



Environmental Consultants

ENVIRONMENTAL  
PROTECTION  
96 APR 22 AM 10:05

Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

April 19, 1996

Attention: Mr. Scott O. Seery

**GROUNDWATER INVESTIGATION  
TEST CELL FACILITY  
6701 EARHART ROAD  
OAKLAND, CALIFORNIA  
EMC Job No. 196332**

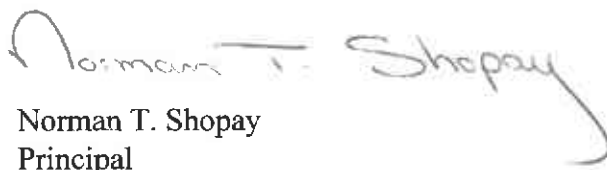
Dear Mr. Seery:

Envirometrix Corporation (EMC) is pleased to submit one copy of our report for the above-referenced property at the request of Mr. Cliff Maupin.

EMC hopes that this report gives you the information needed at this time. If you have any questions, please contact either of the undersigned.

Yours very truly,

**ENVIROMETRIX CORPORATION**

  
Norman T. Shopay  
Principal

Attachments:            Removal of Underground Storage Tank and Site Closure Report

BCC/bcc/196332/12



Environmental Consultants

ENVIRONMENTAL  
PROTECTION  
96 MAR -5 PM 1:50

National Airmotive Corporation  
7200 Lockheed Street  
Oakland, California 94521-4504

March 1, 1996

Attention: Mr. Cliff Maupin

***GROUNDWATER INVESTIGATION WORKPLAN  
NAC TEST CELL FACILITY  
EARHART ROAD  
OAKLAND, CALIFORNIA  
EMC JOB No. 196332***

Envirometrix Corporation (EMC) has prepared this workplan to address concerns of groundwater contamination at the National Airmotive Corporation (NAC) test facility at Oakland Airport (Plate 1). This workplan is to address issues discussed by the Alameda County, Department of Environmental Health (ACDEH) in its letter dated February 21, 1996.

### **SITE INVESTIGATION**

In order to monitor for migration of groundwater contaminants offsite, EMC plans to drill three soil borings in the locations marked on Plate 2 and convert them to groundwater monitoring wells. The actual boring locations may vary from the proposed locations depending on the results of field observations, utility locations, and permission from appropriate agencies.

Prior to drilling, the site and surrounding area will be cleared by a licensed utility surveyor and through Underground Service Alert (USA). Appropriate permits will be obtained from the ACDEH. The ACDEH will be notified 72 hours in advance of drilling.

The soil borings will be advanced with a truck-mounted hollow-stem auger drill rig by a licensed drilling contractor. The borings will be drilled to a depth of approximately 10 feet, and logged by an EMC field geologist. No soil samples will be collected for laboratory analysis. Between borings, all drilling auger will be decontaminated using either



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Mr. Cliff Maupin

March 1, 1996  
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a steam cleaner or a Trisodium Phosphate (TSP) solution and tap water to avoid cross contamination. Decontamination water will be collected and placed in 55-gallon drums.

Soil cuttings will also be stored in 55-gallon drums onsite. To evaluate disposal options for the soil, EMC will collect four soil samples of the cuttings in pre-cleaned 6-inch sampling tubes. Samples collected for analysis will be sealed with Teflon tape and plastic end caps, labeled, and placed in an iced cooler for transportation under Chain-of-Custody protocol to a State-certified analytical laboratory. Samples will be prepared in the laboratory as one composite sample for waste profiling for disposal. Samples will be analyzed for total petroleum hydrocarbons as gasoline (TPH-G), diesel, motor oil, kerosene, and jet fuel (TPH-D/MO/K/JF) by EPA Method 8015M, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020, reactivity, corrosivity, and ignitibility (RCI) and CAM-17 metals by EPA Method 6010 and, if necessary, by the EPA WET test. After waste profiling and acceptance, EMC will transport this material to an appropriate waste disposal facility.

Upon completion, each soil boring will be converted to a groundwater monitoring well. The monitoring wells will be constructed of 2-inch diameter Schedule 40 PVC well casing, and screened from 2 to 10 feet. The depth of the well and screened interval will be adjusted to accommodate the groundwater elevation recorded at the time of drilling. Well screens will have factory milled 0.020-inch perforations. A sandpack of Lonestar #2 or equivalent sand will be placed in the annular space between the borehole and the well screen to approximately one-half foot above the slotted casing. The well will be sealed with a one-foot bentonite seal and finished with cement grouted to the surface. The wellhead will be protected with a water-tight well cap and flush-mounted surface cover. A schematic diagram of a typical monitoring well installation is presented on Plate 3. Locations and elevations of these three wells will be surveyed by a California licensed surveyor.

