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Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

WORKPLAN FOR ADDITIONAL SUBSURFACE INVESTIGATION HOLLAND OIL PROPERTY 16301 EAST 14TH STREET SAN LEANDRO, CALIFORNIA 94580

PREPARED FOR:
Hayward Area Recreation and Park District
1099 E Street
Hayward, California 94541

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

June 26, 2007
Project No. 401314001

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Mr. Lawrence R. Lepore
Park Superintendent
Hayward Area Recreation and Park District
1099 E Street
Hayward, California 94541

Subject: Workplan for Additional Subsurface Investigation Holland Oil Property
16301 East 14th Street
San Leandro, California 94580

Dear Mr. Lepore:

On behalf of the Hayward Area Recreation and Parks District (HARD), Ninyo & Moore has prepared this Workplan for Additional Subsurface Investigation for the Holland Oil Property located at 16301 East 14th Street, San Leandro, California (site).

Historic work at the site has been completed by the property owner under the direction of the Alameda County Department of Environmental Health (ACDEH). The activities described in this workplan complement and update those completed.

Thank you for the opportunity to be of service. I look forward to speaking with you again soon.

Sincerely,
NINYO & MOORE

Markus B. Niebanck, P.G.
Manager, Environmental Sciences

Brian Harvey
Staff Environmental Scientist

MBN/BJH/atf

Distribution: (1) Addressee
(1) Mr. Jerry Wickham, P.G.,
Hazardous Materials Specialist, Alameda County Environmental Health,
1131 Harbor Bay Parkway, Suite 250, Alameda, California 94502

Attachment: Figure 1 - Site Location Map
Figure 2 – Proposed Boring Location Map

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INTRODUCTION

Ninyo & Moore has been retained by the Hayward Area Recreation Department (HARD) to complete a subsurface site investigation of the Holland Oil property located at 16301 East 14th Street in unincorporated Alameda County near San Leandro, California (Figure 1). The Holland site was historically utilized for the bulk storage and distribution of fuels. Episodes of site investigation have been completed by consultants for the property owner. The work described in this report complements the information compiled by Holland.

SCOPE OF WORK

The additional subsurface investigation and groundwater monitoring well installation will be comprised of several components, which are described below:

Permitting and Access Letters

Ninyo & Moore will obtain Drilling Permits, as appropriate, from Alameda County Public Works Agency - Well Division (ACPWA) and Encroachment Permits from the City of San Leandro prior to commencing field activities. Additionally, Ninyo & Moore will obtain a letter from the San Lorenzo Unified School District granting access to Edendale School, the adjacent property to the east of the site.

Utility Clearance

The locations of the borings will be marked in the field prior to conducting a utility clearance. Prior to commencing drilling activities, USA will be contacted, whom, in turn, will contact local utility companies to locate underground utilities in the proposed work areas, as appropriate. If appropriate, site personnel will be contacted to locate underground utilities around proposed drilling locations. As-built utility drawings showing the locations of above-ground and underground utilities will be also reviewed, if available. A private utility locating company will also be contracted to survey the off-site boring areas for potential underground utilities. Where underground utilities or structures are present beneath proposed work areas,

the drilling locations will be moved to unobstructed areas, as deemed appropriate. If necessary, each sampling location will be carefully hand augered for the first 5-feet below ground surface (bgs).

Site Specific Health and Safety Plan

Prior to field work, a SSHSP will be prepared and used on-site, during field activities. A tailgate health and safety meeting will be conducted prior to field work each day to discuss potential hazards that may be encountered.

On-Site Subsurface Investigation and Groundwater Monitoring Well Installation

On-site field activities will consist of the drilling of five soil borings, two of which will be completed as groundwater monitoring wells (Figure 2). The borings will be advanced using direct push geoprobe and hollow stem auger equipment. Borings MW-6 and MW-7 will be converted to monitoring wells MW-6 and MW-7 after soil samples have been collected. Borings B-1, B-2, and B-3 will be continuously cored to depths of 15-20 feet below ground surface (bgs). The total depth of each boring will not exceed 20 feet bgs.

Soil Sampling

Soil samples will be collected from the borings at 2-feet bgs, 5-feet bgs, and at the capillary fringe. A lithologic description of the soils will be described on detailed boring logs in general conformance with the Unified Soil Classification System (USCS). Soil sampling operations will be coordinated by a field geologist under the direction of a Ninyo & Moore California Registered Geologist.

