITS	OTHER	EL EACH ACCIDENT	\$ 1,000,000	EL DISEASE-POLICY LIMIT	\$ 1,000,000	EL DISEASE-EA EMPLOYEE	\$ 1,000,000
WC STATUTORY LIMITS	OTHER												
EL EACH ACCIDENT	\$ 1,000,000												
EL DISEASE-POLICY LIMIT	\$ 1,000,000												
EL DISEASE-EA EMPLOYEE	\$ 1,000,000												
C	OTHER CONTRACTOR'S POLLUTION AND ERRORS & OMISSIONS	PEC804568303	01-OCT-1997	01-OCT-1998	\$1,000,000 Each Incident \$1,000,000 Total All Incidents								

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS


RE: Evidence of Insurance

CERTIFICATE HOLDER

To Whom it may concern
 c/o Foss Environmental
 1605 Ferry Point
 Alameda CA 94501

CANCELLATION

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

AUTHORIZED REPRESENTATIVE


TLS-350 UST Monitoring System

Integrated, Modular Design for Complete Regulatory Compliance and Business Management



- ▶ **Modular design meets current business and regulatory requirements, with expansion capabilities for future needs.**
- ▶ **Integrated solution for centralized, single-system site monitoring.**
- ▶ **Programmable leak test features.**
- ▶ **2-line, 24-character-per-line liquid crystal display and 12-button keyboard step the operator through simple programming and operation functions.**

With its modular design, the TLS-350 lets you choose the exact set of compliance and fuel management features you need today. As regulatory requirements and your business needs change, the flexible TLS-350 platform allows you to add new features tomorrow. A safe investment. A smart decision.

Leading-Edge Leak Detection Technology

The TLS-350 has defined the industry standard for tank monitoring systems with: advanced magnetostrictive probe technologies offering 0.2 GPH monthly monitoring and 0.1 GPH volumetric tank testing; accurate, automatic electronic line leak detection; and, 4SITE Advanced Technology Sensors and a complete line of standard leak sensors to monitor double-wall tanks, containment sumps, and wet and dry wells.

Plus, for 24-hour stations and high-volume operations, Continuous Statistical Leak Detection (CSLD), the most advanced leak detection technology available today,

provides 24-hour, automatic leak detection *without* tank shutdown. No lost business. No lost operating time.

Leading-Edge Business Management Features

The TLS-350 takes business management a step beyond normal fuel inventory management. The SiteFax option provides auto-dial fax capability, letting you send up to 16 different reports to up to 8 separate fax machines on a programmable schedule and fax alarm messages instantaneously. The Graphic Remote Display option lets the operator view all inventory, alarm and system status information without leaving the counter or office unattended.

The optional fuel manager software available for the TLS-350 allows you to track average daily fuel usage, predict the days of remaining inventory, and improve delivery scheduling.

By utilizing Remote Control™ Veeder-Root's new tank management software, all inventory management and environmental compliance can be easily centralized on a personal computer in one location.

The use of these time and money saving options extend your investment in the TLS-350 beyond environmental compliance requirements, improving your bottom line.

System Capabilities

- ▶ **Continuous inventory monitoring.**
- ▶ **Fast, 0.1 GPH in-tank leak detection for up to 8 tanks.**
- ▶ **CSLD option for continuous 24-hour leak detection.**
- ▶ **Line leak detection for up to 8 lines.**
- ▶ **SiteFax auto-dial fax capability.**
- ▶ **Graphic Remote Display option.**
- ▶ **4SITE advanced technology sensor compatibility.**
- ▶ **Interstitial and piping sump leak sensing for up to 64 sensors.**
- ▶ **Vapor and groundwater monitoring for up to 40 wells.**
- ▶ **External inputs.**
- ▶ **Relay outputs.**
- ▶ **Programmable alarms.**
- ▶ **Data communications.**
- ▶ **All third-party tested. All proven in the field.**