EMC will develop the wells and collect one groundwater sample from each well for analysis for TPH-JF, BTEX and, if necessary, Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270 at a state-certified laboratory. Purged groundwater will be stored temporarily in drums onsite until arrangements can be made for its transport to an appropriate disposal facility for recycling.

### REPORT PREPARATION

Upon completion of the groundwater investigation, EMC will prepare a report presenting the results of the investigation. As required by the ACDEH, EMC will conduct this groundwater monitoring on an annual basis for a total of three sampling events. The initial report will discuss the extent of groundwater contamination and will include a scaled site plan with groundwater contours and a schematic diagram of the monitoring wells. Results of the chemical analysis will be presented with laboratory reports and QA/QC reports. The report will be signed by a registered geologist or engineer for presentation to the ACDEH



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for review and approval. Results of the subsequent sampling events will be provided in the form of progress reports. At the conclusion of these three sampling events, EMC will arrange for the destruction of these three wells in accordance with the requirements of ACDEH and submit a closure report documenting these activities.

EMC is prepared to begin the investigation immediately upon approval of the workplan and can begin field work promptly upon receiving authorization. Field operations are expected to take two days for the drilling, well installation and development. Subsequent monitoring is anticipated to take one day for each sampling event. Report preparation will begin upon receipt of the laboratory results and will take approximately two weeks to complete.

EMC hopes this workplan presents the information you require at this time. If you have any questions or require additional information, please contact either of the undersigned.

Yours very truly,

**ENVIROMETRIX CORPORATION**

A handwritten signature in cursive script that reads "Norman T. Shopay".

Norman T. Shopay  
Principal Hydrogeologist

A handwritten signature in cursive script that reads "Carol D. Wilson".

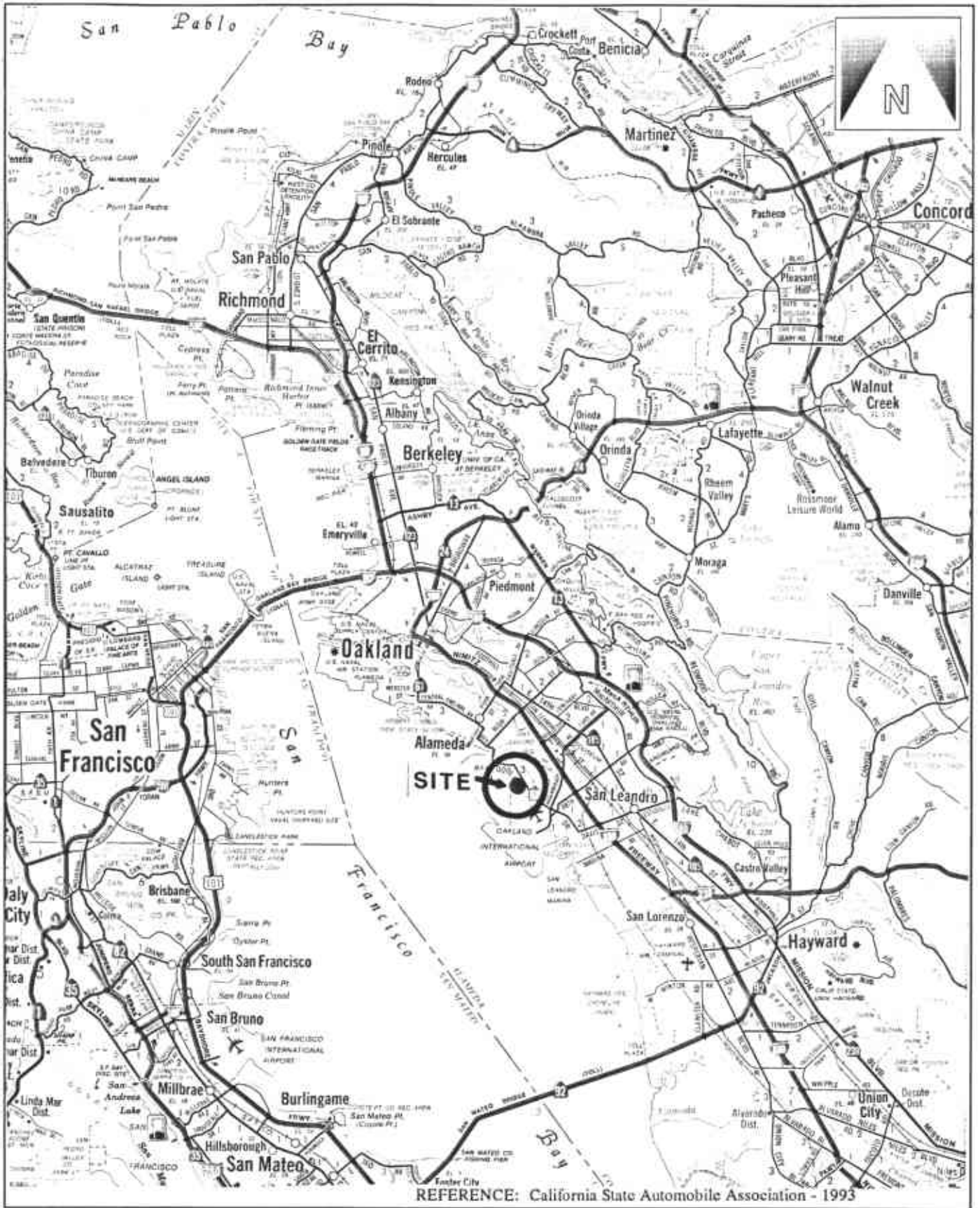
Carol D. Wilson, R.G.  
Senior Geologist