Hollow stem auger samples will be collected in split spoon samplers containing three brass rings. Two of the rings will be used for field screening and chemical analysis. The samples to be sent to the laboratory for chemical analysis will be covered with Teflon tape and plastic caps.

The sample containers will be labeled with the project name, location, boring number, sample depth, sampling date/time, and sampler's initials. The sample containers will be placed into an insulated cooler containing ice for transport to the analytical laboratory. Chain-of-custody documentation will be completed and will accompany the soil samples to the analytical laboratory.

Soil cuttings generated during Geoprobe activity will also be placed into 55-gallon reconditioned steel drums for temporary storage at the site pending analysis.

Soil sampling equipment will be cleaned between sampling intervals by steam cleaning. Decontamination water will be placed into an appropriate container for temporary storage at the site. Rinsate water from equipment decontamination activities will be stored on-site in 55-gallon reconditioned steel drums. The drums will be transported with the soil cuttings to an appropriate waste disposal facility using a certified waste hauler upon receipt of analytical results.

Soil Sample Analysis

Soil samples obtained during on-site field activities will be analyzed by a State certified analytical laboratory. As a measure of gross soil quality, samples will be analyzed for concentrations of gasoline-range (TPH-G), diesel-range (TPH-D) and kerosene-range petroleum hydrocarbons using EPA Method 8015B. As subsequent phases of on-property testing are anticipated, the performance of an exhaustive suite of soil testing is at this time not necessary.

Groundwater Monitoring Well Installation

Borings MW-6 and MW-7 will be converted to groundwater monitoring wells. Monitoring well MW-6 will be located approximately 80 feet north-northeast of existing monitoring well MW2, and MW-7 will be located approximately 80 feet north-northeast of MW-6 (Figure 2). Soil samples will be collected from the hollow stem auger borings at 2-feet bgs, 5-feet bgs, and at the capillary fringe.

The wells will be installed to between 15 feet bgs and 20 feet bgs, depending on groundwater levels and lithologic conditions encountered during the time of installation. The wells will be screened for 10 vertical feet using 2-inch diameter, 0.01 inch slot schedule 40 PVC screen. A screw type PVC end cap will be placed at the bottom of the screen. The remainder of the well casing will be composed of blank schedule 40 PVC. Well construction will be completed by pouring # 2/12 Monterey Sand into the well annulus to approximately 1 foot above the screened PVC, adding one foot of bentonite chips above the sand, and finishing the well within one-foot of the surface with grout (neat cement), which will be used for the sanitary seal. A representative from the Alameda County Public Works Agency (ACPWA) Well Division will be contacted to oversee grouting procedures of the wells on site. Locking, traffic rated monitoring well boxes will be installed within the top 6-inches of the subsurface. A Well Completion Report will be prepared and submitted to the Department of Water Resources (DWR) subsequent to well installation.

Approximately 72-hours subsequent to groundwater monitoring well construction both newly installed and existing monitoring wells will be developed by surging, pumping and bailing the wells using a surge block, submersible pump and stainless steel bailer. The wells will be surged with a surge block within the screened portion of the well to remove sediment in the sand pack, after which the wells will be bailed to remove sand accumulation in the well bottom. Subsequent to the surging and bailing, the wells will be purged to further remove sediments in the well using a submersible pump. Purging will continue until groundwater parameters (pH, temperature, and electrical conductivity) stabilize.

Surveying, Water-level Measurement, Groundwater Sampling and Analysis

Relative casing elevation of each new and existing well will be surveyed to an assigned site datum by Ninyo & Moore field staff. The depth from top of casing to static groundwater will be measured with a water level meter accurate to 0.01 feet.

Groundwater samples will be collected subsequent to well development well by lowering a disposable Teflon bailer into each well and transferring the bailer contents to the appropriate containers. The groundwater sample containers will be labeled with the project name, location, boring number, sample depth, sampling date/time, and sampler's initials. The sample containers will be placed into a cooler containing ice for transport to a California certified laboratory for chemical analysis. Chain-of-custody documentation will be completed and will accompany the groundwater samples to the laboratory.

Laboratory Analysis

Groundwater samples obtained during on-site field activities will be analyzed by a State certified analytical laboratory. Samples will be analyzed for concentrations of gasoline-range (TPH-G), diesel-range (TPH-D) and kerosene-range petroleum hydrocarbons using EPA Method 8015B; volatile organic compounds including benzene, toluene, ethylbenzene and total xylenes (BTEX), methyl tertiary-butyl ether, ethylene dibromide, and ethylene dichloride using EPA M 8260B; halogenated volatile aromatic compounds (HVOCs) using EPAM 8015; and semi-volatile organic compounds using EPAM 8270C.

