PROPOSED WORK PLAN

for

E-Z SERVE #100877
525 WEST A. STREET
HAYWARD, CALIFORNIA

Submitted To:

Juliet Shin
Hazardous Materials Specialist
Alameda County
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Rm 200
Oakland, California 94621

Copy to:

Eddy So
Regional Water Quality Control Board
2201 Webster Street, 4th Floor
Oakland, California 94612

September 21, 1992

INTRODUCTION

At the request of Alameda County, E-Z Serve Petroleum Marketing Company is submitting this work plan for continuing assessment to be conducted at 525 West A Street, Alameda County, Hayward, California.

BACKGROUND

The site was a former Mobil Station consisting of four (4) 10,000 gallon tanks which were removed on June 15, 1990. Prior to the removal of the tanks a fuel system leak was discovered in November 1986, as a result of discrepancy in inventory reconciliation. Converse Environmental Consultants California (CECC) conducted Phase I site assessment as an initial step in assessing the extent of gasoline contamination at the site. At that time, soil borings were drilled on the station property to 30 feet below ground surface. The borings were converted to monitoring wells MW-1 through MW-3. After completion of Phase I the extent of groundwater contamination off-site, the concentration of TPH and BTEX in off-site groundwater, volume of contaminated soil requiring remediation and potential threat of groundwater contamination to nearby groundwater with actual or potential beneficial use had not been assessed.

Phase II investigation was initiated in June 1987 to assess: 1) the potential threat of contamination of usable groundwater sources, as well as (2) the potential for off-site

migration of the groundwater contamination. During Phase II investigation three (3) additional monitoring wells MW-4 through MW-6 drilled to a depth of 30-31 feet were installed. The six (6) wells were purged and sampled at that time. However, in 1990 during the removal of the tanks and grading of the property, three (3) of the wells MW-2, MW-5, and MW-6 were destroyed. MW-1, MW-3 and MW-4 were damaged.

Associated Soils was contracted in January 1992 to abandon the existing wells and install 6 new wells. The results of this work are contained in a report dated March 2, 1992 and previously submitted.

SCOPE OF WORK

E-Z Serve Petroleum Marketing Company proposes to:

Contract with a licensed geologist/contractor, licensed in the State of California, to perform the scopes of work outlined in the proposed work plan. The contractor will:

- Provide Alameda County with a Site Safety Plan for the project
- Apply for all permits to install wells
- Construct four ground water monitoring wells using thread-joint, 4-inch indise diameter, Schedule 40 polyvinyl chloride (PVC) casing in the borehole.
- Purge and sample all wells

- Complete a report of findings for E-Z Serve's record and copies to Alameda County and the Regional Water Quality Control Board.

REGIONAL HYDROGEOLOGY

The site lies within the San Leandro Cone, a low-gradient alluvial fan which originates at the mouth of Castro Valley and spreads westward onto the Bay Plain. This cone consist of alluvial sediments which overlie marine clay and terrigenous sand and silt of intertidal provenances.

The shallowest regional aquifer in area is a permeable, waterbearing alluvial sand, named the Newark aquifer. This aquifer is a series of laterally discontinuous saturated lenses of course to fine sediment 10 to 100 feet thick at depths less than 200 feet. There regional hydraulic gradient is westward, from the mouth of Castro Valley toward the San Francisco Bay. (Reference Phase II Investigation Report dated June 30, 1988 by CECC)

DRILLING AND SAMPLING

After receiving the necessary permits, plans are to drill and install four (4) 4-inch diameter ground-water monitoring wells at the approximate locations shown on the attached site plan. Each well will be drilled to a depth of 30 feet.

During drilling of the wells, soil samples will be collected and monitored for the presence of hydrocarbon constituents. Soil samples will be collected through the 12-inch (OD) diameter hollow-stem augers at approximately 5 foot intervals using a split-barrel sampler equipped with clean brass sample liners. Before each use, the sampler will be cleaned by scrubbing with alconox and rinsing with distilled water. The soil samples will be retained in the 6-inch long brass liners, and immediately capped, labeled and sealed upon removal from the sampler. Logs of each boring will be included in the study report.

The lowermost sample tube from each sampling interval will be sealed at both ends with Teflon and plastic end caps to preserve sample integrity and reduce volatilization. Soil from the next tube will be monitored for volatile organic vapors using a photoionization detector (PID). The PID readings are used to indicate relative concentration levels of volatile organic compounds and are useful for selecting soil samples for laboratory analysis. If the soil has evidence of hydrocarbon constituents other than in the general zone of fluctuating ground water, a soil sample from each borehole will be submitted for analysis of gasoline components and volatile aromatics using Modified EPA Method 8015 and 8020, respectively.

WELL CONSTRUCTION

The wells will be constructed with 4-inch OD Schedule 40 PVC screen and blank casing. Well joints will be flush threaded to provide adequate strength and smooth internal and external surfaces. The well screen will extend from approximately 5 feet above to approximately 5 feet below the existing water level (borehole bottom). Dry filter pack material consisting of #20 graded silica sand will be installed in the wells annular space from the bottom of the well to approximately 1 foot above the well screen. A 2-foot thick bentonite seal will be placed above the filter pack, and a cement/bentonite slurry mix complete the well to ground surface. A PVC slip cap will be placed over the well casing.

The wellhead will be completed with a water-resistant, locking, traffic-rated wellhead box approximately 1-inch above grade to prevent surface water from entering the well. The elevation of the top of the well casing with respect to an established site benchmark reference will be measured with surveying equipment. Construction logs of the as-build wells will be included in the report.