Emergency Generator Applications

- ▶ **Selectable via programming.**
- ▶ **One system handles mix of standard and emergency generator tanks.**
- ▶ **Records generator activity.**
- ▶ **Complete inventory reports before and after generator operation.**

FLEX CATCH

Grade Level Spill Containment

EBW's 5, 15, and 25 Gallon GL Spill containment manholes come equipped with either a Fiber Reinforced Composite snap on cover or a Fiber Reinforced Composite raintight cover (Aluminum and Cast Iron optional) for easy access. The durable and flexible polyethylene shell gives with natural tank movements. It's Equipped with a cast iron deflector ring to protect from heavy traffic and truck plows. The cast iron base (or composite base) easily threads onto the tank riser. Also featured is a pull to push drain to release contained product into the underground storage tank.



5 Gallon GL



15 Gallon GL



25 Gallon GL

Flex Catch - 5 Gallon Grade Level

Part no.	Wt.	Model Style	Base	Cover	Features	Drain
705-470-01	50lbs.	Standard	CI	FRC-AL-CI	Raintight	Pull to Push
705-471-01	38lbs.	Standard	Comp	FRC-AL-CI	Raintight	Pull to Push
705-471-21	54lbs.	British Thrd	CI	FRC	Snap-on	Pull to Push
705-472-01	54lbs.	Standard	CI	FRC	Snap-on	Pull to Push
705-472-65	63lbs.	Canadian	CI	FRC	Snap-on	Pull to Push
705-473-01	38lbs.	Standard	Comp	FRC	Snap-on	Pull to Push
705-473-65	51lbs.	Canadian	Comp	FRC	Snap-on	Pull to Push
705-458-01	51lbs.	Standard	CI	FRC-AL-CI	Raintight	None

Flex Catch - 15 Gallon Grade Level

Part no.	Wt.	Model Style	Base	Cover	Features	Drain
715-470-01	58lbs.	Standard	CI	FRC-AL-CI	Raintight	Pull to Push
715-471-01	46lbs.	Standard	Comp	FRC-AL-CI	Raintight	Pull to Push
715-472-01	62lbs.	Standard	CI	FRC	Snap-on	Pull to Push
715-472-65	77lbs.	Canadian	CI	FRC	Snap-on	Pull to Push
715-473-01	50lbs.	Standard	Comp	FRC	Snap-on	Pull to Push
715-473-65	65lbs.	Canadian	Comp	FRC	Snap-on	Pull to Push

Flex Catch - 25 Gallon Grade Level

Part no.	Wt.	Model Style	Base	Cover	Features	Drain
725-470-01	88lbs.	Standard	CI	FRC-AL-CI	Raintight	Pull to Push
725-471-01	76lbs.	Standard	Comp	FRC	Raintight	Pull to Push
725-472-01	92lbs.	Standard	CI	FRC	Snap-on	Pull to Push
725-472-65	110lbs.	Canadian	CI	FRC	Snap-on	Pull to Push
725-473-01	80lbs.	Standard	Comp	FRC	Snap-on	Pull to Push
725-473-65	98lbs.	Canadian	Comp	FRC	Snap-on	Pull to Push

COVER OPTIONS & REPLACEMENTS

FRC	Fiber Reinforced Composite	705-423-01
AL	Aluminum	705-409
CI	Cast Iron	705-430
	Snap-on	705-333



Sales Desk (800) 475-3291 • Sales Fax (800) 475-4329 • Phone (616) 755-1671

2814 McCracken Avenue, Muskegon, MI 49441

Polyethylene Tank Sump Accessories

Mounting Flange

Steel extension nipple installed into a tank's fitting to mount any size tank sump with a bottom. Includes male-threaded nipple, compression ring and necessary nuts, washers and gasket.

Part #	Description
MF0004	4" Mounting Flange
MF0006	6" Mounting Flange
MF0415	4" Mounting Flange (BSPT)

Mounting Ring

Provides easy and cost effective means of mounting Total Containment® Sumps using Total Containment Close-Off Fittings.