Off-Site Subsurface Investigation

Results of calculations and analysis of the on-site activities will enable accurate placement of three additional off-site boring locations.

Permission to access the Edendale School property will be obtained from the San Lorenzo Unified School District prior to drilling of the three off-site borings. As these borings will be located outside the area of bulk plant operation and presumably free of impact only water

samples will be collected for analysis. Boring advancement will be monitored, however, and if obvious signs of contamination noted sampling plans altered accordingly. The off-site Subsurface Investigation is expected to occur approximately three weeks after the on-site Subsurface Investigation and Groundwater Monitoring Well Installation.

Grab Groundwater Sampling

Three direct push borings will be advanced in locations specified subsequent to the completion and analysis of the on-site activities. Groundwater samples in the direct push borings will be collected at first appearance of groundwater, which is expected to be encountered at approximately seven feet bgs. Grab groundwater samples will be collected using bottom discharging disposable Teflon bailers or a peristaltic pump from the borings. A new bailer will be used at each boring. Non-disposable sampling equipment will be steam cleaned between borings for decontamination purposes.

Groundwater samples will be transferred from the bailer into to the appropriate containers. The groundwater sample containers will be labeled with the project name, location, boring number, sample depth, sampling date/time, and sampler's initials. The sample containers will be placed into a cooler containing ice for transport to a California certified laboratory for chemical analysis. Chain-of-custody documentation will be completed and will accompany the groundwater samples to the laboratory.

Upon completion of sampling activities, the borings will be backfilled to grade with bentonite or other appropriate sealant material, as required by the permitting agency. Soil cuttings and wastewater will be temporarily stored on-site in appropriate containers, pending chemical profiling, transport, and disposal.

Laboratory Analysis

Groundwater samples collected from the three off-site borings will be analyzed for constituents found in the groundwater samples previously collected on-site.

Investigation-Derived Waste Disposal

Soil cuttings from well installation and purged groundwater will be stored in separate steel reconditioned 55-gallon drums. The drums will be removed from the site using a certified waste removal company after receipt of analytical laboratory results.

Report Preparation

A report will be prepared following completion of the described activities. The report will include a description of soil/groundwater sampling and results, complete with tables and figures, a groundwater gradient map, and appendices presenting boring logs and certified analytical reports.