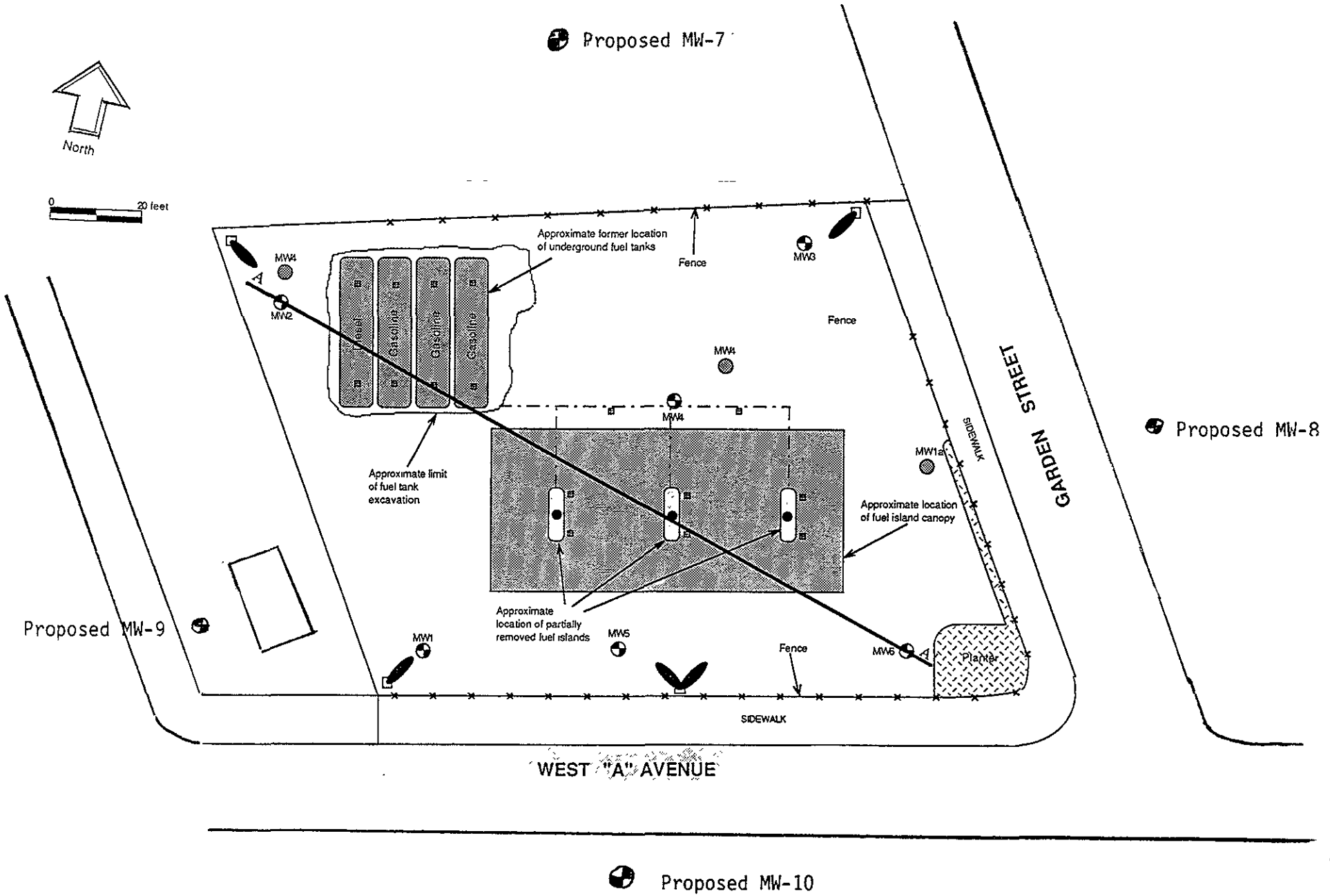
WELL DEVELOPMENT

After the wells are completed and the cement has had sufficient time to set, generally 12 hours, the wells will be developed by surging and bailing to clear sediment from the

formation and filter pack. Prior to development, the water level and presence of possible free product will be measured using water detecting chalk and paste. Water-quality parameters (pH, temperature, electrical conductivity) will be measured during the bailing of the well. Development will be considered complete when water-quality parameters have stabilized and the well produces water relatively free of sediment. Approximately 3 to 5 well-volumes of ground water may be removed from each well during development. This water, as well as wash and rinse water used to clean sampling equipment will be stored on site in 55-gallon drums properly labeled as to their contents which will be removed and properly disposed of within (90) days.

REPORT

Upon completion of field activities and receipt of the laboratory results a report will be written by the registered geologist or certified engineering geologist employed by the contractor and licensed in the State of California will be forwarded to the Department of Environmental Health of Alameda County and the Regional Water Quality Control Board. The report will describe field observations and activities, soil conditions, and sampling results and boring logs.


Proposed MW-7
North
0
20 feet
Approximate former location of underground fuel tanks
Fence
MW4
MW2
MW3
Diesel
Gasoline
Gasoline
Gasoline
Fence
MW4
MW4
Approximate limit of fuel tank excavation
SIDEWALK
GARDEN STREET
Proposed MW-8
MW1a
Approximate location of fuel island canopy
Proposed MW-9
Approximate location of partially removed fuel islands
MW1
MW5
Fence
MW6
Planter
SIDEWALK
WEST "A" AVENUE
Proposed MW-10