

 OHM

November 11, 1987

Ms. Elizabeth Rose
Hazardous Materials Specialist
Alameda County Department of
Environmental Health
470 27th Street, Room 322
Oakland, CA 94612

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HAZARDOUS MATERIALS
WASH. STATE

Dear Ms. Rose:

RE: Proposal for In-place Closure of an Underground Storage Tank Located at the Former Grow Group Facility, Emeryville, California

OHM is pleased to submit this proposal on behalf of Grow Group Inc. for in-place closure of an out of service underground storage tank located at the former Grow Group Facility in Emeryville, California. The tank is believed to have last been used sometime during the mid-1970s and to have previously stored mineral spirits. The proposed closure will be performed in accordance with all applicable local and state regulations.

On September 1, 1987, OHM personnel conducted a site investigation to determine the capacity, orientation and structural soundness of the underground storage tank. Figure 1 shows the underground storage tank location.

The following measurements were taken:

- o Tank fill pipe diameter - 4 in. ID.
- o Tank fill pipe length - 4.8 ft.
- o Depth to bottom of tank (measured from top of fill pipe) - 12.1 ft.
- o Tank diameter - 7.3 ft.
- o Tank length - approx 20 ft.
- o Depth to liquid inside tank - 11.1 ft.
- o Depth of liquid - 1.0 ft.
- o Estimated volume of liquid - 480 to 540 gal.

OHM personnel used a modified camera system to take photographs of the tank interior. The fill pipe through which the photographs were taken is located at the western edge of the storage tank. The tank lies parallel to the sidewalk and runs in a west to east direction as shown in Figure 1. The enclosed photograph was taken with the camera facing east toward Linden Street. Other photographs facing north, south, and west showed the interior tank walls at very close range. The vertical pipe shown in the photograph at the eastern wall of the tank is thought to be the product withdrawal pipe.

What appears to be a line of vapor condensation can be seen at approximately 2.5 feet above the liquid level in the tank. The condensation line is located at the same depth (approximately 8 feet below grade) as ground water observed within an unrelated open excavation situated approximately 50 feet away. The line of condensation therefore represents the water table elevation with respect to the tank. The liquid level of the tank contents, taken on two separate occasions approximately 7 months apart, remained constant. It appears that the tank is structurally sound due to the difference in the ground water level outside of the tank and liquid level measurements observed within the tank. Had the tank been leaking, the liquid level within the tank would likely be at the same depth below grade as the observed ground water level.

The following reasons are presented to the Alameda County Department of Environmental Health for consideration of an in-place tank closure:

- o The underground storage tank lies in close proximity to adjacent buildings. The tank is oriented in an west to east direction, running parallel to the Oakland National Engravers Building. The tank is 7.3 feet in diameter and is within 3.5 feet from the building. Excavation may cause structural damage to the adjacent facility and disruption or inconvenience of nearby business operations. In addition, excavation will cause disruption to traffic along 41st Street.
- o The tank lies in close proximity to underground utility lines. A ground penetrating radar (GPR) survey was conducted on May 15, 1987 to define the boundaries of the underground storage tank and the location of nearby utility lines. The radar could only achieve a maximum penetration of approximately 2 feet below ground surface due to the presence of clay soils. Clay soils are conductive and severely reduce the radar signal's depth of penetration. The survey was, however able to locate several

underground utility lines. Figure 2 shows the locations of the utility lines identified. One Pacific Gas and Electric natural gas line is located approximately one foot north of the tank oriented in an east-west direction, while another lies 8 feet to the south of the tank underneath 41st Street. An unknown utility line, located just east of the tank, runs at an angle to the building at approximately 1.5 feet below the base of the sidewalk. It is possible that additional utility lines exist but could not be identified with the GPR.

- o The area has a relatively high water table. As stated previously, a nearby excavation encountered ground water at a depth of approximately 8 feet below the sidewalk grade. Removal of the overburden material will cause the tank to become buoyant, likely causing abrupt movement and possible injury or utility line rupture.