Part #	Description
MR0200	2" Mounting Ring
MR0400	4" Mounting Ring
MR0600	6" Mounting Ring

Manway Mount Kits

Kits used to fasten and seal Total Containment Tank Sumps to fiberglass or steel tank manways. Includes three-piece compression rings and gaskets.

Part #	Description
MK0022	22" Kit (1 ring; 2 gaskets)
MK0024	24" Kit (1 ring; 2 gaskets)
MK0042	42" Kit (1 ring; 1 gasket)
MK0042A	42" Kit (2 rings; 1 gasket; & bolt kit)

Note: 42" kits should *not* be used on any 42" all-FRP reverse-flange collars unless approved by Total Containment.

Sump Mounting Kit

Kit used to fasten and seal Total Containment Tank Sumps to Total Containment Tanks built with reverse flange manway. Includes one (1) three-piece powder-coated compression ring, one (1) gasket, nuts and washers.

Part #	Description
MK0036	Sump Mounting Kit

Manway Gaskets

Gaskets standard with manways.

Part #	Description
MG0022	22" Manway Gasket
MG0024	24" Manway Gasket
MG0042	42" Manway Gasket

Tank Sump Lids and Accessories

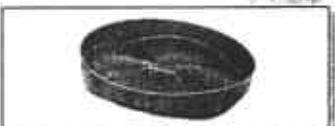
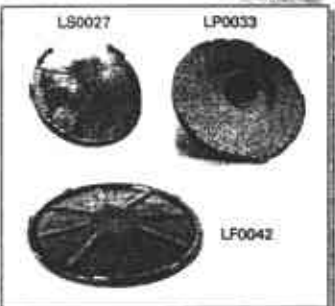
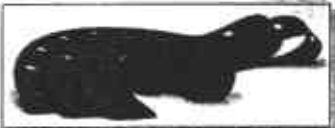
Replacement parts used for liquid-resistant sump access.

Part #	Description
OC0008	Observation Cap <i>(port for cap must be pre-cut at Total Containment)</i>
27" Lids	
LP0027	27" Sump Lid Assembly (lid, gasket, observation cap)
LS0027	27" Sump Lid with Gasket
BK2727	Bolt-down Lid Kit (4 hooks)
LG0922E1	27" Lid Gasket
33" Lids	
LP0033	33" Sump Lid Assembly (lid, gasket, observation cap)
LS0033	33" Sump Lid with Gasket
BK3333	Bolt-down Lid Kit (8 hooks)
LG0875E1	33" Lid Gasket
42" Lids	
LP0042	42" Sump Lid Assembly (lid, gasket, observation cap)
LF0042	42" Fiberglass Lid with Gasket
BK3333	Bolt-down Lid Kit (8 hooks)
LG0942E1	42" Lid Gasket

Backfill Container

Installed between sump and tank to prevent backfill erosion.

Part #	Description
BC0048	Backfill Container

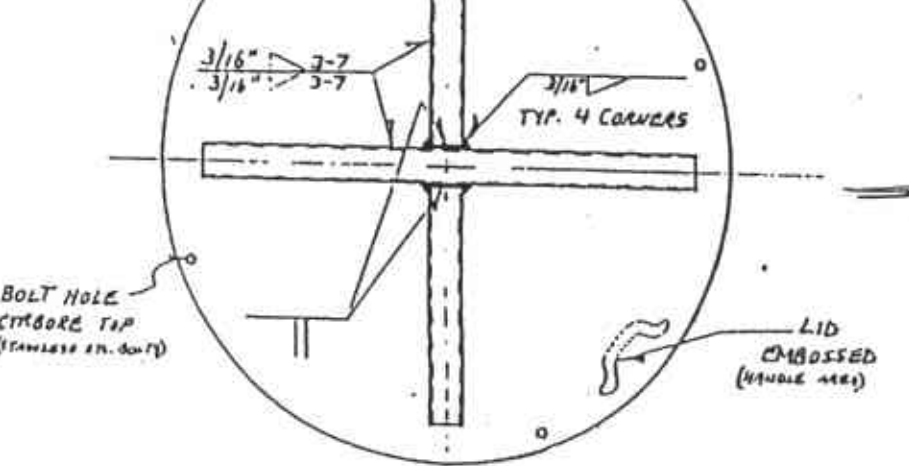


➔ Designates new product or product revision.