SELECTED REFERENCES

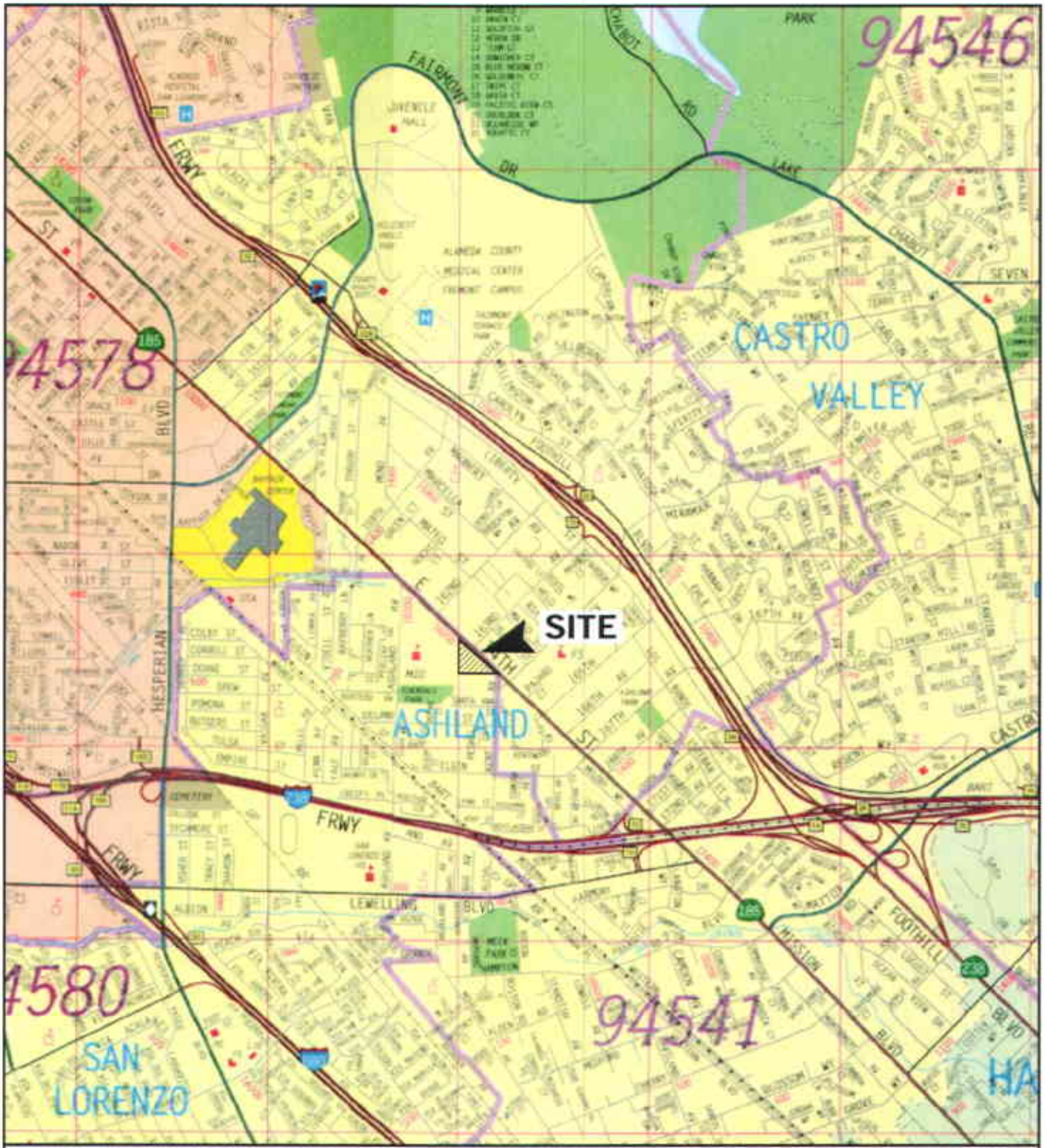
Alameda County Health Care Services Agency, 2005, Letter RE: Fuel Leak Case No. RO000212, Holland Oil, 16301 East 14th Street, San Leandro, California: dated October 28.

Alameda County Health Care Services Agency, 2006, Letter RE: Fuel Leak Case No. RO000212, Holland Oil, 16301 East 14th Street, San Leandro, CA – Work Plan Approval: dated June 7.

Clearwater Group, 2006, Workplan Addendum, Fuel Leak Case No. RO000212, Holland Oil, 16301 East 14th Street, San Leandro, California: dated June 5.

Environmental Bio-Systems, Inc., 2003, Workplan: Additional Subsurface Investigation Groundwater Monitoring Well Installation, Estate of J. Holland Sr., 16301 East 14th Street, San Leandro, California: dated March 3.

Environmental Bio-Systems, Inc., 2001, Subsurface Exploration and Monitoring Well Installation, Estate of J. Holland Sr., 16301 East 14th Street, San Leandro, California; dated May 4.



REFERENCE: 2005 THOMAS GUIDE FOR ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES, STREET GUIDE AND DIRECTORY.