The following site integrity procedures will be implemented upon approval from the Alameda County Department of Environmental Health:

- o Two soil borings will be advanced and terminated at approximately two feet below the water table.
- o Because of the tank location with respect to adjacent structures and the known or suspected utility lines, the borings will be placed directly east and west of the tank as shown in Figure 2.
- o Temporary PVC well screens will be installed, and water samples will be taken from each boring.
- o The water samples will be analyzed according to the San Francisco Regional Water Quality Control Board method for addressing underground tank leaks. (TPHC - total petroleum hydrocarbons) and EPA method 624 (volatile constituents).

The following procedures will be implemented upon approval of in-place closure:

- o The liquid contents will be removed and properly disposed.
- o All vapors will be purged out of the storage tank with carbon dioxide.

- o The tank will be triple-rinse cleaned and the rinse water properly disposed.
- o The tank will be filled in place with silica sand.
- o Fill and vent lines will be removed and capped.

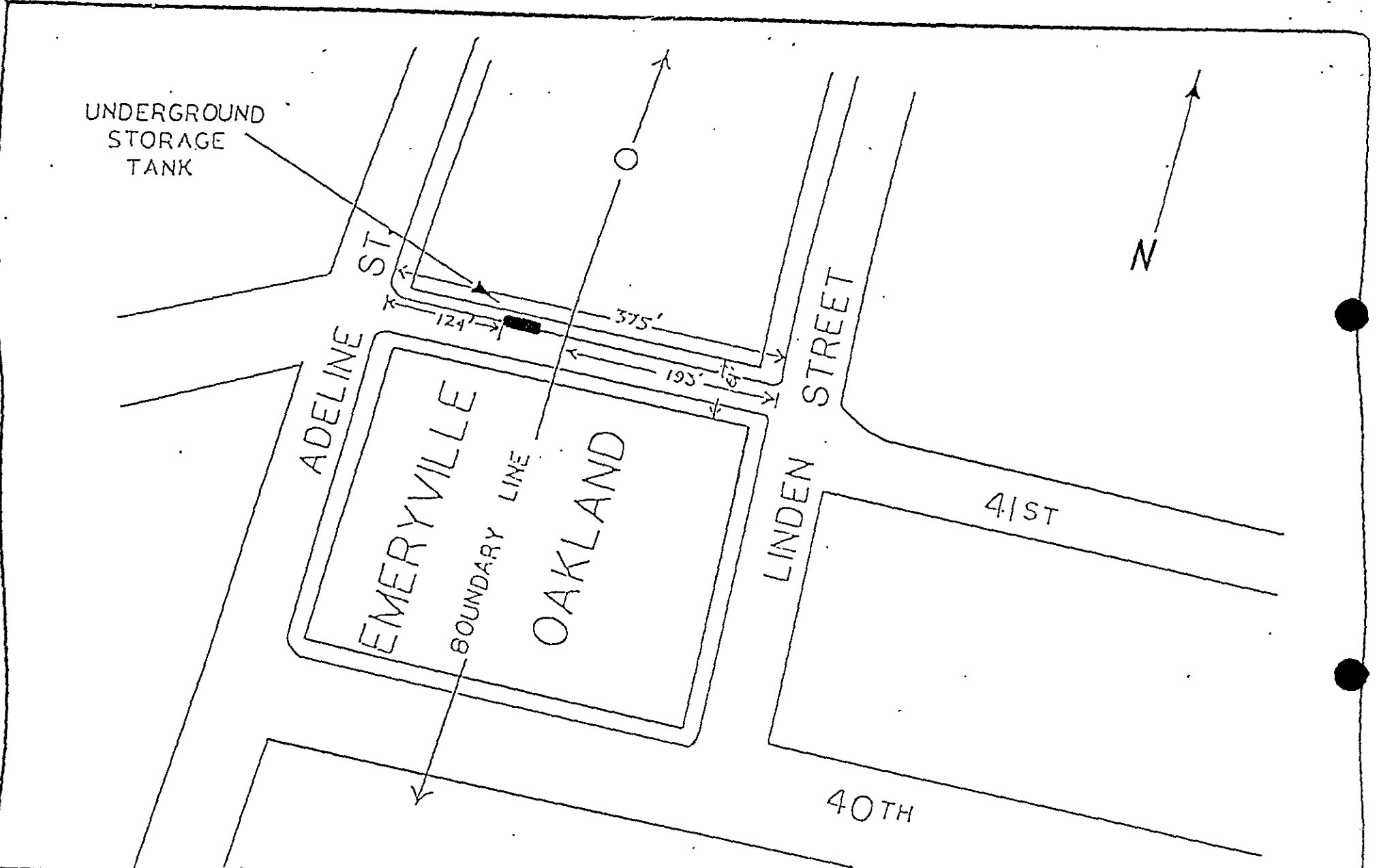
If you have any additions or comments, please call me at 916-372-1331.