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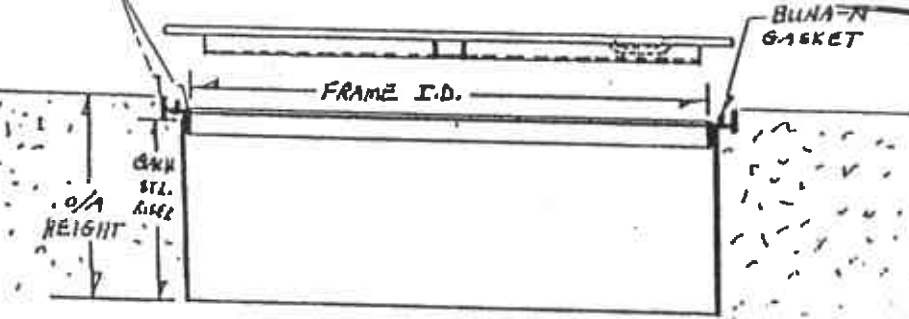
REINFORCEMENT
(ON EDGE, 3" SIDE)

LID VIEWED FROM
UNDERSIDE.



BOLT HOLE
CIRCUMFERENCE
(STAINLESS STEEL)

STEEL
FRAME
ASSY.



MODEL NO.	DIA HEIGHT	RISER HEIGHT	FRAME I.D.	FRAME O.D.	LID REINF.	HANDLES	NO BOLTS	APPROX. WT LBS
400-42R	13"	12"	42"	45"	3"x4" 1/8" C/SH	1	4EA 3/8"-18	265
400-42RL	10"	9"	42"	45"	3"x4" 1/8" C/SH	1	3/8"-18	260
400-36R	13"	12"	36"	38"	2"x2" 3/8" C/SH	1	3/8"-18	199
400-36RL	10"	9"	36"	38"	2"x2" 3/8" C/SH	1	3/8"-18	195
400-30R	13"	12"	30"	33"	2"x2" 3/8" C/SH	1	3/8"-18	181
400-30RL	10"	9"	30"	33"	2"x2" 3/8" C/SH	1	3/8"-18	177
400-24R	13"	12"	24"	27"		1	3/8"-18	99
400-24RL	10"	9"	24"	27"		1	3/8"-18	99
400-18R	13"	12"	18"	21"		OPT.	3EA 3/8"-18	63
400-18RL	10"	9"	18"	21"		OPT.	3EA 3/8"-18	63
400-16R	13"	12"	16"	19"		OPT.	3EA 3/8"-18	65
400-16RL	10"	9"	16"	19"		OPT.	3EA 3/8"-18	63
400-12R	13"	12"	12"	15"		OPT.	3EA 3/8"-18	39
400-12RL	10"	9"	12"	15"		OPT.	3EA 3/8"-18	38

*NOTE: #300 Series designates the non-bolted (not watertight) lid version. Otherwise same as above. 11-20 Load Rated.

MATERIALS:

- LID: 3/8" STEEL
DIAMOND FLOOR PLATE
- GASKET: BUNA-N
1/4" O.D.
- BOLTS: 3/8"-18 INCH HEAD SS
(3/16"-18 12"-18 SIZES)
- HANDLE: 3/8" X 1/4" STEEL
RECESSED WATER TIGHT
- FRAME: 3/8" X 1/4" STEEL
- RISER: GALVANIZED STEEL

DISTRIBUTED BY:

#400 SERIES GRADE LEVEL ACCESS BOXES
WATERTIGHT LID. 11-20 LOAD RATED.