cc: Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

Attention: Mr. Scott O. Seery

Attachments: Plate 1 - Site Location Map  
Plate 2 - Site Plan with Proposed Well Locations  
Plate 3 - Well Construction Detail

CDW/lrd/196332b/12



 <b>ENVIROMETRIX</b>	<b>DRAWN</b> BCC	<b>JOB NUMBER</b> 196332	<b>SITE LOCATION MAP</b>  National Airmotive Corporation Oakland Facilities Oakland, California	<b>PLATE</b>  <b>1</b>
	<b>APPROVED</b> CDW	<b>DATE</b> 3/96		<b>DATE</b>
	<b>REVISED</b>	<b>DATE</b>		



DRAWN  
BCC

APPROVED  
CDW

REVISD

JOB NUMBER  
196332

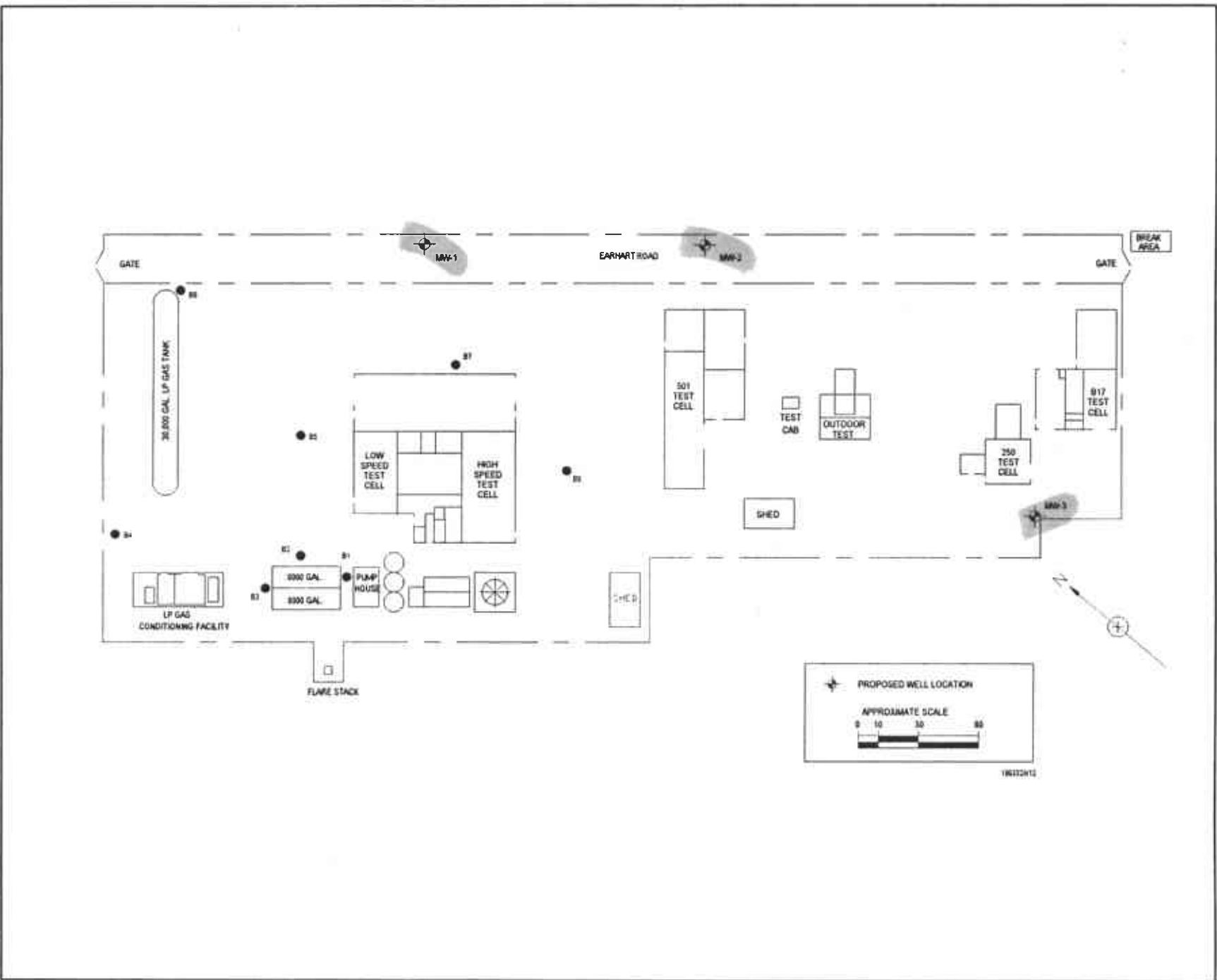
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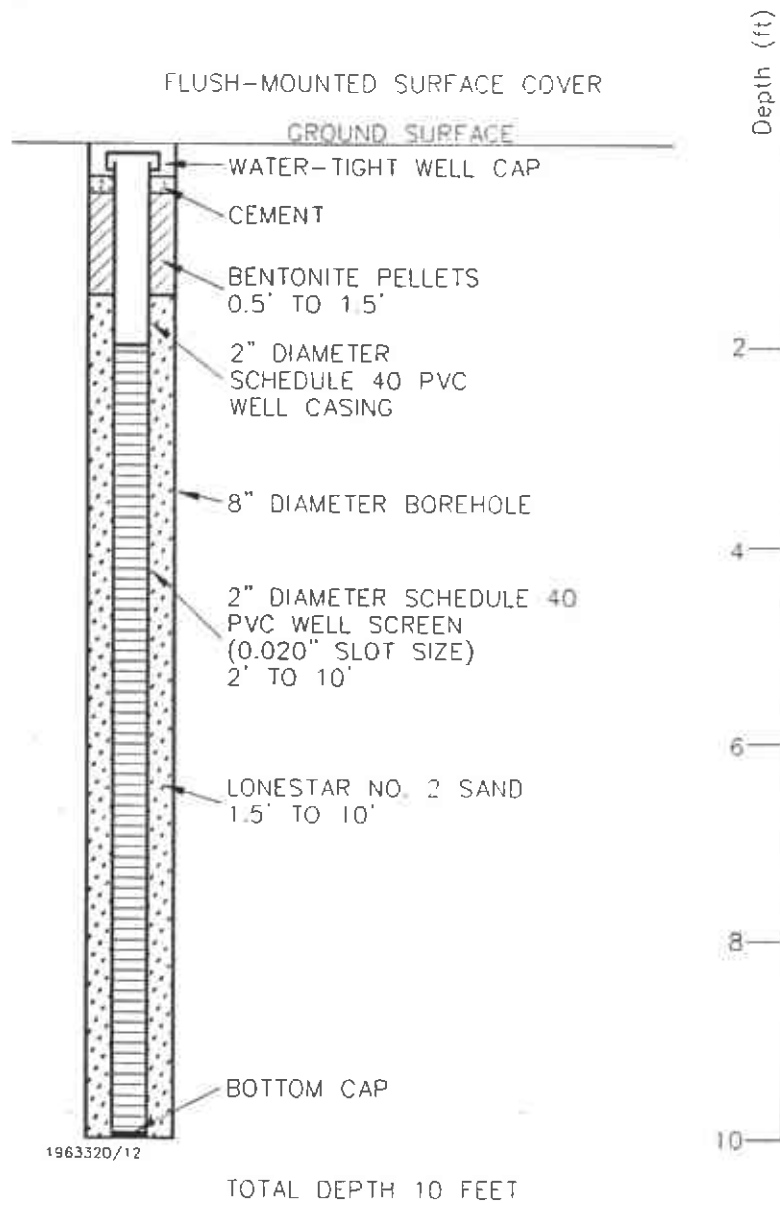
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**SITE PLAN WITH PROPOSED WELL LOCATIONS**

National Airmotive Corporation  
Oakland Facilities  
Oakland, California

PLATE  
**2**





DRAWN BCC	JOB NUMBER 196332
APPROVED CDW	DATE 3/96
REVISED	DATE

**WELL CONSTRUCTION DETAIL**

National Airmotive Corporation  
Oakland Facilities  
Oakland, California

PLATE  
**3**