Sincerely,

Peter W. Coutts

Peter W. Coutts
Project Hydrogeologist

PWC:sag

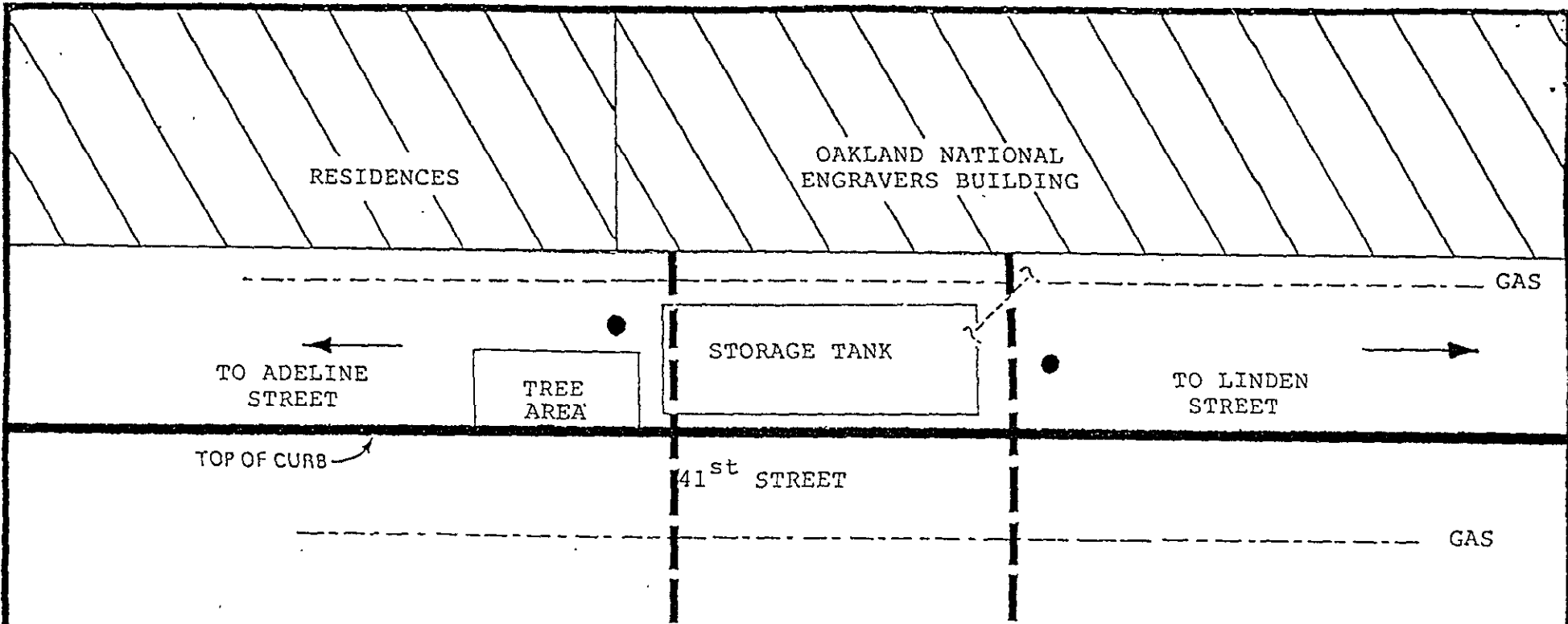


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DATE 9-3-87	CHECKED				
SHEET ___ OF ___	APPROVED				