BAKER INDUSTRIES NORTHWEST, INC.
12428 HIGHWAY 99 SOUTH #58
EVERETT, WASHINGTON 98204
TEL: (206) 745-6130 FAX: (206) 353-6788

REV	DATE	DESCRIPTION

DRAWN	CHECKED	DATE
LS		1-17-92

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BAKER INDUSTRIES NORTHWEST, INC.

12428 Highway 99 South • Unit 56 • Everett, WA 98204

Phone (206) 745-6130 • FAX (206) 353-6788

ROUND ACCESS BOXES

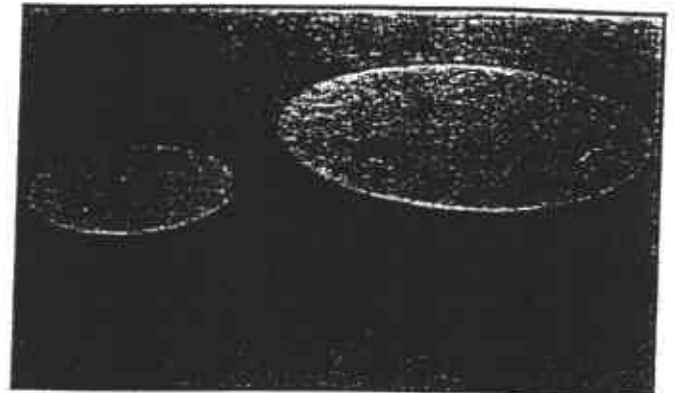
For Grade Level Applications

DESIGN FEATURES OF 400 SERIES:

- Heavy Duty Steel Diamond Plate Lid, Rated For H20 Axle Loads.
- Fully Recessed Steel Handle, Watertight.
- Galvanized Steel Skirt.
- Formed STEEL Support Ring.
- BUNA-N Lid Gasket, Watertight Lid.
- Recessed STAINLESS STEEL Security Bolts In Lid.
- Manufactured In Everett, WA.

NOTE: 300 Series Models 300-12RL thru 300-42RL same as above except do not include lid gasket or security bolts. (not a watertight lid)

DISTRIBUTED BY:



Model 400-16R

Model 400-36R

DESCRIPTION

MODEL	SKIRT I.D.	LID O.D.	HEIGHT
400-12RL	12"	15"	10"
400-16R	16"	19"	13"
400-16RL	16"	19"	10"
400-18R	18"	21"	13"
400-18RL	18"	21"	10"
400-24R	24"	27"	13"
400-24RL	24"	27"	10"
400-30R	30"	33"	13"
400-30RL	30"	33"	10"
400-36R	36"	39"	13"
400-36RL	36"	39"	10"
400-42R	42"	45"	13"
400-42RL	42"	45"	10"

* 'L' models are 10" rather than 13" high.

* 12"-18" sizes do not include recessed handle unless specified.