APPROXIMATE SCALE IN FEET

0 1900 3800

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

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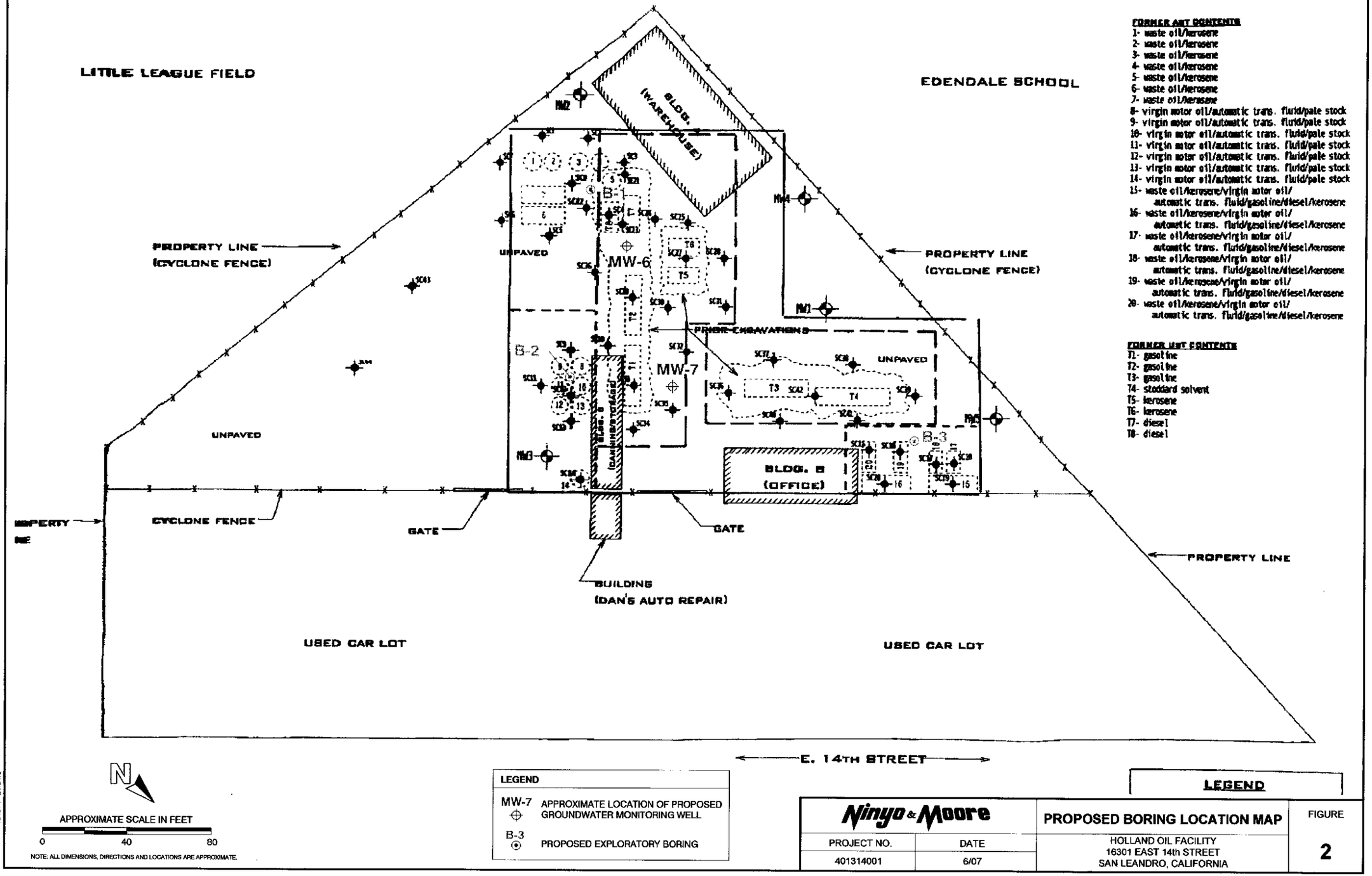
401314-A1.DWG

Ninyo & Moore	SITE LOCATION MAP	FIGURE
PROJECT NO.	DATE	HOLLAND OIL FACILITY 16301 EAST 14th STREET SAN LEANDRO, CALIFORNIA	1
401314001	6/07	



FORMER ART CONTENTS

1- waste oil/kerosene
2- waste oil/kerosene
3- waste oil/kerosene
4- waste oil/kerosene
5- waste oil/kerosene
6- waste oil/kerosene
7- waste oil/kerosene
8- virgin motor oil/automatic trans. fluid/pale stock
9- virgin motor oil/automatic trans. fluid/pale stock
10- virgin motor oil/automatic trans. fluid/pale stock
11- virgin motor oil/automatic trans. fluid/pale stock
12- virgin motor oil/automatic trans. fluid/pale stock
13- virgin motor oil/automatic trans. fluid/pale stock
14- virgin motor oil/automatic trans. fluid/pale stock
15- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
16- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
17- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
18- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
19- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene
20- waste oil/kerosene/virgin motor oil/ automatic trans. fluid/gasoline/diesel/kerosene

FORMER UST CONTENTS

T1- gasoline
T2- gasoline
T3- gasoline
T4- stoddard solvent
T5- kerosene
T6- kerosene
T7- diesel
T8- diesel

LEGEND	
MW-7 ⊕	APPROXIMATE LOCATION OF PROPOSED GROUNDWATER MONITORING WELL
B-3 ⊙	PROPOSED EXPLORATORY BORING

LEGEND

Ninyo & Moore		PROPOSED BORING LOCATION MAP	FIGURE
PROJECT NO.	DATE	HOLLAND OIL FACILITY 16301 EAST 14th STREET SAN LEANDRO, CALIFORNIA	2
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