FIGURE 1.
UNDERGROUND STORAGE
TANK LOCATION

OHM
OHM ENVIRONMENTAL SERVICES, INC.
 1001 15th St. Oakland, CA 94612
 (415) 763-3333 FAX (415) 763-3334

PROJECT 518K	DRAWING	REVISION
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Scale: 1"=10'



LEGEND

- OVERHEAD LINES
- UNDERGROUND LINES
- POSSIBLE UTILITY
- PROPOSED BORING

SCALE	DRAWN BY	NO.	DATE	REVISION	BY
1"=10'	P.C.				
DATE	CHECKED				
9/24/87					
SHEET ___ OF ___	APPROVED				

FIGURE 2.
UTILITY AND PROPOSED
BORING LOCATIONS

O. H. MATERIALS CO.

EMERGENCY RESPONSE AND
ENVIRONMENTAL RESTORATION

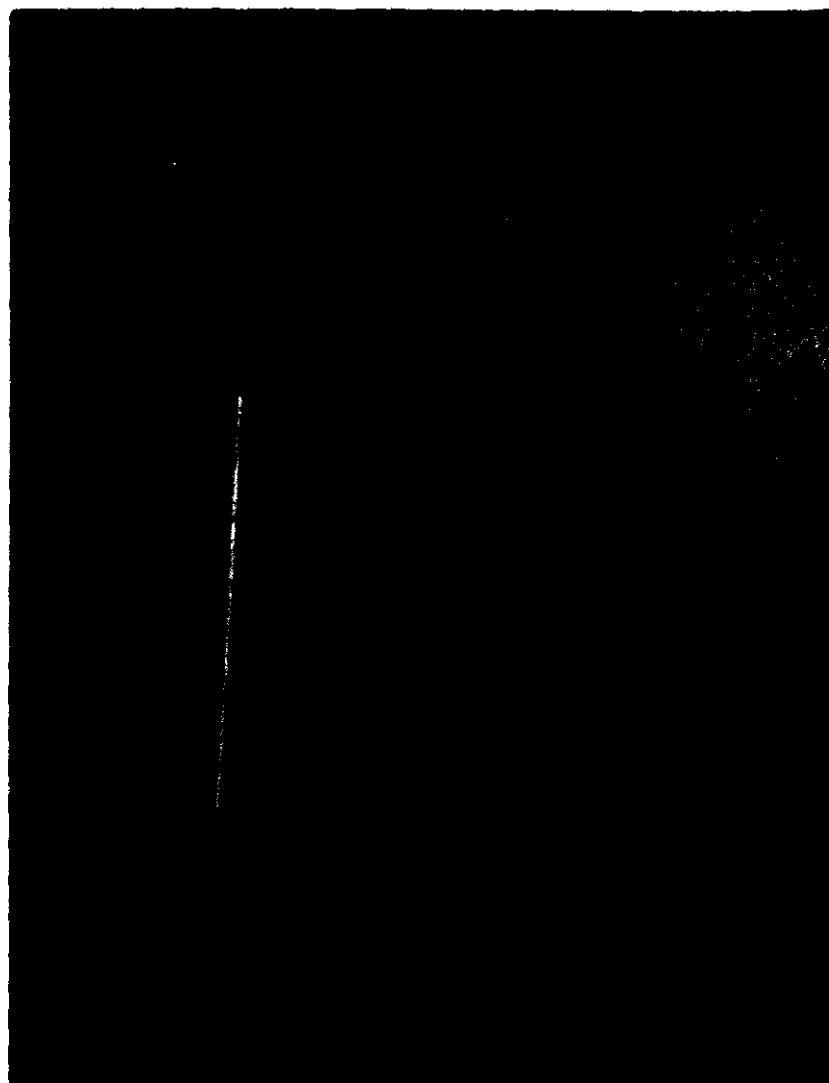
801 551 418-73 2528 FIMPLAT OHIO
804-537 4540

PROJECT	DRAWING	REVISION

O.H. Materials Corp.
3900 Industrial Blvd.
West Sacramento, CA 95691
916-372-1331



OHM



View of tank interior with camera facing east
toward Linden Street.

A Subsidiary of Environmental Treatment and Technologies Corp.