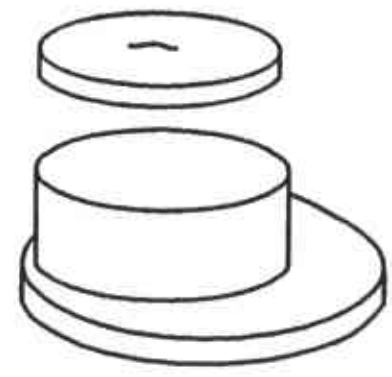
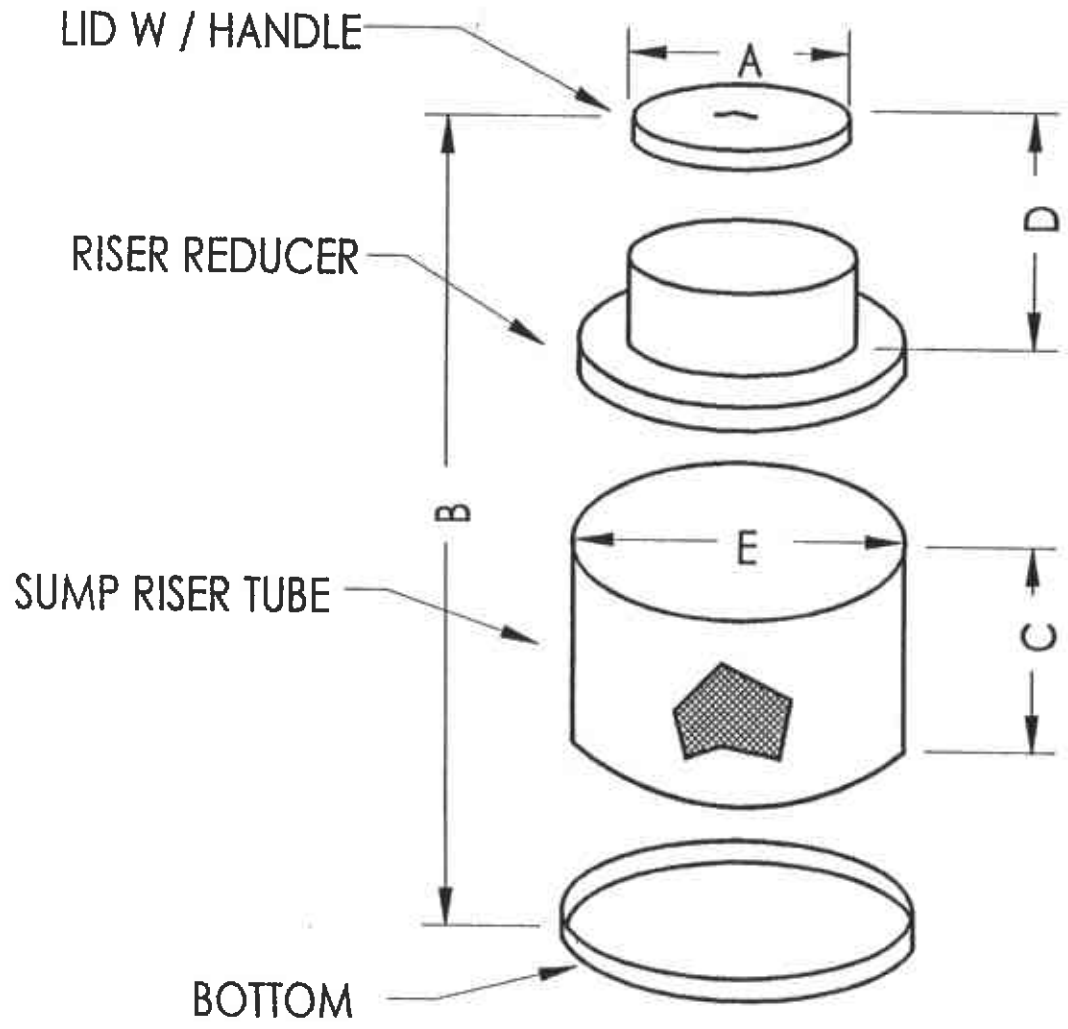
* Dimensions are approximate.

* Other sizes produced on request.

* 20" x 20" and 24" x 24" square access boxes available.



MEMBER
PEI
PROFESSIONAL EQUIPMENT INC.



OFF-SET REDUCER

REDUCER RISER TUBE MAY BE OFFSET TO SUIT

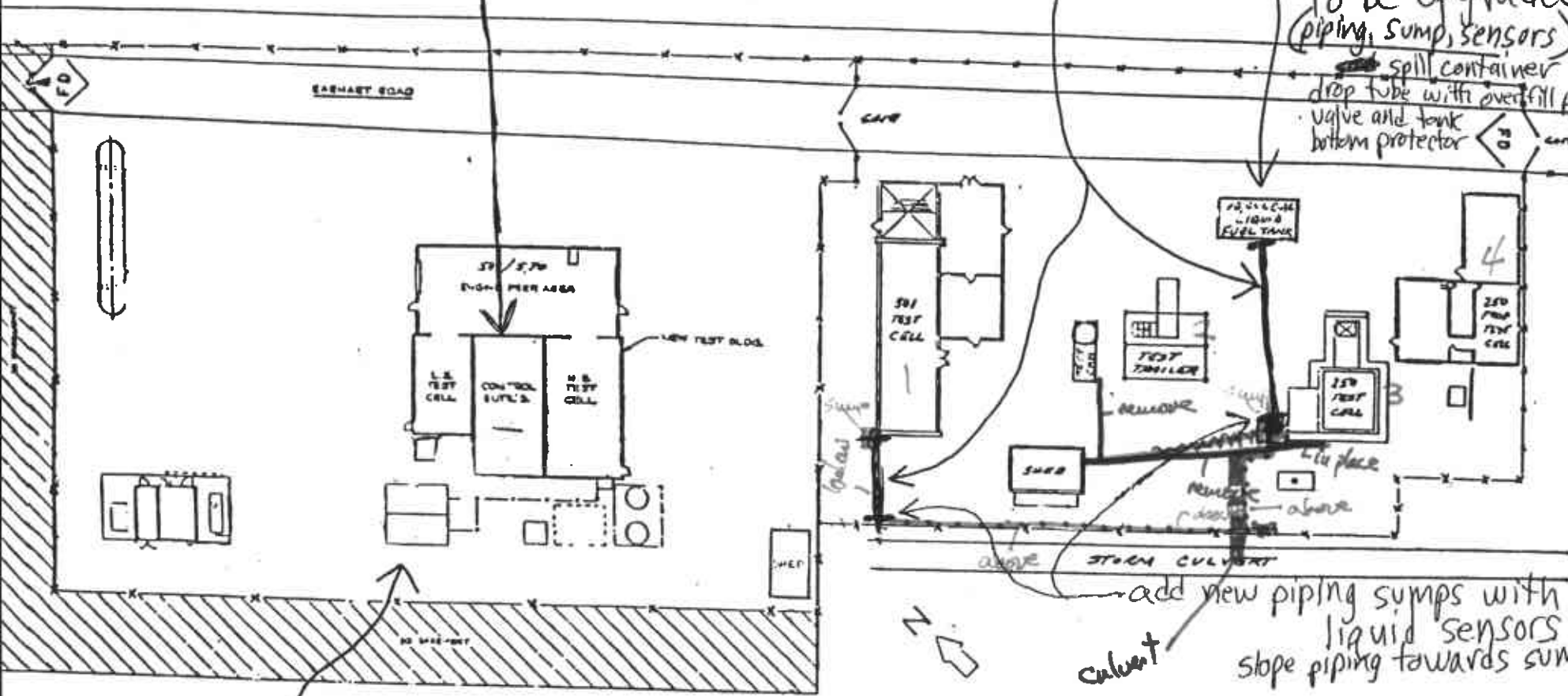
SPECIFICATIONS/NOTES:		DETAIL:		WESTERN FIBERGLASS, INC.	
SUMP SHOWN WITH "TC" LIFT/FRICTION TYPE LID. SEE DETAILS		STANDARD TANK SUMP		1555 COPPERHILL PARKWAY SANTA ROSA, CA 95403	
FOR OTHER LID SYSTEM OPTIONS.				PH 707-523-2050 FX 707-523-2046 - WWW.WESTERNFG.COM	
		BINDER 97/98		BY: R. LEWIS FILE/DRAWING: 930081	
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Install new TLS-350 monitoring system in control room

underground piping to be replaced

10,000 gal. tank to be upgraded (piping, sump, sensors)

spill container drop tube with overflow protection valve and tank bottom protector



2 - 8,000 gal. tanks to be upgraded

(replace intank sensors)

- tanks already have overflow protection valves and double-contained piping

NATIONAL AIRMOTIVE CORP.

7200 LOCKHEED STREET

SITE LAYOUT DIAGRAM

Plan by: B. Bassett / Foss Environmental

9/10/98

FP samples still @ lab

tentative as HC C₇-C₁₈
?

Overfill samples involved in upgrades? yes

- drums
- buckets